Los Angeles Department of Water and Power Annual Owens Valley Report May 2013

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LA DWP Los Angeles Department of Water & Power

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EXECUTIVE SUMMARY

This report includes Los Angeles Department of Water and Power's (LADWP) proposed Owens Valley operations plan for the 2013-14 runoff year, an update on Owens Valley conditions, the current status of LADWP's environmental and mitigation projects, and the status of other studies, projects, and activities.

Owens Valley Annual Operations Plan Summary

For the period of April 1, 2013, to March 31, 2014, the forecast Eastern Sierra runoff for the Owens River Basin is 220,900 acre-feet or 54% of normal. For the period between April 1, 2012 and September 30, 2012, Eastern Sierra runoff was measured to be 154,608 acre-feet or 51% of normal. Forecast Eastern Sierra runoff between April 1, 2013, and September 30, 2013, is 140,500 acre-feet or 46% of normal. The average of the actual and forecast runoff for the April through September period is 49% of normal. Pursuant to Water Agreement Section V.D:

> *By April 20th of each year, the Department shall prepare and submit to the Inyo County Technical Group a proposed operations plan and pumping program for the twelve (12) month period beginning on April 1st. (In the event of two consecutive dry years when actual and forecasted Owens Valley runoff for the April to September period is below normal and averages less than 75 percent of normal, the Department shall prepare a proposed plan for the six (6) month period beginning on April 1st and October 1st, and submit such plans by April 20th and October 20th.)*

Accordingly, LADWP has prepared a proposed six month operations plan and pumping program for the period beginning April 1, 2013.

LADWP groundwater pumping in the Owens Valley is governed by the ON/OFF provisions of the *1991 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* (Water Agreement). According to the well ON/OFF provisions of the Water Agreement, approximately 134,411 acre-feet of water is available for groundwater pumping from Owens Valley well fields. In addition to the ON/OFF provisions of the Water Agreement, LADWP considers Owens Valley conditions, projected runoff, and operational practicalities when determining its planned pumping. LADWP's groundwater pumping for the first six months of the 2013-14 runoff year is planned to range between 47,370 and 54,660 acre-feet, contingent on environmental conditions and water needs. The lower end of this range is commensurate with non-discretionary pumping requirements including fish hatchery supply, town supply, irrigation, and other required uses. The upper range is in keeping with dry year conservative pumping plans supported by the Inyo County/Los Angeles Standing Committee during the drought recovery period of the early 1990s.

Owens Valley Conditions

Forecast runoff to the Owens River Basin during the 2013-14 runoff year is 220,900 acre-feet or 54% of normal. The overall Eastern Sierra snow pack in watersheds contributing to the Los Angeles Aqueduct (LAA) was estimated to be 47% of normal as of April 1, 2013. Precipitation on the Owens Valley floor during the 2012-13 runoff year averaged 1.2 inches and was substantially below the long-term average of 5.9 inches. Vegetation cover in the Owens Valley is comparable to the mid-1980s baseline conditions. Owens Valley groundwater levels are relatively high in most areas.

During the 2012-13 runoff year, the Lower Owens River was in full operational status with minimum average flows of 40 cfs or greater as measured at all gauging stations. The total water use by the Lower Owens River, the Delta, Blackrock Waterfowl Management Area, and other Lower Owens River Project (LORP) uses were approximately 20,900 acre-feet for the year. The releases at the Los Angeles Aqueduct (LAA) intake were augmented by additional releases at selected LAA spill gates to maintain an average continuous flow of at least 40 cfs in the river channel.

Construction for the Owens Lake Dust Mitigation Program (OLDMP) continued during the 2012-13 runoff year. Dust mitigation activities on Owens Lake consumed 75,300 acre-feet of water in 2012-13. Contingent on prevailing conditions, OLDMP water use may be as much as 95,000 acre-feet during the 2013-14 runoff year.

Enhancement/Mitigation Project Status

The enhancement/mitigation projects discussed in Section 4 of this report are environmental projects implemented prior to the *1991 Environmental Impact Report on Water From the Owens Valley to Supply the Second Los Angeles Aqueduct* (1991 EIR). Some of these projects were identified in the 1991 EIR as mitigations for impacts due to LADWP's water gathering activities. There are 26 projects identified as enhancement/mitigation measures; 24 of these have been completed or are being implemented, and two are in the final stages of implementation.

Mitigation Project Status

There are 42 mitigation projects identified for thirteen impacts in the 1991 EIR, with 29 of these projects completed or fully implemented. Ten of the mitigation projects are currently partially implemented, as they are in the process of being constructed or are being revegetated. Three projects are in the planning or design phase.

Other Status

The statuses of the Mitigation Monitoring and Reporting Programs for the Laws Irrigation Project, Well W415 in Big Pine, and the LORP have been updated. A copy of the *Mitigation Monitoring and Reporting Program for the Final Ad Hoc Yellow-billed Cuckoo Habitat Enhancement Plan* is included in Section 6 of this report. Implementation status of the Water Agreement and the *1997 Memorandum of*

Understanding between the City of Los Angeles Department of Water and Power, the County of Inyo, California Department of Fish and Game, the California State Lands Commission, the Sierra Club, and the Owens Valley Committee (1997 MOU) provisions have also been updated.

Green Book Revision Cooperative Study

Inyo County and LADWP continue to jointly work toward the completion of the Green Book revisions. Status updates of the Green Book revision effort are given at Technical Group and Standing Committee meetings.

1. INTRODUCTION

1. INTRODUCTION

This document is intended to satisfy the Los Angeles Department of Water and Power's (LADWP) annual reporting obligations pursuant to 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* (Water Agreement); *the 1991 Environmental Impact Report Water from the Owens Valley to Supply the Second Los Angeles Aqueduct, 1970 to 1990, 1990 Onward, Pursuant to a Long Term Groundwater Management Plan* (1991 EIR); the Laws Type E transfer; the *1997 Memorandum of Understanding between the City of Los Angeles Department of Water and Power, County of Inyo, the California Department of Fish and Game, the California State Lands Commission, the Sierra Club, and the Owens Valley Committee* (1997 MOU); and the *August 2004 Amended Stipulation and Order in Case No. S1CVCV01-29768* (Stip/Order).

1.1 Water Agreement

The Water Agreement requires periodic evaluations of enhancement/mitigation projects to be made by the Inyo County/Los Angeles Technical Group. As required by the Water Agreement, all existing enhancement/mitigation projects will continue unless the Inyo County Board of Supervisors and LADWP agree to modify or discontinue a project. Section 4 of this report provides an update on LADWP enhancement/mitigation project status.

1.2 Annual Operations Plan

The Water Agreement provides that "By April 20th of each year, the Department shall prepare and submit to the Inyo County Technical Group a proposed operations plan and pumping program for the twelve (12) month period beginning on April 1st. (In the event of two consecutive dry years when actual and forecast Owens Valley runoff for the April to September period is below normal and averages less than 75 percent of normal, the Department shall prepare a proposed plan for the six (6) month period beginning on April 1st and October 1st, and submit such plans by April 20th and October 20th). The proposed plan and pumping program and any subsequent modifications to it shall be consistent with these goals and principles.

1. A proposed plan shall include, but is not limited to, the following:

    - Owens Valley Runoff estimate (annual)

    - Projected groundwater production by well field (monthly)

    - Projected total aqueduct reservoir storage levels (monthly)

    - Projected aqueduct deliveries to Los Angeles (monthly)

    - Projected water uses in the Owens Valley (monthly)

    - Water balance projections at each monitoring site

2. The County through its Technical Group representatives shall review the Department's proposed plan of operations and provide comments to the Department within ten (10) days of receipt of the plan.

3. The Department shall meet with the County's Technical Group representatives within ten (10) days of the receipt of the County's comments, and attempt to resolve concerns of the County relating to the proposed pumping program.

4. The Department shall determine appropriate revisions to the plan, provide the revised plan to the County within ten (10) days after the meeting, and implement the plan.

5. The April 1st pumping program may be modified by the Department during the period covered by the plan to meet changing conditions. The Department shall notify the County's Technical Group representatives in advance of any planned significant modifications. The County shall have the opportunity to comment on any such modifications.

6. Information and records pertaining to the Department's operations and runoff conditions shall be reported to the County's Technical Group representatives throughout the year."

Section 2 of this report is LADWP's revised Operations Plan for Runoff Year 2013-14.

1.3 1997 MOU

In accordance with the 1997 MOU Section III.H, LADWP and Inyo County are required to prepare an annual report describing environmental conditions in the Owens Valley and the associated studies, projects, and activities conducted under the Water Agreement and the 1997 MOU. Sections 3 through 7 of this report are intended to fulfill that requirement.

1.4 1991 EIR Monitoring Program

The 1991 EIR requires that LADWP submit an annual report to the Los Angeles Board of Water and Power Commissioners containing a description of each mitigation effort, its goals, strategies, and actions; its status (completed activities, ongoing activities); the overall effectiveness of each mitigation effort; and status of each mitigation plan for the following year. Section 5 of this report provides the required information.

Mitigation plans for each of the mitigation measures are developed by the Technical Group as set forth in Section I.C.2 of the Green Book, the technical appendix to the Water Agreement. The Green Book states: "as part of each mitigation plan, the Technical Group shall develop a reporting and monitoring program. At least once per year, the Technical Group shall report, in writing to the Standing Committee, on the effectiveness of the mitigation plan in achieving its goal." Section 5 of this report is intended to complete that annual obligation.

1.5 2004 Amended Stipulation and Order

The Stip/Order, Section 11, requires that on or about May 1 of each year LADWP shall complete and release an annual report that is in conformance with Section III.H of the 1997 MOU. This report is intended to fulfill that requirement.

2. **OWENS VALLEY OPERATIONS PLAN FOR RUNOFF YEAR 2013-14**

2. OWENS VALLEY OPERATIONS PLAN FOR RUNOFF YEAR 2013-14

This year's annual operations plan and pumping program is consistent with the management strategy of the Water Agreement between the County of Inyo (County) and the City of Los Angeles (City) dated October 18, 1991. As stated in the Water Agreement:

> *The overall goal of managing the water resources within Inyo County is to avoid certain described decreases and changes in vegetation and to cause no significant effect on the environment which cannot be acceptably mitigated while providing a reliable supply of water for export to Los Angeles and for use in Inyo County.*

The overall goal of the Water Agreement: environmental protections and a reliable water supply are the basis of the Los Angeles Department of Water and Power's (LADWP) operations plans. Groundwater pumping in the Owens Valley is managed in conformance with the provisions of the Water Agreement. The Water Agreement provides:

> *By April 20th of each year, the Department shall prepare and submit to the Inyo County Technical Group a proposed operations plan and pumping program for the twelve (12) month period beginning on April 1st. (In the event of two consecutive dry years when actual and forecasted Owens Valley runoff for the April to September period is below normal and averages less than 75 percent of normal, the Department shall prepare a proposed plan for the six (6) month period beginning on April 1st and October 1st, and submit such plans by April 20th and October 20th.)*

2.1. Eastern Sierra Runoff Forecast

The Eastern Sierra Runoff Forecast for the 2013-14 runoff year (Table 1) is based on snow surveys of key Eastern Sierra watersheds in Inyo and Mono counties that contribute the majority of runoff water into the Owens Valley. The Eastern Sierra Runoff Forecast is used for planning aqueduct operations. The forecast Eastern Sierra runoff for 2013-14 runoff year is 220,900 acre-feet, or about 54% of the 1961-2010 long-term average annual runoff value of 412,284 acre-feet.

For the period of April 1 through September 30, 2012, Eastern Sierra runoff was approximately 154,608 acre-feet, or 51% of long term average value of 303,903 acre-feet. The forecast runoff for the period between April 1 through September 30, 2013 is 140,500 acre-feet for the Owens River Basin or 46% of the long term average.

Figure 1 summarizes Owens Valley runoff and groundwater pumping by LADWP since the 1971 runoff year.

Table 1. Owens Valley Runoff Forecast for 2013-14 Runoff Year

2013 EASTERN SIERRA RUNOFF FORECAST
April 1, 2013

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:	64,600	62%	75%	50%	103,522
OWENS RIVER BASIN:	140,500	46%	59%	33%	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:	80,600	66%	79%	53%	122,333
OWENS RIVER BASIN:	220,900	54%	66%	41%	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.

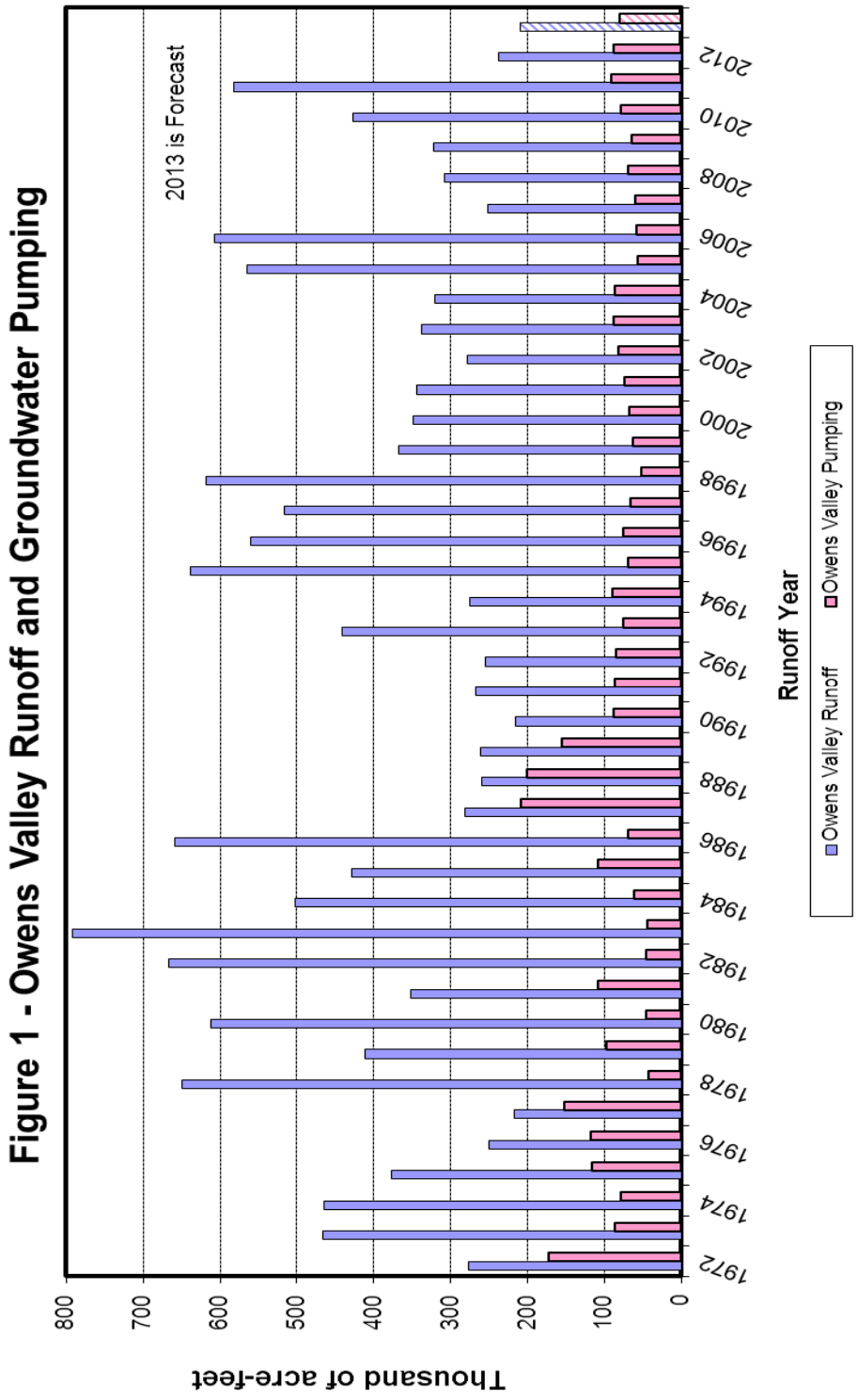

Figure 1. Owens Valley Runoff and Groundwater Pumping

2.2. Owens Valley Groundwater Production

LADWP has prepared its 2013-14 Annual Owens Valley Operations Plan based on the goals and principles of the Water Agreement. The 2013-14 Annual Owens Valley Operations Plan is designed to avoid adverse impacts to the environment while providing a reliable supply of water for in-valley uses and export to Los Angeles for municipal use.

Under the terms of the Water Agreement, the acceptable amount of groundwater pumping from each Owens Valley well field is based on the ON/OFF status of monitoring sites located within each well field and the capacity of the wells linked to those sites (see Water Agreement Sections V.B and V.C). The Water Agreement or Technical Group has designated certain town supply wells, irrigation supply wells, fish hatchery supply wells, enhancement/mitigation (E/M) project supply wells, and other wells determined not to significantly impact areas with groundwater dependent vegetation as exempt from the ON/OFF provisions of the Water Agreement. These exempt wells may be pumped for their intended purpose. Table 2 lists the ON/OFF status of the monitoring sites within the Owens Valley as of April 2013.

Table 3 provides a breakdown of available annual pumping capacity and planned groundwater pumping for the first six months of the 2013-14 runoff year by well field. Pursuant to Water Agreement Section V.D, LADWP shall submit a plan for the second six months of the runoff year on or about October 20, 2013. Table 3 also shows the monitoring sites in ON status as of April 2013, the wells associated with the ON status monitoring sites, and the exempt wells in each well field. Approximately 134,411 acre-feet of water are available for groundwater pumping from Owens Valley well fields under the terms of the Water Agreement during the 2013-14 runoff year. LADWP plans to pump between 44,610 and 54,660 acre-feet during the first six months of the 2013-14 runoff year. Groundwater pumping will provide water for Owens Valley uses and Los Angeles municipal supply. Working with the Inyo/Los Angeles Technical Group, LADWP will monitor Owens Valley environmental conditions to assess if further changes to the planned pumping are needed. LADWP's 2013-14 conservative groundwater management approach is in keeping with the environmentally conservative pumping plans advocated by the Standing Committee during the dry years of the early 1990s. While LADWP plans to pump considerably less groundwater than made available under Water Agreement Section V, the Inyo/Los Angeles Standing Committee may agree upon additional reductions in groundwater pumping pursuant to Water Agreement Section IV.A. To that end, LADWP has requested Inyo County to consider temporary nominal reductions in irrigation during the current runoff year, which will facilitate additional reductions in groundwater pumping.

Figure 2 compares the amount of Owens Valley groundwater pumping provided by the provisions of Water Agreement and the actual groundwater pumping by LADWP for each runoff year since 1992 (available pumping was not calculated prior to 1992). LADWP's anticipated pumping for the 2013-14 runoff year is consistent with its past conservative pumping plans. LADWP is committed to conducting its operations in a conservative, responsible, and environmentally sustainable manner.

In addition to complying with the ON/OFF provisions and the environmental protection goals of the Water Agreement, LADWP's 2013-14 pumping program considers the groundwater mining provisions of the Green Book. Table 4 shows the latest update of the mining calculations based on the procedures described in Section IV.C of the Green Book. As shown in this table, none of the well fields in the Owens Valley will be in deficit by the end of the first half of the 2013-14 runoff year.

Table 5 is a list of Owens Valley wells exempted under the Water Agreement or by approval of the Technical Group from linkage to vegetation monitoring sites and the ON/OFF provisions. The table includes a list of wells by well number, general location of the exempt well, and the reason the well is exempt.

Table 6 details planned groundwater pumping for the first six months of the 2013-14 runoff year on a month-to-month basis for each well field. Pumping for town water systems, fish hatcheries, and enhancement/mitigation (E/M) projects is included in the pumping distribution. Owens Valley groundwater production for the 2013-14 runoff year is consistent with the provisions of the Water Agreement. No additional testing of wells subject to the Water Agreement is included in this year's planned pumping total and if performed, will be in addition to the planned pumping for 2013-14. Planned pumping may be increased to provide freeze protection for the Los Angeles Aqueduct (LAA).

The following is a discussion of the planned pumping program by well field. Figures 3, 4, and 6 through 10 locate LADWP's Owens Valley pumping wells by well field. These figures show the location of production wells, monitoring wells, and vegetation monitoring sites in each area.

Table 2. Soil/Vegetation Water Balance Calculations for April 2013 According to Section III of the Green Book

Table 2 - Soil / Vegetation Water Balance Calculations for April 2013 According to Section III of the Green Book

Site	Oct 2012 Soil AWC (cm)	50% Annual Precip. (cm)	Proj. soil AWC (cm)	Oct. 2012 Veg. Water Req./ Water Req. for Well Turn-On (cm)	Oct 2012 Status	April 2013 soil AWC (cm)	April 2013 Status	Soil AWC Req. for Well Turn-On (cm)
L1	2.1	NA	2.1	12.3/15.6	OFF	3.5	**OFF**	15.6, OFF 7-10
L2	17.5	7.9	25.4	9.1/NA	ON	18.6	**ON**	NA
L3	7.4	NA	7.4	12.0/25.2	OFF	14.1	**OFF**	25.2, OFF 10-11
BP1	5.4	NA	5.4	15.3/22.9	OFF	5.9	**OFF**	22.9H, OFF 10-97
BP2	2.4	NA	2.4	13.9/28.4	OFF	2.1	**OFF**	28.4, OFF 7-98
BP3	5.0	NA	5	10.6/10.6	OFF	4.3	**OFF**	10.6, OFF 7-12
BP4	49.6	8.2	57.8	14.1/NA	ON	49.9	**ON**	NA
TA3	7.3	NA	7.3	25.0/26.0	OFF	7.6	**OFF**	26.0, OFF 10-11
TA4	14.5	NA	14.5	17.3/23.3	OFF	17.5	**OFF**	23.3, OFF 10-11
TA5	20.7	8.2	28.9	6.2/NA	ON	20.8	**ON**	NA
TA6	9.1	NA	9.1	25.5/17.6	OFF	8.5	**OFF**	17.6, OFF 10-11
TS1	1.5	NA	1.5	8.3/20.4	OFF	1.5	**OFF**	20.4H, OFF 10-96
TS2	8.0	7.3	15.3	7.4/NA	ON	9.4	**ON**	NA
TS3	23.9	7.3	31.2	32.9/NA	OFF	31.3	**OFF**	32.9, OFF 10-12
TS4	29.9	NA	29.9	51.7/55.9	OFF	42.4	**OFF**	55.9, OFF 10-11
IO1	26.3	NA	26.3	88.8/42.2	OFF	28.5	**OFF**	42.2, OFF 10-98
IO2	3.7	NA	3.7	10.7/18.9	OFF	4.2	**OFF**	18.9, OFF 7-11
SS1	24.3	6.5	30.8	26.6/NA	ON	24.4	**ON**	NA
SS2	3.3	NA	3.3	11.9/25.6	OFF	3	**OFF**	25.6, OFF 7-11
SS3	22.9	NA	22.9	24.4/33.8	OFF	23.5	**OFF**	33.8, OFF 10-11
SS4	6.1	NA	6.1	7.7/15.9	OFF	7.2	**OFF**	15.9, OFF 7-05
BG2	27.5	6.6	34.1	12.1/NA	ON	24.7	**ON**	NA

H - 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 to the Greenbook equations in section III.D.2, p. 57-59.

Table 3. Annual Pumping Capacity According to Monitoring Sites with ON Status and Planned Pumping for the First Six Months of Runoff Year 2013-14

Wellfield	Monitoring	Associated Production Wells	Available Capacity (AF)	Planned Pumping (AF)
Laws	L2	236, 239, 243, 244	10,426	
	L5*	245, 387, 388	9,122	
	Exempt	236**, 354, 365, 413	3,337	
	Wellfield Pumpage		**22,885**	**5,760-7,200**
Bishop				
	All wells	140, 371, 406, 407, 408, 410, 411, 412	18,000	
	Wellfield Pumpage		**18,000**	**9,000**
Big Pine				
	BP4	331	7,530	
	Exempt	218, 219, 330, 332, 341, 352, 415	28,750	
	Wellfield Pumpage		**36,280**	**11,500-12,900**
Taboose Aberdeen				
	TA5	349	12,091	
	Exempt	118	2,462	
	Wellfield Pumpage		**14,553**	**4,200-7,380**
Thibaut Sawmill				
	TS2	155	796	
	Exempt	351, 356	13,200	
	Wellfield Pumpage		**13,996**	**6,600**
Indep. - Oak				
	Exempt	59, 60, 61, 65, 357, 383EM, 384EM, 401	13,973	
	Wellfield Pumpage		**13,973**	**5,280-6,600**
Symmes Shepherd				
	SS1	69, 392, 393	8,254	
	Exempt	402EM	1,000	
	Wellfield Pumpage		**9,254**	**3,100**
Bairs Georges	BG2	76, 343, 348, 403	4,770	
	Exempt	343	500	
	Wellfield Pumpage		**4,770**	**1,320**
Lone Pine	Exempt	344, 346, 390	700	
	*	416		
	Wellfield Pumpage		**700**	**560**
	Owens Valley Total		**134,411**	**47,370-54,660**

* Monitoring site has yet to be located.

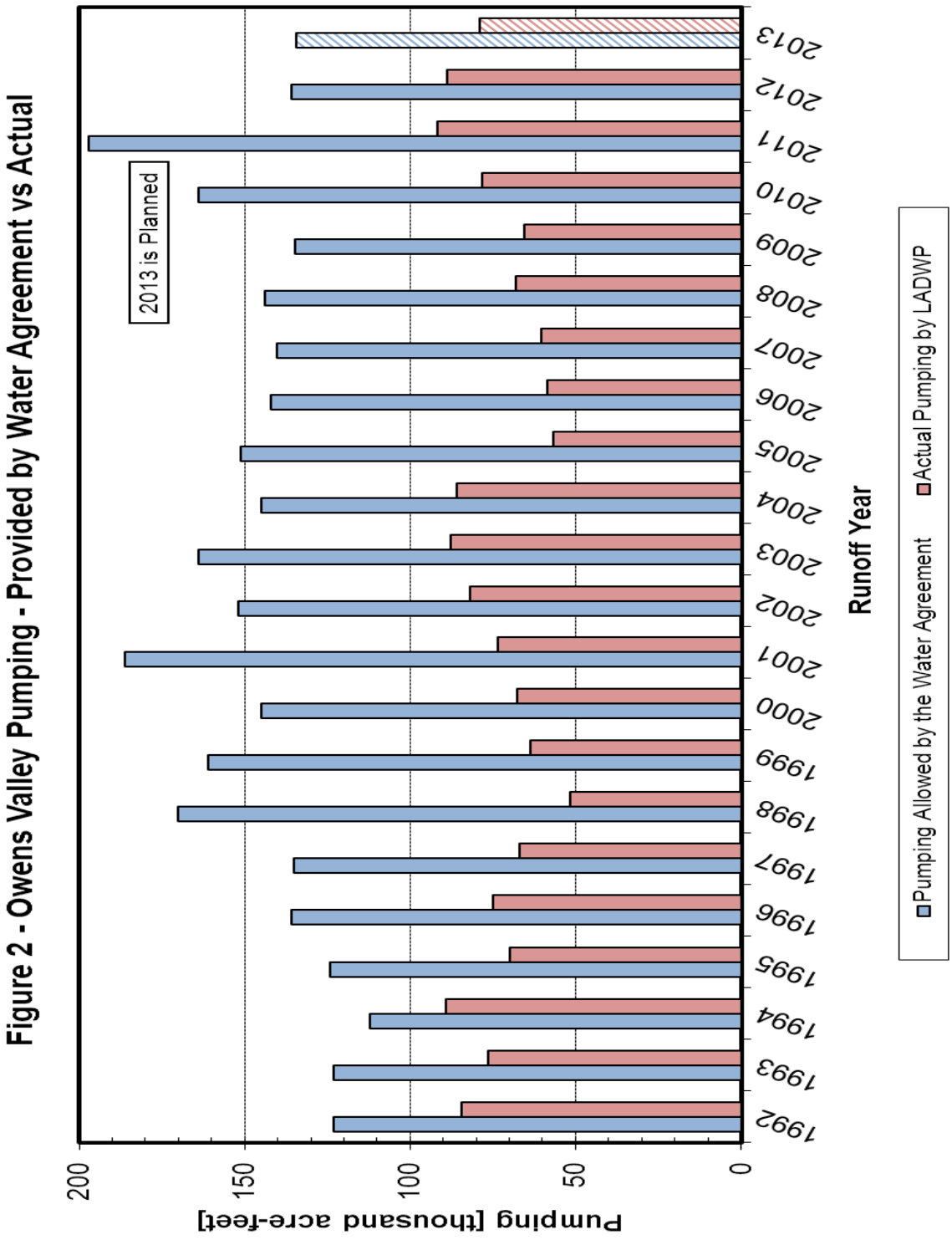

Figure 2. Owens Valley Pumping – Provided by Water Agreement vs Actual

Table 4 - Summary of Recharge and Pumping for Water Year 1994 - 2012 and Estimated Pumping Limit for Apr-Sep 2013 in Acre-Feet

Water	OWENS VALLEY	LAWS		BISHOP		BIG PINE		TABOOSE-THIBAUT		IND-SYM-BAIRS		LONE PINE		OWENS VALLEY	
Year	Runoff Percent	Recharge	Pumping	Recharge	Pumping	Recharge	Pumping	Recharge	Pumping	Recharge	Pumping	Recharge	Pumping	Recharge	Pumping
1994	60%	12,026	21,206	35,793	10,193	19,430	24,962	21,977	23,557	28,106	14,878	11,554	1,281	128,885	96,077
1995	137%	28,115	7,053	55,397	4,799	38,758	21,970	46,375	17,121	55,103	12,631	22,296	1,037	246,044	64,611
1996	123%	12,588	11,535	50,754	9,153	33,228	24,331	42,097	19,906	51,113	12,382	19,757	1,106	209,537	78,413
1997	125%	15,237	8,349	49,949	9,606	33,474	24,002	42,837	21,774	52,100	9,461	19,962	1,128	213,559	74,320
1998	139%	28,195	470	55,309	7,159	40,065	23,729	46,845	16,496	55,605	7,946	20,341	1,365	246,361	57,165
1999	95%	18,546	1,697	42,388	8,672	28,013	21,832	32,426	16,700	41,090	8,424	15,481	2,141	177,944	59,466
2000	80%	11,102	3,974	39,539	10,804	23,213	20,212	27,567	23,143	37,015	8,497	14,344	1,036	152,780	67,666
2001	77%	12,259	2,295	38,772	10,176	22,695	26,785	27,960	17,247	33,469	8,685	13,520	1,942	148,674	67,130
2002	63%	11,184	3,480	35,514	10,839	19,715	26,885	22,495	25,288	28,820	10,599	12,103	1,345	129,831	78,436
2003	75%	11,454	5,786	38,486	11,407	21,883	25,885	26,166	27,387	32,455	14,294	13,088	1,179	143,532	85,938
2004	71%	11,138	7,412	37,149	11,777	21,126	26,149	25,044	25,159	29,771	15,750	11,357	1,119	135,586	87,366
2005	120%	18,389	3,841	47,471	7,093	32,686	19,423	40,500	18,674	46,441	18,585	17,191	1,128	202,678	68,744
2006	138%	35,336	3,013	54,337	5,667	39,650	20,686	47,757	15,707	53,873	9,944	19,956	1,119	250,911	56,136
2007	64%	10,947	7,840	34,470	10,516	19,757	20,525	25,855	14,578	27,624	10,674	10,454	1,100	129,108	65,233
2008	68%	10,855	7,939	35,850	10,228	20,432	20,243	28,619	18,542	27,739	9,219	11,563	858	135,078	67,029
2009	73%	11,049	6,233	37,416	12,123	21,555	22,891	29,385	14,751	29,359	9,603	12,147	775	140,912	66,376
2010	93%	11,154	6,333	41,987	10,509	26,566	22,514	35,541	20,239	36,863	13,031	14,252	626	166,362	73,252
2011	134%	17,375	7,188	52,182	9,889	35,539	27,089	47,562	21,933	50,619	15,428	19,057	1,087	222,333	82,614
2012	72%	11,058	9,514	37,315	11,134	21,297	27,220	28,369	26,156	28,905	16,570	11,538	1,048	138,482	91,642
2013 (a)	52%	10,547	667	30,756	2,439	15,352	13,099	19,250	11,115	21,519	6,949	9,212	187	106,636	37,388
(b) TOTAL		308,726	128,339	855,609	183,826	539,264	461,201	670,442	396,355	773,508	232,356	301,044	22,925	3,448,592	1,425,002
Estimated Apr-Sep 2013 Pumping Limit			180,387		671,783		78,063		274,087		541,152		278,119		2,023,590

(a) Estimated Recharge for the 2013 Water Year; Approximate Pumping for First Half of Water year 2013 (Oct-Mar).

(b) Estimated 20 Year Total for Recharge; actual 19.5 Year Total for Pumping.

Table 5. Exempt Wells in Owens Valley

LADWP Groundwater Pumping Wells Exempt from Water Agreement ON/OFF Provisions

Revised June 22, 2010

Well Number	Well Field	Duration	Reason
354 p[1]	Laws	Annual	Sole Source-Town Supply
413 b[1]	Laws	Annual	Sole Source-Town Supply and E/M Supply
341 b[1]	Big Pine	Annual	Sole Source-Town Supply
352 b[1]	Big Pine	Annual	Same as above
415 p[1] [6]	Big Pine	Annual	Same as above
357 p[1]	Independence-Oak	Annual	Same as above
384 b[1] [2]	Independence-Oak	Annual	Same as above
344 p[1]	Lone Pine	Annual	Same as above
346 b[1]	Lone Pine	Annual	Same as above
330[3]	Big Pine	Annual	Sole Source-Fish Hatcheries
332[3]	Big Pine	Annual	Same as above
409[3]	Big Pine	Annual	Same as above
351	Thibaut-Sawmill	Annual	Same as above
356	Thibaut-Sawmill	Annual	Same as above
218	Big Pine	Annual	No impact on areas with groundwater dependent vegetation
219	Big Pine	Annual	Same as above
118	Taboose-Aberdeen	Annual	Same as above
401	Independence-Oak	Annual	Same as above
59	Independence-Oak	Annual	Same as above
60	Independence-Oak	Annual	Same as above
65	Independence-Oak	Annual	Same as above
383 E/M	Independence-Oak	Annual	Same as above
384 E/M[2]	Independence-Oak	Annual	Same as above
61	Independence-Oak	Irrigation season	Sole Source-Irrigation; no impact on areas with groundwater dependent vegetation
402 E/M	Symmes-Shepherd	Irrigation season	Same as above
390 E/M	Lone Pine	Irrigation season	Same as above
343	Bairs-Georges	Irrigation season in below average runoff years	Sole Source-Irrigation in below average runoff years
365[4]	Laws	Annual	Sole Source-Irrigation; no impact on areas with groundwater dependent vegetation
236[4]	Laws	Irrigation Season	Sole Source-Irrigation
413 E/M[5]	Laws	Irrigation Season	Sole Source-Irrigation

1. Primary town supply well is designated by p; Backup town supply well is designated by b.
2. Well 384 is a dual purpose well, water to Enhancement/Mitigation (E/M) supply is indicated by 384 and Independence domestic supply is indicated as 384 b.
3. Wells 330, 332, and 409 may only be pumped two at a time, unless pumped for testing or emergencies.
4. Well 365 designated as primary and Well 236 designated as backup irrigation supply.
5. Well 413 is a dual purpose well. Water is supplied to the Laws Museum Irrigation Projects east and west of the museum and Laws domestic supply is indicated as 413b.
6. Currently not pump-equipped.

Table 6. Planned Owens Valley Pumping for the First Six Months of 2013-14 Runoff Year (acre-feet)

Month	Laws	Bishop	Big Pine	Taboose-Aberdeen	Thibaut-Sawmill	Indep.-Oak	Symmes-Shepherd	Bairs-Georges	Lone Pine	TOTAL
April	960-1,200	1,500	2,150	1,230	1,100	880-1,100	860	300	100	9,080-9,540
May	960-1,200	1,500	2,150	1,230	1,100	880-1,100	860	300	100	9,080-9,540
June	960-1,200	1,500	2,150	1020-1,230	1,100	880-1,100	860	180	90	8,740-9,410
July	960-1,200	1,500	1,700-2,150	240-1,230	1,100	880-1,100	180	180	90	6,830-8,730
August	960-1,200	1,500	1,700-2,150	240-1,230	1,100	880-1,100	170	180	90	6,820-8,720
September	960-1,200	1,500	1,700-2,150	240-1,230	1,100	880-1,100	170	180	90	6,820-8,720
TOTAL	5,760-7,200	9,000	11,550-12,900	4,200-7,380	6,600	5,280-6,600	3,100	1,320	560	47,370-54,660

Laws Well Field (Figure 3)

Monitoring site L2 is in ON status. Production wells controlled by this monitoring site have an available production capacity of 10,426 acre-feet. Wells linked to monitoring site L5 have a capacity of 9,122 acre-feet. Exempt wells within the Laws Well Field have a capacity of 3,337 acre-feet. The sum total of available pumping capacity in the Laws Well Field is 22,885 acre-feet. Well 365 has had a reduction in production capacity and is in the process of being replaced. Well 236, associated with monitoring site L2, is used as a backup along with Well 365 as an exempt well irrigation water supply.

Planned groundwater pumping for the first half of the runoff year in the Laws Well Field is between approximately 5,760 to 7,200 acre-feet, contingent on water needs and environmental conditions. Groundwater pumping is planned to supply Owens Valley demands including the town water system, E/M projects, and irrigated lands. LADWP has requested that Inyo County consider a temporary 20% reduction in groundwater pumping to supply irrigation water in the Laws Wellfield for the 2013-14 runoff year. If the Inyo/Los Angeles Standing Committee agrees to reduce pumping for irrigation in the Laws Wellfield, pumping for the first half of the runoff year will be approximately 5,800 acre-feet.

Bishop Well Field (Figure 4)

Pumping in the Bishop Well Field is governed by the provisions of the Hillside Decree and the Water Agreement, which limit LADWP's annual groundwater extractions (pumping and flowing wells) from the Bishop Cone to an amount commensurate with the total amount of water used on City-owned lands on the Bishop Cone (including conveyance and other losses). Under the current audit protocols, total water used on City-owned lands within the Bishop Cone area is approximately 29,000 acre-feet per year. The current total available groundwater extraction capacity in the Bishop Well Field is approximately 18,000 acre-feet. The planned groundwater pumping from the Bishop Well Field is 9,000 acre-feet for the first half of the 2013-14 runoff year, contingent on water needs and environmental conditions.

Figure 5 shows water use on City-owned land on Bishop Cone in comparison to the groundwater extractions (flowing and pumping wells) for runoff years 1996 to present.

The current Bishop Cone Audit does not include a number of known uses and losses, including some uses that are currently being measured. These unaccounted for uses should be added to the total Bishop Cone Audit and the audit protocols should be revised to more accurately reflect actual uses and losses.

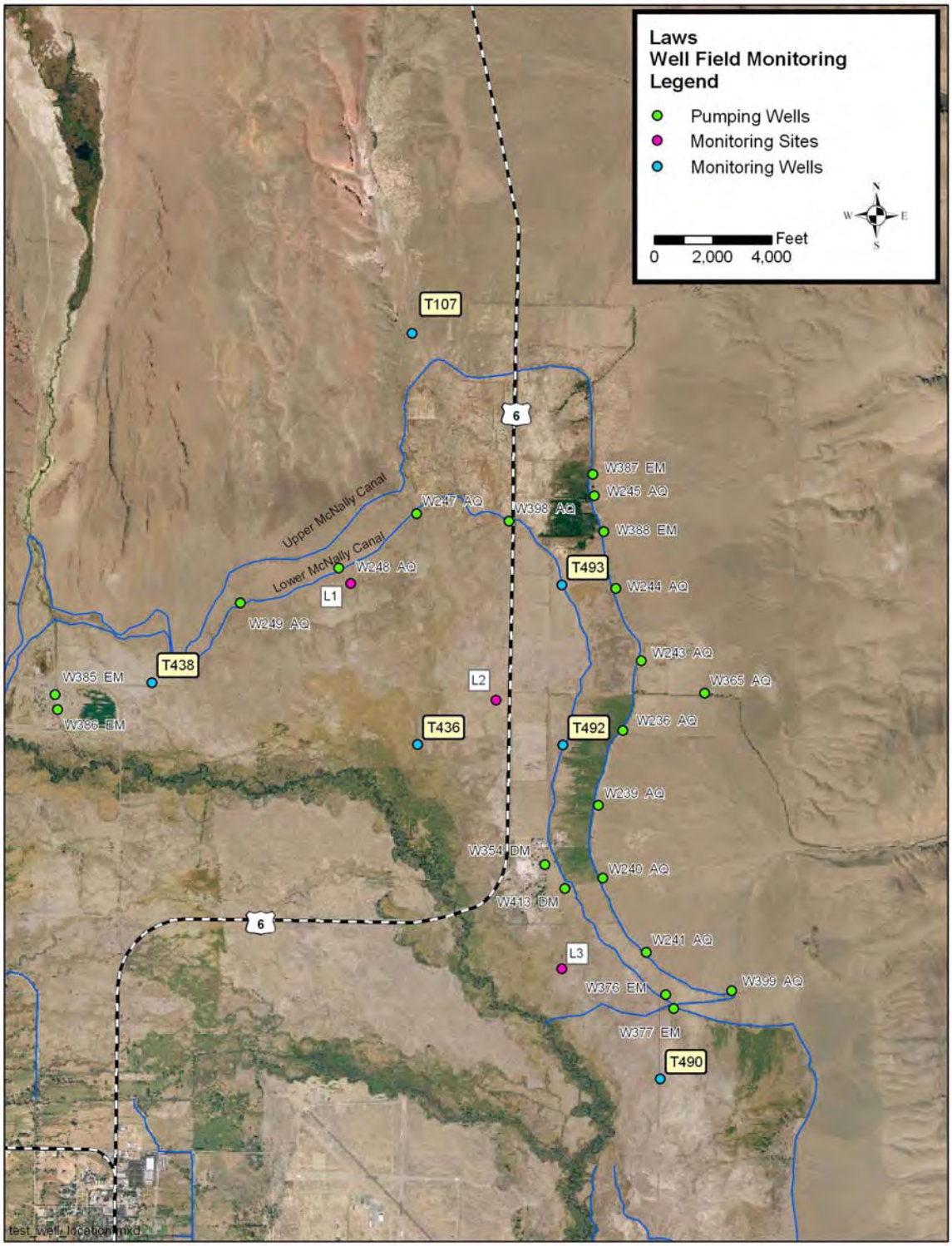

Figure 3. Laws Well Field

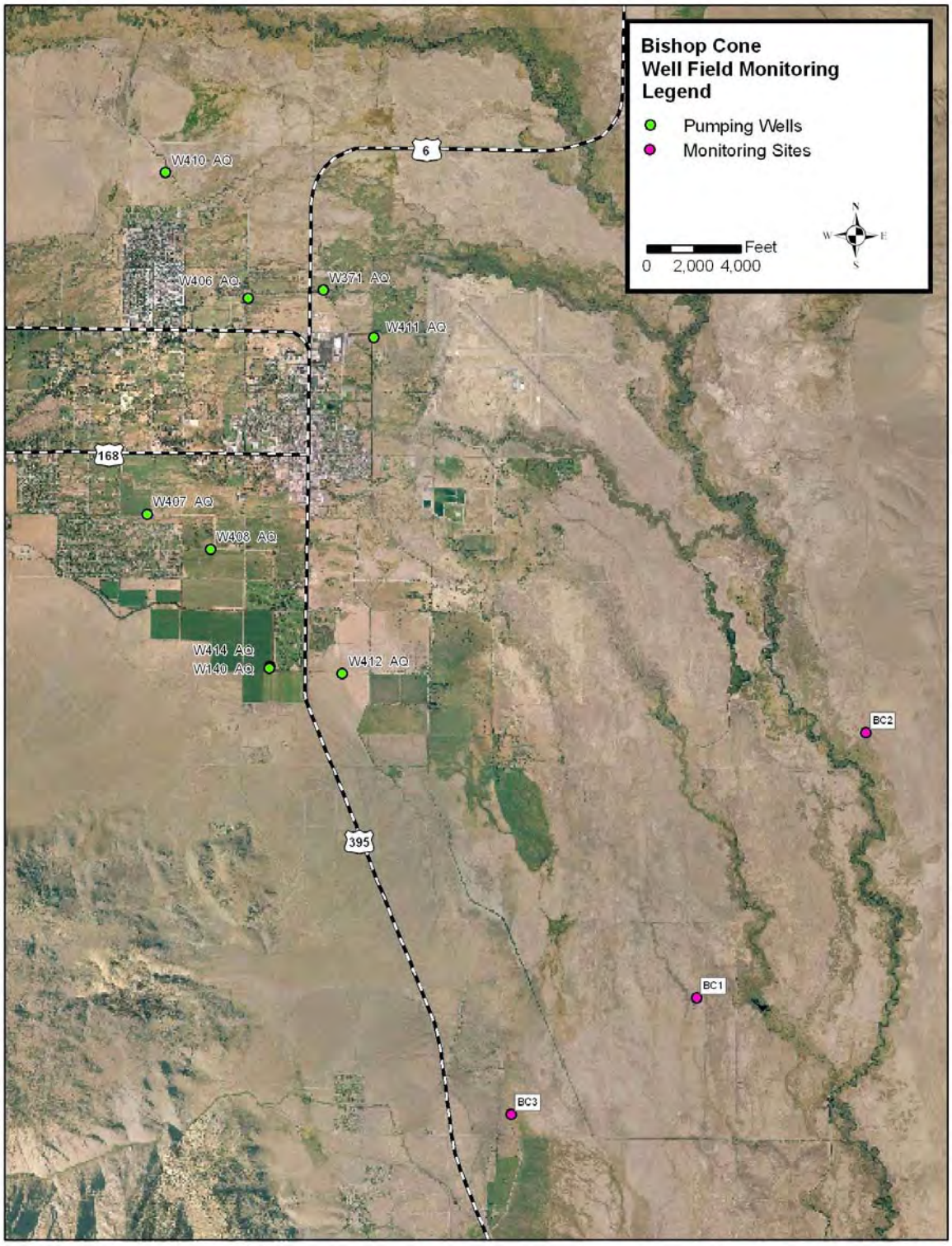

Figure 4. Bishop Well Field

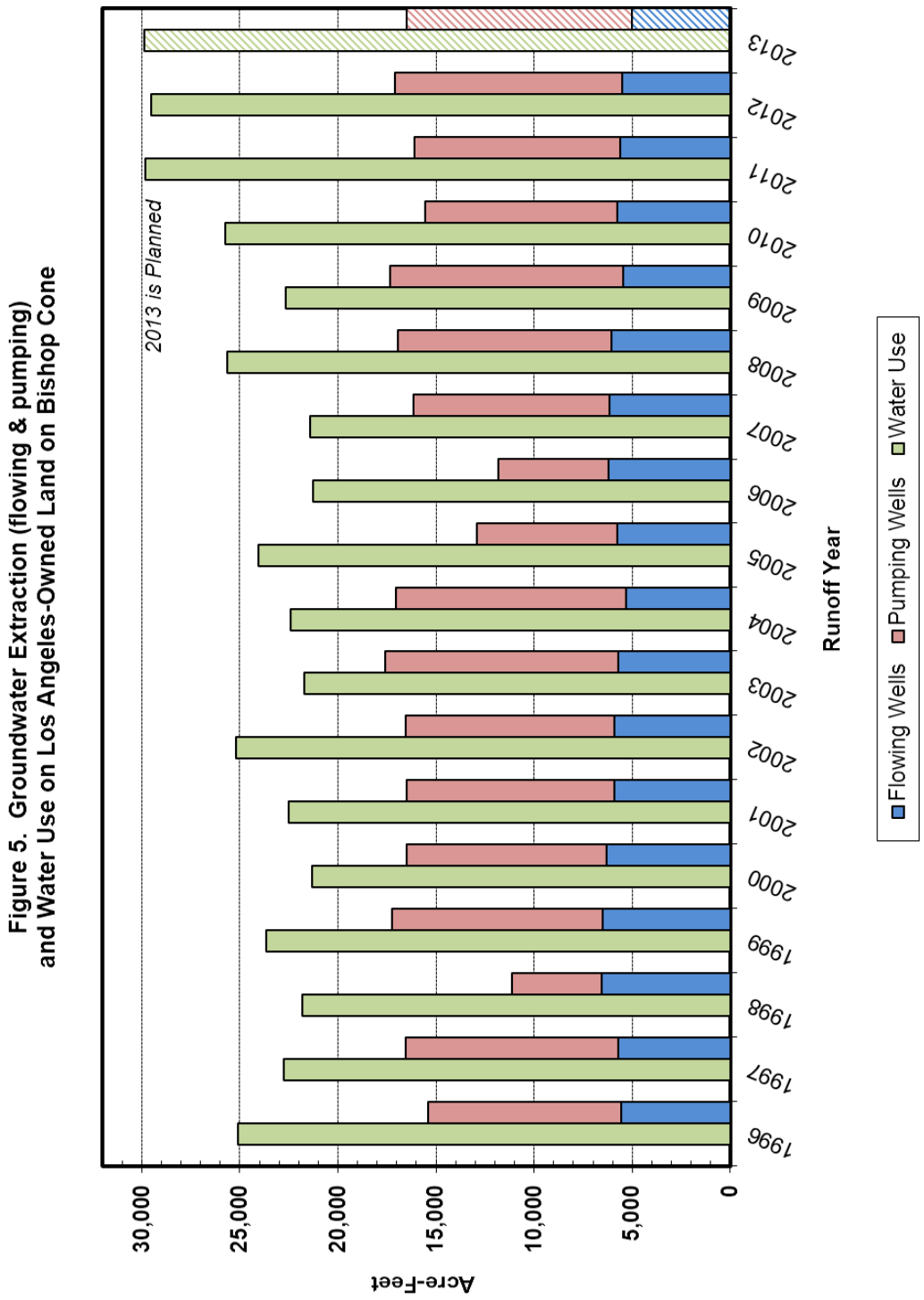

Figure 5. Groundwater Extraction (flowing & pumping) and Water Use on Los Angeles-Owned Land on Bishop Cone

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Big Pine Well Field (Figure 6)

Monitoring sites BP4 is in ON status. Production Well 331, managed in conjunction with monitoring site BP4, has a production capacity of 7,530 acre-feet. Exempt wells including Well 218, Well 219, town supply wells, and Fish Springs Fish Hatchery wells in the Big Pine Well Field have a combined capacity of 28,750 acre-feet. The total available capacity in the Big Pine Well Field is 36,280 acre-feet. The total planned pumping in the Big Pine Well Field is for the first six months of the 2013-14 runoff year is between approximately 11,500 acre-feet and 12,900 acre-feet, contingent on water needs and environmental conditions.

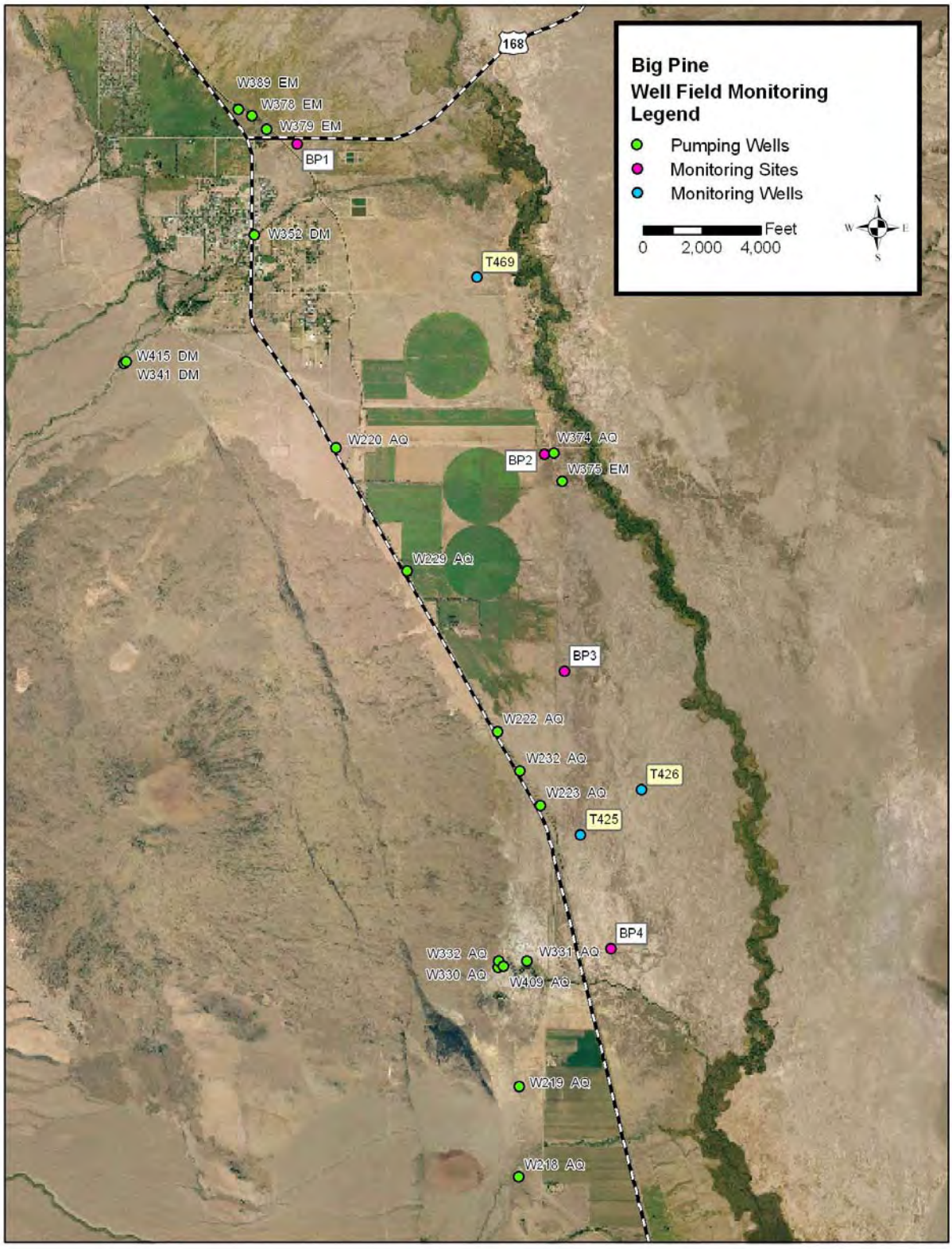


Figure 6. Big Pine Well Field

Taboose-Aberdeen Well Field (Figure 7)

Monitoring site TA5 is in ON status. Production Well 349 is controlled by monitoring site TA5 and has an available pumping capacity of approximately 12,091 acre-feet. Exempt Well 118 in the Taboose-Aberdeen Well Field has a capacity of 2,462 acre-feet. The total available groundwater pumping capacity in the Taboose-Aberdeen Well Field is 14,553 acre-feet. The planned groundwater pumping in the Taboose-Aberdeen Well Field for the first half of the 2013-14 runoff year is contingent on water needs and prevailing environmental conditions and will range between 4,200 acre-feet and approximately 7,380 acre-feet.

Thibaut-Sawmill Well Field (Figure 8)

Monitoring sites TS2 is in ON status. Production well W155, controlled by monitoring site TS2 has a production capacity of 796 acre-feet. Exempt Blackrock Fish Hatchery supply wells W351 and W356 have capacities of 13,200 acre-feet and 8,110 acre-feet respectively. Blackrock Fish Hatchery demand for the 2013-14 runoff year is expected to be between approximately 12,000 acre-feet and 13,200 acre-feet. The total available pumping capacity in the Thibaut-Sawmill Well Field for the 2012-13 runoff year is about 13,996 acre-feet. Total planned pumping in the Thibaut-Sawmill Well Field for the first half of the 2013-14 runoff year is planned to be 6,600 acre-feet, subject to hatchery demands, water needs, and environmental conditions.

Independence-Oak Well Field (Figure 8)

No monitoring sites in the Independence-Oak Well Field are in ON status. Independence-Oak exempt wells have a combined capacity of 13,973 acre-feet. The total available pumping capacity in the Independence-Oak Well Field is 13,973 acre-feet. The anticipated range of groundwater pumping in the Independence-Oak Well Field for the first six months of the 2012-13 runoff year is between 5,280 and 6,600 acre-feet, which includes water for municipal, irrigation, town, and E/M project supply. LADWP has requested Inyo County to consider a temporary 20% reduction in groundwater pumping for irrigation in the Independence-Oak Well Field during the 2013-14 runoff year. If the Inyo/Los Angeles Standing Committee agrees to reduce pumping in the Independence Well Field, groundwater pumping during the first six months of the 2013-14 runoff year will be approximately 5,300 acre-feet.

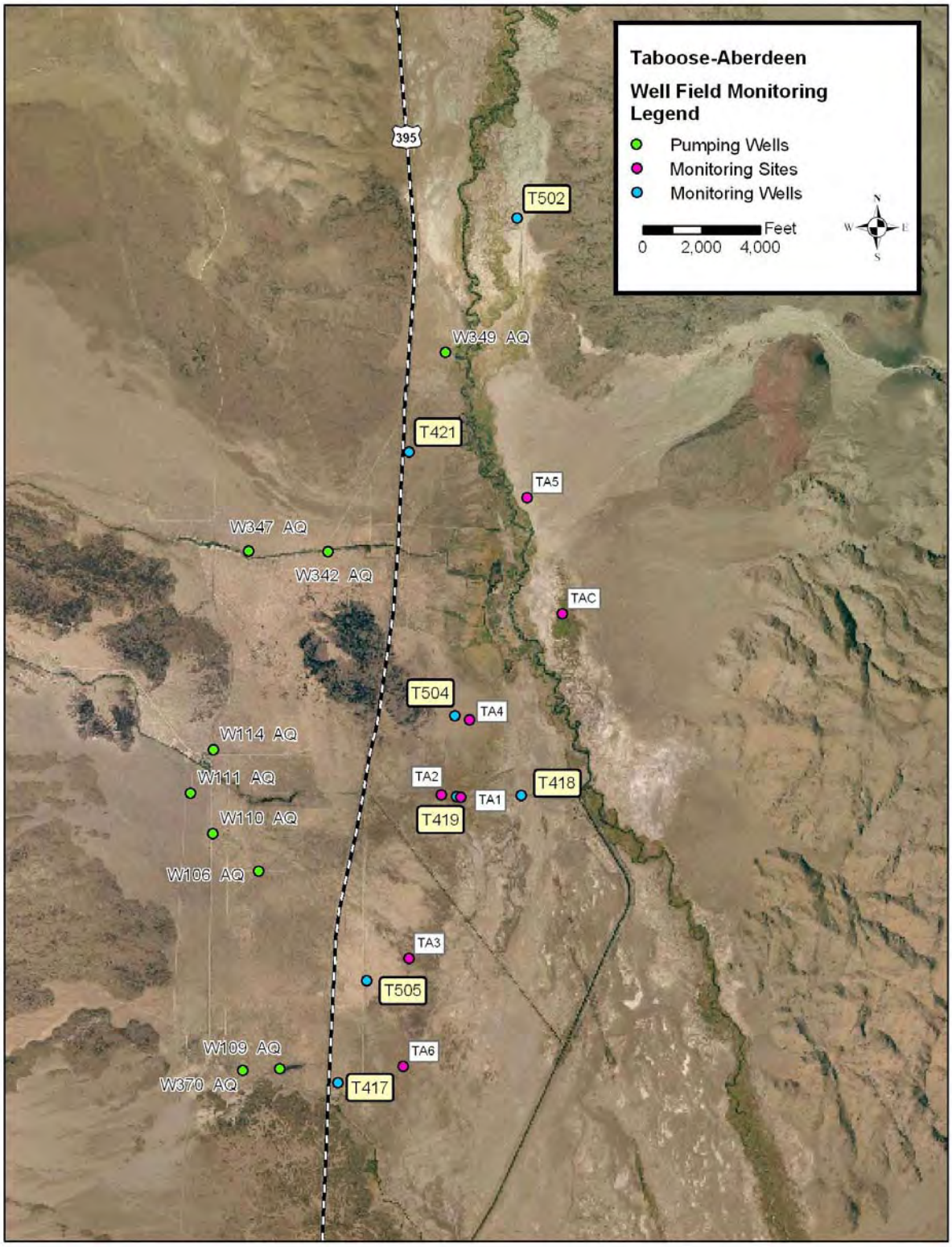


Figure 7. Taboose-Aberdeen Well Field

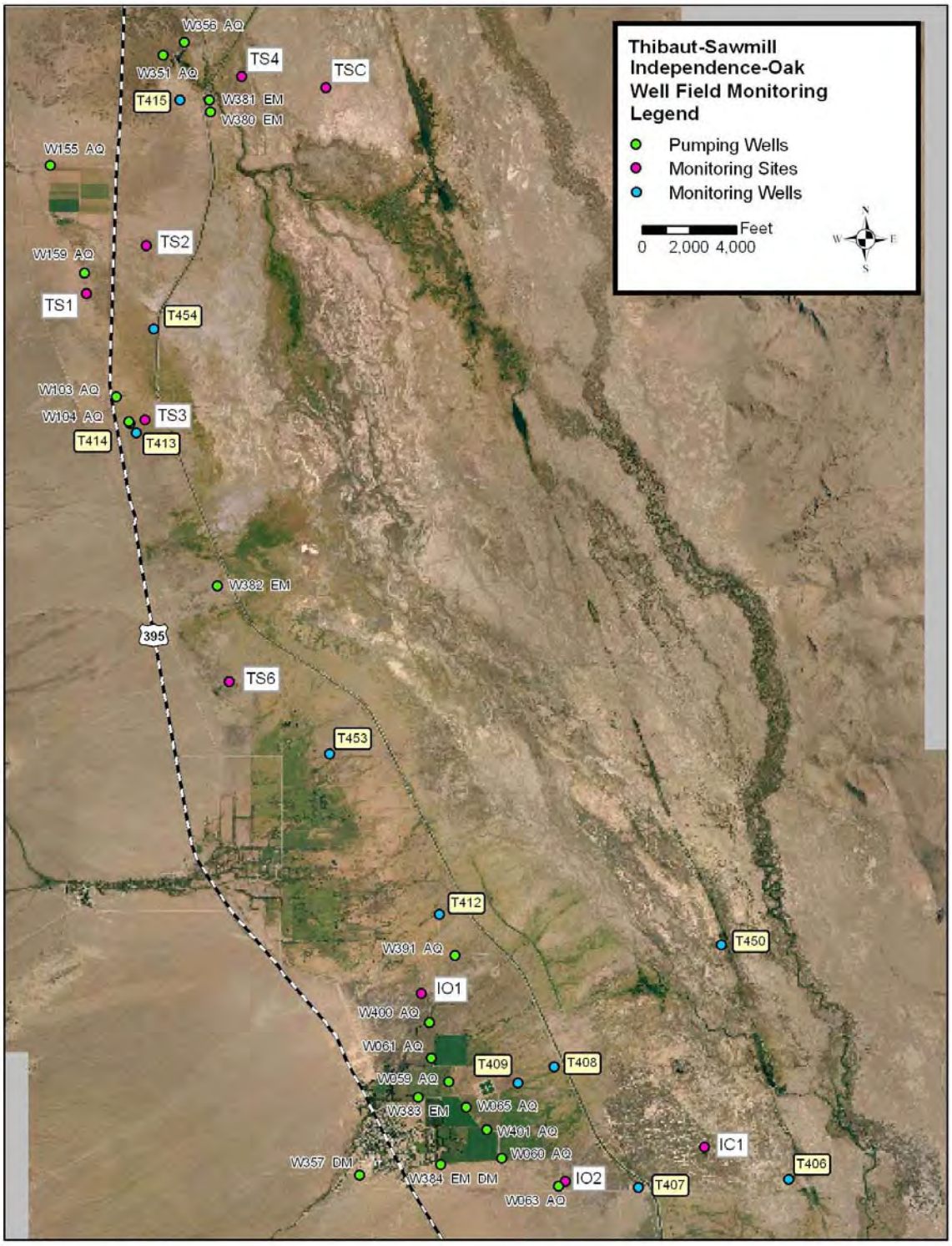


Figure 8. Thibaut-Sawmill and Independence-Oak Well Fields

Symmes-Shepherd Well Field (Figure 9)

Monitoring sites SS1 is in ON status. Monitoring site SS1 has an annual capacity of 8,254 acre-feet. Exempt Well 402 has a capacity of about 1,000 acre-feet. Total available capacity in the Symmes-Shepherd Well Field for the 2013-14 runoff year is approximately 9,254 acre-feet. The total pumping in the Symmes-Shepherd Well Field for the first six months of the 2013-14 runoff year is planned to be 3,100 acre-feet, contingent on water needs and environmental conditions.

Bairs-Georges Well Field (Figure 9)

Vegetation monitoring site BG2 is in ON status. The wells managed under this site have a combined annual capacity of 4,770 acre-feet. Exempt Well 343 has an available capacity of 500 acre-feet (based upon a six month exemption period). The total available capacity in the Bairs-Georges Well Field for the 2013-14 runoff year is 4,770 acre-feet. Groundwater pumping in the Bairs-Georges Well Field for the first six months of the runoff year is planned to be approximately 1,320 acre-feet, contingent on water needs and environmental conditions.

Lone Pine Well Field (Figure 10)

Lone Pine exempt wells are Well 344 and Well 346, and E/M project supply Well 390. These three wells have an annual capacity of approximately 700 acre-feet. Well 390 has degraded in recent years and is being replaced.

Well 416 is a production well in the Lone Pine Well Field drilled in 2002. Hydrologic testing was conducted on Well 416 during the 2009-10 runoff year. The Technical Group has been requested to designate a monitoring site for this well.

The planned groundwater pumping from the Lone Pine Well Field during the first six months of the 2013-14 runoff year is 560 acre-feet, contingent on water needs and environmental conditions.

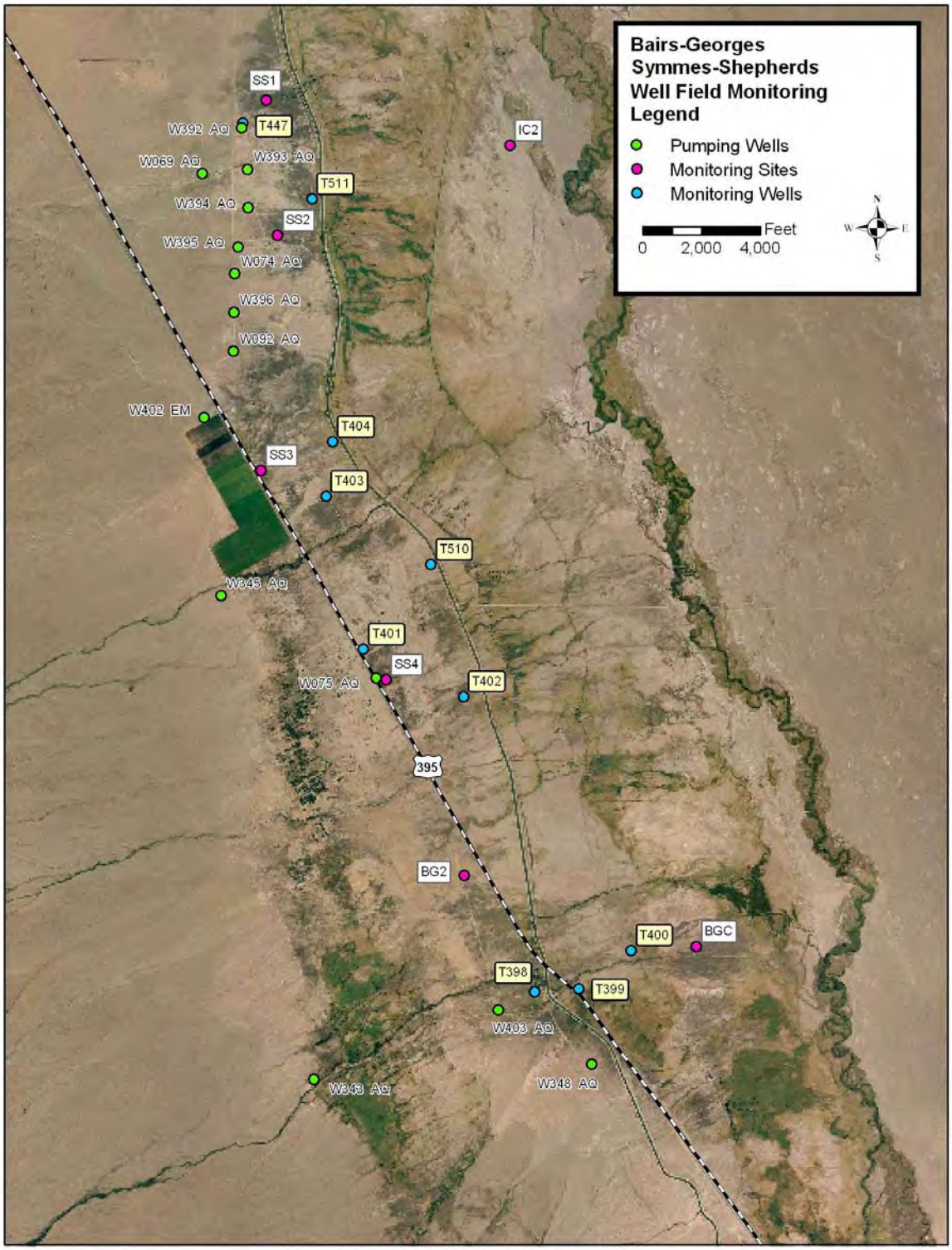


Figure 9. Bairs-Georges and Symmes-Sheperds Well Fields

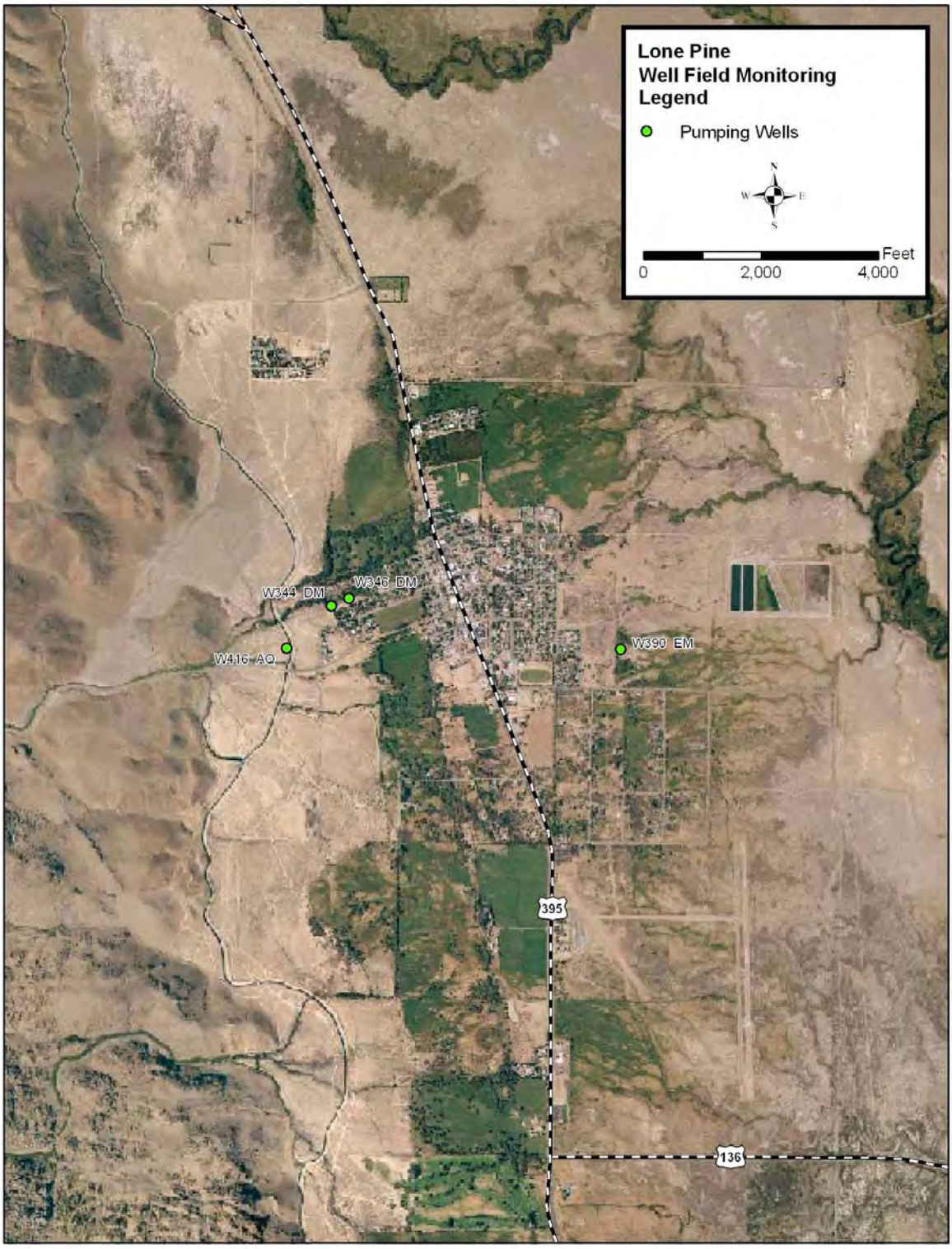


Figure 10. Lone Pine Well Field

2.3. Owens Valley Uses (Including Enhancement/Mitigation Projects)

Table 7 shows the historic (1981-82) uses and the planned monthly uses within the Owens Valley for 2013-14. The in-valley uses shown on Table 7 consist of irrigation, stockwater, recreation, and wildlife projects, E/M supply, LORP project usage, and usage pursuant to California Health and Safety Code Section 42316 for dust abatement projects on Owens Lake. As shown in Table 7 and Figure 11, LADWP plans to provide approximately 198,800 acre-feet for in-valley uses this runoff year, not including water supplied to the Owens Valley reservations.

The primary consumptive use of water in the Owens Valley is the Owens Lake Dust Mitigation Program (OLDMP). Water use in the 2012-13 runoff year by the OLDMP was 75,300 acre-feet. Depending on prevailing conditions, water use by the OLDMP in 2013-14 may be as much as 95,000 acre-feet.

Releases to the LORP from the LAA Intake facility began on December 6, 2006. An average flow of over 40 cfs is now maintained throughout the entire 62 mile stretch of the Lower Owens River, south of the Intake structure. When needed, the releases at the Intake are augmented through additional releases at the Independence, Blackrock, Georges, Locust, and Alabama Spill Gates to maintain a continuous flow of at least 40 cfs in the river channel. Table 7 shows estimated water use by the Lower Owens River on a monthly basis. Water use by the project during 2012-13 was approximately 20,900 acre-feet. Total LORP uses include the Lower Owens River, Owens Delta, Blackrock Waterfowl Management Area, and project associated losses

The Water Agreement provides that "... *enhancement/mitigation projects shall continue to be supplied by enhancement/mitigation wells as necessary*." Due to the monitoring sites controlling some of the production wells supplying E/M projects being in OFF status, the amount of water supplied to E/M projects has often exceeded the amount of water provided by E/M project supply wells. LADWP has chosen to supply certain E/M projects from surface water sources in the past. Future E/M allotments may be influenced by the availability of E/M wells and operational demands. Table 8 shows the planned water supply to E/M projects and the forecast imbalance between the E/M project water use and the E/M project groundwater supply through the end of the 2013-14 runoff year. E/M project water demands during the 2013-14 runoff year are expected to be approximately 3,000 acre-feet greater than E/M groundwater pumping. The cumulative E/M water supply shortfall is estimated to be approximately 187,866 acre-feet by the end of the runoff year.

The Technical Group is currently evaluating the water supply issues associated with the E/M projects and will provide its findings to the Inyo/Los Angeles Standing Committee. It is expected that the Standing Committee will be requested to take appropriate action necessary to ensure water supplied to E/M projects is in conformance with the provisions of the Water Agreement.

Table 7. Historic (1981-82) and Projected (2013-14) Water Uses on City-Owned Land in Owens Valley (acre-feet)

Use	April		May		June		July		August		September		TOTAL Apr-Sep	
	1981	2012	1981	2012	1981	2012	1981	2012	1981	2012	1981	2012	1981	2013
Irrigation	3,980	7,100	7,958	10,100	10,373	10,100	9,476	9,700	8,295	9,500	6,321	6,000	**46,403**	**52,500**
Stockwater	1,141	1,000	1,319	1,000	1,244	1,000	1,245	1,050	1,219	1,050	1,319	900	**7,487**	**6,000**
E / M	0	1,000	0	1,200	0	1,300	0	1,700	0	1,700	0	1,200	**0**	**8,100**
LORP	0	1,400	0	2,700	0	4,300	0	4,600	0	2,700	0	2,300	**0**	**18,000**
Owens Lake	0	13,200	0	13,200	0	12,700	0	3,000	0	8,600	0	12,700	**0**	**63,400**
Rec. & Wildlife	379	570	804	950	1,160	1,050	1,455	1,400	1,381	1,100	1,406	950	**6,585**	**6,020**
Total	***5,500***	***24,270***	***10,081***	***29,150***	***12,777***	***30,450***	***12,176***	***21,450***	***10,895***	***24,650***	***9,046***	***24,050***	***60,475***	***154,020***

Use	October		November		December		January		February		March		TOTAL Oct-Mar		TOTAL Apr-Mar	
	1981	2012	1981	2012	1981	2012	1982	2013	1982	2013	1982	2013	81-82	13-14	81-82	13-14
Irrigation	263	200	0	0	0	0	0	0	0	0	14	100	**277**	**300**	**46,680**	**52,800**
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**	**11,000**
E / M	0	300	0	100	0	100	0	100	0	100	0	100	**0**	**800**	**0**	**8,900**
LORP	0	1,000	0	500	0	700	0	500	0	400	0	900	**0**	**4,000**	**0**	**22,000**
Owens Lake	0	10,800	0	3,900	0	2,000	0	2,000	0	3,900	0	9,000	**0**	**31,600**	**0**	**95,000**
Rec. & Wildlife	781	900	713	550	565	500	478	400	342	300	447	430	**3,326**	**3,080**	**9,911**	**9,100**
Total	***2,109***	***14,100***	***1,758***	***5,850***	***1,615***	***4,100***	***1,485***	***3,800***	***1,352***	***5,500***	***1,559***	***11,430***	***9,878***	***44,780***	***70,353***	***198,800***

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

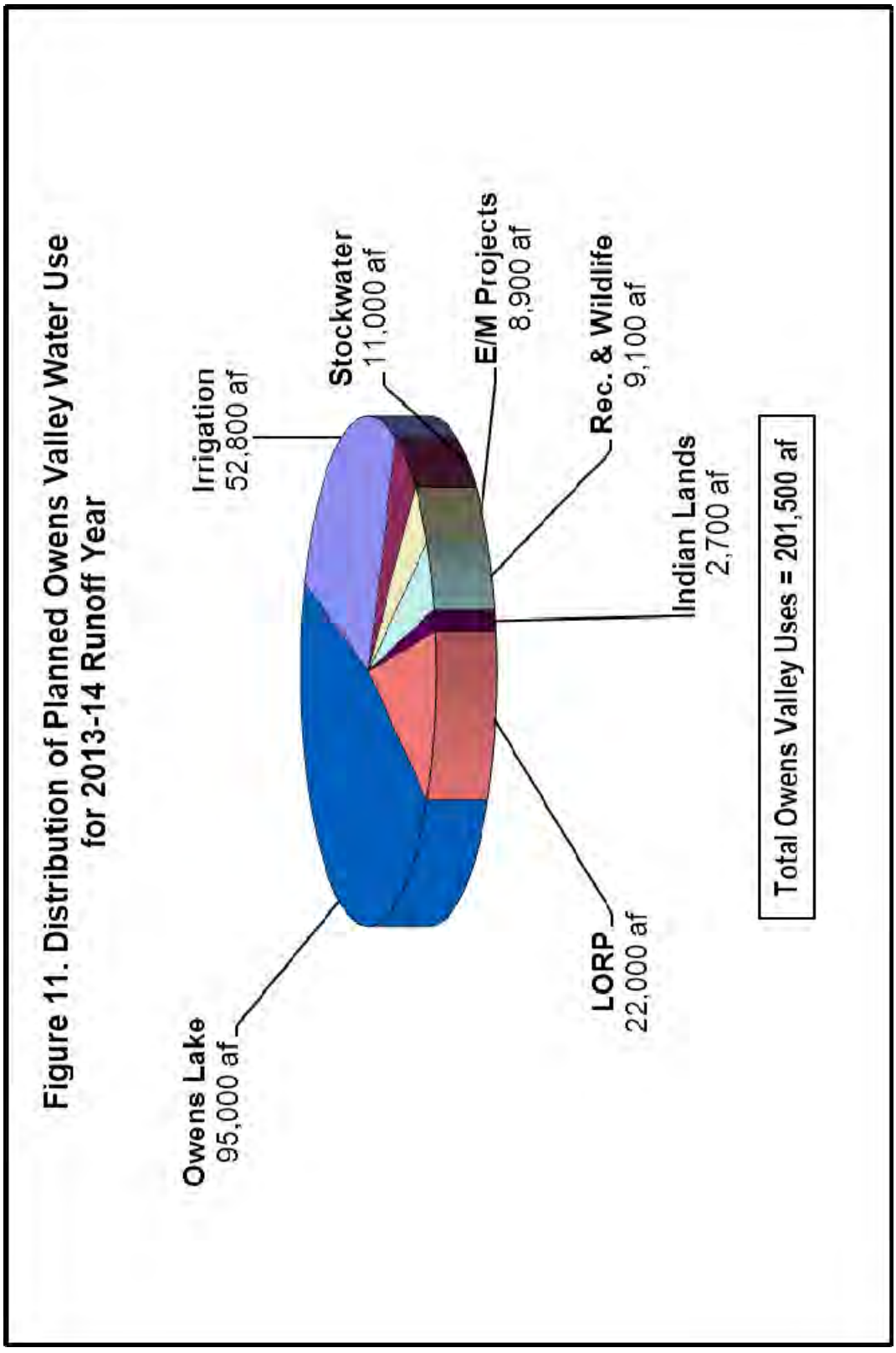


Figure 11. Distribution of Planned Owens Valley Water Use for 2013-14 Runoff Year

Table 8. Owens Valley Groundwater Pumping for Production and E/M Water Use (1984-85 through 2013-14 Runoff Year (acre-feet))

Runoff Year	Owens Valley Runoff (1)	Total Pumping	Non-E/M Pumping	E/M Pumping	E/M Water Uses	E/M Pumping & Use Imbalance	Cumulative E/M Pumping & Use Imbalance
1984-85	121	61,981	61,981	0	0		0
1985-86	103	107,718	107,718	0	109		0
1986-87	158	69,887	69,887	0	12,696	(3)	0
1987-88	68	209,394	179,884	29,510	29,360		0
1988-89	62	200,443	171,012	29,431	30,872		0
1989-90	63	155,972	133,409	22,563	23,330		0
1990-91	52	88,904	70,817	18,087	17,949		0
1991-92	64	87,310	71,520	15,790	20,517	-4,727	-4,727
1992-93	61	84,453	70,688	13,765	18,357	-4,592	-9,319
1993-94	106	76,329	67,338	8,991	19,310	-10,319	-19,638
1994-95	66	89,219	78,209	11,010	20,812	-9,802	-29,440
1995-96	153	69,752	57,180	12,572	22,914	-10,342	-39,782
1996-97	135	74,904	57,981	16,923	23,949	-7,026	-46,808
1997-98	124	66,914	52,760	14,154	21,500	-7,346	-54,154
1998-99	149	51,574	47,353	4,221	19,672	(3)	-54,154
1999-00	89	63,675	59,342	4,333	24,450	-20,117	-74,271
2000-01	84	67,795	61,456	6,339	20,611	-14,272	-88,543
2001-02	83	73,349	70,055	3,294	21,815	-18,521	-107,064
2002-03	66	81,979	76,059	5,920	21,394	-15,474	-122,538
2003-04	81	87,732	80,734	6,998	21,116	-14,118	-136,656
2004-05	77	85,820	78,110	7,710	18,327	-10,617	-147,273
2005-06	136	56,766	51,695	5,071	19,356	-14,285	-161,558
2006-07	146	58,621	53,925	4,696	17,357	(3)	-161,558
2007-08	61	60,338	53,413	6,925	11,312	-4,387	-165,945
2008-09	74	68,971	61,053	7,918	10,646	-2,728	-168,673
2009-10	77	64,138	57,946	6,192	10,695	-4,503	-173,176
2010-11	104	78,248	71,233	7,015	10,807	-3,792	-176,968
2011-12	142	91,699	84,365	7,334	11,993	-4,659	-181,627
2012-13	57	*88,000*	*82,345*	*5,655*	*8,914*	*-3,259*	*-184,886*
2013-14 (2)	*54*	*54,660*	*49,560*	*5,100*	*8,100*	*-3,000*	*-187,886*

(1) Based on 1961-2010 average: 415,974 acre-feet. Includes some runoff contribution to the Laws Wellfield from the White Mountains.
(2) this is only Apr-Sep pumping/uses. Forecast for planned pumping of 54,660 acre-feet (planned pumping ranges 44,610-54,660 acre-feet)
(3) surface water was available

2.4. Aqueduct Operations

Table 9 shows planned LAA reservoir storage levels and monthly deliveries to Los Angeles. Based on this plan, approximately 67,000 acre-feet will be exported from Inyo and Mono Counties to the City during the 2013-14 runoff year.

2.5. Water Exports to Los Angeles

Figure 12 provides a record of water exports from the Eastern Sierra to Los Angeles, averaging approximately 350,000 acre-feet per year since 1970. Figure 13 shows the LAA contribution to the City water supply relative to other sources and the total annual water supplied to Los Angeles since 1970. LADWP estimates that Los Angeles will require about 557,452 acre-feet of water during the 2013-14 runoff year. It is anticipated that water from the Eastern Sierra will make up about 12% of the 2013-14 supply. Water purchases from the Metropolitan Water District of Southern California will provide about 78% of the City's supply, groundwater from Los Angeles area aquifers will provide about 8%, and recycled water will supply about 1% of the City's water needs.

Table 9. Planned Los Angeles Aqueduct Operations for 2013-14 Runoff Year

Month	Owens Valley-Bouquet Reservoir Storage 1st of month Storage (acre-feet)	Aqueduct Delivery to Los Angeles (acre-feet)
April	161,282	1,190
May	165,224	1,537
June	162,683	3,868
July	155,496	8,608
August	145,218	10,146
September	129,225	6,843
October	112,968	2,017
November	110,954	4,463
December	120,313	4,612
January	135,667	3,074
February	153,430	8,331
March	162,314	12,298
TOTAL		***66,986***

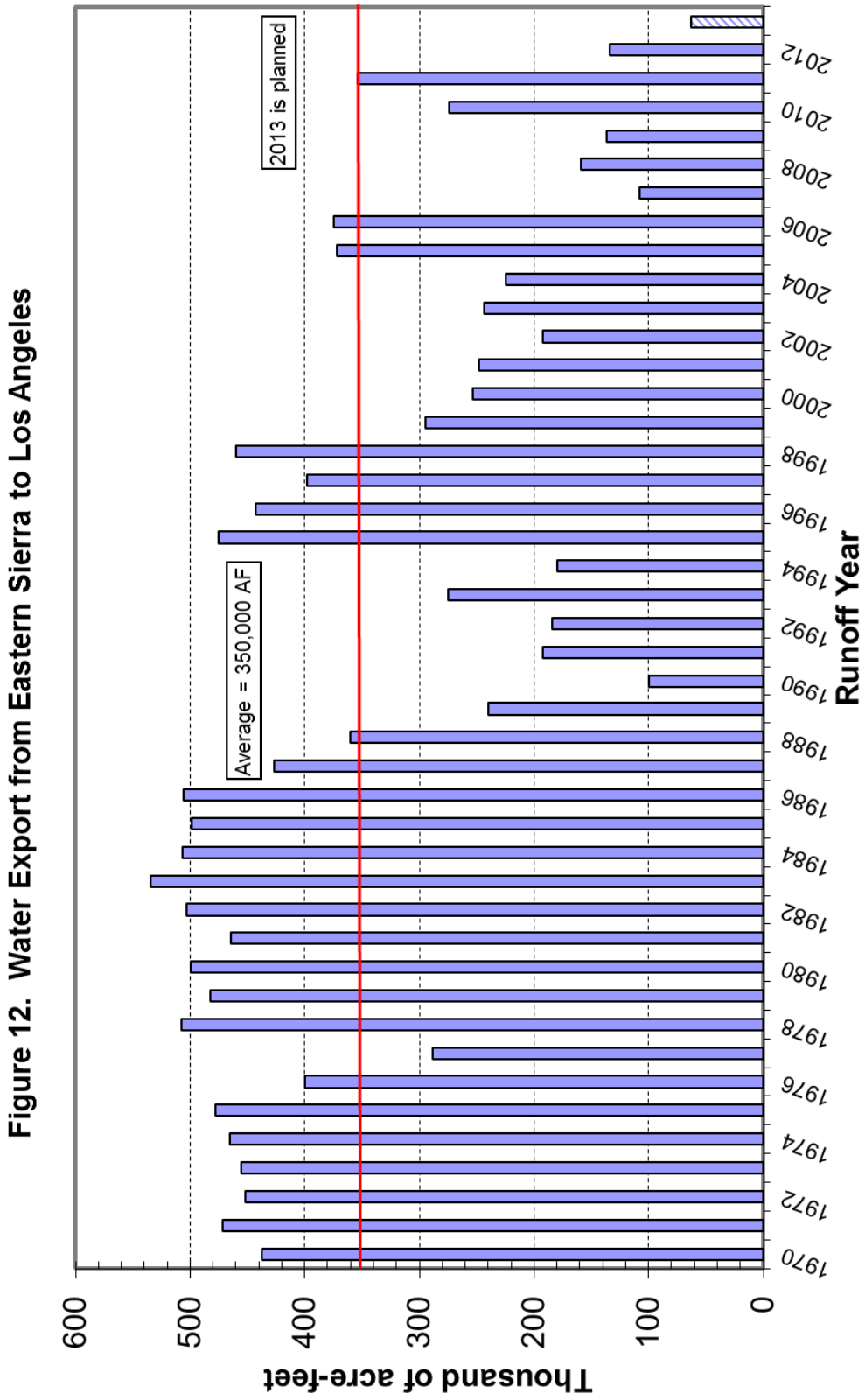


Figure 12. Water Export from Eastern Sierra to Los Angeles

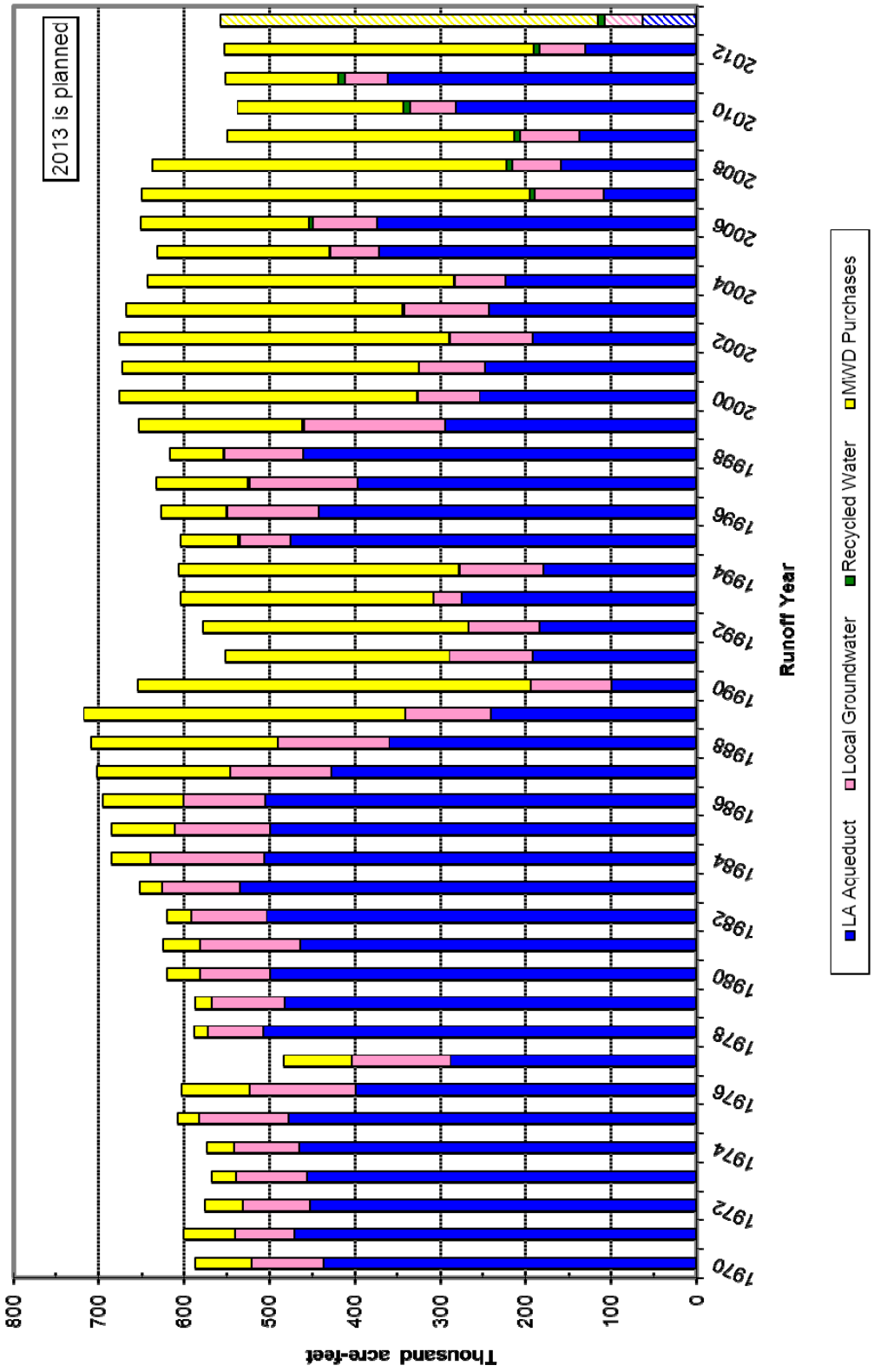


Figure 13. Sources of Water for the City of Los Angeles

3. CONDITIONS IN THE OWENS VALLEY

3. CONDITIONS IN THE OWENS VALLEY

As of April 1, 2013 the Eastern Sierra overall snowpack was measured to be 47% of normal and Owens Valley floor precipitation over the 2012-13 year was about 21% of average (Tables 11 and 12). Owens Valley runoff during the 2012-13 runoff year is forecast to be 220,900 acre-feet or approximately 54% of normal (Table 1). Overall vegetation cover in the Owens Valley is comparable to 1980s baseline conditions. A graphical summary of Owens Valley conditions is provided in Figure 14. Groundwater levels are generally high in most areas of the valley.

3.1. Well ON/OFF Status

The Water Agreement includes the vegetation protection provisions of linking pumping wells to specific monitoring sites. If the available soil moisture measured at a vegetation monitoring site is not sufficient to meet the estimated demands of the vegetation associated with that monitoring site, the wells linked to that site are designated as being in the OFF status and may not be operated. The wells linked to a monitoring site may be operated if the available soil water is determined to be sufficient to have met the estimated water requirements of the vegetation at the time that the associated wells were designated as being in the OFF status. The Green Book includes the complete well ON/OFF procedures. Table 10 provides a listing of Owens Valley monitoring site ON/OFF status as of April 2013, the monitoring wells associated with each monitoring site, and the linked pumping wells.

Some pumping wells are designated as being exempt from linkage to vegetation sites and the ON/OFF provisions of the Water Agreement because these wells are in areas that cannot cause significant adverse impacts to the vegetation or because these wells have been determined by Inyo County and the Los Angeles Department of Water and Power (LADWP) to be a necessary source of water. A list of exempt wells and the reasons for exemption are included in Table 5.

3.2. Groundwater Level Hydrographs

LADWP hydrographers monitor groundwater levels in over 700 monitoring wells throughout the Owens Valley. Groundwater levels are considered when evaluating the overall condition of the basin and are utilized for calibrating groundwater models. Hydrographs are used to observe the changes in groundwater levels over time. Figures 15a through 15g illustrate hydrographs of selected monitoring wells in Owens Valley well fields. As shown in Figures 15a-15g, groundwater levels are generally high in most areas of the valley.

LADWP uses regression models to forecast change in depth-to-water. Groundwater pumping for the first six months of the 2013-14 runoff year will be contingent on environmental conditions and water needs assessed during the year. The range of planned pumping by well field is included in Table 3 (Section 2). Based upon the first six

months of planned groundwater pumping in each well field during the 2013-14 runoff year, the forecast depth-to-water changes between April 1, 2013 and April 1, 2014 in selected Owens Valley well fields are as follows:

- Groundwater levels in the Laws Well Field are forecast to decrease between approximately 0.9 to 1.3 feet.
- Groundwater levels in the Big Pine Well Field are forecast to decrease between 0.8 and 1.0 feet.
- Groundwater levels in the Taboose-Aberdeen Well Field are forecast to decrease between 0.4 and 1.0 feet.
- Groundwater levels in the Thibaut-Sawmill Well Field are forecast to decrease by 1.8 feet.
- The forecast change in depth-to-water in the Independence-Oak Well Field ranges between a 0.3 foot increase and a 0.9 foot decrease.
- Groundwater levels in the Symmes-Shepherd Well Field are forecast to increase by 0.1 feet.
- Groundwater levels in the Bairs-Georges Well Field are forecast to decrease between 0.0 and 0.2 feet.

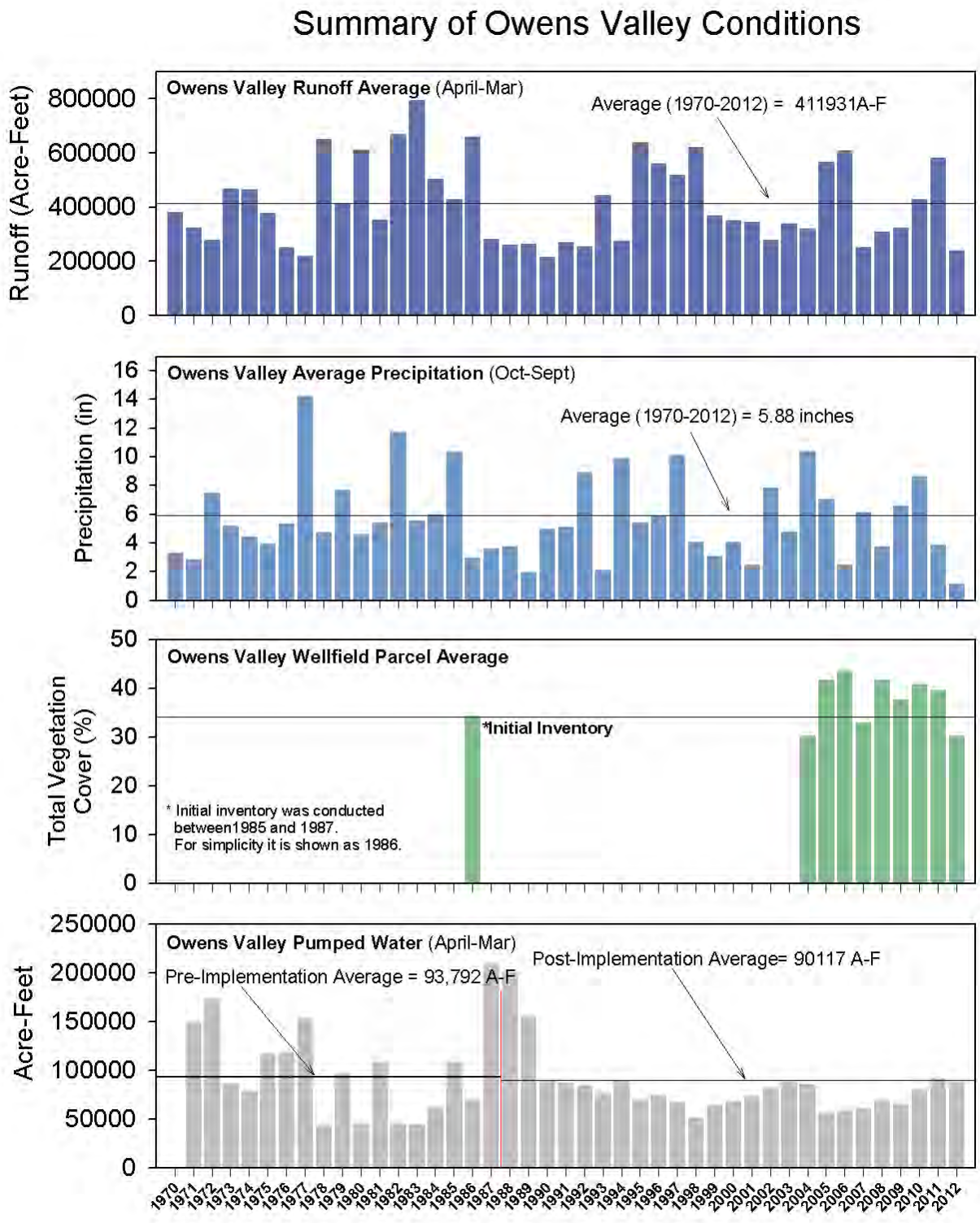


FIGURE 14. Summary of Owens Valley Conditions

Table 10. Owens Valley Monitoring Site Status (ON/OFF) as of April 2013

Wellfield	Monitoring Site	Monitoring Well	Pumping Wells	E/M Wells	ON/OFF Status
Laws	L1	795T	247, 248, 249, 398		OFF
	L2	USGS 1	236*, 239, 243, 244		ON
	L3		240, 241, 242	376, 377	OFF
	L4a, L4b			385, 386	na
	L5**		245	387, 388	na
	Exempt		236*, 354, 365, 413		Exempt
Bishop	All wells		140, 411, 410, 371		na
			406, 407, 408, 412		na
Big Pine	BP1	798T	210, 352	378, 379, 389	OFF
	BP2	799T	220, 229, 374	375	OFF
	BP3	567T	222, 223, 231, 232		OFF
	BP4	800T	331		ON
	Exempt		218, 219, 330, 332, 341, 352, 415		Exempt
Taboose-Aberdeen	TA3	505T	106, 110, 111, 114		OFF
	TA4	586T	342, 347		OFF
	TA5	801T	349		ON
	TA6	803T	109, 370		OFF
	Exempt		118		Exempt
Thibaut-Sawmill	TS1	807T	159		OFF
	TS2	T806	155		ON
	TS3	454T	103, 104	382	OFF
	TS4	804T		380, 381	OFF
	Exempt		351, 356		Exempt
Independence-Oak	IO1	809T	391, 400		OFF
	IO2	548T	63		OFF
	Exempt		59, 60, 61, 65, 401, 357, 384*	383, 384	Exempt
Symmes-Shepherd	SS1	USGS 9G	69, 392, 393		ON
	SS2	646T	74, 394, 395		OFF
	SS3	561T	92, 396		OFF
	SS4	811T	75, 345		OFF
	Exempt			402	Exempt
Bairs-Georges	BG2	812T	76, 343*, 348, 403		ON
	Exempt		343*		na
Lone Pine	Exempt		344, 346	390	Exempt
	Other		416		na

*dual use

** Monitoring site has not yet been located.

FIGURE 15a. Depth to Water Hydrographs for Laws Well Field

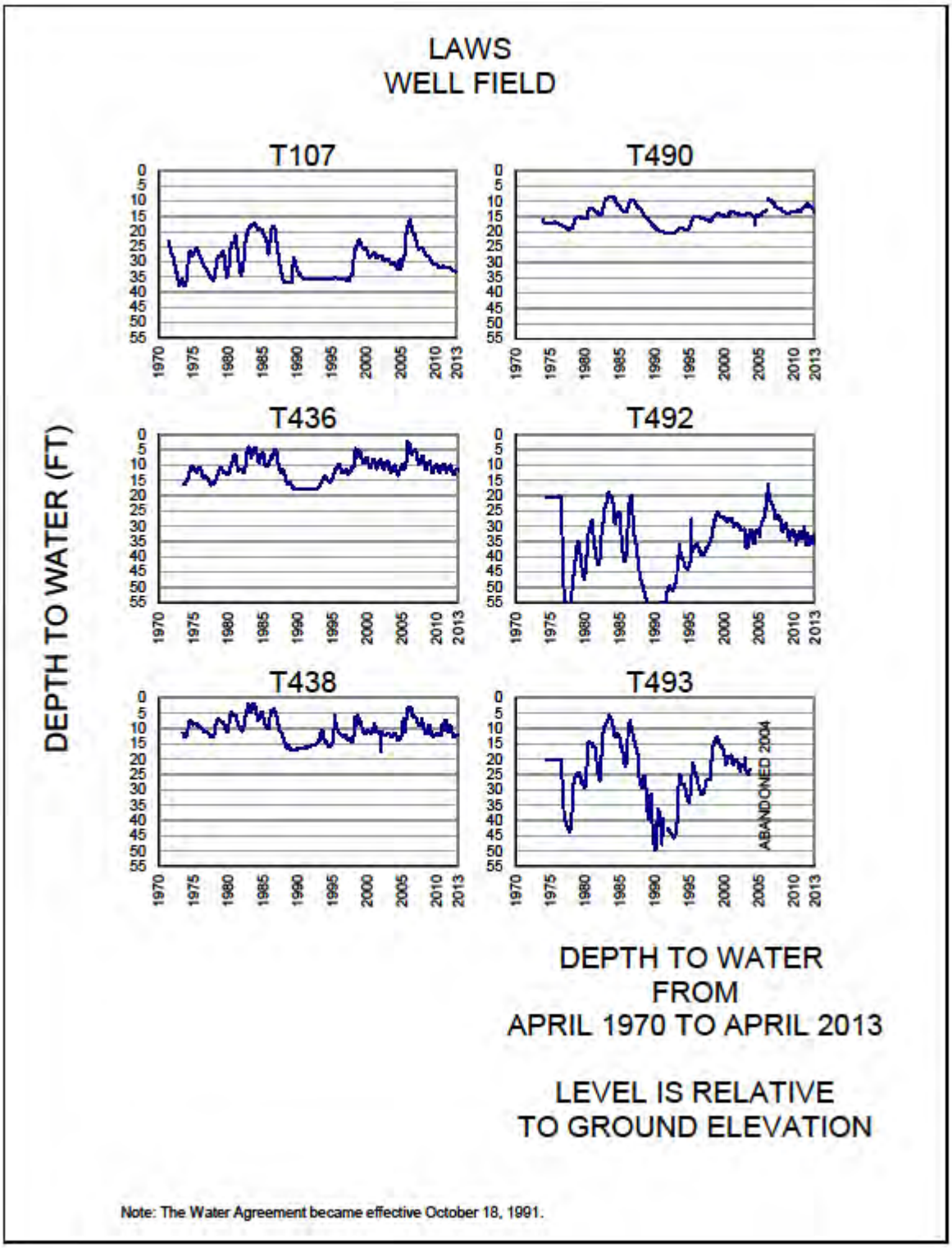


FIGURE 15b. Depth to Water Hydrographs for Big Pine Well Field

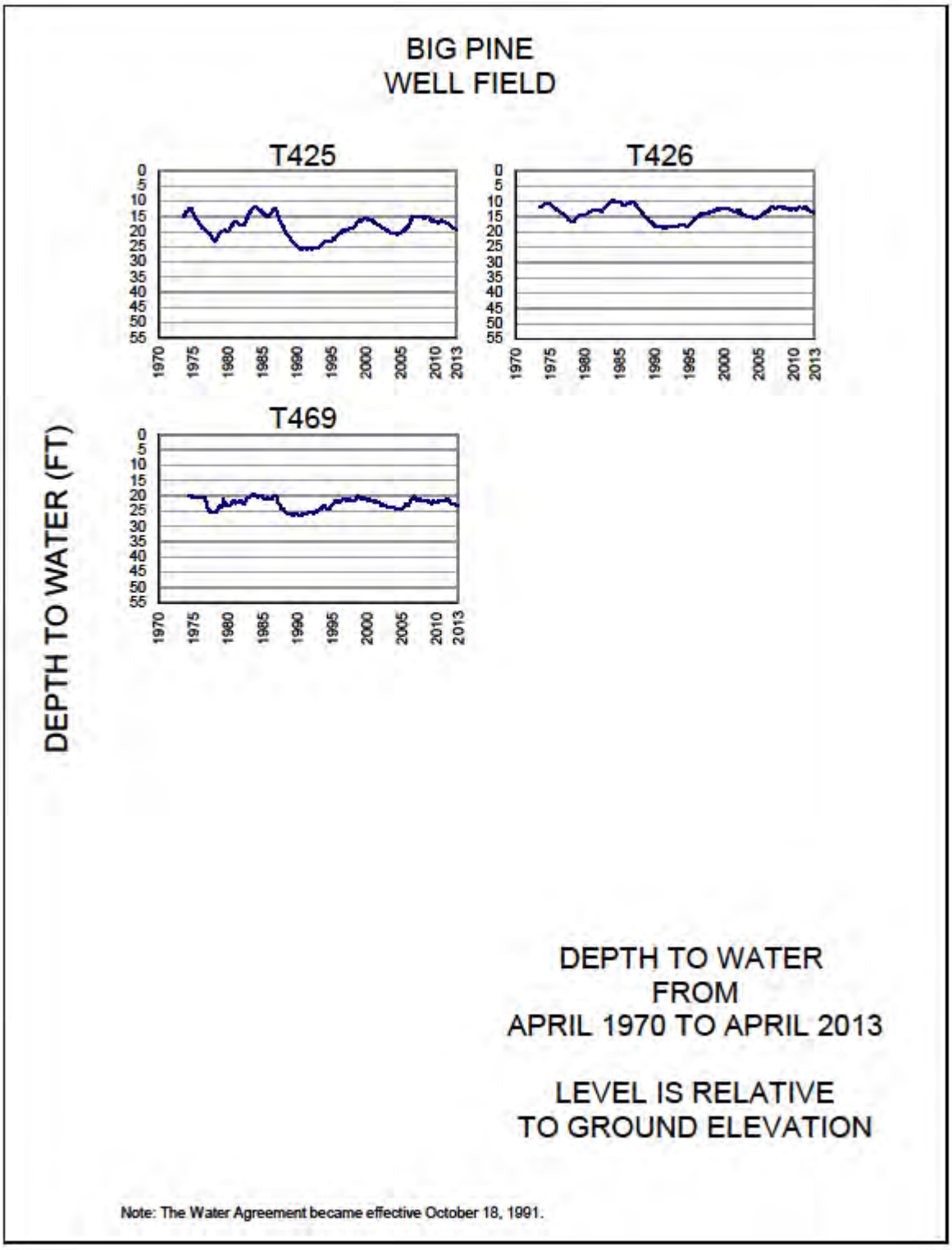


FIGURE 15c. Depth to Water Hydrographs for Taboose-Aberdeen Well Field

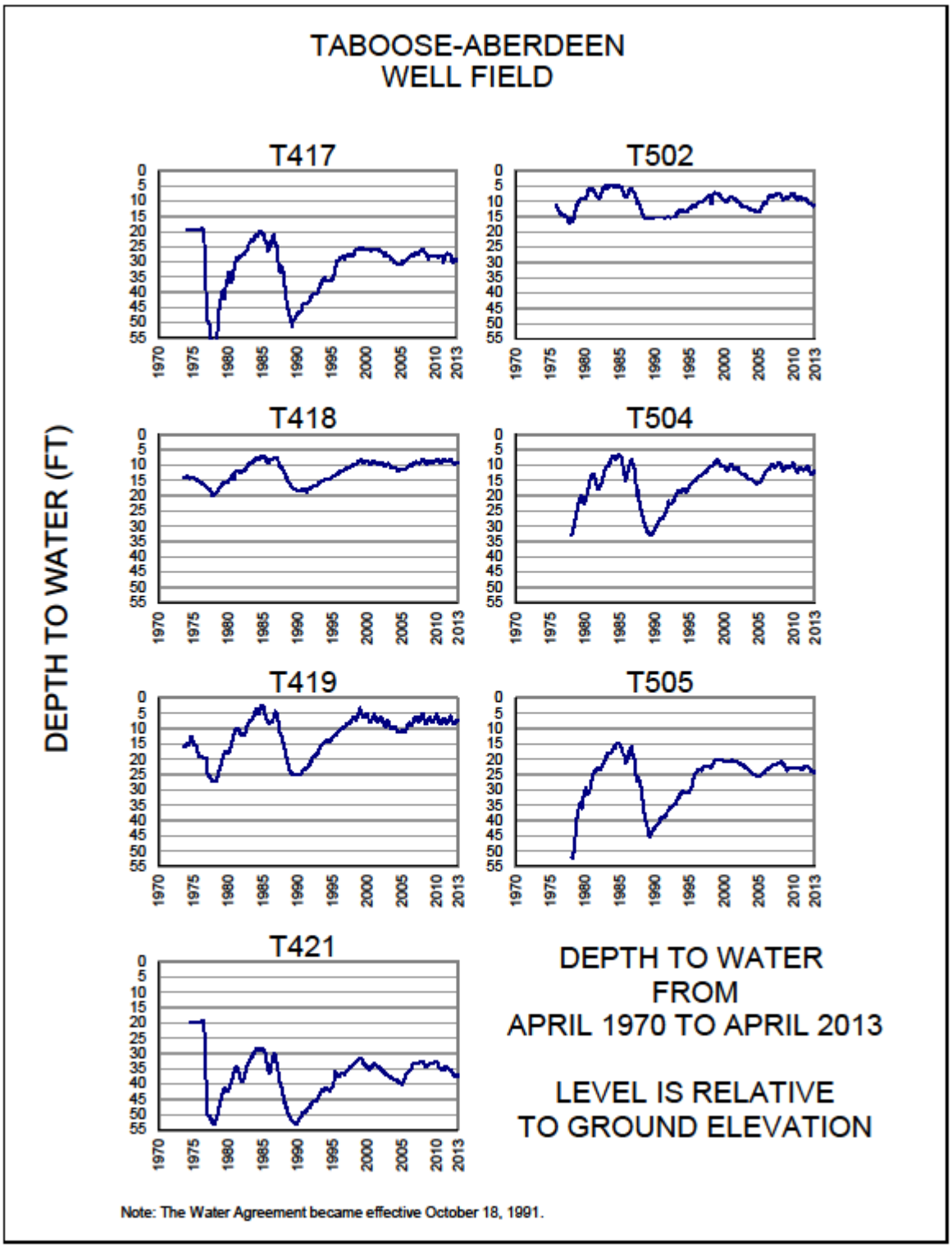


FIGURE 15d. Depth to Water Hydrographs for Thibaut-Sawmill Well Field

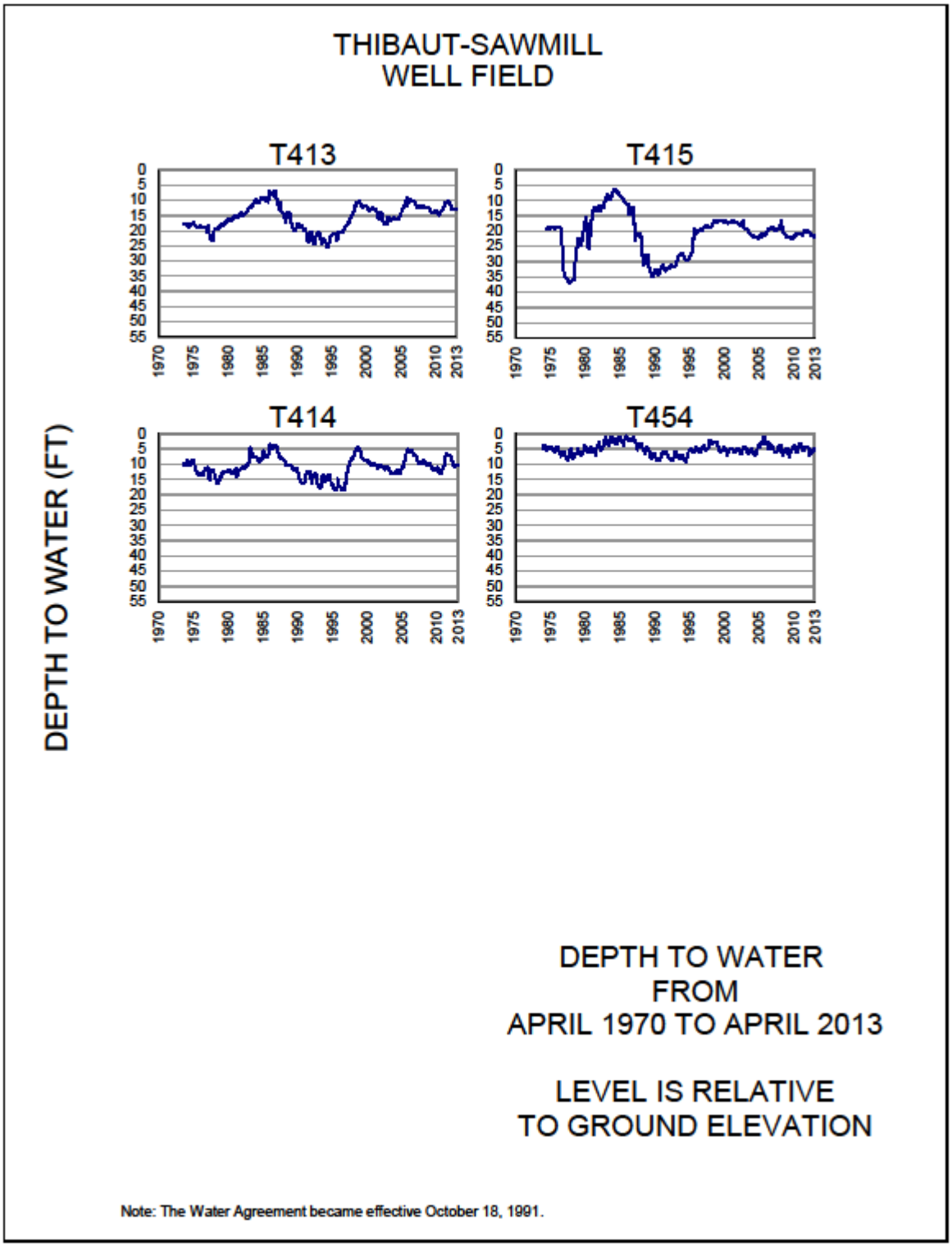


FIGURE 15e. Depth to Water Hydrographs for Independence-Oak Well Field

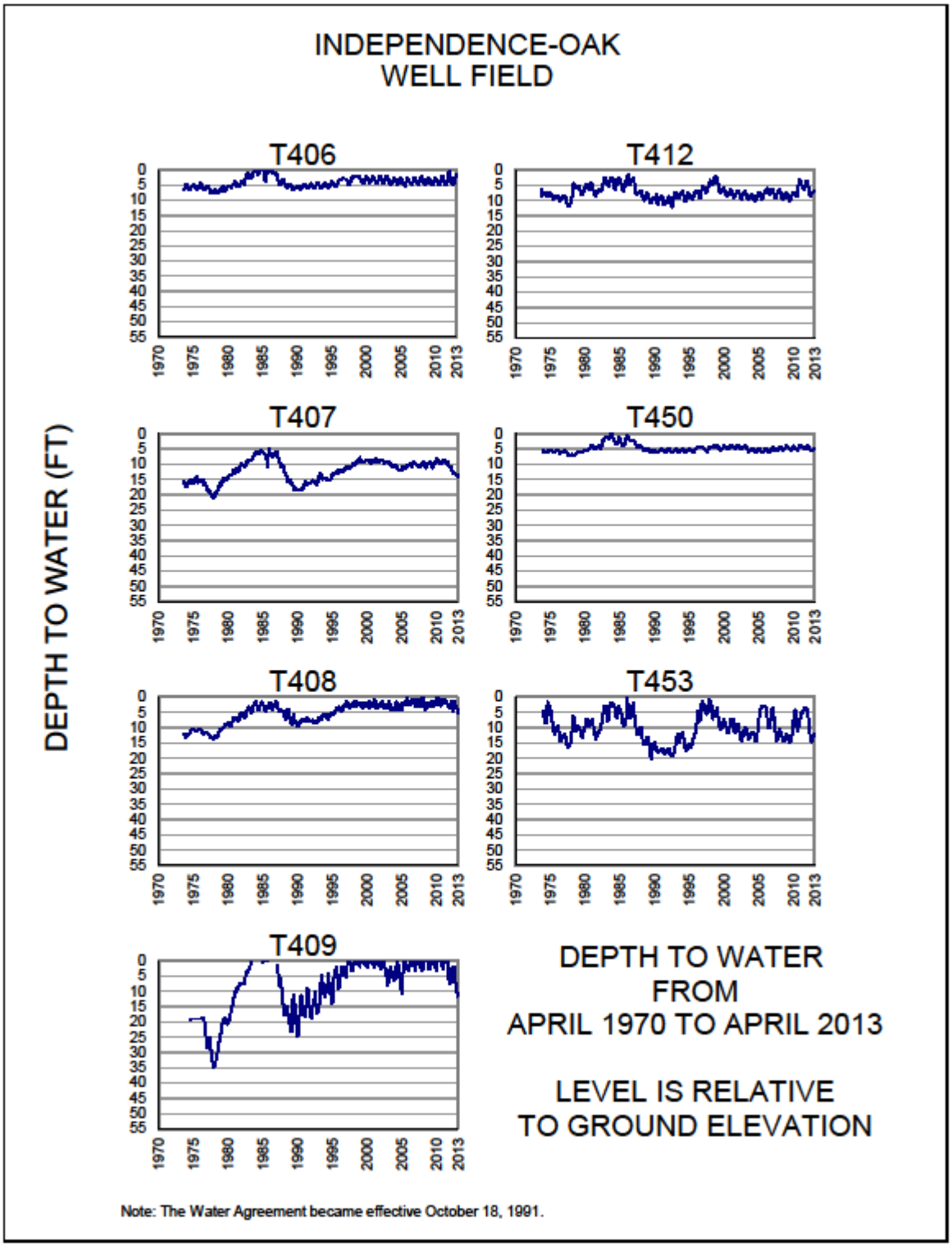


FIGURE 15f. Depth to Water Hydrographs for Symmes-Shepards Well Field

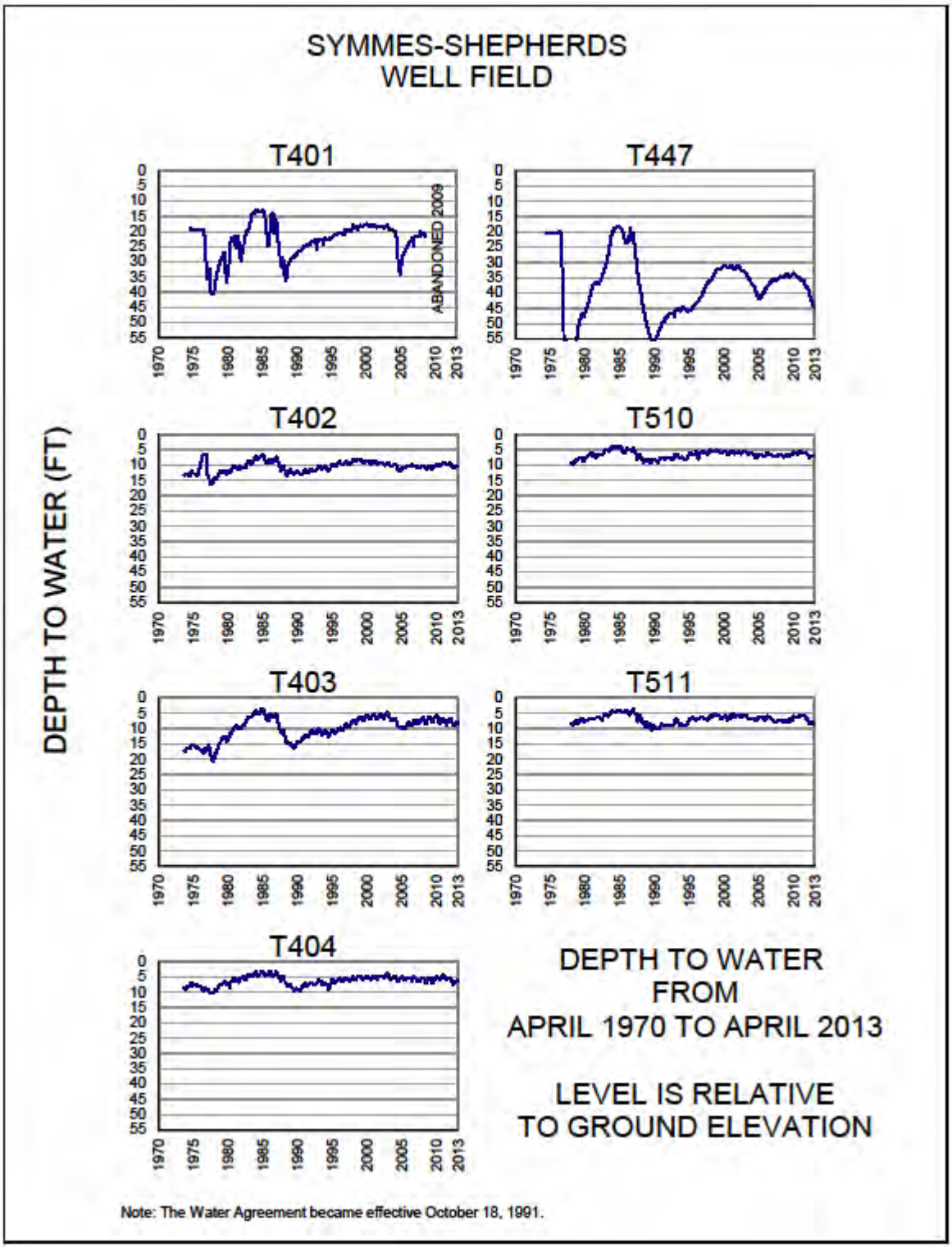
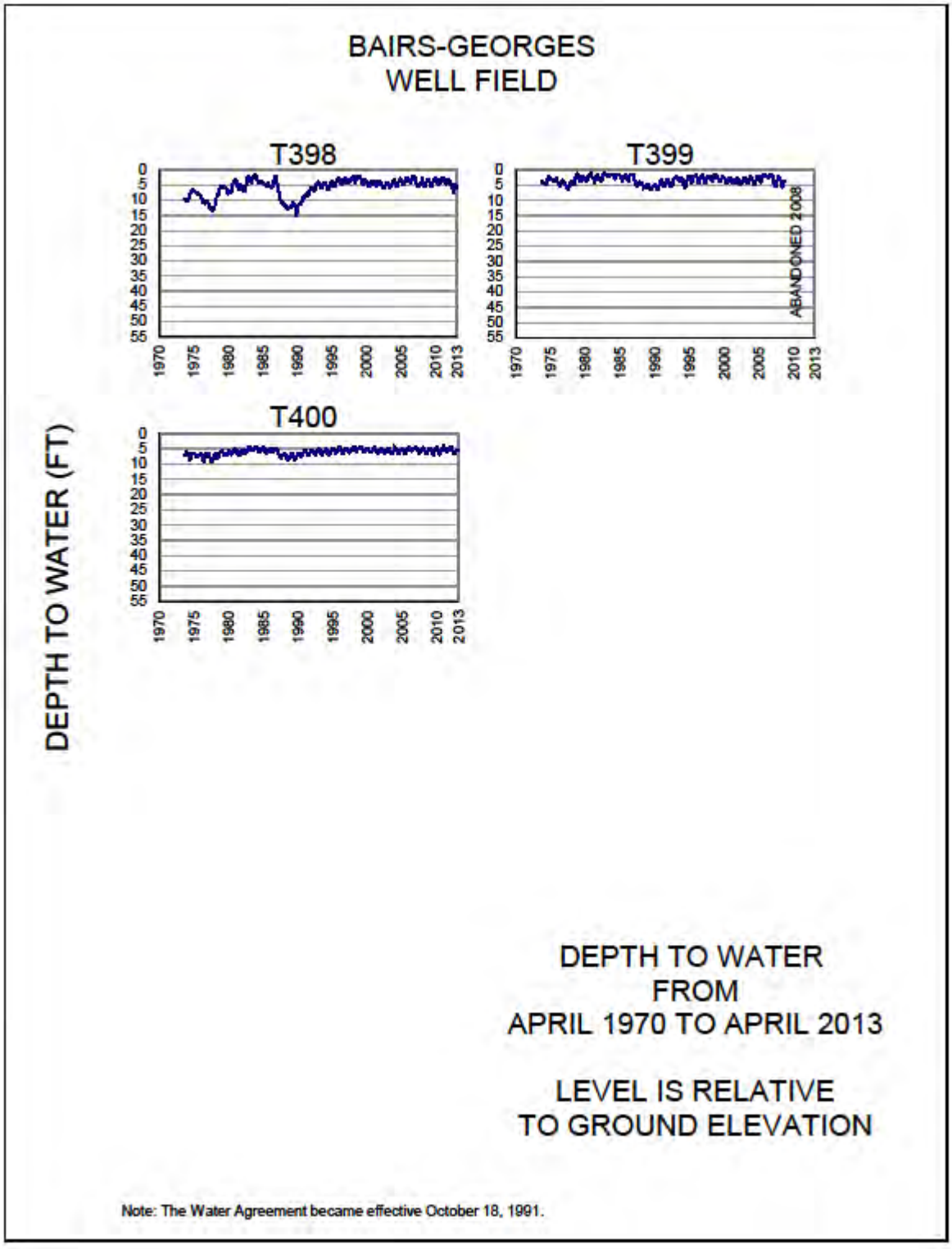


Figure 15g. Depth to Water Hydrographs for Bairs-Georges Well Field



3.3. Precipitation Record and Runoff Forecast

The Eastern Sierra snowpack as of April 1 was 71% of normal in the Mammoth Lakes area, 16% of normal in the Rock Creek area, 47% of normal in the Bishop area, 24% of normal in the Big Pine area, and 19% of normal in the Cottonwood Lakes area. The Eastern Sierra overall snowpack, weighted by contribution to Owens River runoff was calculated to be 47% of the normal snowpack as of April 1, 2013 (Table 11).

The Eastern Sierra runoff forecast for the 2013-14 runoff year is 220,900 acre-feet or 54% of normal (Table 1). Figure 16 compares the forecast runoff for the 2013-14 year to previous runoff years.

Average precipitation on the valley floor for the 2012-13 year was 1.2 inches, which is substantially below the fifty-year average of 5.9 inches. Table 12 details monthly annual precipitation totals for the 2012-13 runoff year as well as the long-term averages throughout the Owens Valley.

Table 11. Eastern Sierra April 1, 2013 Snow Survey Results

EASTERN SIERRA SNOW SURVEY RESULTS
April 1, 2013

MAMMOTH LAKES AREA (Contributes 25% of Owens River Basin runoff)

Course	Water Content	April 1 Normal	Percent of Normal
Mammoth Pass	35.6	43.5	82%
Mammoth Lakes	9.5	21.1	45%
Minarets 2	22.0	30.1	73%
Mammoth Lakes Area Average:	**22.4**	**31.5**	**71%**

ROCK CREEK AREA (Contributes 16% of Owens River Basin runoff)

Course	Water Content	April 1 Normal	Percent of Normal
Rock Creek 1	0.6	7.4	9%
Rock Creek 2	2.1	10.5	20%
Rock Creek 3	2.5	14.4	17%
Rock Creek Area Average:	**1.7**	**10.8**	**16%**

BISHOP AREA (Contributes 20% of Owens River Basin runoff)

Course	Water Content	April 1 Normal	Percent of Normal
Sawmill*	9.3	19.7	47%
Bishop Area Average:	**9.3**	**19.7**	**47%**

BIG PINE AREA (Contributes 13% of Owens River Basin runoff)

Course	Water Content	April 1 Normal	Percent of Normal
Big Pine Creek 2	1.8	13.9	13%
Big Pine Creek 3	6.0	18.6	32%
Big Pine Creek Area Average:	**3.9**	**16.3**	**24%**

COTTONWOOD AREA (Contributes 25% of Owens Basin River runoff)

Course	Water Content	April 1 Normal	Percent of Normal
Cottonwood Lakes 1	2.5	13.0	19%
Trailhead**	2.6	13.7	19%
Cottonwood Area Average:	**2.6**	**13.3**	**19%**

EASTERN SIERRA OVERALL SNOW PACK (Weighted by contribution to Owens River Basin runoff)

Average of all Snow Courses	Water Content	April 1 Normal	Percent of Normal
	8.9	**19.2**	**47%**

Normals are based on the 1961-2010 period.
* Measured by DWR
** Trailhead has only been measured since 1982.

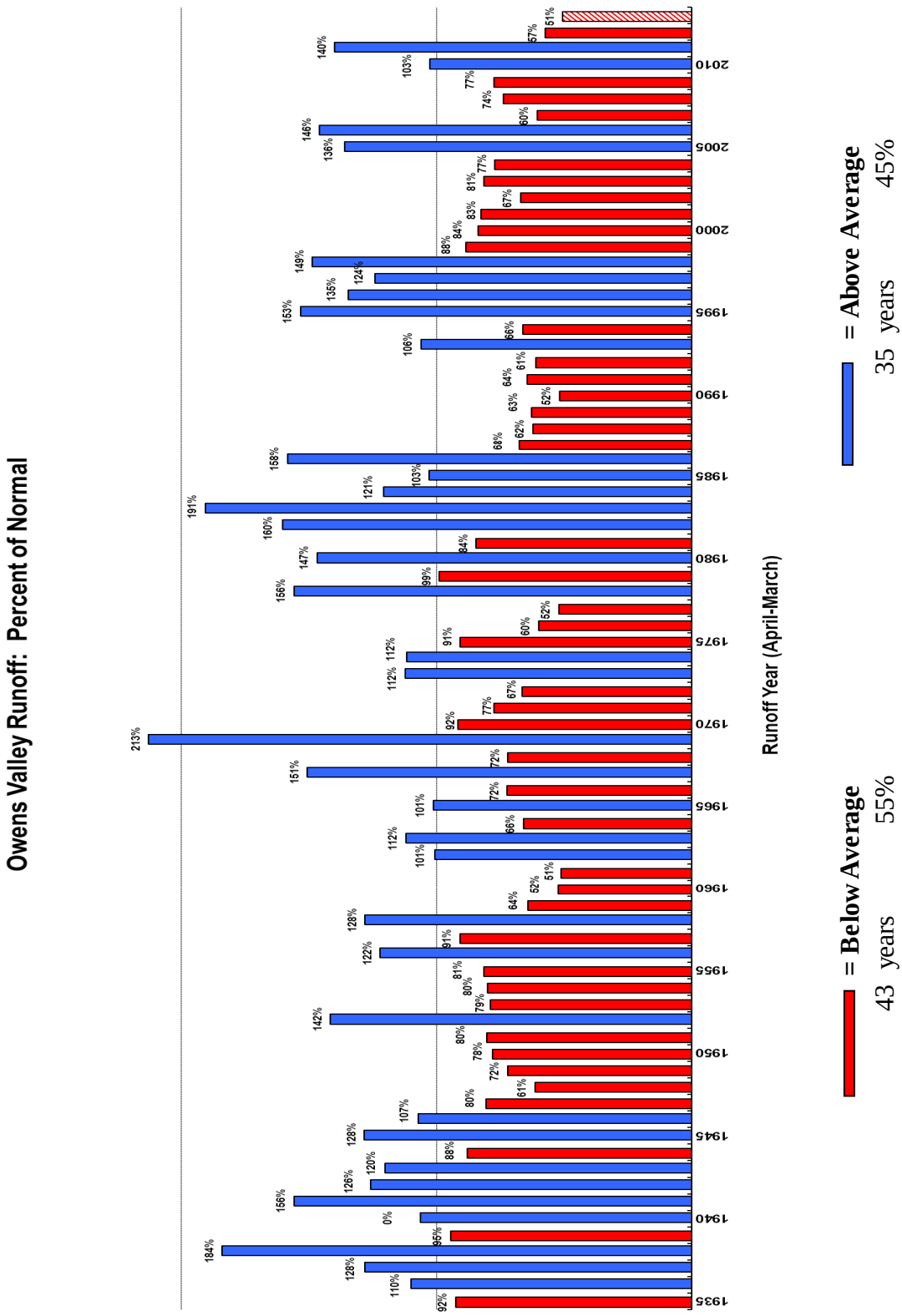
Table 12. Owens Valley Precipitation During Runoff Year 2012-13 in Inches

Table 12 - Owens Valley Precipitation During Runoff Year 2012-13 in inches

Month	Bishop	Big Pine	Tinemaha Reservoir	LAA Intake	Indepen d. Yard	Alabama Gates	Lone Pine	Cotton-wood	South Haiwee	Average Owens Valley
April, 2012	0.02	0.08	0.06	0.08	0.02	0.03	0.00	0.11	0.05	0.05
May	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
June	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
July	0.00	0.06	0.00	0.00	0.00	0.00	0.04	0.35	0.02	0.05
August	0.07	0.35	0.13	0.35	0.15	0.13	0.16	0.43	0.01	0.20
September	0.00	0.08	0.23	0.00	0.04	0.32	0.23	0.15	0.00	0.12
October	0.28	0.33	0.29	0.28	0.47	0.11	0.13	0.26	0.00	0.24
November	0.00	0.06	0.00	0.00	0.00	0.00	0.03	0.02	0.05	0.02
December	0.58	0.85	0.56	0.39	0.56	0.37	0.29	0.19	0.15	0.44
January, 2013	0.20	0.04	0.01	0.00	0.00	0.01	0.16	0.17	0.38	0.11
February	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
March	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.01
2012-13 Total	*1.15*	*1.85*	*1.28*	*1.11*	*1.24*	*0.97*	*1.04*	*1.68*	*0.76*	*1.23*
Average*	6.37	6.46	6.76	5.76	5.48	4.03	4.01	6.89	7.31	5.90
% of Average	18%	29%	19%	19%	23%	24%	26%	24%	10%	21%

* Average for 1960 to 2010 runoff year

Figure 16. Owens Valley Runoff – Percent of Normal



3.4. Owens Valley Water Supply and Use

Table 13 provides an overview of the Owens Valley water supply, in-valley uses and losses, and Los Angeles Aqueduct (LAA) exports for the post Water Agreement period (1992-93 through 2012-13 runoff years) as compared to the pre-project average (pre-Second Los Angeles Aqueduct) and projected water supply and uses (based on the Water Agreement, 1991 EIR, and 1997 MOU). Actual water uses in the Owens Valley are generally consistent with the projected values under the 1991 EIR and 1997 MOU with the notable exception of significant diversions to the OLDMP. While the average Owens Valley water supply (surface water flow, flowing wells, and pumped groundwater) has remained about the same over time, exports are considerably less than anticipated under the 1991 EIR and 1997 MOU. The fundamental reasons for this reduction in the municipal water supply are increased uses within Owens Valley for dust abatement, mandated decreases in water exported from the Mono Basin, and less groundwater pumping than anticipated under the Water Agreement.

Current Owens Valley water uses are compared to pre-Water Agreement uses as well as those uses projected under the Water Agreement and 1997 MOU in Figure 17. The components of LADWP's water exports from the Eastern Sierra are compared to pre-Water Agreement exports as wells as those projected under the Water Agreement and 1997 MOU in Figure 18.

Table 14 provides a breakdown of Owens Valley water uses from 1985 to the present and planned water uses for the 2013-14 runoff year. While much of Table 14 is self-explanatory, the following items bear additional explanation:

- Enhancement/mitigation (E/M) water supply is the water supplied to E/M projects referenced in the 1991 EIR,
- LORP is water supplied to the Lower Owens River Project,
- Owens Lake Release tracks water supplied to the Owens Lake Dust Mitigation Program,
- Operations is water used for operational reasons.

Table 15 lists a breakdown of water supplied to E/M projects during the 2012-13 runoff year.

Table 13. Owens Valley Water Supply and Uses

(Amounts in Thousands of Acre-Feet/Year)

	Pre-Project (Pre Water Agreement)	Projected per MOU/ Agreement	Actual Data for Runoff Year 2012-2013	Actual Post Water Agreement Averages (1992-2013)
Owens Valley Water Supply				
Runoff (Owens Valley & Round Valley)	319[1]	310	168	299
Flowing Wells	44	15	38	33
Pumped Groundwater	10	110[2]	89	73
Total	373	435	295	405
In-Valley Uses & Losses				
City Water Used in O.V.				
Irrigated Lands [3]	62	46	49	49
Stockwater, Wildlife, and Rec. Uses [4]	20	23	20	21
Post 1985 E/M Projects [5]	0	12	9	11
Lower Owens River [6]	0	36[7]	21	19[8]
Additional Mitigation (1,600 af from MOU)	0	2	2	2[8]
Owens Lake	0	0	75	70[8]
Sub-Total	82	119	176	172
Other O.V. Uses and Losses [9]	134	122	175	104
Total	216	241	351	276
Components of Aqueduct Export				
Owens Valley Contribution to Export	103	210	-(56)	129
Long Valley Contribution to Export	149	149	173	143
Mono Basin Contribution to Export [10]	95	30	16	16[8]
Total	347	389	133	288

1. Average runoff for period 1935 to 1988 (Runoff Year)
2. Assumed based on 1991 O.V. Groundwater Pumping EIR
3. Does not include areas receiving water supplies non-tributary to the Owens River/Aqueduct (approx. 7,000 AFY).
4. Includes projects such as the Tule Elk Field, Farmers Ponds implemented after 1970 and before 1985 when E/M projects commenced. Also includes the LORP Off-River Lakes and Ponds uses.
5. Except Lower Owens River Rewatering E/M Project
6. Includes river losses, and releases to the Blackrock Waterfowl Habitat Area and the Delta
7. Assumes: 6,500 AF year-round flow to delta, 3,000 AF to Blackrock, and 26,500 AF for other losses.
8. Represents recent history.
9. Includes uses on private lands, conveyance losses, recharge, evaporation, and operation releases.
10. 1993 Court decision allows approximately 30,000 AFY when lake reaches elevation 6392. Prior to Court decision Mono Basin export averaged 95,000/yr.

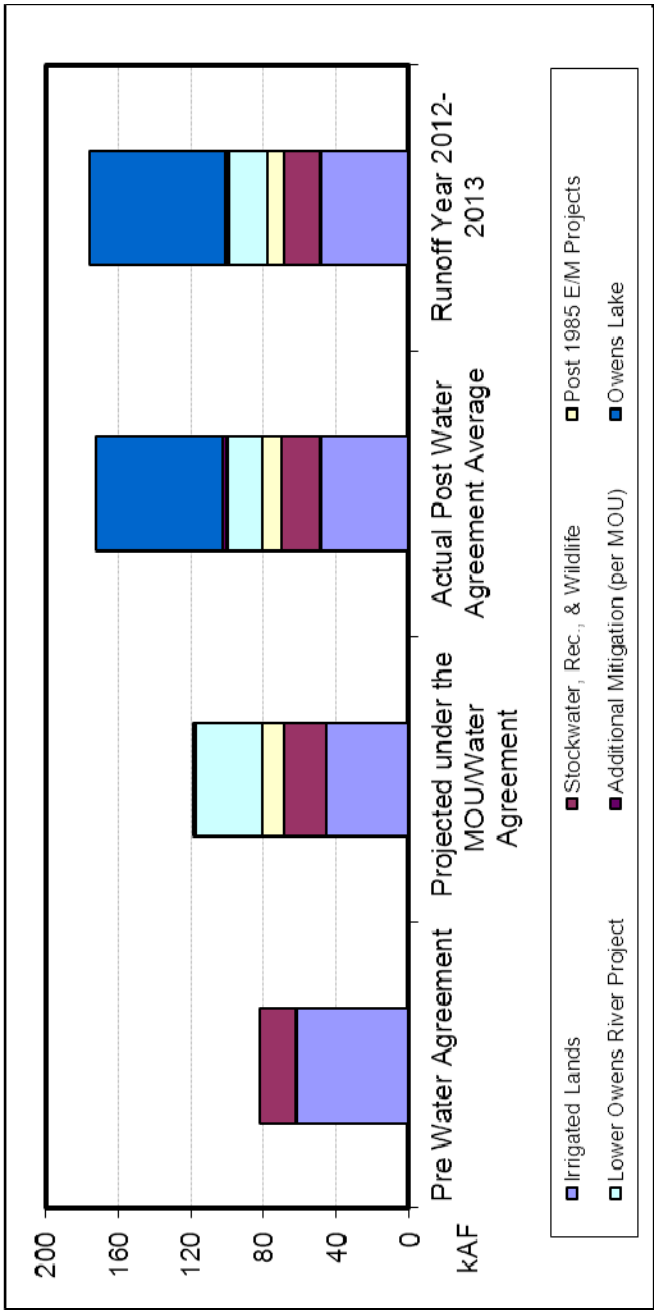


Figure 17. Owens Valley Water Uses

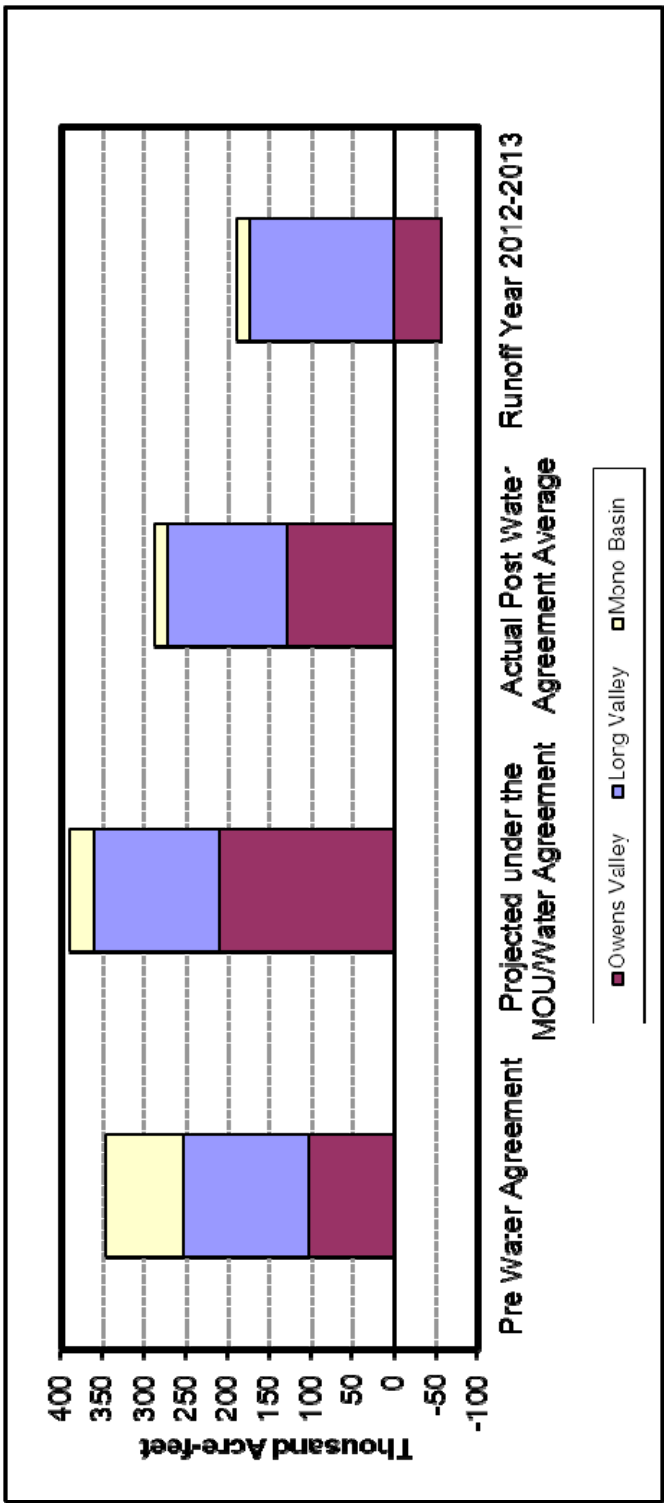


Figure 18. Components of the Eastern Sierra Water Exports

Table 14. Owens Valley Water Uses for 1985-86 through 2012-13 and Planned Uses for the 2013-14 Runoff Year (acre-feet)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	Groundwater Recharge		(14)	(15)
												(13a)	(13b)		
Runoff Year	Owens Valley Runoff %	Owens Valley Pumping (1000 af)	Irrigation	Stock Water	E/M	Rec. & Wildlife	Indian Land Uses	LORP	1600 AF Projects	Owens Lake Release	In-Valley Uses (sum of 4+5+6+7+8+9+10+11)	Big Pine & Independence Spreading	Laws Spreading	Operations	All Uses (sum of 12+13+14)
1985-86	103	108	47,390	15,394	109	9,205	4,248	4,191			80,537	4,822	4,068	13,712	103,139
1986-87	158	70	47,884	15,125	1,610	9,735	3,873	12,551			90,778	67,251	20,429	72,387	250,845
1987-88	68	209	48,679	15,443	13,818	6,420	3,902	15,542			103,804	0	0	7,499	111,303
1988-89	62	200	46,463	14,381	17,102	8,429	5,299	13,856			105,530	0	0	6,705	112,235
1989-90	63	156	48,232	13,922	15,261	8,669	5,460	8,069			99,613	0	0	8,935	108,548
1990-91	52	89	46,424	14,360	9,242	9,983	5,445	8,657			94,111	0	0	5,312	99,423
1991-92	64	87	42,112	14,662	8,301	9,143	5,938	10,251			90,407	0	0	9,923	100,330
1992-93	61	84	37,131	17,828	9,088	7,725	5,211	9,269			86,252	0	0	12,179	98,431
1993-94	105	76	47,798	17,230	13,443	8,676	5,270	5,867			98,284	14,512	10,640	12,433	135,869
1994-95	66	89	37,790	17,178	9,132	8,116	5,641	11,680			89,537	0	56	12,102	101,695
1995-96	153	70	57,748	20,919	11,162	12,479	5,170	11,752			119,230	30,126	21,148	13,561	184,065
1996-97	135	75	46,171	19,757	10,989	9,438	5,540	12,960			104,855	4,606	0	21,125	130,586
1997-98	124	67	47,114	16,422	8,114	8,022	5,548	13,494			98,714	4,113	4,106	13,874	120,807
1998-99	149	52	45,445	13,654	9,075	8,691	4,589	10,597			92,051	24,970	31,077	23,016	171,114
1999-00	89	64	49,529	14,461	8,836	7,470	4,232	15,616			100,144	0	0	11,263	111,407
2000-01	84	68	49,327	13,442	7,989	7,263	5,792	12,793			96,606	0	790	12,517	109,913
2001-02	83	73	43,296	12,759	9,401	7,487	4,931	12,414			90,288	0	230	12,973	103,491
2002-03	66	82	43,929	12,291	11,442	7,377	4,922	9,952		22,983	112,896	0	0	8,431	121,327
2003-04	81	88	45,974	11,620	10,926	6,853	5,293	10,190		27,049	117,905	0	0	8,787	126,692
2004-05	77	86	50,311	11,546	9,915	6,866	4,739	9,003		28,981	121,361	243	695	9,536	131,835
2005-06	136	57	53,832	11,355	11,587	7,807	3,281	7,769		31,643	127,274	16,212	24,187	14,814	182,487
2006-07	146	59	50,968	12,041	11,551	7,849	3,315	11,700		42,542	139,966	29,457	16,855	38,937	225,215
2007-08	61	60	47,699	12,161	11,565	10,122	2,931	22,501		66,580	173,559	0	0	5,631	179,190
2008-09	74	69	56,130	11,435	10,646	8,479	3,527	20,957		61,326	172,500	1,342	0	7,651	181,493
2009-10	77	65	52,933	11,450	10,695	10,398	4,142	15,708		66,940	172,266	0	0	8,453	180,719
2010-11	103	80	52,983	12,275	10,807	12,106	3,703	17,020		75,267	184,161	2,993	1,973	14,280	203,407
2011-12	140	92	62,391	11,566	11,847	9,702	3,156	19,556		74,031	192,249	13,231	4,119	8,785	218,384
2012-13	*57*	89	*48,700*	*11,000*	*8,914*	*9,100*	*2,700*	*20,900*	*1,636*	*75,300*	*178,250*	*0*	*0*	*4,200*	*182,450*
2013-14	*51*		*52,800*	*11,000*	*8,900*	*9,100*	*2,700*	*22,000*	*1,600*	*95,000*	*203,100*	*0*	*0*	*4,400*	*207,500*
AVG.	93	88	48,524	14,023	10,051	8,714	4,500	12,994	1,636	73,492	121,939	7,375	4,840	13,911	148,066

NOTES:

PUMPING 1987 TO PRESENT INCLUDES E/M PUMPING
2013-14 REFLECTS CURRENT YEAR OPERATIONS FORECAST
E/M EXCLUDES RELEASES TO THE LORP
LORP IS RECORD OF THE REWATERING E/M (1985-2006) AND THE MITIGATION PROJECTS (STARTED IN DECEMBER 2006)
LORP RECORD INCLUDES RIVERINE LOSS, RELEASES TO BLACKROCK WATERFOWL, AND RELEASES TO DELTA
LORP OFF-RIVER LAKES & PONDS USE OF 3,000 AF IS INCLUDED IN REC & WILDLIFE.

Table 15. Water Supplied to Enhancement/Mitigation Projects During 2012-13

Project	Water Supplied (acre-feet)
McNally Canals Conveyance Losses	185
McNally/Laws/Poleta Native Pasture Lands	1,460
McNally Ponds	0
Laws Historical Museum	138
Klondike Lake	1,144
Lower Owens River Rewatering	0
Independence Pasture Lands	2,324
Independence Springfield	1,188
Independence Ditch System	165
Independence Woodlot	334
Shepherd Creek Alfalfa Lands	1,019
Lone Pine Park/Richards Field	481
Lone Pine Woodlot	156
Lone Pine Van Norman Field	97
Lone Pine Regreening	223
Total E/M Uses	8,914

3.5. Owens Valley Vegetation Conditions

Vegetation conditions within the Owens Valley are monitored using vegetation transects as well as other methods. The Green Book describes the methodology and purposes of vegetation transects. As stated in the Green Book: “Vegetation transects are included within the Green Book to serve two purposes: 1) to estimate transpiration from a monitoring site, and 2) for use in determining whether vegetation has decreased or changed significantly from the previous cover.” A reference for comparison of vegetation changes is the 1984-87 vegetation inventory data.

The Green Book requires the 1984-87 vegetation inventory to be used as a baseline when determining whether vegetation cover and/or species composition has changed. The 1984-1987 inventory transects were chosen using aerial photos to aid in determining transect locations. Transects were located visually by choosing lines that appeared to cover the representative units of vegetation within the parcel being measured. Transects were generally run toward the center of the parcels in order to avoid transitional areas at parcel edges. A minimum of five transects were run on each parcel. If the vegetation cover was particularly heterogeneous, a qualitative method was employed in selecting additional transects. The transect data were checked visually and additional transects were run to lessen the degree of variability as necessary.

The Green Book directs that future transects should be performed in a similar manner as the initial inventory to determine whether vegetation has changed, but allows the technique to be modified by the Technical Group to permit statistical comparison by randomly selected transects. The procedures for modifying the Green Book procedures are included under Water Agreement Section XXV. In any case, the Green Book requires the Technical Group to perform a statistical analysis in order to determine the statistical significance of any suspected vegetation changes from the 1984-87 inventory maps.

In 2004, LADWP began running transects annually within parcels located both inside and outside well fields. Some parcels are evaluated annually, while others are not. Percent total cover is calculated and compared to data collected within parcels during the period of baseline inventory.

Figure 19 includes vegetation transect data collected by LADWP and presented in a series of graphs documenting Owens Valley vegetation conditions. LADWP monitors vegetation using established vegetation transects that enable the Technical Group to reliably assess annual changes in vegetation cover and composition.

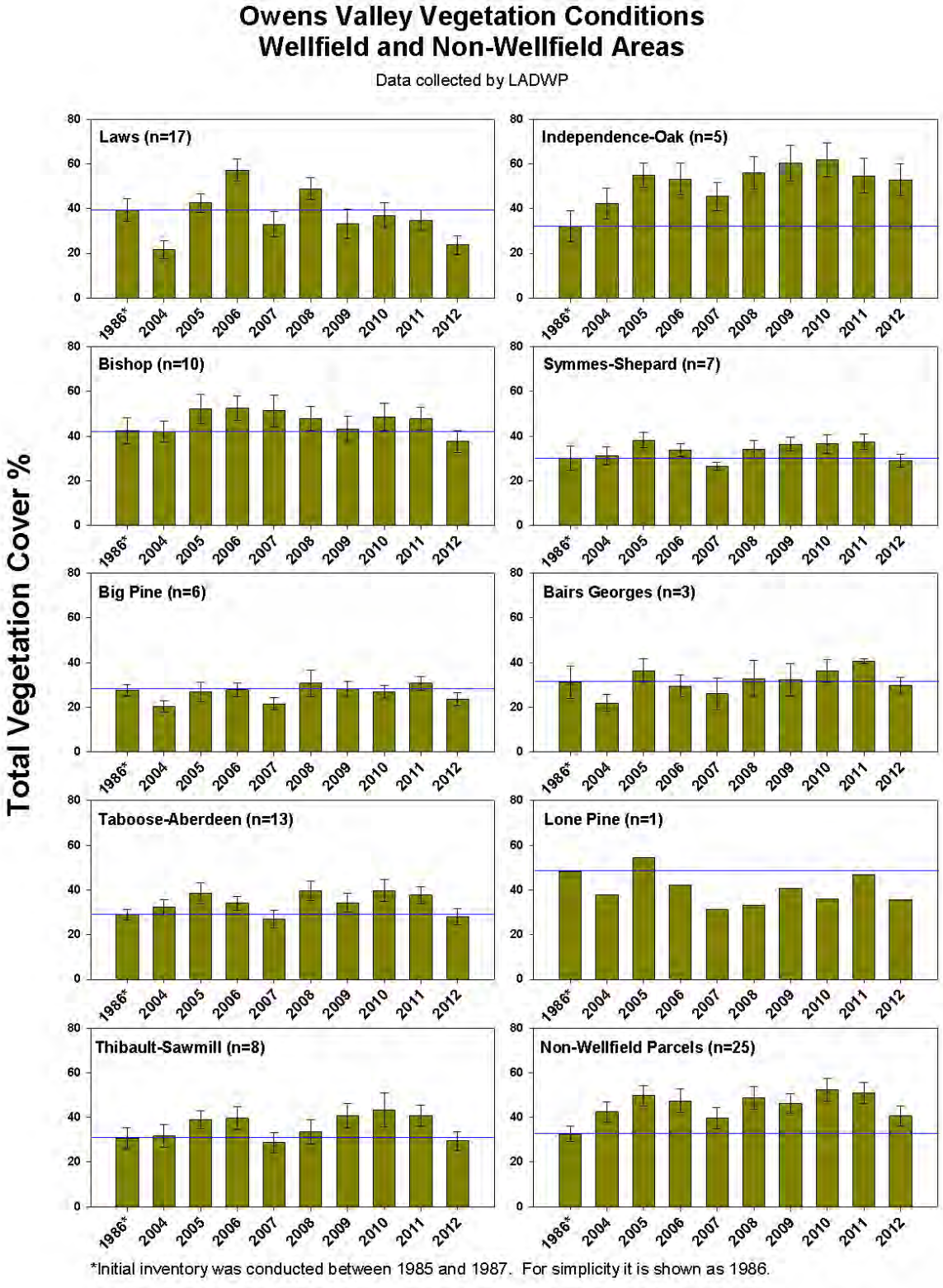


Figure 19 – Owens Valley Vegetation Condition
Wellfield and Non-Wellfield

3.6. Bishop Cone Audit

LADWP's groundwater pumping on the Bishop Cone is governed by the provisions of the Stipulation and Order filed on August 26, 1940 in Inyo County Superior Court in the case of Hillside Water Company, a corporation et al. vs. the City of Los Angeles, a Municipal Corporation et al., (Hillside Decree) as well as the Water Agreement. Annual groundwater extractions from the Bishop Cone are limited to an amount not greater than the total amount of water used on City of Los Angeles (City)-owned lands on the Bishop Cone during that year. Annual groundwater extractions by LADWP on the Bishop Cone are the sum of all groundwater pumped plus the amount of artesian water that has flowed from wells on the Bishop Cone during the year. Water used on City-owned lands on the Bishop Cone are the quantity of water supplied to such lands, including conveyance losses, less any return flow to the aqueduct system.

The Inyo County Water Department (ICWD) performs an annual audit of LADWP water uses and groundwater extractions by LADWP on the Bishop Cone. The Appendices contain a draft copy of the most recent audit dated October 25, 2012. As shown in Figure 5, LADWP has historically pumped much less than allowed under the terms of the Hillside Decree. In the 2012-13 runoff year LADWP pumped about 11,491 acre-feet of water from the Bishop Cone area, less than half of that identified as being allowed using the current audit procedures.

The current Bishop Cone audits do not provide an accurate accounting of ditch losses and stockwater uses on the Bishop Cone and existing audit protocols should be revised to better reflect a true accounting of water supplied.

3.7. Reinhackle Spring Monitoring

As required by the 1991 Owens Valley EIR, Owens Valley groundwater pumping is managed to avoid reductions in spring flows that would cause significant decreases or changes in spring-associated vegetation. Groundwater pumping from wells that may affect flow from Reinhackle Spring are managed so that flows from the spring are not significantly reduced compared to flows under prevailing natural conditions. Table 16 shows daily flow values for Reinhackle Spring. Over the 2012-13 runoff year, Reinhackle Spring had an average daily flow of about 1.8 cfs.

Analysis of Reinhackle Spring was included in a 2004 cooperative study by LADWP and ICWD on the Owens Valley groundwater geochemistry. During the study, water samples from Reinhackle Spring were chemically analyzed and compared to water samples from the LAA, nearby pumping wells, samples from the deep aquifer, and samples from shallow monitoring wells. The 2004 study concluded that the water flowing from Reinhackle Spring is similar in composition to aqueduct water and not similar to the deep aquifer samples or up-gradient shallow aquifer wells. Testing to determine the effects of groundwater pumping and LAA seepage on Reinhackle Spring flow was conducted between May 2010 and April 2011. Data and analysis from the 2004 cooperative study and 2010-11 testing have been included in a draft monitoring and operations plan for the Bairs-Georges Wellfield known as the draft Reinhackle Spring Flow Characterization Report and Operations Plan. The draft Reinhackle Spring Flow Characterization Report and Operations Plan was sent to the Inyo County Water Department for review in November 2012.

Table 16. Reinhackle Spring Flow in cfs During 2012-13 Runoff Year

Day of Month	April	May	June	July	August	September	October	November	December	January	February	March	Annual
1	1.92	1.84	1.79	1.79	1.79	1.98	2.07	1.98	1.74	1.7	1.44	1.51	
2	1.92	1.84	1.79	1.79	1.79	1.99	2.07	1.98	1.74	1.7	1.43	1.48	
3	1.89	1.84	1.79	1.79	1.73	2.02	2.07	1.98	1.74	1.7	1.43	1.48	
4	1.88	1.84	1.79	1.79	1.72	2.03	2.07	1.98	1.73	1.7	1.43	1.47	
5	1.88	1.82	1.8	1.79	1.76	2.02	2.07	1.98	1.7	1.67	1.47	1.46	
6	1.88	1.79	1.81	1.8	1.81	2.02	2.07	1.95	1.7	1.65	1.47	1.42	
7	1.88	1.79	1.79	1.82	1.83	2.03	2.07	1.93	1.7	1.65	1.48	1.37	
8	1.88	1.79	1.79	1.84	1.79	2.01	2.07	1.93	1.7	1.61	1.48	1.35	
9	1.85	1.79	1.79	1.84	1.8	2.01	2.07	1.93	1.72	1.59	1.52	1.34	
10	1.8	1.79	1.79	1.84	1.81	2.03	2.05	1.93	1.74	1.61	1.56	1.35	
11	1.79	1.79	1.79	1.84	1.84	2.01	2.02	1.93	1.74	1.61	1.57	1.38	
12	1.79	1.79	1.79	1.84	1.84	1.99	2.02	1.9	1.74	1.59	1.56	1.39	
13	1.8	1.79	1.79	1.84	1.84	2.04	2	1.88	1.74	1.57	1.56	1.39	
14	1.79	1.79	1.79	1.84	1.88	2.07	2.02	1.88	1.74	1.56	1.56	1.39	
15	1.79	1.79	1.79	1.84	1.88	2.07	2.01	1.84	1.73	1.56	1.56	1.42	
16	1.79	1.79	1.79	1.84	1.88	2.07	2	1.78	1.67	1.56	1.56	1.39	
17	1.79	1.79	1.79	1.84	1.9	2.07	1.98	1.77	1.67	1.56	1.56	1.38	
18	1.79	1.79	1.79	1.84	1.92	2.07	1.98	1.74	1.68	1.54	1.56	1.35	
19	1.79	1.79	1.79	1.84	1.93	2.07	1.98	1.77	1.68	1.52	1.56	1.35	
20	1.79	1.79	1.79	1.84	1.93	2.07	1.98	1.77	1.68	1.52	1.53	1.35	
21	1.79	1.79	1.79	1.84	1.93	2.07	1.98	1.77	1.69	1.51	1.52	1.35	
22	1.79	1.79	1.79	1.84	1.94	2.07	1.98	1.77	1.68	1.48	1.52	1.35	
23	1.79	1.79	1.79	1.81	1.97	2.07	1.98	1.79	1.65	1.46	1.52	1.35	
24	1.79	1.79	1.79	1.79	1.97	2.07	1.98	1.79	1.66	1.46	1.53	1.35	
25	1.79	1.79	1.79	1.79	1.96	2.07	1.98	1.78	1.65	1.48	1.52	1.35	
26	1.82	1.79	1.79	1.79	1.98	2.07	1.98	1.75	1.65	1.48	1.54	1.35	
27	1.84	1.79	1.79	1.79	1.98	2.07	1.98	1.75	1.65	1.48	1.52	1.35	
28	1.84	1.79	1.79	1.79	1.98	2.07	1.98	1.77	1.65	1.48	1.42	1.35	
29	1.83	1.79	1.79	1.79	1.98	2.07	1.98	1.74	1.64	1.48		1.35	
30	1.98	1.79	2.01	1.79	1.98	2.15	1.98	1.71	1.64	1.43		1.35	
31		2.04		1.96			2		1.62	1.5		1.35	
Average	1.83	1.81	1.80	1.82	1.88	2.05	2.02	1.85	1.69	1.56	1.51	1.38	1.80

3.8. Water Spreading in the Owens Valley

The April 1, 2012 Eastern Sierra overall snowpack was estimated to be 35% of normal and Owens Valley runoff was about 57% of normal during the 2012-13 runoff year. In years with much greater than normal snowmelt, the volume of runoff may at times exceed the capacity of the LAA system. During periods of high snowpack runoff, LADWP may spread runoff water for operational reasons. No water was spread from water spreading diversions during the 2012-13 runoff year.

Overall estimated snowpack as of April 1, 2013 is about 47% of normal and forecast runoff in the Owens River Basin is about 220,900 acre-feet or 54% of average. Extensive water spreading is not anticipated during the 2012-13 runoff year; however, based upon the prevailing temperature, precipitation, and available LAA capacity in the upcoming year, some limited water spreading may occur for operational reasons.

3.9. Owens Lake Dust Mitigation

In accordance with the Great Basin Unified Air Pollution Control District's (GBUAPCD) *2003 and 2008 Owens Valley PM_{10} Planning Area Demonstration of Attainment State Implementation Plans*, LADWP has mitigated dust emissions from just under 42 square miles of the Owens Lakebed to date. A total of 75,300 acre-feet of water was released for dust control on Owens Lake during the 2012-13 runoff year.

Shallow flooding, managed vegetation, and gravel dust control measures have been used to mitigate dust emissions from the lakebed and are recognized as the approved Best Available Control Methods (BACM) by GBUAPCD. LADWP completed Phase 8 of the Owens Lake Dust Control Project in the fall of 2012, bringing just over 2 square miles of gravel BACM into operation.

Currently, Phase 7a of the Owens Lake Dust Control Project is under environmental review, which would bring an additional 3.1 square miles of new dust control into operation in areas formerly designated for Moat and Row under Phase 7. In addition, Phase 7a will convert 3.4 square miles currently operated as shallow flood to managed vegetation, gravel, or a hybrid of the approved control methods to use water more efficiently and to enhance wildlife habitat value on the Owens Lakebed.

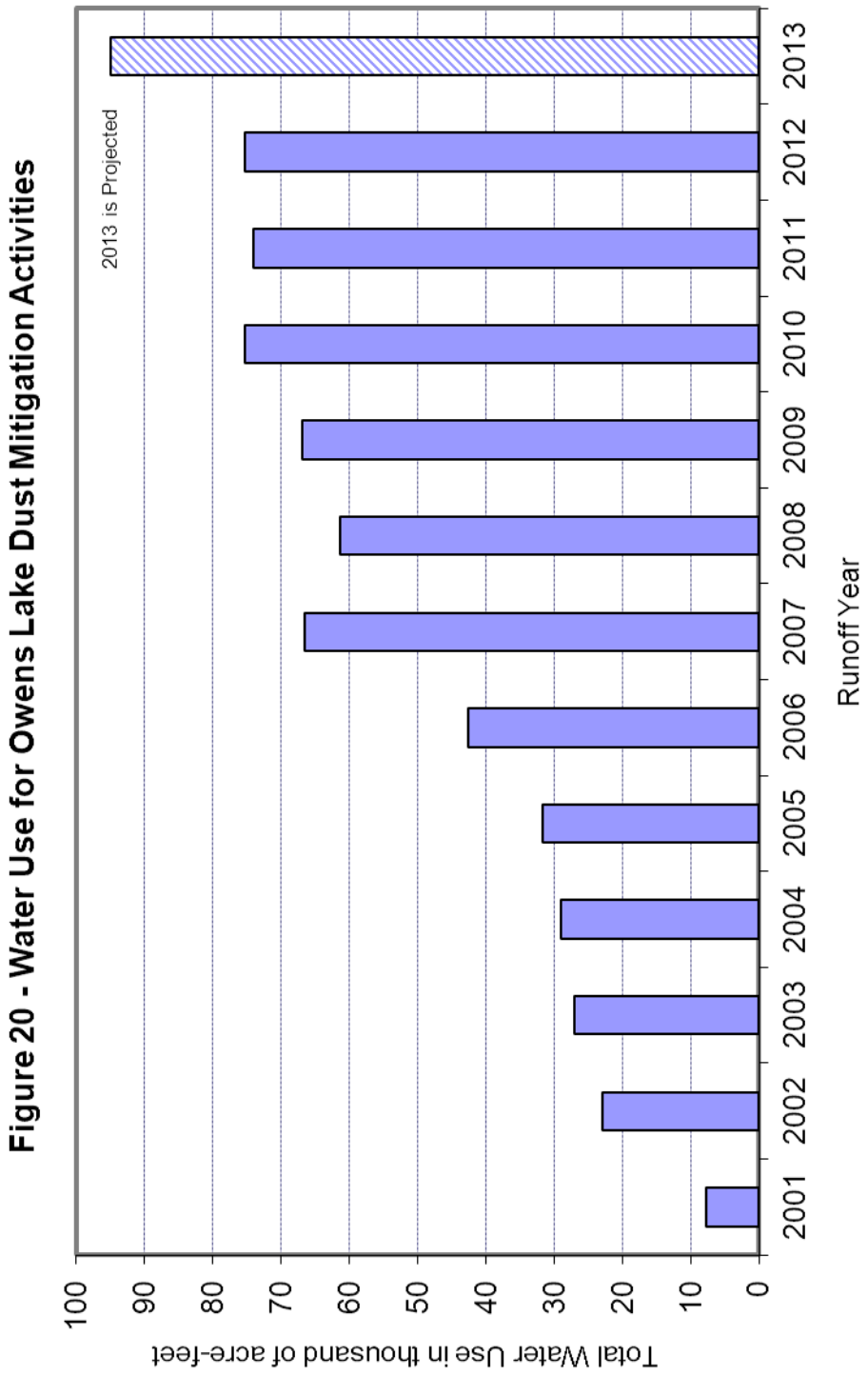


Figure 20. Water Use by Owens Lake Dust Mitigation Activities

4. ENHANCEMENT/MITIGATION PROJECT STATUS

4. ENHANCEMENT/MITIGATION PROJECT STATUS

Table 17 provides the current status of Owens Valley Enhancement/Mitigation Projects.

TABLE 17. E/M Project Status

Project/Item Description	Project Status, Strategies/ Actions/ Plans and overall effectiveness of Mitigation effort and Plan in reaching its goal	1991 Owens Valley EIR Impact No.
Independence Springfield (283 acres)	The Independence Springfield has achieved its goal by irrigating over 280 acres. The E/M Project is currently under evaluation by the Technical Group.	10-11
Independence Woodlot (21 acres)	The Independence Woodlot has achieved its goals. California Department of Forestry assists with harvesting and cleanup. The Lone Pine Future Farmers of America irrigates the woodlot and distributes the wood according to the operations plan and management guidelines that were developed by the Technical Group.	10-11
Independence East Side Regreening Project (30 acres)	Mitigation plans were submitted to Inyo County Water Department (ICWD) for this project on August 13, 2004. California Environmental Quality Act (CEQA) was filed for the Independence East Side Regreening Project and the Town Water System September 23, 2004, with a public comment period from September 23, to October 29, 2004. Responses to comments were completed. The Board of Water and Power Commissioners approved a Mitigated Negative Declaration for the project in May 2005. Inyo County (County) requested that three minor modifications to the project be made: 1) The project well to be located approximately 100 yards to the east of the originally proposed location, 2) That sprinkler irrigation be considered in place of flood irrigation, and 3) That a portion of the project area include stables and/or corrals. An amendment to the project scoping document that incorporates these changes was approved by the Standing Committee on April 23, 2009. The well for this project was drilled in September 2012, and is scheduled to be equipped in 2013. The E/M projects are currently under evaluation by the Technical Group.	10-11

Project/Item Description	Project Status, Strategies/ Actions/ Plans and overall effectiveness of Mitigation effort and Plan in reaching its goal	1991 Owens Valley EIR Impact No.
Big Pine Northeast Regreening (30 acres)	Mitigation Plans for the Big Pine Northeast Regreening were transmitted to the County in 2004. Comments were received from the County in 2005. The County identified a portion of the project area for land release and sale. In addition, a portion of the Big Pine Ditch system runs through the project area. This reduced the original project area by less than an acre. A letter was sent to the County in February 2008 requesting concurrence on the acreage change but a response has not been received. An archaeological survey of the site was completed as required by the CEQA process. Cultural resources were identified during the survey. These resources will be avoided during implementation. Issues with the 1988 Scope of Work made the project unfeasible as originally scoped. In order to facilitate implementation of the project the following changes were identified: 1) Change the water supply identified for the project to include the Big Pine Canal (Well W375 remained scoped as a required source of make-up water for the project), 2) Change the irrigation method from flood irrigation to the option of flood or sprinkler irrigation, 3) Move the project area closer to U.S. Highway 395, and 4) Change the lessee identified for the project to an unspecified lessee. These changes were discussed publicly at the September 9, 2009 Inyo County Water Commission meeting, the November 5, 2009 Inyo/Los Angeles Standing Committee meeting, and the April 15, 2010, Technical Group Meeting. At the November 4, 2010, Inyo/Los Angeles Standing Committee meeting, modifications to the final scoping document "Regreening Northeast of Big Pine: Irrigated Pasture J & L Livestock – RLI-483 – Big Pine Area" as an Enhancement/Mitigation Project were approved. Key modifications include: changing the lease designation, revising the boundaries of the project, and amending the water supply source and method of application identified for the project. The ICWD and Technical Group analyzed the operation of Well W375 and concluded that an exemption for up to 150 acre-feet per year would have no significant impact on the environment or other well owners. The Technical Group must exempt Well W375 for project water supply in order to make the project feasible. The Los Angeles Department of Water and Power (LADWP) has completed the CEQA analysis for the proposed project and the Board of Water and Power Commissioners have approved the Negative Declaration for the project. Implementation of the project is scheduled for the 2014-2015 runoff year.	10-11
Shepherd Creek Alfalfa Field (198 acres)	The Shepherd Creek project is 100% complete and has achieved its goals.	10-11
Shepherd Creek Potential (60 acres)	The Shepherd Creek Potential Project was evaluated and natural increases in the density of native cover have occurred that are comparable to baseline conditions in adjacent undisturbed parcels. Therefore, the goals for this potential project, as stated in the EIR, have been met.	10-11
Lower Owens River Rewatering Project (18,000 AFY)	This project was to provide a continuous flow of water in a 62-mile, previously dry (1913-1986) portion of the river channel and maintain five small lakes, creating a warm water fishery and wildlife habitat in the southern Owens Valley. Inyo County and LADWP decided to reduce the water supply to the Lower Owens River Project in 1991 because of a lack of E/M well supply. The portion of the river between Blackrock Spillgate and Independence was dry until the Lower Owens River Project was implemented in December 2006.	10-14

Project/Item Description	Project Status, Strategies/ Actions/ Plans and overall effectiveness of Mitigation effort and Plan in reaching its goal	1991 Owens Valley EIR Impact No.
Independence Pasture Lands and Native Pasture Lands (610 acres)	Currently, approximately 520 acres are incorporated into the project. The project was evaluated in 2008 to determine if additional acreage should be irrigated. Figure 12-2 for the project (1991 EIR) was scanned and rubber sheeted onto a quad sheet for acreage calculations in GIS. The Independence pasturelands acreage in this image was actually 522 acres. Therefore, LADWP has implemented the acreage designated in the figure presented in the 1991 EIR.	10-16
Van Norman Fields (171 acres)	This project is complete and the goals for this project are being met. A portion of the project cannot be irrigated because of the area's topography. This area was evaluated jointly by LADWP and Inyo County and a decision was made that this high area could not be modified to increase irrigation efficiency and that the project goals were being fulfilled. Additionally the project supply well designated for this project, Well 390, has reached the end of its service life and water is currently being supplied to the project from a submersible pump installed in the Well 390 casing. A replacement well was drilled in October 2012 and is scheduled to be equipped prior to the end of 2013. The E/M projects are currently under evaluation by the Technical Group.	10-16
Richards Fields (160 acres)	This project is complete and the goals for this project are being met.	10-16
Lone Pine Woodlot (12 acres)	The Woodlot has achieved its goals. The California Department of Forestry helps with harvesting and cleanup and the Lone Pine Future Farmers of America irrigate the woodlot and distributes the wood according to the operations plan and management guidelines that were developed by the Technical Group.	10-16
Lone Pine East Side Regreening (11 acres)	This project is complete and the goals for this project are being met.	10-16
Lone Pine West Side Regreening (7 acres)	This project is complete and the goals for this project are being met.	10-16
Laws/Poleta Native Pasture (216 acres)	This project is complete and the goals for this project are being met.	10-18
Laws Historical Museum Pasturelands (21+15 acres)	This project is complete and the goals for this project are being met.	10-18
McNally Ponds and Native Pasturelands (348 acres)	The Standing Committee agreed in 1991 to reduce the water commitment to the McNally Ponds Project for that year because of dry conditions. In many normal and below normal runoff years since that time, the Standing Committee has reduced water releases to this project. In years of abundant runoff the project receives its full allotment of water. In 2012-13 the Standing Committee agreed to not provide a full allotment of water to the project. Under the current operating procedures, in years when the McNally Canals are operating or the McNally Ponds supply wells are in ON status, the ponds receive a full water allotment. The E/M projects are currently under evaluation by the Technical Group.	10-18

Project/Item Description	Project Status, Strategies/ Actions/ Plans and overall effectiveness of Mitigation effort and Plan in reaching its goal	1991 Owens Valley EIR Impact No.
Klondike Lake Aquatic Habitat (160 acres)	The Klondike Lake Project is being implemented. The estimated water usage for the project was reduced from 2,200 AF to 1,700 AF, with 1,500 AF allocated for conveyance and lake level maintenance and up to 200 AF allocated for waterfowl habitat south of the lake. A new diversion was installed and implementation of the releases for waterfowl habitat south of the lake began in May 2005. Delivery of the total allocation of up to 200 AF to the south was initially problematic because of the low hydraulic gradient between the lake and the waterfowl habitat areas. The low hydraulic gradient also made accurate flow measurement difficult. Sand accumulations have periodically been cleared from the conveyance pipe inlet and vegetation removed from the pipe outflow area to facilitate flow. A different water release location was utilized in 2012 and the project received its full allotment of 200 AF. The goals for this project were met in 2012. The E/M projects are currently under evaluation by the Technical Group.	11-1
Millpond Recreation Area (18 acres irrigated, pond, pay portion of power bill).	This project is being implemented.	n/a
Independence Ditch	Complete.	n/a
Independence Roadside Rest Area (0.5 acres)	Complete.	n/a
Eastern California Museum	Complete.	n/a
Manzanar Tree Pruning	Complete.	n/a
Lone Pine North Clean-Up	Complete.	n/a
Lone Pine Sports Complex	Complete.	n/a
Lone Pine Riparian Park (320 acres)	Complete.	n/a
Tree Planting Along Public Roads	Complete.	n/a

5. 1991 ENVIRONMENTAL IMPACT REPORT (1991 EIR) MITIGATION MEASURE STATUS

5. 1991 OWENS VALLEY ENVIRONMENTAL IMPACT REPORT (1991 EIR) MITIGATION MEASURE STATUS

Table 18 provides status of mitigations required by the 1991Owens Valley EIR.

TABLE 18. 1991 Owens Valley EIR Mitigation Measures

9 - WATER RESOURCES

Steward Ranch

1991 EIR Impact No. 9-14

Impacts:	Los Angeles Department of Water and Power (LADWP) pumping between 1970 and 1990 in the Big Pine area contributed to lowered water levels in the wells of Steward Ranch and resulted in an adverse economic effect. It is expected that LADWP will continue to pump from this area in the future. The proposed mitigation measure would reduce this impact to less-than significant.
Project Description/ Mitigation Measure:	Because groundwater pumping in the Big Pine well field was contributing to a lowering of groundwater levels at Steward Ranch, one of two wells became inoperable. LADWP reached agreement with the ranch owners to permanently mitigate the lowered groundwater levels that have existed since 1972.
Mitigation Goals/ Strategies/Actions:	To compensate the ranch owners for lowered groundwater levels on the ranch.
Project Status/ Effectiveness:	The mitigation efforts are complete. LADWP continues to compensate the ranch owners for added power costs of pumping water from a greater depth.
Mitigation Plan Required/Status:	No.

10 - VEGETATION

Saltcedar Eradication Control Program

1991 EIR Impact No. 10-6

Impacts:	Between 1970 and 1990, LADWP continued to spread surplus water in wet years in the spreading areas created by the dikes east of Independence between the aqueduct and the river. This activity increased soil moisture and water tables, but also fostered conditions favorable to the spread of saltcedar, which was established prior to 1970.
Project Description/ Mitigation Measure:	A saltcedar eradication and control program has been implemented as described in Chapter 5 of the 1991 EIR.
Mitigation Goals/ Strategies/Actions:	To control saltcedar in the Owens Valley.
Project Status/ Effectiveness:	The control efforts are continuing with payments from LADWP to the Inyo County Water Department (ICWD) and with outside funding. Control of Owens River saltcedar populations from Tinemaha Reservoir into the Delta has occurred along the main channel of the Owens River. Control efforts are continuing.
Mitigation Plan Required/Status:	No.

Independence Springfield (297 acres), Independence Woodlot (20 acres), Revegetation project East of Independence (part of Independence Springfield, 40 acres)

1991 EIR Impact No. 10-11

Impacts:	Fluctuations in water tables due to groundwater pumping have caused approximately 655 acres of groundwater dependent vegetation to die-off. Loss of vegetation cover has occurred on these lands.
Project Description/ Mitigation Measure:	As part of the Independence Springfield and Woodlot enhancement/mitigation projects, approximately 317 acres of barren or near-barren ground have been revegetated with either native pasture or alfalfa. This area was affected by groundwater pumping and surface diversions of water.

Mitigation Goals/ Strategies/Actions: Independence Woodlot - to supply fuel wood to needy individuals and to mitigate blowing dust. Independence Springfield - to establish native perennial vegetation where none existed, reduce blowing dust and enhance grazing.

Project Status/ Effectiveness: Independence Woodlot has achieved its goals. California Department of Forestry helps with harvesting and cleanup and the Lone Pine Future Farmers of America irrigate the woodlot and distributes the wood according to the operations plan and the management guidelines that were developed by the Technical Group. Independence Springfield has achieved its goal over approximately 280 acres. LADWP is currently planning to irrigate an additional 40 acres.

Mitigation Plan Required/Status: No.

Independence East Side Regreening Project (30 acres), Big Pine Northeast Regreening (30 acres)

1991 EIR Impact No. 10-11

Impacts: Continued from above.

Project Description/ Mitigation Measure: In the near future, two enhancement/mitigation projects will be initiated to mitigate areas affected by groundwater pumping adjacent to the towns of Independence (east side regreening project) and Big Pine (northeast regreening project). Each project was originally planned to be approximately 30 acres of irrigated pasture.

Mitigation Goals Strategies/Actions: To enhance the aesthetics of the areas that lie adjacent to Independence and Big Pine.

Project Status/ Effectiveness: Mitigation plans were submitted to ICWD for these projects on August 13, 2004:

Independence East Side Regreening Project and Town Water System – As required by the California Environmental Quality Act (CEQA) the Initial Study and Draft Mitigated Negative Declaration for the Independence East Side Regreening Project and Town Water System in the Independence Area of Inyo County

(Mitigated Negative Declaration) was filed on September 23, 2004, with a public comment period from September 23 to October 29, 2004. Responses to comments are complete. The Board of Water and Power Commissioners approved the Mitigated Negative Declaration in May 2005. Inyo County requested that three minor modifications be made to the project: 1) The project well to be located approximately 100 yards to the east of the location designated in the Mitigated Negative Declaration, 2) That the method of irrigation be changed from flood irrigation to sprinkler irrigation, and 3) That a small portion of the total acreage be considered for corrals and stables. An amendment to the project scoping document incorporating these minor changes was approved by the Standing Committee on April 23, 2009. The well for this project was drilled in September 2012 and is scheduled to be equipped prior to the end of 2013.

Big Pine Regreening – Mitigation Plans were transmitted to Inyo County in 2004. Comments were received from Inyo County in 2005. Inyo County identified a portion of the project area for land release and sale. In addition, a portion of the Big Pine Ditch system runs through the project area. This reduced the original project area by less than one acre. A letter was sent to Inyo County in February 2008 asking for concurrence on the acreage change. An archaeological survey of the site was completed as required by the CEQA process. Cultural resources were identified during the survey. These resources will be avoided during implementation. LADWP also identified issues making the project unfeasible as originally scoped. In order to facilitate implementation, the following changes were identified: 1) Change the water source for the project to include the Big Pine Canal (Well 375 remained scoped as the make-up water source for the project), 2) Change irrigation method from flood irrigation to the option of flood or sprinkler irrigation, 3) Move the project area closer to U.S. Highway 395, and 4) Change the lessee identified for the project to an unspecified lessee. These changes were discussed publicly at the September 9, 2009, Inyo County Water Commission meeting and the November 5, 2009 Inyo/Los Angeles Standing Committee meeting. At the November 4, 2010, Inyo/Los Angeles Standing Committee meeting modification of the final scoping document “Regreening Northeast of Big Pine: Irrigated Pasture J & L Livestock – RLI-483 – Big Pine Area” as an enhancement/mitigation project was approved. Key modifications include: changing the lease designation, revising the boundaries of the project, and amending the water supply source and method of application identified for the project. The ICWD and Technical Group analyzed the operation of Well 375 and concluded that an exemption for up to

150 acre-feet per year would have no significant impact on the environment or other well owners. The Technical Group must exempt Well 375 for project make-up water in order to make this project feasible. LADWP has completed the CEQA analysis, and the Board of Water and Power Commissioners have approved the Negative Declaration for the project. Implementation of the project is scheduled for the 2014-2015 runoff year.

Mitigation Plan Required/Status: In progress.

Shepherd Creek Alfalfa Field (198 acres), Shepherd Creek Potential (60 acres).

1991 EIR Impact No. 10-11

Impacts: Continued from above.

Project Description/ Mitigation Measure: Under the Shepherd Creek enhancement/mitigation project, approximately 198 acres of poorly vegetated land has been converted to alfalfa. This area was affected by groundwater pumping and abandonment of irrigation. In addition, an area of approximately 60 acres to the east of the existing project area on the opposite side of U.S. Highway 395 is poorly vegetated. If the density of the native cover in this area does not naturally increase, the existing enhancement/mitigation project may be expanded to include this additional area.

Mitigation Goals Strategies/Actions: Shepherd Creek Project - To revegetate abandoned farm land with alfalfa to mitigate blowing dust.

Shepherd Creek Potential Project - To naturally increase the density of native cover or expand the existing project into this area.

Project Status/ Effectiveness: The Shepherd Creek Project is 100% complete and has achieved its goals.

The Shepherd Creek Potential Project was evaluated and natural increases in the density of native cover have occurred making the site comparable to baseline conditions in adjacent undisturbed parcels. Therefore, the goals for this potential project, as stated in the EIR, have been met.

Mitigation Plan

Required/Status: No.

Taboose/Hines Springs/Blackrock Areas Revegetation Project (80 acres)
(The 80 acres is comprised of Tinemaha 54, Hines Spring S, and Blackrock 16E)

1991 EIR Impact No. 10-11

Impacts: Continued from above.

Project Description/ Mitigation Measure: Approximately 80 acres of land that lost a significant amount of its native vegetation cover as a result of increased groundwater pumping will be revegetated. The techniques that will be employed to revegetate these lands will be determined through studies that will be conducted by LADWP and Inyo County. These lands will not be permanently irrigated, but will be revegetated with native Owens Valley vegetation not requiring irrigation except perhaps during its initial establishment. Depending on the amount of rainfall and runoff, successful revegetation of these lands could take a decade or longer. The goal will be to restore as full a native vegetation cover as is feasible, but at a minimum, vegetation cover sufficient to avoid blowing dust will be achieved in that area.

Mitigation Goals/ Strategies/Actions: Tinemaha 54 - To restore vegetation to the conditions that existed prior to the impact. Hines Spring S - Dependent upon the Hines Spring mitigation project presented below.

Blackrock 16E - To rehabilitate the site to alkali meadow conditions.

Project Status/ Effectiveness: Tinemaha 54 - The 0.3-acre area has been fenced, planted with 108 grass plants and drip irrigated between 1999 and 2004 to get the plants established. Transects were run by LADWP and ICWD in August of 2012. The parcel has achieved 2.14% total perennial cover. Hines Spring S - the Additional Mitigation Projects developed by the MOU Ad Hoc Group were implemented by March 2012. Hines Spring S may be affected by the implementation of on-site mitigation (Hines Spring Well 355 and Hines Spring Aberdeen Ditch projects), and a revegetation plan will be developed within three years after the work at Hines Spring is completed. Blackrock 16E - the area has been fenced and weeds have been treated by controlled burn. Cover of native species has increased from 5% in 1999 to 12% in 2002. Weed cover decreased from 9% in 1999 to less than 1% in 2002. Permanent transects were run in 2010 and the parcel has

attained the cover and composition goals delineated in the revegetation plan.

Mitigation Plan Required/Status: Yes – complete.

Five Bridges Area Revegetation Project (300 acres)

1991 EIR Impact No. 10-12

Impacts: Vegetation in an area of approximately 300 acres near Five Bridges Road north of Bishop was significantly adversely affected during 1988 because of the operation of the two wells, to supply water to enhancement/mitigation projects.

Project Description/ Mitigation Measure: Water has been spread over the affected area since 1988. By the summer of 1990, revegetation of native species had begun on approximately 80% of the affected area. LADWP and Inyo County are developing a plan to revegetate the entire affected area with riparian and meadow vegetation. This plan will be implemented when it has been completed.

Mitigation Goals Strategies/Actions: To restore the vegetation community complex with similar species composition and cover that exists at local similar sites. The goal will be attained when alkali meadows attain live cover of 60%, composed of four perennial species and riparian areas attain live cover of 90%, composed of four perennial species.

Project Status/ Effectiveness: Riparian areas have been fenced, water releases are conducted three times during the growing season, several controlled burns have been conducted, and the area is treated annually for weed problems. Monitoring was conducted throughout the growing season. In 2012, water releases were conducted three times during the growing season. At transect L4 in 2012, perennial cover was 21%, composed of five native species. Perennial cover at transect L5 in 2012 was 68%, composed of six native species. Both of these transects are located in alkali meadow areas. A grazing management plan has been developed for the area.

Mitigation Plan Required/Status: Yes – complete.

Symmes-Shepherd Well field Area Revegetation Project (60 acres) (The area is comprised of Independence 105, Independence 131, and Independence 123)

1991 EIR Impact No. 10-13

Impacts:	Increased groundwater pumping has significantly adversely affected approximately 60 acres of vegetation in the Symmes-Shepherd well field area.
Project Description/ Mitigation Measure:	A revegetation program will be implemented for these affected areas utilizing native vegetation of the type that has died. Water may be spread as necessary in these areas to accomplish the revegetation.
Mitigation Goals Strategies/Actions:	To revegetate the parcels with species mapped in the surrounding areas.
Project Status/ Effectiveness:	While 60 acres was identified in the EIR, 115 acres were fenced for these three projects. Independence 105 (14 acres) - The area has been fenced and native vegetation cover has increased naturally. Transects were run by ICWD in 2006 and native perennial cover had increased to 25%. The site has attained the cover and composition goals delineated in the revegetation plan. Independence 131 (73 acres) - The area has been fenced. Revegetation trials have been completed by two consulting firms. In areas not disturbed by the revegetation trials, vegetation cover is starting to increase naturally. Transects were run in 2006. Perennial cover was 8% composed of eight native perennial species. The goal for the site is to attain 17% perennial cover composed of four native perennial species. Approximately 25 acres were drill seeded with locally collected seeds in the spring of 2011. Transects were run by LADWP and ICWD in August of 2012. IND131S currently contains 6.15 % perennial cover, and IND131N has achieved the revegetation goals with 15.7% live cover composed of 5 perennial species. The site will be considered rehabilitated when cover is 90% and composition is 75% of the site specific stated goal

Independence 123 (28 acres) - The area has been fenced and native perennial vegetation cover has increased naturally. Transects were run in 2006. The site has attained the goals delineated in the revegetation plan of 17% perennial cover composed of four native perennial species.

Mitigation Plan Required/Status: Yes – complete.

Fish Springs Hatchery, Blackrock Spring Hatchery

1991 EIR Impact No. 10-14

Impacts: Increased groundwater pumping has reduced or eliminated flows from Fish Springs, Big and Little Seely Springs, Hines Spring, Big and Little Blackrock Springs, and Reinhackle Spring. This has caused significant adverse impacts to vegetation at several of these spring areas.

Project Description/ Mitigation Measure: No on-site mitigation will be implemented at Fish Springs and Big Blackrock Springs; however, the CDFW fish hatcheries at these locations serve as mitigation of a compensatory nature by producing fish that are stocked throughout Inyo County. The Lower Owens River Project provides compensatory mitigation.

Mitigation Goals/ Strategies/Actions: To allow CDFW to continue fish hatchery operations at Big Blackrock and Fish Springs.

Project Status/ Effectiveness: Hatchery operations are continuing. The Lower Owens River Project has been implemented.

Mitigation Plan Required/Status: No.

Big and Little Seely Springs (1 acre pond adjacent to Well W349)

1991 EIR Impact No. 10-14

Impacts: See description above.

Project Description/ Mitigation Measure:	In the area of Big and Little Seely Springs, LADWP Well 349 discharges water into a pond approximately one acre in size. This pond provides a temporary resting place for waterfowl and shorebirds when the pump is operating or Big Seely Spring is flowing. This water passes through the pond to the Owens River. Riparian vegetation has become established around this pond.
Mitigation Goals/ Strategies/Actions:	To manage groundwater pumping in accordance with the goals of the Water Agreement, replace the previous water resource with surface water and/or groundwater, and allow the affected area to naturally revegetate.
Project Status/ Effectiveness:	Project implementation is complete and the project functions as described.
Mitigation Plan Required/Status:	No.

Hines Spring (1 to 2 acres)

1991 EIR Impact No. 10-14

Impacts:	See description above.
Project Description/ Mitigation Measure:	The Hines Spring vent and its surroundings will receive on-site mitigation. Water will be supplied to the area from an existing, but unused, LADWP well at the site. As a result, approximately one to two acres will either have ponded water or riparian vegetation. Hines Spring will serve as a research project on how to re-establish a damaged aquatic habitat and surrounding marshland. Riparian trees and a selection of riparian herbaceous species will be planted on the banks. The area will be fenced.
Mitigation Goals/ Strategies/Actions:	To provide water from an existing, but unused, LADWP well to create 1-2 acres of ponded water or riparian vegetation at Hines Springs.
Project Status/ Effectiveness:	This project was also identified in the 1997 MOU and the subject of a 2004 and 2010 Stipulation and Order. Consultants developed draft plans for this project. The Parties to the 1997 MOU decided to enter into an ad hoc process to analyze the project at Hines

Springs and other potential project areas. *The Additional Mitigation Projects Developed by the MOU Ad Hoc Group* document describes a series of eight mitigation projects to satisfy this mitigation of the 1600 AF commitment of the 1997 MOU and was completed and agreed to by the Parties. CEQA analysis was conducted in the spring of 2010 and the projects were adopted by the Board of Water and Power Commissioners in June 2010. Implementation of the projects began shortly thereafter and were fully implemented by March 2012. Refer to Section 7 for more information on the status of each project.

Mitigation Plan Required/Status: Yes – complete.

Reinhackle Spring, Little Blackrock Springs

1991 EIR Impact No. 10-14

Impacts: See description above.

Project Description/ Mitigation Measure: LADWP will continue to supply water from Division Creek to the site of the former pond at Little Blackrock Springs. The marsh vegetation at this site will thus be maintained. When it was determined in the late 1980s that groundwater pumping was affecting the flow from Reinhackle Spring, pumping from certain wells in the area was discontinued and the spring flow increased No significant adverse impacts on vegetation in this area have resulted from the reduced flow. At Reinhackle Spring, groundwater pumping from wells that affect the spring flow will be managed so that flows from the spring will not be significantly reduced compared to flows under prevailing natural conditions. In addition, all of the provisions for protecting springs, described in impact 10-15 (see below) and contained in the Water Agreement and the Green Book, will be applied equally to Reinhackle Spring.

Mitigation Goals/ Strategies/Actions: Little Blackrock Spring - To maintain marsh vegetation through the use of the Division Creek Diversion.

Reinhackle Spring - Groundwater pumping will be managed so that flows from the spring will not be significantly reduced compared to flows under prevailing natural conditions.

Project Status/

Effectiveness: Little Blackrock Spring - This project is complete and the project functions as described.

Reinhackle Spring - Spring flows are being monitored continually and are shown in Table 16 (Section 3). The flow followed the typical seasonal pattern of reaching a peak flow in winter and a low flow in the spring. The average daily spring flow during 2012-13 runoff year was 1.8 cfs.

A geochemistry study of flow in Reinhackle Spring was conducted in 2003 as a cooperative study by LADWP, MWH Americas, Inc., and ICWD. This study concluded that water from Reinhackle Spring is similar in origin to the Los Angeles Aqueduct and dissimilar to the deep aquifer samples and up gradient shallow aquifer wells. An operational test was conducted in Bairs-Georges Wellfield to study the response of the spring flow to groundwater pumping by active wells in the wellfield and the flow in the Los Angeles Aqueduct and was completed in March 2011. The analysis of the data from these operational tests is completed and is being reviewed. The preliminary results show that the flow in Reinhackle Spring is affected mainly by the water levels in the shallow aquifer west of the spring. The groundwater pumping in the Bairs-Georges Wellfield could affect the flow in the spring only to the extent that it affects water levels in the shallow aquifer west of the spring. Based on the results of these operation tests, LADWP has developed a monitoring and operational plan for Bairs-Georges Wellfield that has been submitted to ICWD for comment.

Mitigation Plan Required/Status: No.

LORP Project (60 miles, perhaps more than 1,000 acres)

1991 EIR Impact No. 10-14

Impacts: See description above.

Project Description/ Mitigation Measure: Although, not all springs and associated riparian and meadow vegetation will receive on-site mitigation, the Lower Owens River Project will provide mitigation of a compensatory nature. This project will rewater 60+ miles of the river channel allowing for restoration of riparian vegetation along the river. This project also will result in the creation of several new ponds along the river and will provide the continuation of existing lakes associated with the

project. The project will restore large areas of wetland and meadow vegetation, perhaps exceeding 1,000 acres adjacent to the river and its delta. In comparison, the area of riparian and meadow vegetation that has been lost and will not be restored because of the elimination of spring flow due to groundwater pumping is estimated to be less than 100 acres.

Mitigation Goals/ Strategies/Actions: To rewater the Lower Owens River below the Los Angeles Aqueduct Intake and the enhancement of several environmental features along or near the river including the Delta, the Blackrock Waterfowl Management Area and Off-River Lakes and Ponds. The goal of the Lower Owens River Project is the establishment of a healthy, functioning ecosystem for the benefit of biodiversity and Threatened and Endangered Species, while providing for the continuation of sustainable uses including recreation, livestock grazing, agriculture and other activities.

Project Status/ Effectiveness: Flows were initiated in the Lower Owens River Project in December 2006. Phase 1 flows were met and exceeded. Project baseflows were achieved in February 2007. The specified Seasonal Habitat Flow was initiated on May 29, 2012, and completed on schedule. Specified flows were released to the Delta in 2012. The Blackrock Waterfowl Management Area achieved the 2012 - specified flooded acreage through water releases. Off-River Lakes and Ponds have been managed as specified for 2012. Training, monitoring, and reporting are being conducted as specified in the various permits.

Mitigation Plan Required/Status: Yes – complete.

Lower Owens River Rewatering Project (18,000 Acre-Feet Per Year)

1991 EIR Impact No. 10-14

Impacts: See description above.

Project Description/ Mitigation Measure: This project provided up to 18,000 acre-feet (AF) per year of continuous flow of water in a 50-mile, previously dry (1913-1986) portion of the river channel creating a warm water fishery and wildlife habitat in the southern Owens Valley. The project also supplied water to five small lakes along the river route providing improved waterfowl habitat in the region.

Mitigation Goals Strategies/Actions: The goal of the enhancement/mitigation project was to create a warm watery fishery and wildlife habitat in the southern Owens Valley. In addition, five small lakes were provided water for waterfowl habitat.

Project Status/ Effectiveness: This project has been overlaid by the Lower Owens River Project described above.

Mitigation Plan Required/Status: No.

Springs Vegetation (general)

1991 EIR Impact No. 10-14

Impacts: See description above.

Project Description/ Mitigation Measure: In addition, vegetation dependent upon a supply of water from a spring (primarily management type D) will be maintained in order to avoid a significant change or decrease as provided in the Water Agreement and the Green Book.

Mitigation Goals Strategies/Actions: Per description.

Project Status/ Effectiveness: On-going.

Mitigation Plan Required/Status: No.

Springs and Seeps

1991 EIR Impact No. 10-15

Impacts: Under the provisions of the Water Agreement and the Green Book, spring flows and vegetation dependent upon such flows will be carefully monitored by the Technical Group.

Project Description/ Mitigation Measure: The Green Book contains procedures for determining the effects of groundwater pumping and surface water management

practices on spring flow. Groundwater pumping from existing and new wells will be managed to avoid reductions in spring flows that would cause significant decreases or changes in spring-associated vegetation. If despite such management, significant decreases in spring flows occur due to groundwater pumping that could cause significant decreases or changes in vegetation dependent upon such flows, management of groundwater pumping from wells affecting flow from the spring will be modified so that adequate spring flow resumes to supply the vegetation. Also, the Technical Group may determine additional appropriate actions that could include: (a) temporarily supplying surface water or groundwater that could restore and sustain the vegetation until adequate spring flow resumes; and/or (b) revegetating the affected area if necessary.

Mitigation Goals/ Strategies/Actions: Per description.

Project Status/ Effectiveness: On-going.

Mitigation Plan Required/Status: No.

Independence Pasturelands and Native Pasturelands (610 acres), Van Norman Fields (171 acres), Richards Fields (160 acres), and Lone Pine Woodlot (12 acres)

1991 EIR Impact No. 10-16

Impacts: Approximately 1,080 acres of formerly irrigated lands had not successfully revegetated following the abandonment of agriculture. This was a significant adverse impact because these lands had a loss of vegetation and were the source of blowing dust.

Project Description/ Mitigation Measure: As part of the enhancement/mitigation projects implemented by LADWP and Inyo County since 1985, approximately 942 acres of these abandoned agricultural lands have been revegetated with irrigated pasture or alfalfa. These areas are the Independence Pasture and Native Pasturelands, the Van Norman and Richards Fields, and the Lone Pine Woodlot adjacent to Lone Pine.

Mitigation Goals/

Strategies/Actions: Independence Pasturelands/Native Pastures - To revegetate abandoned cropland that was removed from irrigation. Van Norman Field and Richards Field - To revegetate abandoned agricultural lands and native vegetation stands that were revegetating slowly. Lone Pine Woodlot - To supply fuel wood to needy individuals and to mitigate blowing dust.

Project Status/ Effectiveness: Currently, at the Independence Pasturelands/Native Pastures approximately 520 acres are incorporated into the project. Figure (12-2) for this project, in the 1991 EIR, was scanned and rubber sheeted onto a quad sheet for acreage calculations in GIS. The Independence Pasturelands acreage in this image was 522 acres. Therefore, LADWP has implemented the acreage designated in the figure presented in the 1991 EIR. The other projects noted above are complete and the goals for the projects have been met. At the Lone Pine Woodlot, the California Department of Forestry helps with harvesting and cleanup and the Lone Pine Future Farmers of America irrigate the woodlot and distributes the wood in accordance with the operation plans and management guidelines that were developed by the Technical Group. At the Van Norman Field, a portion of the project cannot be irrigated because of topography. This area was evaluated jointly by LADWP and Inyo County and a decision was made that this high area should not be modified to increase irrigation efficiency but that the project was fulfilling its stated goals. Well W390, the well designated to supply water to this project has reached the end of its service life and is planned for replacement. In the interim a submersible pump is supplying water to the project from the well W390 casing. A replacement well was drilled in October of 2012 and is scheduled to be equipped prior to the end of 2013.

Mitigation Plan Required/Status: No.

Lone Pine East Side Regreening (11 acres),
Lone Pine West Side Regreening (7 acres)

1991 EIR Impact No. 10-16

Impacts: Continued from above.

Project Description/ Mitigation Measure: A field of approximately seven acres along the Whitney Portal Road in Lone Pine, and a field of approximately 11 acres, located north of Lone Pine and east of U.S. Highway 395, have been

converted to irrigated pasture as part of the Lone Pine Regreening enhancement/mitigation projects.

Mitigation Goals/ Strategies/Actions: To enhance the aesthetics and to regreen abandoned agricultural lands in the Lone Pine area.

Project Status/ Effectiveness: Project implementation is complete and the goals for these projects have been met.

Mitigation Plan Required/Status: No.

Bishop Area Revegetation Project (120 acres)

1991 EIR Impact No. 10-16

Impacts: Continued from above.

Project Description/ Mitigation Measure: In addition, 120 acres of formerly irrigated land near Bishop with a loss of vegetation cover will be revegetated. The process to successfully revegetate these lands will be determined through studies to be conducted by LADWP and Inyo County. These lands will not be permanently irrigated, but will be revegetated with Owens Valley vegetation not requiring irrigation except perhaps during its initial establishment.

Mitigation Goals/ Strategies/Actions: To revegetate the parcel with species found in the surrounding area. The goal will be to achieve as full a vegetation cover as is feasible, but at a minimum, a vegetation cover sufficient to avoid blowing dust.

Project Status/ Effectiveness: The area has been fenced and a consulting firm has conducted revegetation studies on the site. Monitoring of the site was completed in 2003. A seed farm has been initiated for seed harvest. The seed farm will aid in the implementation of all revegetation projects in the Owens Valley. In addition, a greenhouse was purchased and LADWP has begun growing plants for the seed farm and revegetation. Depending on the amount of rainfall and runoff, successful revegetation of these lands could take a decade or longer. Approximately 35 acres were drill seeded with locally collected seeds in the spring of 2011. A buried drip system was installed on approximately 16 acres within the area that was drill seeded. The recently

installed emitters were planted during the spring of 2012. Transects were run with ICWD in August 2012. The parcel has achieved 4.8% native perennial cover.

Mitigation Plan Required/Status: Yes – complete.

Irrigated Lands in the Owens Valley Since 1981-82

1991 EIR Impact No. 10-16

Impacts: Continued from above.

Project Description/ Mitigation Measure: Irrigated lands in Owens Valley (including the Olancha-Cartago area) in existence during the 1981-82 runoff year or that have been irrigated in the future, except perhaps in very dry years. (Reductions in very dry years must be agreed upon in advance by LADWP and the Inyo County Board of Supervisors).

Mitigation Goals/ Strategies/Actions: To maintain existing irrigated lands.

Project Status/ Effectiveness: Irrigation is ongoing.

Mitigation Plan Required/Status: No.

Meadow/Riparian Vegetation Dependent upon Agricultural Tailwater, LORP Project (60 miles of river, perhaps more than 1,000 acres)

1991 EIR Impact No. 10-17

Impacts: Meadow and riparian vegetation that were supplied by tailwater from formerly irrigated lands has been impacted.

Project Description/ Mitigation Measure: The loss of meadow or riparian vegetation that was dependent upon tailwater from formerly irrigated fields will be mitigated in the form of compensation by the restoration of meadow and riparian vegetation by the LORP.

Mitigation Goals/ Strategies/Actions: See LORP (Impact 10-14).

Project Status/ Effectiveness: See LORP (Impact 10-14).

Mitigation Plan Required/Status:	No.

Laws Area Revegetation Project (140 acres)

1991 EIR Impact No. 10-18

Impacts:	Significant adverse vegetation decrease and change have occurred in the Laws area due to a combination of factors, including abandoned agriculture, groundwater pumping, water spreading in wet years, livestock grazing, and drought.
Project Description/ Mitigation Measure:	Approximately 140 acres will be revegetated within the Laws area, which has lost all or part of its vegetation cover due to increased groundwater pumping or to abandonment of irrigation operations to supply the second aqueduct.
Mitigation Goals/ Strategies/Actions:	To revegetate the site with native species found in the surrounding area.
Project Status/ Effectiveness:	The area has been fenced and two consulting firms have conducted revegetation studies on the site. Final monitoring was conducted in 2004. The results of these studies were utilized to move forward with larger scale revegetation efforts at this site. The drip irrigation system installed during one of the studies was expanded and seed was planted at all emitters. In 2005, the drip irrigation system located in areas with well established plants was moved to the interspaces between rows. Permanent transects were run in 2006. In 2009, the irrigation system was run from April to October, as in previous years. Maintenance was performed as needed on the irrigation system. A seed farm has been initiated for seed harvest. The seed farm will aid in the implementation of all revegetation projects in the Owens Valley. In addition, a greenhouse was purchased and LADWP has begun growing out plants for the seed farm and revegetation. In the spring of 2011 approximately 18 acres were seeded with locally collected seeds. Transects were run with the ICWD in August 2012 and the parcel has achieved 2% native cover. A buried drip system was installed during the winter of 2012. In January 2013 a new fence was installed between the western portion of LAWS118 and the Cashbaugh Lease (RLI-411). Planting at this parcel will begin upon the completion of planting at LAWS 90, LAWS 94/95, and

LAWS 129. Initial planting at Laws 118 is scheduled for completion by 2016.

Mitigation Plan Required/Status: Yes – complete.

Laws/Poleta Native Pasture (216 acres), Laws Historical Museum Pasturelands (21+15 acres), and McNally Ponds and Native Pasturelands (348 acres)

1991 EIR Impact No. 10-18

Impacts: See description above.

Project Description/ Mitigation Measure: In the mid-1980s, LADWP and Inyo County implemented the Laws-Poleta Pastureland, Laws Museum, and McNally Ponds enhancement/mitigation projects in the Laws area totaling approximately 541 acres of pastureland.

Mitigation Goals/ Strategies/Actions: Laws/Poleta Pasturelands - To revegetate the project site with native pasture. Laws Museum - To improve native vegetated areas adjacent to the Museum and to provide windbreak trees. McNally Ponds and Native Pasturelands - To provide a seasonal water supply to ephemeral ponds, create waterfowl habitat, enhance vegetation, and increase grazing capabilities.

Project Status/ Effectiveness: Fully implemented. Laws Historical Museum Pasture. The project is complete and the goals for the project are being met. The Standing Committee agreed in 1991 to reduce the water commitment to the McNally Ponds Project because of dry conditions. In most normal and below-normal runoff years since that time, the Standing Committee has reduced water releases to this project. During the 2012-13 runoff year, the Standing Committee agreed to reduce water supplied to the project.

Mitigation Plan Required/Status: No.

Farmers Pond

1991 EIR Impact No. 10-18

Impacts:	See description above.
Project Description/ Mitigation Measure:	In the 1970s, LADWP started the Farmer's Pond environmental project.
Mitigation Goals/ Strategies/Actions:	To provide water to fill the ponds each fall for use by wildlife.
Project Status/ Effectiveness:	Being implemented.
Mitigation Plan Required/Status:	No.

Groundwater Monitoring/Pumping Reductions in the Laws Area

1991 EIR Impact No. 10-18

Impacts:	See description above.
Project Description/ Mitigation Measure:	The area where it is suspected that groundwater pumping during the recent drought has caused decreases or changes in vegetation is being monitored by LADWP and Inyo County. Groundwater pumping has been reduced in the area. Should it be determined that any significant decreases or changes have occurred, the area will be mitigated under the Water Agreement.
Mitigation Goals/ Strategies/Actions:	No project at this time.
Project Status/ Effectiveness:	Being implemented.
Mitigation Plan Required Status:	No.

Laws 640-Acre Potential

1991 EIR Impact No. 10-18

Impacts:	Approximately 640 acres in the Laws area have a very low density of vegetation cover. The primary cause of the loss or reduction of vegetation is not a result of the project.
Project Description/ Mitigation Measure:	These lands will be considered by the Standing Committee for selective mitigation, which would be compatible with water spreading and groundwater recharge activities during wet years.
Mitigation Goals/ Strategies/Actions:	To increase vegetation density.
Project Status/ Effectiveness:	A determination has not been made by the Standing Committee for selective mitigation.
Mitigation Plan Required/Status:	Yes, if implemented.

Big Pine Area Revegetation Project (160 acres)

1991 EIR Impact No. 10-19

Impacts:	Water management practices in a portion of the Big Pine Well Field have resulted in significant adverse change and decrease of plant cover.
Project Description/ Mitigation Measure:	A revegetation program will be implemented for approximately 160 acres within the Big Pine area, which have lost all or part of its vegetation cover due to increased groundwater pumping or to abandonment of irrigation as part of operations to supply the second aqueduct, will be revegetated.
Mitigation Goals/ Strategies/Actions:	To revegetate the area with species found in the surrounding area.
Project Status/ Effectiveness:	The site has been fenced. Permanent transects were run in 2006. A seed farm has been initiated for seed harvest. The seed farm will aid in the implementation of all revegetation projects in the Owens Valley. In addition, a greenhouse was purchased and LADWP has begun growing plants for the seed farm and revegetation. In the spring of 2011 approximately 20 acres were

drill seeded with locally collected seed. It is anticipated that a buried drip system will be installed during 2012-2013. Transects were run by LADWP and ICWD in August 2012. The parcel currently contains 3% native perennial vegetation.

Mitigation Plan Required/Status: Yes – complete.

Big Pine Northeast Regreening (30 acres)

1991 EIR Impact No. 10-19

Impacts: See description above.

Project Description/ Mitigation Measure: LADWP and Inyo County will implement the Big Pine Regreening enhancement/mitigation project by establishing irrigated pasture on approximately 30 acres to the north and east of Big Pine.

Mitigation Goals/ Strategies/Actions: Northeast Big Pine Regreening - See Impact 10-11.

Project Status/ Effectiveness: Mitigation plans were transmitted to Inyo County in 2004. Comments were received from Inyo County in 2005. Inyo County identified a portion of the project area for land release and sale. In addition, a portion of the Big Pine Ditch system runs through the project area. This reduced the original project area by less than an acre. An archaeological survey of the site was completed as required by the California Environmental Quality Act (CEQA) process. Cultural resources were identified during the survey. These resources will be avoided during implementation. LADWP also identified issues making the project unfeasible as originally scoped. In order to facilitate implementation of the project the following changes were identified: 1) Change the water source for the project to include the Big Pine Canal (Well 375 remained scoped as a make-up water source for the project), 2) Change irrigation method from flood irrigation to the option of flood or sprinkler irrigation, 3) Move the project area closer to U.S. Highway 395, and 4) Change the lessee identified for the project to an unspecified lessee. These changes were discussed publicly at the September 9, 2009 Inyo County Water Commission meeting and the November 5, 2009, Inyo/Los Angeles Standing Committee meeting. At the November 4, 2010, Inyo/Los Angeles Standing Committee meeting modifications to the Final Scoping Document “Regreening Northeast of Big Pine: Irrigated Pasture J & L Livestock – RLI-483 – Big Pine Area” as an Enhancement/Mitigation Project was approved. Key modifications

include: changing the lease designation, revising the boundaries of the project, and amending the water supply source and method of application identified for the project. The ICWD and the Technical Group analyzed the operation of Well 375 and concluded that an exemption for up to 150 acre-feet per year would have no significant impact on the environment or other well owners. The Technical Group must exempt Well 375 for project make-up water to make the project feasible. LADWP has completed the CEQA analysis for the project, and the Los Angeles Department of Water and Power, Board of Water and Power Commissioners approved the Negative Declaration for the project. Implementation of the project is scheduled for the 2014-2015 runoff year.

Mitigation Plan Required/Status: Yes – in progress.

Big Pine Area Revegetation Project (20 acres)

1991 EIR Impact No. 10-19

Impacts: See description above.

Project Description/ Mitigation Measure: An area of approximately 20 acres directly to the east of Big Pine that is poorly vegetated as a result of pre-project activities and activities which are not a part of the project will be evaluated as a potential enhancement/mitigation project. If, in planning this project, it is determined that it is not feasible to permanently irrigate this area, a revegetation program will be implemented.

Mitigation Goals/ Strategies/Actions: To establish a cultivated crop. If irrigation is not feasible, the goal will be to revegetate the site with species found in the surrounding area.

Project Status/ Effectiveness: The site was fenced in 2007 to eliminate disturbances and encourage natural revegetation. If this area does not revegetate naturally, it will be included with LADWP's ongoing revegetation efforts.

Mitigation Plan Required/Status: Yes, if implemented.

Big Pine Ditch or Alternate Project

1991 EIR Impact No. 10-19

Impacts:	See description above.
Project Description/ Mitigation Measure:	The Big Pine Ditch project is planned to be implemented as provided in the Water Agreement. This area will also be mitigated by the Valley-wide mitigation under the Water Agreement.
Mitigation Goals/ Strategies/Actions:	Big Pine Ditch - To re-establish a ditch system within the town of Big Pine so that residents in the town could have a surface supply through their properties if desired.
Project Status/ Effectiveness:	The Standing Committee approved procedures and guidelines for implementing the project in 1998. A Mitigated Negative Declaration has been completed. The Inyo/Los Angeles Water Agreement has been modified to provide a reliable water supply of 300 AF for the project. The Big Pine Irrigation and Improvement Association has implemented Phases 1, 2, and 3 of the project. Phase 4 is 25% complete. LADWP has provided $99,745 of the $100,000 committed to the project. After test pumping and identification of a monitoring site for Well 415 to supply supplemental water for the ditch system, a contract will be considered for the installation of another well in Bell Canyon to provide additional water for the project. Pipe has been purchased and installed from Big Pine Creek via Mendenhall Ditch to the ditch system headgate. The installation of street crossings, ditches, and returns needed for Phase 4 are completed. In 2012 the Big Pine Ditch System consumed 632 AF of water.
Mitigation Plan Required/Status:	No.

Thibaut/Sawmill Marsh Habitat, LORP Project
(60 miles of river, perhaps more than 1,000 acres)

1991 EIR Impact No. 10-20

Impacts:	A significant loss and reduction of marsh vegetation has occurred in the Thibaut-Sawmill area primarily due to surface water diversion, but also due to lowered groundwater from increased groundwater pumping.
Project Description/	

Mitigation Measure: Portions of the Lower Owens River Project, including Thibaut Ponds, are in this area. Thus, portions of the impacted area will be mitigated directly; however, for much of the impacted area, mitigation will be in the form of compensation through the Lower Owens River Project's restoration of wetland, meadow, and riparian vegetation. Any significant decreases in vegetation cover or changes in vegetation composition due to groundwater pumping during the recent drought period will be mitigated under the Water Agreement.

Mitigation Goals Strategies/Actions: See LORP (Impact 10-14).

Project Status/ Effectiveness: See LORP (Impact 10-14).

Mitigation Plan Required/Status: No.

11 – WILDLIFE

Aquatic Habitat

1991 EIR Impact No. 11-1

Impacts: Changes of surface water management practices and increased groundwater pumping have altered the habitats on which wildlife depends. Vegetation changes have been significant in many locations throughout the Owens Valley. Therefore, impacts to certain species of wildlife, which were entirely dependent upon the impacted habitat, can be presumed to be significant.

Project Description/ Mitigation Measure: The importance of riparian, marsh, and aquatic habitats is recognized for mitigation of the impacts to wildlife that occurred during the 1970 to 1990 period. Wetter habitats support many more species and greater populations of wildlife; therefore, water management to create wet habitats will be used to mitigate the significant adverse impacts of the project.

Aquatic Habitat (LORP Project, Klondike, Farmers, Buckley, Billy, Lone Pine Pond, etc.)

1991 EIR Impact No. 11-1

Impacts: Continued from above.

Project Description/

Mitigation Measure: See above.

Mitigation Goals/ Strategies/Actions: See LORP (Impact 10-14). See Farmers (Impact 10-18), Buckley Ponds - To provide for a warm-water fishery and waterfowl area. Billy Lake - To provide waterfowl habitat in the region. Lone Pine Pond - To create habitat for a warm-water fishery.

Project Status/ Effectiveness: See LORP (Impact 10-14). Klondike Lake, Farmers Ponds, Buckley Ponds, Billy Lake, and Lone Pine Pond are fully implemented and functioning as specified in the goals.

Mitigation Plan Required/Status: No.

12 – AIR QUALITY

Independence Springfield (approximately 297 acres), Independence East Side Regreening (approximately 30 acres), Shepherds Creek Alfalfa Field (approximately 198 acres), and Revegetation Project East of Independence (part of Independence Springfield, approximately 40 acres)

1991 EIR Impact No. 12-1

Impacts: Significant impacts on air quality resulting from groundwater pumping during the period of 1970 to 1990 have occurred due to vegetation losses.

Project Description/ Mitigation Measure: As part of the Independence Pasturelands and Springfield enhancement/mitigation projects, approximately 730 acres of barren or near-barren ground have been revegetated with either native pasture or alfalfa. This area was affected by groundwater pumping and surface diversions of water. Approximately 40 acres remain barren and will be revegetated with native pasture. Under the Shepherd Creek enhancement/mitigation project, approximately 200 acres of poorly vegetated land has been converted to alfalfa. In addition, other areas that have the potential to cause significant adverse impacts to air quality have been identified in Section 10 (above) and will be mitigated as set forth in that section.

Mitigation Goals/ Strategies/Actions: See Impact 10-11.

Project Status/

Effectiveness: See Impact 10-11.

Mitigation Plan Required/Status: No.

Elevated PM-10 Levels

1991 EIR Impact No. 12-2

Impacts: Increased groundwater pumping could result in elevated PM_{10} levels due to vegetation losses.

Project Description/ Mitigation Measure: See mitigation measure for item 12-1, above.

Mitigation Goals/ Strategies/Actions: Minimize impact to less than significant.

Project Status/ Effectiveness: N/A

Mitigation Plan Required/Status: No.

Air Quality Impacts from Loss of Vegetation

1991 EIR Impact No. 12-3

Impacts: Significant impacts to air quality have resulted from the abandonment of irrigated lands to supply the second Los Angeles Aqueduct.

Project Description/ Mitigation Measure: Approximately 1,240 acres of formerly irrigated agricultural lands that had not successfully revegetated have been planted with pasture or alfalfa (see mitigation measure 10-11, above). In addition, other areas that have the potential to cause significant adverse impacts on air quality have been identified in Section 10, Vegetation, and will be mitigated as set forth in that section.

Mitigation Goals/ Strategies/Actions: Minimize impact to less than significant.

Project Status/ Effectiveness: N/A

Mitigation Plan

Required/Status: No.

16 – ANCILLARY FACILITIES

Vegetation Loss from Construction Activities

1991 EIR Impact No. 16-1 - Vegetation

Impacts:	The construction phase of the addition of new recharge facilities could result in vegetation decrease or change.
Project Description/ Mitigation Measure:	Provisions of the Water Agreement will be met. No further mitigation measures are required.
Mitigation Goals/ Strategies/Actions:	No significant vegetation decrease or change.
Project Status/ Effectiveness:	N/A
Mitigation Plan Required/Status:	No.

Air Quality Effects from Construction Activities

1991 EIR Impact No. 16-3 – Air Quality

Impacts:	Air quality could be adversely affected by the construction of recharge facilities.
Project Description/ Mitigation Measure:	All disturbed areas would be wetted during construction to minimize fugitive dust.
Mitigation Goals/ Strategies/Actions:	Minimize impact to less than significant.
Project Status/ Effectiveness:	N/A
Mitigation Plan Required/Status:	No.

Archaeological Disturbance from Construction Activities

1991 EIR Impact No. 16-5 – Cultural Resources

Impacts:	Construction of proposed recharge projects could disturb subsurface archaeological resources, with possible significant impact.
Project Description/ Mitigation Measure:	16-5(a) The proposed recharge facility project locations would be surveyed for cultural resources prior to the initiation of any ground-disturbing project activities associated with the construction of any culverts, ditches, or trenches, once the exact locations of these features are determined. The significance of any site recorded during the survey would be determined through the use of subsurface testing, as appropriate.
Mitigation Goals/ Strategies/Actions:	N/A
Project Status/ Effectiveness:	N/A
Mitigation Plan Required/Status:	No.

Compliance with Archaeological and Preservation Act of 1974

1991 EIR Impact No. 16-5 – Cultural Resources

Impacts:	Continued from above.
Project Description/ Mitigation Measure:	16-5(b) In accordance with the requirements of 36 CFR 800.11, should a previously unidentified National Register or eligible property be discovered during construction on any and all parts of the project, LADWP will comply with the provisions of the Archaeological and Historic Preservation Act of 1974 by evaluating the resources and implementing mitigation measure as warranted.
Mitigation Goals/ Strategies/Actions:	Minimize impact to less than significant.
Project Status/ Effectiveness:	N/A
Mitigation Plan Required/Status:	No.

Water Quantity Impacts from New Wells in Big Pine Area

1991 EIR Impact No. 16-7 – Water Resources

Impacts:	New wells in the Big Pine area would lower groundwater levels, and could result in significant impacts to local private wells.
Project Description/ Mitigation Measure:	Monitoring will be conducted as provided in the Water Agreement and the Green Book. If pumping of the new production well is shown to cause a significant adverse impact to any private well, the impact will be mitigated as described in the Water Agreement and in Section 4 of the Green Book.
Mitigation Goals/ Strategies/Actions:	Minimize to less than significant impacts to private wells.
Project Status/ Effectiveness:	N/A
Mitigation Plan Required/Status:	No.

Water Quantity Impacts to Artesian Wells in Laws Area from Operation of Two New Wells

1991 EIR Impact No. 16-9 – Vegetation

Impacts:	Operation of the two new wells in the Laws area could cause flow in artesian wells to stop or diminish to a degree that impacts the vegetation up on such flow would result.
Project Description/ Mitigation Measure:	Existing and new monitoring wells will be used to monitor water levels and vegetation as provided in the Water Agreement and the Green Book. Groundwater pumping will be managed to avoid causing reductions in the amount of water flowing from these wells such that significant decreases and changes to vegetation would result. If it is projected that such decreases and changes could occur, water will be supplied to avoid such vegetation decreases or changes.
Mitigation Goals/ Strategies/Actions:	Avoidance of impact.
Project Status/ Effectiveness:	N/A
Mitigation Plan Required/Status:	No.

Type D Vegetation Impacts Along Fault Zone West of Big Pine from Pumping Big Pine Well BP-1

1991 EIR Impact No. 16-10 – Vegetation

Impacts:	Pumping of the Big Pine well BP-1 may impact Type D vegetation along the fault zone west of Big Pine.
Project Description/ Mitigation Measure:	As provided in the Water Agreement and the Green Book, existing and new monitoring sites would be utilized to monitor vegetation, water levels, and soil water. Groundwater pumping would be managed to avoid significant decreases and changes in vegetation.
Mitigation Goals/ Strategies/Actions:	Avoidance of impact.
Project Status/ Effectiveness:	N/A
Mitigation Plan Required/Status:	No.

Reduction or Elimination of Flow from Reinhackle Spring and Subsequent Loss of Vegetation from New Wells in the Independence-Symmes-Bairs Area

1991 EIR Impact No. 16-11 – Vegetation

Impacts:	New wells in the Independence-Symmes-Bairs area may reduce or eliminate the flow from Reinhackle Spring and impact vegetation dependent upon flow from the spring.
Project Description/ Mitigation Measure:	At Reinhackle Spring groundwater pumping from wells that affect the spring flow will be managed so that flows from the spring will not be significantly reduced compared to flows under prevailing natural conditions. In addition, all of the provisions for protecting springs, described in Impact 10-15 (above) and contained in the Water Agreement and the Green Book, will be applied equally to Reinhackle Spring.
Mitigation Goals/ Strategies/Actions:	Avoidance of impact.

Project Status/ Effectiveness:	N/A
Mitigation Plan Required/Status:	No.

Air Quality Impacts from Construction and Maintenance of New Wells

1991 EIR Impact No. 16-13 – Air Quality

Impacts:	Air quality could be affected by the construction and maintenance of new wells.
Project Description/ Mitigation Measure:	All areas disturbed during construction of the new wells would be wetted during construction to minimize generation of fugitive dust.
Mitigation Goals/ Strategies/Actions:	Minimize impact to less than significant.
Project Status/ Effectiveness:	N/A
Mitigation Plan Required/Status:	No.

Archaeological Disturbance from Construction of 15 New Wells

1991 EIR Impact No. 16-16 – Cultural Resources

Impacts:	Construction of 15 new wells could disturb subsurface archaeological resources, with possible significant impact.
Project Description/ Mitigation Measure:	16-16(a) Construction activity at the LP-1, BP-1, and BP-2 sites will be monitored. If subsurface prehistoric archaeological resource evidence is found, excavation or other construction activity in the area will cease and an archaeological consultant would be retained to evaluate findings in accordance with standard practice and applicable regulations. Data/artifact recovery, if deemed appropriate, would be conducted during the period when construction activities are on hold.

Mitigation Goals/ Strategies/Actions:	Minimize impact to less than significant.
Project Status/ Effectiveness:	N/A
Mitigation Plan Required/Status:	No.

Notification of Proper Authorities (Native American Representatives, Coroner) if Remains are Discovered

1991 EIR Impact No. 16-16 – Cultural Resources

Impacts:	Continued from above.
Project Description/ Mitigation Measure:	16-16(b) An appropriate representative of Native American Indian tribes and the County Coroner would be informed and consulted if remains are discovered, as required by State law.
Mitigation Goals/ Strategies/Actions:	Minimize impact to less than significant.
Project Status/ Effectiveness:	N/A
Mitigation Plan Required/Status:	No.

Discharge Rates Could Be Affected in Flowing Wells on Bishop Cone from Increased Pumping

1991 EIR Impact No. 16-18 – Water Resources

Impacts:	Increased pumping on the Bishop Cone could affect the rate of discharge of flowing wells.
Project Description/ Mitigation Measure:	Changes in flow rates from flowing wells will be monitored along with vegetation dependent upon flows from such wells. Groundwater pumping will be managed to avoid significant decreases or changes in vegetation dependent upon water from flowing wells. Water will be provided if necessary to avoid such decreases and changes in vegetation if flows from such wells are diminished due to groundwater pumping.

Mitigation Goals/ Strategies/Actions:	Avoidance of impact.
Project Status/ Effectiveness:	N/A
Mitigation Plan Required/Status:	No.

Bishop Cone Pumping Effects on Vegetation

1991 EIR Impact No. 16-19 – Vegetation

Impacts:	Increased pumping on the Bishop Cone could adversely affect vegetation due to lowered water levels or reduced flows from flowing wells.
Project Description/ Mitigation Measure:	As provided in the Water Agreement, existing and new monitoring sites would be utilized to monitor vegetation, water levels, and soil water. Groundwater pumping would be managed to avoid significant decrease and change to vegetation and other significant effects on the environment.
Mitigation Goals/ Strategies/Actions:	Avoidance of impact.
Project Status/ Effectiveness:	N/A
Mitigation Plan Required/Status:	No.

6. STATUS OF OTHER STUDIES, PROJECTS, AND ACTIVITIES

6.0. STATUS OF OTHER STUDIES, PROJECTS, AND ACTIVITIES

The following describes the status of studies, projects, and activities conducted under the 1991 *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* (Water Agreement).

Tables 19 and 20 detail mitigation and monitoring of the irrigation projects in the Laws and Big Pine areas, respectively. Table 21 lists the Water Agreement provisions and their respective status. Table 22 lists the Cooperative Studies that have been approved by the Inyo/Los Angeles Standing Committee (Standing Committee) and their respective status. Table 23 lists the 1991 EIR revegetation projects, progress to date, and proposed future work. This document provides an update for activities that occurred in 2012. The history of activities at these sites may be found in Owens Valley Annual Reports from previous years.

6.1 Irrigation Project in the Laws Area 2012

6.1.1 Progress Report

Seed Collection

Professional seed collection began in 2003, and has occurred during most years since. In 2012 Seed was collected by professional seed collectors and Los Angeles Department of Water and Power (LADWP) staff from native stands of vegetation and from the Seed Farm.

Plant Propagation

In early September 2003, Ed Kleiner called in with a progress report on the seed collection. He recommended that the Agriculture Department at Victor Valley Community College be contacted regarding growing out some of the shrub species for transplantation at the Seed Farm. On September 15, 2003, Mr. Jonathan Cook, the chairman of the Agriculture Department, was contacted. Mr. Cook indicated that there was an interest in working together to grow out the desired species.

On October 2, 2003, LADWP staff met with representatives of Victor Valley Community College and toured their greenhouse and plant propagation facility. On October 6, 2003, a contract was established with Victor Valley Community College. The contract with the college specifies that they are to grow out and deliver to LADWP 2,500, 2-gallon containerized plants, each year for the next three years.

On November 26, 2003, seeds were delivered to Victor Valley Community College to begin propagation. On September 21, 2004, LADWP took delivery of 2,500 plants. The species propagated included Winterfat (*Krascheninnikovia lanata*), Mormon Tea (*Ephedra nevadensis*), Spiny Hopsage (*Grayia spinosa*), Indigo Beauty (*Psorothamnus polydenius*), and Indigo bush (*Psorothamnus arborescens*).

In July 2004 seed was sent to Victor Valley Community College for propagation of additional plants. LADWP received 1,100 plants on March 22, 2005, and approximately 1,900 plants in the spring of 2006.

The final delivery of 600 plants was received from Victor Valley Community College in the summer of 2007.

In the summer of 2006 LADWP initiated the purchase of a greenhouse.

The greenhouse became operational in the winter of 2008/2009.

In January 2009, LADWP began plant propagation in the new greenhouse. Approximately 6,000 plants were propagated utilizing seed from 27 species that are native to the Owens Valley.

During 2010, approximately13,000 plants were propagated utilizing seed from 27 species that are native to the Owens Valley.

During 2011, approximately 13,000 plants were propagated utilizing seed from 35 species that are native to the Owens Valley.

During 2012, approximately 13,000 plants were propagated utilizing seed from 35 species that are native to the Owens Valley.

LADWP purchased and assembled a new greenhouse during the winter of 2012-13. The additional greenhouse will be planted in the spring of 2013 and plants will be ready for planting in the fall of 2013.

Seed Farm

Between July 17 and July 19, 2003 an initial weed treatment was applied to Parcel LAW027. An LADWP crew applied 2, 4-D to the entire area to control Russian thistle. Treatments resumed in the spring of 2004.

In January 2004, the complete specification to purchase solid set sprinkler systems for the Seed Farm and the Laws Museum Project was completed. These systems were purchased in late winter and installed and tested in the spring with the goal of having the system running for the 2004 irrigation season.

During the winter and spring of 2004, the Seed Farm parcel was burned for weed control. The Seed Farm was irrigated in July 2004 to promote weed growth. This was followed by spraying of an herbicide to eradicate the newly emerged weeds.

On September 7, 2004, 20 acres of the Seed Farm was seeded with Indian Ricegrass (*Achnatherum hymenoides*) using a range drill. This area was sprinkled using sixteen irrigation lines, two lines at a time for 45-minute sets that were run from 4 a.m. to

10 p.m., 7 days a week. On September 28, 2004, the water application was reduced to 30-minute sets twice a day, conducted 6 days a week. This irrigation schedule continued until November 1, 2004.

On September 21, 2004, LADWP took delivery of 2,500 plants from Victor Valley Community College. These plants were placed in cold frames to harden them off prior to planting. On October 29 and 30, 2004, a drip irrigation system was installed at the Seed Farm to accommodate the plants. November 1 - 3, 2004, the 2,500 tubelings were planted utilizing 12 to 15 LADWP personnel. Holes were dug and filled with water prior to planting. In addition, all plants received 2 hours or more of water applied by the drip irrigation system. Very high winds that occurred near the end of November caused significant damage to the above-ground portions of the plants.

In January 2005, 10 acres of the Seed Farm was seeded with Needlegrass (*Achnatherum speciosum*). This seed was planted using a range drill. Irrigation was not provided at the time of planting because of abundant winter precipitation. Irrigation was initiated March 21, 2005, for the growing season.

On March 22, 2005, LADWP received 1100 plants from Victor Valley Community College. These plants were placed in cold frames to harden them off prior to planting. April 5 and 6, 2005, the 1100 tubelings were planted utilizing 12 to 15 LADWP personnel. Holes were dug and filled with water prior to planting. In addition, all plants received 2 hours or more of water applied by the drip irrigation system.

Additionally, in 2005 the existing Indian Ricegrass plot and Needlegrass plot were overseeded at a rate of 10 pounds of seed per acre. Ten additional acres were planted with Saltgrass (*Distichlis spicata*) and two acres were planted with Squirreltail grass (*Elymus elymoides*).

Maintenance activities conducted in 2005 included repairs to the irrigation system, hand weeding around plants at drip emitters, and mowing between the irrigation layout to control weeds prior to seed set.

In 2006, ten acres of creeping wild rye (*Leymus triticoides*) were planted at the Seed Farm.

Maintenance activities conducted in 2006 included repairs to the irrigation system, hand weeding around plants at drip emitters, and mowing between the irrigation layout to control weeds prior to seed set.

In 2007, rodents caused major damage to the drip irrigation system at the Seed Farm. The rodents chewed through the irrigation lines searching for water in this very dry year. Repairs were completed on all damaged irrigation lines. In addition, all the planting basins were hand weeded. Ten acres of saltgrass (*Distichlis spicata*) were drill seeded and irrigated at the Seed Farm.

In 2008, rodents again caused major damage to the drip irrigation system at the Seed Farm. Repairs were completed and all necessary maintenance was performed on all irrigation lines. All the planting basins were hand weeded. Areas with little success were mowed in preparation for future planting.

In 2009, damage was repaired on drip lines with successful plantings. Irrigation was conducted during the growing season. Blocks of the Seed Farm with few plants were cleared of existing drip lines and were replaced with buried drip lines. A filter system was installed to insure successful implementation of irrigation.

In the fall of 2009, approximately 2,100 plants, consisting of 14 native species propagated in the LADWP greenhouse, were planted at the Seed Farm. Seed was harvested at the Seed Farm that will be used to grow additional plants in the greenhouse.

In 2010, damage was repaired on drip lines with successful plantings. Irrigation was conducted during the growing season. Blocks of the Seed Farm with few plants were cleared of existing drip lines and were replaced with buried drip lines. The buried drip system delivers water year round to the plants depending on soil moisture. A filter system was installed to ensure successful implementation of irrigation.

During 2010, approximately 5,200 plants, consisting of 14 native species propagated in the LADWP greenhouse, were planted at the Seed Farm. Seed was harvested at the Seed Farm that will be used to grow additional plants in the greenhouse.

In 2011, damage was repaired on drip lines with successful plantings. Irrigation was conducted during the growing season. A buried drip system was installed on the remaining sections of the parcel.

During 2011, approximately 2,500 plants, consisting of native species propagated in the LADWP greenhouse, were planted at the Seed Farm. Seed was harvested at the Seed Farm that will be used to grow additional plants in the greenhouse.

In 2012, damage was repaired on drip lines with successful plantings. Irrigation was conducted during the growing season. A buried drip system was installed on the remaining sections of the parcel.

During 2012, approximately 1,100 plants, consisting of native species propagated in the LADWP greenhouse, were planted at the Seed Farm. Seed was harvested at the Seed Farm that will be used to grow additional plants in the greenhouse.

LADWP purchased and assembled a new greenhouse during the winter of 2012-13. The additional greenhouse will be planted in the spring of 2013 and plants will be ready for planting in the fall of 2013.

Status of Revegetation Parcels Laws 90, 94, 95, 118, and 129

LAWS 90 - In fall 2005, an irrigation system was installed in a portion of this parcel, and 20 acres of the parcel were drill seeded. In the spring of 2006, containerized plants were planted in the parcel. Seeds were also planted in basins bringing the total area planted to 50 acres. In 2007, the drip system was run from April 1 to October 1. All basins were weeded and reseeded. Containerized plants were also planted at some of the emitters. In 2008, the drip system ran from April through October. All basins were weeded and reseeded. In 2009, buried drip irrigation lines were installed. The buried drip system delivers water year round to the plants depending on soil moisture. In 2010, approximately 4,800 plants that were propagated in LADWP's greenhouse were planted at emitters. In 2011 approximately 6000 plants were placed in this parcel. In 2012 approximately 2600 plants were placed during the spring planting. Additional plantings are planned for 2013-2014. The initial planting of Laws 90 is scheduled for completion in 2014.

LAWS 94 - In 2004 an acre of the parcel was seeded with native seeds identified for this parcel. In fall 2005, an irrigation system was installed in a portion of this parcel. In addition, 10 acres of the parcel were drill seeded in 2005. In the spring of 2006, containerized plants were planted in the parcel. Seeds were also planted in basins bringing the total area planted to 20 acres in 2007. The drip system was run from April 1 to October 1. All basins were weeded and reseeded. Containerized plants were also planted at some of the emitters. In 2008, the drip system ran from April through October. All basins were weeded and reseeded. In 2010, buried drip irrigation lines were installed. The buried drip system delivers water year round to the plants depending on soil moisture. Approximately 1,500 plants that were propagated in LADWP's greenhouse were planted at the emitters. In 2011, approximately 1250 plants were placed in this parcel. In 2012 approximately 7,000 plants were placed at LAWS 94/95. Additional plantings are planned for 2013-2014. The initial planting in LAWS 94 is scheduled for completion in 2013.

LAWS 95 - In 2004, an acre of the parcel was seeded with native seeds identified for this parcel. In fall 2005, an irrigation system was installed in a portion of this parcel. In addition, 10 acres of the parcel were drill seeded in 2005. In the spring of 2006, containerized plants were planted in the parcel. Seeds were also planted in basins bringing the total planted area to 20 acres. In 2007, the drip system was run from April 1 to October 1. All basins were weeded and reseeded. Containerized plants were also planted at some of the emitters. In 2008, the drip system ran from April through October. All basins were weeded and reseeded. In 2010, buried drip irrigation lines were installed. The buried drip system delivers water year round to the plants depending on soil moisture. Approximately 1,500 plants that were propagated in LADWP's greenhouse were planted at the emitters. In 2011, approximately 1250 plants were placed in this parcel. In 2012 approximately 7,000 plants were placed at LAWS 94/95. Additional plantings are planned for 2013-2014. The initial planting in LAWS 95 is scheduled for completion in 2013.

LAWS 118 - Plan is to convert approximately 32 acres of this parcel to irrigated pasture. Monitoring of the SAIC study was conducted during the 2004 growing season. The results of these studies were utilized to move forward with larger scale revegetation efforts at this site. The drip irrigation system was expanded in 2004 and seed was planted at all emitters. The system was run from late June through the beginning of November. In 2005, the drip irrigation system was moved to the interspaces in the area with well-developed plants. After moving the drip system, all areas under the emitters were seeded. In addition, areas that were previously planted were reseeded if plants were not present. The system was run from April through the first predicted freeze in October. Maintenance was performed as needed on the irrigation system. In 2006, the drip system was run from April 1 to October 1. Basins seeded in 2005 were reseeded as needed. In 2007, the drip system was run from April 1 to October 1. All basins were weeded and reseeded. Containerized plants were also planted at some of the emitters. In 2008, the drip system ran from April through October. All basins were weeded and reseeded. Approximately 32 acres of this revegetation parcel was removed to become irrigated pasture. In 2010, the drip system ran from April through October. Repairs were completed on the drip irrigation system as needed. In the spring of 2011 approximately 18 acres were seeded with locally collected seeds. The remainder of the area to be revegetated within this parcel had a buried drip system installed in 2012. Transects were run with the Inyo County Water Department (ICWD) in August 2012 and the parcel has achieved 2% native cover. A buried drip system was installed during the winter of 2012. In January of 2013 a new fence was installed between the western portion of LAWS 118 and the Cashbaugh Lease. Planting at this parcel will begin upon the completion of planting at LAWS 90, LAWS 94/95, and LAWS 129. The initial planting of LAWS 118 is scheduled for completion in 2016.

LAWS 129 - In fall 2005, an irrigation system was installed in a portion of this parcel. In addition, 10 acres of the parcel were drill seeded. In the spring of 2006, containerized plants were planted in the parcel. Seeds were also planted in basin bringing the total area planted to 20 acres. In 2007, the drip system was run from April 1 to October 1. All basins were weeded and reseeded. Containerized plants were also planted at some of the emitters. In 2008, the drip system ran from April through October. All basins were weeded and reseeded. In 2011, the drip system ran from April through October. Repairs were completed on the drip irrigation system as needed. A buried drip system was installed during 2011-2012. The buried drip system delivers water year round to the plants depending on soil moisture. During the spring of 2011 approximately 1400 plants were placed in this parcel. In the spring of 2012 approximately 2,000 plants were placed at buried drip emitters. Additional plantings are scheduled for 2014-2015. The initial planting of LAWS 129 is scheduled for completion in 2015.

Lease Request for Proposal (RFP)

Center Pivot Systems

The center pivot systems are fully implemented.

In February 2003, an RFP was prepared and advertised to solicit proposals for ranch management for the portion of the Laws Ranch north of Silver Canyon Road. The Four J Cattle Corporation submitted the successful proposal.

The portion of the Laws Ranch located south of Silver Canyon Road was included in the Cashbaugh Ranch lease.

6.1.2 Mitigation Monitoring Report for the Irrigation Project in the Laws Area

See Table 19 for the Mitigation Monitoring Program for the Irrigation Project in the Laws Area.

Mitigation Measure M-1

Impact: Creation of dust during pipeline installation and ground preparation for planting.

Measure: Ground surfaces will be thoroughly wet prior to and during work to minimize dust.

All seeding work during 2006 was conducted utilizing the Trux No-till drill seeder and water was applied before initiating seeding and as soon as seeding was complete to control dust emissions.

Mitigation Measure M-2 and M-3

Impact: Groundwater pumping to supply water to the project could adversely affect groundwater-dependent vegetation in the vicinity of the project and cause blowing dust.

Measure: 1991 *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* (Water Agreement).

Table A illustrates the vegetation cover in vegetation parcels within the Laws Well Field as determined by ICWD. Data from 2002 and 2003 indicates estimates of vegetation cover in the parcels prior to implementation of the irrigation project in the Laws area. Data since 2004 are estimates of vegetation cover after implementation of the irrigation project in the Laws area.

Table B illustrates the depth-to-water in the Laws area test holes prior to, and after implementation of the irrigation project in the Laws area.

Table A. Vegetation Cover in Selected Parcels within the Laws Well Field

Parcel	Percent Perennial Cover										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
LAW030	19.5	nd	20.5	24.2	32.4	36.6	32.7	28.1	24.8	24.9	22
LAW035	nd	3.1	1.6	4.7	17.9	6.4	6.3	1.1	1.4	4.9	4
LAW043	nd	3	2.4	nd	40.8	7.4	7.2	1.5	2.8	4.8	7
LAW052	2.3	2.9	3.9	5.4	12.5	10.1	7.6	3.4	3.1	6.7	8
LAW062	2.8	4.7	3.3	7.2	12.8	10.9	10.8	5.6	7.8	6.6	10
LAW063	3.7	6.3	5.4	9.6	24.0	16.7	15.9	6.2	11.1	12.0	12
LAW065	3.3	2.9	2.1	5.1	13.9	10.7	12.3	3.8	4.0	4.7	7
LAW070	nd	1	1.6	nd	nd	nd	11.1	8.0	3.8	20.6	10
LAW078	36.2	31.8	27.1	39.0	49.7	50.1	53.7	30.8	26.3	32.0	35
LAW082	2.1	3	4.4	4.2	12.7	7.1	12.6	6.5	7.6	8.7	8
LAW085	7.1	9.8	7.7	14.8	28.5	22.3	30.2	21.9	26.1	16.8	15
LAW107	37.6	43.9	38.2	65.1	59.8	67.2	78.2	56.3	53.8	31.4	54
LAW112	12.9	25.1	15.8	32.9	33.3	45.0	47.3	32.3	33.7	30.5	33
LAW120	17.6	24.3	21	27.6	28.8	36.2	38.5	26.4	26.5	31.2	35
LAW122	59	54.8	47.8	56.6	54.6	62.8	52.7	57.9	53.7	50.2	60
LAW137	17	20.3	13	19.1	32.3	17.0	21.3	19.3	20.1	16.3	21

**nd is no data*

Table B. Depth to Water (in feet) for Test Holes in the Laws Well Field

WELL	April 2004	April 2005	April 2006	April 2007	April 2008	April 2009	April 2010	April 2011	April 2012	April 2013
T107	30.1	31.9	18.6	21.1	25.2	28.0	31.0	31.8	32.75	33.12
T436	10.1	10.2	4.8	5.3	7.1	8.8	9.5	9.5	11.26	11.14
T438	11.6	8.9	3.8	6.3	8.2	9.1	11.4	8.6	12.61	12.03
T490	14.6	14.7	13.3	10.2	12.6	13.8	13.5	13.3	12.49	13.17
T492	32.1	31.5	24.4	23.0	26.8	29.1	30.8	31.7	34.14	32.75

Mitigation Measure M-4

Impact: Reducing the irrigation duty from 5 AF per-acre to 3 AF per-acre and of changing from flood irrigation to sprinkler irrigation.

Measure: Water Agreement

LADWP and the Laws Ranch lease jointly determined irrigated field, pasture, or area vegetation condition using the Natural Resource Conservation Service Pasture Condition Assessment. This protocol, once followed, is designed to optimize plant and livestock productivity while minimizing detrimental effects to soil or water resources.

Pasture condition scoring involves the visual evaluation of 10 indicators each having five environmental conditions (Cosgrove et al. 1991). Each indicator is rated separately and the scores are combined into an overall score for the pasture. The overall score for a pasture can then be divided by the total possible score to give a percent rating ({overall score ÷ total possible score} × 100 = percent rating). Not all 10 indicators may be

appropriate for use in every pasture. In this case, using less than 10 indicators will reduce the possible score, but the percent rating will still be comparable. Irrigated pastures on the Laws Ranch lease will be evaluated after the area has been seeded and irrigated for at least three growing seasons in order to allow the seeded pasture mix to become fully established. The average pasture score for the Laws Ranch lease during the 2010 growing season was 89%. The next scheduled evaluation is in 2013.

Mitigation Measure M-5

Impact: Altering the flow in a ditch that carries water diverted from Coldwater Canyon.

Measure: Water Agreement

Diversions from Coldwater Canyon Ditch are utilized for irrigation of the Seed Farm. During operation, approximately one-quarter of the total flow remains in the ditch.

Periodic examinations were conducted along the ditch throughout the growing season. These examinations did not indicate any signs of vegetation stress. Photo points have been established along the ditch.

Diversions for irrigation from Coldwater Canyon Ditch for the Laws Seed Farm continued in 2012. Periodic examinations were conducted along the ditch throughout the growing season. These examinations did not indicate any signs of vegetation stress. Photos points were replicated during the 2010 growing season and will be replicated during the 2015 growing season.

Mitigation Measure M-6

Impact: Altering the flow in Silver Canyon Ditch.

Measure: Water Agreement

Diversions from Silver Canyon Ditch are utilized for irrigation of Parcels LAWS 90, 94, and 95. During operation, approximately one-quarter of the total flow remains in the ditch.

Diversions for irrigation from Silver Canyon Ditch for the Laws Parcels 90, 94, and 95, continued in 2012. Periodic examinations were conducted along the ditch throughout the growing season. These examinations did not indicate any signs of vegetation stress. Photo points have been established along the ditch and were replicated during the 2010 growing season and will be replicated during the 2015 growing season.

Mitigation Measure M-7

Impact: Growth of state listed A or B noxious weeds in the project area.

Measure: LADWP or its lessee or lessees, in conjunction with Inyo County's weed abatement program, will promptly treat or remove the weed.

Surveys were conducted on the irrigation project in the Laws area for noxious weeds during the 2012 growing season. No A or B listed noxious weeds were found. Weed control was conducted in the 2011 season for other weedy species. The lessee treated weeds through a combination of grazing and burning.

Mitigation Measure M-8

Impact: Archaeological investigations identified six previously unrecorded archaeological sites and 11 isolates within the project area.

Measure: Pipeline placement was to avoid identified sites; if new sites are encountered during implementation, work will be halted until an archeologist can be consulted.

No cultural resources were encountered during construction or operation of the irrigation project in the Laws area in 2006.

TABLE 19. Mitigation and Monitoring Program for Irrigation Project in the Laws Area

POT. IMPACT		MITIGATION			MONITORING			
Summary of Impact	**MM No.**	**Measure**	**Timing**	**Responsibility**	**Method**	**Period**	**Frequency**	**Responsibility**
Air Quality								
Creation of dust during pipeline installation and ground preparation for planting.	M-1	Ground surfaces will be thoroughly wet prior to and during work to minimize dust.	To be implemented throughout the project as needed.	LADWP construction staff and/or LADWP lessee.	Water trucks will pre-wet construction areas and water as necessary throughout construction. Ground will be pre-irrigated prior to planting.	As needed throughout construction and/ or prior to planting.	Throughout the construction or agricultural period.	LADWP construction staff and/or LADWP lessee.
Groundwater pumping to supply water to the project could adversely affect groundwater dependent vegetation in the vicinity of the project and cause blowing dust.	M-2	Section III and Section IV 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	To be implemented throughout the project as needed.	Inyo/Los Angeles Technical Group	Annual monitoring of the vegetation in the vicinity is being conducted.	During the period when groundwater pumping and water management practices could affect vegetation.	Annually during the growing season.	Inyo/Los Angeles Technical Group
Hydrology and Water Quality								
Groundwater pumping	M-3	Water Agreement	To be implemented throughout the project as needed.	Inyo/Los Angeles Technical Group	Monitoring at each identified site will consist of one or more field visits during the period when groundwater pumping and water management practices could affect such vegetation.	During the period when groundwater pumping and water management practices could affect vegetation.	Annually during the growing season.	Inyo/Los Angeles Technical Group

POT. IMPACT		MITIGATION			MONITORING			
Summary of Impact	**MM No.**	**Measure**	**Timing**	**Responsibility**	**Method**	**Period**	**Frequency**	**Responsibility**
Reducing the irrigation duty from 5 AF per acre to 3 AF per acre and of changing from flood irrigation to sprinkler irrigation.	M-4	Water Agreement	To be implemented throughout the work as needed.	Inyo/Los Angeles Technical Group	Monitoring at each identified site will consist of one or more field visits during the period when groundwater pumping and surface water management practices could affect such vegetation.	During irrigation season	Annually during the growing season.	Inyo/Los Angeles Technical Group
Biological Resources								
Altering the flow in a ditch that carries water diverted from Coldwater Canyon.	M-5	Water Agreement	To be implemented throughout the work as needed.	Inyo/Los Angeles Technical Group	Monitoring at each identified site will consist of one or more field visits during the period when surface water management practices could affect such vegetation.	During the period of changes in surface water management practices could affect vegetation.	Annually during the growing season.	Inyo/Los Angeles Technical Group
Altering the flow in Silver Canyon Ditch.	M-6	Water Agreement	To be implemented throughout the work as needed.	Inyo/Los Angeles Technical Group	Monitoring at each identified site will consist of one or more field visits during the period when surface water management practices could affect such vegetation.	During the period of changes in surface water management practices could affect vegetation.	Annually during the growing season.	Inyo/Los Angeles Technical Group
Growth of noxious weeds	M-7	LADWP or its lessee or lessees, in conjunction with Inyo County's weed abatement program, will promptly treat or remove the weed.	To be implemented throughout the work as needed.	LADWP Watershed Resources Staff; LADWP Lessee; and/or Inyo County Agricultural Department.	Monitoring consists of field visits during the growing season.	Annually during the growing season.	Annually during the growing season.	LADWP Watershed Resources Staff; LADWP Lessee; and/or Inyo County Agricultural Department.

POT. IMPACT		MITIGATION			MONITORING			
Summary of Impact	**MM No.**	**Measure**	**Timing**	**Responsibility**	**Method**	**Period**	**Frequency**	**Responsibility**
Cultural Resources								
Archaeological investigations identified six previously unrecorded archaeological sites and 11 isolates within the project area.	M-8	Pipeline placement was to avoid identified sites; if new sites are encountered during implementation, work will be halted until an archaeologist can be consulted.	To be implemented throughout the work as needed.	LADWP Construction Manager	Construction personnel will monitor for unidentified sites during the progression of construction.	During construction activities.	Throughout the construction period.	LADWP Construction Manager

6.2 Mitigation Monitoring Report for the Irrigation Project in the Big Pine Area

See Table 20 for the Mitigation Monitoring Program for the Irrigation Project in the Big Pine Area.

TABLE 20. Mitigation and Monitoring Program for the Irrigation Project in the Big Pine Area

POT. IMPACT		MITIGATION			MONITORING			
Summary of Impact	**MM No.**	**Measure**	**Timing**	**Responsibility**	**Method**	**Period**	**Frequency**	**Responsibility**
Hydrology and Water Quality								
The cumulative effect of groundwater pumping from Well W415, the new Bell Canyon well, as proposed in the project, in combination with the operation of other wells in the Big Pine area could cause significant adverse impacts to groundwater dependent vegetation, other vegetation, or non-LADWP wells in the area.	M-1	Water Agreement	To be implemented throughout the project as needed.	Inyo/Los Angeles Technical Group	A monitoring site will be developed by the Inyo/Los Angeles Technical Group as called for in the Inyo/Los Angeles Water Agreement to manage operation of each well.	During the period when groundwater pumping is needed for the project.	As decided by the Inyo/Los Angeles Technical Group, consistent with the Water Agreement.	Inyo/Los Angeles Technical Group

6.3 Water Agreement Provisions

See Table 21 for the Water Agreement Provisions.

TABLE 21. Water Agreement Provisions

Title	Provision	Status
Groundwater Management	LADWP and Inyo County are to manage water resources within Inyo County to avoid certain described decreases and changes in vegetation and to cause no significant effect on the environment which cannot be acceptably mitigated while providing a reliable supply of water for export to Los Angeles and for use in Inyo County.	By agreement of the Standing Committee, implementation of groundwater management, pursuant to the Water Agreement, commenced in 1987.
New Wells and Production Capacity	In order to provide for increased operational flexibility and to facilitate rotational pumping, LADWP may replace existing wells and construct new wells in areas where hydrogeologic conditions are favorable and where operation of such wells will not cause a change in vegetation that would be inconsistent with the agreement. The Water Agreement and 1991 EIR describe 15 new wells that LADWP proposes to construct in the Owens Valley.	LADWP has constructed 6 replacement wells on Bishop Cone and one of the 15 new wells allowed under the Water Agreement. The new well is located in Lone Pine. The Technical Group must establish management for the well before it can be operated. Currently, LADWP is planning to construct 2 new wells on the Bishop Cone. LADWP has abandoned or converted to monitoring wells 13 previously replaced wells.
Groundwater Pumping on the Bishop Cone	Before LADWP may increase groundwater pumping on the Bishop Cone, or construct new wells on the Cone, Inyo County and LADWP are to develop an audit procedure for determining the exact amount of water used annually on City-owned land on the Cone. LADWP pumping on the Cone must be in strict adherence to the provisions of the "Hillside Decree."	The Standing Committee has adopted the Bishop Cone audit procedure. The audit has been conducted since 1996. In 1998, the Superior Court entered a "Memorandum of Judgment" in Matlick versus City of Los Angeles which reaffirmed LADWP's pumping practices on the Bishop Cone. Current audits do not account for stockwater use and ditch losses on the Bishop Cone. Audit protocols should be updated to properly reflect these sources of water supplied to the Bishop Cone.
Groundwater Recharge Facilities	LADWP may construct groundwater banking and groundwater recharge facilities in Inyo County. The 1991 EIR describes certain groundwater recharge facilities in Laws, Big Pine, and Rose Valley.	LADWP has not proposed re-construction of groundwater recharge facilities in Laws, or Big Pine, or new facilities in Rose Valley.
Cooperative Studies	LADWP may provide funding for the costs of conducting studies related to the effects of groundwater pumping on the environment of the Owens Valley.	Studies approved by the Standing Committee are underway. See Table 22, "Cooperative Studies."

Title	Provision	Status
Enhancement/ Mitigation Projects	All existing E/M projects will be maintained, unless the Standing Committee agrees to modify or discontinue a project, and new projects may be implemented if approved by the Standing Committee. The Water Agreement provides that E/M projects will continue to be supplied by E/M wells unless otherwise agreed.	All E/M projects that have been implemented are being maintained. It is planned to supply approximately 10,500 acre-feet of water to these projects in 2013-2014. Now that the LORP is fully implemented, the water supplied to the project is no longer included within the E/M project account of water uses. Therefore, the amount of water supplied to E/M Projects annually is much less then it was when the LORP was included in the water supply value. The Standing Committee eliminated the water commitment to the McNally Ponds Project for the 1991 year because of dry conditions. For most years since then, the Standing Committee has decided annually on water releases to this project. In 2009, the project did not receive water because project supply wells could not be pumped under the Interim Management Plan. During the 2012-13 runoff years, the project did not receive water. The Laws Museum Project is fully implemented. LADWP sent mitigation plans for the Independence regreening projects to ICWD in August 2004, and California Environmental Quality Act (CEQA) documents were completed by LADWP for the Independence East Side Regreening Project and Town Water System in September 2004. The Board of Water and Power Commissioners approved the project in May 2005. Inyo County requested minor changes to the project including: relocation of the project supply well, change of irrigation type from flood to sprinkler, and addition of corrals/stables. The Standing Committee approved a revised scope of work on April 23, 2009. The well for this project was drilled in September 2012 and is scheduled to be equipped prior to the end of 2013. Mitigation Plans for the Big Pine Northeast Regreening were transmitted to Inyo County in 2004. Comments were received from Inyo County in 2005. Inyo County identified a portion of the project area for land release and sale. Note that a portion of the Big Pine Ditch system runs through the project area. This reduced the original project area by less than an acre. An archaeological survey of the site was completed and cultural resources were identified during the survey. These resources will be avoided during implementation. LADWP identified issues making the project unfeasible as originally scoped. In order to facilitate implementation the following changes were identified: 1) Change the water source for the project to include the Big Pine Canal (Well W375 remained scoped as a make-up water source well), 2) Change irrigation method from flood irrigation to the option of flood or sprinkler irrigation, 3) Move the project area closer to U.S. Highway 395, and 4) Change the lessee identified for the project to an unspecified lessee. These changes were discussed publicly at the September 9, 2009 Inyo County Water

Title	Provision	Status
		Commission meeting and the November 5, 2009 Standing Committee meeting. At the November 4, 2010 Standing Committee meeting the following modifications were made to the final scoping document: changing the lessee designation, revising the boundaries of the project, and amending the water supply source and method of application identified for the project. ICWD studied the effects of groundwater pumping to supply the Northeast Big Pine Regreening mitigation project and submitted its conclusions to the Technical Group in a July, 2010 memorandum. The ICWD study concluded that predicted drawdown from the operation of Well W375 for project make-up water "is too small to measurably affect the phreatophytic communities in the vicinity of the well" and recommended exempting Well W375 for up to 150 AF per year for project make-up water. The study was reviewed by the Technical Group and submitted to the Standing Committee prior to it making its November 4, 2010, approval of the project modifications. The Technical Group must exempt Well W375 for project make-up water in order to make this project feasible. LADWP has completed the CEQA analysis for the proposed project and the Board of Water and Power Commissioners have approved the Negative Declaration for the project Implementation of the project is scheduled for the 2014-2015 runoff year. The E/M projects are currently under evaluation by the Technical Group.
Town Water Systems	LADWP will transfer to Inyo County, or another Owens Valley public entity or entities, ownership of the water systems in the communities of Lone Pine, Independence, and Laws. Prior to transferring the systems, evaluations of each system will be performed by a mutually agreed upon consultant, and if necessary, work will be done to upgrade the systems. LADWP will provide free water, up to specified amounts for each town.	Inyo County contracted with a private company to assume the operation, maintenance and billing for the systems in July 1999. Pursuant to an agreement with LADWP, Inyo County completed upgrades of the systems in December 2002, using $2.6 million in funds provided by LADWP. LADWP completed the transfer of ownership to Inyo County in January 2005.
Lower Owens River	See Table 24, "1997 MOU Provisions."	See Table 24, "1997 MOU Provisions."
Lower Owens River Project (LORP)	Los Angeles will pay the costs of implementing the project. Inyo County will repay Los Angeles one half of the project costs up to maximum of $3.75 million. Any funds provided for the project from sources other than Los Angeles will be an off-set against Inyo County's repayment obligation. Los Angeles will pay the annual costs of operating the pumpback system. Inyo County and Los Angeles will each pay one half of the other costs of the project.	As part of a negotiated agreement with Inyo County to not pursue funding from the USEPA, LADWP has credited Inyo County $5.1 million to cover Inyo County's $3.75 million obligation for LORP implementation with the remaining $1.35 million to be used by Inyo County towards post implementation costs.

Title	Provision	Status
Haiwee Reservoir	Inyo County and Los Angeles will develop a recreational plan for South Haiwee. The recreation plan will be implemented and operated by Inyo County or a concessionaire. Any plan must take into account Los Angeles' operating and security needs.	A recreational plan has not been developed. A security audit was performed following the September 11, 2001 incident. This audit concluded that due to a potential security threat to a municipal water source, Haiwee Reservoir should be closed to the public. CEQA documentation (Negative Declaration) was filed to close Haiwee Reservoir on December 16, 2004. The facility was officially closed to the public in 2005.
Saltcedar Control	LADWP is to provide funding to Inyo County to implement a Saltcedar Control Program: $750,000 during the first three years of the program; thereafter, $50,000 per year (adjusted upward or downward in accordance with the consumers' price index).	LADWP initiated payments and ICWD initiated the Saltcedar Control Program in 1997. In 2012, LADWP paid ICWD $69,481 for this work. LADWP has paid Inyo County $1,536,048 since 1997 under this provision of the Water Agreement. In 2004, as part of a Wildlife Conservation Board (WCB) grant, LADWP provided $56,000 for saltcedar control, and the balance of the program was funded from a WCB grant for $490,000 obtained by Inyo County working in cooperation with LADWP. Approval for a second grant from the WCB for $560,000 was received in February 2004. In addition to the monies provided under the Water Agreement for saltcedar control, LADWP committed, as part of the 2004 Stipulation and Order, to match the amount of grant monies the ICWD received up to $1.5 million for additional saltcedar control in the LORP Project Area. Under Item 6 of the Stipulation and Order, LADWP has paid Inyo County a total of $1,061,338 as of February 2011 leaving a balance of $438,661 available to Inyo County per the Stipulation and Order. A third grant for $600,000 from the WCB was received by ICWD in November 2007.
Park Rehabilitation, Development, and Maintenance	During the 10-year period following entry of the Stipulation and Order, LADWP is to provide up to $2 million to Inyo County to rehabilitate existing Inyo County parks and campgrounds and to develop new recreational facilities. LADWP is to make an annual payment of $100,000 (Adjusted upward or downward in accordance with the consumer's price index) to Inyo County to maintain existing and new recreational facilities.	The remainder of the money available for parks rehabilitation and maintenance is $21,954. In addition, LADWP has provided annual payments to Inyo County for parks operation and maintenance activities including a payment in 2012 of $148,324 for a total of $1,992,136. LADWP has paid Inyo County a total of over $3,824,050 since 1997 under this provision of the Agreement.
Owens River Recreational Use Plan	As part of the parks rehabilitation program, Inyo County may develop a plan for recreational use and management of the Owens River from Pleasant Valley Reservoir to the Owens River delta as one of the programs to be funded by LADWP under the provisions of the Agreement concerning Park Rehabilitation, Development, and Maintenance.	In 2007, ICWD formed a collaborative group to gather preliminary information for a Recreational Use Plan for the LORP. This group met twice in 2007 and received grant funding from the Sierra Nevada Conservancy for plan development. These grant funds were returned when time constraints were not met by the group, but were reinstated in 2010 to fund a consultant to write the plan. ICWD selected MIG Consultants to write the LORP Recreational Use Plan in October 2010 and stakeholder interviews were held in December 2010 and May 2011. A draft Recreation Use Plan was released in November 2011 and a final draft plan was released in February 2012. ICWD and MIG presented this plan to both the Standing Committee and the public in February 2012.

		Additional public meetings were held in August 2012 and a revised draft plans were released in October 2012 and February 2013. Next steps include further review of the draft plan, CEQA evaluation and obtaining necessary permits prior to implementation of the project.
Title	**Provision**	**Status**
Financial Assistance for Water-Related Activities	LADWP is to make an annual payment to Inyo County to assist Inyo County in funding water and environmentally-related activities. The annual payment is to be adjusted upward or downward each year in accordance with the consumer's price index	Los Angeles has provided annual payments to Inyo County, and provided $1,382,564 in July 2012. Funds provided by Los Angeles have been expended to fund Inyo County Water Department. LADWP has paid Inyo County over $26 million since 1988 for this purpose.
General Financial Assistance to Inyo County	LADWP is to make an annual payment to Inyo County to assist Inyo County in providing services to its citizens. The annual payment is to be adjusted upward or downward each year in accordance with a formula in the State Constitution for an assessment of Los Angeles-owned property in Inyo County.	Los Angeles has provided annual payments to Inyo County, and provided $3,183,466 in 2012. Funds provided by Los Angeles have been deposited into Inyo County's General Fund and expended on Inyo County services as directed by the Board of Supervisors. LADWP has paid Inyo County more than $45.5 million since 1991 for this purpose.
Big Pine Ditch System	LADWP is to provide up to $100,000 for reconstruction and upgrading of the Big Pine ditch system. LADWP is to supply up to 6 cfs to the ditch system from a new well to be constructed west of Big Pine.	The Standing Committee approved procedures and guidelines for implementing the project in 1998. A Mitigated Negative Declaration has been completed. The Water Agreement has been modified to provide a reliable water supply of 300 acre-feet for the project. The Big Pine Irrigation and Improvement Association have implemented Phases 1, 2 and 3 of the project. Phase 4 is 25% complete. LADWP has provided $99,745 of the $100,000 committed to the project. After test pumping and identification of a monitoring site for Well W415 to supply supplemental water for the ditch system, a contract will be considered for the installation of another well in Bell Canyon to provide additional water for the project. Pipe has been purchased and installed from Big Pine Creek via Mendenhall Ditch to the ditch system headgate. The installation of street crossings, ditches, and returns needed for Phase 4 are being completed. In 2012 the Big Pine Ditch System consumed 632 AF of water.
Park and Environmental Assistance to City of Bishop	LADWP is to make an annual payment to the City of Bishop to assist the City in maintaining its park and for other environmentally-related activities. The payment of $125,000 is to be adjusted upward or downward each year in accordance with the consumer price index. Inyo County shall make an annual payment to the City of Bishop in an amount equal to the payment made by LADWP.	Los Angeles has provided annual payments to the City of Bishop, and provided $185,406 in 2012. LADWP has paid the City of Bishop $2,565,026 since 1997 for this purpose. Inyo County has made its required payment under this section of the agreement.

Release of City-Owned Lands	Los Angeles is to sell 26 acres of surplus City-owned land within the Bishop city limits; and LADWP is to release for sale 75 acres of City-owned land, in areas noted on Exhibit B of the Water Agreement, for public or private development	LADWP has sold the 26 acres within Bishop city limits. Inyo County and LADWP determined which parcels of the 75 acres were to be sold and set a schedule for the phased release of these lands. Phase I has been completed, Phase II occurred on March 23, 2011. At the Phase II sale 24 parcels of land in the Owens Valley were offered at public auction which cumulatively totaled 55 acres. Only 5 of the 24 parcels offered were sold. Negotiations for Phase III, which will target approximately 14 acres, are on-going with a target date not yet set. Approval was received from the

Title	Provision	Status
		Inyo County Board of Supervisors and the Board of Water and Power Commissioners to amend the maps for the parcels included in the 75 acres to make a parcel on Hanby Street in Bishop eligible for sale. LADWP has approached Inyo County on the viability of moving forward with the Hanby parcel to complete Phase III of the scheduled land releases. Issues related to public water system, access availability, and the need to annex the parcel into the City of Bishop has been discussed. Inyo County requested additional time to confer with its Board of Supervisors to discuss the poor outcome of the two previous auctions, discuss possible alternatives for Phase III, and seek direction on how best to proceed with negotiations with LADWP. LADWP staff is currently waiting on a response from Inyo County on how they propose to proceed.
Additional Sales of City-owned Lands	LADWP will negotiate in good faith for the sales of additional surplus City-owned land in or near valley towns for specific identified needs. Any such sales are to occur subsequent to those described above.	In 2011-2012 LADWP sold to Caltrans a land parcel located in the town of Independence for expansion of their maintenance yard. LADWP granted to the City of Bishop two right of way easements for road projects. There were no sales in 2012-2013.
Lands for Pubic Purposes	Los Angeles will negotiate in good faith for the sale or lease to Inyo County of any City-owned land requested by Inyo County for use as a public park or for other public purposes.	LADWP entered into the following agreements with Inyo County: (1) a 15-year lease for use by the Agriculture Commissioner, (2) granted an easement for their water reservoir tanks located in Independence, (3) renewed a lease for use as the Lone Pine Park, and (4) renewed a lease for use as an equipment storage yard. In 2012-13 LADWP entered into the following leases: two leases for parks with the County of Inyo, one lease for a continuation school with Bishop Union High School, one lease for a campground with the Superintendent of Schools, one lease for a Landfill with the County of Mono, two leases for volunteer fire departments with the City of Bishop, two leases for public parking with the City of Bishop, one lease for the Sierra Nevada Aquatic Research Laboratory with the Regents of California, two license agreements for monitoring sites at sewer treatment facilities for the City of Bishop and Eastern Sierra Community Service District, one license for telecommunication with the Red Cross, and one permit for a community garden with Metabolic Studio.
Withdrawn Lands	Inyo County will support passage of withdrawn land legislation pertaining to federally-owned lands in Inyo County.	There is a 2010 proposal from BLM to remove the water withdrawal status on the Olancha Mill Site, status unknown.

Legislative Coordination	Except under certain circumstances, LADWP and Inyo County are to refrain from seeking or supporting any legislation, administrative regulation, or litigation that would weaken or strengthen local or state authority to regulate groundwater or that would affect any provision of the agreement.	The legislative coordination policy has somewhat been followed.
Dispute Resolution	The agreement provides a process for resolving disputes between LADWP and Inyo County regarding issues related to the Water Agreement or the Green Book.	Issues concerning annual pumping programs and operation of the McNally Canals have been addressed utilizing the dispute resolution procedures. Inyo County has agreed to not initiate a dispute over groundwater pumping during the term of the Interim Management Plan provided the pumping provisions of the plan are observed.

6.4 Cooperative Studies

See the 2010 Annual Owens Valley Report for a complete listing of Cooperative Studies.

Table 22 includes the details of the on-going Cooperative Studies approved by the Standing Committee.

TABLE 22. Cooperative Studies

Green Book Revision	ICWD and LADWP have been working on cooperative studies intended to facilitate improvements to the Green Book since 2007. Work on the Green Book revision cooperative study is being conducted under the *Framework and Procedures for Developing Revisions to the Green Book* document as approved by the Standing Committee on November 27, 2006. An outline of the cooperative studies being addressed for the Green Book revision effort are included in the *Working Document, Outline of Issues and Tasks for Revising the Green Book and Related Issues* (Working Document), November 2007.	Efforts to date have focused on procedures for developing new operational triggers for pumping wells and improving the procedures for installing new wells and replacing existing wells. The task to cooperatively address vegetation monitoring also began in early 2010. Little progress has been made.
2009 Owens Lake Groundwater Evaluation Project (OLGEP)	The OLGEP was a cooperative study included in the *2007 Agreement Between the County of Inyo and the City of Los Angeles Department of Water and Power Regarding an Interim Management Plan for Groundwater Pumping in the Owens Valley* to perform an evaluation of groundwater under Owens Lake that can be responsibly used to augment the water supply needs of the Owens Lake Dust Mitigation Program. This study included the following eight tasks: Task 1: Compile existing geologic, hydrologic, and ecologic information Task 2: Evaluate existing information, develop a preliminary conceptual model of the Owens Lake, and identify data gaps Task 3: Assist LADWP in collecting field data Task 4: Update conceptual model of the Owens Lake Task 5: Develop a numerical groundwater model of the Owens Lake Task 6: Use the numerical model to simulate and analyze alternative pumping scenarios Task 7: Develop and implement a public outreach plan Task 8: Prepare final report and conduct project meetings	The OLGEP was completed in October 2012. This study determined that local groundwater from Owens Lake can be utilized to partially supply dust mitigation activities at Owens Lake. The amount of groundwater that could be pumped will depend on key aquifer parameters to be determined during the next three years and resources protection criteria to be developed by the Habitat Group, formed during the Master Planning effort for Owens Lake. The proposed implementation plan includes a three year baseline and environmental studies phase, followed by an initial phase of limited pumping before the full groundwater development at Owens Lake could be implemented. LADWP has requested ICWD, Great Basin Unified Air Pollution Control District, California State Lands Commission, and California Department of Fish and Wildlife to participate in an Advisory Committee for the Owens Lake Groundwater Development Program.

6.5 Revegetation/Regreening Project, Progress, and Proposed Future Work

See Table 23 for the details of the Revegetation/Regreening Projects, Progress, and Proposed Future Work.

TABLE 23. Revegetation/Regreening Projects, Progress, and Proposed Future Work

Title	Provision	Status
LAWS 90	The site has been fenced.	In 2012 approximately 2600 plants were placed during the spring planting. Additional plantings are planned for 2013-2014. .
LAWS 94	The site has been fenced.	In 2012 approximately 7,000 plants were placed at LAWS 94/95. Additional plantings are planned for 2013-2014.
LAWS 95	The site has been fenced.	In 2012 approximately 7,000 plants were placed at LAWS 94/95. Additional plantings are planned for 2013-2014.
LAWS 118	The site has been fenced. Permanent transects have been installed and baseline monitoring has been conducted. Revegetation studies have been implemented by SAIC using seed with sprinklers and plants with drip irrigation. In addition, MWH Americas, Inc. conducted studies on dryland revegetation techniques using native seed and various treatments.	Transects were run with ICWD in August 2012 and the parcel has achieved 2% native cover. A buried drip system was installed during the winter of 2012. In January of 2013 a new fence was installed between the western portion of LAWS 118 and the Cashbaugh Lease. Planting at this parcel will begin upon the completion of planting at LAWS 90, LAWS 94/95, and LAWS 129.
LAWS 129	This site has been fenced.	In the Spring of 2012 approximately 2,000 plants were placed at buried drip emitters. Additional plantings are scheduled for 2014-2015.
Five Bridges	Water releases to this area were initiated in 1987. Permanent photo points and transects have been monitored annually. Fences were installed to eliminate grazing in the riparian and meadow areas that water releases flow through. Initial water releases were from Bishop Creek Canal to C-Drain. The Mitigation Plan stated that releases should be conducted by high flows in the Owens River. These high flows were very difficult to implement. As a consequence, a change was made and water releases originated from Bishop Creek Canal to C-Drain. Water has been released three times a year during the growing season. All water releases are monitored. Weed control is conducted annually. Controlled burns have been conducted to help with weed control. Monitoring data indicates that the area is responding well to the water releases.	In 2012, releases from the Bishop Creek Canal via C-Drain were conducted three times during the growing season. Permanent photo points and transects were monitored. Weed control continued.
Bishop 97	The site has been fenced. Permanent transects have been installed and baseline monitoring has been conducted. Permanent transects were run in	Approximately 35 acres were drill seeded with locally collected seeds in the spring of 2011. A buried drip system was installed on approximately 16 acres within the area that was drill seeded. The

Title	Provision	Status
	2003 to document any changes from baseline conditions. MWH Americas, Inc. conducted studies on dryland revegetation techniques using native seed and various treatments.	recently installed emitters were planted during the spring of 2012. Transects were run with ICWD in August 2012. The parcel has achieved 4.8% native perennial cover.
Big Pine NE Regreening	A revised scope of work was sent to ICWD that reflected the interests of the citizens of the community of Big Pine. ICWD did not provide comments on this revised scope of work. On August 13, 2004 LADWP submitted a Mitigation Plan that reflected the project as described in the Final Scoping Document that was approved by the Standing Committee in 1988. Comments were received from Inyo County in 2005.	Big Pine Northeast Regreening Project- Mitigation Plans for the project were transmitted to Inyo County in 2004. Comments were received from Inyo County in 2005. LADWP identified issues making the project unfeasible as originally scoped. In order to facilitate implementation of the project LADWP recommended the following changes: 1) Change the water source for the project to include the Big Pine Canal (Well 375 remained scoped as a project make-up water supply well), 2) Change irrigation method from flood irrigation to the option of flood or sprinkler irrigation, 3) Move the project area closer to Highway 395, 4) Change the lessee identified for the project to an unspecified lessee. These changes were discussed publicly at the September 9, 2009, Inyo County Water Commission meeting and the November 5, 2009, Standing Committee meeting. At the November 4, 2010, Standing Committee meeting modifications to the final scoping document were approved. Key modifications include; changing the lessee designation, revising the boundaries of the project, and amending the water supply source and method of application identified for the project. The ICWD and Technical Group analyzed the operation of Well W375 and concluded that an exemption for up to 150 acre-feet per year would likely have no significant impact on the environment or other well owners. The Technical Group must still exempt Well W375 for project make-up water in order for the project to be feasible. LADWP has completed the CEQA analysis for the proposed project and the Board of Water and Power Commissioners have approved the Negative Declaration for the project. Implementation of the project is scheduled for the 2014-2015 runoff year. The E/M projects are currently under evaluation by the Technical Group.
Big Pine 160	The site has been fenced. Permanent transects have been installed and baseline monitoring has been conducted. MWH Americas, Inc. conducted studies on dryland revegetation techniques using native seed and various treatments.	Potential water sources are being evaluated and a drip irrigation system is being designed for this site. Once the irrigation system is installed and operational, plants/seeds from species identified for this site will be placed at emitters. In the spring of 2011 approximately 20 acres were drill seeded with locally collected seed. Transects were run by LADWP and ICWD in August of 2012. The parcel currently contains 3% native perennial vegetation.

Title	Provision	Status
East Big Pine	"An area of approximately 20 acres directly to the east of Big Pine that is poorly vegetated as a result of pre-project activities and activities which are not a part of the project will be evaluated as a potential enhancement/mitigation project. If, in planning this project, it is determined that it is not feasible to permanently irrigate this area, a revegetation program will be implemented" (1991 EIR Impact 10-19). The "Revegetation Plan for Impacts Identified in the LADWP, Inyo County EIR for Groundwater Management" that was submitted to the MOU Parties in 1999 states that this area is within the same parcel as Big Pine 160 and, therefore, the mitigation will be the same for both sites.	A survey was completed in 2006 for a fence for this site. The area was fenced in 2007 to eliminate disturbances and encourage natural revegetation. If this area does not revegetate naturally, it will be included with LADWP's ongoing revegetation efforts. Transects will be run by LADWP and ICWD during the 2013 growing season.
Tinemaha 54	The site has been fenced. Permanent transects have been installed and baseline monitoring has been conducted. Grass plants were planted in 1999. A drip irrigation system was installed in 2001. The grass plants were irrigated during the growing season from the time the system was installed through 2004.	Transects were run by LADWP and ICWD in August of 2012. The parcel has achieved 2.14% total perennial cover.
Blackrock 16E	The site has been fenced. Permanent transects have been installed and baseline monitoring has been conducted. A controlled burn was conducted by LADWP in conjunction with California Department of Forestry to remove weed litter. Permanent transects were run in 2002 to document any changes from baseline conditions. Site native perennial cover has increased, so no active revegetation plans will be developed at this time.	Transects were run in 2010 to assess cover at the site. This site has attained the cover and composition goals delineated in the Revegetation Plan.
Hines Springs S	This site will likely be affected by the Hines Springs on-site mitigation. The site goal and revegetation plan for this area will be developed within three years after the work at Hines Springs is completed.	The Additional Mitigation Projects Developed by the MOU Ad Hoc Group (including the Hines Spring Well 355 Project) were implemented by March 8, 2012 in compliance with Stipulation and Order S1CVCV01-29768. A revegetation plan will be developed within three years of this date for Hines Springs S.
Independence Regreening	A revised scope of work has been submitted to ICWD that reflects the interests of the citizens of	CEQA was filed for the Independence East Side Regreening Project and Town Water System September 23, 2004 with a public

Title	Provision	Status
	the community of Independence	comment period from September 23 to October 29, 2004. Responses to comments were completed. The Board of Water and Power Commission approved the project in May 2005. CEQA was completed for the project with the well location on the project site. Inyo County requested minor changes to the project after the completion of CEQA including: relocation of the project supply well, change of irrigation type from flood to sprinkler, and addition of corrals/stables. These minor changes were incorporated into a project scoping document amendment that was approved by the Standing Committee on April 23, 2009. Inyo County has agreed to complete additional CEQA if required to address project changes. The well for this project was drilled in September 2012 and is scheduled to be equipped prior to the end of 2013.
Independence 105	The site has been fenced. Permanent transects have been installed and baseline monitoring has been conducted. Permanent transects were run in 2001 to document any changes from baseline conditions. Site native perennial cover has increased, so no active revegetation plans will be developed at this time.	Transects were run in 2006 to assess cover at the site. The site has attained the goals for cover and composition delineated in the revegetation plan.
Independence 123	The site has been fenced. Permanent transects have been installed and baseline monitoring has been conducted.	Transects were run in 2006 to assess cover at the site. The site has attained the goals for cover and composition delineated in the revegetation plan.
Independence 131	The site has been fenced. Permanent transects have been installed and baseline monitoring has been conducted. Revegetation studies have been implemented by SAIC using seed with sprinklers and plants with drip irrigation. In addition, MWH Americas, Inc. conducted studies on dryland revegetation techniques using native seed and various treatments.	Monitoring of the SAIC study was conducted during the 2004 growing season. Data indicates that placing seed at emitters produced positive results. Therefore, seed will be used for this portion of the revegetation project. Precipitation conditions in the last few years have resulted in recruitment of native species and an increase in vegetation cover in areas not disturbed by the revegetation trials. Permanent transects were run in 2006. Approximately 25 acres were drill seeded with locally collected seeds in the spring of 2011. Transects were run by LADWP and ICWD in August of 2012. IND131S currently contains 6.15% perennial cover, and IND131N has achieved the revegetation goals with 15.7% live cover composed of five perennial species. The site will be considered rehabilitated when cover is 90% and composition is 75% of the site specific stated goal.

6.6 Green Book Revision Cooperative Study Status

ICWD and LADWP have been working on cooperative studies intended to facilitate improvements to the Green Book since 2007. Work on the Green Book revision cooperative study is being conducted under the *Framework and Procedures for Developing Revisions to the Green Book* document as approved by the Standing Committee on November 27, 2006. An outline of the cooperative studies being addressed for the Green Book revision effort are included in the *Working Document, Outline of Issues and Tasks for Revising the Green Book and Related Issues* (Working Document), November 2007.

The Working Document is divided into four general sections and 11 tasks. A description of the tasks included in the Working Document follows:

- Hydrologic Management Issues
    - Development of new or improved operational triggers for pumping wells
    - Re-evaluate groundwater mining provisions
    - Procedures for new wells
    - Surface water management
- Monitoring Issues
    - Vegetation monitoring
    - Hydrologic Monitoring (groundwater, surface water, and precipitation)
- Goal Attainment
    - Compliance monitoring
    - Attributability
    - Significance
- Revise Draft Green Book
    - Draft Green Book revisions
    - Seek approval of Draft Green Book revisions

Efforts to date have focused on procedures for developing new operational triggers for pumping wells and improving the procedures for installing new wells and replacing existing wells. The task to cooperatively address vegetation monitoring also began in early 2010.

Efforts to include a facilitator and assistance from the Ecological Society of America for the Green Book revision effort are in progress.

6.7 Invasive Species Treatment and Removal

Background

The Los Angeles Department of Water and Power noxious weed treatment program began in 1995 when the first Pepperweed (*Lepidium latifolium*) site was found in the Owens Valley. LADWP along with many other agencies formed the Eastern Sierra Weed Management Group in 1999. Since that time LADWP has had an extensive weed control program which utilizes LADWP personnel and contractors. The primary goal of LADWP's ongoing weed control efforts are to treat rated noxious weeds on LADWP lands in Inyo and Mono Counties.

Additional weed treatments on LADWP lands were provided by Inyo County personnel. Between 2006 and 2012 LADWP provided $200,000 to Inyo County for weed control. Often this money was used as matching funds for grants that significantly increased the funds that could be used to treat weeds in Inyo and Mono Counties.

On June 30, 2012 the $200,000 funding came to an end and LADWP took over complete control for weed treatments on its lands in Inyo and Mono Counties. The one exception is within the Lower Owens River Project (LORP) where a combination of funds from the LADWP and Inyo County fund a program that is administered by the Inyo and Mono Counties Agricultural Commissioner's Office.

Treatment Efforts

During the spring of 2012 LADWP began preparing for the transition of responsibilities. A total of five LADWP personnel were assigned to weed management beginning in July 2013.

In addition to personnel LADWP also acquired a number of pieces of equipment that were dedicated to the weed control program.

- 2- 4-wheel drive pick-ups equipped with weed spaying equipment
- 3- quad all-terrain vehicles each equipped with and associated weed sprayers equipment.
- 1- side by side all-terrain vehicle equipped with and associated weed sprayers equipment.
- $41,416 in pesticide materials for noxious weed control.

LADWP staff began the process of modifying the restricted Materials Permit 140339-2012 so that is would cover the additional sites LADWP will be treating. The new permit was received in August 2012. Between July and August LADWP treatment efforts were restricted to those areas previously treated by LADWP.

In August LADWP received the weed site maps from Inyo County then toured weed locations with Inyo County staff in October.

Since August 2013, LADWP staff has been treating all sites previously treated by LADWP as well as those previously treated by Inyo County. These sites include the Owens River from

Pleasant Valley to the Los Angeles Aqueduct (46 miles) and the unlined section of the Los Angeles Aqueduct (26 miles). Along these areas LADWP utilized a contractor with a boat to treat weed locations that were inaccessible by land.

Additional areas include 600 acres in the Five Bridges area, all of the Hines Spring/1600 Project locations, LADWP water spreading basins, and operational facilities from Los Angeles to the Owens Valley. LADWP staff also treated 1920 acres of both salt cedar and Russian olive sites that were not being treated by Inyo County and burned 400 acres of slash.

At Owens Lake, LADWP staff have surveyed and treated 45 square miles which included hand removal of salt cedar seedlings where appropriate. Both sides of Bishop Creek Canal, Big Pine Canal, and the McNally Canals were each treated twice from their intakes to the river returns.

7. STATUS OF PROJECTS DEFINED IN THE 1997 MOU

7. STATUS OF PROJECTS DEFINED IN THE 1997 MOU

The following describes the status of projects and activities conducted under the *1997 Memorandum of Understanding between the City of Los Angeles Department of Water and Power, County of Inyo, the California Department of Fish and Game, the California State Lands Commission, the Sierra Club, and the Owens Valley Committee* (1997 MOU). This section provides updates on the Lower Owens River Project, Yellow-billed Cuckoo Habitat Enhancement Plan, the Additional Mitigation Projects Developed by the MOU Ad Hoc Group (Additional Mitigation Projects), Inventory of Plants and Animals at springs and seeps, and the Owens Valley Land Management Plan (OVLMP). Table 24 describes the 1997 MOU project commitments and current status. Sections 7.1-7.3 contain additional reporting requirements for projects that were implemented in recent years.

TABLE 24. 1997 MOU Provisions

Title	Provision	Status
Lower Owens River Project (LORP)	A project to rewater approximately 60 miles of the Owens River channel below the aqueduct intake, the enhancement of several environmental features along and near the river, and the return of water to the aqueduct by means of a pumpback facility near the Owens River delta. The LORP is also identified in the 1991 EIR as compensatory mitigation for impacts that occurred between 1970 and 1990 that were considered difficult to quantify or mitigate directly. The LORP, as described in the Water Agreement and the 1991 EIR, is augmented by the provisions of the MOU. The four physical features of the LORP are listed below:	See Section 5, Table 18, "1991 EIR Mitigation Measures" (Impact #10-14)." Project base flows of 40 cfs continued in 2012. On May 29, 2012, the Seasonal Habitat Flow was initiated. Drew Slough and Waggoner received water as provided in the MOU.
LORP, Item 1	1. The Lower Owens River Riverine-Riparian System. A continuous flow will be established and maintained in the river channel from at or near the intake structure which diverts the Owens River into the Los Angeles Aqueduct to a pumpback system located near the river delta that will return water to the LAA. The baseflow in the river channel will be approximately 40 cfs. In average and above runoff years, there will be "seasonal habitat flows" of approximately 200 cfs, with reductions of the habitat flows in years when runoff is forecast to be less than average.	This component of the project was achieved in February 2007. Work is completed on installing necessary facilities to implement the 40 cfs baseflow and seasonal habitat flow.
LORP, Item 2	2. The Owens River Delta Habitat Area. This feature provides for the enhancement and maintenance of approximately 325 acres of existing habitat and the establishment and maintenance of new habitat consisting of riparian areas and ponds suitable for shorebirds, waterfowl, and other animals. An annual average of approximately 6 to 9 cfs will be released below the pumpback system to supply this area.	Releases for the delta occur simultaneously with the 40 cfs baseflow. No construction was necessary for this component of the project other than the completion of the Pumback Station.
LORP, Item 3	3. Off-River Lakes and Ponds. Off-river lakes and ponds in the LORP area will be maintained and/or established through flow and land management to provide habitat for fisheries, waterfowl, shorebirds, and other animals. These habitats will be as self-sustaining as possible.	This component of the project is on-going.
LORP, Item 4	4. The 1500-Acre Blackrock Waterfowl Habitat Area. In average and above runoff years, approximately 500 acres within an overall project area of 1500 acres will be flooded to provide habitat for resident and migratory waterfowl and other native species. In years when the runoff is forecasted to be less than average, the water supply to the area will be reduced in general proportion to the forecasted runoff in the watershed.	All preliminary construction work identified for implementation of the Blackrock Waterfowl component has been completed. The forecast runoff for 2011-2012 was 150%. Per Ecosystems Sciences recommendation and consistent with the Blackrock Waterfowl Management Area (BWMA) flooding strategies for drier years, as well as the Standing Committee's BWMA policy approved this year, 500 acres in the BWMA was flooded this year. Acreage was combined between the Waggoner and Drew units. There are no requirements for each unit and no plans for allocating a set amount of water to each unit. CDFG consultation

Title	Provision	Status
		occurred prior to Standing Committee approval.
LORP (cont.)	See Table 21, Agreement Provisions."	

Title	Provision	Status
LORP (cont.)	LADWP and the County will direct and assist Ecosystem Sciences in the preparation and implementation of a management plan for the LORP area that addresses each of the four physical features of the LORP. The parties to the 1997 MOU, government agencies, LADWP ranch lessees, and the public will be consulted as the plan is developed.	Ecosystem Sciences (ES) has prepared a draft management plan for the project. These plans are listed as draft as the project is based on adaptive management and adjustments may be made in the future. Thus the term "final plan" is not used.
LORP (cont.)	LADWP as the lead agency and the County as responsible agency will jointly prepare an EIR on the LORP. A draft EIR was to be released by June of 2000, but the deadline has been extended by the 1997 MOU Parties. A final EIR will be completed as soon as possible following release of the draft.	This project required an EIR. The Draft EIR was released November 1, 2002. The public comment period concluded January 14, 2003. The Final EIR was approved by the Board of Water and Power Commissioners in July 2004. The Inyo County Board of Supervisors approved the EIR in November 2005. LADWP received all the necessary permits for implementation by January 9, 2006 and construction began immediately.
LORP (cont.)	The baseflow in the river channel will be commenced not later than June 2003 unless circumstances beyond LADWP's control prevent the completion of the pumpback system and/or the commencement of baseflow. Implementation of the other features of the LORP will commence upon certification of the LORP EIR.	The Draft EIR stated that the baseflow would not commence on June 13, 2003. The Final EIR was completed in June 2004 per the February 13, 2004, Stipulation and Order. Phase I releases started December 6, 2006. Phase II releases of 40 cfs were physically achieved in February 2007 and were certified by the court in July 2007. Additional punitive conditions involving maintaining flows and recording of flows were added to the 2007 Stipulation and Order following certification of the 40 cfs base flows.
Yellow-Billed Cuckoo Habitat	Under the direction of LADWP and the County, Ecosystem Sciences will evaluate Yellow-billed Cuckoo habitat in riparian woodland areas of Hogback and Baker Creeks. Based on the evaluation, if deemed warranted, habitat enhancement plans for these areas will be developed by Ecosystem Sciences, in consultation with LADWP, the lessee for the area and the parties to the 1997 MOU. The evaluations were to be completed within 36 months of the discharge of the writ, but the deadline has been extended by the 1997 MOU Parties. Actions or projects recommended by this evaluation will be presented to the Board of Water and Power Commissioners for approval and implementation. If approved by the Board of Water and Power Commissioners, habitat enhancement plans will be implemented as expeditiously as feasible.	Ecosystem Sciences completed a Yellow-billed Cuckoo (YBC) Habitat Plan in April 2005. LADWP released a Draft EIR in January 2006. The 1997 MOU Parties and others expressed displeasure with the Consultant's project. The MOU Parties and the lessees for the Baker Creek and Hogback Creek areas entered into negotiations with LADWP staff to develop another alternative for the YBC Habitat Plan. The *Ad Hoc Yellow-billed Cuckoo Habitat Enhancement Plan* was completed and a Mitigated Negative Declaration was released for public review. The Board of Water and Power Commissioners approved the project on January 19, 2010. Implementation of the project has begun. Please refer to Section 7.2 for updated information on implementation of this project.
Inventories of Plants and Animals at Springs and Seeps (within the	Within 36 months of the discharge of the writ, an inventory of plants and animals at wetlands associated with springs and seeps was to be conducted by ES. The deadline has been extended by the 1997 MOU	The deadline for completion of the inventories was extended to December 2000 and then to July 2001 by the MOU Parties. No further extensions have been granted. ES completed and

LORP Planning Area)	Parties.	submitted results of its inventory to the MOU Parties in June 2001. ES has completed this work.

Title	Provision	Status
Additional Mitigation	A total of 1600-AF of water per year will be supplied by LADWP for the implementation of on-site mitigation measure at Hines Springs identified in the 1991 EIR and on-site or off-site mitigation that is in addition to the mitigation measures identified in the 1991 EIR for impacts at Fish Springs, Big and Little Seely Springs and Big and Little Blackrock Springs. Under the direction of LADWP and the County, ES, will recommend reasonable and feasible on-site and/or off-site mitigation measures, including the implementation of mitigation at Hines Springs. Projects recommended by these studies and evaluations will be presented to the Board of Water and Power Commissioners for approval and implementation. The mitigation measures are to be implemented by LADWP and maintained by LADWP and/or the County. The measures were to be implemented within 36 months of the discharge of the writ, but the deadline has been extended by the MOU Parties.	The Second Amendment of Amended Stipulation and Order (Case No. S1CVCV01- 29768) regarding the Additional Mitigation Projects Developed by the MOU Ad Hoc Group was executed on March 8, 2010 by Inyo County Superior Court. This Amendment accepts the Additional Mitigation Projects as mitigation for the 1600 AF provision and establishes a two year timeline for implementation of the projects. The Additional Mitigation Projects were approved by the Board of Water and Power Commissioners following CEQA evaluation in June 2010. LADWP began implementing the eight projects shortly thereafter and all projects were implemented by the March 8, 2012 court deadline. Please refer to Section 7.3 for more information on each project.
Owens Valley Management Plan	LADWP, in consultation with the parties to the 1997 MOU and others, is to identify areas of City-owned land, which are not included in the LORP planning area, and develop plans for the identified areas to remedy problems caused by livestock grazing and other uses of the land. Priority will be given to riparian areas, irrigated meadows and sensitive plant and animal habitats. The plans will provide for the continuation of sustainable uses (including recreation, livestock grazing, agriculture, and other activities) will promote biodiversity and a healthy ecosystem, and will consider the enhancement of threatened and endangered species habitats. LADWP, working with ES. Will commence the planning effort within 5 years, and plans are to be completed within approximately 10 years. Each plan will contain an implementation schedule and will be implemented in compliance with CEQA. As plans become final, they will be presented to the Board of Water and Power Commissioners for approval and implementation.	LADWP has completed the OVLMP which describes management actions for City-owned lands in Inyo County. CEQA was completed and adopted by the Board of Water and Power Commissioners in June 2010. Implementation of fencing and recreational management measures were completed in early 2011. Please refer to Section 7.4 for more information.
Inventories of Plants and Animals at Springs and Seeps (outside the LORP Planning Area)	Within 36 months of the discharge of the writ, an inventory of plants and animals at wetlands associated with springs and seeps was to be conducted jointly by LADWP and the County on lands owned by the City of Los Angeles within the portion of the Owens River watershed located in Inyo County that is not included in the LORP Planning Area.	LADWP has completed data collection for spring and seep discharge. LADWP had ES complete the inventory of plants and animals.
Title	**Provision**	**Status**
Type E Vegetation	By December 1999, LADWP and the County are to develop baseline conditions for management of vegetation classified as Type E in the long-term agreement. These conditions will be adopted by the Standing	The inventory of Type E Vegetation was conducted by Resource Concepts, Inc. (RCI) under a contract administered by Inyo County and funded by LADWP. The final report on the inventory

	Committee.	was completed in December 1999.
Aerial Photo Analysis	By June 2000, LADWP, the County, and experts in aerial photography interpretation were to conduct a study analyzing existing air photos of the Owens Valley to evaluate the merits of using air photos in monitoring vegetation in the valley, to determine the feasibility of using air photos to analyze and refine the vegetation map data base, and to provide recommendations on how aerial photography, or other remote sensing techniques, could be used to monitor vegetation conditions and changes. If feasible and cost-effective relative to other field monitoring techniques, recommendations will be implemented.	The deadline was extended by the 1997 MOU Parties. In January 2002, Ecosat Geobotanical Surveys, Inc., the consultant conducting the study, completed reports addressing the 1997 MOU requirements.
Mitigation Plans for Impacts Identified in the 1991 EIR and the Water Agreement	The Technical Group will prepare mitigation plans and implementation schedules for all area for which on-site mitigation measures have been adopted in the 1991 EIR. The plans will be completed by June 1998. In accordance with the EIR, on-site mitigation will be accomplished through revegetation with native Owens Valley species and through establishment of irrigation.	In August 1999, following the receipt of comments from the MOU Parties, the Inyo/Los Angeles Technical Group approved the mitigation plans. In January 2002, the County identified four on-site mitigation measures for which plans were inadvertently omitted from the mitigation plans. The County prepared draft plans and schedules for these measures. Mitigation plans were submitted by LADWP to ICWD for the Independence Eastside Regreening and Big Pine Northeast Regreening projects and evaluations of East of Shepherd Creek Alfalfa Potential E/M and East of Big Pine Potential E/M projects on August 13, 2004. CEQA documentation was completed for the Independence Eastside Regreening Project and Town Water System on September 23, 2004, with a public comment period from September 23 to October 29, 2004. The Board of Water and Power Commission approved the project in May 2005. Inyo County requested changes to the project after the completion of CEQA including: relocation of the project supply well, change of irrigation type from flood to sprinkler, and addition of corrals/stables. These changes were incorporated into a project scoping document amendment that was approved by the Standing Committee on April 23, 2009. The well for this project was drilled in September 2012, and is scheduled to be equipped prior to the end of 2013. The E/M projects are currently under evaluation by the technical group.

Title	Provision	Status
Mitigation Plans for Impacts Identified in the 1991 EIR and the Water Agreement	The Technical Group will prepare mitigation plans and implementation schedules for all area for which on-site mitigation measures have been adopted in the 1991 EIR. The plans will be completed by June 1998. In accordance with the EIR, on-site mitigation will be accomplished through revegetation with native Owens Valley species and through establishment of irrigation.	Big Pine Northeast Regreening Project- Mitigation Plans for the project were transmitted to the County in 2004. Comments were received from the County in 2005. LADWP identified issues making the project unfeasible as originally scoped. In order to facilitate implementation of the project LADWP recommended the following changes: 1) Change the water source for the project to include the Big Pine Canal (Well W375 remained scoped as project make-up water well), 2) Change irrigation method from flood irrigation to the option of flood or sprinkler irrigation, 3) Move the project area closer to Highway 395, 4) Change the lessee identified for the project to an unspecified lessee. These changes were discussed publicly at the September 9, 2009 Inyo County Water Commission meeting and the November 5, 2009 Inyo/LA Standing Committee meeting. At the November 4, 2010 Inyo/LA Standing Committee meeting, modifications to the Final Scoping Document were approved. Key modifications include: changing the lessee designation, revising the boundaries of the project, and amending the water supply source and method of application identified for the project. The ICWD and Technical Group analyzed the operation of Well W375 and concluded that an exemption for up to 150 AF per year would likely have no significant impact on the environment or other well owners. The Technical Group must still exempt Well W375 for project make-up water in order to make this project feasible. LADWP has completed a Negative Declaration to fulfill the CEQA analysis for the project. The appeal process for the CEQA document has been completed and implementation of the project is scheduled for the 2014-2015 runoff year.
Technical Group Meetings	Technical Group meetings are to be open to the public.	Scheduled Technical Group meetings were opened to the public beginning October 15, 1997.
Annual Reports	LADWP and the County are to prepare annual reports describing environmental conditions in the Owens Valley, and describing studies, projects and activities conducted under the long-term agreement and the MOU. The report will be released on or about May 1 of each year.	Inyo County has prepared annual reports since 1991. LADWP released annual reports for 2001 through 2011. This report is intended to fulfill the obligation for 2012.
Fish Slough	The 1997 MOU acknowledges that LADWP and CDFG have reached agreement concerning threatened and endangered species that involves land management and other activities in the Fish Slough area of Mono County. The agreement is to be memorialized in a letter from LADWP to CDFG.	A letter agreement was never memorialized; however, LADWP has worked closely with CDFG on the Fish Slough Area of Critical Environmental Concern (ACEC).

Title	Provision	Status
Dispute Resolution and Litigation	The parties to the 1997 MOU will maintain frequent, informal communications to minimize disagreements. In the event of a dispute among the parties over the 1997 MOU the parties will meet and confer before any litigation concerning the dispute may be commenced. The parties may elect to retain the services of a mutually acceptable impartial mediator/facilitator to assist in dispute resolution. Any litigation arising out of the 1997 MOU is to be commenced in the Inyo County Superior Court.	The parties to the 1997 MOU, called the "MOU Signatory Group," have met regularly on an as needed basis. In addition, the Parties and their attorneys met several times during the fall/winter of 2003-04 to develop the 2004 Stipulation and Order. Due to conditions beyond LADWP's control, the 2004 Stipulation and Order schedule for putting water in the LORP could not be met. The MOU Parties filed suit in the Inyo County Superior Court on July 25, 2005. The Court ordered limited pumping, required groundwater recharge, no reduction of in-valley uses, a fine, and implementation of LORP base flows by July 25, 2007 The Court also stayed an injunction against the use of the second aqueduct if base flows were not achieved in the LORP. Upon achieving base flows prior to July 25, 2007 the injunction and daily fines were dismissed.
Financial Assistance	The County will pay the sum of $53,000 to the Sierra Club and the sum of $30,000 to the Owens Valley Committee for professional services in the development and preparation of the 1997 MOU.	The specified amounts have been paid by the County to the identified parties.

7.1 Mitigation Monitoring and Reporting Program for the LORP

This Mitigation Monitoring and Reporting Program (MMRP) was developed to ensure implementation of the mitigation measures outlined in the Final Environmental Impact Report and Environmental Impact Statement (EIR/EIS) for the LORP (State Clearinghouse No. 2000011075). The MMRP was prepared by the City of Los Angeles Department of Water and Power (LADWP), the lead agency for the LORP under the California Environmental Quality Act (CEQA), in conformance with Public Resources Code Section 21081.6 and CEQA Guidelines Section 15097.

Project Description Summary

The LORP is a large-scale habitat restoration project in Inyo County, California, that is being implemented through a joint effort by LADWP and Inyo County. The LORP was identified in a 1991 Environmental Impact Report as mitigation for impacts related to groundwater pumping by LADWP from 1970 to 1990. The description of the project was augmented in a Memorandum of Understanding (MOU), signed by LADWP, Inyo County, California Department of Fish and Game (CDFG), California State Lands Commission (SLC), Sierra Club, and the Owens Valley Committee. The 1997 MOU specifies the goal of the LORP, timeframe for development and implementation, and specific actions. It also provides certain minimum requirements for the LORP related to flows, locations of facilities, and habitat and species to be addressed.

The overall goal of the LORP, as stated in the MOU, is as follows:

> *"The goal of the LORP is the establishment of a healthy, functioning Lower Owens River riverine-riparian ecosystem, and the establishment of healthy functioning ecosystems in the other elements of the LORP, for the benefit of biodiversity and threatened and endangered species, while providing for the continuation of sustainable uses including recreation, livestock grazing, agriculture, and other activities."*

LORP implementation includes release of water from the Los Angeles Aqueduct to the Lower Owens River, flooding of approximately 500 acres in the Blackrock Waterfowl Management Area, maintenance of several off-river lakes and ponds, modifications to grazing practices, construction of minor new facilities (to facilitate the release, monitoring, etc.), and installation of a pump station to capture a portion of the water released to the river.

Mitigation Monitoring and Reporting Plan (MMRP) Responsibility

Implementation and monitoring of most of the identified mitigation measures are post-implementation costs to be shared equally between LADWP and Inyo County. Operation and maintenance related to the pump station and monitoring for grazing management is solely the responsibility of LADWP. For other elements of the LORP, LADWP and Inyo County staff shares the responsibility for implementation and monitoring.

Organization of the MMRP

The LORP MMRP presents the mitigation measures by geographic area (Riverine-Riparian System, Blackrock Waterfowl Management Area, Pumpback Station and Associated Facilities, Land Management Plan, and other mitigation measures associated with the LORP as a whole). (Note: Some mitigation measures apply to more than one area.) The timing of

the measure, the party responsible for implementing the measure, the agency responsible for mitigation monitoring, and the monitoring method are identified for each mitigation. A line for documentation of compliance is also provided.

Riverine-Riparian System

Air Quality

Mitigation Measure AQ-1 PM10 (fugitive dust) emissions from ground disturbance during construction of the pump station.

To minimize dust/ PM_{10} emissions during construction activity, as necessary, one or more of the following measures have been implemented:

- After clearing, grading, earth moving, or excavation has been completed, the disturbed areas have been treated by watering, or revegetated.
- During construction, water trucks were used to keep areas of vehicle movement, temporary soil stockpiles, and construction disturbance damp enough to prevent dust from leaving the site.
- The amount of disturbed area was minimized and on site vehicle speeds were reduced to 15 miles per hour or less.

Biological Resources

Mitigation Measure F-1 Impacts on game fishery associated with potential water quality degradation during initial flow releases to the river.

No work has been conducted that would require action for this mitigation measure.

Mitigation Measure RW-1 Impacts on breeding birds during mechanical removal of tules.

Removal of cattail and bulrush obstructions, mechanical removal of cattail and bulrush stands occurred in winter to avoid conflicts with breeding birds. Work after March 15 was conducted after field surveys determined there would be no affect to nesting birds.

Mitigation Measure R-1 Short-term disturbance of desert sink scrub associated with the establishment of temporary access roads during initial channel clearing.

Temporary access roads used to clear the river channel were seeded with native or naturalized grasses and shrubs common to the valley after completion of the de-silting operation to facilitate restoration of vegetative cover and species compatible with the surrounding vegetation. The colonization by non-native aggressive or noxious weeds will be inhibited by weed control for 3 years after construction.

Mitigation Measure RW-2 Impacts on wetland and riparian vegetation during mechanical removal of tules.

Impacts to wetland and riparian habitats adjacent to the work area were minimized by making use of existing barren areas for staging, operations, and stockpiling; crushing vegetation in

the work area rather than clearing or grading it; and mulching areas denuded during operations with vegetative debris to encourage natural revegetation and discourage noxious weeds.

Cultural Resources

Mitigation Measure CRR-1 Potential disturbance of known archaeological and historic sites during establishment and use of construction-related roads and/or use of construction equipment for the channel clearing work.

LADWP implemented the following management actions to avoid impacts on cultural resources during the channel clearing work:

- LADWP worked with qualified archaeologists to locate the temporary access road for the channel clearing work to avoid the two historic sites identified in the field survey by Far Western (2003).
- Temporary construction fencing was installed along the perimeter of the area where these two historic sites are located to avoid construction equipment, vehicles, or personnel from accidentally entering and disturbing the site.
- Temporary construction fencing was installed between the sediment stockpile area and the adjacent prehistoric site to avoid heavy equipment and or sediment spoil from accidentally entering and disturbing the site.
- Installation of temporary fencing referenced above was conducted under the supervision of a qualified archaeologist.
- LADWP notified representatives of regional Native American Tribes prior to beginning earthwork for the channel clearing work.
- No previously unknown prehistoric or historic cultural material was encountered.

Mitigation Measure CRR-2, Potential impacts on unknown archeological sites or cultural deposits that could be affected by the new flows or earthwork.

No previously unknown prehistoric or historic cultural material was encountered.

Hydrology

Mitigation Measure H-1 Localized overbank flooding that could affect public roads and lease roads that cross the river if floating debris clogs the culverts and bridges, primarily under the seasonal habitat flows.

No work has been conducted that would require action for this mitigation measure.

Pumpback Station and Associated Facilities

Air Quality

Mitigation Measure AQ-1 PM10 (fugitive dust) emissions from ground disturbance during construction of the Pumpback Station.

To minimize dust/ PM_{10} emissions during construction activity, as necessary, one or more of the following measures have been implemented:

- After clearing, grading, earth moving, or excavation has been completed, the disturbed areas have been treated by watering, or revegetated.
- During construction, water trucks were used to keep areas of vehicle movement, temporary soil stockpiles, and construction disturbance damp enough to prevent dust from leaving the site.
- The amount of disturbed area was minimized and on site vehicle speeds were reduced to 15 miles per hour or less.

Mitigation Measure AQ-2 PM10 (fugitive dust) emissions from sediment stockpile at the Pumpback Station site.

LADWP stabilized the sediment stockpile at the Pumpback Station site as necessary to minimize wind-blown dust from the stockpile. The method to reduce fugitive dust emissions was water application.

Biological Resources

Mitigation Measure P-1 Disturbance to upland vegetation from construction of the pump station and associated facilities.

Upland areas disturbed during construction at the Pumpback Station site were regraded to create natural contours that match adjacent topography. These areas were then seeded with native plant species in mid-February 2007. The species included were based on the species removed, and the availability of seeds or plant materials.

Mitigation Measure P-3 Disturbance of upland vegetation during construction of the power line.

The area of temporary disturbance associated with construction of the power line was minimized to the extent feasible by using overland travel to reach pole sites, prohibiting construction of new roads, and minimizing soil disturbance such as scraping or excavation, except where necessary to ensure safe passage or to complete construction.

Mitigation Measure P-4 Potential inadvertent disturbance of a freshwater seep that is located within 100 feet of the proposed power line alignment, about 2000 feet north of U.S. Highway 395 on the margins of Owens Lake.

The small freshwater seep along the power line was avoided during construction by marking its boundary on construction drawings and flagging them in the field prior to construction activities to indicate an environmentally sensitive area to be avoided.

Mitigation Measure P-5 The potential for increase in predation on plovers and other shorebirds from the increase in power poles.

Power poles installed for the LORP Pumpback Station that are located within 0.25 mile of Owens Lake were equipped with anti-predator perches (aluminum combs or other appropriate devices placed on top of poles or other potential perching sites).

Cultural Resources

Mitigation Measure CRP-1 Potential disturbance of unknown cultural resources during construction of the Pumpback Station.

LADWP implemented the following management actions to avoid impacts on cultural resources during construction of the Pumpback Station:

- LADWP notified representatives of regional Native American Tribes prior to beginning earthwork for the Pumpback Station. Interested Tribal representatives shall be invited to participate (on a volunteer basis) in the monitoring of the earthwork.
- A qualified archaeologist has been present during earthwork for the pump station to monitor for and avoid cultural resources. Human remains were encountered during work at the Pumpback Station in June 2006. Representatives from Far Western Archeological and from the local tribe reinterred the remains at a nearby location.

Mitigation Measure CRP-2 Potential disturbance of unknown cultural resources during construction of the power line.

LADWP notified representatives of regional Native American Tribes prior to beginning construction of the power line.

Water Quality

Mitigation Measure P-2 Temporary water quality impacts associated with site disturbance and equipment use during construction of the Pumpback Station.

The Storm Water Pollution Prevention Plan (SWPPP) was prepared under the provisions of the required Construction General Storm Water NPDES Permit and specifically included measures to: (1) prevent erosion from the construction site and from the post-construction site that could cause sedimentation into the river, with a focus on stabilizing the river banks to prevent sloughing and erosion during the initial river flows and due to water level fluctuations in the forebay; and (2) prevent discharge of construction materials, contaminants, washings, concrete, fuels, and oils into the river from construction equipment and vehicles. These measures included, at a minimum, physical devices to prevent sedimentation and discharges (e.g., silt fencing, hay bales), and routine monitoring of these devices and the conditions of the river downstream of the pump station site.

Blackrock Waterfowl Management Area

Air Quality

Mitigation Measure AQ-1 PM10 (fugitive dust) emissions from ground disturbance during construction of the berms and ditches in Blackrock Waterfowl Management Area.

To minimize dust/ PM_{10} emissions during construction activity, as necessary, one or more of the following measures have been implemented:

- After clearing, grading, earth moving, or excavation has been completed, the disturbed areas have been treated by watering, or revegetated.
- During construction, water trucks were used to keep areas of vehicle movement, temporary soil stockpiles, and construction disturbances damp enough to prevent dust from leaving the site.
- The amount of disturbed area was minimized and on site vehicle speeds were reduced to 15 miles per hour or less.
- Roads throughout the LORP area have been improved and covered with shale to help reduce dust emission.

Biological Resources

Mitigation Measure B-1 Disturbance of upland vegetation during construction of berms and ditches in the Blackrock Waterfowl Management Area.

Temporarily disturbed upland habitats in the Blackrock Waterfowl Management Area have been seeded with native grasses and shrubs common to the valley to facilitate restoration of vegetative cover utilizing species compatible with the surrounding vegetation. The colonization by non-native weeds will be inhibited by weed control for 3 years after construction. During the 2008 growing season tamarisk seedlings were treated and removed.

Cultural Resources

Mitigation Measure B-2 Potential disturbance of known archaeological sites during construction of a ditch in the Blackrock Waterfowl Management Area.

LADWP implemented the following management actions to avoid impacts on cultural resources during construction of the proposed ditch to be located in proximity of the two known prehistoric sites:

- LADWP notified representatives of regional Native American Tribes prior to beginning construction of the proposed ditch to be located in proximity of the two known prehistoric sites. Interested Tribal representatives have been invited to be present (on a volunteer basis) during the construction of the ditch.
- LADWP worked with a qualified archaeologist to locate the proposed ditch to avoid the two known prehistoric sites identified in the field survey by Far Western (2001).
- Temporary protective fencing has been placed between the known prehistoric sites and proposed ditch areas. A qualified archaeologist supervised the placement of temporary protective barriers.

- All vehicles have remained on the road in the vicinity of the known prehistoric sites.
- If construction must occur within 25 feet of these sites, an archaeologist will monitor construction activities.

Land Management Plan

Rangelands

Mitigation Measure LM-1 Potential increase in livestock drift onto public lands.

The work associated with this measure is complete. There has not been an increase in livestock drift onto public lands.

Other Mitigation Measures Associated with the LORP as a Whole

Deleterious Species

Mitigation Measure V-1 Potential increase in the distribution and abundance of perennial pepperweed, Russian knapweed, saltcedar, and other noxious non-native weeds.

LADWP has implemented the following actions to minimize infestations of noxious weeds:

- Construction and other disturbance of substrates have been minimized.
- The use of fire for vegetation management has been minimized.
- Construction equipment was maintained "weed free" by washing and inspecting equipment used in weed-infested areas prior to moving to another site.
- On-site fill materials for construction were used to the extent possible. Off-site fill materials were taken from borrow pits located in areas that are free of noxious weeds.

Mitigation Measure V-2 Potential increase in the distribution and abundance of perennial pepperweed, Russian knapweed, and other noxious non-native weeds (excluding saltcedar).

LADWP is providing $50,000 per year to the Agricultural Commissioner to fund the monitoring and control of new infestations of perennial pepperweed and other noxious weeds (excluding saltcedar) in the LORP project area for the first 7 years of LORP implementation. In addition, LADWP is providing $150,000 per year for the first 7 years to the Agricultural Commissioner to fund the control of existing perennial pepperweed and other noxious weed populations outside of the LORP area that could serve as seed sources for the LORP area. The commitment by LADWP in this effort over the 7-year period is a total of $1,400,000. As of August 28, 2012, LADWP has provided $1,400,000 to the Inyo-Mono County Agricultural Commissioner for this provision, and fulfilled its obligation.

The Agricultural Commissioner has developed protocols for monitoring and controlling infestations based upon past experience and current literature. Based on the protocols, the Agricultural Commissioner will use the funds to identify and treat new infestations of noxious weeds within the LORP area in a timely manner, with priority given to the riparian areas. Existing infestations outside of the LORP area that could serve as seed sources for the

LORP area will also be monitored and treated. A Memorandum of Understanding between the Agricultural Commissioner and LADWP will be entered into, and will outline the responsibilities of each agency under the protocols.

Mitigation Measure V-3 Potential increase in the distribution and abundance of saltcedar.

In addition to LADWP's contribution to the existing Inyo County Saltcedar Control Program, LADWP will provide funding to Inyo County in order for the County's Saltcedar Control Program to implement the following measures.

Monitoring and Treatment of New Saltcedar Infestations

Protocols for monitoring and treating new saltcedar infestations in the project area will be developed and implemented by the Inyo County Saltcedar Control Program in cooperation with LADWP. Several joint meetings were held in 2007-08 to discuss this issue. The protocols will include, but not be limited to, the following:

- Prioritization for monitoring and treatment of areas that are to undergo a change in hydrologic status and that do not have an established cover of native plants.
- Provisions for treating new saltcedar infestations, including protocols for treating saltcedar near rare plant populations.
- Provisions for annual pedestrian monitoring of project areas potentially subject to saltcedar infestations.
- Provisions for annual follow-up treatments of previously treated saltcedar infestations.

Treatment of Saltcedar Seed Sources

If the ongoing Inyo County Saltcedar Control Program is not able to achieve the priorities for the control of existing saltcedar populations in the LORP area identified in Section 10.4.1.6 of the LORP EIR, the control of existing saltcedar populations will be completed as part of this mitigation measure.

Coordination

In addition to the above, the program will include:

- LADWP will provide to the Saltcedar Control Program reports and data compiled through the LORP monitoring program concerning flows and water levels related to the river baseflow and seasonal habitat flows, releases to the Delta, and water levels at the Off-River Lakes and Ponds and in the Blackrock area.
- LADWP will notify the Saltcedar Control Program of the timing and extent of annual seasonal habitat flows, increased flow releases to Blackrock units, pulse flows to the Delta, and other changes in land management that could cause a new infestation of saltcedar.
- LADWP will provide to the Saltcedar Control Program work products relevant to saltcedar control that are prepared through the LORP monitoring program, such as maps, imagery, etc.

Funding

LADWP will provide matching funds for LORP saltcedar control equal to the amount obtained by the County up to a total of $1.5 million. The intent of this mitigation measure is to suppress increases in saltcedar resulting from LORP implementation. If continuation of the LORP-focused saltcedar control program is required and the matching funds described above are exhausted, funding for the program will be an ongoing post-implementation cost (EIR/EIS Section 2.2.2.2).

Mitigation Measure V-4 Potential increase in the distribution and abundance of noxious weeds and New Zealand mud snails.

LADWP conducted a training program for LADWP and Inyo County personnel, lessees, and their employees working within the LORP area on identification and reporting of noxious weeds, including saltcedar, and New Zealand mud snails. The training was conducted at all LADWP maintenance facilities in the Owens Valley. The Eastern Sierra Weed Management Area Noxious Weed Identification Handbook was provided to program participants. The instruction detailed how to accurately describe their locations to aid in verification and timely response and identify the agencies to which sightings of the species should be reported. As new personnel are hired or when training is updated, a refresher course will continue to be provided. In addition, photos of relevant deleterious species have been posted in the assembly rooms of appropriate LADWP and Inyo County facilities.

Mitigation Measure V-5 Potential increase in the distribution and abundance of New Zealand mud snails.

Informational materials have been prepared regarding how to identify New Zealand mud snails and notifying recreational users to take precautionary measures to prevent the spread of New Zealand mud snails. The signs are currently being developed and will be posted in 2010 at key access points to the LORP area, such as Mazourka Canyon Road, Manzanar Reward Road, the Pumpback station, and the Delta. The precautionary measures that will be described on the signs include: scrubbing and rinsing waders, boots, watercraft, and equipment before leaving the water (using hot water or drying will enhance this measure); disposing of fish entrails in proper trash receptacles; and reporting to the Non-indigenous Aquatic Species Toll Free Hotline if this species is observed.

Mitigation Measure V-6 Potential increase in the distribution and abundance of New Zealand mud snails.

During project construction and maintenance, LADWP has either completely dried construction equipment between use in water infested with New Zealand mud snails and non-infested water or steam cleaned the equipment before use in non-infested water.

Public Health and Safety

Mitigation Measure PS-1 Potential increase in mosquito breeding habitat.

LADWP has entered into an agreement with Owens Valley Mosquito Abatement Program (OVMAP) to abate the potential increase in mosquitoes resulting from the LORP. This mitigation measure is considered an ongoing post-implementation cost which is to be shared equally by the County of Inyo and the LADWP. Mitigation Measure PS-1 has three components:

- Pre-project and post-implementation surveillance, monitoring, and control (to be performed by OVMAP).
- Agency coordination and LORP management adjustments (to be performed by LADWP).
- Public education, program administration, and reporting (to be performed by OVMAP).

OVMAP estimates that the annual cost to fully implement Mitigation Measure PS-1 could be approximately $109,000, depending on the severity of the impact (L. Kirk, pers. comm., December 2003). This is considered an ongoing post-implementation cost that will continue for the life of the project. Post-implementation costs are to be shared equally by LADWP and the County as described in EIR/EIS Section 2.2.2.2. In June 2012, LADWP paid OVMAP $2,211.50 which represents one half of the cost of monitoring and control of mosquitoes resulting from the LORP between the dates of October 1, 2011 and December 31, 2011.

Recreation-Related Impacts

Mitigation Measure RC-1 Impacts on biological resources, grazing operations, cultural resources, existing recreational uses, and roadways from future increase in recreational activities.

LADWP personnel observed and received a complaint regarding access through new LORP related fencing. A field review was conducted on February 22, 2007, by LADWP personnel and concerned citizens. In addition, a public meeting was held on April 4, 2007, in Independence to document public concerns about recreation access. Another field review with LADWP and concerned citizens was conducted on April 19, 2007. Walkthrough access was improved as a result of these concerns. Additionally, LADWP staff utilized the information from these meetings to improve recreation access to alleviate the public's concerns.

Mitigation Measure RC-2 Impacts on cultural resources from future increase in recreational activities.

Although no work has been conducted that would require action for this mitigation measure, LADWP has conducted a training program for LADWP and Inyo County personnel working within the LORP on identifying and reporting of cultural resources or potential cultural resources at LADWP or Inyo County facilities in the Owens Valley. Training is offered and provided to new employees on an ongoing basis

7.2 Annual Report to Summarize the Progress at Hogback and Baker Creeks for Habitat Enhancement for Yellow-billed Cuckoo

Introduction

The *Final Ad Hoc Yellow-billed Cuckoo Habitat Enhancement Plan* (Enhancement Plant) states in Section 2.1.8.3.:

> "Annual reports will be prepared each year by LADWP to summarize the progress of the willow and cottonwood planting and black locust control. The annual reports will include a brief introduction to include the performance standards, monitoring methodologies, monitoring results for the year, and discussion of any adjustments required to achieve the overall goal to improve the habitat."

Fences

All fencing described in the Enhancement Plan was complete as of 2011. As stated in past annual reports, the fencing at Hogback and the Brown exclosure was completed in April 2010 and the Apple Orchard exclosure was completed in February 2011. The fence on the western boundary of the Brown exclosure, destroyed during the Center Fire, was replaced in June 2011. Throughout the summer of 2012 the lessee reported that the northern fence of the Brown exclosure was cut in multiple locations.

Baker Creek

Planting Area E was scheduled for 2012. Plant spacing was discussed in *Table 9. Baker Creek Target Upper and Mid-Canopy Species List and Plant Spacing* of the *Final Ad Hoc Yellow-billed Cuckoo Habitat Enhancement Plan* (Enhancement Plan). The table states:

> "*Target number of plants per acre assumes 349 trees per acre (12' triangular spacing) with no existing canopy trees in a planting area; therefore, number of pole plantings will be adjusted to fit existing site conditions for each planting area using target percent canopy and 12' spacing, as well as depth to groundwater criteria. When trees are present, plantings should be 12' from the edge of existing canopy."*

Planting within Area E is scheduled over a three to five year period starting in 2012. The majority of the planting area was completed this year and depending on success rates, more pole plantings might be planted next year.

- Planting in Area E began in late March 2012 and was completed in early April 2012. The plan called for an estimate of 3,036 pole plantings within this area. Due to depth to

water and the 12-foot spacing from existing canopy only 1205 pole plantings were planted.

Pole Planting Monitoring
The Enhancement Plan in Section 2.1.5.1. states:

"*Once planted, pole cuttings should be monitored monthly for the first growing season (March to October) to check for herbivory on cuttings without cages."* Planting was completed in April. As a consequence, all plantings were monitored monthly, May through September. Although the Enhancement Plan calls for monitoring into October, it was found that the plantings were already losing their leaves for the winter by the October monthly monitoring. Table 25 notes all plantings that were either in leaf or bud during monthly monitoring.

Table 25. Percentage of Plantings that were in Leaf or Bud by Month for each Planting Area.

Location	May	June	July	August	September
Planting Area E	78	72	69	61	55

Monitoring by Species
Section 2.1.5.2. of the Enhancement Plan discusses anticipated mortality for cottonwood and willow pole plantings in the first season. This section states:

"*Replacement of pole cuttings will be implemented when mortality within individual planting areas in the first season for cottonwoods and willow is greater than the following:*

- *Cottonwoods >50 percent*
- *Willows >20 percent*

Table 26 presents the data for survival of cottonwoods and willows by month for each of the planting areas implemented in 2012. Based on the above criteria, 132 of the original 252 Fremont cottonwood (POFR) and 90 of the original 379 arroyo willow (SALA6) pole plantings will need to be replaced in planting area E in 2013 (Table 2).

Table 26. Percentage of Cottonwoods and Willows that were in Leaf or Bud (living) During the 2012 Growing Season.

Planting Area E	May	June	July	August	September	Average
POFR	76	55	45	29	20	45* 5%**
SALA3	85	87	86	84	83	85
SALA6	72	75	75	69	63	71* 9%**

*Mortality exceeded the limits noted above. Replacement planting will be implemented in Planting Area E in 2013.
** Percent above the criteria noted above.

Replanting of Areas C, D, and H

- Replanting in area C was completed in April 2012. Approximately 36 of the 209 willows and cottonwoods that were planted in 2011 were replanted in 2012.
- Replanting in area D was also completed in April 2012. Of the 701 pole plantings planted in 2011, approximately 135 were to be replanted in 2012. Due to the 12-foot spacing from existing cover we were only able to replant approximately 50 pole cuttings.
- Replanting in area H was completed in April 2012. Approximately 61 of the 404 pole plantings planted in 2011 were replanted in 2012.

As-Built Plans

All new pole plantings were noted by species and given an individual identifying number. The pole planting location was recorded with a GPS and downloaded into GIS. As-Built Plans were displayed over an aerial photo. The As-Built Plans were provided to the Parties and the lessee.

Black Locust Control

Black locust control in 2012 was conducted throughout planting area E. Black locust that were previously treated during the winter of 2011 and burned during the 2011 Center Fire started to re-sprout. Control began in early January and was completed by early March. As in previous years, Cal Fire crews were utilized to aide in control. Control consisted of cutting the black locust low to the ground followed by an application of herbicide. Black locust suitable for firewood was donated to Round Valley School. Black locust suitable for fence posts were provided to the lessee. The remaining black locust were transported to the borrow pit on the Sugarloaf Road to be burned at a later date.

Planting Area Monitoring

Section 2.1.8.1. of the Enhancement Plan states:

> *"Quantitative monitoring will assess the attainment of final success criteria and identify the need to implement contingency measures in the event of failure. Monitoring will begin in late summer after the second growing season since initial planting to capture the fullest extent of the growing season and after the majority of avian species have finished breeding. Monitoring will continue annually through Year 6 within each planting area or until the success criteria are met."*

Planting criteria as stated in section 2.1.7.1 of the Enhancement Plan:

- Planting Areas A, B, C, D, E, and F – Cover of target upper and mid canopy species is at least 50 percent.
- Planting Areas G and H - Cover of target upper and mid canopy species is equal to 65 percent.
- Native species understory cover will be at least 50 percent in all planting areas.
- Black locust cover will be no more than five percent in all the planting areas.
- Cover of other non-native species in the understory will be less than 25 percent in all planting areas.

Transects and bearings were randomly located using GIS for each of the planting areas. A total of six transects were generated for area A, eight transects for area B, three transects for Area C, 10 transects for Area D, 10 transects for Area F&G, and 12 transects for Area H.

Transects within all above areas were sampled from August 28-31, 2012. Absolute cover values were then calculated for each planting area and are summarized in Table 27.

Area A for the second year met the 50 percent criteria for upper and mid canopy. Compared with 2011 the upper and mid canopy cover increased by 27 percent, totaling 62 percent cover. Native understory decreased 19 percent between 2011 and 2012. This decrease may be attributed to the dry winter conditions of 2011-2012 compared to the above average winter of 2010-2011 (Table 27).

Within area B, the upper and mid canopy decreased 37 percent to a total cover of 17 percent. Like area A, this decrease may be associated with the drier than normal winter of 2011-2012. Native understory increased nine percent to 67 percent. Non-native understory increased 43 percent to 10 percent (Table 27).

Area F&G upper and mid canopy cover increased 27 percent, totaling 33 percent. Native understory decreased 26 percent, totaling 39 percent (Table 27). This decrease may be attributed to two factors. The dry winter of 2011-2012 and the increase of upper and mid canopy cover which is beginning to shade out the understory.

Line point transects within Areas C, D, and H were sampled for the first time in 2012. Area C met the criteria for native understory with a total cover of 69 percent. Criteria were also met for non-native understory totaling 13 percent and non-native canopy cover totaling zero percent. Upper and mid canopy for Area C totaled 13 percent, well below the 50 percent criteria (Table 27).

Area D met both the non-native canopy and understory criteria. Non-native canopy totaled zero percent cover and non-native understory totaled three percent. Upper and mid canopy totaled 45 percent, five percent below the cover criteria. Native understory totaled 35 percent, 15 percent below the criterion (Table 27). As observed within area F&G, understory cover may decrease as upper story cover increases (Figure 21).

Figure 21. Area D, Transect Number Four, Mid to Upper Canopy Shading the Understory.

Area H met the non-native understory criteria totaling six percent cover and non-native canopy cover totaling one percent. Upper and mid canopy cover totaled 42 percent, a 23 percent below the 65 percent criteria. Native understory had a total cover value of 42 percent, eight percent below the criterion (Table 27). The understory in Area H may be decreasing in total cover due to the increase in canopy cover.

Table 27. Percent Absolute Cover Values for 2012 within Planting Areas A, B, C, D, F&G, and H. *Percent Cover Values for 2011 in Parenthesis*.

	Planting Area A	Planting Area B	Planting Area C	Planting Area D	Criteria for Areas A,B,C,D	Planting Area F&G	Planting Area H	Criteria for Area F&G, H
Upper Canopy Native	T (T)	T (1)	3	T		3 (4)	7	
Upper Canopy Non-Native	0* (0*)	0* (0*)	0*	0*	<5	3* (1*)	1*	<5

Mid Canopy	62 (51)	17 (25)	10	45		30 (23)	35	
Upper & Mid Canopy	62* (51*)	17 (27)	13	45	≥50	33 (26)	42	≥65
Understory Native	30 (37)	67* (64*)	69*	35	≥50	39 (53*)	42	≥50
Understory Non-Native	T* (1*)	10* (7*)	13*	3*	<25	7* (12*)	6*	<25

* Has met criteria as stated above.
T = Trace <1%

Activities Scheduled for 2013

Black Locust Control

Black locust control will continue in planting areas E, F&G, and H during the winter of 2012-2013.

Planting of Pole Cuttings

The Enhancement Plan allows for area E to be planted in years 3-5. Planting area E requires the planting of Red willow (*Salix laevigata*), Arroyo willow (*Salix lasiolepis*) and Fremont cottonwood (*Populus fremontii*). Before a grove of Black locust located in a dry area are removed and replaced with pole plantings, another year of pole planting monitoring around this grove is recommended.

Besides replanting area E, all other planting areas will be revisited and unsuccessful plantings will be replaced. A source of Black cottonwood (*Populus balsamifera trichocarpa*) was discovered in 2012 and will be used to supply cuttings for Area A.

Pole cuttings will be harvested during the winter and stored in a refrigerated storage unit until the spring. Planting of the pole cuttings will occur when conditions permit in the spring.

7.3 Mitigation Monitoring and Reporting Program - Final Ad Hoc Yellow-Billed Cuckoo Habitat Enhancement Plan Initial Environmental Study

Final Ad Hoc Yellow-Billed Cuckoo Habitat Enhancement Plan
Initial Environmental Study/Mitigated Negative Declaration
SCH# 2009101098

Introduction

This Mitigation Monitoring and Reporting Program (MMRP) has been developed to ensure implementation of the mitigation measures outlined in the Initial Environmental Study/Mitigated Negative Declaration (IES/MND) for the Final Ad Hoc Yellow-Billed Cuckoo (YBC) Habitat Enhancement Plan (State Clearinghouse No. 2009101098). The MMRP has been prepared by the City of Los Angeles Department of Water and Power (LADWP), the lead agency for the Final Ad Hoc YBC Habitat Enhancement Plan under the California Environmental Quality Act (CEQA), in conformance with Public Resources Code

Section 21081.6 and CEQA Guidelines Section 15097. Adoption of a MMRP is required for projects in which the Lead Agency has required changes or adopted mitigation to avoid significant environmental effects.

Project Description Summary

The 1997 Memorandum of Understanding (MOU) among LADWP, Inyo County, the Owens Valley Committee (OVC), Carla Scheidlinger, the Sierra Club, the California Department of Fish and Game (CDFG), and the California State Lands Commission (SLC) outlines the requirement for an evaluation of YBC habitat at Baker and Hogback Creeks. The Final Ad Hoc YBC Habitat Enhancement Plan was developed to maintain and/or improve conditions for YBC at Baker and Hogback Creeks. Under the proposed Project, habitat conditions would be maintained and/or improved at each site through the implementation of project actions such as planting of native riparian vegetation, alteration of grazing practices, amended recreation policies, and altered trails.

Mitigation Monitoring and Reporting Responsibility

LADWP shall have primary responsibility for administrating the MMRP activities to staff, consultants, or contractors. LADWP has the responsibility of ensuring that monitoring is documented through periodic reports and that deficiencies are promptly corrected. LADWP's designated environmental monitor will track and document compliance with mitigation measures, note any problems that may result, and take appropriate action to remedy problems. Specific responsibilities of LADWP include:

- Coordination of all mitigation monitoring activities
- Management of the preparation, approval, and filing of monitoring or permit compliance reports
- Maintenance of records concerning the status of all approved mitigation measures
- Coordination with MOU Parties and other agencies

Resolution of Non-compliance Complaints

LADWP will act as the contact for interested parties who wish to register comments or complaints. Any person or agency may file a complaint that states non-compliance with the mitigation measures that were adopted as part of the approval process for the Final Ad Hoc YBC Habitat Enhancement Plan. The complaint shall be directed to the LADWP (111 North Hope Street, Room 1044, Los Angeles, California 90012) in written form providing detailed information on the purported violation. The LADWP shall conduct an investigation and determine the validity of the complaint. If non-compliance with a mitigation measure is verified, the LADWP shall take the necessary action(s) to remedy the violation. The complaint shall receive written confirmation indicating the results of the investigation or the final corrective action that was implemented to respond to the specific non-compliance issue.

Mitigation Monitoring and Reporting Plan Matrix

The MMRP is organized in a matrix format and includes: mitigation measure by number, text of the mitigation measures, time frame for monitoring, agency responsible (in this case, LADWP), and space to indicate verification the measures were implemented. This last column will be used by LADWP to document the person who verified the implementation of the mitigation measure, the date on which this verification occurred, and any other notable remarks.

Table 28. Mitigation Monitoring and Reporting Program for the YBC Enhancement Plan

Biological Resources						
No.	**Impact**	**Mitigation Measure**	**Time Frame**	**Responsible Monitoring Agency**	**Verification of Compliance**	
BIO-1	Fence installation, plantings, and exotics removal could disturb sensitive plant species, if any are present in the specific locations to be disturbed for project implementation.	• Areas of Owens Valley checkerbloom, Inyo County star-tulip, or other sensitive plant species will be flagged and access restricted during earth disturbing activities (vehicle travel, mowing, fence post installation, planting, herbicide use, and/or tree removal) to prevent impacts to rare plant species. • Work within areas known for sensitive plants will be done by hand, including pounding fence posts by hand. Vehicles and larger construction equipment will be excluded from areas containing rare plant populations.	Prior to and during construction During construction	LADWP	2011	Areas with sensitive plants were avoided during project implementation in 2011.
BIO-2	Vehicle travel outside of established roads, fence installation, pole plantings, and tree removal could disturb riparian plant communities.	• Installation of fencing, plantings, and exotics removal will be done under the supervision of LADWP biologists.	During construction	LADWP	2011	Access maps were developed by a LADWP biologist that designated access on established roads and parking areas outside the project area to protect riparian areas
Cultural Resources						
CUL-1	Fence installation, brush mowing, planting, and tree removal have the potential to disturb surface and subsurface archaeological materials at the project sites.	• If ground disturbances are proposed within the boundaries of, or in close proximity to, any of the previously recorded archaeological sites (BC-1 through BC-22 and HB-1 through HB-11; as described in Bevill and Nilsson, 2006), or newly recorded archaeological sites (BC-09-01 through BC -09-05 and HB 09-01 through HB-09-03; as described in Reid and	Prior to construction During construction	LADWP		All implementation areas were surveyed by an archaeologist and buffer areas were flagged around resources prior to any work. All buffer areas were avoided during project implementation. All employees received training specified in this

		Denardo, 2009) a qualified archaeologist shall delineate a 50-foot buffer, using flagging tape, around each archaeological site where ground disturbances are proposed prior to the start of Project construction.	During construction			
		• Mowing, minor vegetation removal, planting, and fence installation within the flagged buffer zones shall be monitored by an archaeologist.	During construction			
		• Black locust trees located within the flagged buffer zone areas shall be treated with herbicide and left in place.	Prior to construction			
		• If more extensive ground disturbances (including, but not limited to, tree removal or grading) become necessary within the flagged buffer zones, further archaeological investigations, which may include evaluation, testing and data recovery, will be required prior to implementation of those actions.				
		• If previously unrecorded cultural resources are encountered during the project, all work shall cease within 100 feet of the discovery until the find can be evaluated by a qualified archaeologist.				
		• Prior to the start of construction, construction personnel shall be trained regarding the possibility of				

		encountering previously unidentified or buried cultural materials, including both prehistoric and historic resources, during construction. Prior to the initiation of construction or ground-disturbing activities, the project proponent should complete training by a qualified archaeologist for construction personnel. Worker education will focus on the rationale for cultural resources monitoring; regulatory policies protecting resources - a discussion of applicable laws and penalties under the law; a basic identification of cultural resources; and the protocol to follow in case of discovery, including Native American burials.				
Cul-2	Fence installation, tree removal, and plantings have the potential to disturb fossiliferous older dissected alluvial fan and lakebed deposits and younger alluvial fan deposits.	• Prior to the start of construction, a qualified paleontologist will conduct training for construction personnel to review the procedures to be followed upon the discovery of paleontological materials. Worker education will focus on the rationale for paleontological resources monitoring; regulatory policies protecting resources - a discussion of applicable laws and penalties under the law; a basic identification of fossils; and the protocol to follow in case of discovery.	Prior to construction	LADWP	Jan.-2011	All employees received training specified in this mitigation measure.
CUL-3	Fence installation, tree removal and plantings have the potential (unlikely) to disturb human remains.	• In the unexpected event that human remains are discovered, the Inyo County Coroner would be contacted, the area of the find would be protected, and provisions of State CEQA Guidelines Section 15064.5 would be followed.	During construction	LADWP	2011	No human remains were discovered.

7.4 Additional Mitigation Projects Developed by the MOU Ad Hoc Group

Introduction

Section III.A.3. Additional Mitigation of the 1997 MOU describes LADWP's commitment to supply 1,600 acre feet (AF) of water per year for 1) the implementation of the on-site mitigation measure at Hines Spring identified in the 1991 EIR, and 2) the implementation of on and/or off-site mitigation in addition to that identified in the 1991 EIR for impacts that occurred at Fish Springs, Big and Little Blackrock Springs, and Big and Little Seely Springs.

The Second Amendment of Amended Stipulation and Order Case No. S1CVCV01-29768 was executed on March 8, 2010, by the Superior Court of California, Inyo County. This order accepts the eight projects described in the *Additional Mitigation Projects Developed by the MOU Ad Hoc Group* (Additional Mitigation Projects) document as mitigation for impacts identified above and establishes a two year timeline for their implementation. The projects are named according to their locations: Freeman Creek, Warren Lake, Hines Spring Well 355, Hines Spring Aberdeen Ditch, North of Mazourka Canyon Road, Homestead, Well 368, and Diaz Lake.

CEQA Process for the Additional Mitigation Projects

In accordance with CEQA, LADWP completed an Initial Study for the Additional Mitigation Projects and prepared a Mitigated Negative Declaration (MND). The document was released on March 23, 2010, to 52 public agencies and other interested parties for a 30-day review period; the review period ended April 26, 2010. After review of the comments received and based on the information in the Initial Study, LADWP determined that with adoption of mitigation measures, implementation of the Additional Mitigation Projects would not have a significant impact on the environment.

The final MND, Mitigation Monitoring and Reporting Program (Section 7.2.3), and proposed implementation schedule were approved by the City of Los Angeles Board of Water and Power Commissioners (Board) on June 1, 2010. A Notice of Determination was filed with the Inyo County Clerk on June 2, 2010. LADWP began implementing the projects shortly thereafter and implemented all eight Additional Mitigation Projects by March 8, 2012 as specified in the Stipulation and Order.

7.4.1 Monitoring and Reporting per the Additional Mitigation Projects Document

The Additional Mitigation Projects document defines a five year monitoring framework for the projects that includes flow monitoring, rapid assessment surveys, photo point monitoring, and mapping requirements. Table 30 shows flow data recorded for each of the Additional Mitigation Projects from April 1, 2012, through March 31, 2013. Additionally, LADWP conducted photo point monitoring,

woody recruitment surveys and assessment of fence condition (where applicable) and has generated recommendations for the projects where necessary. Inyo County Water Department (ICWD) generated a comprehensive plant species list and mapped the flooded extent of each project (Warren Lake in March 2013; all others in the peak of the growing season in July 2012). Vegetation mapping and end of season rapid assessment were not conducted during this first season following implementation because field conditions were not yet representative of full project potential.

Table 29. Additional Mitigation Projects Developed by the MOU Ad Hoc Group, Annual Accounting in Acre Feet (April 1, 2012-March 31, 2013)

Additional Mitigation Projects Developed by the MOU Ad Hoc Group
Annual Accounting in Acre Feet (April 1, 2012-March 31, 2013)

2012-2013	Freeman Creek* (2054)	Warren Lake (2173)	Hines Well 355 (W355)	Aberdeen Ditch (400)	North of Mazourka (F418)	North of Mazourka (404)	Homestead T775 (F421)	Homestead Well (F419)	Well 368 (F420)	Diaz Lake (86)	Total
April	20	0	19	12	21	6	9	24	12	0	123
May	19	0	21	11	21	7	9	17	13	0	118
June	14	0	21	12	19	2	8	17	11	0	104
July	13	0	21	12	19	2	8	17	11	80	183
August	10	0	22	12	19	2	8	17	11	0	101
September	13	0	21	8	18	2	7	15	11	0	95
October	22	41	21	0	19	2	6	14	11	37	173
November	22	31	21	0	18	2	6	14	10	68	192
December	23	0	21	0	13	2	6	13	11	0	89
January	23	44	21	4	11	2	6	24	11	0	146
February	18	38	19	5	10	2	8	25	10	0	135
March	18	67	22	10	11	2	8	28	11	0	177
Total					*199*	*33*	*89*	*225*			
Project Total	*215*	*221*	*250*	*86*	*232*		*314*		*133*	*185*	*1636*
Total applied to 1600 Acre Foot Commitment**	**215**	**221**	**240**	**86**	**232**		**300**		**133**	**185**	**1612**

**Freeman Creek will be recorded as 215 AF/year based on long term average regardless of varying flow reads.*

***Amount in excess of project allotment may not be carried over to future years.*

Freeman Creek

Flow Monitoring: The annual water allotment for this project is 215 AF/year, which was based on long term averages for Freeman Creek. Although LADWP is to use the 215 AF average volume of water toward the 1600 AF water commitment, LADWP recorded 272 AF of water being used for the project during the 2012-2013 water year.

Photo Point Monitoring: Photo points were established in April 2011 and were recaptured at the peak of the growing season in 2012. These photos can be made available upon request. Additionally, photos of the project area were captured from a helicopter in August 2012 (looking northeast) shown below.

Freeman Creek, August 2012

Plant Species List (provided by ICWD):

Freeman Creek				7/24/2012
CODE	**Species name**	**Common Name**	**Occurrence**	**Spring obligate**
AMARA	*Amaranthus sp.*	pigweed	widespread	*n/a*
ACSP12	*Achnatherum speciosum*	desert needlegrass	very few	n/a
AMAC2	*Ambrosia acanthicarpa*	flatspine bur ragweed	limited	n/a
ARTRT	*Artemisia tridentata ssp. tridentata*	big sagebrush	widespread	n/a
ASFA	*Asclepias fascicularis*	Mexican whorled milkweed	limited	FAC
CEEX	*Centaurium exaltatum*	desert centaury	widespread	FACW

CIDO	*Cicuta douglasii*	western water hemlock	limited	**OBL**
COCO4	*Conyza coulteri*	Coulter's horseweed	limited	FAC+
DESO2	*Descurainia sophia*	herb sophia	limited	n/a
EPGI	*Epipactis gigantea*	stream orchid	very few	**OBL**
EPGL	*Epilobium glaberrimum*	glaucus willowherb	limited	**OBL**
EPILO	*Epilobium sp.*	willowherb	limited	n/a
EPNE	*Ephedra nevadensis*	Nevada ephedra	widespread	n/a
ERBR7	*Eriogonum brachyanthum*	shortflower buckwheat	limited	n/a
ERDE2	*Eriastrum densifolium*	Giant woollystar	limited	n/a
ERNA10	*Ericameria nauseosa*	Rubber rabbitbrush	widespread	n/a
ERSP3	*Eriastrum sparsiflorum*	Great Basin woollystar	widespread	n/a
EUOC4	*Euthamia occidentalis*	stern goldentop	widespread	**OBL**
HECU3	*Heliotropium curassavicum*	salt heliotrope	widespread	**OBL**
JUBA	*Juncus balticus*	Baltic rush	widespread	**OBL**
LELE13	*Lessingia lemmonii*	Lemmon's lessingia	limited	n/a
LOPU3	*Lotus purshianus*	American bird's-foot trefoil	limited	n/a
MEAL12	*Melilotus alba*	sweetclover	widespread	FACU
MEAR4	*Mentha arvensis*	wild mint	widespread	FACW
MIPI8	*Mimulus pilosus*	false monkeyflower	widespread	FACW
NIAT	*Nicotiana attenuata*	coyote tobacco	widespread	FAC
OEEL	*Oenothera elata*	Hooker's evening primrose	limited	FACW
POFR2	*Populus fremontii*	Fremont cottonwood	limited	FACW
POMO5	*Polypogon monspeliensis*	annual rabbitsfoot grass	limited	FACW+
RUSA	*Rumex salicifolius*	willow dock	very few	**OBL**
SAEX	*Salix exigua*	narrowleaf willow	widespread	FACW
SALA3	*Salix laevigata*	red willow	widespread	FACW
SALA6	*Salix lasiolepis*	arroyo willow	limited	FACW
SOAS	*Sonchus asper*	spiny sowthistle	limited	FAC
SPAI	*Sporobolus airoides*	alkali sacaton	limited	FAC+
TARA	*Tamarix ramosissima*	saltcedar	limited	FAC
XAST	*Xanthium strumarium*	rough cocklebur	limited	FAC

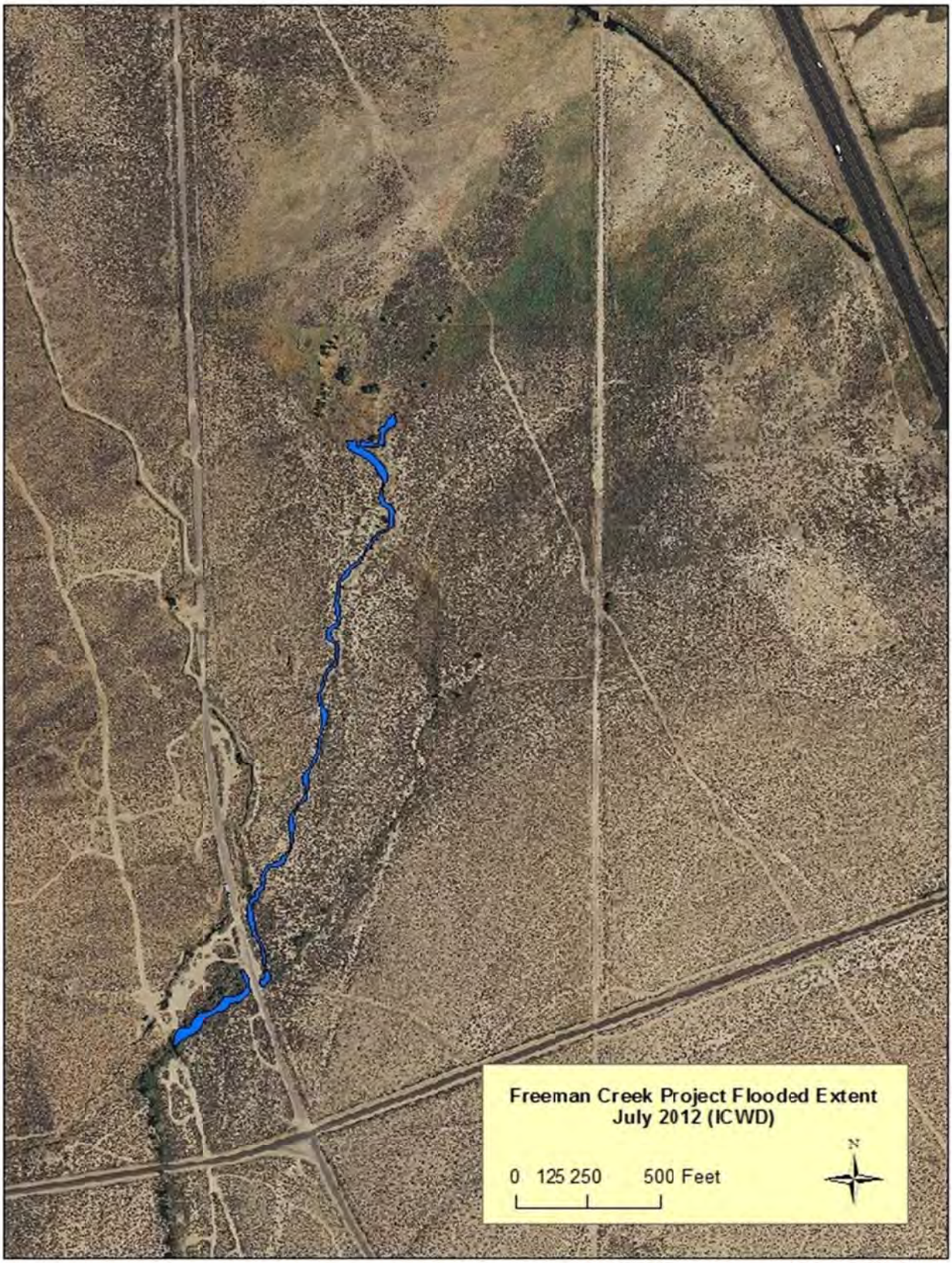
OBL=obligate wetland, FACW+=facultative wetland with frequency toward higher end of category, FACW=facultative wetland, FAC+=facultative with frequency toward higher end of category, FAC=facultative, FAC-=facultative with frequency toward lower end of category, FACU=facultative upland, UPL=upland

Woody Recruitment: Fremont cottonwood recruitment was noted in formerly dry reaches of Freeman Creek as anticipated. Some of these seedlings were captured in photo points so that survivability can be assessed in the future.

Fence Condition: Not applicable.

Recommendations: The flow reads taken this year were higher on average than expected based on long term data used to design the project. This was surprising given the 2012-2013 water year was substantially below average. LADWP will install a new metering device at the flume to record future data and verify volume of water that is going to the project. If the trend continues to demonstrate that water released to the project is greater than the 215 AF allotment (even in dry years), LADWP's water commitment to this project should be reevaluated.

No additional planting or seeding is necessary at this time, as recruitment of desirable species is naturally occurring. Further, saltcedar was eradicated from the site in 2011. Saltcedar seedlings and resprouts will continue to be removed as needed from the project site.



Freeman Creek Project Flooded Extent, July 2012

Warren Lake

Flow Monitoring: LADWP released water to Warren Lake from October-November and January–March to fulfill the remaining balance of the 1600 AF water commitment. The total volume of water that was released to the project was 221 AF.

Photo Point Monitoring: Photo points were established in April 2011 and were recaptured at the peak of the growing season in 2012. These photos can be made available upon request. Additionally, photos of the project area were captured from a helicopter in March 2013 to illustrate flooded extent (looking north) shown below.

Warren Lake, March 2013

Plant Species List (provided by ICWD):

Warren Lake				7/18/2012
CODE	**Species name**	**Common Name**	**Occurrence**	**Spring obligate**
ANCA10	*Anemopsis californica*	Yerba mansa	widespread	**OBL**
ASFA	*Asclepias fascicularis*	Mexican whorled milkweed	widespread	FAC
ATLET2	*Atriplex lentiformis ssp. torreyi*	Torrey's saltbush	widespread	FAC
BAHY	*Bassia hyssopifolia*	fivehorn smotherweed	widespread	FAC
DISP	*Distichlis spicata*	saltgrass	widespread	FACW
EPGL	*Epilobium glaberrimum*	glaucus willowherb	very few	**OBL**
ERCI6	*Erodium cicutarium*	redstem stork's bill	limited	n/a

ERNA10	*Ericameria nauseosa*	rubber rabbitbrush	widespread	n/a
HEAN3	*Helianthus annuus*	common sunflower	widespread	FAC-
HECU3	*Heliotropium curassavicum*	salt heliotrope	widespread	**OBL**
HOJU	*Hordeum jubatum*	foxtail barley	limited	FAC+
JUBA	*Juncus balticus*	Baltic rush	widespread	**OBL**
LELA2	*Lepidium latifolium*	pepperweed	widespread	FACW
MEAL12	*Melilotus alba*	sweetclover	widespread	FACU
MEAR4	*Mentha arvensis*	wild mint	very few	FACW
MUAS	*Muhlenbergia asperifolia*	scratchgrass	very few	FACW
POLA4	*Polygonum lapathifolium*	curlytop knotweed	very few	**OBL**
POMO5	*Polypogon monspeliensis*	annual rabbitsfoot grass	widespread	FACW+
SAEX	*Salix exigua*	narrowleaf willow	widespread	FACW
SALA3	*Salix laevigata*	red willow	widespread	FACW
SCMI2	*Scirpus microcarpus*	panicled bulrush	very few	**OBL**
SOAS	*Sonchus asper*	spiny sowthistle	widespread	FAC
SPAI	*Sporobolus airoides*	alkali sacaton	widespread	FAC+
XAST	*Xanthium strumarium*	rough cocklebur	limited	FAC+

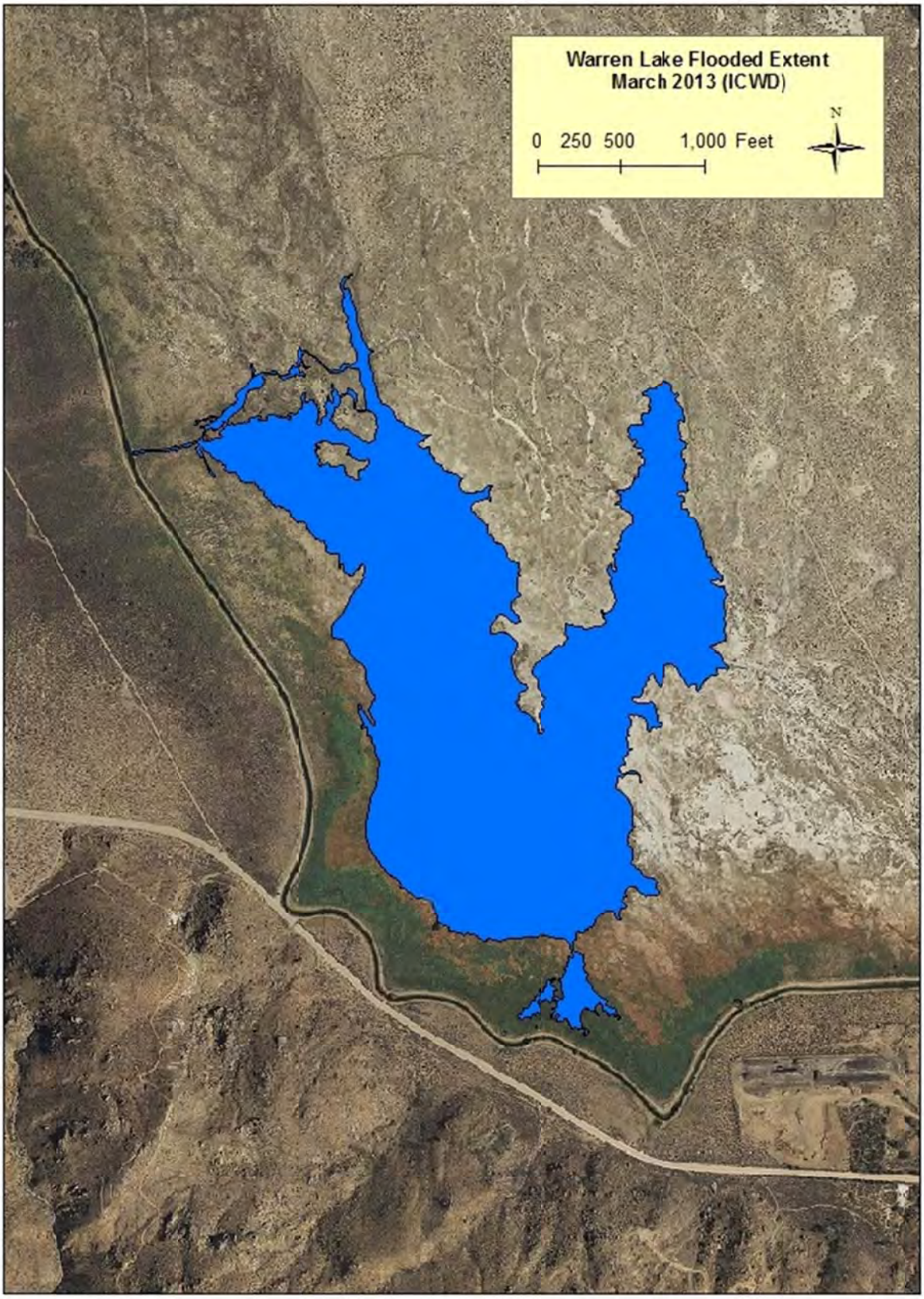
OBL=obligate wetland, FACW+=facultative wetland with frequency toward higher end of category, FACW=facultative wetland, FAC+=facultative with frequency toward higher end of category, FAC=facultative, FAC-=facultative with frequency toward lower end of category, FACU=facultative upland, UPL=upland

All saltcedar that was cut and treated prior to implementation had an effective kill and no resprouts were observed during monitoring. One perennial pepperweed plant was treated in the diversion channel off of the Big Pine Canal in August 2012 to prevent spread into the project area. Saltcedar and pepperweed will be removed from the project site as needed if noted in future monitoring.

Woody Recruitment: None noted during project monitoring.

Fence Condition: Not applicable.

Recommendations: The project is operating as necessary. However, LADWP is exploring methods of improving efficiency of water release to the diversion off the Big Pine Canal. Saltcedar and pepperweed will be removed in the site as needed if noted in future monitoring.



Warren Lake Flooded Extent, March 2013

Hines Spring Well 355

Flow Monitoring: The annual water allotment for this project is 240 AF/year. LADWP released 250 AF to this project in its first full year post implementation.

Photo Point Monitoring: Photo points were established in March 2012 and were recaptured at the peak of the growing season in 2012. These photos can be made available upon request. Additionally, photos of the project area were captured from a helicopter in August 2012 (looking south/southeast) shown below. The Hines Spring Well 355 project area is on the left side of the photo and is fed by the ditch in the foreground. The Hines Spring Aberdeen Ditch project area is on the right side of the photo.

Hines Spring Well 355 and Aberdeen Ditch Projects, August 2012

Plant Species List (provided by ICWD):

Hines Spring W355				7/18/2012
CODE	**Species name**	**Common Name**	**Occurrence**	**Spring obligate**
AMAC2	*Ambrosia acanthicarpa*	flatspine bur ragweed	limited	n/a
ARTRT	*Artemisia tridentata ssp. tridentata*	big sagebrush	widespread	n/a
ATLET2	*Atriplex lentiformis ssp. torreyi*	Torrey's saltbush	widespread	FAC
ATSE2	*Atriplex serenana*	bractscale	widespread	FAC
BAHY	*Bassia hyssopifolia*	fivehorn smotherweed	widespread	FAC

CHBE4	*Chenopodium berlandieri*	pitseed goosefoot	limited	n/a
CHHI	*Chenopodium hians*	hians goosefoot	widespread	n/a
CLOB	*Cleomella obtusifolia*	Mojave cleomella	limited	n/a
CORA5	*Cordylanthus ramosus*	bushy bird's beak	widespread	FACW
DISP	*Distichlis spicata*	saltgrass	widespread	FACW
ELEOC	*Eleocharis sp.*	spikerush	widespread	**OBL**
ERNA10	*Ericameria nauseosa*	rubber rabbitbrush	widespread	n/a
HEAN3	*Helianthus annuus*	common sunflower	widespread	FAC-
HECU3	*Heliotropium curassavicum*	salt heliotrope	widespread	**OBL**
HOJU	*Hordeum jubatum*	foxtail barley	limited	FAC+
JUBA	*Juncus balticus*	Baltic rush	widespread	**OBL**
LECI4	*Leymus cinereus*	Great Basin wildrye	very few	FAC
LETR5	*Leymus triticoides*	creeping wildrye	widespread	FAC+
MIGU	*Mimulus guttatus*	seep monkeyflower	limited	**OBL**
OEEL	*Oenothera elata*	Hooker's evening primrose	limited	FACW
POMO5	*Polypogon monspeliensis*	annual rabbitsfoot grass	widespread	FACW+
ROWO	*Rosa woodsii*	Wood's rose	widespread	FAC-
RUCR	*Rumex crispus*	curly dock	limited	FACW-
SALA3	*Salix laevigata*	red willow	limited	FACW
SATR12	*Salsola tragus*	Russian thistle	widespread	FACU
SCBA	*Schismus barbatus*	common Mediterranean grass	widespread	n/a
SCMA8	*Schoenoplectus maritimus*	cosmopolitan bulrush	limited	**OBL**
SIAL	*Sisymbrium altissimum*	tall tumblemustard	limited	FACU
SOAM	*Solanum americanum*	American black nightshade	limited	FAC
SPAI	*Sporobolus airoides*	alkali sacaton	widespread	FAC+
STPA4	*Stephanomeria pauciflora*	brownplume wirelettuce	widespread	n/a
TYPHA	*Typha sp.*	cattail	widespread	**OBL**
XAST	*Xanthium strumarium*	rough cocklebur	widespread	FAC+

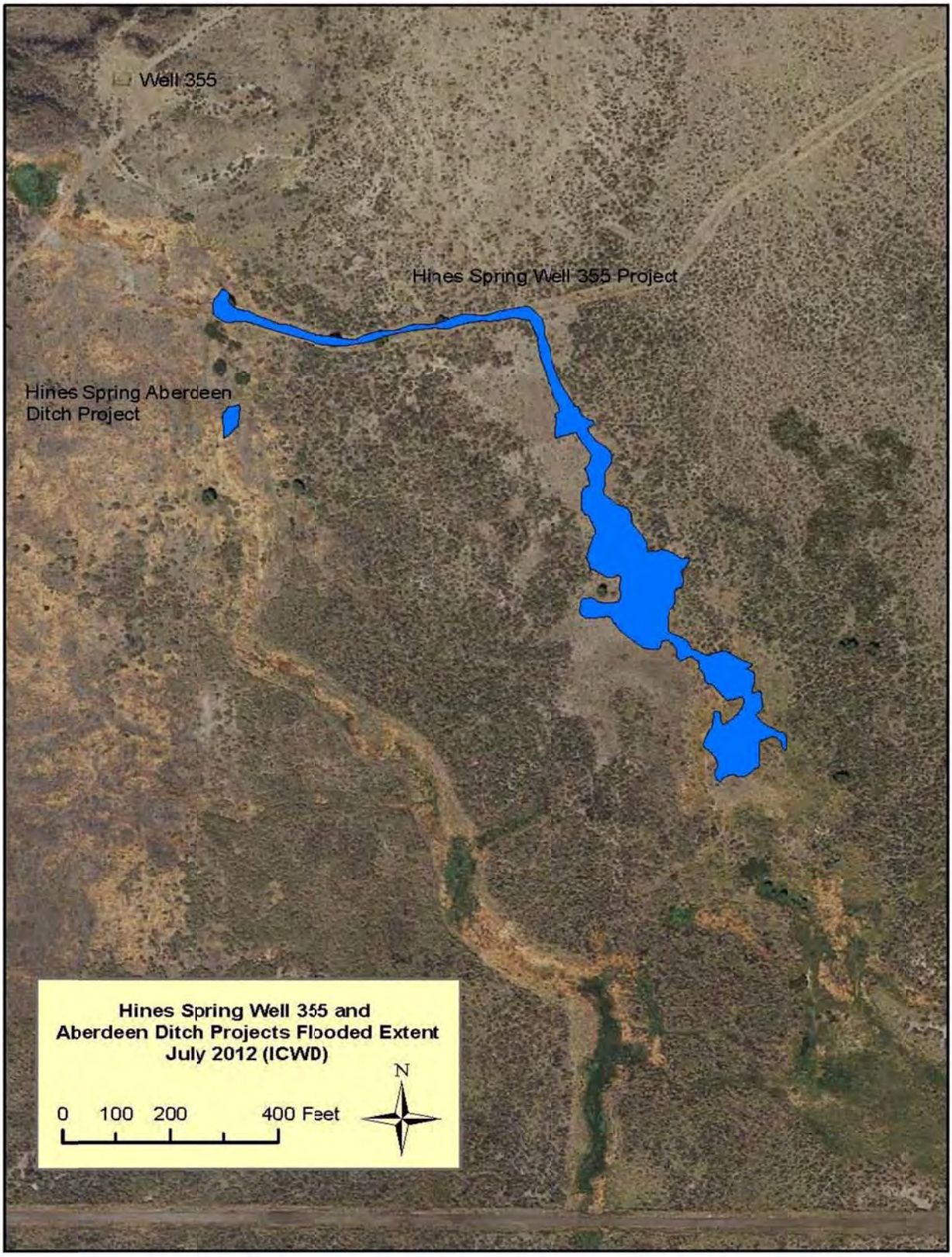
OBL=obligate wetland, FACW+=facultative wetland with frequency toward higher end of category, FACW=facultative wetland, FAC+=facultative with frequency toward higher end of category, FAC=facultative, FAC-=facultative with frequency toward lower end of category, FACU=facultative upland, UPL=upland

Woody Recruitment: Woods' rose recruitment is occurring on the bank of the ditch and willow seedlings are apparent near the pipe outfall. Additionally, abundant recruitment of desirable non-woody species is occurring throughout the newly flooded project area (see species list above).

Fence Condition: The fence around Well 355 is in good condition. Additionally, under the Additional Mitigation Projects document, LADWP was to fence an exclosure around the Hines Well 355 and Aberdeen Ditch projects after the first year of implementation so that it could be delineated better. The Hines Spring Aberdeen Ditch project has had several issues that have resulted in conditions that are not representative of desired project goals and the anticipated flooded extent. As a consequence, LADWP requested

an additional one-year time extension for fencing this exclosure to allow project conditions to become more static and to more effectively manage these adjacent projects in the Hines Spring area (February 14, 2013 letter to MOU Parties).

Recommendations:
No additional planting or seeding is necessary at this time, as recruitment of desirable species is naturally occurring and is quite diverse at the project site (particularly non-woody species). LADWP will fence the exclosure by March 2014 as requested in February 2013 letter to the MOU Parties.



Hines Spring Well 355 and Aberdeen Ditch Projects Flooded Extent, July 2012

Hines Spring Aberdeen Ditch

Flow Monitoring: The annual water allotment for this project is 145 AF/year. LADWP released 86 AF to this project in its first full water year due to a series of setbacks following implementation. These issues include two unanticipated sinkholes in the spring channel, two subsequent pipe extensions, and a below average water year that resulted in insufficient surface flow to the project for much of the year. As a consequence, LADWP extended the pipe down the channel into a different soil type and will monitor it for several months to ensure no new sinkholes develop.

Photo Point Monitoring: Photo points were established in March 2011 and were recaptured at the peak of the growing season in 2012. These photos can be made available upon request.

Plant Species List (provided by ICWD):

Hines Spring Aberdeen Ditch				7/18/2012
CODE	**Species name**	**Common Name**	**Occurrence**	**Spring obligate**
ATSE2	*Atriplex serenana*	bractscale	widespread	FAC
CLLU2	*Cleome lutea*	yellow spiderflower	very few	FAC
COCO4	*Conyza coulteri*	Coulter's horseweed	limited	FAC+
MALE3	*Malvella leprosa*	alkali mallow	widespread	FACU
SATR12	*Salsola tragus*	Russian thistle	widespread	FACU
SIAL2	*Sisymbrium altissimum*	tall tumblemustard	limited	FACU
SOAM	*Solanum americanum*	American black nightshade	limited	FAC

OBL=obligate wetland, FACW+=facultative wetland with frequency toward higher end of category, FACW=facultative wetland, FAC+=facultative with frequency toward higher end of category, FAC=facultative, FAC-=facultative with frequency toward lower end of category, FACU=facultative upland, UPL=upland

Woody Recruitment: None noted in project monitoring.

Fence Condition: Under the Additional Mitigation Projects document, LADWP was to fence an exclosure around the Hines Spring Well 355 and Aberdeen Ditch projects after the first year of implementation so that it could be delineated better. Since conditions at the Hines Spring Aberdeen Ditch project were not representative of desired project conditions with respect to project flows and the associated flooded extent, LADWP requested an additional one-year time extension for fencing this exclosure to allow project conditions to become more static and to more effectively manage these adjacent projects in the Hines Spring area (February 14, 2013, letter to MOU Parties).

Recommendations:
Monitor to determine effectiveness of extended pipeline. Fence the exclosure by March 2014 following verification of project success (no sinkholes).

North of Mazourka Canyon Road

Flow Monitoring: The annual water allotment for this project is 300 AF/year from two artesian well sources. These wells produced 232 AF for the project this year.

Photo Point Monitoring: Photo points were established in March 2012 and were recaptured at the peak of the growing season in 2012. These photos can be made available upon request. Additionally, photos of the project area were captured from a helicopter in August 2012 (looking southeast) shown below. The green vegetated area illustrates the enhanced project area.

North of Mazourka Canyon Road Project, August 2012

Plant Species List (provided by ICWD):

North of Mazourka Canyon Rd.				7/17/2012
CODE	**Species name**	**Common Name**	**Occurrence**	**Spring obligate**
ATLET2	*Atriplex lentiformis ssp. torreyi*	Torrey's saltbush	widespread	FAC
ATPH	*Atriplex phyllostegia*	leafclover saltweed	widespread	FACW
ATTR	*Atriplex truncata*	wedgescale saltbush	widespread	FAC
BAHY	*Bassia hyssopifolia*	fivehorn smotherweed	widespread	FAC
CEEX	*Centaurium exaltatum*	desert centaury	limited	FACW
CHMU	*Chenopodium murale*	nettleleaf goosefoot	limited	FACU
CIDO	*Cicuta douglasii*	western water hemlock	widespread	**OBL**

COCO4	*Conyza coulteri*	Coulter's horseweed	widespread	FAC+
COMAC	*Cordylanthus maritimus ssp. canescens*	saltmarsh bird's-beak	widespread	**OBL**
DISP	*Distichlis spicata*	saltgrass	widespread	FACW
ELAN	*Elaeagnus angustifolia*	Russian olive	widespread	FAC
ELEOC	*Eleocharis sp.*	spikerush	widespread	**OBL**
EPGL	*Epilobium glaberrimum*	glaucus willowherb	widespread	**OBL**
ERNA10	*Ericameria nauseosa*	rubber rabbitbrush	widespread	n/a
GLLE3	*Glycyrrhiza lepidota*	American licorice	widespread	FAC+
GNLU	*Gnaphalium luteo-album*	Jersey cudweed	limited	FACW-
HEAN3	*Helianthus annuus*	common sunflower	widespread	FAC-
HECU3	*Heliotropium curassavicum*	salt heliotrope	widespread	**OBL**
HOJU	*Hordeum jubatum*	foxtail barley	widespread	FAC
JUBA	*Juncus balticus*	Baltic rush	widespread	**OBL**
JUME4	*Juncus mexicanus*	Mexican rush	very few	FACW
LASE	*Lactuca serriola*	prickly lettuce	widespread	FACU
LEMNA	*Lemna sp.*	duckweed	widespread	**OBL**
LETR5	*Leymus triticoides*	creeping wildrye	widespread	FAC
MARSI	*Marsilea sp.*	waterclover	widespread	**OBL**
MIGU	*Mimulus guttatus*	seep monkeyflower	limited	**OBL**
PHAU7	*Phragmites australis*	common reed	widespread	FACW
POMO5	*Polypogon monspeliensis*	annual rabbitsfoot grass	widespread	FACW
RONA2	*Rorippa nasturtium-aquaticum*	watercress	widespread	**OBL**
SALA3	*Salix laevigata*	red willow	limited	FACW
SCMA8	*Schoenoplectus maritimus*	cosmopolitan bulrush	widespread	**OBL**
SCNE	*Scirpus nevadensis*	Nevada bulrush	widespread	**OBL**
SPAI	*Sporobolus airoides*	alkali sacaton	widespread	FAC
TARA	*Tamarix ramosissima*	saltcedar	limited	FAC
TYPHA	*Typha sp.*	cattail	widespread	**OBL**

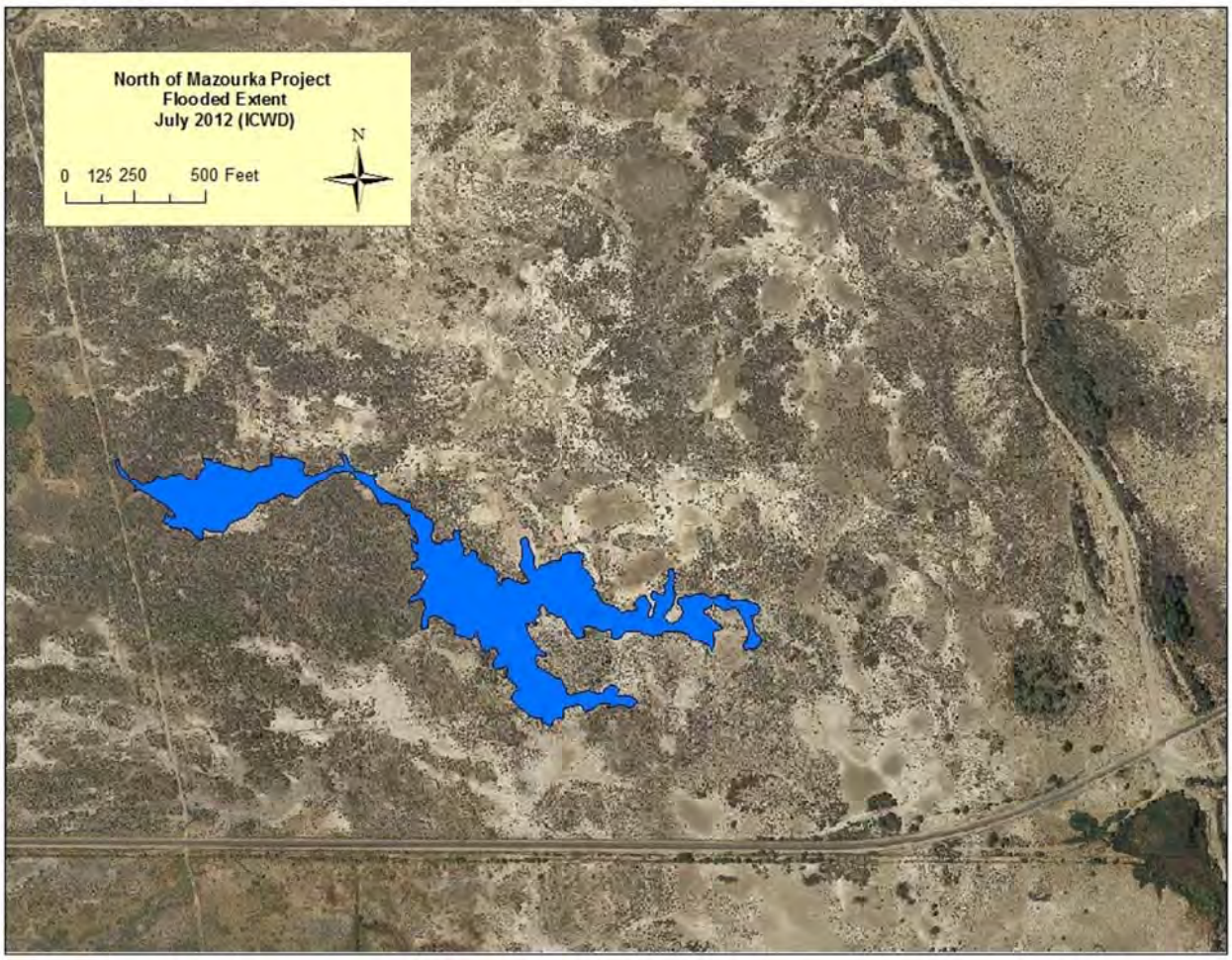
OBL=obligate wetland, FACW+=facultative wetland with frequency toward higher end of category, FACW=facultative wetland, FAC+=facultative with frequency toward higher end of category, FAC=facultative, FAC-=facultative with frequency toward lower end of category, FACU=facultative upland, UPL=upland

Saltcedar seedlings are apparent in the bottom of the new channel west of the small project pond. Additionally, there are some saltcedar resprouts onsite from areas that were treated prior to implementation. These will continue to be treated as resources are available.

Woody Recruitment: None noted during project monitoring. However, there is abundant recruitment of desirable non-woody species in/near the exclosure extending east into the project area (see species list above).

Fence Condition: During implementation, an exclosure was established around the location of water release. This fence is currently in good condition.

Recommendations: No additional planting or seeding is necessary at this time, as recruitment of desirable species is naturally occurring, particularly non-woody species in/near the exclosure. Additional saltcedar treatment is needed in areas of resprouts throughout the project area and seedlings in the channel to the project pond. This will be conducted as resources are available.



North of Mazourka Project Flooded Extent, July 2012

Homestead

Flow Monitoring: The annual water allotment for this project is 300 AF/year from two artesian well sources. These wells produced 314 AF for the project this year. Well T774-777 produced less than 1/3 of the required flow for the project, yet was able to supply enough water to meet most of the project goals (exclusive of the spring channel near the Homestead). The addition of water from Homestead Well #2 resulted in persistent flooding that was not anticipated that would have reached the river if not rectified. As a consequence, LADWP shifted the majority of this additional flow to the

south via the diversion on the homestead spring channel. Flooding still persisted, so a tee was added to this pipeline in January 2013 to divert flow to the south (but west of the fault) to ensure that water released to the project did not connect with the Owens River.

Photo Point Monitoring: Photo points were established in March 2012 and were recaptured at the peak of the growing season in 2012. These photos can be made available upon request. Additionally, photos of the project area were captured from a helicopter in August 2012 (looking southeast) shown below.

Homestead Project, August 2012

Plant Species List (provided by ICWD):

Homestead Project				7/17/2012
CODE	**Species name**	**Common Name**	**Occurrence**	**Spring obligate**
ALOC2	*Allenrolfea occidentalis*	iodinebush	limited	FACW
AMARA	*Amaranthus sp.*	pigweed	widespread	*n/a*
ANCA10	*Anemopsis californica*	Yerba mansa	widespread	**OBL**
ASSP	*Asclepias speciosa*	showy milkweed	very few	FAC
ATCO	*Atriplex confertifolia*	shadscale saltbush	limited	n/a
ATLET2	*Atriplex lentiformis ssp. torreyi*	Torrey's saltbush	widespread	FAC
ATPA3	*Atriplex parryi*	Parry's saltbush	limited	FACW

ATPH	*Atriplex phyllostegia*	leafclover saltweed	widespread	FACW
BAHY	*Bassia hyssopifolia*	fivehorn smotherweed	widespread	FAC
CEEX	*Centaurium exaltatum*	desert centaury	limited	FACW
CHMU	*Chenopodium murale*	nettleleaf goosefoot	very few	FACU
CIDO	*Cicuta douglasii*	western water hemlock	limited	**OBL**
COCO4	*Conyza coulteri*	Coulter's horseweed	limited	FAC+
COMAC	*Cordylanthus maritimus ssp. canescens*	saltmarsh birdsbeak	limited	**OBL**
DAGL2	*Datisca glomerata*	Durango root	very few	FACW
DISP	*Distichlis spicata*	saltgrass	widespread	FACW
ELAN	*Elaeagnus angustifolia*	Russian olive	limited	FAC
ELEOC	*Eleocharis sp.*	spikerush	widespread	**OBL**
EPCI	*Epilobium ciliatum*	fringed willowherb	limited	FACW
ERNA10	*Ericameria nauseosa*	rubber rabbitbrush	widespread	n/a
FOPU	*Forestiera pubescens*	stretchberry	limited	FAC
GLLE3	*Glycyrrhiza lepidota*	American licorice	limited	FAC+
GNLU	*Gnaphalium luteo-album*	Jersey cudweed	widespread	FACW-
HEAN3	*Helianthus annuus*	common sunflower	widespread	FAC-
HECU3	*Heliotropium curassavicum*	salt heliotrope	widespread	**OBL**
HOJU	*Hordeum jubatum*	foxtail barley	limited	FAC+
JUBA	*Juncus balticus*	Baltic rush	widespread	**OBL**
LASE	*Lactuca serriola*	prickly lettuce	very few	FACU
LEMNA	*Lemna sp.*	duckweed	widespread	**OBL**
LETR5	*Leymus triticoides*	creeping wildrye	widespread	FAC+
LOCO6	*Lotus corniculatus*	bird's-foot trefoil	limited	FAC
MALE3	*Malvella leprosa*	alkali mallow	widespread	FACU
MARSI	*Marsilea sp.*	waterclover	widespread	**OBL**
MEAL12	*Melilotus alba*	sweetclover	widespread	FACU
MIGU	*Mimulus guttatus*	seep monkeyflower	limited	**OBL**
NIOC2	*Nitrophila occidentalis*	boraxweed	widespread	FACW
PHAU7	*Phragmites australis*	common reed	limited	FACW
PLMA2	*Plantago major*	common plantain	very few	FACW-
POFR2	*Populus fremontii*	Fremont cottonwood	limited	FACW
POMO5	*Polypogon monspeliensis*	annual rabbitsfoot grass	widespread	FACW+
POPE3	*Polygonum persicaria*	spotted ladysthumb	very few	FACW
PSPO	*Psorothamnus polydenius*	Nevada dalea	limited	n/a
PYRA	*Pyrrocoma racemosa*	clustered goldenweed	widespread	FAC
RONA2	*Rorippa nasturtium-aquaticum*	watercress	widespread	**OBL**
ROWO	*Rosa woodsii*	Woods' rose	widespread	FAC-
RUCR	*Rumex crispus*	curly dock	limited	FACW-
SAEX	*Salix exigua*	narrowleaf willow	very few	FACW
SAGO	*Salix gooddingii*	Goodding's willow	very few	FACW

SALA3	*Salix laevigata*	red willow	very few	FACW
SAVE4	*Sarcobatus vermiculatus*	greasewood	limited	FACU
SCAC3	*Schoenoplectus acutus*	hardstem bulrush	widespread	**OBL**
SCAM6	*Schoenoplectus americanus*	chairmaker's bulrush	widespread	**OBL**
SCMA8	*Schoenoplectus maritimus*	cosmopolitan bulrush	widespread	**OBL**
SCPUP5	*Schoenoplectus pungens var. pungens*	common threesquare	limited	**OBL**
SOAM	*Solanum americanum*	American black nightshade	limited	FAC
SPAI	*Sporobolus airoides*	alkali sacaton	widespread	FAC+
SPGR	*Spartina gracilis*	alkali cordgrass	very few	FACW
STPA4	*Stephanomeria pauciflora*	brownplume wirelettuce	limited	n/a
SUMO	*Suaeda moquinii*	Mojave seablite	limited	FAC+
TARA	*Tamarix ramosissima*	saltcedar	limited	FAC
TRVA	*Trifolium variegatum*	whitetip clover	limited	FACW-
TYPHA	*Typha sp.*	cattail	widespread	**OBL**
XAST	*Xanthium strumarium*	rough cocklebur	widespread	FAC

OBL=obligate wetland, FACW+=facultative wetland with frequency toward higher end of category, FACW=facultative wetland, FAC+=facultative with frequency toward higher end of category, FAC=facultative, FAC-=facultative with frequency toward lower end of category, FACU=facultative upland, UPL=upland

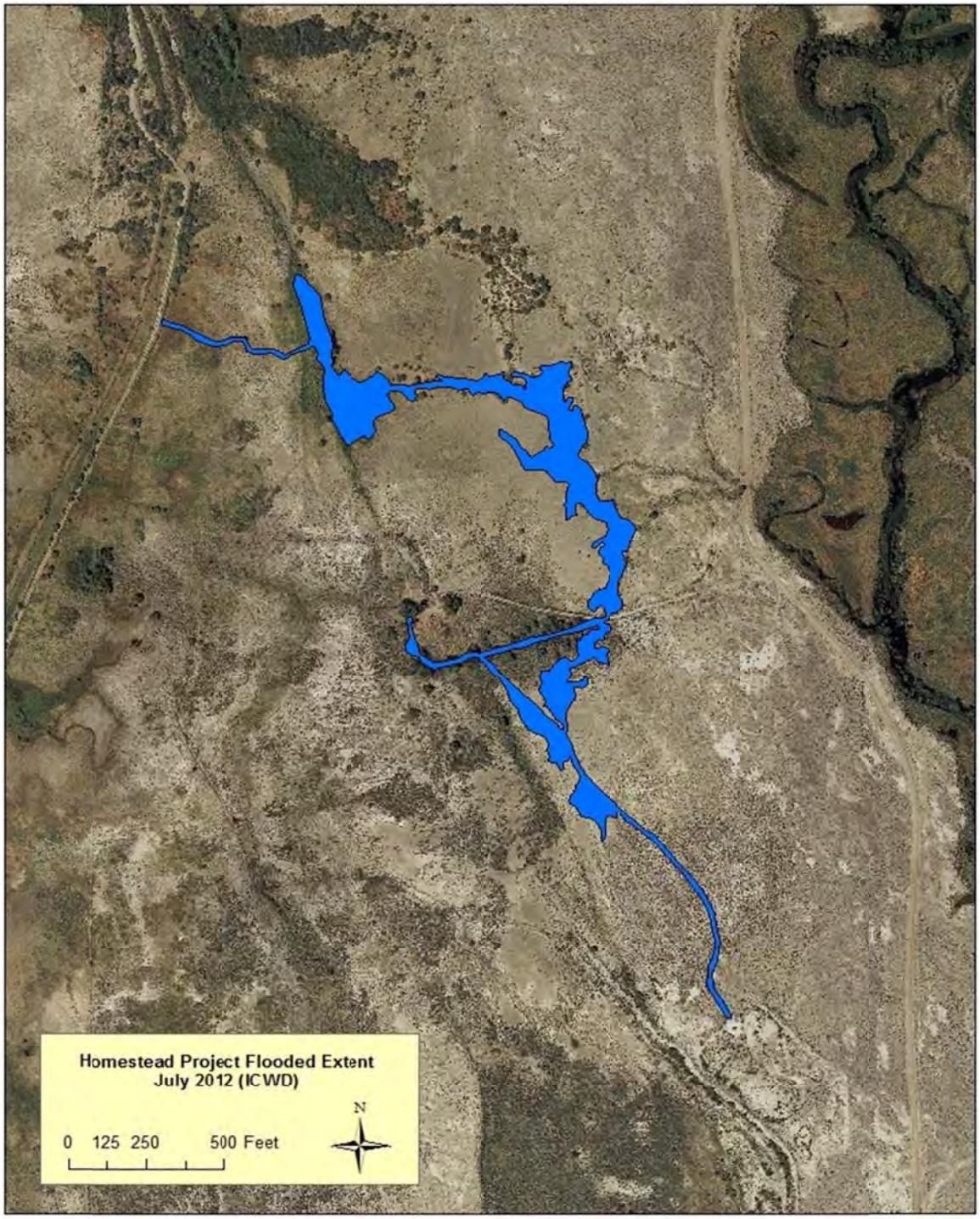
Woody Recruitment: None noted in project monitoring. However, there is notable recruitment of desirable non-woody species throughout the project area (see species list above). Native grasses are coming in quickly in the areas where saltcedar and Russian olive slash was burned (see photos below taken in March 2012 following the burn and in August 2012 during the peak of the growing season). Additionally, wetland obligates are becoming established in/around the new ponds and the homestead and western spring channels. Saltcedar and Russian olive resprouts are sporadically located throughout the project area and some have been retreated. Additional treatment will be conducted as resources become available.

Homestead Project near diversion, March 2012 (post burn)

Homestead Project near diversion, August 2012

Fence Condition: Not applicable.

Recommendations: No additional planting or seeding is necessary at this time, as recruitment of desirable species is naturally occurring. LADWP will continue managing flows as necessary for this project to ensure that there is no connectivity to the river. Additional treatment of saltcedar and Russian olive resprouts will occur as resources are available.



Homestead Project Flooded Extent, July 2012

Well 368

Flow Monitoring: The annual water allotment for this project is 150 AF/year. LADWP released 133 AF to this project in its first full year post implementation. Owens Valley pupfish (*Cyprinodon radiosus*) are abundant throughout the extended habitat area.

Photo Point Monitoring: Photo points were established in March 2012 and were recaptured at the peak of the growing season in 2012. These photos can be made available upon request. Additionally, photos of the project area were captured from a helicopter in August 2012 (looking southwest) shown below.

Well 368 Project, August 2012

Plant Species List (provided by ICWD):

Well 368				7/17/2012
CODE	**Species name**	**Common Name**	**Occurrence**	**Spring obligate**
ACHY	*Achnatherum hymenoides*	Indian ricegrass	limited	UPL
AMARA	*Amaranthus sp.*	pigweed	widespread	n/a
ANCA10	*Anemopsis californica*	Yerba mansa	widespread	**OBL**
ARSP5	*Artemisia spinescens*	bud sagebrush	limited	n/a
ATCA2	*Atriplex canescens*	fourwing saltbush	very few	FACU
ATCO	*Atriplex confertifolia*	shadscale saltbush	widespread	n/a

ATLET2	*Atriplex lentiformis ssp. torreyi*	Torrey's saltbush	widespread	FAC
ATPA3	*Atriplex parryi*	Parry's saltbush	widespread	FACW
CIDO	*Cicuta douglasii*	western water hemlock	widespread	**OBL**
CIVU	*Cirsium vulgare*	bull thistle	widespread	FACU
COCA5	*Conyza canadensis*	Canadian horseweed	widespread	FAC
CUSCU	*Cuscuta sp.*	dodder	widespread	n/a
DAGL2	*Datisca glomerata*	Durango roote	limited	FACW
DISP	*Distichlis spicata*	saltgrass	widespread	FACW
ELAN	*Elaeagnus angustifolia*	Russian olive	limited	FAC
ELEOC	*Eleocharis sp.*	spikerush	widespread	**OBL**
EPGL	*Epilobium glaberrimum*	glaucus willowherb	widespread	**OBL**
EPNE	*Ephedra nevadensis*	Nevada ephedra	limited	n/a
ERNA10	*Ericameria nauseosa*	rubber rabbitbrush	widespread	n/a
GNLU	*Gnaphalium luteo-album*	Jersey cudweed	limited	FACW-
HEAN3	*Helianthus annuus*	common sunflower	widespread	FAC-
JUBA	*Juncus balticus*	Baltic rush	widespread	**OBL**
LEMNA	*Lemna sp.*	duckweed	widespread	**OBL**
LOCO6	*Lotus corniculatus*	bird's-foot trefoil	widespread	FAC
MEAL12	*Melilotus alba*	sweetclover	widespread	FACU
MEAR4	*Mentha arvensis*	wild mint	limited	FACW
MIGU	*Mimulus guttatus*	seep monkeyflower	widespread	**OBL**
MIPI5	*Mimulus pilosus*	false monkeyflower	very few	FACW
MUAS	*Muhlenbergia asperifolia*	scratchgrass	widespread	FACW
PLMA2	*Plantago major*	common plantain	very few	FACW-
POMO5	*Polypogon monspeliensis*	annual rabbitsfoot grass	widespread	FACW+
POPE3	*Polygonum persicaria*	spotted ladysthumb	widespread	FACW
PSPO	*Psorothamnus polydenius*	Nevada dalea	widespread	n/a
SAEX	*Salix exigua*	narrowleaf willow	widespread	FACW
SAGO	*Salix gooddingii*	Goodding's willow	widespread	FACW
SALA3	*Salix laevigata*	red willow	widespread	FACW
SALA6	*Salix lasiolepis*	arroyo willow	very few	FACW
SATR12	*Salsola tragus*	Russian thistle	widespread	FACU
SAVE4	*Sarcobatus vermiculatus*	greasewood	widespread	FACU
SCAM6	*Schoenoplectus americanus*	chairmaker's bulrush	widespread	**OBL**
SCMI2	*Scirpus microcarpus*	panicled bulrush	limited	**OBL**
SPAI	*Sporobolus airoides*	alkali sacaton	widespread	FAC+
STAL	*Stachys albens*	whitestem hedgenettle	very few	**OBL**
STPA4	*Stephanomeria pauciflora*	brownplume wirelettuce	widespread	n/a
STPI	*Stanleya pinnata*	desert princesplume	very few	n/a
TEAX	*Tetradymia axillaris*	longspine horsebrush	limited	n/a
TEGL	*Tetradymia glabrata*	littleleaf horsebrush	limited	n/a
TRWO	*Trifolium wormskioldii*	cows clover	very few	FACW

TYDO	*Typha domingensis*	southern cattail	widespread	**OBL**
TYPHA	*Typha sp.*	cattail	widespread	**OBL**
XAST	*Xanthium strumarium*	rough cocklebur	widespread	FAC+

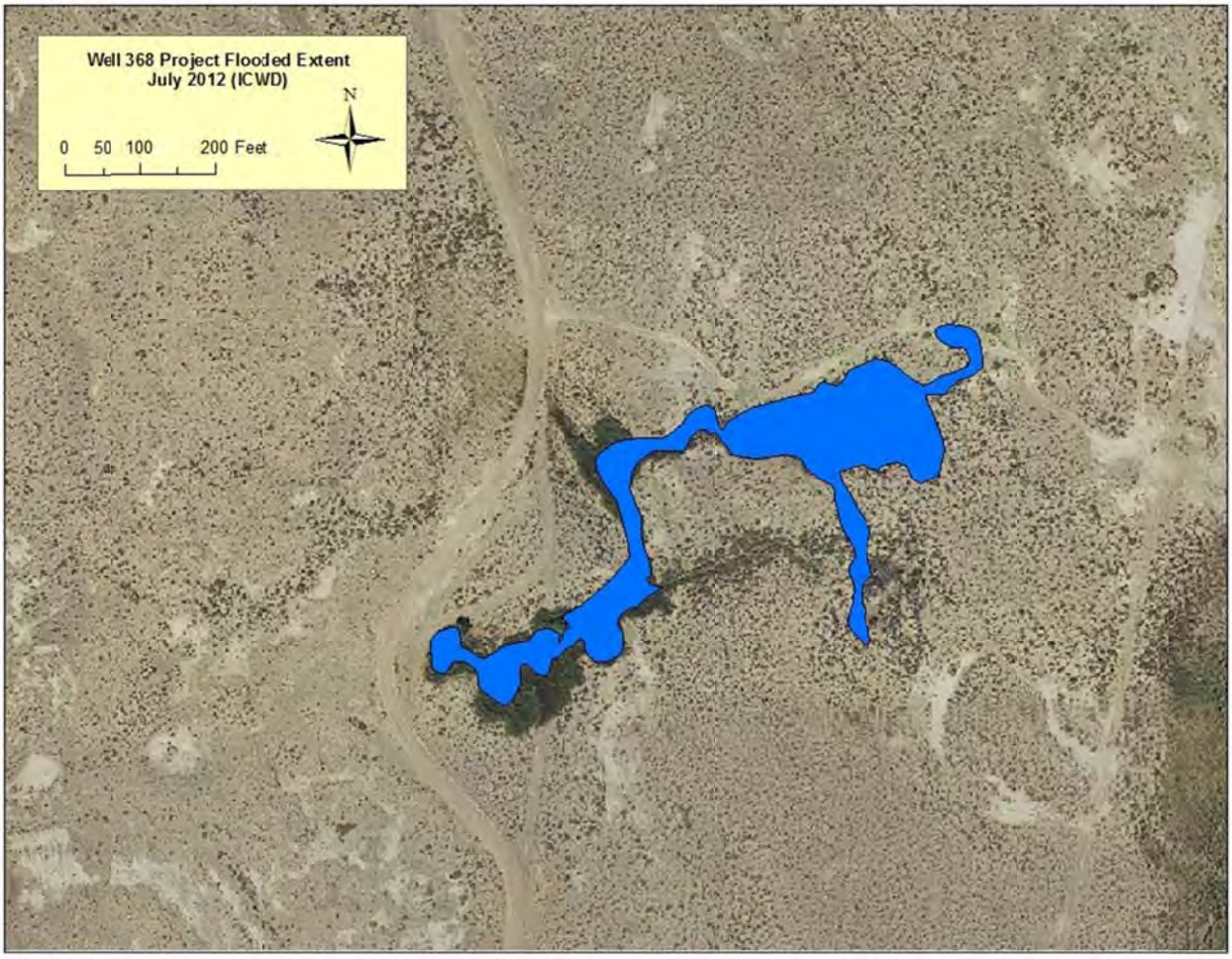
OBL=obligate wetland, FACW+=facultative wetland with frequency toward higher end of category, FACW=facultative wetland, FAC+=facultative with frequency toward higher end of category, FAC=facultative, FAC-=facultative with frequency toward lower end of category, FACU=facultative upland, UPL=upland

Woody Recruitment: Willow recruitment is occurring throughout the project area, particularly near the pipe outfall. However, much of the narrowleaf willow population is discolored (including new growth) and appears stressed from an unknown cause. Other willows in similar washes in the project also have this discolored appearance.

There is abundant recruitment of desirable non-woody species occurring throughout the newly flooded project area and no additional seeding or planting is necessary at this time. However, saltcedar seedlings are apparent in the lower reach of the project area and should be eradicated when resources are available.

Fence Condition: Not applicable.

Recommendations: Monitor the health of the narrowleaf willows at the project site and determine the cause for stress if possible (e.g., fungus, parasite, etc.). Remove/treat saltcedar seedlings that occur within the project area as resources become available, possibly using volunteers for hand pulling.



Well 368 Project Flooded Extent, July 2012

Diaz Lake

Flow Monitoring: 250 AF of water is allotted for this project. Inyo County requested and received 185 AF of water for Diaz Lake this year.

Other Monitoring: No photo point, vegetation, or other monitoring was conducted for this water accounting project.

Recommendations:

None. This project is operating as necessary.

7.5 Mitigation Monitoring and Reporting Program – MOU Ad Hoc Group Initial Study

Additional Mitigation Projects Developed by the MOU Ad Hoc Group Initial Study / Mitigated Negative Declaration SCH# 2010031094

Introduction

This Mitigation Monitoring and Reporting Program (MMRP) has been developed to ensure implementation of the mitigation measures outlined in the Initial Study/Mitigated Negative Declaration (IS/MND) for the Additional Mitigation Projects Developed by the MOU Ad Hoc Group (State Clearinghouse No. 2010031094). The MMRP has been prepared by LADWP, the lead agency for the Additional Mitigation Projects Developed by the MOU Ad Hoc Group under the California Environmental Quality Act (CEQA), in conformance with Public Resources Code Section 21081.6 and CEQA Guidelines Section 15097. Adoption of a MMRP is required for projects in which the Lead Agency has required changes or adopted mitigation to avoid significant environmental effects.

Mitigation Monitoring and Reporting Responsibility

LADWP shall have primary responsibility for administrating the MMRP activities to staff, consultants, or contractors. LADWP has the responsibility of ensuring that monitoring is documented through periodic reports and that deficiencies are promptly corrected. LADWP's designated environmental monitor will track and document compliance with mitigation measures, note any problems that may result, and take appropriate action to remedy problems. Specific responsibilities of LADWP include:

- Coordination of all mitigation monitoring activities
- Management of the preparation, approval, and filing of monitoring or permit compliance reports
- Maintenance of records concerning the status of all approved mitigation measures
- Coordination with MOU Parties and other agencies

Resolution of Non-compliance Complaints

LADWP will act as the contact for interested parties who wish to register comments or complaints. Any person or agency may file a complaint that states non-compliance with the mitigation measures that were adopted as part of the approval process for the Additional Mitigation Projects Developed by the MOU Ad Hoc Group. The complaint shall be directed to LADWP (111 N. Hope Street, Room 1044, Los Angeles, California 90012) in written form, providing detailed information on the purported violation. LADWP shall conduct an investigation and determine the validity of the complaint. If non-compliance with a mitigation measure is verified, LADWP shall take the necessary action(s) to remedy the violation. The complaint shall receive written confirmation indicating the results of the investigation or the final corrective action that was implemented to respond to the specific non-compliance issue.

Mitigation Monitoring and Reporting Plan Matrix

The MMRP is organized in a matrix format and includes: mitigation measure by number, text of the mitigation measures, time frame for monitoring, agency responsible (in this case, LADWP), and space to indicate verification the measures were implemented. This last column will be used by LADWP to document the person who verified the implementation of the mitigation measure, the date on which this verification occurred, and any other notable remarks.

Table 30. Mitigation Monitoring and Reporting Program for the Additional Mitigation Projects

No.	Impact	Mitigation Measure	Time Frame	Responsible Monitoring Agency		Verification of Compliance
Cultural Resources						
CUL-1	Installation of the proposed pipeline has the potential to disturb surface and subsurface archaeological materials.	Hines Spring Well 355 and Aberdeen Ditch The Aberdeen Supply Line will be relocated to an area where the density of cultural materials appears to be very light or non-existent. Specific locations will be determined in coordination with a qualified archaeologist during a field visit. If previously unrecorded cultural resources are encountered during the project, all work shall cease within 100 feet of the discovery until the find can be evaluated by a qualified archaeologist. During earthwork necessary for installation of project facilities (wells, pipelines, ditches), the construction crew and/or archaeological monitors shall implement the following measures if there is a discovery of paleontological resources: Stop all construction work within a 50-foot radius of the find until a qualified paleontologist or paleontologically-trained archaeologist can assess the significance of the find. If the discovery is significant or potentially significant, then the following would apply: data recovery and analysis, preparation of a data recovery report or other reports, and accession of recovered fossil	Prior to and during construction	LADWP	3/12/12	The alignment of the Aberdeen Ditch pipeline was staked by LADWP Survey and a qualified archaeologist on November 29, 2010 prior to earthmoving activities. The pipeline was rerouted around cultural resources and was extended approximately 200' as a result. Installation of the pipeline began in December 2010 and was monitored by a qualified archaeologist. Construction was complete in February 2011. No additional cultural or paleontological resources were located during construction. The proposed pipeline for the Hines Spring Well 355 project was surveyed by a qualified archaeologist March 9, 2011 prior to any earthmoving activities and the only artifact present was a mule shoe. The project area is currently grazed by horses and mules. The resource was avoided and no additional monitoring was conducted during pipeline installation. This pipeline was installed in October 2011 and no additional cultural or paleontological resources were located during construction.

		material at an accredited paleontological repository (e.g., the University of California's Museum of Paleontology).				
CUL-2	Installation of the proposed pipeline and well has the potential to disturb surface and subsurface archaeological materials.	Homestead The new artesian well shall be installed away from existing Well 044A and multi-component cultural resources Site 1600 AF-06/H to a location without known cultural resources. The pipeline from the T774-T777 complex shall be installed along either side of the road leading to the Homestead project area from the access road, or to another location without known cultural resources. Specific locations will be determined in coordination with a qualified archaeologist during a field visit. If previously unrecorded cultural resources are encountered during the project, all work shall cease within 100 feet of the discovery until the find can be evaluated by a qualified archaeologist. During earthwork necessary for installation of project facilities (wells, pipelines, ditches), the construction crew and/or archaeological monitors shall implement the following measures if there is a discovery of paleontological resources: Stop all construction work within a 50-foot radius of the find until a qualified paleontologist or paleontologically-trained archaeologist can assess the significance of the find. If the discovery is significant or potentially significant,	Prior to and during construction	LADWP	3/12/12	LADWP determined the location, staging area and pipeline for the new Homestead artesian well with a qualified archaeologist on March 8-9 and 14-16, 2011. Installation of the well near Well 044 required LADWP to apply a geotextile fabric to protect artifacts in the area. Additionally, the qualified archaeologist was onsite for the drilling of the well in June 2011. Unfortunately, the new well did provide a sufficient water supply for the project. LADWP selected an alternative well site, staging area, and pipeline for the project, which were surveyed by a qualified archaeologist September 7, 2011. No cultural or paleontological resources were found during this survey and no further monitoring was recommended by the qualified archeologist for the drilling of the new well, use of new staging area, or installation of the new pipeline. The new well was drilled January 24-27, 2012. Pipeline installation began January 30, 2012 and was complete February 21, 2012. No cultural or paleontological resources were found during construction. The alignment of the T774-T777 pipeline was also surveyed for archaeological resources in March 2011; no artifacts were found, thus no further monitoring was recommended by the qualified archaeologist for installation of this pipeline. This pipeline was installed August/September 2011 and no cultural or

		then the following would apply: data recovery and analysis, preparation of a data recovery report or other reports, and accession of recovered fossil material at an accredited paleontological repository (e.g., the University of California's Museum of Paleontology).				paleontological resources were found during construction.
CUL-3	Installation of the proposed pipelines has the potential to disturb surface and subsurface archaeological materials.	Well 368 The short east-west portion of the pipeline from the new artesian well to the access road will be installed in the existing berm or road, or other location without known cultural resources. The north-south portion of the pipeline from the access road to the Well F368 area will be re-aligned west approximately 200 feet from the access road, or to another location without known cultural resources. Specific locations will be determined in coordination with a qualified archaeologist during a field visit. If relocation of these pipelines is impractical, an archaeological testing and evaluation program will be conducted for sites 1600 AF-02 and 1600 AF-03. If previously unrecorded cultural resources are encountered during the project, all work shall cease within 100 feet of the discovery until the find can be evaluated by a qualified archaeologist. During earthwork necessary for installation of project facilities (wells, pipelines, ditches), the construction crew and/or archaeological monitors	Prior to and during construction	LADWP	3/12/12	LADWP met with a qualified archaeologist on March 8-9, 2011 to determine the location, staging area and pipeline for the new artesian well for the Well 368 project. The well location was moved slightly east based on cultural resource concerns. The installation of the new well required application of geotextile fabric to protect artifacts in the area. Additionally, the qualified archaeologist was onsite for the drilling of the well in June 2011. Unfortunately, the new well did provide a sufficient water supply for the project. LADWP selected an alternative well site, staging area, and pipeline for the project, which were surveyed by a qualified archaeologist September 7, 2011. No cultural or paleontological resources were found during this survey and thus no further monitoring was recommended by the qualified archeologist for the drilling of the new well, use of new staging area, or installation of the new pipeline. The new well was drilled January 17-20, 2012. Pipeline installation began January 24, 2012 and was complete February 21, 2012. No cultural or paleontological resources were found during construction.

		shall implement the following measures if there is a discovery of paleontological resources: Stop all construction work within a 50-foot radius of the find until a qualified paleontologist or paleontologically-trained archaeologist can assess the significance of the find. If the discovery is significant or potentially significant, then the following would apply: data recovery and analysis, preparation of a data recovery report or other reports, and accession of recovered fossil material at an accredited paleontological repository (e.g., the University of California's Museum of Paleontology).				
CUL-4	Installation of the proposed pipelines and wells has the potential to disturb surface and subsurface archaeological materials.	Homestead, Well 368, Hines Spring Well 355 and Aberdeen Ditch At the Homestead, Well 368, Hines Spring Well 355 and Aberdeen Ditch project sites, pipeline, power line, and well installation shall be monitored by a qualified archaeologist. Based on the NAHC contact list for the project, Native American representatives shall be notified of project construction schedules at the Homestead, Well 368, Hines Spring Well 355 and Aberdeen Ditch project sites, and invited to be present during well, power line and pipeline installation on a volunteer basis. If previously unrecorded cultural resources are encountered during the project, all work shall cease within 100 feet of the discovery until the find can be evaluated by a qualified archaeologist.	During construction	LADWP	3/12/12	**Homestead**: Installation of the first artesian well was monitored by a qualified archeologist and Native American representatives were contacted prior to drilling (June 2011). Unfortunately, the new well did not provide a sufficient water supply for the project. The alternative well site, staging area, and pipeline alignment were surveyed by a qualified archaeologist in September 2011 prior to construction. No cultural or paleontological resources were found during this survey and thus no further monitoring was recommended by the qualified archeologist. Additionally, no further monitoring of the T774-T775 pipeline were required based on the initial pedestrian survey. Further, no cultural or paleontological resources were found during construction. **Well 368**: Installation of the first artesian well was monitored by a qualified archeologist and Native American

		During earthwork necessary for installation of project facilities (wells, pipelines, ditches), the construction crew and/or archaeological monitors shall implement the following measures if there is a discovery of paleontological resources: Stop all construction work within a 50-foot radius of the find until a qualified paleontologist or paleontologically-trained archaeologist can assess the significance of the find. If the discovery is significant or potentially significant, then the following would apply: data recovery and analysis, preparation of a data recovery report or other reports, and accession of recovered fossil material at an accredited paleontological repository (e.g., the University of California's Museum of Paleontology).				representatives were contacted prior to drilling (June 2011). Unfortunately, the new well did not provide a sufficient water supply for the project. The alternative well site, staging area, and pipeline alignment were surveyed by a qualified archaeologist in September 2011 prior to construction. No cultural or paleontological resources were found during this survey and thus no further monitoring was recommended by the qualified archeologist. Further, no cultural or paleontological resources were found during construction. **Hines Spring Well 355**: The proposed pipeline for the Hines Spring Well 355 project was surveyed by a qualified archaeologist March 9, 2011 prior to any earthmoving activities and the only artifact present was a mule shoe. The project area is currently grazed by horses and mules. The resource was avoided and no additional monitoring was conducted during pipeline installation. This pipeline was installed in October 2011 and no additional cultural or paleontological resources were located during construction. The Hines Spring Well 355 power line was installed November 2011-January 2012. Power line installation was monitored by a qualified archaeologist based on preconstruction surveys of the alignment conducted in September 2010. Native American representatives were contacted prior to construction and invited to attend, but none participated. One cultural artifact was found during construction and will be given to the Big Pine Paiute Tribe for curation as recommended by the qualified archaeologist that was monitoring onsite.

						Aberdeen Ditch: The Aberdeen Ditch pipeline was constructed December 2010-February 2011 and was monitored by a qualified archaeologist. Native American representatives were notified prior to the construction work, but no representatives participated in monitoring activities. No additional cultural or paleontological resources were located during construction.
CUL-5	Installation of the proposed pipelines and wells has the potential to disturb surface and subsurface archaeological materials.	If previously unrecorded cultural resources are encountered during the project, all work shall cease within 100 feet of the discovery until the find can be evaluated by a qualified archaeologist. During earthwork necessary for installation of project facilities (wells, pipelines, ditches), the construction crew and/or archaeological monitors shall implement the following measures if there is a discovery of paleontological resources: Stop all construction work within a 50-foot radius of the find until a qualified paleontologist or paleontologically-trained archaeologist can assess the significance of the find. If the discovery is significant or potentially significant, then the following would apply: data recovery and analysis, preparation of a data recovery report or other reports, and accession of recovered fossil material at an accredited paleontological repository (e.g., the University of California's Museum of Paleontology).	During construction	LADWP	3/12/12	No unrecorded cultural or paleontological resources were encountered during construction. All resources encountered had been recorded in preconstruction surveys, and all sites with documented resources were monitored by a qualified archaeologist.
CUL-6	Excavation for installation of	If previously unrecorded cultural resources are encountered during the	During construction	LADWP	3/12/12	No unrecorded cultural or paleontological resources were encountered during

	project facilities could result in the disturbance of paleontological resources.	project, all work shall cease within 100 feet of the discovery until the find can be evaluated by a qualified archaeologist. During earthwork necessary for installation of project facilities (wells, pipelines, ditches), the construction crew and/or archaeological monitors shall implement the following measures if there is a discovery of paleontological resources: Stop all construction work within a 50-foot radius of the find until a qualified paleontologist or paleontologically-trained archaeologist can assess the significance of the find. If the discovery is significant or potentially significant, then the following would apply: data recovery and analysis, preparation of a data recovery report or other reports, and accession of recovered fossil material at an accredited paleontological repository (e.g., the University of California's Museum of Paleontology).				excavation or installation of project facilities.
CUL-7	Excavation for installation of project facilities could result in the disturbance of human remains.	In the unexpected event that human remains are discovered, the Inyo County Coroner shall be contacted, the area of the find shall be protected, and provisions of State CEQA Guidelines Section 15064.5 shall be followed. If previously unrecorded cultural resources are encountered during the project, all work shall cease within 100 feet of the discovery until the find can be evaluated by a qualified archaeologist.	During construction	LADWP	3/12/12	No human remains were encountered during excavation or installation of project facilities.

		During earthwork necessary for installation of project facilities (wells, pipelines, ditches), the construction crew and/or archaeological monitors shall implement the following measures if there is a discovery of paleontological resources: Stop all construction work within a 50-foot radius of the find until a qualified paleontologist or paleontologically-trained archaeologist can assess the significance of the find. If the discovery is significant or potentially significant, then the following would apply: data recovery and analysis, preparation of a data recovery report or other reports, and accession of recovered fossil material at an accredited paleontological repository (e.g., the University of California's Museum of Paleontology).				

7.5.1 Additional Mitigation Projects References

City of Los Angeles Department of Water and Power (LADWP). 1991. *1991 Environmental Impact Report – Water from the Owens Valley to Supply the Second Los Angeles Aqueduct 1970 to 1990 and 1990 Onward, Pursuant to a Long Term Groundwater Management Plan.*

City of Los Angeles Department of Water and Power (LADWP), the County of Inyo, the California Department of Fish and Game, the California State Lands Commission, the Sierra Club, the Owens Valley Committee (1997 MOU). 1997. *Memorandum of Understanding between the City of Los Angeles Department of Water and Power the County of Inyo, the California Department of Fish and Game, the California State Lands Commission, the Sierra Club, the Owens Valley Committee*. Los Angeles Department of Water and Power, Bishop, California.

City of Los Angeles Department of Water and Power (LADWP) et al. 2008. *Additional Mitigation Projects Developed by the MOU Ad Hoc Group.* Bishop, CA.

Superior Court of the State of California, County of Inyo. 2010. *The Second Amendment of Amended Stipulation and Order Case No. S1CVCV01-29768.* Executed March 2010.

7.6 Annual Report on the Owens Valley Land Management Plan

Introduction

Section II.B of the 1997 MOU describes the requirement for a land management plan for City of Los Angeles (City) owned, non-urban lands in the Owens River Watershed in Inyo County (excluding the LORP planning area). The 1997 MOU states that LADWP shall continue to protect water resources used by the citizens of Los Angeles while providing for the continuation of sustainable uses such as recreation, livestock grazing, agriculture, and other activities. In doing so, LADWP shall promote biodiversity and healthy ecosystems, and address situations or problems that occur from the effects of various land uses on City-owned property. The 1997 MOU states that priority is to be given to riparian areas, irrigated meadows, and sensitive plant and animal habitats.

Subsequently, LADWP developed the OVLMP (LADWP and Ecosystem Sciences 2010) to fulfill this requirement of the 1997 MOU and guide management of the City's lands in the Owens Valley. The OVLMP consists of 10 chapters that describe current conditions and future management of grazing, riverine-riparian ecosystems, recreation, cultural resources, fire, commercial uses, threatened and endangered species, and areas of special management concern. The fundamental role of resource management is to assess and evaluate the effects of existing land and water use practices, and recommend flow management and land management improvements if necessary.

CEQA Process for the Owens Valley Land Management Plan

An Initial Study and Mitigated Negative Declaration (MND) (LADWP 2010) was prepared for the OVLMP in March 2010. After review of the comments received and based on the information in the Initial Study, LADWP determined that with adoption of mitigation measures, implementation of the OVLMP would not have a significant impact on the environment. The final MND and Mitigation Monitoring and Reporting Program were approved by the City of Los Angeles Board of Water and Power Commissioners on June 1, 2010. A Notice of Determination was filed with the Inyo County Clerk on June 2, 2010.

7.7 OVLMP Mitigation Monitoring and Reporting Program

Owens Valley Land Management Plan Initial Study / Mitigated Negative Declaration
SCH# 2010031098

Introduction

This Mitigation Monitoring and Reporting Program (MMRP) has been developed to ensure implementation of the mitigation measures outlined in the Initial Study/Mitigated Negative Declaration (IS/MND) for the Owens Valley Land Management Plan (State Clearinghouse No. 2010031098). The MMRP has been prepared by the City of Los Angeles Department of Water and Power (LADWP), the lead agency for the OVLMP under the California Environmental Quality Act (CEQA), in conformance with Public Resources Code Section 21081.6 and CEQA Guidelines Section 15097. Adoption of a MMRP is required for projects in which the Lead Agency has required changes or adopted mitigation to avoid significant environmental effects.

Mitigation Monitoring and Reporting Responsibility

LADWP shall have primary responsibility for administrating the MMRP activities to staff, consultants, or contractors. LADWP has the responsibility of ensuring that monitoring is documented through periodic reports and that deficiencies are promptly corrected. LADWP's designated environmental monitor will track and document compliance with mitigation measures, note any problems that may result, and take appropriate action to remedy problems. Specific responsibilities of LADWP include:

- Coordination of all mitigation monitoring activities
- Management of the preparation, approval, and filing of monitoring or permit compliance reports
- Maintenance of records concerning the status of all approved mitigation measures
- Coordination with MOU Parties and other agencies

Mitigation Monitoring and Reporting Plan Matrix

The Mitigation Monitoring and Reporting Plan Matrix (MMRP) is organized in a matrix format and includes: mitigation measure by number, text of the mitigation measures, time frame for monitoring, agency responsible (in this case, LADWP), and space to indicate verification the measures were implemented. This last column will be used by LADWP to document the person who verified the implementation of the mitigation measure, the date on which this verification occurred, and any other notable remarks.

Table 31. Mitigation Monitoring and Reporting for Owens Valley Land Management Plan

No.	Impact	Mitigation Measure	Time Frame	Responsible Monitoring Agency	Verification of Compliance	
Biological Resources						
BIO-1	Installation of project facilities could result in disturbance of sensitive plants.	• Where present, areas of Owens Valley checkerbloom, Inyo County star-tulip, or other sensitive plant species will be flagged and access restricted during earth disturbing activities (mowing, fence post installation, stockwater well installation, roadway barrier installation, herbicide use, and/or vegetation removal) to prevent impacts to rare plant species. • Work within areas known for sensitive plants will be done by hand, including pounding fence posts by hand. Vehicles and larger construction equipment will be excluded from areas containing rare plant populations.	Prior to and during construction During construction	LADWP	3/8/13	LADWP has completed approximately 18 miles of new fencing, which completes all fencing required under the OVLMP. LADWP has installed recreation controls along Chalk Bluffs Road, and at junctions of the Owens River and Highway 6, East Line Street, Warm Springs, and Highway 168. To date, all stockwater wells have been drilled and ground disturbing activities are complete. LADWP has not installed any project facilities in areas where rare plants are known to occur. Therefore, there was no need for flagging, restricted access, and handwork to avoid impacts to rare plants.
BIO-2	Installation of project facilities could result in disturbance of sensitive animals.	Prior to earth disturbing activities (mowing, fence post installation, stockwater well installation, roadway barrier installation, herbicide use and/or vegetation removal), LADWP biologists shall survey for active bird nests of sensitive species and active vole burrows. If nests are present, work shall be redirected or suspended in the immediate area until the nest is no longer active. If active vole burrows are observed, work will be redirected	Prior to and during construction	LADWP	3/8/13	Fencing and recreation controls were installed outside the bird nesting season. In addition, no evidence of Owens Valley Vole or bats was encountered during installation of these facilities.

		around the area. If a bat roost is identified during project fence or well installation, the situation will be evaluated and appropriate action taken to avoid impacts such as exclusion measures or providing an alternative roost site.				
BIO-3	Installation of project facilities could result in disturbance of sensitive riparian plant communities.	Installation of project-related facilities (e.g., fences, stockwater wells, roadway barriers) and vegetation-disturbing activities within sensitive plant communities (e.g., exotics removal) will be done under the supervision of LADWP biologists.	During construction	LADWP	3/8/13	The installation of project-related facilities has not disturbed sensitive plant communities but was conducted under the supervision of LADWP biologists. Treatment for Invasive species by LADWP is described in Section 6.8. These efforts were conducted under the supervision of an LADWP biologist.
Cultural Resources						
CUL-1	Installation of the proposed facilities has the potential to disturb surface and subsurface archaeological materials.	• If ground disturbances are proposed within the boundaries of, or in close proximity to: – The 19 sites located in 2006 and considered eligible, potentially eligible, or not fully evaluated for listing in the CRHP (McCombs, 2006) – The previously recorded archaeological sites described in McCombs, 2006 – Sites identified during the 2010 survey of stockwater well locations (Garcia and Associates, 2010a) A qualified archaeologist shall delineate an approximately 50-foot buffer, using flagging tape, around each archaeological site where	Prior to construction	LADWP	3/8/13	No fencelines or recreation controls were installed in the vicinity of any archeological sites documented by McCombs Archeology (2006) and Garcia and Associates (GANDA 2010). Garcia and Associates conducted a field survey on January 12, 2010 (GANDA 2010). No paleontological material was observed on the ground surface at any of the eight well locations. All stockwater well locations were verified to be absent of surface paleontological and cultural materials or were moved to areas that were absent of these resources. No unrecorded cultural sites were encountered during the installation of project facilities.

		ground disturbances are proposed prior to the start of project construction. Specifically, Site 1309-03H (located in 2010) shall be clearly marked prior to ground disturbance for the Cashbaugh Ears stockwater well. • Mowing, minor vegetation removal, fence installation, well installation, or other construction activity within the flagged buffer zones shall be monitored by an archaeologist. Stockwater well installation at Cashbaugh South, Warmsprings, Cashbaugh Ears, Mendiburu North, and Mendiburu South shall be monitored by an archaeologist. If ground disturbing activities are planned within the Pawona Witsu Archaeological District, an archaeological monitor shall be present. • Based on the NAHC contact list, Native American representatives shall be notified of project construction schedules at locations where an archaeological monitor will be present, and invited to be present during construction activity at these locations on a volunteer basis. • If previously unrecorded cultural resources are encountered during the project, all work shall cease within 100 feet of the discovery until the find can be evaluated by a qualified archaeologist.	During construction Prior to construction During construction			
CUL-2	Installation of the	• Prior to the start of construction or ground disturbing activities,	Prior to construction	LADWP	3/8/13	LADWP Construction and other field staff receive annual training on archeological and

	proposed facilities has the potential to disturb surface and subsurface archaeological materials.	construction personnel shall be trained by a qualified archaeologist regarding the possibility of encountering previously unidentified or buried cultural materials, including both prehistoric and historic resources, during construction. Worker education will focus on the rationale for cultural resources monitoring; regulatory policies protecting resources; basic identification of cultural resources; and the protocol to follow in case of discovery, including Native American burials.				paleontological resources. This training was given to Bishop Construction and other field staff on February 26, 2013. LADWP Independence Construction Staff received this training on February 28, 2013.
CUL-3	Excavation for installation of project facilities could result in the disturbance of paleontological resources.	• Prior to the start of construction, a qualified paleontologist or paleontologically trained archaeologist will conduct training for construction personnel to review the procedures to be followed upon the discovery of paleontological materials. Worker education will focus on the rationale for paleontological resources monitoring; regulatory policies protecting fossils; a basic identification of fossils; and the protocol to follow in case of discovery.	Prior to construction	LADWP	3/8/13	LADWP Construction Staff receives annual training on archeological and paleontological resources. This training was given to Bishop Construction and other field staff on February 26, 2013. LADWP Independence Construction Staff received this training on February 28, 2013.
CUL-4	Excavation for installation of project facilities could result in the disturbance of paleonto-logical	• A paleontologist shall develop and implement a monitoring protocol for stockwater well installation. If fossil materials are discovered, the monitor shall redirect or halt construction activities within 50 feet of the discovery, in accordance with the guidelines of the Society of Vertebrate Paleontology, to 1) evaluate the resource, and 2) make recommendations regarding their treatment. If relevant, data recovery,	Prior to and during construction	LADWP	3/8/13	Garcia and Associates (GANDA) prepared a paleontological identification and evaluation report for the installation of stockwater wells for the OVLMP in March 2010. Section 6.0 (Mitigation Measures) of this report outlines a protocol for unanticipated discovery, monitoring, data recovery, reporting, and curation of paleontological resources. This task is complete.

	resources.	reporting, and curation would then be conducted as outlined in Garcia and Associates (2010b).				
CUL-5	Excavation for installation of project facilities could result in the disturbance of human remains.	In the unexpected event that human remains are discovered, the Inyo County Coroner would be contacted, the area of the find would be protected, and provisions of State CEQA Guidelines Section 15064.5 would be followed. If the remains are determined to be of Native American origin, both the Native American Heritage Commission and any identified descendants shall be notified (Health and Safety Code Section 7050.5, Public Resources code Section 5097.94 and 5097.98).	During construction	LADWP	3/8/13	No human remains were discovered during the installation of facilities for the OVLMP to date.

7.8 Owens Valley Land Management Plan References

City of Los Angeles Department of Water and Power (LADWP), the County of Inyo, the California Department of Fish and Game, the California State Lands Commission, the Sierra Club, the Owens Valley Committee. 1997. *Memorandum of Understanding between the City of Los Angeles Department of Water and Power the County of Inyo, the California Department of Fish and Game, the California State Lands Commission, the Sierra Club, the Owens Valley Committee. Los Angeles Department of Water and Power, Bishop, California.*

City of Los Angeles Department of Water and Power (LADWP) and Ecosystem Sciences. *2010. Final Owens Valley Land Management Plan.* City of Los Angeles Department of Water and Power, Bishop, CA.

City of Los Angeles Department of Water and Power (LADWP). 2010. *Initial Study and Mitigated Negative Declaration for Owens Valley Land Management Plan.* Environmental Document prepared for CEQA compliance. Los Angeles, California, March 2010.

Garcia and Associates. 2010. Final Report. *Paleontological Identification and Evaluation Report and Recommended Mitigation Measures for the Los Angeles Department of Water and Power's Stockwater Wells Installation for the Owens Valley Land Management Plan, Inyo County, California.* Prepared for the Los Angeles Department of Water and Power by Garcia and Associates, subcontractor of MWH. San Anselmo, CA. March 2010.

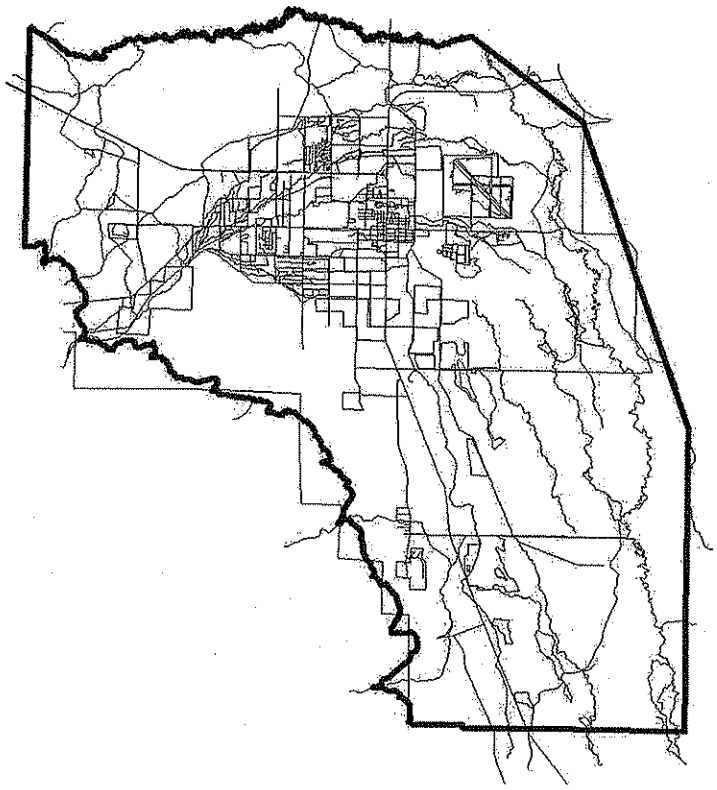
McCombs Archaeology. 2006. Class III Heritage Resources Survey for the Riparian Corridor of the Middle Owens River Project. McCombs Archaeology, Taylorsville, CA.

APPENDICES

The Bishop Cone Audit for 2011-2012 Runoff Year

LADWP TECHNICAL GROUP REVIEW DRAFT

THE BISHOP CONE AUDIT FOR THE 2011-2012 RUNOFF YEAR



Randy Jackson
Senior County Hydrologist

Inyo County Water Department
Report 2012-1
October 25, 2012

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TABLES

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INTRODUCTION

The Bishop Cone audit is an annual accounting of Los Angeles Department of Water and Power's (LADWP) groundwater extraction and water usage on Los Angeles-owned lands on the Bishop Cone. Section VII.A of the Inyo County/Los Angeles long-term groundwater management agreement provides that, "Before the Department may increase groundwater pumping above present levels, or construct any new wells on the [Bishop] Cone, the Technical Group must agree on a method for determining the exact amount of water annually used on Los Angeles-owned lands on the Cone. The agreed upon method shall be based on a jointly conducted audit of such water uses." (Appendix A).

At its October 17, 1995 meeting, the Technical Group agreed to recommend to the Inyo County/Los Angeles Standing Committee the description of a Bishop Cone audit procedure to be incorporated into the Green Book. That audit procedure is attached (See Appendix A of this report for section IV.D of the Green Book). The Green Book is the technical appendix to the long-term agreement. The Inyo County/Los Angeles Standing Committee adopted the procedure on November 7, 1996 as section IV.D of the Green Book.

WATER USES ON LADWP-OWNED LAND ON THE BISHOP CONE

Section IV.D.1.a. of the Green Book states, "For the purposes of the Bishop Cone audit, water usage on Los Angeles-owned land on the Bishop Cone is defined as the quantity of water supplied to such land, including conveyance losses, less any return flow to the aqueduct system" (See Appendix A). Table 1, below, is a compilation of water usage in acre-feet (AF) on LADWP-owned land on the Bishop Cone for the runoff years of 2010-2011 and 2011-2012.

TABLE 1. WATER USES ON LOS ANGELES-OWNED LAND ON THE BISHOP CONE.

LADWP ACCOUNT NUMBER	RUNOFF YEAR*[1] 2010-2011 (AF)	RUNOFF YEAR*[1] 2011-2012 (AF)
BA354B or BA362B	647.00	783.00
BA302A	105.00	133.00
BA302B	835.70	1073.87
BA311	2546.08	3138.24
BA313	506.48	506.42
*[3]BA324	1122.70	1274.43
BA324A	NO DATA	NO DATA
BA324C	NO DATA	NO DATA
BA387A	480.65	694.00
BARECF	458.85	567.34
BA339	249.56	292.51
BA342	NO DATA	NO DATA

LADWP ACCOUNT NUMBER	RUNOFF YEAR*1 2010-2011 (AF)	RUNOFF YEAR*1 2011-2012 (AF)
BA362C	NO DATA	NO DATA
BA362D	593.78	663.22
BA304	242.00	249.00
BA324B	NO DATA	NO DATA
BA387B	NO DATA	NO DATA
BA397 (SAME AS BA387B-NEW LEASE HOLDER)	2203.75	3197.99
BA361A	2793.00	2205.20
BA361B	2250.16	2266.16
BA354A or 362A	1025.00	933.00
BARECA	666.00	470.00
BARECC	72.00	88.00
BARECD	2727.00	2352.00
BA338	2223.53	3011.39
BAOPRA	0.00	0.00
BAOPRB	0.00	0.00
BAGWRA	NO DATA	NO DATA
RV361	66.08	170.5
RV361B	NO DATA	NO DATA
RVRECA	1815.00	2983.00
LARECB	NO DATA	NO DATA
LAE&MH	0.00	0.00
BAICR	NO DATA	NO DATA
BA1478 (SAME AS BAICR-NEW LEASE HOLDER)	420.62	147.08
BA353	217.39	204.96
BA393	118.16	99.00
*3 BA500	506.90	893.81
*3 BA005A	34.86	38.67
*2 BA005B	49.00	69.00
*2 BA006A	2080.24 (No Credit) *5	69.87 (No Credit) *5
BA1479	32.39	29.00
BA392	568.00 (No Credit) *5	338.55 (No Credit) *5
BA301 (Aubrey and Moxley)	605.22	610.49
BA335 (Partrige and Johnson)	151.04	164.16
BA394 (Berner)	NO DATA	NO DATA
BA360 (Allen)	NO DATA	NO DATA
BCCL	NO DATA	3648.09 (DENY)
TOTAL	**25,764.90**	**29,308.44**

*1 A runoff year is defined as starting April 1st and ending March 31st of the following year.

*2 Accounts were first listed in the 2002-2003 runoff year. The account BA006A is an active water use account, but in the past has been denied by Inyo for lack of measuring devices. Devices have not yet been installed at account BA006A. NO DATA –The Account was not active, no data was reported. 0.00-The account was active, no use was reported, data was 0.00 acre-feet.

*3 New accounts in years past, field inspection performed and accounts credited.

*4 Account BA1479 same as BA342. Account BA502B same as BA354B. Account BA502A same as BA354A.
*5 Accounts need field inspection to establish credit.

Map 1 attached, shows the location of the Bishop Cone, the pumping and flowing wells on the Bishop Cone and the location of selected Bishop Cone accounts. Account information on the map is not complete and it will be updated in the future as data become available. In general, there was an increase in water use, on most accounts from runoff years 2010-2011 to 2011-2012 as well as an overall total increase in water use of 4,055.04 acre-feet in 2011-2012. Several accounts were not granted credit this runoff year and await inspections in the runoff year (See Table 1). As of this time, stockwater has not been defined as individual accounts nor has inspection of the accounts taken place. Account BCCL has not been inspected. Stockwater and BCCL credit is therefore denied until the above work has taken place and inspections concerning the individual stockwater accounts and BCCL have been conducted and successfully confirm the measurement on the accounts.

TOTAL LADWP GROUNDWATER EXTRACTION ON LADWP-OWNED LAND ON THE BISHOP CONE FOR RUNOFF YEARS 2010-2011 AND 2011-2012

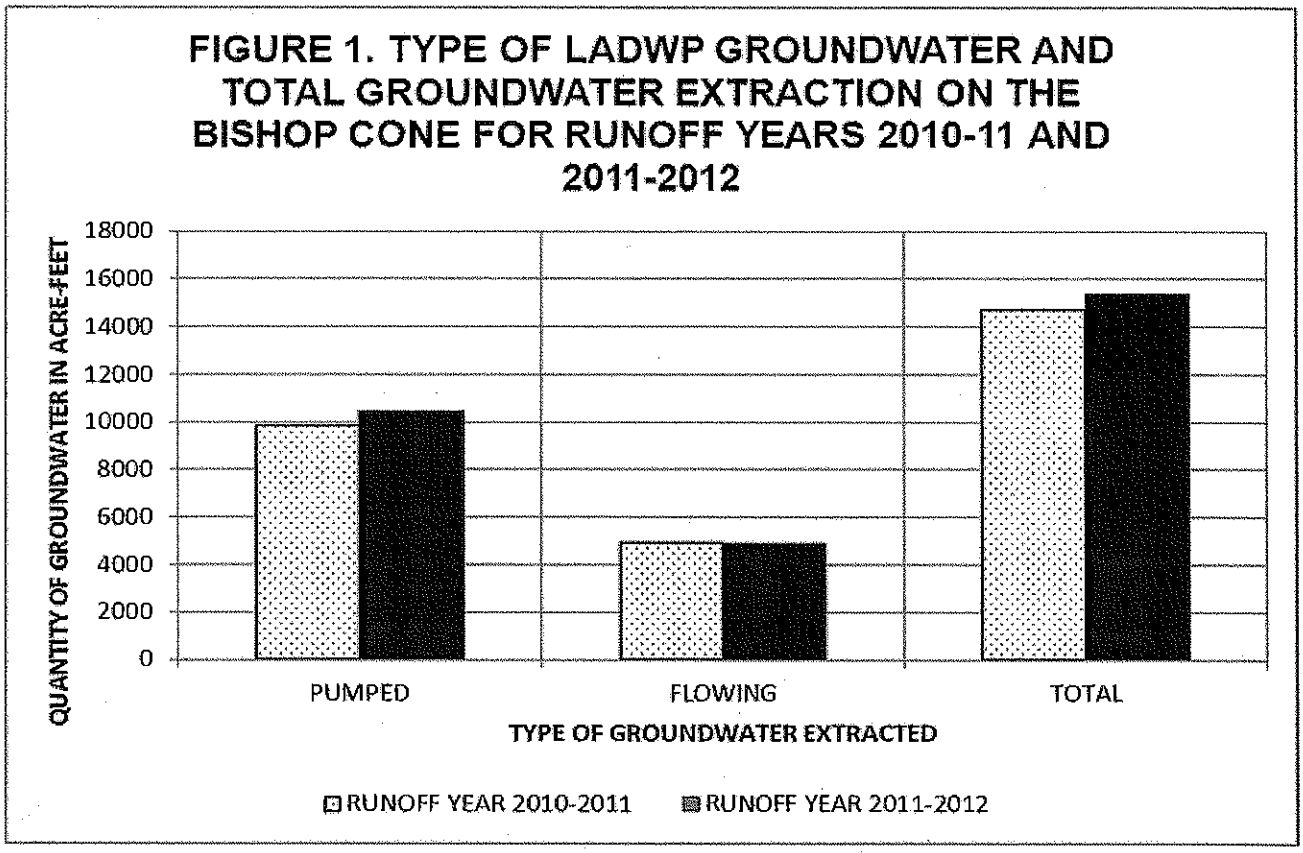
Section IV.D.1.d of the Green Book states, "Total groundwater extraction by LADWP will be compared with corrected water usage on the Bishop Cone for the runoff year. Total groundwater extraction is defined as the sum of all groundwater pumped by LADWP plus the amount of artesian water that flowed out of LADWP uncapped wells on the Bishop Cone during the runoff year."

Total LADWP groundwater extraction and groundwater extraction classified as flowing and pumped groundwater in acre-feet, on the Bishop Cone for the runoff years of 2010-2011 and 2011-2012, are shown in Table 2, below. The 2011-2012 Runoff Year groundwater extraction shows an increase compared to the previous runoff year's extraction of some 659 acre-feet.

TABLE 2. TYPE OF GROUNDWATER EXTRACTION ON LADWP LANDS ON THE BISHOP CONE

TYPE OF GROUNDWATER	RUNOFF YEAR 2010-2011 (AF)	RUNOFF YEAR 2011-2012 (AF)
PUMPED	9,828.00	10,475.00
FLOWING	4,899.00	4,911.00
TOTAL	**14,727.00**	**15,386.00**

Total groundwater extraction and groundwater extraction classified as flowing and pumped groundwater in acre-feet on LADWP-owned land on the Bishop Cone are shown in a bar chart in Figure 1, below.



Flowing and pumped groundwater by well on the Bishop Cone are shown in Table 3, below.

TABLE 3. FLOWING AND PUMPED GROUNDWATER BY WELL ON THE BISHOP CONE IN RUNOFF YEAR 2011-2012.

WELL	FLOWING GROUNDWATER (ACRE-FEET)	PUMPED GROUNDWATER (ACRE-FEET)
F121	36	NA
F122	177	NA
F123	159	NA
F124	0	NA
F125	988	NA
F126	263	NA
F127	373	NA
F128	330	NA
F129	155	NA
F130	237	NA
F131	826	NA
F132	324	NA
F133	366	NA
F134	580	NA
F136	97	NA
W410	NA	2,548
W406	NA	1,020
W371	NA	1,113

W411	NA	1,298
WELL	**FLOWING GROUNDWATER (ACRE-FEET)**	**PUMPED GROUNDWATER (ACRE-FEET)**
W407	NA	876
W408	NA	1,107
W140	NA	1,317
W412	NA	1,196
TOTAL	**4,911**	**10,475**

COMPLIANCE WITH THE INYO COUNTY/LOS ANGELES LONG-TERM GROUNDWATER MANAGEMENT AGREEMENT

The Inyo County/Los Angeles long-term groundwater management agreement provides that, during any runoff year, total groundwater extraction by LADWP on the Bishop Cone shall not exceed water usage on Los Angeles-owned land on the Cone. Table 4, below, shows that LADWP was within compliance with the above provision for runoff years 2010-2011 and 2011-2012.

TABLE 4. LADWP USES IN COMPARISON TO LADWP GROUNDWATER EXTRACTION ON THE BISHOP CONE.

	RUNOFF YEAR 2010-2011 (AF)	**RUNOFF YEAR 2011-2012 (AF)**
TOTAL USES	**25,764.90**	**29,819.94**
TOTAL GROUNDWATER EXTRACTION	**14,727.00**	**15,386.00**

APPENDIX A

Section VII.A of the Inyo County/Los Angeles Long-Term Groundwater Management Agreement

Section IV.D of the Green Book

state water well standards. The sealing of a monitoring well shall be designed to prevent cross flow between aquifers.

The EIR describes the impacts of the construction and operation of fifteen (15) new wells. The construction and operation of any new wells not described in the EIR will be the subject of a subsequent CEQA review.

The Technical Group may agree that some existing wells that now supply enhancement/mitigation projects be converted to Department production wells. Wells that are the only source of supply for an enhancement/mitigation project shall not be converted. Water for the enhancement/mitigation project formerly supplied by a converted well will be supplied as necessary from Department production wells. Any enhancement/mitigation well converted to a production well could later be reverted to an enhancement/mitigation well if agreed to by the Technical Group.

VII. GROUNDWATER PUMPING ON THE BISHOP CONE

A. Any groundwater pumping by the Department on the "Bishop Cone" (Cone) shall be in strict adherence to the provisions of the Stipulation and Order filed on the 26th day of August, 1940, in Inyo County Superior Court in the case of Hillside Water Company, a corporation, et al. vs. The City of Los Angeles, a Municipal Corporation, et al., ("Hillside Decree").

Before the Department may increase groundwater pumping above present levels, or construct any new wells on the Cone, the Technical Group must agree on a method for determining the exact amount of water annually used on Los Angeles-owned lands on the Cone. The agreed upon method shall be based on a jointly conducted audit

of such water uses.

The Department's annual groundwater extractions from the Cone shall be limited to an amount not greater than the total amount of water used on Los Angeles-owned lands on the Cone during that year. Annual groundwater extractions by the Department shall be the total of all groundwater pumped by the Department on the Cone, plus the amount of artesian water that flowed out of the casing of uncapped wells on the Cone during the year. Water used on Los Angeles-owned lands on the Cone, shall be the quantity of water supplied to such lands, including conveyance losses, less any return flow to the aqueduct system.

B. The overall management goals and principles and the specific goals and principles for each vegetation classification of this Stipulation and Order apply to vegetation on the Cone.

VIII. GROUNDWATER RECHARGE FACILITIES

It is recognized that development of new groundwater storage, and the implementation and operation of feasible groundwater banking and recharge facilities in the Owens Valley and in the Rose Valley that will not cause significant effects on the environment may be beneficial. The development of any such facilities in the Owens Valley and in Rose Valley are subject to agreement of the Inyo County Board of Supervisors and the Department, acting through the Standing Committee. The Inyo County Board of Supervisors shall not unreasonably refuse to agree to a feasible groundwater banking facility that will not cause significant decrease or change in vegetation or a significant effect on the environment. The

GREEN BOOK

D. Bishop Cone Audit

This sub-section describes the procedures for conducting the Bishop Cone audit in accordance with Section VII.A of the Agreement. The Bishop Cone audit is an annual accounting of LADWP groundwater extraction and water usage on Los Angeles-owned land on the Bishop Cone. The Agreement provides that, during any runoff year, total groundwater extraction by LADWP on the Bishop Cone shall not exceed water usage on Los Angeles-owned land on the Cone. The area defined as the Bishop Cone is shown as Figure IV.D.1.

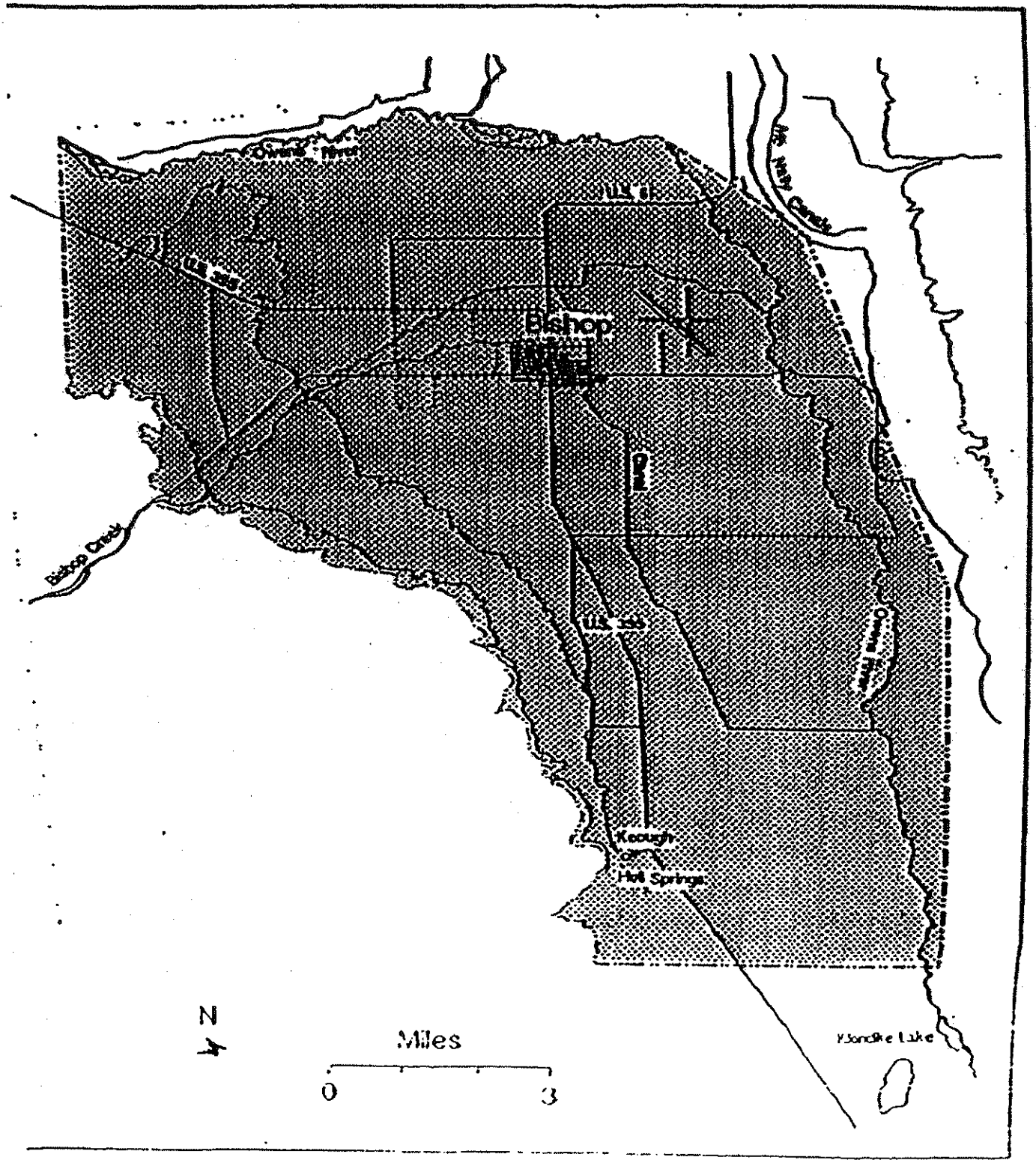
1. Procedures for Conducting the Bishop Cone Audit

a. For the purposes of the Bishop Cone audit, water usage on Los Angeles-owned land on the Bishop Cone is defined as the quantity of water supplied to such land, including conveyance losses, less any return flow to the aqueduct system. Water usage is documented on a runoff-year basis and is compiled by LADWP each May in the Bishop Area Water Use Report. At the conclusion of each runoff year, LADWP will forward the final water use report for the runoff year to Inyo County.

b. The final water use report will be compared for consistency with the previous year's report. If measuring stations have been added or removed from the water-use report during the year, or if a significant change in the pattern of water usage occurs (for example, an account that has not received water for one year receives a

FIGURE IV.D.1

Bishop Cone Boundary



considerable amount the next year), the location will be field-checked. The field-check will evaluate whether changes in water usage warrant the changes noted in the report. If a change is made in the method of delivery to or return from an account that results in an overestimation of uses on the Bishop Cone, water usage for that account will not be credited to the total uses for the audit.

c. Water usage for accounts BAIND (Bishop Indian Reservation), BA391 (outside of Bishop Cone boundary), and BAWEST (West Bishop private uses) will be subtracted from the total reported water usage.

d. Total groundwater extraction by LADWP will be compared with the corrected water usage on the Bishop Cone for the runoff year. Total groundwater extraction is defined as the sum of all groundwater pumped by LADWP plus the amount of artesian water that flowed out of uncapped wells on the Bishop Cone during the runoff year. During any runoff year, total groundwater extraction by LADWP on the Bishop Cone shall not exceed water usage on Los Angeles-owned land on the Cone.

e. A draft report summarizing the results of the Bishop Cone audit will be prepared annually as an Inyo County Water Department report and will be submitted to the Technical Group in June for a 30-day review.

f. A final Bishop Cone audit report will be submitted in July to the Technical Group, the Standing

Committee, the Inyo County Board of Supervisors, and the Inyo County Water Commission.

LADWP will notify Inyo County of any changes in the status, location, or operation of any measuring station used to conduct the Bishop Cone audit at the time the final Bishop Area Water Use Report is submitted to the County. LADWP will also notify the County of any changes in the boundaries of the accounts included in the audit.

Upon request by Inyo County, LADWP will provide measuring station data for accounts included in the audit to assist the County in verifying water usage for individual accounts.

APPENDIX B

Data on Uses and Total Groundwater Extracted on the Bishop Cone Supplied by LADWP

Department of Water and Power the City of Los Angeles

ANTONIO R. VILLARAIGOSA
Mayor

Commission
THOMAS S. SAYLES, *President*
ERIC HOLOMAN, *Vice-President*
RICHARD F. MOSS
CHRISTINA E. NOONAN
JONATHAN PARFREY
BARBARA E. MOSCHOS, *Secretary*

RONALD O. NICHOLS
General Manager

June 14, 2012

RECEIVED

JUN 19 2012

Inyo Co. Water Department

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

Dear Dr. Harrington:

Subject: Bishop Cone Audit

This is in response to your letter dated February 24, 2012. Included is a hard copy and an electronic copy for the following:

2011-2012 runoff year Bishop Cone Audit Water Use Report.
2011-2012 runoff year Flowing well discharge data from the Bishop Cone.
2011-2012 runoff year Pumping well discharge data for the Bishop Cone.

If you have any questions, please contact Mr. William Jones of my staff at (760) 873-0380.

Sincerely,

Gene L. Coufal
Aqueduct Manager

Enclosures
c w/o enc: Mr. William Jones

2011/2012 RUNOFF YEAR BISHOP CONE FLOWING WELL TOTALS

(ACRE-FEET)

	2011									2012			
WELL	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	TOTAL
F121	3	3	3	3	3	3	3	3	3	3	3	3	36
F122	18	15	5	12	16	15	16	15	18	16	15	16	177
F123	18	17	13	15	18	17	12	11	11	10	8	9	159
F124	0	0	0	0	0	0	0	0	0	0	0	0	0
F125	77	82	80	82	82	80	85	83	86	86	80	85	988
F126	22	24	22	22	21	21	22	22	23	22	20	22	263
F127	30	31	31	33	33	31	31	30	32	31	29	31	373
F128	32	33	34	33	33	31	25	22	22	24	19	22	330
F129	13	15	14	13	13	13	13	12	12	12	12	13	155
F130	10	12	7	11	25	25	26	24	23	24	23	27	237
F131	68	71	68	71	70	67	70	68	69	69	65	70	826
F132	25	26	27	28	26	25	28	29	29	29	26	26	324
F133	30	31	30	31	31	30	31	30	31	31	29	31	366
F134	49	49	44	45	46	46	51	51	52	50	46	51	580
F136	10	7	1	4	5	6	10	10	11	11	10	12	97
TOTAL	405	416	379	403	422	410	423	410	422	418	385	418	4911

2011/2012 RUNOFF YEAR BISHOP CONE FLOWING WELL TOTALS

(ACRE-FEET)

	2011									2012			
WELL	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	TOTAL
W140	208	213	204	209	208	199	76	0	0	0	0	0	1317
W371	101	101	69	34	101	98	103	101	103	103	97	102	1113
W406	207	216	107	73	212	202	3	0	0	0	0	0	1020
W407	164	170	85	120	170	164	3	0	0	0	0	0	876
W408	193	197	162	193	176	183	3	0	0	0	0	0	1107
W410	226	233	161	82	237	228	235	228	234	234	218	232	2548
W411	249	269	140	95	277	264	4	0	0	0	0	0	1298
W412	239	249	124	87	252	242	3	0	0	0	0	0	1196
TOTAL	1587	1648	1052	893	1633	1580	430	329	337	337	315	334	10475

FROM 3/01/12 TO 3/31/12

ACCOUNTS & STATIONS		ACRE-FEET PERIOD	MAR M-T-D	SINCE 4/01/11
BA502B	SMITH & STICKELLS			
	A-1 DRAIN			
3031	A-1 DRAIN PUMP PLANT # 1 S/O HALL DITC	.00	.00	.00
3032	A-1 DRAIN PUMP PLANT # 3 AT WELL # 140	.00	.00	783.00
*TOTALS	ACRES= 148 ALOT= 740 LEFT= 43-	.00	.00	783.00
BA302A	BOOTHE			
	HALL DITCH			
3006	HALL DITCH @ GOLF COURSE RETURN	2.00	2.00	136.00
B02A11	HALL DITCH @ BOOTHE	3.08	3.08	41.82
B02A21	STOCKWATER	3.08-	3.08-	41.82-
B02A32	OPERATIONS	2.00-	2.00-	3.00-
*TOTALS	ACRES= 47 ALOT= 235 LEFT= 102	.00	.00	133.00
BA302B	BOOTHE			
	BISHOP CREEK CANAL			
3161	BISHOP CREEK CANAL #16	40.00	40.00	693.00
3162	BISHOP CREEK CANAL #17	.00	.00	456.00
3164	BISHOP CREEK CANAL #20	35.00	35.00	658.00
3165	BISHOP CREEK CANAL #21	.00	.00	.00
B02B21	STOCKWATER @ #16	30.23-	30.23-	355.21-
B02B22	STOCKWATER @ #20	6.20-	6.20-	73.20-
B02B41	DITCH MAKE	.00	.00	.00
B02B31	OPERATIONS	38.57-	38.57-	304.72-
*TOTALS	ACRES= 120 ALOT= 600 LEFT= 473-	.00	.00	1073.87
BA311	J.W. CASHBAUGH, ET AL			
	BISHOP CREEK CANAL			
3166	BISHOP CREEK CANAL #5	.00	.00	696.00
3022	BISHOP CREEK CANAL #5A	.00	.00	429.00
3167	BISHOP CREEK CANAL #9	.00	.00	469.00
3168	BISHOP CREEK CANAL #30	49.00	49.00	2478.00
B11201	STOCKWATER @ #30	30.67-	30.67-	359.58-
3022	CREDIT FOR TATUM RETURN @ #5A	.00	.00	429.00-
B11301	OPERATIONS	18.33-	18.33-	145.18-
*TOTALS	ACRES= 561 ALOT= 2805 LEFT= 333-	.00	.00	3138.24
BA313	BOYD & ONEY			
	NORTH INDIAN DITCH			
3016	NORTH INDIAN ABOVE MUMY LANE #58E	470.00	470.00	6835.00
3017	WONACOTT A-2	71.00	71.00	988.00
3015	WONACOTT A-1	69.00-	69.00-	1082.00-
3054	WONACOTT A-3 RETURN	6.00-	6.00-	471.00-
3051	WONACOTT 58F	55.00-	55.00-	504.00-
3018	NORTH INDIAN B-2	347.00-	347.00-	4592.00-
B13401	NORTH INDIAN DITCH LOSS	54.00-	54.00-	655.58-
B13402	WONACOTT DITCH LOSS	10.00-	10.00-	42.00-
B13404	WONACOTT DITCH MAKE	.00	.00	30.00
B13301	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 84 ALOT= 420 LEFT= 86-	.00	.00	506.42

ACCOUNTS & STATIONS		ACRE-FEET PERIOD	MAR M-T-D	SINCE 4/01/11
BA324	DANIELS, ROSSI, HANNON			
	NORTH & SOUTH INDIAN DITCH			
3370	NORTH INDIAN DIVERSION W/O SUNLAND	.00	.00	40.00
3270	SOUTH INDIAN D-3	146.00	146.00	2986.00
3005	SOUTH INDIAN DITCH D-4	95.00-	95.00-	1406.00-
B244	DITCH LOSS	51.00-	51.00-	345.57-
B2442	DITCH MAKE	.00	.00	.00
B243	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 163 ALOT= 815 LEFT= 459-	.00	.00	1274.43
BA1478	INDIAN CREEK RANCH (BL-1478)			
	GEORGE & N. INDIAN DITCH			
3002	GEORGE DITCH WEST OF SUNLAND AVENUE	64.00	64.00	990.00
3068	GEORGE DITCH C-3	31.00-	31.00-	484.00-
BICR42	GEORGE DITCH LOSS	33.00-	33.00-	411.34-
BAICR4	DITCH MAKE	.00	.00	110.00
3264	NORTH INDIAN DITCH BELOW A-1 DRAIN B3A	335.00	335.00	2797.00
3370	NORTH INDIAN DIVERSION W/O SUNLAND	.00	.00	40.00-
3364	NORTH INDIAN DITCH W/O HWY 395	235.00-	235.00-	2427.00-
BICR43	NORTH INDIAN DITCH LOSS	100.00-	100.00-	387.58-
BAICR3	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 41 ALOT= 205 LEFT= 57	.00	.00	147.08
BA387A	GIACOMINI			
	NORTH INDIAN DITCH			
3043	NORTH INDIAN DITCH B-3	.00	.00	515.00
3011	WEST LINE L-2	.00	.00	179.00
B87A3	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 122 ALOT= 610 LEFT= 84-	.00	.00	694.00
BARECF	RECREATION FOREST SERVICE			
	KINGSLEY DITCH			
3023	KINGSLEY DITCH C-4	87.00	87.00	1266.00
3183	CEMETERY DITCH	28.00-	28.00-	465.00-
BRCF41	DITCH MAKE	.00	.00	4.00
BRCF42	DITCH LOSS	59.00-	59.00-	237.66-
*TOTALS	ACRES= 43 ALOT= 215 LEFT= 352-	.00	.00	567.34
BA339	DOHNEL			
	KINGSLEY DITCH			
3170	KINGSLEY DITCH C-1	16.00	16.00	577.00
B39201	STOCKWATER @ C-1	16.00-	16.00-	282.21-
B39301	OPERATIONS	.00	.00	2.28-
*TOTALS	ACRES= 39 ALOT= 195 LEFT= 97-	.00	.00	292.51
BA393	CABALLERO			
	KINGSLEY DITCH			
3061	KINGSLEY DITCH PUMP PLANT	.00	.00	41.00
3171	BISHOP CREEK DITCH # 11	.00	.00	58.00
BA933	OPERATIONS @ #11	.00	.00	.00
*TOTALS	ACRES= 18 ALOT= 90 LEFT= 9-	.00	.00	99.00

ACCOUNTS & STATIONS		ACRE-FEET PERIOD	MAR M-T-D	SINCE 4/01/11
BA362D	JJ TATUM, LJ TATUM			
	DAIRY DITCH			
3388	INDIAN SOUTH RETURN ON SEE-VEE LANE	1.00	1.00	820.00
3389	INDIAN MIDDLE RETURN ON SEE-VEE LANE	.00	.00	158.00
3390	INDIAN NORTH RETURN ON SEE-VEE LANE	9.00	9.00	337.00
B62D21	DAIRY STOCKWATER	10.00-	10.00-	229.14-
B62D31	OPERATIONS DAIRY DITCH	.00	.00	422.64-
*TOTALS	ACRES= 182 ALOT= 578 LEFT= 85-	.00	.00	663.22
BA304	ANDREW & DAN BOYD			
	NEWLON DITCH			
3026	NEWLON DITCH BOYD PUMP PLANT	7.00	7.00	249.00
*TOTALS	ACRES= 48 ALOT= 240 LEFT= 9-	7.00	7.00	249.00
BA500	TALBOT			
	GEORGE & S. INDIAN DITCH			
3012	GEORGE DITCH C-1	35.00	35.00	962.00
3002	GEORGE DITCH WEST OF SUNLAND AVENUE	64.00-	64.00-	990.00-
B24B41	BUHS STOCKWATER	.00	.00	18.38-
B24B44	DITCH LOSS	.00	.00	11.24-
B24B04	DITCH MAKE	29.00	29.00	252.00
3365	PARK WEST RETURN S/O A-DRAIN	5.00	5.00	112.00
3047	4 X - 58D	337.00	337.00	4005.00
3366	SOUTH INDIAN DITCH DIVERSION # 1 N/O S	.00	.00	49.00
3367	SOUTH INDIAN DITCH DIVERSION # 2 N/O S	1.00	1.00	518.00
W408	WELL # 408	.00	.00	1107.00
3046	SOUTH INDIAN RETURN AT A-1 DRAIN	187.00-	187.00-	1793.00-
3270	SOUTH INDIAN D-3	146.00-	146.00-	2986.00-
B004	DITCH LOSS	10.00-	10.00-	312.57-
B0040	DITCH MAKE	.00	.00	.00
B50B31	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 171 ALOT= 890 LEFT= 3-	.00	.00	893.81
BA397	GIACOMINI			
	BISHOP CREEK CANAL			
3172	BISHOP CREEK DITCH # 16-A	.00	.00	.00
3163	BISHOP CREEK DITCH # 19	.00	.00	826.00
3173	BISHOP CREEK DITCH # 19-A	.00	.00	.00
3174	BISHOP CREEK DITCH # 22	.00	.00	554.00
3019	BISHOP CREEK CANAL DIVERSION # 24	50.00	50.00	1081.00
3020	BISHOP CREEK CANAL DIVERSION # 25	229.00	229.00	527.00
3391	BISHOP CREEK CANAL DIVERSION 26A	.00	.00	706.00
3024	BISHOP CREEK CANAL DIVERSION # 29	63.00	63.00	538.00
3392	FORD RAWSON-DIV 1A	.00	.00	.00
B9721	STOCKWATER @ #29	27.87-	27.87-	243.37-
B9722	BOOTHE STOCKWATER @ #19	.00	.00	68.73-
B9723	STOCKWATER @ #19 & #24	28.46-	28.46-	283.78-
B9731	OPERATIONS	285.67-	285.67-	438.13-
*TOTALS	ACRES= 482 ALOT= 2410 LEFT= 787-	.00	.00	3197.99

ACCOUNTS & STATIONS		ACRE-FEET PERIOD	MAR M-T-D	SINCE 4/01/11
BA361A	ST RANCH			
	NORTH FORK BISHOP CREEK			
3036	NORTH FORK BISHOP CREEK I-1	72.00	72.00	1358.00
3004	NORTH FORK BISHOP CREEK I-2	.00	.00	1358.00
3042	TATUM RETURN AT HIGHWAY 6	.00	.00	39.00-
3039	TATUM RETURN AT BISHOP CREEK CANAL	64.00-	64.00-	694.00-
3022	BISHOP CREEK CANAL #5A	.00	.00	429.00-
B61A21	STOCKWATER @ I-1	.00	.00	208.90-
3316	WELL #406	48.00	48.00	1018.00
B61A41	DITCH MAKE	56.00-	56.00-	20.00-
B61A31	OPERATIONS	.00	.00	137.90-
*TOTALS	ACRES= 262 ALOT= 1005 LEFT= 1200-	.00	.00	2205.20
BA361B	ST RANCH			
	MATLICK DITCH			
3009	MATLICK DITCH F-10	86.00	86.00	2200.00
3040	MATLICK DITCH F-13 N	252.00	252.00	2689.00
3008	MATLICK DITCH F-13 E	54.00	54.00	771.00
3007	MATLICK DITCH F-14	4.00	4.00	164.00
3035	MATLICK DITCH #154	74.00	74.00	1638.00
3154	TATUM RETURN G-2	.00	.00	146.00-
3037	MATLICK DITCH #63A	71.00-	71.00-	856.00-
3038	TATUM RETURN H-1	2.00-	2.00-	1096.00-
3003	MATLICK DITCH RETURN @ B-1 DRAIN	57.00-	57.00-	503.00-
3010	MATLICK RETURN @ C DRAIN	244.00-	244.00-	1546.00-
B61B41	DITCH LOSS #154 TO RETURN @ B1	17.00-	17.00-	297.36-
B61B42	DITCH MAKE F-10 TO RETURN @ C DRAIN	.00	.00	.00
B61B21	SPENCER STOCKWATER	15.50-	15.50-	183.00-
B61B22	STOCKWATER @ F-10	30.69-	30.69-	362.34-
B61B31	OPERATIONS	32.81-	32.81-	206.14-
*TOTALS	ACRES= 412 ALOT= 2365 LEFT= 98	.00	.00	2266.16
BA502A	SMITH & STICKELLS			
	HALL DITCH			
3027	HALL DITCH PUMP PLANT # 2 @ DON TATUM	2.00	2.00	189.00
3028	HALL DITCH PUMP PLANT # 4 AT DON TATUM	.00	.00	744.00
*TOTALS	ACRES= 219 ALOT= 1095 LEFT= 162	2.00	2.00	933.00
BARECA	RECREATION FARMERS PONDS			
	BISHOP CREEK CANAL			
3155	BISHOP CREEK CANAL #5B	.00	.00	512.00
BRCA31	OPERATIONS @ #5B	.00	.00	42.00-
*TOTALS		.00	.00	470.00
BARECC	RECREATION SADDLE CLUB			
	BISHOP CREEK CANAL			
3021	BISHOP CREEK CANAL #67	.00	.00	88.00
BRECC3	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 13 ALOT= 65 LEFT= 23-	.00	.00	88.00

ACCOUNTS & STATIONS		ACRE-FEET PERIOD	MAR M-T-D	SINCE 4/01/11
BARECD	RECREATION BUCKLEY PONDS			
	SOUTH FORK BISHOP CREEK			
3194	S FORK BISHOP CR BELOW BISHOP CR CANAL	466.00	466.00	5228.00
3193	SANDERS POND RETURN	136.00-	136.00-	2398.00-
3066	RAWSON POND # 3 RETURN TO OWENS RIVER	61.00-	61.00-	478.00-
BRCD31	OPERATIONS	.00	.00	.00
*TOTALS		269.00	269.00	2352.00
BA338	YRIBARREN			
	FORD-RAWSON CANAL & KEOUGH			
2003	FORD RAWSON CANAL DIVERSION #2	47.00	47.00	994.00
2024	FORD RAWSON CANAL DIVERSION #3	.00	.00	4226.00
2004	FORD RAWSON CANAL DIVERSION #7	.00	.00	1065.00-
2043	YRIBARREN RETURN #2	.00	.00	.00
B38402	FORD RAWSON CANAL LOSS	.00	.00	714.49-
B38201	STOCKWATER @ #2	30.69-	30.69-	362.34-
B38401	FORD RAWSON CANAL DITCH MAKE	.00	.00	.00
3368	RAWSON & KEOUGH DITCH E/O HWY 395	75.00	75.00	515.00
3369	RAWSON & KEOUGH DITCH RETURN AT A-DRAI	56.00-	56.00-	380.00-
B38202	CASHBAUGH STOCKWATER	11.03-	11.03-	97.86-
B38403	KEOUGH DITCH LOSS	6.29-	6.29-	30.04-
B38301	OPERATIONS	17.99-	17.99-	73.88-
*TOTALS	ACRES= 427 ALOT= 2135 LEFT= 876-	.00	.00	3011.39
BAOPRA	OPERATION FORD-RAWSON CANAL			
	FORD-RAWSON CANAL			
2026	FORD RAWSON CANAL BELOW BCC	.00	.00	.00
2024	FORD RAWSON CANAL DIVERSION #3	.00	.00	.00
BOPA31	OPERATIONS	.00	.00	.00
*TOTALS		.00	.00	.00
BAOPRB	OPERATIONS A-DRAIN			
	A-DRAIN			
2086	A-DRAIN DIVERSION TO ARKANSAS FLATS	.00	.00	.00
BOPB31	OPERATIONS	.00	.00	.00
*TOTALS		.00	.00	.00
RV361B	ST RANCH			
	HORTON CREEK			
3102	HORTON CREEK E-7	.00	.00	682.00
R61B31	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 105 ALOT= 525 LEFT= 157-	.00	.00	682.00
RVRECA	RECREATION MILL POND			
	MCGEE CREEK			
3185	MCGEE CREEK @ ABELOUR RANCH	220.00	220.00	4810.00
3235	MILL POND RETURN	121.00-	121.00-	1827.00-
RRCA41	DITCH MAKE	.00	.00	.00
*TOTALS		99.00	99.00	2983.00

ACCOUNTS & STATIONS		ACRE-FEET PERIOD	MAR M-T-D	SINCE 4/01/11
LAE&MH	FIVE BRIDGES RECHARGE			
	BISHOP CREEK CANAL			
3242	BISHOP CREEK CANAL DIVERSION #2	.00	.00	389.00
LEMGE5	MITIGATION WATER @ DIVERSION #4	.00	.00	.00
3317	BISHOP CREEK CANAL DIVERSION #6	7.00	7.00	382.00
LEMH2	STOCKWATER @ DIVERSION #2 & #6	7.00-	7.00-	305.00-
LEMH3	OPERATIONS	.00	.00	466.00-
*TOTALS		.00	.00	.00
BA353	HADELER & MILORADICH			
	WONACOTT & SMITH DITCH			
3015	WONACOTT A-1	69.00	69.00	1082.00
3053	TOMMY SMITH DITCH # 162-A	1.00	1.00	112.00
3017	WONACOTT A-2	71.00-	71.00-	988.00-
BA3534	WONACOTT DITCH LOSS	1.00	1.00	11.04-
BA534	DITCH MAKE	.00	.00	10.00
BA3533	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 38 ALOT= 190 LEFT= 14-	.00	.00	204.96
BA005A	ONEY			
	OTEY DITCH			
3049	# 161 OTEY	60.00	60.00	1309.00
3377	OTEY DITCH RETURN AT MATLICK DITCH	59.00-	59.00-	1252.00-
B05A4	DITCH LOSS	1.00-	1.00-	18.33-
B05A42	DITCH MAKE	.00	.00	.00
*TOTALS	ACRES= 13 ALOT= 65 LEFT= 26	.00	.00	38.67
BA005B	SAFSTROM			
	MATLICK DITCH			
3378	OTEY DITCH DIVERSION ABOVE MATLICK DIT	.00	.00	69.00
B05B4	DITCH LOSS	.00	.00	.00
*TOTALS	ACRES= 20 ALOT= 100 LEFT= 31	.00	.00	69.00
BA006A	BARTON			
	MATLICK DITCH			
3064	MATLICK DITCH AT INTAKE # 61	195.00	195.00	4017.00
3377	OTEY DITCH RETURN AT MATLICK DITCH	59.00	59.00	1252.00
3412	MATLICK DITCH WEST OF MCLAREN	120.00-	120.00-	2114.00-
3378	OTEY DITCH DIVERSION ABOVE MATLICK DIT	.00	.00	69.00-
B06A1	PRIVATE DIVERSION	72.62-	72.62-	1559.96-
B06A4	DITCH LOSS	61.38-	61.38-	1456.17-
*TOTALS	ACRES= 14 ALOT= 70 LEFT= 0	.00	.00	69.87
BA1479	HIDDEN CREEKS RANCH			
	SOUTH INDIAN DITCH			
3025	SOUTH INDIAN DITCH DIVERSION # 3	.00	.00	29.00
B14793	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 27 ALOT= 135 LEFT= 106	.00	.00	29.00

ACCOUNTS & STATIONS		ACRE-FEET PERIOD	MAR M-T-D	SINCE 4/01/11
BA392	LACEY LIVESTOCK			
	YOUNG & MATLICK DITCHES			
3387	MATLICK DITCH TO THE NORTH	49.00	49.00	1330.00
3398	MATLICK DITCH #1	325.00	325.00	4724.00
BA9242	DITCH LOSS	.00	.00	119.45-
3399	REINHACKLE #1	87.00	87.00	1316.00
3400	YOUNG DITCH #1	3.00	3.00	251.00
3401	YOUNG DITCH #2	87.00-	87.00-	890.00-
3406	C-DRAIN AT INTAKE	346.00-	346.00-	4423.00-
BA921	MATLICK DITCH F-10	86.00-	86.00-	2200.00-
BA924	DITCH MAKE	55.00	55.00	350.00
BA923	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 140 ALOT= 700 LEFT= 361	.00	.00	338.55
BA301	AUBREY & MOXLEY			
	NELLIGAN & YOUNG DITCHES			
3396	NELLIGAN DIV. #1	138.00	138.00	.2421.00
3397	NELLIGAN BELOW DIV. #1	97.00	97.00	1473.00
3401	YOUNG DITCH #2	87.00	87.00	890.00
3050	HOLLAND # 63-B	44.00-	44.00-	521.00-
3404	NELLIGAN DITCH #2	176.00-	176.00-	2765.00-
3402	YOUNG DITCH #3	83.00-	83.00-	690.00-
3407	YOUNG DITCH # 4	.00	.00	46.00-
BA014	DITCH LOSS	19.00-	19.00-	151.51-
BA0144	DITCH MAKE	.00	.00	.00
BA013	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 99 ALOT= 495 LEFT= 115-	.00	.00	610.49
BA335	PARTRIDGE & JOHNSON			
	YOUNG DITCH			
3402	YOUNG DITCH #3	83.00	83.00	690.00
3407	YOUNG DITCH # 4	.00	.00	46.00
3403	YOUNG DITCH RETURN TO NELLIGAN	77.00-	77.00-	519.00-
BA354	DITCH LOSS	6.00-	6.00-	52.84-
BA353	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 30 ALOT= 150 LEFT= 14-	.00	.00	164.16
BCCL	BISHOP CONE CONVEYANCE LOSSES			
BCCL1	BA313 DITCH LOSS N INDIAN	54.00	54.00	655.58
BCCL2	BA313 DITCH LOSS WONACOTT	10.00	10.00	42.00
BCCL3	BA324 DITCH LOSS N & S INDIAN	51.00	51.00	344.55
BCCL4	BA1478 DITCH LOSS GEORGE	33.00	33.00	411.34
BCCL5	BA1478 DITCH LOSS N INDIAN	100.00	100.00	387.58
BCCL6	BARECF DITCH LOSS KINGSLEY	59.00	59.00	237.66
BCCL7	BA500 DITCH LOSS GEORGE	.00	.00	11.24
BCCL8	BA500 DITCH LOSS S INDIAN	10.00	10.00	312.57
BCCL9	BA361B DITCH LOSS MATLICK	17.00	17.00	297.36
BCCL10	BA338 DITCH LOSS FORD RAWSON	.00	.00	714.49
BCCL11	BA353 DITCH LOSS WONACOTT	1.00-	1.00-	11.04
BCCL12	BA005A DITCH LOSS OTEY	1.00	1.00	18.33
BCCL13	BA301 DITCH LOSS NELLIGAN	19.00	19.00	151.51

ACCOUNTS & STATIONS		ACRE-FEET PERIOD	MAR M-T-D	SINCE 4/01/11
BCCL14	BA335 DITCH LOSS YOUNG	6.00	6.00	52.84
BCCL15	TOTAL DITCH LOSS	359.00-	359.00-	3643.32-
*TOTALS		.00	.00	4.77
	AREA SUMMARY IRG	9.00	9.00	23768.02
	SW	247.42	247.42	3474.86
	OPER	395.37	395.37	2241.87
	E&M	.00	.00	.00
	GWRC	.00	.00	.00
	REC	368.00	368.00	6460.34
	IND	.00	.00	.00
	DOM	.00	.00	.00
	LORP	.00	.00	.00
	TOTAL WATER USE	1019.79	1019.79	35945.09

TOTAL IRG AC 4088 TOTAL ALOT 20143 DUTY TO DATE 5.8 AF/AC

Department of Water and Power the City of Los Angeles

ANTONIO R. VILLARAIGOSA
Mayor

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THOMAS S. SAYLES, *President*
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RONALD O. NICHOLS
General Manager

October 11, 2012

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

Dear Dr. Harrington:

Subject: Draft Bishop Cone Audit for the 2011-2012 Runoff Year

In response to your letter dated August 15, 2012, and Draft Bishop Cone Audit, for the 2011-2012 runoff year. The Los Angeles Department of Water and Power (LADWP) is in agreement with the Inyo County Water Department's 2011-2012 audit regarding irrigation and recreation uses on the Bishop Cone with the exception of the following discrepancies:

- Table 1 LADWP Account Number BA354A or 362A or BA502B on page 2 should not include BA502B. In June 2011, BA354A was changed into BA502A while BA354B was changed into BA502B. Note 4 of Table 1 reflects this change.

- Table 1 LADWP Account Number BAGWRA on page 2 should show a Runoff Year 2011-2012 value of No Data.

- Table 1 LADWP Account Number RV361 on page 2 should show a Runoff Year 2011-2012 value of 170.5 acre-feet (ac-ft.) RV361B was mistakenly shown on the Bishop Cone Audit water use report rather than the Bishop Cone Area RV361.

- Table 1 LADWP Account Number BCCL on page 2 should have a Runoff Year 2011-2012 value of 3648.09 ac-ft instead of 4.77 ac-ft. This is because the accounting method should make the total always equal to zero and the actual total ditch loss being listed above the zero. Due to an accounting error, 4.77 ac-ft was carried down into the total value, which should have rolled into the 3643.32 ac-ft total ditch loss, resulting in 3648.09 ac-ft.

Bishop, California mailing address: 300 Mandich Street • Bishop, CA 93514-3449 • Telephone: (760) 873-0208 • Fax (760) 873-0266
111 North Hope Street, Los Angeles, CA 90012-2607 • *Mailing address:* Box 51111 • Los Angeles, CA 90051-0100
Telephone: (213) 367-4211 • *Cable address:* DEWAPOLA

It should be noted that 3475 acre-feet of water was supplied to the Bishop Cone as stockwater during the 2011-2012 runoff year.

Mr. William Jones of my staff will contact Mr. Randy Jackson of your staff to continue discussion of the inclusion of stockwater uses in the audit report.

If you have any questions, please contact Mr. Jones at (760) 873-0380.

Sincerely,

James G. Yannotta
Aqueduct Manager

c: Mr. Randy Jackson
Mr. William Jones