



Los Angeles Department of Water and Power Annual Owens Valley Report May 2009



- ◆ Annual Owens Valley Operations Plan for the 2009-10 Runoff Year
- ◆ Conditions in the Owens Valley
- ◆ Enhancement and Mitigation Project Status
- ◆ 1991 Environmental Impact Report
- ◆ Mitigation Measure Status
- ◆ Status of Other Studies, Projects and Activities

**LOS ANGELES DEPARTMENT OF WATER AND POWER
ANNUAL OWENS VALLEY REPORT**

**Annual Owens Valley Operations Plan for Runoff Year 2009-10
Conditions in the Owens Valley
Enhancement and Mitigation Project Status
Status of 1991 Environmental Impact Report
Mitigation Measure Status
Status of Other Studies, Projects, and Activities**

Prepared by

**Los Angeles Department of Water and Power
Water Operations Division
Aqueduct Section**

May 2009

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SUMMARY

This report includes LADWP's proposed Owens Valley operations plan for the 2009-10 runoff year, an update on Owens Valley conditions, the current status of LADWP's environmental and mitigation projects, and other studies, projects, and activities.

Owens Valley Annual Operations Plan Summary

For the period of April 1, 2009 to March 31, 2010 the forecast Owens Valley runoff is 294,100 acre-feet, or 71% of normal. According to the well ON/OFF provisions of the Water Agreement, approximately 135,000 acre-feet of water is available for groundwater pumping from Owens Valley wellfields. Currently, LADWP pumping is governed by the ON/OFF provisions of the *1991 Agreement between the County of Inyo and the City of Los Angeles (City) and its Department of Water and Power on a Long-Term Groundwater Management Plan for Owens Valley and Inyo County (Water Agreement)* and the *Agreement Between the County of Inyo and the City of Los Angeles Department of Water and Power Regarding and Interim Management Plan for Groundwater Pumping in the Owens Valley (IMP)* agreed upon by Inyo County and LADWP. Accordingly, LADWP's planned pumping is limited to 63,450 acre-feet (acft) for 2009-10 runoff year.

Owens Valley Conditions

The 2009-10 runoff year is forecast to be below normal. The overall Eastern Sierra snow pack as of April 1, 2009 was 72% of normal. Similarly, precipitation on the valley floor has been below normal with approximately 3.24 inches as compared to the long-term average of 5.97 inches. Despite last year's below normal runoff, the overall vegetation cover in the Owens Valley remained above the mid-1980's baseline conditions in 2008. Similarly, groundwater levels in the wellfields generally remained stable mainly due to minimal pumping by LADWP for in-valley uses.

During 2008-09 runoff year the Lower Owens River was in full operation status with minimum average flows of 40 cfs measured at all gauge stations. The total water use by the Lower Owens River, the Delta, and the Blackrock Waterfowl Habitat was approximately 25,000 acre-feet for the year. The releases at the Los Angeles Aqueduct (LAA) intake is augmented through additional releases at the Independence, Blackrock, Georges, Locust, and Alabama spillgates to maintain an average continuous flow of at least 40 cfs in the river channel.

Construction of Owens Lake Dust Mitigation Measures continued during 2008-09 runoff year. With the additional areas covered by the Dust Control Project, water demand by the project continued to increase with total water use of 60,000 acft during 2008-09 runoff years.

Enhancement/Mitigation Project Status

The enhancement/mitigation projects discussed in this report are environmental projects that were implemented prior to the *1991 EIR Water From the Owens Valley to Supply the Second Los Angeles Aqueduct* (1991 EIR), used to evaluate a long-term groundwater management plan in the Owens Valley. 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 planning stages.

Mitigation Project Status

There are 42 mitigation projects identified for thirteen impacts in the 1991 EIR. 29 of these projects have been completed or are being 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 phase.

Green Book Revision Cooperative Study

Inyo County and LADWP are jointly working toward the completion of Green Book Revision cooperative studies to develop a better understanding of Owens Valley natural resources and an updated procedure for managing natural resources in Owens Valley.

The status of the Mitigation Monitoring and Reporting Programs for the Laws Irrigation Project, Well 415 in Big Pine, and the Lower Owens River Project (LORP) have been updated. The status on implementation of the Water Agreement and the 1997 Memorandum of Understanding between LADWP, Inyo County, the 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.

1. INTRODUCTION

1. INTRODUCTION

This document is intended to satisfy LADWP's annual reporting obligations pursuant to the Water Agreement; the 1991 EIR; the Laws Type E transfer; the 1997 MOU between LADWP, Inyo County, the California Department of Fish and Game, the California State Lands Commission, the Sierra Club, and the Owens Valley Committee; 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/LADWP 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 Obligations of Agreement

The Inyo/LA 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 2009-10 Runoff Year Operations Plan.

1.3 1997 Owens Valley MOU

In accordance with the MOU, 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 MOU. Sections 3 through 6 of this report are intended to complete that requirement.

1.4 1991 Owens Valley 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 mitigation plans 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 2009-10**

2. ANNUAL OWENS VALLEY OPERATIONS PLAN FOR RUNOFF YEAR 2009-10

This year's pumping program is consistent with the management strategy of the Water Agreement between the County of Inyo and the City of Los Angeles 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.”

This year will be the third year that Owens Valley operations will be under the provisions of the IMP as well as the Water Agreement. The IMP, an agreement between Inyo County and LADWP, is a more conservative pumping management approach than pumping under the provisions of the Water Agreement alone. The IMP provides a simple methodology for preparing the Owens Valley annual pumping programs for runoff years 2007-08, 2008-09, and 2009-10. Pumping in the Owens Valley will be managed with the goal of maintaining or raising average groundwater levels in each well field as compared to the average measured water levels in early April 2007, subject to well field specific criteria described in Section 8.b of the IMP.

2.1 Owens Valley Runoff Forecast

The April 1, 2009 LADWP forecast runoff for the Owens Valley is based on the actual survey of snow gauging stations located along the Eastern Sierra Mountain front. The long-term average Owens Valley runoff is 415,725 acre-feet, based on 1956-2005 actual data. For the period of April 1, 2009 through March 31, 2010, the forecast Owens Valley runoff is 294,100 acre-feet, or 71% of long-term average (Table 1). This includes runoff from streams in Long Valley, Round Valley, and the Owens Valley. Figure 1 shows Owens Valley runoff since the 1971 runoff year.

Table 1. Owens Valley Runoff Forecast for 2009-10 Runoff Year

2009 RUNOFF FORECAST
April 1, 2009

APRIL THROUGH SEPTEMBER RUNOFF

	MOST PROBABLE VALUE		REASONABLE MAXIMUM	REASONABLE MINIMUM	LONG-TERM MEAN (1956 - 2005)
	<u>(Acre-feet)</u>	<u>(% of Avg.)</u>	<u>(% of Avg.)</u>	<u>(% of Avg.)</u>	<u>(Acre-feet)</u>
MONO BASIN:	91,300	88%	100%	76%	103,890
OWENS VALLEY:	206,900	68%	81%	55%	304,059

APRIL THROUGH MARCH RUNOFF

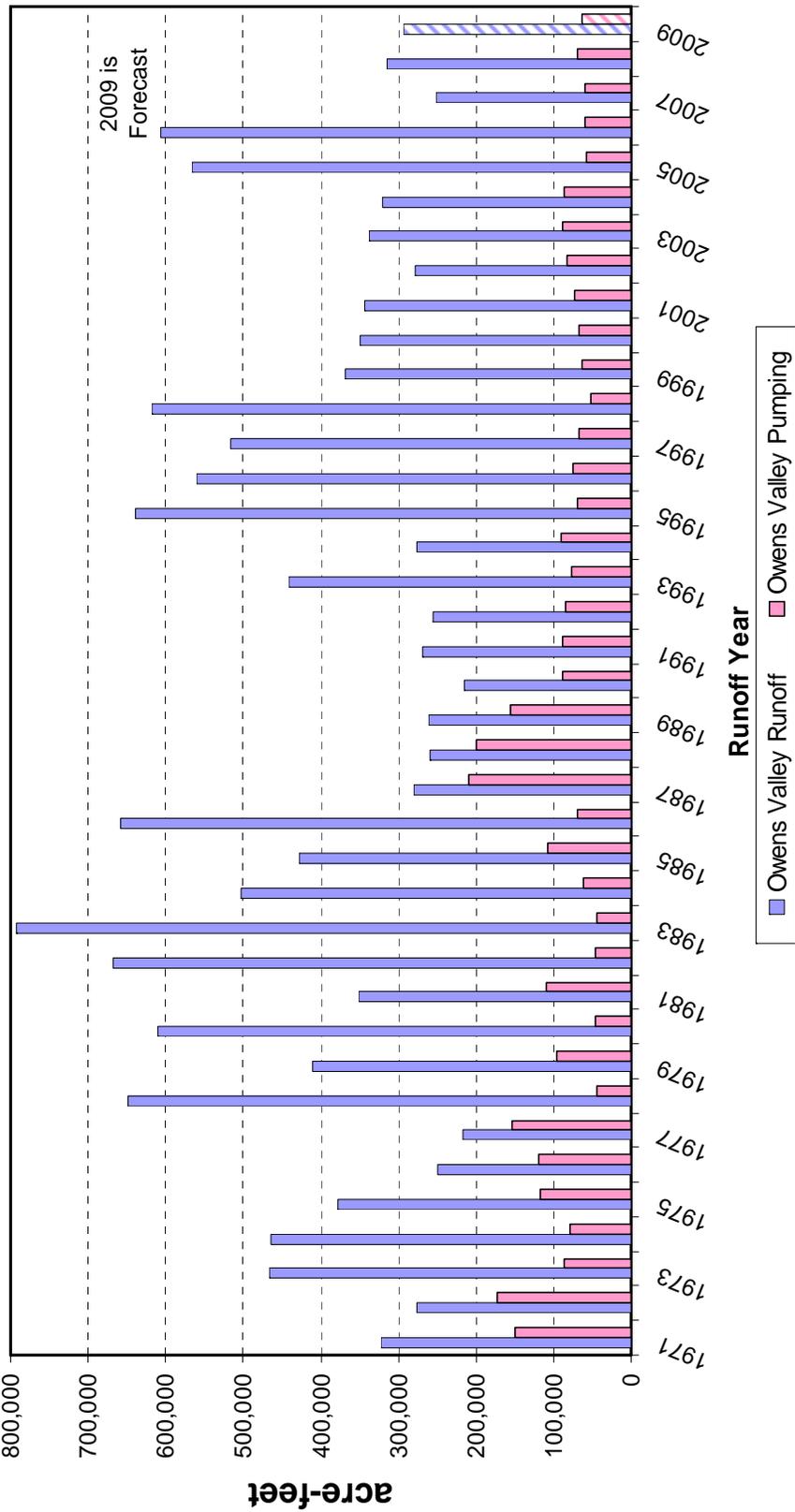
	MOST PROBABLE VALUE		REASONABLE MAXIMUM	REASONABLE MINIMUM	LONG-TERM MEAN (1956 - 2005)
	<u>(Acre-feet)</u>	<u>(% of Avg.)</u>	<u>(% of Avg.)</u>	<u>(% of Avg.)</u>	<u>(Acre-feet)</u>
MONO BASIN:	107,900	88%	101%	75%	122,383
OWENS VALLEY:	294,100	71%	84%	59%	415,725

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 2009-10 Annual Owens Valley Operations Plan based on the goals and principles of the Water Agreement and in compliance with the provisions of IMP. The 2009-10 Annual Operations Plan focuses on meeting in-valley uses and strives to maintain average well field groundwater levels commensurate with those measured in April 2007.

The amount of groundwater pumping allowed under the Water Agreement from each well field in the Owens Valley is determined based on the ON/OFF status of monitoring sites located throughout the Owens Valley (Section V of Water Agreement). Table 2 lists the ON/OFF status of all monitoring sites in the Owens Valley as of April 2009. According to the ON/OFF provisions, Table 3 shows that as of April 2009, approximately 135,000 acre-feet of water is available for groundwater pumping from Owens Valley well fields. The 135,000 acre-feet of water is available for pumping from wells linked to monitoring sites with ON status and from exempt wells. Wells are considered to be exempt when their pumping has no impact on groundwater dependent vegetation or when they are used to supply town water systems, fish hatcheries, and specific Enhancement/Mitigation projects. Table 3 lists a breakdown of available pumping capacity and planned annual groundwater pumping by wellfield. Figure 2 shows comparison between the amount of groundwater pumping allowed under the provisions of Water Agreement and the actual groundwater pumping from the Owens Valley for each runoff year since 1992.

As shown in Table 3, LADWP's planned pumping in Owens Valley for 2009-10 runoff year is limited to 63,450 acre-feet under the provisions IMP. This is approximately 47% of the pumping allowed under the ON/OFF provisions of the Water Agreement. Figure 1 also shows actual groundwater pumping from wellfields in Owens Valley from the 1971 runoff year to the planned pumping for the 2009-10 runoff year.

Consistent with the goals of the Water Agreement, pumping in all areas is within the allowable limits dictated by ON/OFF status and 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 wellfields in the Owens Valley will be in deficit by the end of the first half of the 2009-10 runoff year.

As stated earlier, ICWD and LADWP entered into the IMP agreement for managing groundwater in Owens Valley during 2007-08 through 2009-10 runoff years. Groundwater pumping in the Owens Valley will be managed with the goal of maintaining or raising average groundwater levels in each wellfield compared to the average measured groundwater levels in early April 2007. A number of representative monitoring wells in each wellfield are utilized to calculate the average groundwater levels in corresponding wellfields. Table 5 lists the agreed-upon monitoring wells in each wellfield utilized for calculating average wellfield groundwater levels, measured groundwater levels in April 2007, 2008, and 2009 as well as forecast water levels for April 2010 based on: 1) the measured April 2009 water levels; 2) the 2009-10 Owens Valley runoff; and 3) the proposed wellfield pumping volumes. Measured April 2009 water levels for Owens Valley remained generally stable despite very low runoff

conditions and pumping of the exempt wells presented in Exhibit B of the IMP (Table 6). Similarly, for April 2010, water levels are expected to remain relatively stable despite below normal runoff conditions being forecast.

Table 7 details planned pumping for the 2009-10 runoff year on a month-to-month basis for each wellfield. Pumping for town water systems, fish hatcheries, and enhancement/mitigation (E/M) projects are included in that distribution. While this table provides the planned pumping amounts from each wellfield on a monthly basis, the actual pumping may differ depending on the equipment conditions.

Planned pumping may be increased to provide freeze protection for the Los Angeles Aqueduct during winter months.

The planned monthly distribution of groundwater pumping from each wellfield for the 2009-10 runoff year is similar to previous years and is shown in Table 7. The total Owens Valley groundwater pumping for 2009-10 runoff year is consistent with the provisions of the Water Agreement and the IMP. Pumping tests such as the Reinhackle Spring Operational Test in the Bairs-Georges Wellfield, the initial operation of production wells W415 in Big Pine, and W416 in the Lone Pine Wellfield, if agreed to by ICWD and LADWP, will be in addition to the above planned pumping total.

The following is a discussion of the planned pumping program by wellfield. Figures 3, 4, and 6 through 10 locate LADWP's Owens Valley pumping wells by wellfield. 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 2009 According to Section III of Green Book

Site	Oct 2008 Soil AWC (cm)	50% Annual Precip. (cm)	Proj. soil AWC (cm)	Oct. 2008 Veg. Water Req./ Water Req. for Well Turn-On (cm)	Oct 2008 Status	April 2009 soil AWC (cm)	April 2009 Status	Soil AWC Req. for Well Turn On (cm)
L1	13.9	7.9	21.8	18.0 / NA	ON	14.0	ON	NA
L2	37.5	7.9	45.4	11.0 / NA	ON	37.1	ON	NA
L3	9.0	7.9	16.9	18.5 / NA	OFF	16.6	OFF	18.5, OFF 10-08
BP1	11.5	NA	11.5	14.4 / 22.9H	OFF	12.0	OFF	22.9H, OFF 10-97
BP2	2.3	NA	2.3	26.0 / 28.4	OFF	5.5	OFF	28.4, OFF 7-98
BP3	21.5	7.6	29.1	11.9 / NA	ON	21.9	ON	NA
BP4	57.0	8.2	65.2	8.4 / NA	ON	60.2	ON	NA
TA3	5.1	NA	5.1	35.7 / 25.9	OFF	7.5	OFF	25.9, OFF 7-98
TA4	15.2	NA	15.2	18.3 / 23.2	OFF	19.7	OFF	23.2, OFF 10-98
TA5	20.6	8.2	28.8	6.3 / NA	ON	23.9	ON	NA
TA6	9.0	NA	9.0	23.3 / 26.8H	OFF	12.3	OFF	26.8H, OFF 7-96
TS1	2.0	NA	2.0	2.5 / 20.4H	OFF	3.6	OFF	20.4H, OFF 10-96
TS2	6.7	NA	6.7	15.9 / 19.5	OFF	9.6	OFF	19.5, OFF 7-98
TS3	27.3	7.3	34.6	14.6 / NA	ON	41.2	ON	NA
TS4	26.3	NA	26.3	53.4 / 47.9	OFF	40.6	OFF	47.9, OFF 10-03
IO1	20.6	NA	20.6	83.4 / 42.2	OFF	26.5	OFF	42.2, OFF 10-98
IO2	3.7	NA	3.7	12.6 / 14.8	OFF	4.0	OFF	14.8, OFF 7-05
SS1	25.9	NA	25.9	35.2 / 9.3	OFF	37.0	OFF	39.3, OFF 7-05
SS2	3.0	NA	3.0	17.6 / 13.4	OFF	4.5	OFF	13.4, OFF 7-03
SS3	22.6	NA	22.6	39.4 / 37.7	OFF	35.2	OFF	37.7, OFF 10-03
SS4	4.5	NA	4.5	15.6 / 15.9	OFF	3.7	OFF	15.9, OFF 7-05
BG2	28.6	6.5	35.1	18.0 / NA	ON	31.9	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 - Available Pumping Capacity According to Monitoring Sites with ON Status and Planned Pumping for Runoff Year 2009-10

Wellfield	Monitoring Site	Associated Production Wells	Available Capacity (AF)	Planned Pumping (AF)
Laws	L1	247, 248, 249, 398	12,670	
	L2	236**, 239, 243, 244	10,492	
	L5*	245, 387, 388	9,412	
	Exempt	236**, 354, 365, 413	3,337	
	Wellfield Pumpage		35,911	7,900
Bishop	All wells	140, 371, 406, 407, 408, 410, 411, 412	12,000	
	Wellfield Pumpage		12,000	11,000
Big Pine	BP3	222, 223, 231, 232	4,851	
	BP4	331	7,530	
	Exempt	218, 219, 330, 332, 341, 352, 415	25,486	
	Wellfield Pumpage		37,867	21,000
Taboose	TA5	349	10,570	
Aberdeen	Exempt	118, 349	1,810	
	Wellfield Pumpage		12,380	550
Thibaut	TS3	103, 104, 382EM	2,968	
Sawmill	Exempt	351, 356	12,800	
	Wellfield Pumpage		15,768	12,800
Indep. - Oak	Exempt	59, 60, 61, 65, 357, 383EM, 384EM, 401	13,973	
	Wellfield Pumpage		13,973	7,400
Symmes				
Shepherd	Exempt	402EM	1,350	
	Wellfield Pumpage		1,350	1,200
Bairs	BG2	76, 343, 348, 403	4,054	
Georges	Exempt	343	500	
	Wellfield Pumpage		4,054	400
Lone Pine	Exempt	344, 346, 390	1,231	
	Other	416	335	
	Wellfield Pumpage		1,566	1,200
Owens Valley Total			134,869	63,450

* Monitoring site has yet to be located.

** Well W236 is used partially for irrigation water augmentation.

Figure 2 - Owens Valley Pumping - Allowed Under Water Agreement vs Actual

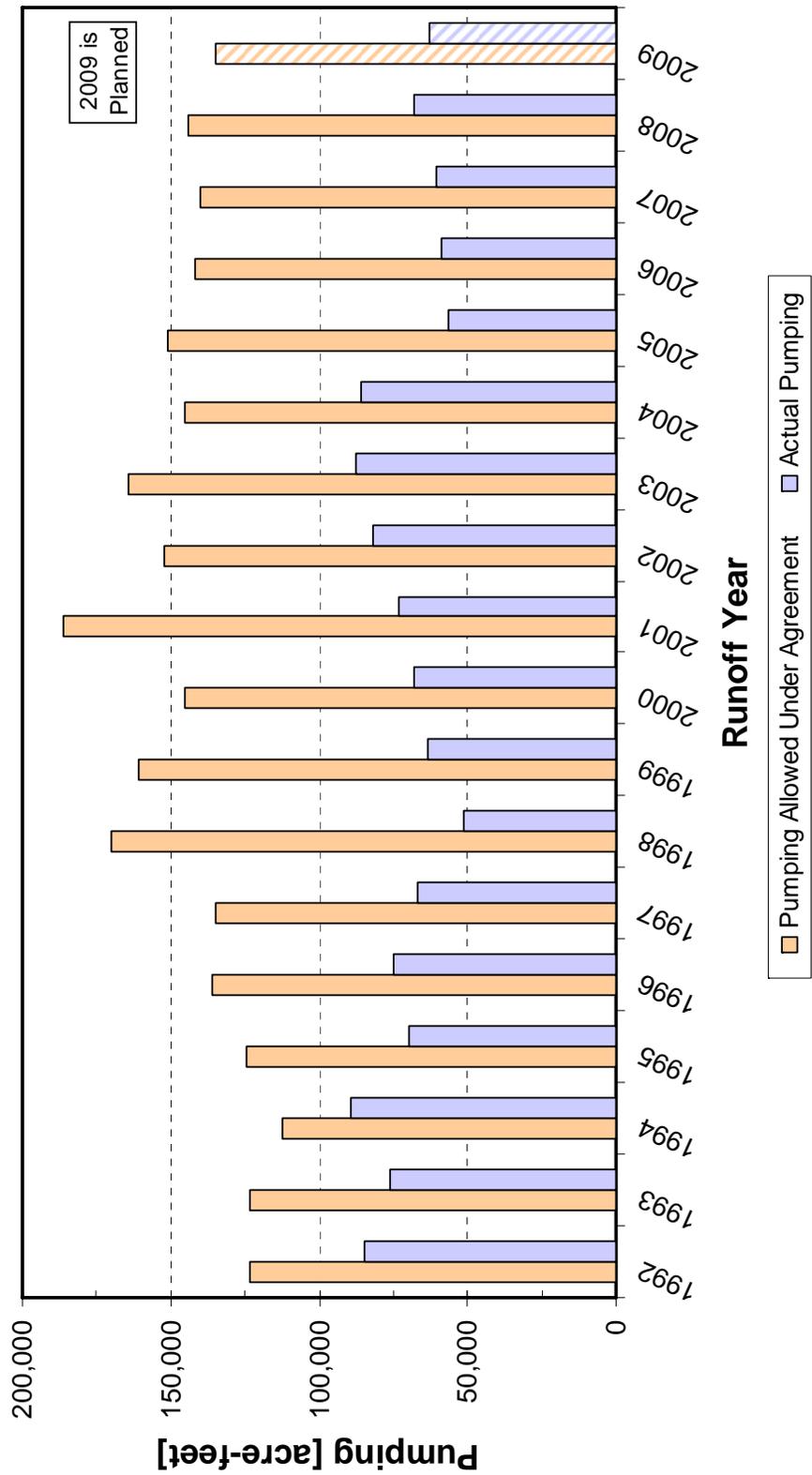


Table 4 - Summary of Recharge and Pumping for Water Year 1990 - 2008 and Estimated Pumping Limit for Apr-Sep 2009 in acre-feet

Water Year	OWENS VALLEY		LAWS		BISHOP		BIG PINE		TABOOSE-THIBAUT		IND-SYM-BAIRS		LONE PINE		OWENS VALLEY	
	Runoff Percent		Recharge	Pumping	Recharge	Pumping	Recharge	Pumping	Recharge	Pumping	Recharge	Pumping	Recharge	Pumping	Recharge	Pumping
1990	55%		11,580	27,988	34,198	11,432	17,604	29,666	19,777	33,480	23,406	20,124	9,989	1,658	116,554	124,348
1991	59%		11,132	13,691	34,868	11,519	18,729	21,168	21,087	29,136	25,846	10,390	10,408	1,303	122,070	87,207
1992	57%		10,859	8,907	34,688	11,326	18,392	24,345	20,518	23,761	25,195	14,154	10,420	1,626	120,072	84,119
1993	99%		19,778	7,541	44,445	8,404	27,580	22,627	35,068	19,424	40,061	11,689	15,509	1,519	182,441	71,204
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	23,288	28,820	10,279	12,103	1,345	129,831	78,116
2003	75%		11,454	5,786	38,486	11,407	21,883	25,885	26,166	27,387	32,455	14,281	13,088	1,179	143,532	85,925
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	133,586	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	2,892	54,337	5,667	39,650	20,685	47,757	15,707	53,873	9,944	19,980	1,119	250,935	56,014
2007	64%		10,947	7,840	34,470	10,516	19,757	20,525	25,804	14,578	27,624	10,673	10,454	1,100	129,057	65,232
2008	68%		10,947	7,840	34,470	10,516	19,757	20,525	25,804	14,578	27,624	10,673	10,454	1,100	129,057	65,232
2009 (a)	67%		10,855	130	35,850	2,463	20,432	10,868	28,613	6,587	27,759	1,050	11,584	177	135,094	21,275
(b) TOTAL			311,668	153,927	833,847	183,521	516,190	456,574	626,719	409,703	742,475	230,496	289,792	25,409	3,320,691	1,459,630
Estimated Apr-Sep 2009 Pumping Limit				157,741		650,326		59,616		217,016		511,979		264,383		1,861,061

(a) Estimated Recharge for the 2009 Water Year; Approximate Pumping for First Half of Water year 2009 (Oct-Mar).

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

Table 5 – Measured Depth-to-Water in April of 2007, 2008, and 2009 and Forecast for April 2010 in Selected Monitoring Wells

Wellfield (Planned Pumping)	Monitoring Well	April 2007 Measured DTW (ft)	April 2008 Measured DTW (ft)	April 2009 Measured DTW (ft)	April 2010 Forecasted DTW (ft)	April 2010 DTW change from April 2007
Laws (7,900 AF)	T436	-5.3	-7.1	-8.8	-10.3	-5.1
	T490	-10.2	-12.6	-13.8	-15.0	-4.8
	T492	-23.1	-26.8	-29.1	-34.3	-11.2
	Average	-12.9	-15.5	-17.2	-19.9	-7.0
Big Pine (21,000 AF)	T425	-14.9	-14.9	-15.2	-16.5	-1.6
	T426	-11.7	-11.9	-12.1	-12.8	-1.0
	Average	-13.3	-13.4	-13.7	-14.6	-1.3
Taboose-Aberdeen (550 AF)	T418	-9.1	-8.3	-8.7	-8.3	0.8
	T419	-6.3	-5.1	-6.2	-5.2	1.1
	T421	-33.1	-32.5	-33.4	-33.4	-0.4
	T502	-8.0	-7.5	-8.8	-9.6	-1.6
	Average	-14.1	-13.3	-14.3	-14.1	0.0
Thibaut-Sawmill (12,800 AF)	T413	-10.4	-11.9	-12.2	-13.4	-3.0
	T415	-19.0	-18.4	-21.7	-21.4	-2.3
	Average	-14.7	-15.1	-17.0	-17.4	-2.7
Independence - Oak (7,400 AF)	T407	-9.9	-9.8	-9.5	-10.0	0.0
	T408	-2.9	-2.8	-2.9	-3.2	-0.4
	T409	-3.3	-3.1	-2.7	-5.2	-2.0
	Average	-5.4	-5.2	-5.0	-6.1	-0.8
Symmes-Shepherd (1,200 AF)	T401	-22.0	-20.6	*	*	*
	T403	-7.0	-6.3	-6.2	-5.9	1.0
	T404	-5.4	-5.4	-5.4	-5.1	0.3
	T447	-35.7	-34.6	-33.8	-33.6	2.1
	Average	-16.0	-15.4	-15.1	-14.9	1.2
Bairs-George (400 AF)	T398	-2.7	-3.8	-3.3	-3.7	-1.0
	T400	-4.4	-4.6	-4.9	-4.8	-0.5
	Average	-3.5	-4.2	-4.1	-4.3	-0.8

* Well T401 was abandoned as part of CALTRANS road widening in December 2008

Table 6 – Exempt Wells in Owens Valley

Exhibit B

(revision 7/2007)

List of Exempt Owens Valley Wells for this Agreement

WELL NUMBER	WELL FIELD	REASON
354 ¹	Laws	Town Supply
413 ²	Laws	Town Supply and Laws Museum E/M Project Irrigation Well
236	Laws	Irrigation Water (to supplement irrigation water supply from Well 365 when necessary)
247	Laws	Supply McNally Pasture enhancement/mitigation Project
376	Laws	Irrigation Supply for re-vegetation project
377	Laws	Supply Laws/Poleta Pasture enhancement/mitigation Project
399	Laws	Irrigation Supply for re-vegetation project
341 ¹	Big Pine	Town Supply
352 ²	Big Pine	Town Supply
415 ^{2 3}	Big Pine	Town Supply
357 ¹	Independence-Oak	Town Supply
384 ²	Independence-Oak	Town Supply
344 ¹	Lone Pine	Town Supply
346 ²	Lone Pine	Town Supply
330	Big Pine	Fish Spring Hatchery
332	Big Pine	Fish Spring Hatchery
349	Taboose-Aberdeen	Water to supply a pond which is a mitigation project
351	Thibaut-Sawmill	Blackrock Fish Hatchery
356	Thibaut-Sawmill	Blackrock Fish Hatchery
401	Independence-Oak	Water for irrigation in Independence-Oak Wellfield
59	Independence-Oak	Water for irrigation in Independence-Oak Wellfield
60	Independence-Oak	Water for irrigation in Independence-Oak Wellfield
65	Independence-Oak	Water for irrigation in Independence-Oak Wellfield
383E/M	Independence-Oak	Water for irrigation in Independence-Oak Wellfield
384E/M	Independence-Oak	Water for irrigation in Independence-Oak Wellfield
61	Independence-Oak	Water for irrigation in Independence-Oak Wellfield
365	Laws	Water for irrigation in Laws Wellfield
245	Laws	Water for irrigation in Laws Wellfield
387	Laws	Water for irrigation in Laws Wellfield
388	Laws	Water for irrigation in Laws Wellfield
402E/M	Symmes-Shepherd	Water for E/M Project in Symmes-Shepherd Wellfield
390E/M	Lone Pine	Water for E/M Project in Lone Pine Wellfield
343	Bairs-Georges	Irrigation Water in Bairs-Georges Wellfield in Below Average Runoff Years

Note 1: Primary town supply well

Note 2: Backup town supply well

Note 3: Usage for the Big Pine Ditch system to be consistent with evaluation and approval of such use by the Technical Group

Note: This is Exhibit B, "List of Exempt Owens Valley Wells for this Agreement," an attachment to the 3/07 Standing Committee-approved Interim Management Plan (IMP).

Table 7 - Planned Monthly Wellfield Pumping for 2009-10 Runoff Year in acre-feet

Month	Laws	Bishop	Big Pine	Taboose- Aberdeen	Thibaut- Sawmill	Indep.- Oak	Symmes- Shepherd	Bairs- George	Lone Pine	TOTAL
April	1,000	1,500	1,700	15	1,060	1,000	200	0	180	6,655
May	1,200	1,500	1,800	18	1,060	1,050	200	0	180	7,008
June	1,200	1,500	1,800	368	1,080	1,050	200	0	190	7,388
July	1,200	1,500	1,800	18	1,080	1,050	200	150	190	7,188
August	1,200	1,500	1,800	20	1,080	1,050	200	150	190	7,190
September	1,200	1,500	1,800	18	1,080	1,050	200	100	180	7,128
October	200	400	1,800	18	1,060	200	0	0	15	3,693
November	200	300	1,700	15	1,060	200	0	0	15	3,490
December	200	300	1,700	15	1,060	200	0	0	15	3,490
January	100	300	1,700	15	1,060	200	0	0	15	3,390
February	100	300	1,700	15	1,060	200	0	0	15	3,390
March	100	400	1,700	15	1,060	150	0	0	15	3,440
Total	7,900	11,000	21,000	550	12,800	7,400	1,200	400	1,200	63,450

Laws Wellfield (Figure 3)

Monitoring sites L1 and L2 are in ON status. Production wells controlled by these monitoring sites have an available production capacity of 32,357 acre-feet. Wells linked to monitoring site L5 have a capacity of 9,412 acre-feet. Green Book designated exempt wells within the Laws Wellfield have a capacity of 3,337 acre-feet. Therefore, the total available pumping capacity in the Laws Wellfield is 35,911 acre-feet. Well W365 has had a reduction in production capacity. Well W236, associated with monitoring site L2 is sometimes used along with W365 as exempt wells to provide irrigation water. LADWP is evaluating W365 to determine the cause of reduced production capacity.

According to the terms of the IMP, monitoring wells T436, T490, and T492 are used to calculate the average groundwater level in the Laws Wellfield. Even though vegetation monitoring sites L1 and L2 are in ON status, none of the wells associated with these monitoring sites will be pumped in the 2009-10 runoff year because of the depth-to-water criteria of the IMP. The pumping minimum in the Laws Wellfield is 7,900 acre-feet this year to supply the town water system, all E/M projects, and irrigated lands in this wellfield. IMP exempted wells (Table 6) will be utilized to provide water for these uses. Therefore, the required groundwater pumping from the Laws Wellfield is 7,900 acre-feet for the 2009-10 runoff year. With this amount of groundwater pumping and a 71% of normal Owens Valley runoff, the April 2010 average groundwater level in the Laws Wellfield, based on the key monitoring wells is forecast to be 7.0 feet below the April 2007 level as shown in Table 5.

Bishop Wellfield (Figure 4)

Pumping in the Bishop Wellfield is governed by the provisions of the Hillside Decree, and exempt from the management provisions of the IMP. The provisions of the Hillside Decree limit LADWP's annual groundwater extractions (pumping and flowing wells) from the Bishop Cone to the total amount of water used on City-owned lands on the Bishop Cone (including conveyance losses) in each runoff year. Currently, the accounted-for total uses on City-owned land within the Bishop Cone area is approximately 25,000 acre-feet per year. The current total available pumping capacity in the Bishop Wellfield is approximately 12,000 acre-feet. The planned groundwater pumping from the Bishop Wellfield is 11,000 acre-feet for the 2009-10 runoff year.

Figure 5 shows water use on the City-owned land in comparison to the groundwater extractions (flowing and pumping wells) on Bishop Cone for runoff years 1996 to present. The current annual accounted for water use on the City-owned land (approximately 25,000 acre-feet) and the groundwater extraction capacity (approximately 15,000 acre-feet) leaves an additional 10,000 acre-feet of allowed pumping remaining on the Bishop Cone.

The above calculated water use does not include the amount of conveyance losses on Bishop Cone which is a credited use. When an evaluation of conveyance losses within Bishop Cone is completed, it will be included in future Bishop Cone audits.

Figure 3

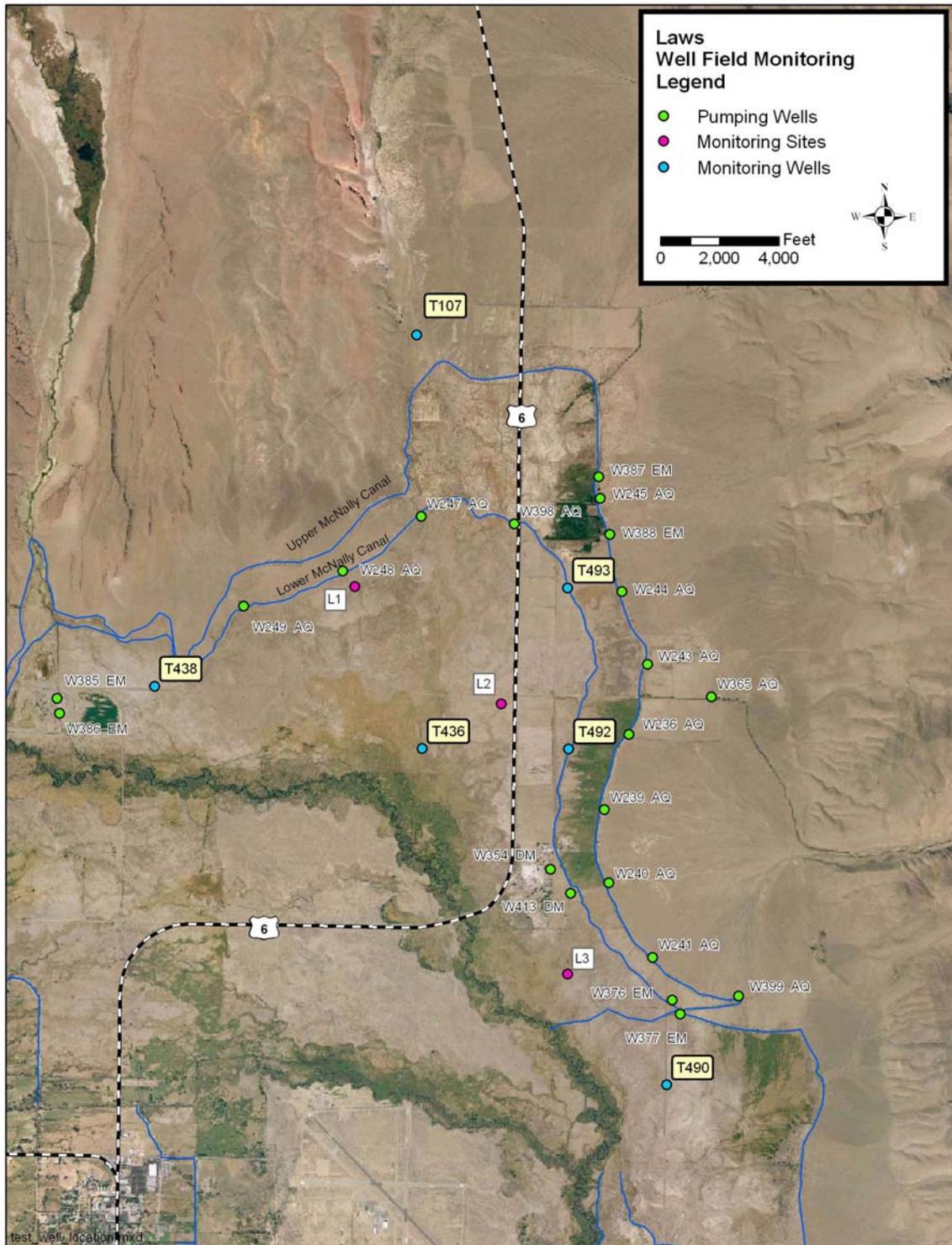


Figure 4

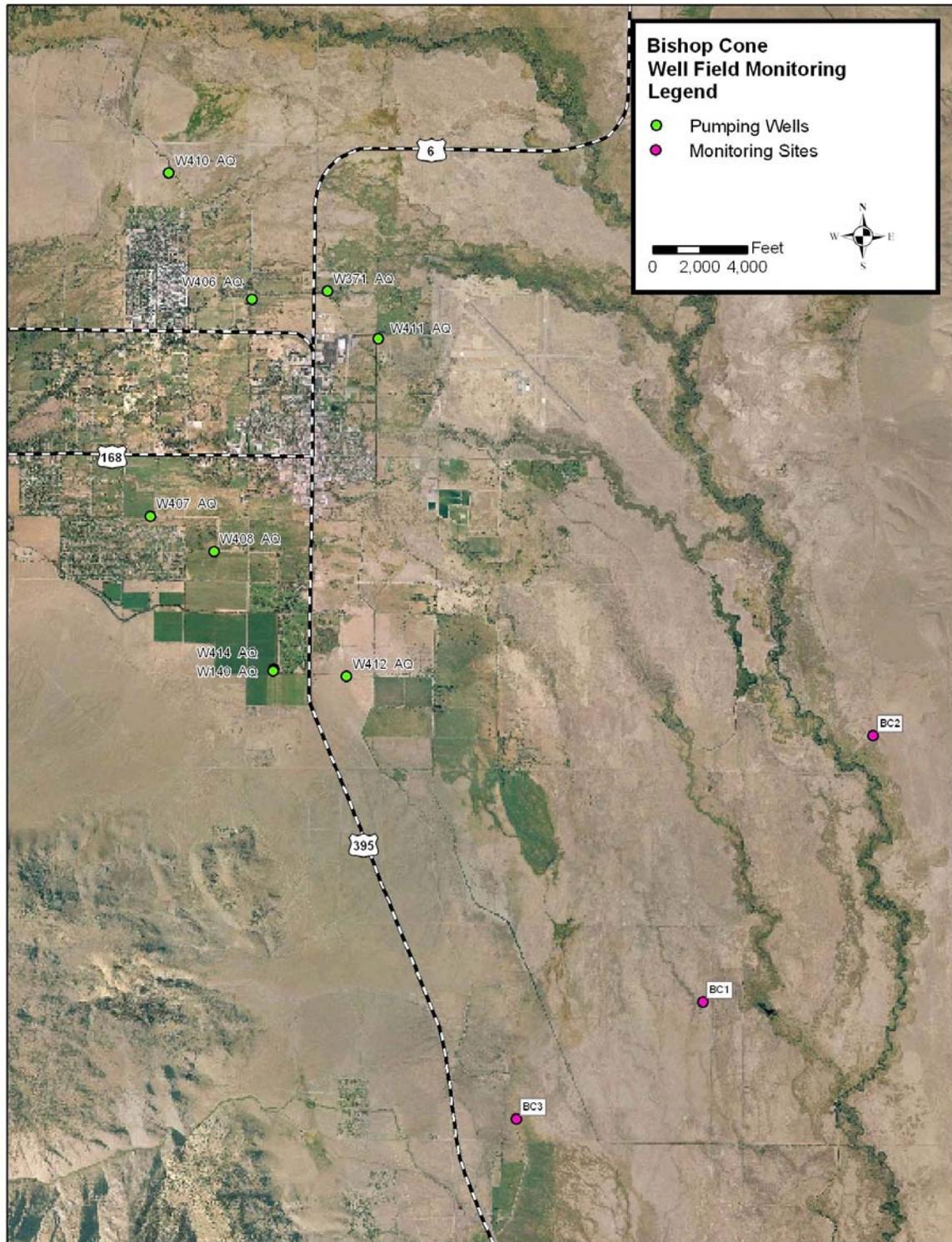
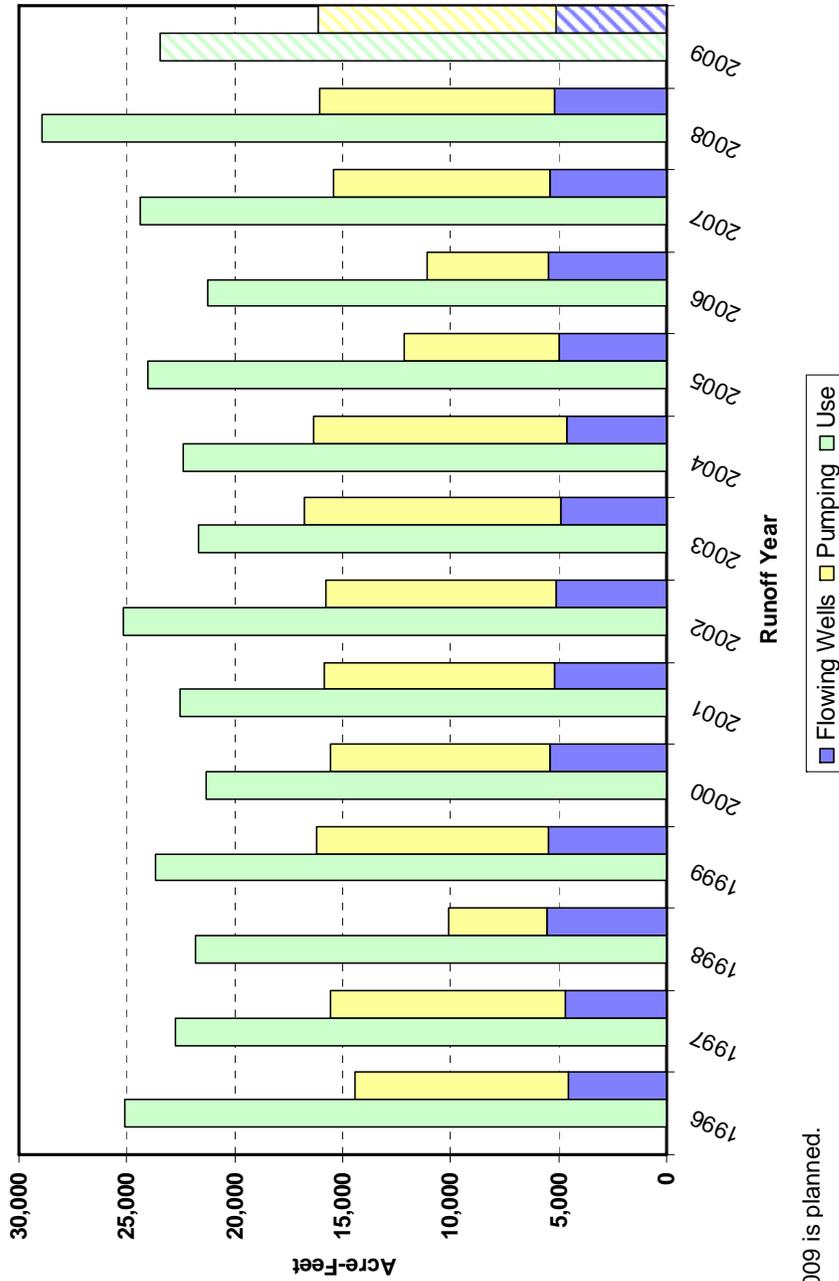


Figure 5 - Groundwater Extraction (flowing & pumping) and Water Use on Los Angeles-Owned Land on the Bishop Cone



* 2009 is planned.

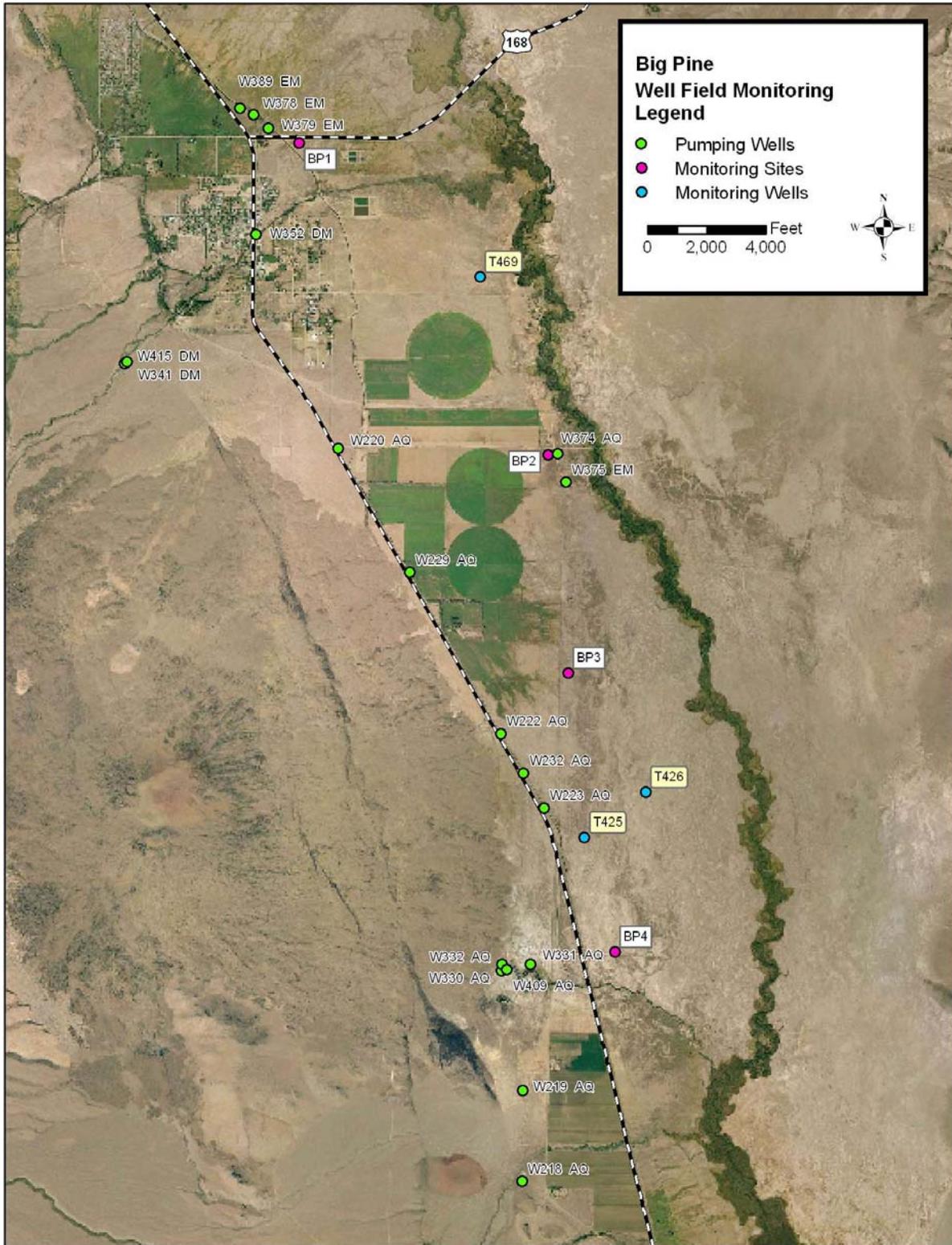
According to the Hillside Decree, total groundwater extraction can not be more than water use on City-owned land on the Bishop Cone.

Big Pine Wellfield (Figure 6)

Monitoring sites BP3 and BP4 are in ON status. Production wells controlled by BP3 have an available production capacity of 4,851 acre-feet. Production well W331, controlled by monitoring site BP4, has a production capacity of 7,530 acre-feet. Green Book designated exempt wells W218, W219, town supply wells, and the Fish Spring Fish Hatchery wells in the Big Pine Wellfield have a combined capacity of 25,486 acre-feet. Therefore, the total available capacity in the Big Pine Wellfield is 37,867 acre-feet.

According to the IMP, monitoring wells T425 and T426 are used to calculate the average groundwater level in Big Pine Wellfield. Even though monitoring sites BP3 and BP4 are in ON status, none of the wells associated with these monitoring sites will be pumped in the 2009-10 runoff year because of the depth-to-water criteria of the IMP. The required pumping from the Big Pine Wellfield includes supplying Fish Spring Fish Hatchery and the town water system on a year-round basis. IMP exempted wells (Table 6) will be utilized to provide water for these uses. The required groundwater pumping from the Big Pine Wellfield is 21,000 acre-feet in the 2009-10 runoff year. With 21,000 acre-feet of pumping and a 71% forecast Owens Valley runoff, the April 2010 average groundwater level in the Big Pine Wellfield based on the key monitoring wells is forecast to be 1.3 feet below April 2007 measured levels as shown in Table 5.

Figure 6



Taboose-Aberdeen Wellfield (Figure 7)

Monitoring site TA5 is in ON status. Production well W349 is controlled by this monitoring site and has an available pumping capacity of approximately 10,570 acre-feet. Green Book exempted well W118 in the Taboose-Aberdeen Wellfield has a capacity of 1,810 acre-feet. Therefore, the total available groundwater pumping capacity in the Taboose-Aberdeen Wellfield is 12,380 acre-feet.

According to the IMP, monitoring wells T418, T419, T421, T502 are used to calculate the average groundwater level in the Taboose-Aberdeen Wellfield. Even though monitoring site TA5 is in ON status, production well W349 will not be pumped continuously because of the depth-to-water criteria of the IMP. During the month of June, W349 will pump continuously for approximately 11 days and for the rest of year will be set on a timer to maintain the water level in a pond adjacent to the Owens River. Production well W349 is expected to pump approximately 550 acre-feet during the 2009-10 runoff year. With the 550 acre-feet of pumping from the Taboose-Aberdeen Wellfield and a 71% of normal forecast Owens Valley runoff, the April 2010 average groundwater level in the Taboose-Aberdeen Wellfield, based on the key monitoring wells, is forecast to remain the same as April 2007 measured levels as shown in Table 5.

Thibaut-Sawmill Wellfield (Figure 8)

Monitoring site TS3 is in ON status. Production wells controlled by this monitoring site have an available pumping capacity of 2,968 acre-feet. Green Book exempted wells W351 and W356 supplying Blackrock Fish Hatchery have a capacity of 12,598 acre-feet and 8,110 acre-feet respectively. Typically, 12,800 acre-feet per year is necessary for supplying the Blackrock Fish Hatchery. Therefore, a total pumping capacity of 15,568 acre-feet is available in the Thibaut-Sawmill Wellfield.

According to the IMP, monitoring wells T413 and T415 are used to calculate the average water level in the Thibaut-Sawmill Wellfield. Even though monitoring site TS3 is in ON status, the wells associated with this monitoring site will not be pumped in the 2009-10 runoff year because of the depth-to-water criteria of the IMP. Typically, 12,800 acre-feet per year is necessary for supplying the Blackrock Fish Hatchery. IMP exempted wells (Table 6) will be utilized to provide water for use at the Blackrock Hatchery. The required groundwater pumping from the Thibaut-Sawmill Wellfield is 12,800 acre-feet for the 2009-10 runoff year. With the required pumping of 12,800 acre-feet from the Thibaut-Sawmill Wellfield and a 71% of normal forecast Owens Valley runoff, the average April 2010 groundwater level in the Thibaut-Sawmill Wellfield, based on the key monitoring wells, is forecast to be 2.7 feet below the average measured wellfield groundwater level in April 2007 as shown in Table 5.

Independence-Oak Wellfield (Figure 8)

All vegetation monitoring sites in the Independence-Oak Wellfield remained in OFF status as of April 2009, resulting in no planned pumping from wells linked to these monitoring sites. Total available pumping capacity in the Independence-Oak Wellfield from Green Book designated exempt wells is 13,973 acre-feet. Pumping from this

wellfield will be limited to exempt wells for supplying E/M projects and the town water system.

According to the IMP, monitoring wells T407, T408, and T409 are used to calculate the average groundwater level in the Independence-Oak Wellfield. None of the wells in the Independence-Oak Wellfield will be pumped for Los Angeles Aqueduct (LAA) supply because of the depth-to-water criteria of the IMP. The required pumping in this wellfield is 7,400 acre-feet for supplying the town water system and E/M projects in the wellfield. IMP exempted wells (Table 6) will be utilized to provide water for these uses. The planned groundwater pumping from the Independence-Oak Wellfield is 7,400 acre-feet for the 2009-10 runoff year. With the planned pumping of 7,400 acre-feet from the Independence-Oak Wellfield and a 71% of normal forecast Owens Valley runoff, the average April 2010 groundwater level in the Independence-Oak Wellfield, based on the key monitoring wells, is forecast to be 0.8 feet below to the average measured groundwater level in April 2007 as shown in Table 5.

Figure 7

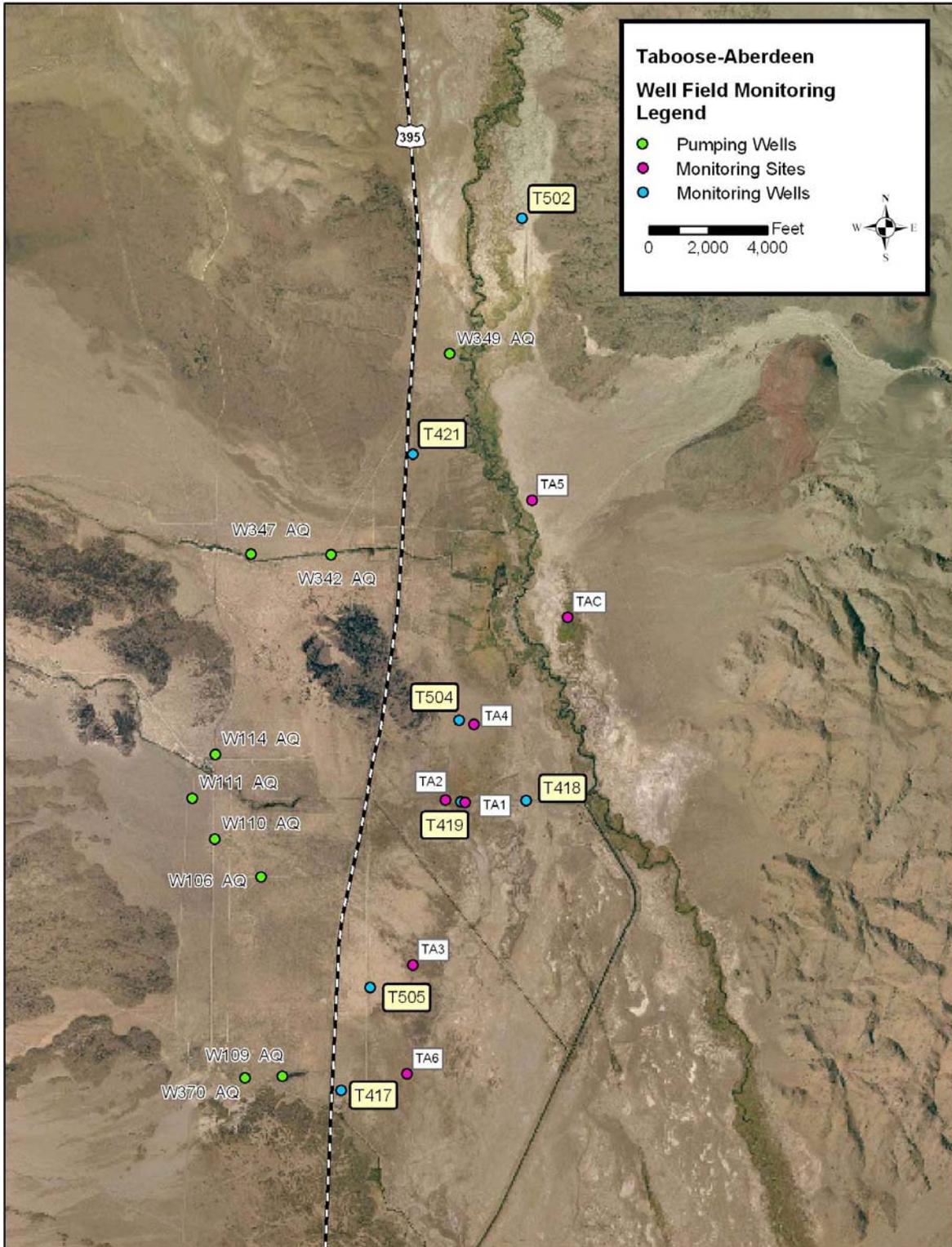
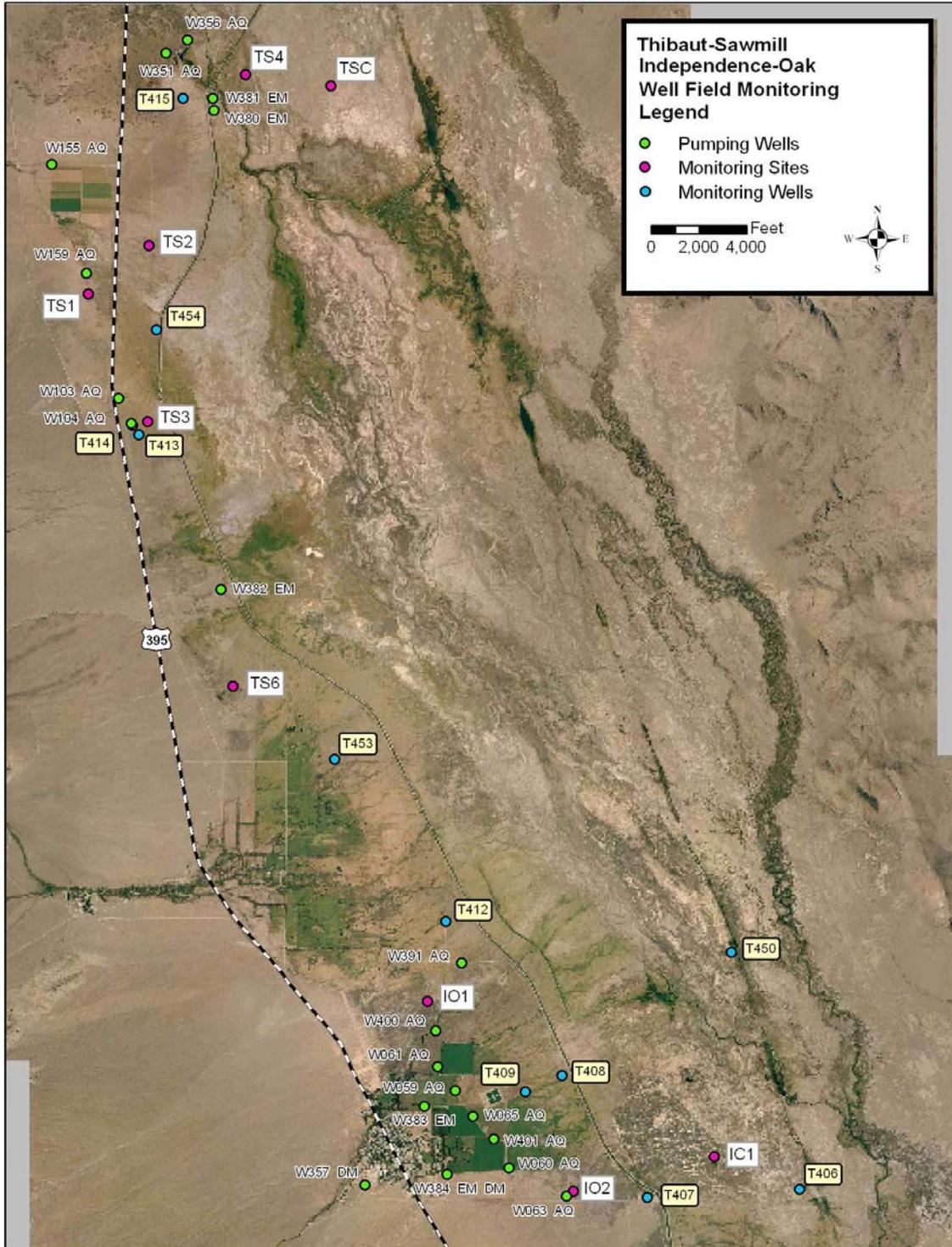


Figure 8



Symmes-Shepherd Wellfield (Figure 9)

The average measured wellfield water level in April 2009 was higher than the average April 2007 level. However, all vegetation monitoring sites in the Symmes-Shepherd Wellfield remained in OFF status as of April 2008, resulting in no planned pumping from wells linked to these monitoring sites. Green Book designated exempt well, W402, in the Symmes-Shepherd Wellfield, has an available capacity of 1,350 acre-feet. The required groundwater pumping from the Symmes-Shepherd Wellfield is 1,200 acre-feet for the 2009-10 runoff year.

According to the IMP, monitoring wells T401, T403, T404, and T447 are used to calculate the average water level in the Symmes-Shepherd Wellfield. However, due to a Caltrans road widening project near Manzanar, several monitoring wells including T401 were destroyed. Therefore, to calculate average wellfield water level, only data from monitoring wells T403, T404, and T447 were utilized. IMP exempted production well W402 (Table 6) will be used for supplying an E/M project in this wellfield. Pumping 1,200 acre-feet from the Symmes-Shepherd Wellfield and a 71% of normal forecast Owens Valley runoff, the average April 2010 groundwater level in the Symmes-Shepherd Wellfield, based on the key monitoring wells, is forecast to be 1.2 feet above the average measured wellfield groundwater level in April 2007 as shown in Table 5.

Bairs-Georges Wellfield (Figure 9)

Vegetation monitoring site BG2 remained in ON status as of April 2008. As 2009-10 runoff year is forecast to be a below normal year, LADWP anticipates having to operate well W343 to provide supplemental water for irrigation purposes in this wellfield. The total planned pumping from well W343 is expected to be 400 acre-feet. Operational testing related to Reinhackle Spring may resume if a testing protocol is agreed to by ICWD and LADWP.

According to the IMP, monitoring wells T398 and T400 are used to calculate the average groundwater level in the Bairs-Georges Wellfield. LADWP is not planning to operate any wells in the Bairs-Georges Wellfield during the 2009-10 runoff year for aqueduct supply purposes because of the depth-to-water criteria of the IMP. The IMP exempted well W343 (Table 6) will be utilized to provide supplemental irrigation water during this runoff year. With a planned pumping of 400 acre-feet from the Bairs-Georges Wellfield and a 71% of normal forecast Owens Valley runoff, the average April 2010 groundwater level in the Bairs-Georges Wellfield, based on the key monitoring wells, is forecast to be 0.8 feet below the average measured groundwater level in April 2007 as shown in Table 5.

Lone Pine Wellfield (Figure 10)

LADWP is currently operating three wells in the Lone Pine area including the town supply wells W344 and W346 and well W390 to supply an E/M project east of town. These three wells pump approximately 1,200 acre-feet per year to meet the demand.

As outlined in Section IV.B of the Green Book, LADWP desires to activate pumping well W416, which was drilled in 2002. Green Book guidelines provide for operation of a new well at full capacity for up to six months while monitoring nearby water levels and vegetation. Data collected during the initial operation will then be utilized to develop a long-term operation plan for this production well.

The planned groundwater pumping from the Lone Pine Wellfield is 1,200 acre-feet for the 2009-10 runoff year. Pumping for initial operation phase of W416 will be in addition to the 1,200 acre-feet and implemented once agreement is reached on the testing protocol between ICWD and LADWP. A revised protocol for initial operation of W416 was submitted to ICWD on March 5, 2009 and is awaiting comment/approval.

The E/M well W390 had been producing silt and sand for the last couple of years, to the extent of causing pump failure. A replacement pump with the same capacity failed as well. Subsequently, a small capacity pump with only 0.5 cfs pumping capacity was installed in the well for the 2009-10 irrigation season. LADWP is currently making plans to re-drill this well.

Figure 9

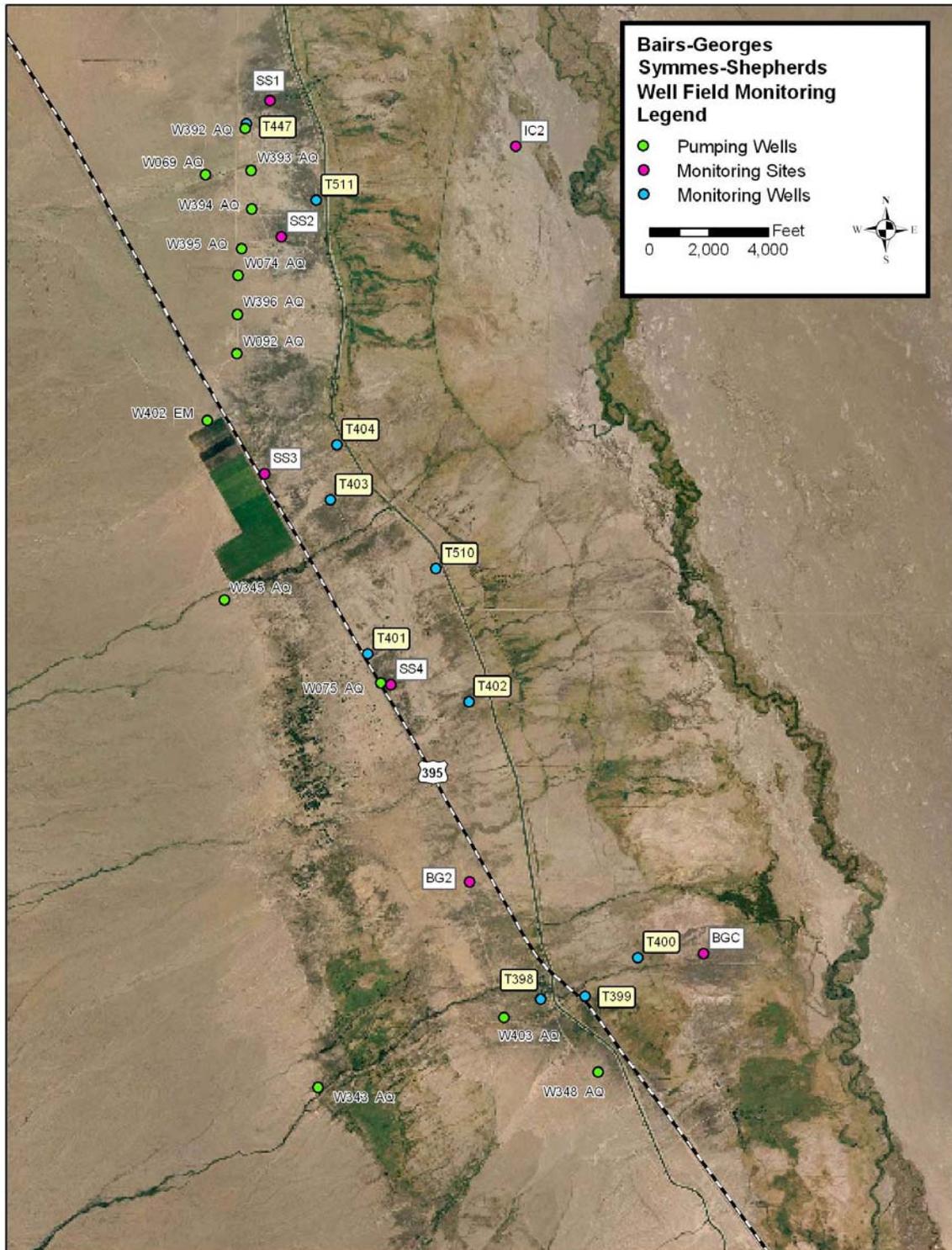
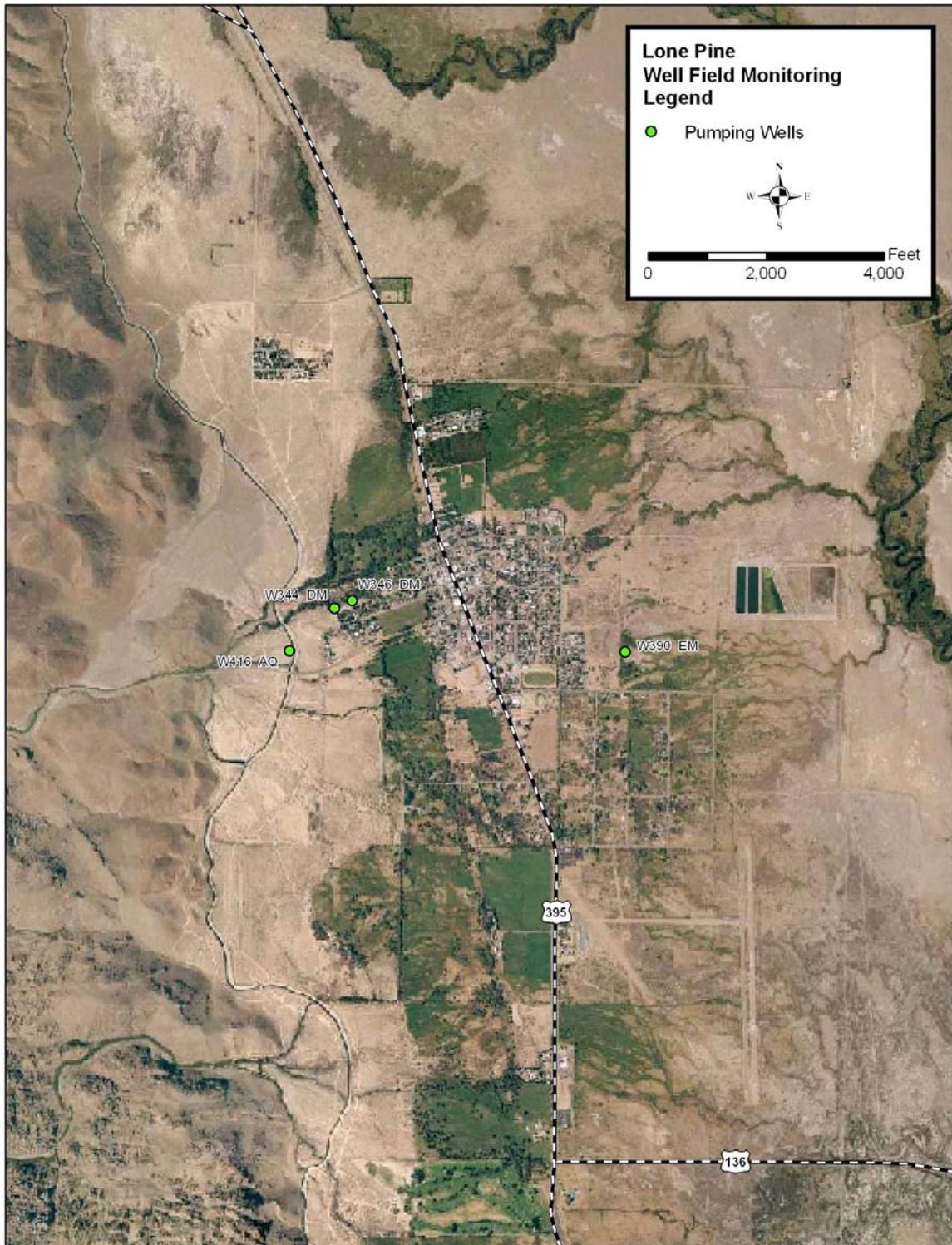


Figure 10



2.3 Owens Valley Uses (Including Enhancement/Mitigation Projects)

Table 8 shows the historic (1981-82) uses and the planned monthly Owens Valley uses for 2009-10. The in-valley uses shown on Table 8 consist of irrigation, stock water, operations, recreation and wildlife projects, E/M supply (with the LORP project usage shown separately), and Owens Lake. As shown in Table 8 and Figure 11, LADWP plans to provide approximately 197,000 acre-feet for in-valley uses this runoff year.

The water for the McNally Ponds E/M project is supplied via the McNally canals in above normal runoff years when Owens River water is available or well water when the canals are not operated. In most normal or below normal runoff years since 1991 the Standing Committee has approved not operating the McNally Pond project because of lack of E/M supply well capacity. In June 2007 LADWP requested that the list of IMP exempt wells be modified to allow pumping of Wells 248 and 249 in the Laws Wellfield to supply water to the McNally Ponds E/M project. This request was not approved. Due to low runoff the McNally Canals will not be operated in 2009-10, subsequently there is no water available to supply this project.

The Water Agreement provides that “... *enhancement/mitigation projects shall continue to be supplied by enhancement/mitigation wells as necessary.*” Due to 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 exceeded the amount of water provided by E/M project supply wells. Table 9 shows the planned water supply to E/M projects and the forecast imbalance between the E/M projects water use and the E/M project supply well pumping by the end of 2008-09 runoff year.

The planned E/M water use is expected to result in a shortfall of E/M pumping totaling approximately 2,750 acre-feet during the 2009-10 runoff year and a cumulative shortfall of approximately 171,400 acre-feet by the end of 2009-10 runoff year. This shortfall will be made up partially by pumping LAA supply wells and/or by providing surface water from the LAA.

Releases to the Lower Owens River Project (LORP) from the intake facility commenced 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 LAA intake are augmented through additional releases at the Independence, Blackrock, Georges, Locust, and Alabama spillgates to maintain a continuous flow of approximately 40 cfs in the river channel. Table 8 shows estimated water use by the Lower Owens River on a monthly basis. Consumptive use of approximately 26,000 acre-feet of water by the Lower Owens River, Delta, Off-River Lakes and Ponds, and the Blackrock waterfowl habitat area is expected during the 2009-10 runoff year.

**Figure 11. Distribution of Owens Valley Water Use
for 2009-10 Runoff Year**

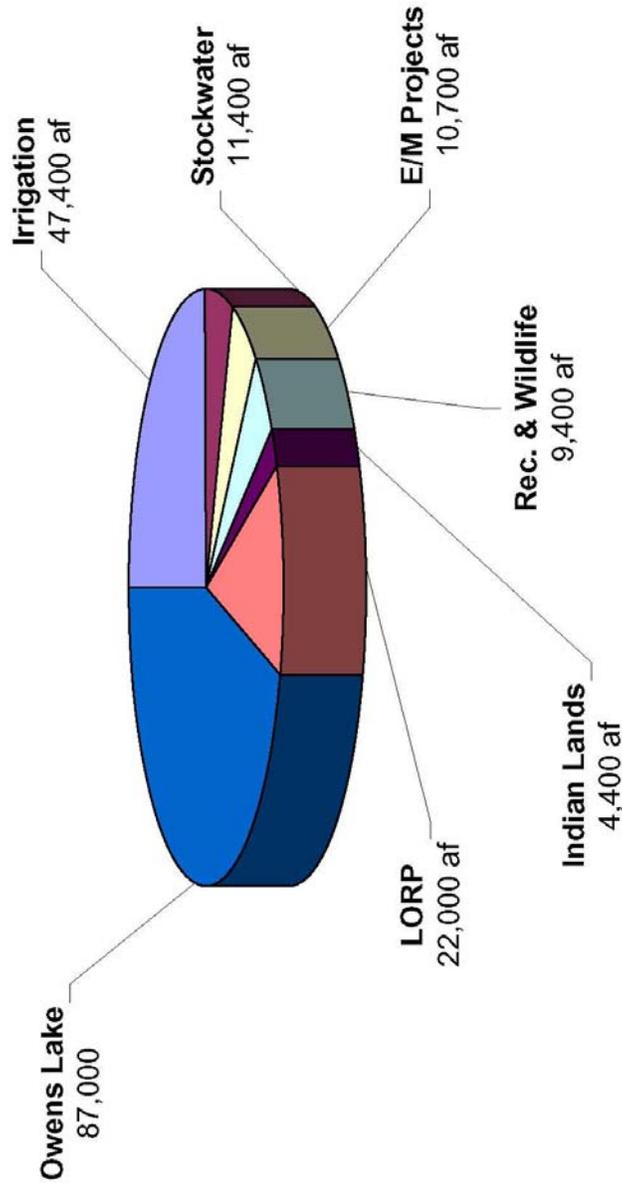


Table 9 - Owens Valley Groundwater Pumping for E/M Water Use (1984-85 through 2009-10 Runoff Year)
(ACRE-FEET)

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	120	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	(4)	0
1987-88	68	209,393	179,883	29,510	29,360		0
1988-89	62	200,443	171,012	29,431	30,872		0
1989-90	63	155,903	133,340	22,563	23,330		0
1990-91	52	89,061	70,974	18,087	17,949		0
1991-92	64	87,526	71,736	15,790	20,517	-4,727	-4,727
1992-93	61	84,135	70,370	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	89,153	78,143	11,010	20,812	-9,802	-29,440
1995-96	154	69,740	57,168	12,572	22,914	-10,342	-39,782
1996-97	135	74,817	57,894	16,923	23,949	-7,026	-46,808
1997-98	124	66,910	52,756	14,154	21,500	-7,346	-54,154
1998-99	149	51,575	47,354	4,221	19,672	(4)	-54,154
1999-00	89	63,699	59,366	4,333	24,450	-20,117	-74,271
2000-01	84	67,534	61,195	6,339	20,611	-14,272	-88,543
2001-02	83	72,536	69,242	3,294	21,815	-18,521	-107,064
2002-03	67	82,281	76,361	5,920	21,394	-15,474	-122,538
2003-04	81	87,726	80,728	6,998	21,116	-14,118	-136,656
2004-05	77	85,803	78,093	7,710	18,327	-10,617	-147,273
2005-06	136	56,806	51,735	5,071	19,356	-14,285	-161,558
2006-07	145	57,412	52,716	4,696	17,357	(4)	-161,558
2007-08	58	60,338	53,413	6,925	11,312	-4,387	-165,945
2008-09 (2)	86	68,149	60,231	7,918	10,646	-2,728	-168,673
2009-10 (3)	71	63,450	55,550	7,900	10,650	-2,750	-171,423

(1) Based on 1956-2005 average: 415,725 acre-feet

(2) estimated

(3) forecast or planned

(4) surface water was available

2.4 Aqueduct Operations

Table 10 shows planned Los Angeles Aqueduct first-of-month reservoir storage levels and planned monthly Aqueduct deliveries to Los Angeles. Based on this plan, a total of 136,213 acre-feet will be exported from the Eastern Sierra to the City in the 2009-10 runoff year. This is only 38% of the long-term average export of water from the Eastern Sierra to the City between 1970 and present.

2.5 Water Exports to Los Angeles

Figure 12 provides a record of water supply exported from the Eastern Sierra, averaging 363,000 acre-feet per year from 1970 to present. Figure 13 shows the LAA contribution to the City water supply relative to the total supply from 1970 to present. During the 2008-09 runoff year, approximately 25% of the water supply for the City of Los Angeles was provided by exports from the Eastern Sierra (Owens Valley and Mono Basin). Figure 13 also shows the forecast water supply mix for the City for the 2009-10 runoff year. It is estimated that imports from the Eastern Sierra will provide approximately 23% of water supply for the City, groundwater pumping from San Fernando Valley will provide 12%, recycled water 1%, and purchased water from Metropolitan Water District of Southern California will provide the remaining 64% of the City's water supply. This, one of the lowest historic forecasts for water exports to Los Angeles from the Eastern Sierra, is the result of multiple years of lower than normal Owens Valley runoff, reduced groundwater pumping required by the IMP, reduced Mono Basin exports, and increasing water demands in the Owens Valley for the Owens Lake Dust Mitigation Program and the LORP.

**Table 10 - Planned Los Angeles Aqueduct Operations
for 2009-10 Runoff Year**

Month	Owens Valley-Bouquet Reservoir Storage 1st of month Storage (acre-feet)	Aqueduct Delivery to Los Angeles (acre-feet)
April	179,090	5,950
May	182,536	9,223
June	183,514	11,901
July	178,006	15,372
August	163,585	15,372
September	156,174	14,876
October	133,389	10,760
November	123,909	10,413
December	127,535	10,760
January	140,955	10,760
February	158,844	10,066
March	171,000	10,760
<i>TOTAL</i>		136,213

Figure 12 - Water Export from Eastern Sierra to Los Angeles

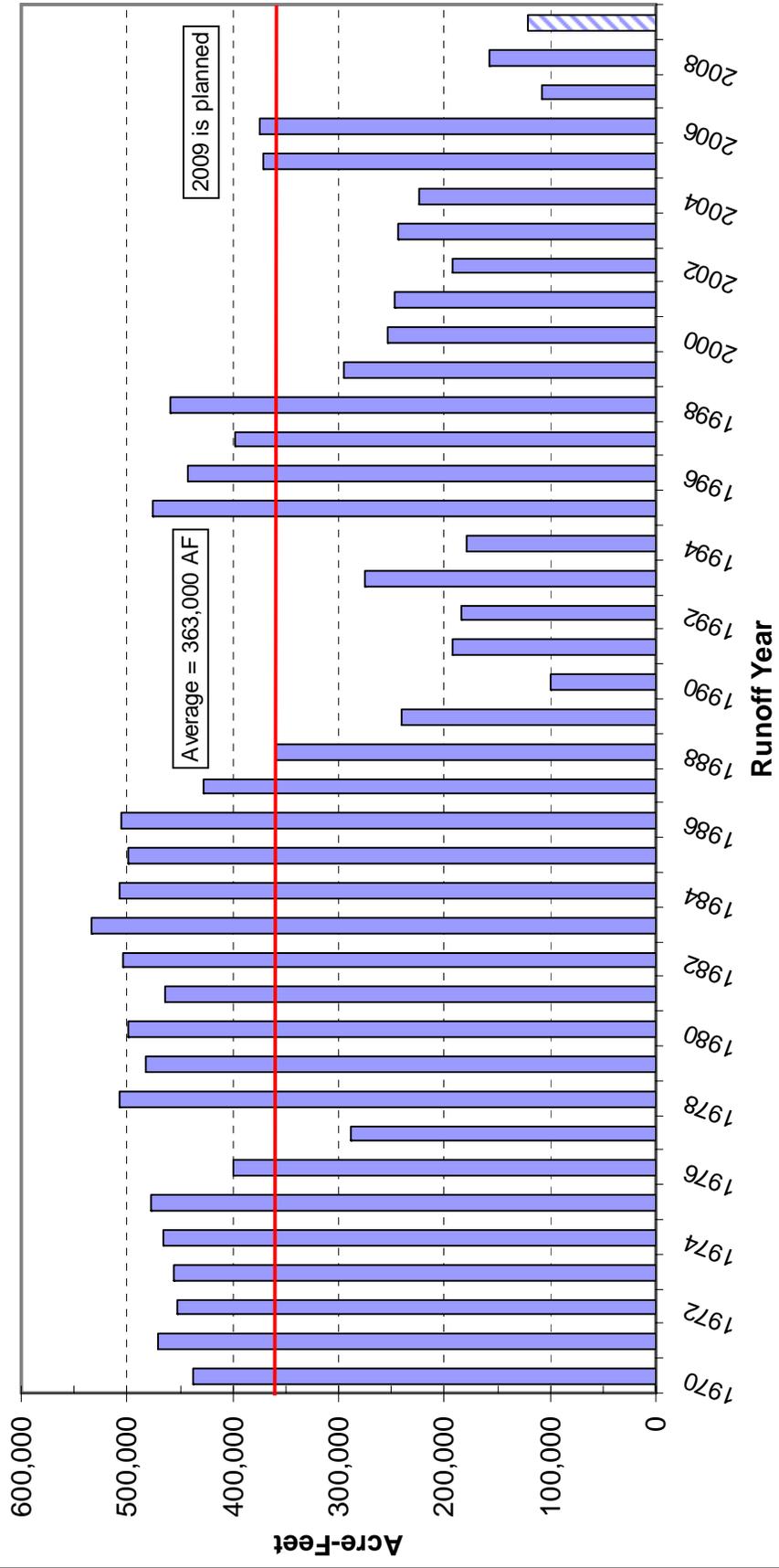
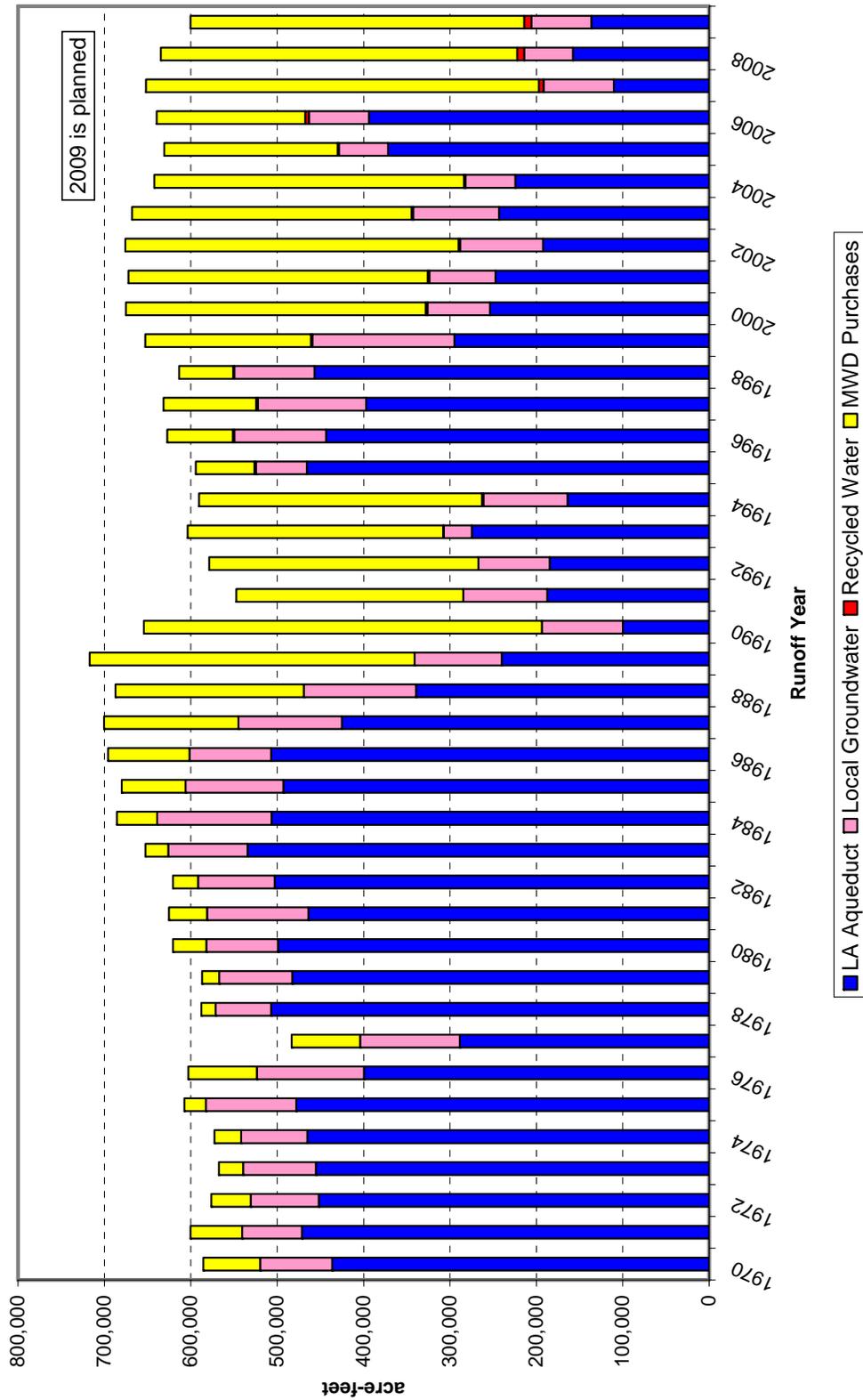


Figure 13 – Sources of Water for the City of Los Angeles



3. OWENS VALLEY CONDITIONS

3. CONDITIONS IN THE OWENS VALLEY

A summary of Owens Valley Conditions is provided in Figure 14. The 2008-09 runoff year was the third consecutive below-normal year for both the snowfall on the Eastern Sierra Nevada Mountains and the rainfall on the Owens Valley floor. With 72% of average snowpack as of April 1, 2009, the forecast Owens Valley runoff for the 2009-10 runoff year is 294,100 acre-feet or approximately 71% of normal. The average precipitation on the Owens Valley floor was also below normal with an average of 3.25 inches compared to the long-term average of 5.97 inches (Table 13). Overall, vegetation cover in the Owens Valley is comparable to the mid-1980's baseline conditions (see Section 3.5).

3.1 Well ON/OFF Status

The Water Agreement has provisions linking wells to specific monitoring sites. If the available soil moisture is insufficient to meet the needs of vegetation within a monitoring site, the wells linked to that site are turned off. LADWP may turn on the wells linked to a monitoring site once the available soil water at the monitoring site has recovered to the level where it can meet the estimated water requirements of the vegetation at the time that the wells were turned off. Table 11 provides a listing of April 2009 Owens Valley monitoring site ON/OFF status, the monitoring wells associated with each monitoring site, and the pumping wells linked to each monitoring site.

Certain wells are exempt from the ON/OFF provisions of the Water Agreement because these wells are in areas that can not cause adverse impacts to the nearby vegetation or because these wells are a required source of water. In addition to wells with ON status, Table 11 lists wells that are exempt from the ON/OFF provisions of the Water Agreement in each wellfield.

As discussed in Section 2, the 2009-10 pumping plan is consistent with the IMP Agreement, which uses a similar but revised list of exempt wells (Table 6).

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 groundwater basin and are utilized for calibrating groundwater models. Hydrographs are used to observe the changes in groundwater levels over time. Figures 15a through 15f illustrate hydrographs of selected monitoring wells in Owens Valley wellfields. As shown in Figures 15a-15f, groundwater levels are generally high throughout the valley despite two years of below-normal runoff in the Eastern Sierra.

FIGURE 14 – Summary of Owens Valley Condition

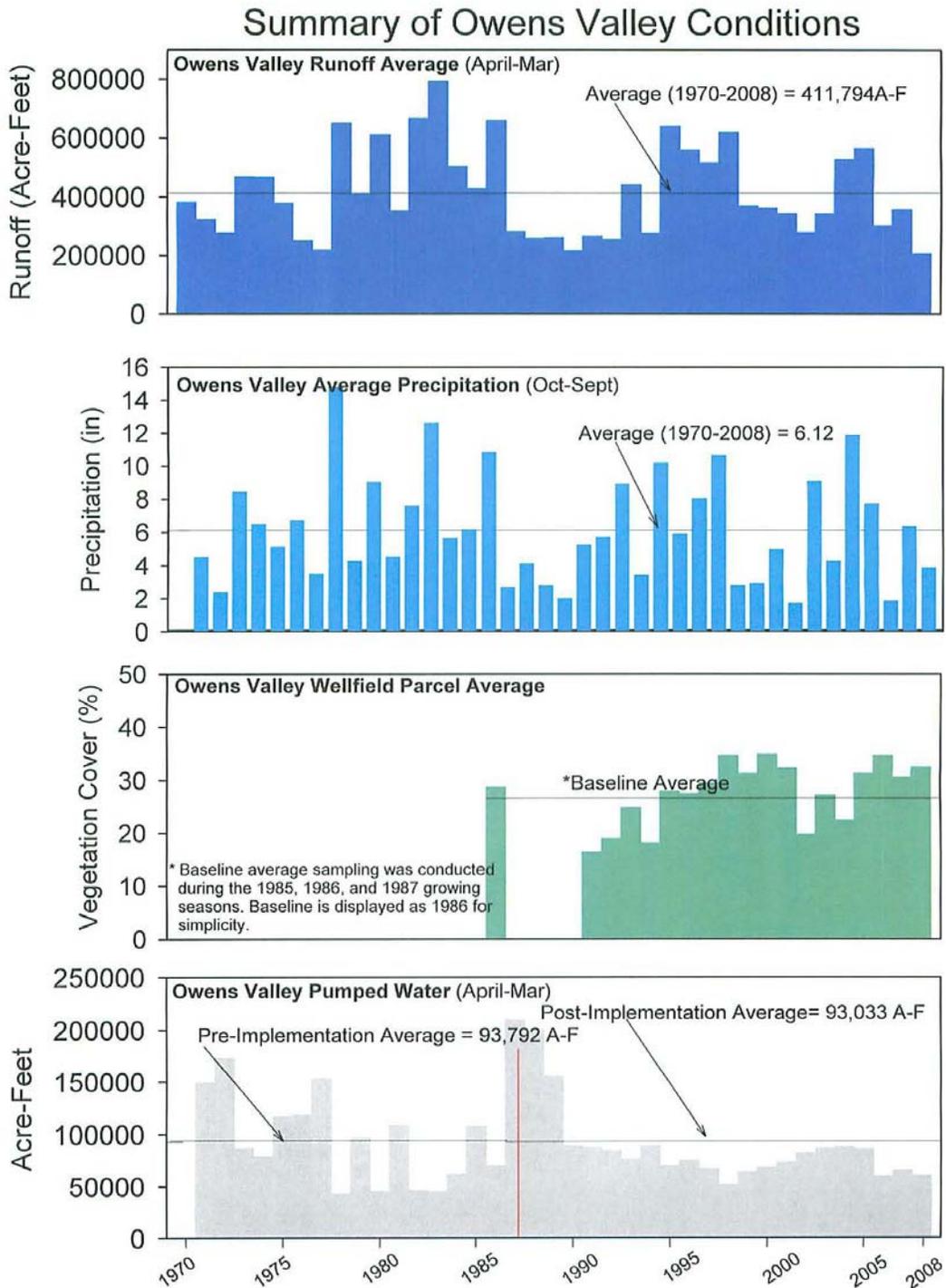


Table 11 -Owens Valley Monitoring Site Status (ON/OFF) as of April 2009

Wellfield	Monitoring Site	Monitoring Well	Pumping Wells	E/M Wells	ON/OFF Status
Laws	L1	795T	247, 248, 249, 398		ON
	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		ON
	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		OFF
	TS3	454T	103, 104	382	ON
	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		OFF
	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 Selected Monitoring Wells

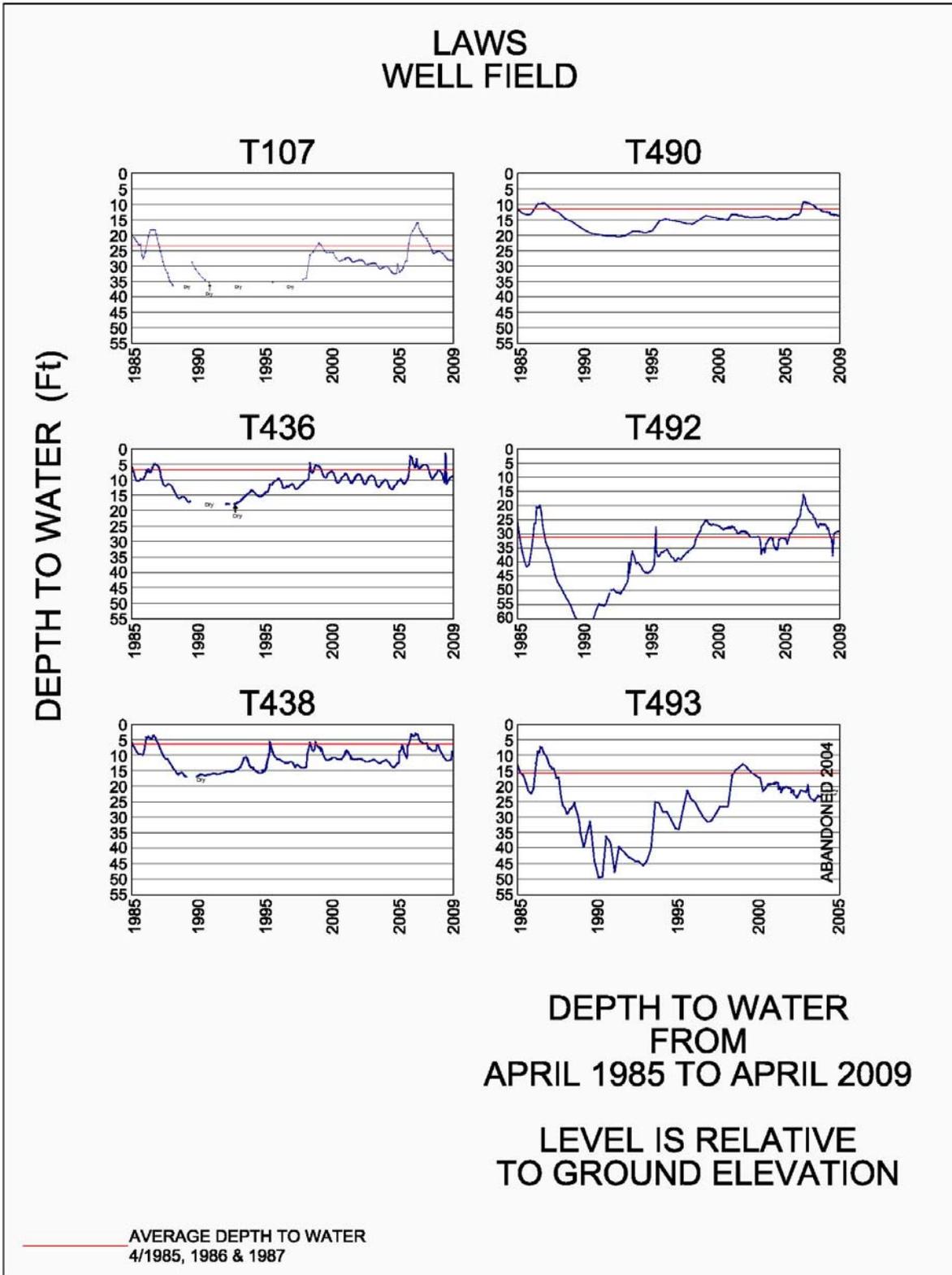


FIGURE 15b - Depth-To-Water Hydrographs for Selected Monitoring Wells

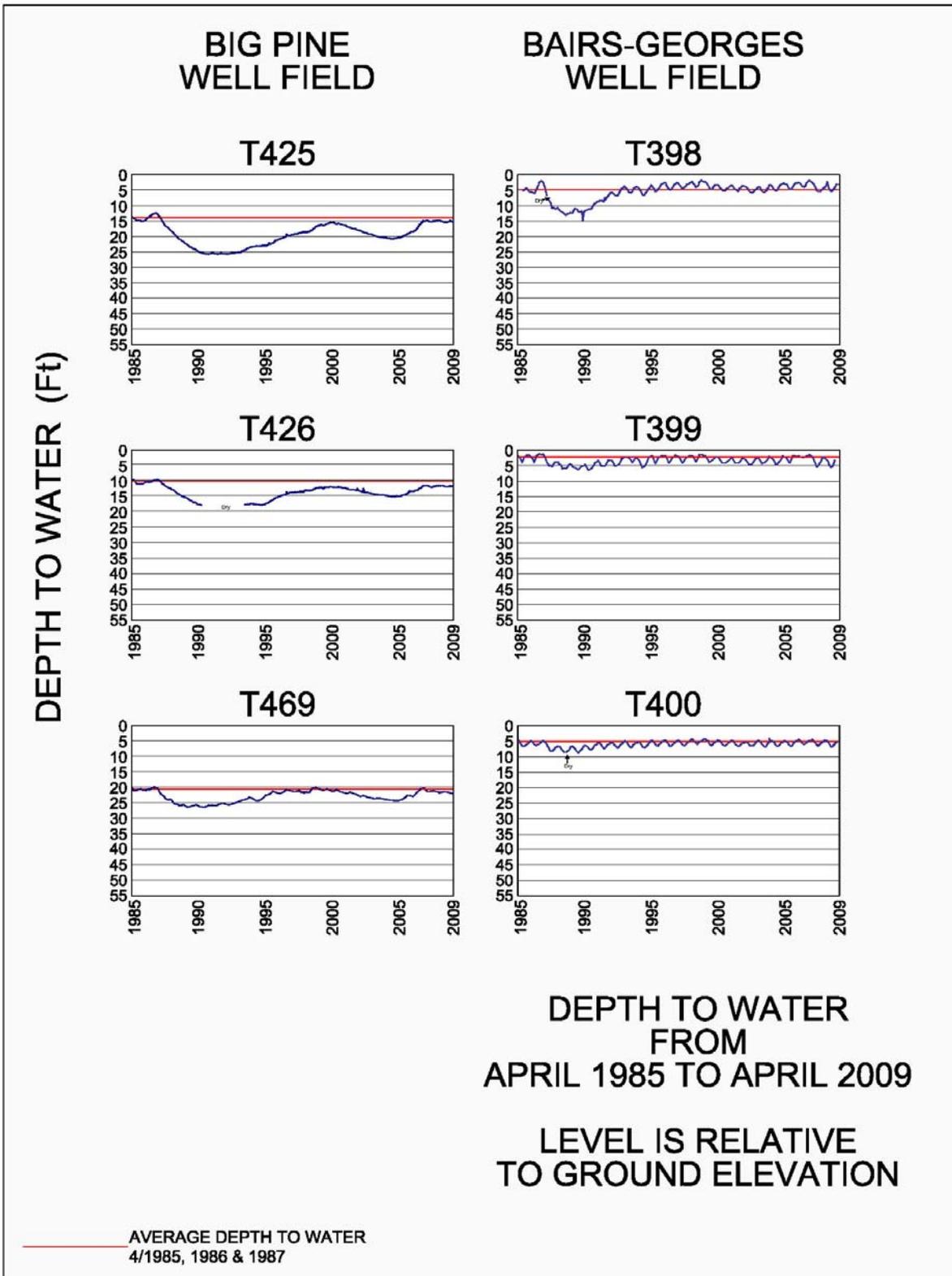


FIGURE 15c - Depth-To-Water Hydrographs for Selected Monitoring Wells

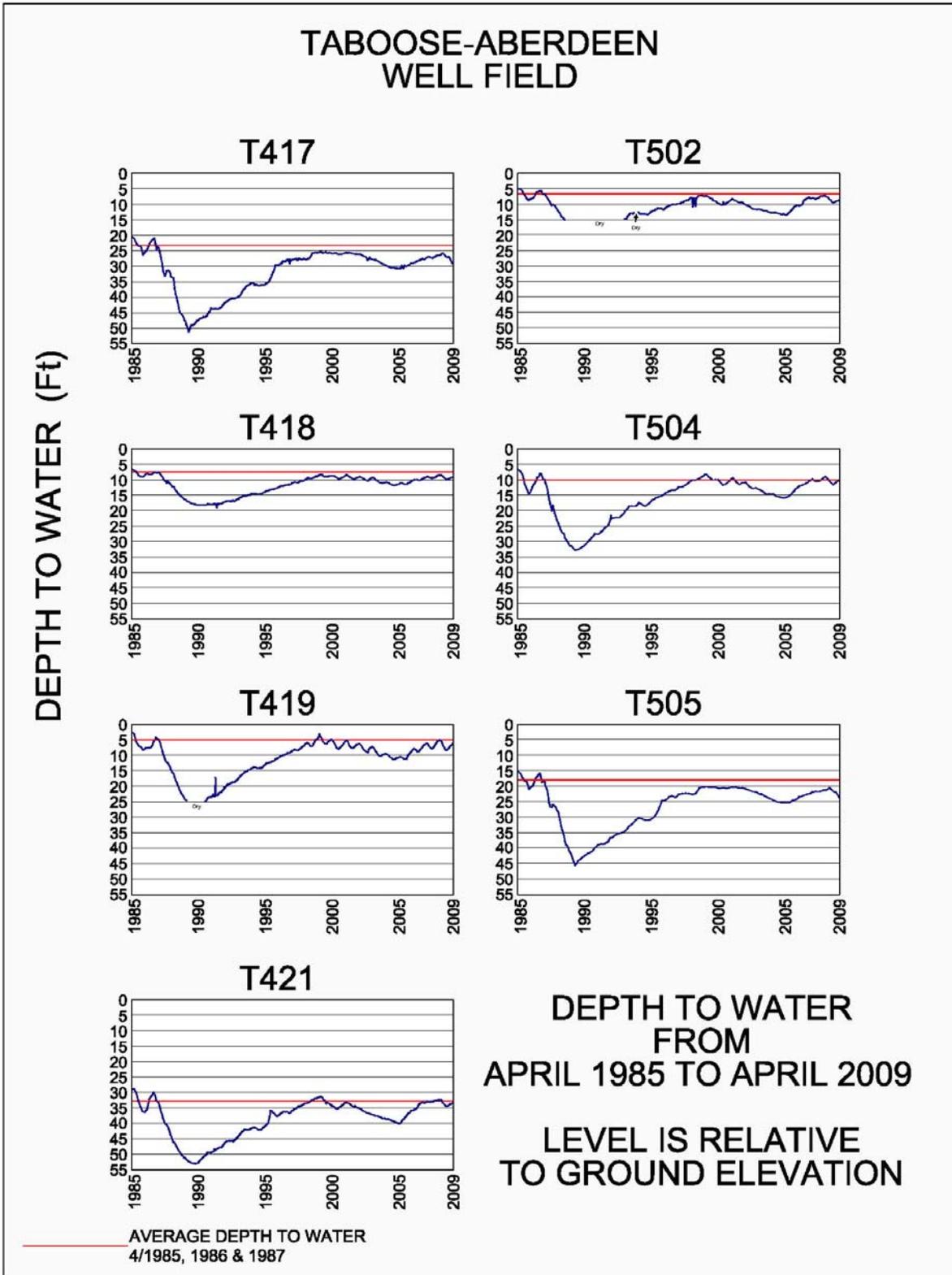


FIGURE 15d - Depth-To-Water Hydrographs for Selected Monitoring Wells

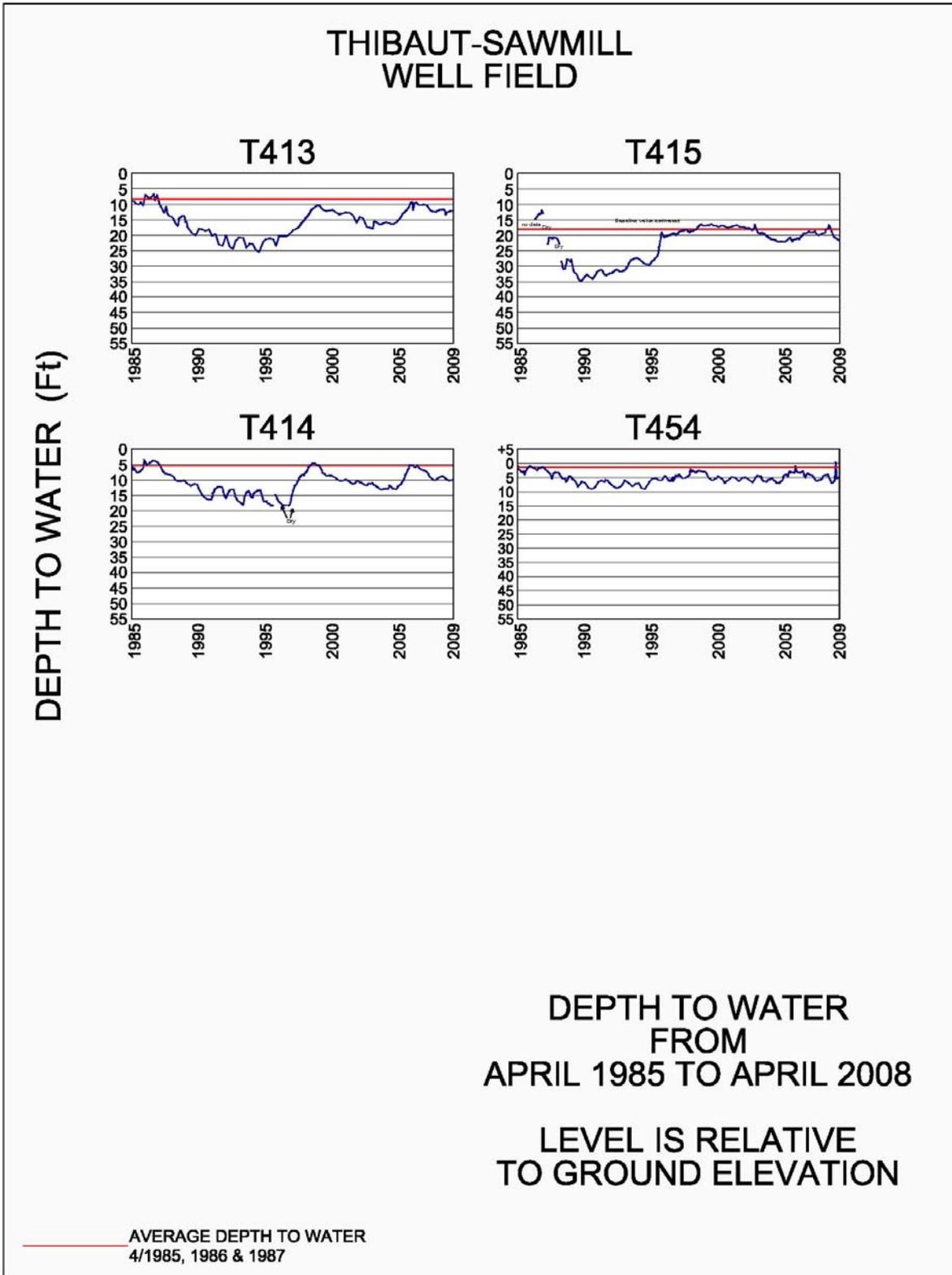


FIGURE 15e - Depth-To-Water Hydrographs for Selected Monitoring Wells

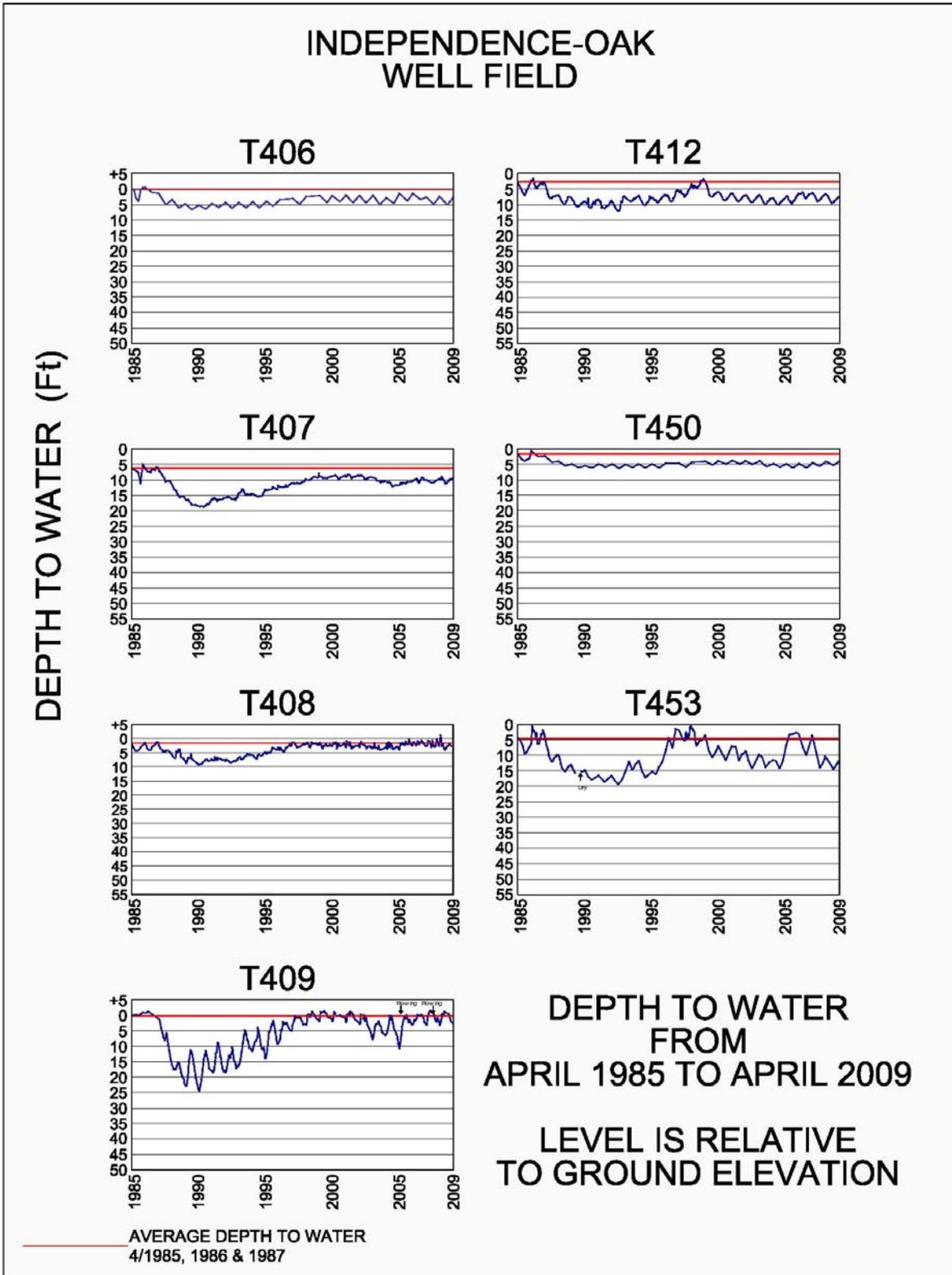
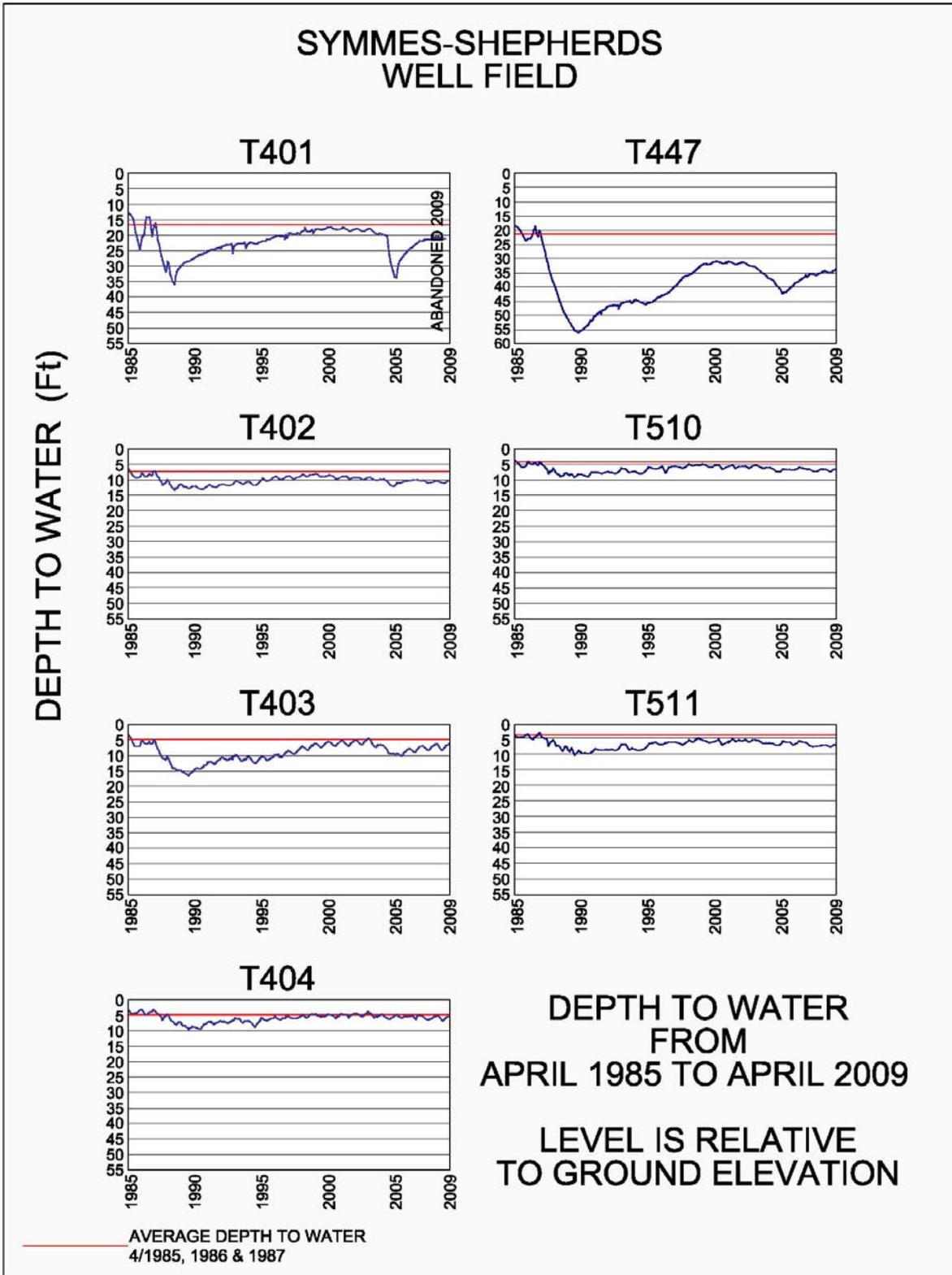


FIGURE 15f - Depth-To-Water Hydrographs for Selected Monitoring Wells



3.3 Precipitation Record and Runoff Forecast

The 2009-10 runoff year is forecast to be a below normal runoff year. The snowpack on April 1 varied from 87% of normal in the Mammoth Lakes Area to 39% in the Rock Creek Area. The overall Eastern Sierra snowpack as of April 1, 2009 was 72% of normal (Table 12).

Valley-floor precipitation in the Owens Valley during the 2008-09 runoff year ranged from 1.86 inches in Lone Pine to 5.48 inches at the South Haiwee gauge (Table 13). The average 2008-09 runoff year precipitation on the valley floor was 3.25 inches. The valley floor receives 5.97 inches of precipitation per year on the average based on 1956-2005 data.

The forecast Owens Valley runoff for 2009-10 runoff year is 294,100 acre-feet or 71% of normal valley-wide (Table 1). Figure 16 shows how the forecast runoff for the 2009-10 year compares to past years since 1940.

Table 12 - EASTERN SIERRA SNOW SURVEY RESULTS
April 1, 2009

MAMMOTH LAKES AREA (Contributes 27% of Owens River runoff)

<u>Course</u>	<u>Water Content</u>	<u>April 1 Normal</u>	<u>Percent of Normal</u>
Mammoth Pass	37.4	43.6	86%
Mammoth Lakes	18.0	21.1	85%
Minarets 2	<u>26.7</u>	<u>30.2</u>	<u>89%</u>
Mammoth Lakes Area Average:	27.4	31.6	87%

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

<u>Course</u>	<u>Water Content</u>	<u>April 1 Normal</u>	<u>Percent of Normal</u>
Rock Creek 1	2.3	7.3	31%
Rock Creek 2	3.6	10.6	34%
Rock Creek 3	<u>6.8</u>	<u>15.0</u>	<u>45%</u>
Rock Creek Area Average:	4.2	11.0	39%

BIG PINE AREA (Contributes 32% of Owens River runoff)

<u>Course</u>	<u>Water Content</u>	<u>April 1 Normal</u>	<u>Percent of Normal</u>
Big Pine Creek 1	15.3	22.1	69%
Big Pine Creek 2	7.6	14.2	53%
Big Pine Creek 3	<u>13.8</u>	<u>18.5</u>	<u>74%</u>
Big Pine Creek Area Average:	12.2	18.3	67%

COTTONWOOD AREA (Contributes 25% of Owens River runoff)

<u>Course</u>	<u>Water Content</u>	<u>April 1 Normal</u>	<u>Percent of Normal</u>
Cottonwood Lakes 1	8.1	13.0	62%
Cottonwood Lakes 2	8.2	14.5	56%
Trailhead*	<u>9.0</u>	<u>13.6</u>	<u>66%</u>
Cottonwood Area Average:	8.4	13.7	61%

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

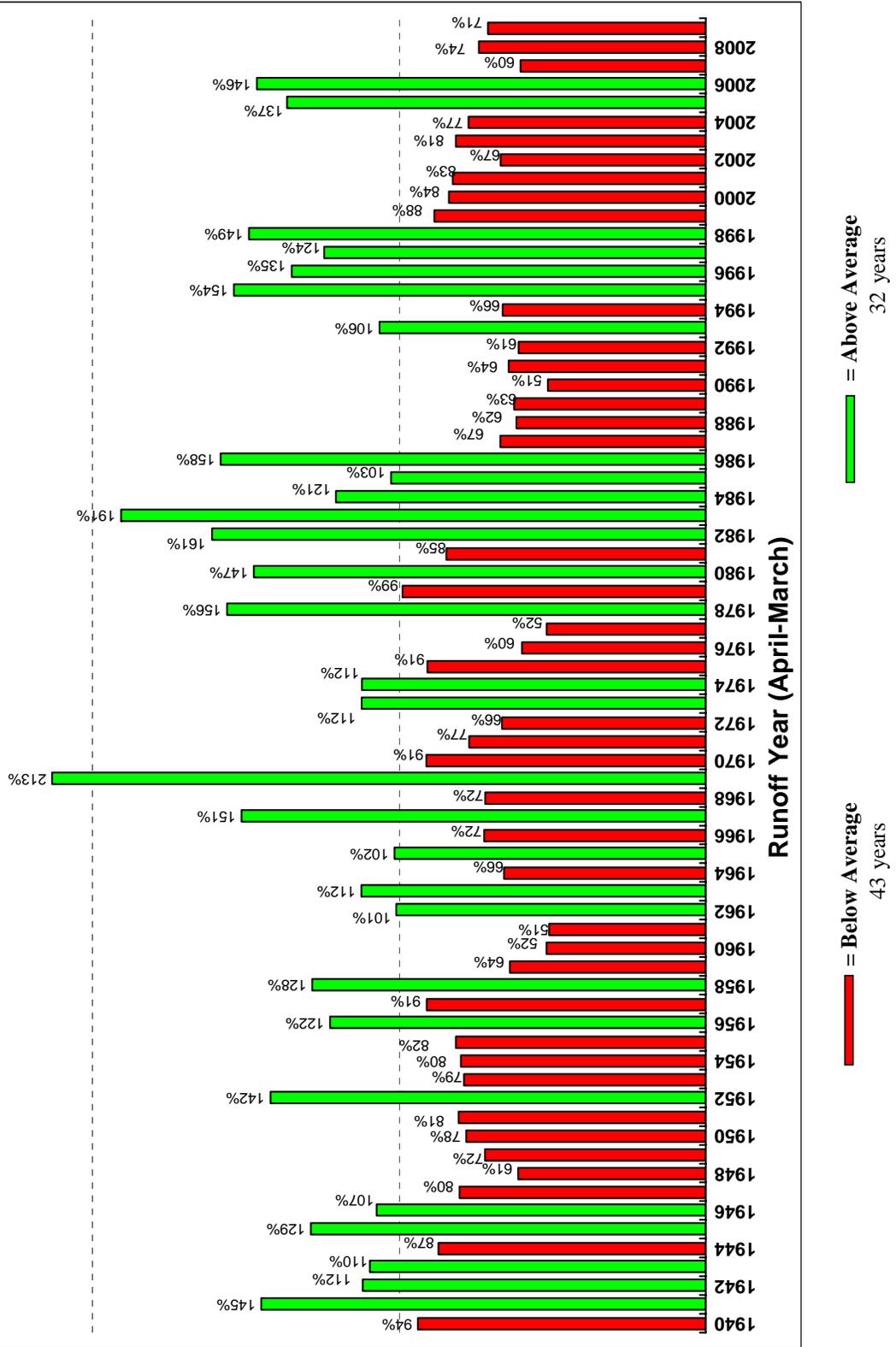
<u>Average of all Snow Courses</u>	<u>Water Content</u>	<u>April 1 Normal</u>	<u>Percent of Normal</u>
	14.1	19.6	72%

Table 13 - Owens Valley Precipitation During Runoff Year 2008-09 in inches

Month	Bishop	Big Pine	Tinemaha Reservoir	LAA Intake	Independ. Yard	Alabama Gates	Lone Pine	Cotton-wood	S. Haiwee	Average Owens Valley
April, 2008	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.15	0.00	0.09	0.00	0.01	0.01	0.00	0.01	0.01	0.03
June	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
July	0.20	0.16	0.07	0.00	0.10	0.25	0.20	0.09	0.27	0.15
August	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.02
September	0.03	0.03	0.08	0.00	0.09	0.01	0.06	0.03	0.18	0.06
October	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
November	0.56	0.35	1.00	0.00	1.02	1.00	1.11	1.63	1.88	0.95
December	0.61	2.46	0.96	0.71	0.69	0.55	0.48	0.80	0.91	0.91
January, 2009	0.01	0.01	0.01	0.00	0.06	0.02	0.00	0.01	0.28	0.04
February	0.48	0.00	1.87	1.32	0.83	1.14	0.00	1.64	1.69	1.00
March	0.06	0.02	0.07	0.06	0.07	0.07	0.01	0.18	0.12	0.07
2008-09 Total	2.10	3.25	4.15	2.09	2.87	3.05	1.86	4.39	5.48	3.25
Average*	6.50	6.74	6.77	6.05	5.50	4.05	4.02	6.89	7.20	5.97

* Average for 1956 to 2005

Figure 16 - Owens Valley Runoff: Percent of Normal



3.4 Owens Valley Water Supply and Use

Table 14 provides an overview of the Owens Valley water supply, in-valley uses and losses, and LAA export for the actual post Water Agreement period (1992-2008 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 Owens Valley EIR, and 1997 Memorandum of Understanding). The in-valley uses are consistent with the estimated values, with the exception of differences due to the unanticipated diversions to Owens Lake. The average Owens Valley water supply to LAA is a reflection of the about-normal runoff since 1992, a court mandated pumping limit, and releases to the LORP and Owens Lake dust mitigation measures. The Owens Valley water supply and uses are shown on a year-by-year basis in Figure 17. The sources of water for the LAA are shown on a year-by-year basis in Figure 18.

Table 15 shows different components of water use in the Owens Valley from 1985-86 to the present and planned water use for the 2009-10 runoff year. One component of water use, E/M water supply, is the water supplied to specific projects as specified in the 1991 EIR. Table 16 lists a breakdown of actual water supplied to each of the E/M projects during the 2008-09 runoff year.

Table 14 - Owens Valley Water Supply and Uses

(Amounts in Thousands of Acre-Feet/Year)

	Pre-Project	Projected per MOU/ Agreement	Actual Data for Runoff Year 2008-2009	Actual Post Water Agreement Averages (1992- 2009)
Owens Valley Water Supply				
Runoff (Owens Valley & Round Valley)	319 ⁽¹⁾	310	228	303
Flowing Wells	44	15	32	33
Pumped Groundwater	10	110 ⁽²⁾	68	72
Total	364	435	328	408
In-Valley Uses & Losses				
<u>City Water Used in O.V.</u>				
Irrigated Lands ⁽³⁾	62	46	56	48
Stockwater, Wildlife, and Rec. Uses ⁽⁴⁾	20	23	20	23
Post 1985 E/M Projects ⁽⁵⁾	0	12	11	10
Lower Owens River ⁽⁶⁾	0	36 ⁽⁷⁾	21	22 ⁽⁸⁾
Additional Mitigation (1,600 af from MOU)	0	2	0	0
Owens Lake	0	0	61	64 ⁽⁸⁾
Sub-Total	82	123	169	167
<u>Other O.V. Uses and Losses ⁽⁹⁾</u>	134	122	130	95
Total	216	245	299	262
Components of Aqueduct Export				
Owens Valley Contribution to Export	103	210	29	146
Long Valley Contribution to Export	149	149	115	139
Mono Basin Contribution to Export ⁽¹⁰⁾	95	30	16	16 ⁽⁸⁾
Total	347	389	160	301

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

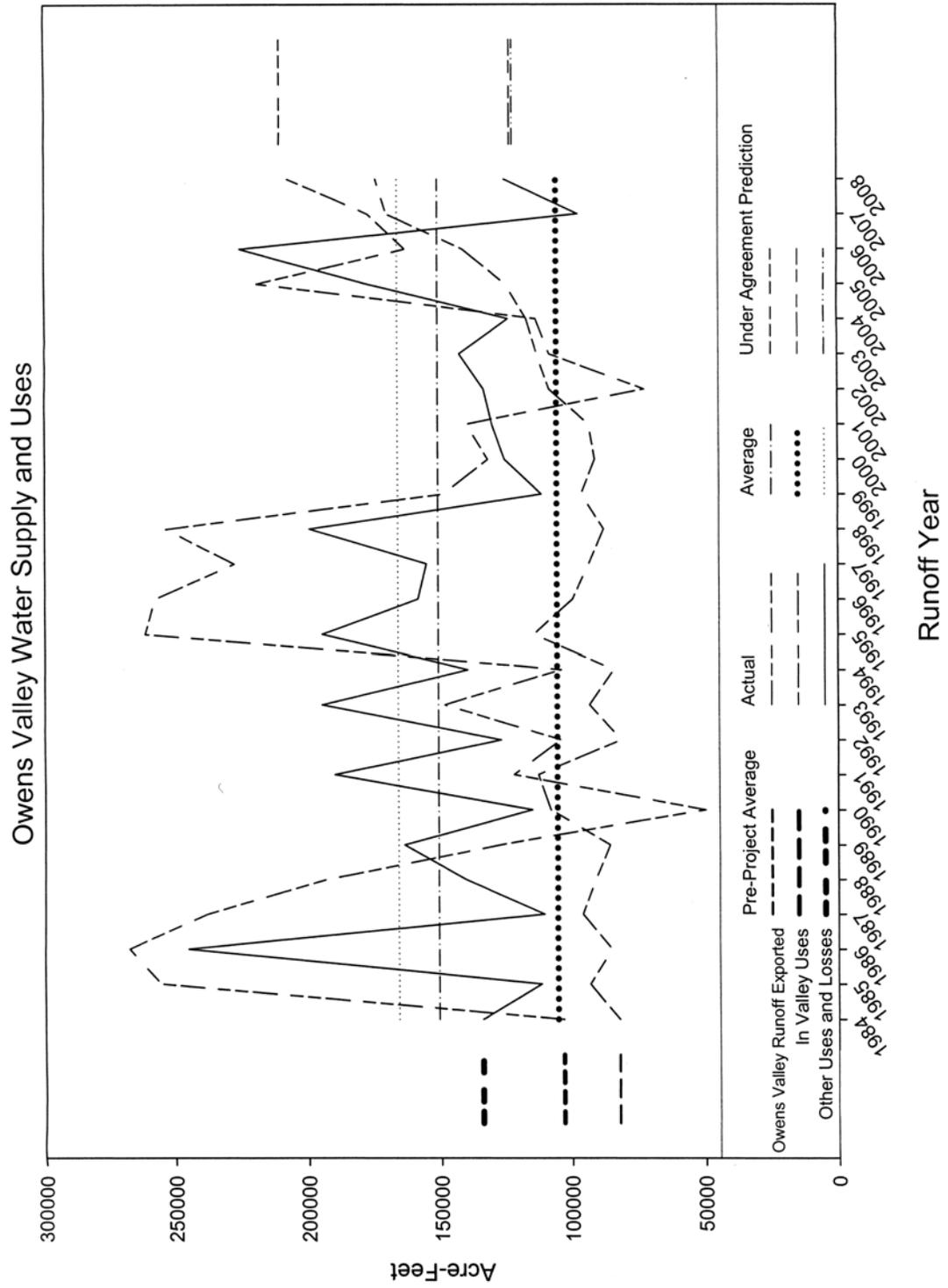


Figure 18

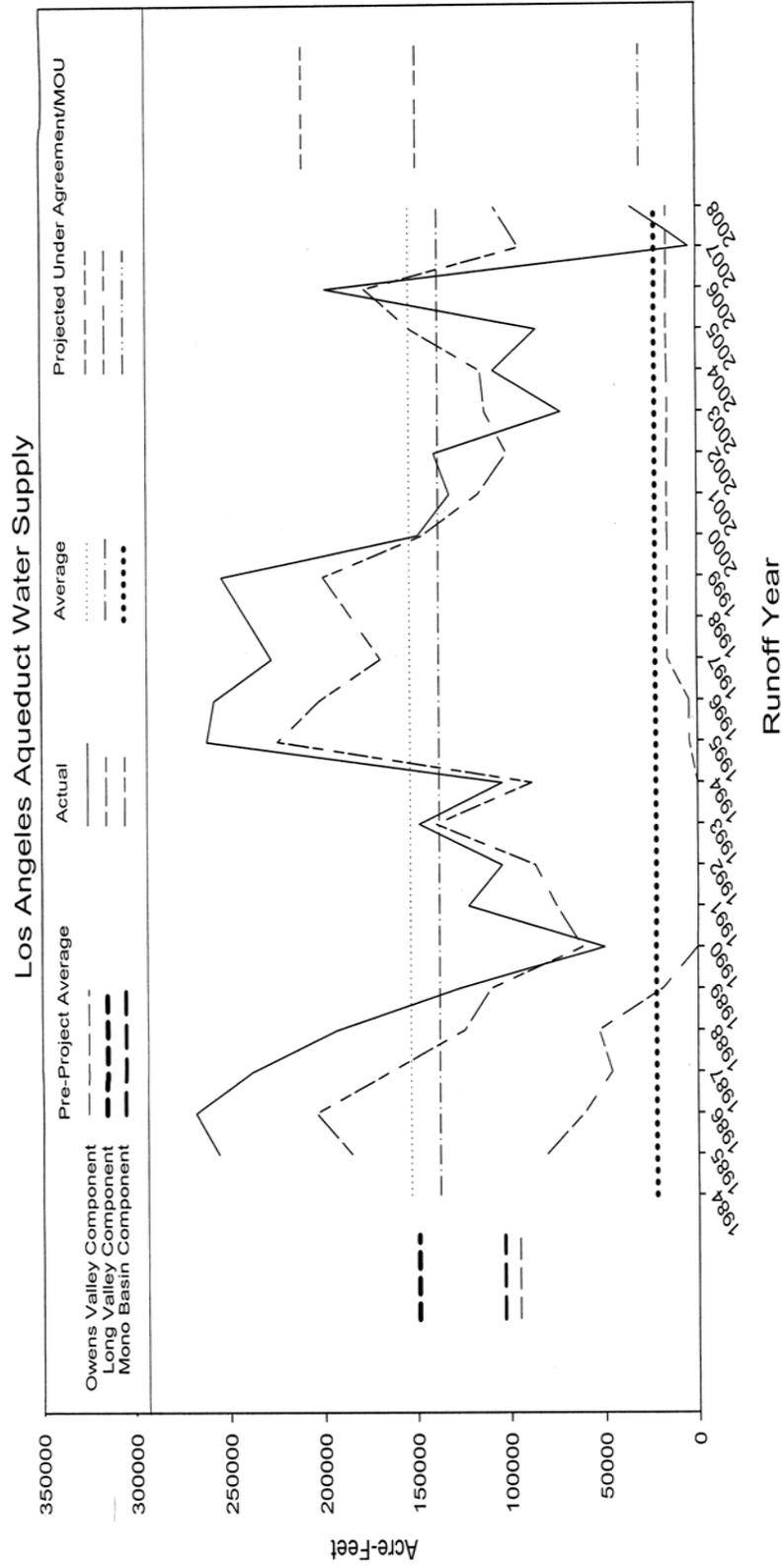


Table 15 - Owens Valley Water Uses for 1985-86 through 2008-09 and Planned 2009-10 Runoff Year
(ACRE-FEET)

(1) Runoff Year	(2) Runoff %	(3) Owens Valley Pumping (1000 af)	(4) Irrigation	(5) Stock Water	(6) E/M	(7) Rec. & Wildlife	(8) Indian Land Uses	(9) LORP	(10) Owens Lake Release	(11) In-Valley Uses (sum of 4+5+6+ 7+8+9+10)	Groundwater Recharge		(13) Operations	(14) All Uses (sum of 11+12+13)
											(12a) Big Pine & Independence Spreading	(12b) Laws Spreading		
1985-86	103	108	47,390	15,394	109	9,205	5,568	4,191		81,857	4,822	4,068	13,712	104,459
1986-87	158	70	47,884	15,125	1,610	9,735	4,966	12,551		91,871	67,251	20,429	72,387	251,938
1987-88	68	209	48,679	15,443	13,818	6,420	4,621	15,542		104,523	0	0	7,499	112,022
1988-89	62	200	46,463	14,381	17,102	8,429	6,209	13,856		106,440	0	0	6,705	113,145
1989-90	63	156	48,232	13,922	15,261	8,669	6,119	8,069		100,272	0	0	8,935	109,207
1990-91	52	89	46,424	14,360	9,242	9,983	5,903	8,657		94,569	0	0	5,312	99,881
1991-92	64	87	42,112	14,662	8,301	9,143	6,775	10,251		91,244	0	0	9,923	101,167
1992-93	61	84	37,131	17,828	9,088	7,725	6,215	9,269		87,256	0	0	12,179	99,435
1993-94	105	76	47,798	17,230	13,443	8,676	6,612	5,867		99,626	14,512	10,640	12,433	137,211
1994-95	66	89	37,790	17,178	9,132	8,116	6,392	11,680		90,288	0	56	12,102	102,446
1995-96	152	70	57,748	20,919	11,162	12,479	6,471	11,752		120,531	30,126	21,148	13,561	185,366
1996-97	133	75	46,171	19,757	10,989	9,438	7,058	12,960		106,373	4,606	0	21,125	132,104
1997-98	123	67	47,114	16,422	8,114	8,022	6,957	13,494		100,123	4,113	4,106	13,874	122,216
1998-99	147	52	45,445	13,654	9,075	8,691	5,854	10,597		93,316	24,970	31,077	23,016	172,379
1999-00	88	64	49,529	14,461	8,836	7,470	5,208	15,616		101,120	0	0	11,263	112,383
2000-01	83	68	49,327	13,442	7,989	7,263	6,760	12,793		97,574	0	790	12,517	110,881
2001-02	82	73	43,296	12,759	9,401	7,487	5,870	12,414		91,227	0	230	12,973	104,430
2002-03	66	82	43,929	12,291	11,442	7,377	5,759	9,952	22,983	113,733	0	0	8,431	122,164
2003-04	81	88	45,974	11,620	10,926	6,853	6,270	10,190	27,049	118,882	0	0	8,787	127,669
2004-05	76	86	50,311	11,546	9,915	6,866	5,802	9,003	28,981	122,424	243	695	9,536	132,898
2005-06	135	57	53,832	11,355	11,587	7,807	4,538	7,769	31,643	128,531	16,212	24,187	14,814	183,744
2006-07	144	59	50,988	12,041	11,551	7,849	4,581	11,700	42,542	141,232	29,457	16,855	38,937	226,481
2007-08	60	60	47,699	12,161	11,565	10,122	3,662	22,501	66,580	174,290	0	0	5,631	179,921
2008-09	73	68	56,130	11,435	10,646	8,479	4,371	20,957	61,270	173,288	1,342	0	7,651	182,281
2009-10	71	63	47,400	11,400	10,700	9,400	4,400	22,000	87,000	192,300	0	0	10,100	202,400
AVG.	94	89	47,391	14,558	10,013	8,429	5,773	11,735	40,150	109,608	8,236	5,595	15,138	138,576

NOTES: PUMPING 1987 TO PRESENT INCLUDES E/M PUMPING
VALUES FOR 2009-10 ARE FORECASTED OR PLANNED VALUES
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

**Table 16. Water Supplied to Enhancement/Mitigation Projects
During 2008-09 Runoff Year**

Project	Water Supplied (acre-feet)
McNally Canals Conveyance Losses	574
McNally/Laws/Poleta Native Pasture Lands	1,320
McNally Ponds	0
Laws Historical Museum	63
Klondike Lake	1,195
Lower Owens River Rewatering	0
Independence Pasture Lands	2,588
Independence Springfield	1,554
Independence Ditch System	515
Independence Woodlot	335
Shepherd Creek Alfalfa Lands	1,183
Lone Pine Park/Richards Field	1,012
Lone Pine Woodlot	51
Lone Pine Van Norman Field	28
Lone Pine Regreening	228
Total E/M Uses	10,646

3.5 Owens Valley Vegetation Conditions

With reference to LADWP's groundwater pumping operations, vegetation conditions within the Owens Valley are monitored using vegetation transects along with other methods. Vegetation transects are conducted per the Green Book, the technical appendix to the Water Agreement. The Green Book describes the methods 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." Reference source for the comparison of vegetation changes in order to determine significance are the 1984-87 vegetation inventory data.

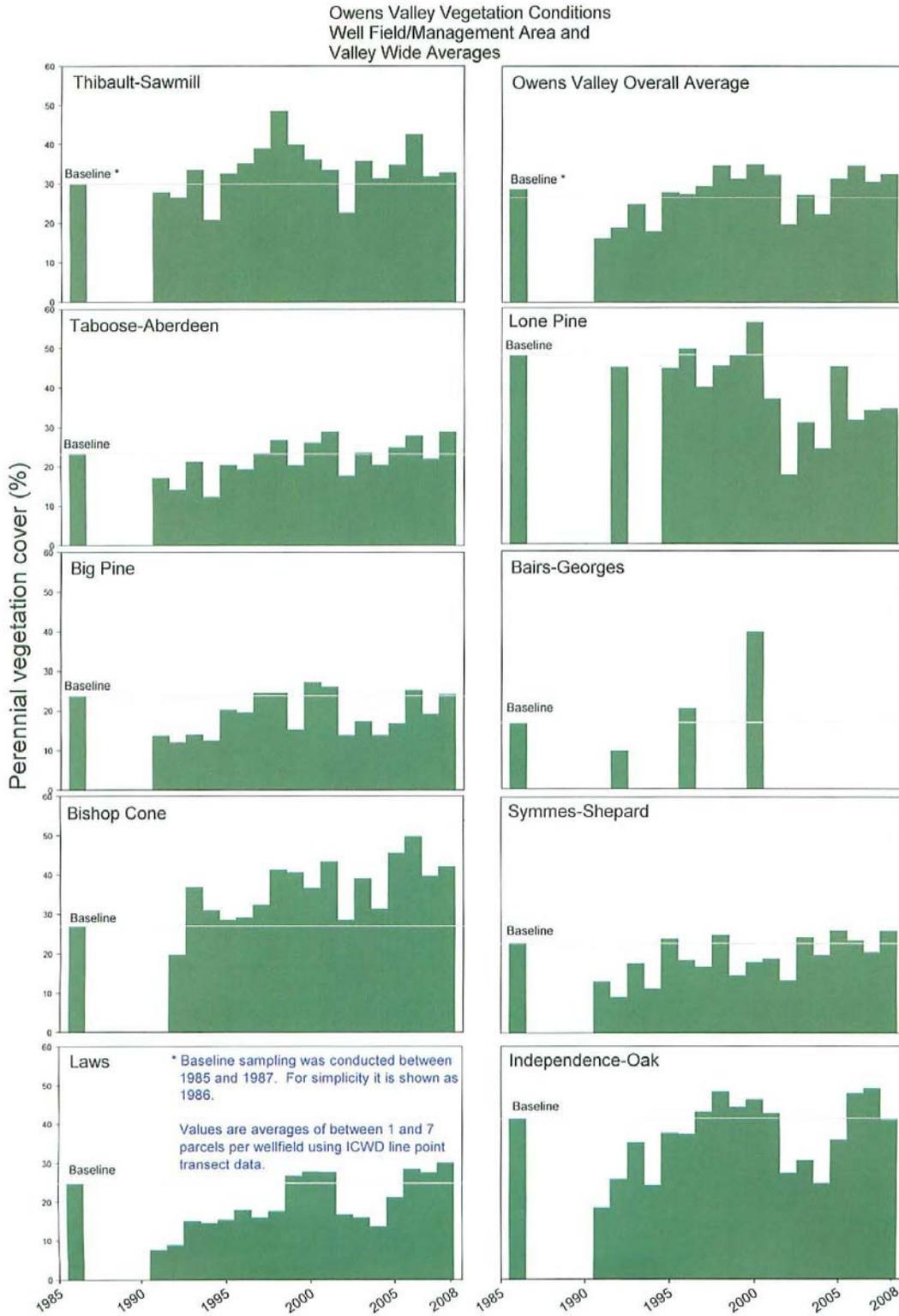
The Green Book requires the 1984-87 vegetation inventory to be used as a baseline when determining whether vegetation cover and/or species composition has changed. The 1984-1987 inventory transects were chosen using aerial photos to aid in determining transect locations. Transects were located visually 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 advises 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 to permit statistical comparison by randomly selected transects. In any case, the Green Book requires statistical analysis to be used to determine the statistical significance of vegetation changes from the 1984-87 inventory maps.

In 1991, ICWD began running transects annually within parcels located inside and outside wellfields. Some parcels are evaluated each year, while others are not evaluated annually. Percent cover of perennial species is calculated and compared to data collected within parcels during the period of baseline inventory.

Figure 19 shows a series of graphs documenting Owens Valley vegetation conditions based upon vegetation transect data gathered by the ICWD within each wellfield and for the entire Owens Valley. Using the attached graphs it is possible to distinguish the trend that vegetation cover has increased valley-wide since the early 1990's. It is probably not reasonable to make year to year comparisons in vegetation cover based upon the random vegetation measurement methodologies currently employed.

Figure 19 – Owens Valley Vegetation Condition



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 Los Angeles-owned lands on the Bishop Cone during that year. Annual groundwater extractions by LADWP are the total of all groundwater pumped by LADWP on the Bishop Cone plus the amount of artesian water that flowed out of the casing of uncapped 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 ICWD performs an annual audit of LADWP water uses and groundwater extractions by LADWP on the Bishop Cone. Appendix A is a copy of the most recent audit dated July 2008. As shown in Figure 5, LADWP has historically pumped much less than allowed under the terms of the Hillside Decree. In the 2008-09 runoff year LADWP pumped approximately 10,900 acre-feet, or approximately 40% of what it could pump under terms of the Hillside decree.

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. Additionally, groundwater pumping from wells that 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 17 shows daily flow values for Reinhackle Spring. For the 2008-09 runoff year Reinhackle Spring had a high daily flow rate of about 2.27 cfs, a low daily flow rate of about 1.39 cfs, and average daily flow of about 1.72 cfs. A geochemistry study that included Reinhackle Spring was initiated in February 2003 and completed in December 2004. The study was conducted cooperatively by LADWP, MWH and ICWD. Three shallow test holes and one deep test hole were installed to aid in study implementation. This study analyzed water samples from Reinhackle Spring in comparison to water samples from the aqueduct, pumping wells, deep wells and shallow wells. This study concluded that the water flowing from Reinhackle Spring is similar in origin to the aqueduct and dissimilar to the deep aquifer samples and up-gradient shallow aquifer wells. An operational pumping test was started in 2005 to evaluate the effect of pumping on flow in the spring. This test was stopped because monitoring site BG2 changed to OFF status in October 2006. As of April 2008, the status of the site has changed to ON again. LADWP has requested that the test be continued which, will require the wells used for the Reinhackle Spring test to be considered exempt wells under the IMP. If Inyo County agrees the test will resume.

Table 17 - Reinhackle Spring Flow in cfs during 2008-09 Runoff Year

day\mo	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Annual
1	1.40	1.40	1.90	2.20	2.14	2.09	2.12	2.03	1.88	1.82	1.70	1.70	
2	1.40	1.41	1.92	2.20	2.15	2.07	2.12	2.03	1.88	1.79	1.70	1.65	
3	1.40	1.42	1.93	2.17	2.16	2.10	2.12	2.01	1.88	1.79	1.70	1.61	
4	1.40	1.43	1.94	2.18	2.17	2.12	2.12	1.98	1.88	1.79	1.64	1.61	
5	1.40	1.43	1.96	2.20	2.17	2.12	2.12	1.98	1.88	1.79	1.61	1.61	
6	1.40	1.43	1.98	2.22	2.17	2.12	2.11	1.98	1.88	1.79	1.61	1.61	
7	1.40	1.43	1.98	2.22	2.17	2.12	2.09	1.98	1.88	1.79	1.61	1.61	
8	1.40	1.46	1.98	2.25	2.17	2.12	2.12	1.98	1.88	1.79	1.61	1.61	
9	1.40	1.48	1.98	2.26	2.17	2.12	2.11	1.98	1.88	1.79	1.61	1.63	
10	1.40	1.48	1.96	2.27	2.17	2.12	2.11	1.96	1.88	1.79	1.61	1.65	
11	1.40	1.52	1.96	2.23	2.17	2.12	2.07	1.93	1.88	1.79	1.61	1.64	
12	1.40	1.56	1.98	2.23	2.16	2.12	2.07	1.93	1.88	1.79	1.61	1.61	
13	1.40	1.60	1.98	2.24	2.16	2.12	2.07	1.93	1.88	1.73	1.61	1.61	
14	1.40	1.61	1.98	2.25	2.15	2.12	2.07	1.93	1.88	1.72	1.61	1.61	
15	1.39	1.65	1.98	2.25	2.17	2.12	2.07	1.93	1.88	1.72	1.61	1.61	
16	1.39	1.65	1.98	2.22	2.17	2.12	2.07	1.93	1.88	1.73	1.61	1.61	
17	1.39	1.68	1.99	2.22	2.17	2.14	2.07	1.93	1.88	1.73	1.61	1.61	
18	1.39	1.70	2.00	2.22	2.17	2.15	2.07	1.93	1.85	1.73	1.61	1.61	
19	1.39	1.71	2.01	2.19	2.15	2.15	2.07	1.93	1.84	1.73	1.61	1.61	
20	1.39	1.74	2.03	2.17	2.12	2.15	2.07	1.93	1.84	1.71	1.61	1.61	
21	1.39	1.74	2.03	2.17	2.12	2.14	2.07	1.93	1.84	1.71	1.61	1.61	
22	1.40	1.81	2.03	2.13	2.11	2.12	2.05	1.93	1.84	1.74	1.62	1.61	
23	1.41	1.84	2.05	2.10	2.10	2.12	2.07	1.91	1.84	1.74	1.65	1.61	
24	1.40	1.84	2.09	2.11	2.10	2.12	2.05	1.90	1.84	1.74	1.65	1.61	
25	1.43	1.87	2.12	2.11	2.11	2.12	2.03	1.88	1.84	1.74	1.65	1.61	
26	1.42	1.88	2.12	2.11	2.10	2.12	2.03	1.92	1.84	1.74	1.65	1.61	
27	1.43	1.86	2.12	2.12	2.07	2.12	2.03	1.93	1.84	1.74	1.65	1.61	
28	1.43	1.88	2.13	2.12	2.07	2.12	2.03	1.91	1.84	1.70	1.94	1.61	
29	1.41	1.88	2.17	2.12	2.08	2.12	2.03	1.90	1.84	1.70	0.00	1.61	
30	1.64	1.88	2.18	2.12	2.07	1.97	2.03	2.03	1.84	1.70	0.00	1.64	
31	0.00	2.15	0.00	1.98	1.90	0.00	2.21	0.00	2.08	1.91	0.00	1.41	
TOTAL AF	84	102	120	134	131	126	128	116	115	108	88	99	1,351
AVG CFS	1.41	1.66	2.02	2.18	2.13	2.12	2.08	1.95	1.87	1.76	1.58	1.61	1.86
Max Daily	1.64	2.15	2.18	2.27	2.17	2.15	2.21	2.03	2.08	1.91	1.94	1.70	2.27
Min Daily	1.39	1.40	1.90	1.98	1.90	1.97	2.03	1.88	1.84	1.70	1.61	1.41	1.39

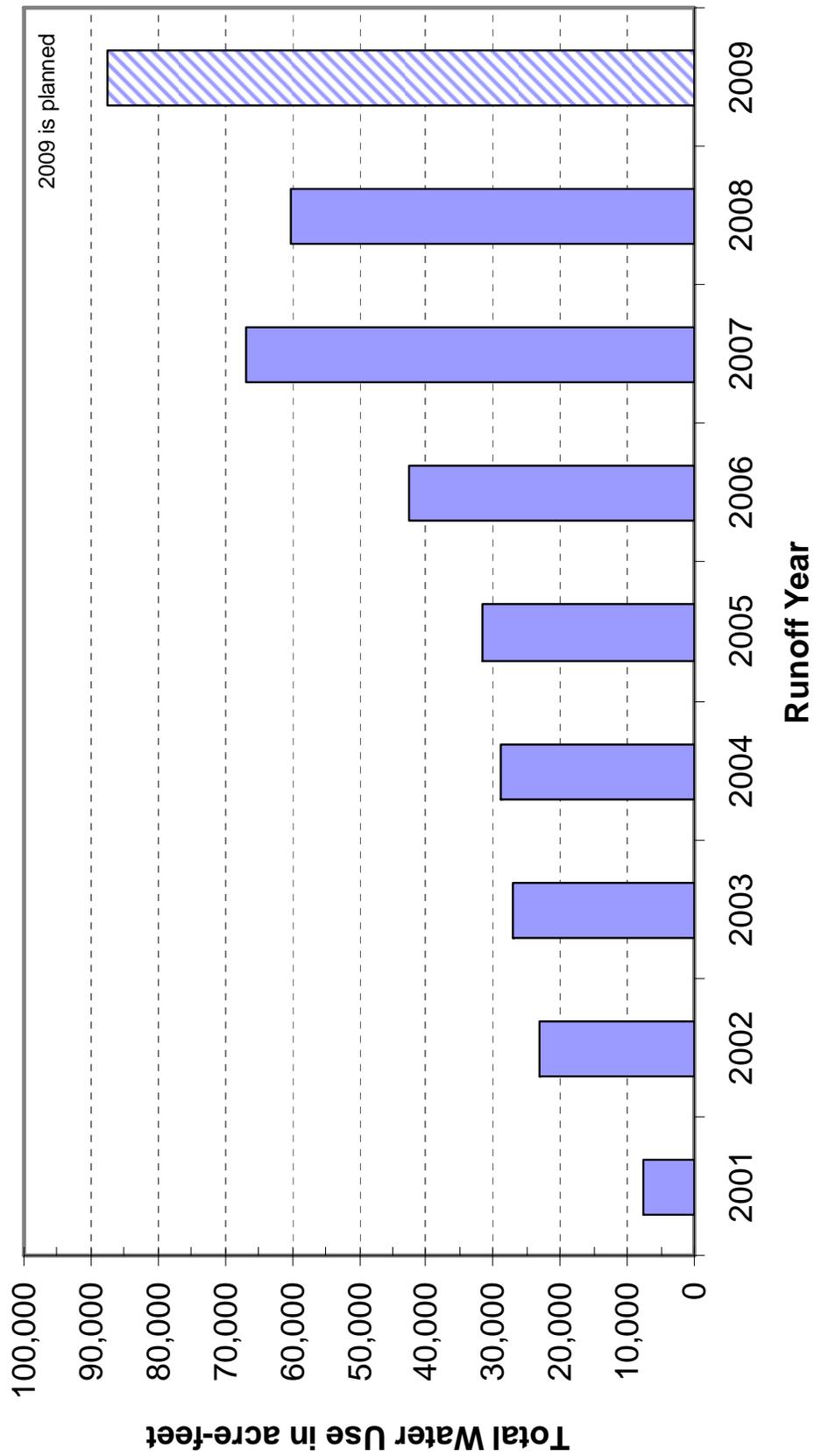
3.8 Water Spreading in the Owens Valley

The actual Owens Valley runoff for 2008-09 was 76% of normal. Typically in such a dry year, runoff from snowmelt during the spring and summer months does not exceed the capacity of the LAA system. There was no operational need to spread water in Laws, Big Pine, or Independence area wellfields. Additionally, the IMP requires LADWP to spread water only in years when forecast runoff is more than 120% of normal. However, the waters of the north fork of Oak Creek were channeled through a spreading diversion in the Independence area subsequent to a July 12, 2008 flooding event. LADWP estimates that 1342 acre-feet of groundwater recharge in the Independence area resulted from diverting Oak Creek. No other water spreading was conducted during the 2008-09 runoff year.

3.9 Owens Lake Dust Mitigation

In accordance with the Great Basin Unified Air Pollution Control District's (GBUAPCD) 2003 Owens Valley PM₁₀ Planning Area Demonstration of Attainment State Implementation Plan, LADWP has mitigated dust emissions from approximately 29.8 square miles of the Owens Lakebed. Shallow flooding, managed vegetation, and gravel dust control measures have been used to mitigate dust emissions from the lakebed. Release of water from the LAA to the Owens Lake started in November 2001. A total of 7,700 acre-feet of LAA water was used for dust mitigation during 2001-02 runoff year. Releases to the Owens Lake have increased steadily since then, with a total of 60,294 acre-feet of water released in 2008-09 runoff year. Figure 20 shows annual water released from the LAA and/or LORP Pumpback Station to the Owens Lake for dust mitigation activities. The water usage for dust mitigation at Owens Lake is expected to increase to approximately 95,000 acre-feet per year as LADWP mitigates dust emissions with an additional 9.2 square miles of shallow flooding and 0.5 square miles of modified shallow flooding (a version of shallow flooding with less construction-related impacts) on the lakebed by April 2010 in accordance with a 2006 settlement agreement between LADWP and GBUAPCD.

Figure 20 - Water Use by Owens Lake Dust Mitigation Activities



4. ENHANCEMENT/MITIGATION PROJECT STATUS

4. ENHANCEMENT/MITIGATION PROJECT STATUS

Table 19 provides the current status of Owens Valley Enhancement/Mitigation Projects.

**TABLE 19
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 over approximately 280 acres. Another 40 acres needs to be planted and is planned for initiation in the 2009-10 runoff year.	10-11
Independence Woodlot (21 acres)	The Woodlot has achieved its goals. California Department of Forestry helps with harvesting and cleanup and Inyo Mono Advocates for Community Action distributes wood to needy individuals according to the operations plan and management guidelines developed by the Technical Group.	10-11
Independence East Side Regreening Project (30 acres)	Discussions have taken place regarding possible modifications to this project. Mitigation plans were submitted to ICWD for this project on August 13, 2004. CEQA was filed for the Independence East Side Regreening Project and 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 requested that three 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. 3) That a portion of the 30 pasture include stables and/or corrals. An amendment to the project scoping document that incorporates these changes was approved by Standing Committee on April 23, 2009. Inyo County has agreed to complete any additional CEQA requirements for these changes.	10-11
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 Inyo County in February 2008 asking for 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. As a consequence, an amended mitigation plan will be submitted for Technical Group approval and CEQA will be completed for the project described in the 1988 Scope of Work.	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 Project in 1991 because of a lack of E/M well supply. Since that time, 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

Section 4 – Enhancement/Mitigation
Project Status

4 – 2

May 2009

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 EIR noted the acreage for this project as 610 acres. The project was evaluated this year to determine if additional acreage should be irrigated. The figure (12-2) for the 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 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 was fulfilling the stated goals for the project.	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. California Department of Forestry helps with harvesting and cleanup and Inyo Mono Advocates for Community Action distributes wood to needy individuals according to the operations plan and management guidelines 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 decided in 1991 to eliminate 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 had eliminated water releases to this project. Because of abundant runoff in 2006-2007 the project received its full allotment of water for that year. In 2008-09 the project did not receive water because the Interim Management Plan did not allow the associated supply wells to be pumped.	10-18
Klondike Lake Aquatic Habitat (160 ac)	The Klondike Lake Project is being implemented. The estimated water usage was reduced from 2,200 AF to 1,700 AF with 1,500 AF for conveyance and lake level maintenance, and up to 200 AF for waterfowl habitat south of the lake. A new diversion was installed and implementation of releases for waterfowl habitat south of the lake began in May 2005. Delivery of 200 AF to the south has been more difficult than originally thought. Additional modifications conducted in 2007 included cleaning out accumulated sand in front of the headgate prior to opening the diversion to reduce the amount of sand in the pipe. Crews also removed some vegetation at the pipe outflow area to facilitate flow. Delivery of the 200 AF was still not possible. A total of 96 AF of water was released in 2007. Vegetation and sediment were removed in front of release pipe, and 89 AF of water was released in 2008.	11-1

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.
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 OWENS VALLEY ENVIRONMENTAL IMPACT REPORT
(1991 Owens Valley EIR) MITIGATION MEASURE STATUS**

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

Table 20 provides status of mitigations required by the EIR on Water from the Owens Valley to Supply the Second Los Angeles Aqueduct, October, 1991.

TABLE 20
1991 Owens Valley EIR Mitigation Measures

9 - WATER RESOURCES

Steward Ranch

1991 Owens Valley EIR Impact No. 9-14

Impacts: 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

Salt Cedar Eradication Control Program

1991 Owens Valley 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 salt cedar, which was established prior to 1970.

Project Description/
Mitigation Measure: A salt-cedar eradication and control program has been implemented as described in Chapter 5 of the 1991 Owens Valley EIR.

Mitigation Goals/
Strategies/Actions: To control salt cedar in the Owens Valley

Project Status/
Effectiveness: The control efforts are continuing with payments from LADWP to ICWD and with outside funding. Control of Owens River salt cedar populations from Tinemaha Reservoir into the Delta has occurred along the main channel of the Owens River. Additional control efforts are now being conducted just south of the Two Culverts area.

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 Owens Valley 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: 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 Inyo Mono Advocates for Community Action distributes wood to needy individuals according to the operations plan and the management guidelines developed by the Technical Group.
Independence Springfield has achieved its goal over approximately 280 acres. Additional acres need to be planted and is planned for initiation in 2009-2010 runoff year.

Mitigation Plan
Required/Status: No

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

1991 Owens Valley 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 - CEQA 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 items in the project be modified: 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. 3) That a portion of the total acreage be considered for corrals and stables. An amendment to the project scoping document that incorporates these changes was approved by the Standing Committee on April 23, 2009.

Big Pine Regreening – Mitigation Plans 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 Inyo County in February 2008 asking for 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. As a consequence, an amended mitigation plan will be submitted for Technical Group approval and CEQA will be completed for the project.

Mitigation Plan
Required/Status:

In progress.

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

1991 Owens Valley 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 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 Owens Valley 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 on 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. As stated in the EIR, the intent was not to permanently irrigate revegetation sites. Permanent transects were run in 2004. Hines Spring S will not be implemented until Hines Spring mitigation is implemented. 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 2005 and perennial cover had decreased since 2002 and weed cover had increased. A contractor was hired to collect native seed and 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 green house was purchased and LADWP has begun growing plants for the seed farm and revegetation sites.

Mitigation Plan
Required/Status:

Yes – complete.

Five Bridges Area Revegetation Project (300 acres)

1991 Owens Valley 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 2008, water releases were conducted three times during the growing season. At transect L4 in 2008 perennial cover was 52% composed of five native species. Perennial cover at transect L5 in 2008 was 74% and composed of six native species. 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 Owens Valley 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.

Ind. 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.

Ind. 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 is 8% composed of eight native perennial species.

Ind. 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.

A contractor was hired to collect native seed and 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 green house was purchased and LADWP has begun growing plants for the seed farm and revegetation sites.

Mitigation Plan
Required/Status: Yes – complete.

Fish Springs Hatchery, Blackrock Spring Hatchery

1991 Owens Valley 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 CDFG fish hatcheries at these locations serve as mitigation of a compensatory nature by producing fish that are stocked throughout Inyo County.

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

Project Status/
Effectiveness: Hatchery operations continue

Mitigation Plan
Required/Status: No

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

1991 Owens Valley 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 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 Owens Valley 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 2006 Stipulation and Order. Consultants developed draft plans for this project. The Parties to the MOU decided to enter into an ad hoc process to analyze the project at Hines Springs and other potential project areas. Conceptual plans have been completed. When plans are finalized and agreed to by the Parties, CEQA will be completed and implementation of the project will be initiated.

Mitigation Plan
Required/Status: Yes – in progress.

Reinhackle Spring, Little Blackrock Springs

1991 Owens Valley 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 1980's 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 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. A geochemistry study that included Reinhackle Spring was initiated in February 2003 and completed in December 2004. The study was conducted cooperatively by LADWP, MWH and ICWD. Three shallow test holes and one deep test hole were installed to aid in study implementation. This study analyzed water samples from Reinhackle Spring in comparison to water samples from the aqueduct, pumping wells, deep wells and shallow wells. This study concluded that the water flowing from Reinhackle Spring is similar in origin to the aqueduct and dissimilar to the deep aquifer samples and upgradient shallow aquifer wells. The final phase of spring flow response to pumping test will be conducted in the near future.

Mitigation Plan
Required/Status:

No

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

1991 Owens Valley 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 re-water 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 area and Off-River Lakes and Ponds. The goal of the LORP 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 first seasonal habitat flow was initiated on February 13, 2008 and completed on schedule. Specified flows were released to the Delta in 2008. The Blackrock Waterfowl Area achieved the 2008 specified acreage through water releases. Off-River Lakes and Ponds have been managed as specified for 2008. 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 ACFT/YR)

1991 Owens Valley EIR Impact No. 10-14

Impacts: See description above.

Project Description/
Mitigation Measure: This project provides up to 18,000 acft/yr 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 supplies water to five small lakes along the river route providing improved waterfowl habitat in the region.

Mitigation Goals
Strategies/Actions: The goal of the E/M 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 LORP Project described above.

Mitigation Plan
Required/Status: No

Springs Vegetation (general)

1991 Owens Valley EIR Impact No. 10-14

Impacts: See description above.

Project Description/
Mitigation Measure: In addition, vegetation dependent on 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 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 Owens Valley EIR Impact No. 10-15

Impacts: Under the provisions of the 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 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 would determine an appropriate course of action that might include: (a) temporarily supplying surface water or groundwater of a quality that would 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 Pasture Lands and Native Pasture Lands (610 acres),
Van Norman Fields (171 acres), Richards Fields (160 acres),
Lone Pine Woodlot (12 acres)**

1991 Owens Valley 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 Lands and native pasture lands, 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. The EIR noted the acreage for this project as 610 acres. The figure(12-2) for the 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 Inyo/Mono Advocates for Community Action distributes wood to needy individuals in accordance with the operation plans and management guidelines 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 could not be modified to increase irrigation efficiency but that the project was fulfilling its stated goals.

Mitigation Plan
Required/Status: No

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

1991 Owens Valley 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 Highway 395, have been converted to irrigated pasture as part of the Lone Pine Regreening enhancement/mitigation projects. 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 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 Owens Valley 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. The results of this study and other studies conducted on revegetation will be utilized to move forward with larger scale revegetation efforts at this site. A contractor was hired to collect native seed and 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 green house 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.

Mitigation Plan
Required/Status:

Yes – complete.

Irrigated Lands in the Owens Valley since 1981-82

1991 Owens Valley 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 on Agricultural Tailwater,
LORP Project (60 miles of river, perhaps more than 1,000 acres)**

1991 Owens Valley 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 on tailwater from formerly irrigated fields will be mitigated in the form of compensation by the restoration of meadow and riparian vegetation by the Lower Owens River Project.

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 Owens Valley 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 2 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. The system was run from late June till the beginning of November in 2004. 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 2006, 2007 and 2008 the irrigation system was run from April to the first forecast hard freeze in October. Seed was planted in the basins at drip emitters and at basins that had been previously seeded if no plants were present. Maintenance was performed as needed on the irrigation system. A contractor was hired to collect native seed and 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 green house was purchased and LADWP has began growing out plants for the seed farm and revegetation

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 Owens Valley EIR Impact No. 10-18

Impacts: See description above

Project Description/
Mitigation Measure:

In the mid-1980's, LADWP and Inyo County implemented the Laws-Poleta Pasture Land, Laws Museum, and McNally Ponds enhancement/mitigation projects in the Laws area totaling approximately 541 acres of pasture land.

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 decided in 1991 to eliminate 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 eliminated water releases to this project. Because of abundant runoff in 2006-2007 the project received its full allotment of water. In 2008-2009 the project did not receive water because the Interim Management Plan did not allow the associated wells to be pumped.

Mitigation Plan
Required/Status:

No

Farmers Pond

1991 Owens Valley EIR Impact No. 10-18

Impacts: See description above

Project Description/
Mitigation Measure: In the 1970's, 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 Owens Valley 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 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 Owens Valley 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 Owens Valley 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 consulting firm has conducted studies on revegetation techniques at the site. The results of this study and other studies conducted on revegetation will be utilized to move forward with larger scale revegetation efforts at this site. A contractor was hired to collect native seed and 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 began growing plants for the seed farm and revegetation.
Mitigation Plan Required/Status:	Yes – complete.

Big Pine Northeast Regreening (30 acres)

1991 Owens Valley 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 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 Inyo County in February 2008 asking for 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. As a consequence, an amended mitigation plan will be submitted for Technical Group approval and CEQA will be completed for the project.

Mitigation Plan
Required/Status:

Yes – in progress.

Big Pine Area Revegetation Project (20 acres)

1991 Owens Valley 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 Owens Valley 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 Agreement. This area will also be mitigated by the Valley-wide mitigation under the 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/LA 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 has implemented Phase 1, 2 and 3 of the project. 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 2008 the Big Pine Ditch System consumed 303 acre-feet of water.

Mitigation Plan
Required/Status:

No

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

1991 Owens Valley 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 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 (Klondike Lake)

1991 Owens Valley 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 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.

Mitigation Goals/
Strategies/Actions: To create and maintain the lake level to enhance the attractiveness of the facility for recreation as well as improve waterfowl nesting and feeding habitat by providing a firm water supply to the site.

Project Status/
Effectiveness: The Klondike Lake Project is being implemented. The estimated water usage for the project was reduced from 2,200 acft to 1,700 acft with 1,500 acft for conveyance and lake level maintenance, and 200 acft 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 200 acft to the south has been more difficult than originally thought. Additional modifications conducted in 2007 included cleaning out accumulated sand in front of the headgate prior to opening the diversion to reduce the amount of sand in the pipe. Crews also removed some vegetation at the pipe outflow area to facilitate flow. Delivery of the 200 acft was still not possible. A total of 96 acft of water was released in 2007. Vegetation and sediment were removed in front of the release pipe, and 89 acft of water was released in 2008.

Mitigation Plan
Required/Status: No

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

1991 Owens Valley 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). Farmers Ponds, Buckley Ponds, Billy Lake and Lone Pine Pond are fully implemented and functioning as determined by the goals.

Mitigation Plan
Required/Status: No

12 – AIR QUALITY

Independence Springfield (297 acres),

Independence East Side Regreening (30 acres),

Shepherds Creek Alfalfa Field (198 acres),

Revegetation Project East of Independence (part of Independence Springfield, 40 acres)

1991 Owens Valley 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 Pasture Lands 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 Owens Valley 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 Owens Valley EIR Impact No. 12-3

Impacts: Significant impacts to air quality have resulted from the abandonment of irrigated lands to supply the second 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 Owens Valley 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 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 Owens Valley 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 Owens Valley 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 Owens Valley 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 Owens Valley 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 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 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 Owens Valley 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 dependent 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 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 Owens Valley 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 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 Owens Valley 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 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 Owens Valley 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 Owens Valley 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 Owens Valley 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 groups 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 Owens Valley 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 Owens Valley 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 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. STATUS OF OTHER STUDIES, PROJECTS, AND ACTIVITIES

Tables 21 and 22 detail mitigation and monitoring of the irrigation projects in the Laws and Big Pine areas, respectively. Table 23 lists the Water Agreement provisions and their respective status. Table 24 lists the MOU provisions and their respective status. Table 25 lists the Cooperative Studies that have been approved by the Los Angeles/Inyo Standing Committee and their respective status. Table 26 lists the 1991 EIR revegetation projects, progress to date, and proposed future work. Section 6.8 provides a report on the Mitigation Monitoring and Reporting Program for the LORP.

6.1 Irrigation Project in the Laws Area 2008 Progress Report

Seed Collection

On February 6, 2003, Comstock Seed of Gardnerville, Nevada was contacted regarding the collection of native Owens Valley seeds to be used for the establishment of the seed farm at Laws. On February 10, 2003, a list of 41 species was given to Mr. Ed Kleiner of Comstock Seed in order to determine the level of experience that his company had collecting them and an estimated cost for each. Based on past experience with seed availability, viability, and clean out, the list was reduced to 12 species. The final price quote was received on February 25, 2003.

On March 13, 2003 the purchase request for 12 species was submitted to the LADWP purchasing office. The contract was placed on LADWP's BidNet system on March 22, 2003. The final contract with Comstock Seed was approved on May 19, 2003.

On May 21, 2003 LADWP met Mr. Ed Kleiner, owner of Comstock Seed, regarding possible collection sites for seeds of the requested species. Seed collection began that same week.

On November 21, 2003 Comstock Seed delivered seeds for 12 of the collected species to Bishop.

In May 2004 a new contract was awarded to Comstock Seed for additional seed collection. The species list was expanded. Seed collection was performed from May through the fall 2004. A total of 18 species of plant seed were collected.

Seed collection continued in 2005. Seed was collected in the Owens Valley from a total of 25 species of plants.

Seed collection continued in 2006. Seed was collected in the Owens Valley from a total of 12 species of plants.

In 2007 and 2008 the seed crop in the Owens Valley was extremely low due to a very dry winter. As a consequence, no seed collection occurred.

Plant Propagation

In early September 2003 Mr. 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 College and toured their green house 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 (*Psoralea polydenius*), and Indigo bush (*Psoralea arborescens*).

In July 2004 seed was sent to Victor Valley Community College for propagation of additional plants. LADWP took delivery of 1,100 plants on March 22, 2005. LADWP took delivery of approximately 1,900 additional plants in spring 2006. The final delivery of plants from Victor Valley Community College was in the summer 2007 when 600 plants were received and planted in the fall.

In the summer 2006 LADWP initiated the purchase of a greenhouse. The greenhouse became operational in the winter of 2008/2009. LADWP will begin propagating plants for the seed farm and revegetation efforts in 2009.

Seed Farm

Between July 17 and July 19, 2003 the 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 were completed. These systems were purchased in the 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 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 were seeded with Indian Ricegrass (*Achnatherum hymenoides*) using a range drill. This area was sprinkled using

16 irrigation lines, two lines at a time for 45-minute sets that were run from 4 a.m. to 10 p.m., seven days a week. On September 28, 2004, the water application was reduced to 30-minute sets twice a day, conducted six days a week. This irrigation schedule continued until November 1, 2004. Irrigation was initiated March 21, 2005 for the growing season.

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. On 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 two 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. Irrigation was initiated on March 21, 2005 for the growing season.

In January 2005, ten acres of the seed farm were seeded with Needlegrass (*Achnatherum speciosum*). This seed was planted using the 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 took delivery of 1100 plants from Victor Valley College. These plants were placed in cold frames to harden them off prior to planting. On 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.

In addition, in 2005 the existing Indian Ricegrass plot and Needlegrass plot were overseeded at a rate of 10 pounds of seed per acre. 10 additional acres were planted with Saltgrass (*Distichlis spicata*) and 2 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. These 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. 10 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.

Center Pivot Systems

On April 11, 2003 the bid specifications for the center pivot irrigation systems were posted on LADWP's BidNet system. Bids were closed on April 24 and the contract was awarded to Great Basin Irrigation of Fishlake Valley, Nevada, on June 1, 2003.

Assembly of the irrigation systems began in early September 2003. Assembly was complete in mid-October 2003. During September and October 2003, installation of 12-inch steel pipe mainline and 8-inch plastic lateral pipelines to pivots was completed. During October and November, risers and valves on 8-inch plastic lateral pipelines were installed.

During the late winter and early spring 2004 the final assembly of the pivot systems was checked and all water lines flushed in preparation for the upcoming irrigation season. All necessary bridges required for ditch and canal crossing were installed and the pivots were tested. The areas under the two wiper pivots were seeded in the spring 2004. The north full pivot was fully seeded by mid-summer 2004. The south full pivot was fully seeded by spring 2005 resulting in full implementation of the center pivot systems. All the fields were treated for weeds in the spring 2005, 2006, 2007 and 2008.

Lease RFP

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 4-J Cattle Company submitted the successful proposal. Irrigation was initiated by the 4-J Cattle Company on the flood-irrigated pastures in June 2003. These pastures were fully irrigated in 2004 and 2005.

The portion of the Laws Ranch located south of Silver Canyon Road was included in the Cashbaugh Ranch lease. Those areas designated as flood irrigated were irrigated in 2003 with the exception of the portion of parcel LAW118 that was recently added to the lands to be irrigated. The diversion structure off of the Upper McNally Canal that will provide water to this portion of LAW118 was rebuilt in spring 2005. The lessee began a cleanup of this area in the fall 2005 to ready the site for irrigation.

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

See Table 21 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: Department of Water and Power on a Long-Term Ground Water Management Plan in the Owens Valley and Inyo County (the Water Agreement).

Table A illustrates the vegetation cover in vegetation parcels within the Laws wellfield as determined by the Inyo County Water Department. 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 wellfield.

Parcel	Percent Perennial Cover						
	2002	2003	2004	2005	2006	2007	2008
LAW030	19.5	nd	20.5	24.2	32.4	36.6	32.7
LAW035	nd	3.1	1.6	4.7	17.9	6.4	6.3
LAW043	nd	3	2.4	Nd	40.8	7.4	7.2
LAW052	2.3	2.9	3.9	5.4	12.5	10.1	7.6
LAW062	2.8	4.7	3.3	7.2	12.8	10.9	10.8
LAW063	3.7	6.3	5.4	9.6	24.0	16.7	15.9
LAW065	3.3	2.9	2.1	5.1	13.9	10.7	12.3
LAW070	nd	1	1.6	Nd	nd	nd	11.1
LAW078	36.2	31.8	27.1	39.0	49.7	50.1	53.7
LAW082	2.1	3	4.4	4.2	12.7	7.1	12.6
LAW085	7.1	9.8	7.7	14.8	28.5	22.3	30.2
LAW107	37.6	43.9	38.2	65.1	59.8	67.2	78.2
LAW112	12.9	25.1	15.8	32.9	33.3	45.0	47.3
LAW120	17.6	24.3	21	27.6	28.8	36.2	38.5
LAW122	59	54.8	47.8	56.6	54.6	62.8	52.7

Table B. Depth to water (in feet) for test holes in the Laws wellfield.

Well	April 2004	April 2005	April 2006	April 2007	April 2008	April 2009
T107	30.1	31.9	18.6	21.1	25.16	27.99
T436	10.1	10.2	4.8	5.3	7.05	8.79
T438	11.6	8.9	3.8	6.3	8.20	9.11
T490	14.6	14.7	13.3	10.2	12.57	13.82
T492	32.1	31.5	24.4	23.0	26.84	29.12

Mitigation Measure M-4

Impact: Reducing the irrigation duty from 5 acft per-acre to 3 acft 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 ($\{\text{overall score} \div \text{total possible score}\} \times 100 = \text{percent rating}$). 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 2007 growing season was 88%. The next scheduled evaluation is in 2010.

Mitigation Measure M-5

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

Measure: Water Agreement

Between October 1994 and June 2004, there were no flow diversions from Cold Water Canyon Ditch. In June 2004, periodic flow reductions in Cold Water Canyon Ditch occurred as the irrigation system for the Laws Seed Farm was being installed. Beginning in July and extending into the first week of November 2004 the irrigation system was fully operational on the Laws Seed Farm. During operation, approximately 1/4 of the total flow remained in the ditch. The entire flow resumed in November 2004 and remained until March 2005. Diversions from Cold Water Canyon Ditch began March 21, 2005 for irrigation of the seed farm. During operation, approximately 1/4 of

the total flow remained in the ditch. As the early season species matured, irrigation was reduced and flows into the ditch were increased. Irrigation was discontinued the first of October and the entire flow was returned to Cold Water Canyon 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.

Irrigation from Cold Water Canyon Ditch for the Laws Seed Farm continued in 2007 as described above.

Periodic examinations were conducted along the ditch throughout the 2007 and 2008 growing season. These examinations did not indicate any signs of vegetation stress. Photos points will be replicated during the 2009 growing season.

Mitigation Measure M-6

Impact: Altering the flow in Silver Canyon Ditch.

Measure: Water Agreement

There were no diversions from Silver Canyon Ditch during the 2005 monitoring period. Photo points have been established along the ditch.

Diversions from Silver Canyon Ditch began in late April 2007 for irrigation of Parcels LAW 90, 94, and 95. Irrigation was delayed because of severe rodent damage to the irrigation system and significant repairs that were needed before irrigation could begin. During operation, approximately 1/4 of the total flow remained in the ditch. Irrigation was discontinued the first of October and the entire flow was returned to Silver Canyon 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 and will be replicated during the 2009 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 2005 growing season. No A or B listed noxious weeds were found. Weed control consisting of flaming and herbicide treatments were conducted in the 2005 season. In addition, the lessee treated weeds through a combination of grazing, mowing, and burning.

Surveys were conducted on the Irrigation Project in the Laws Area for noxious weeds during the 2008 growing season. No A or B listed noxious weeds were found. Weed

control was conducted in the 2008 season. 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 21
Mitigation and Monitoring Program for Irrigation Project in the Laws Area

POT. IMPACT Summary of Impact	MM No.	MITIGATION			MONITORING			
		Measure	Timing	Responsibility	Method	Period	Frequency	Responsibility
<u>Air Quality</u>								
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 (the Water Agreement)	To be implemented throughout the project as needed	Inyo LA 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 LA Technical Group
<u>Hydrology and Water Quality</u>								
Groundwater pumping	M-3	Water Agreement	To be implemented throughout the project as needed	Inyo LA 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	During the period when groundwater pumping and water management practices could affect vegetation.	Annually during the growing season	Inyo LA Technical Group

POT. IMPACT		MITIGATION			MONITORING			
Summary of Impact	MM No.	Measure	Timing	Responsibility	Method	Period	Frequency	Responsibility
					vegetation.			
Reducing the irrigation duty from 5 acre-feet per acre to 3 acre-feet per acre and of changing from flood irrigation to sprinkler irrigation	M-4	Water Agreement	To be implemented throughout the work as needed	Inyo LA 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 LA Technical Group
<u>Biological Resources</u>								
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 LA 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 LA Technical Group
Altering the flow in Silver Canyon Ditch	M-6	Water Agreement	To be implemented throughout the work as needed	Inyo LA 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 LA 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 Dept.	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 Dept.

<u>Cultural Resources</u>								
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

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

See Table 22 for the Mitigation Monitoring Program for the Irrigation Project in the Big Pine Area.

**TABLE 22
Mitigation and Monitoring Program for the Irrigation Project in the Big Pine Area**

POT. IMPACT	MM No.	MITIGATION			MONITORING			
		Measure	Timing	Responsibility	Method	Period	Frequency	Responsibility
<u>Hydrology and Water Quality</u>								
The cumulative effect of groundwater pumping from well 415, 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 LA Technical Group	A monitoring site will be developed by the Inyo LA Technical Group as called for in the Inyo/LA Long Term Water Agreement to manage operation of each well.	During the period when groundwater pumping is needed for the project.	As decided by the Inyo LA Technical Group, consistent with the Long Term Water Agreement	Inyo LA Technical Group

6.4 Water Agreement Provisions

See Table 23 for the Water Agreement Provisions.

**TABLE 23
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 Agreement, commenced in 1987.
New Wells & 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 1 new well 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 LA-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 v City of Los Angeles which reaffirmed LADWP's pumping practices on the Bishop Cone.
Groundwater Recharge Facilities	LADWP may construct groundwater banking and groundwater recharge facilities in the 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 25, "Cooperative Studies."
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.	<p>All E/M projects that have been implemented are being maintained. It is planned to supply approximately 12,000 acre-feet of water to these projects in 2009-2010. 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 is much less in 2008-2009 than in previous years.</p> <p>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</p>

Title	Provision	Status
		<p>Committee has decided annually on water releases to this project. Because of abundant runoff in 2006-2007 the project received its full allotment of water. In 2007 and 2008 the project did not receive water because project supply wells could not be pumped under the Interim Management Plan.</p> <p>The Laws Museum Project is fully implemented. The Laws Museum Project water supply was changed to a well and sprinkler system. All mainline and lateral lines were fully installed during the spring/summer of 2006 and irrigation began in summer/fall 2006.</p> <p>LADWP sent Mitigation Plans for the Independence regreening projects to ICWD in August, 2004, 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 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. Inyo County has agreed to complete additional CEQA if required to address project changes. As determined at the February 13, 2009 Technical Group Meeting these changes must be approved by the Standing Committee.</p> <p>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. 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. A letter was sent to Inyo County in February 2008 asking for 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. As a consequence, an amended mitigation plan will be submitted for Technical Group approval and CEQA will be completed for the project</p>

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.	The 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, the County completed upgrades of the systems in December 2002, using \$2.6M in funds provided by LADWP. LADWP completed the transfer of ownership to the County in January 2005.
Lower Owens River	See Table 24, "MOU Provisions."	See Table 24, "MOU Provisions."
Lower Owens River Project (LORP)	Los Angeles will pay the costs of implementing the project. The 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 the County's repayment obligation. Los Angeles will pay the annual costs of operating the pumpback system. The 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 the County \$5.1 million to cover the County's \$3.75 million obligation for LORP implementation with the remaining \$1.35 million to be used by the County towards post implementation costs.
Haiwee Reservoir	Inyo County and LA will develop a recreational plan for South Haiwee. The recreation plan will be implemented and operated by the 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.
Salt Cedar Control	LADWP is to provide funding to Inyo County to implement a Salt Cedar 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 Salt Cedar Control Program in 1997. In 2008, LADWP paid ICWD \$65,888 for this work. LADWP has paid Inyo County \$1,266,815 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 salt cedar control, and the balance of the program was funded from a WCB grant for \$490,000 obtained by the 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 salt cedar 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 salt cedar control in the LORP Project Area. Under Item 6 of the Stipulation and Order, LADWP has paid Inyo

		County a total of \$661,663 as of August 2008 leaving a balance of \$838,336 available to the 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, & 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 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 operation and maintenance is \$168,086. In addition, LADWP has provided annual payments to the County for parks operation and maintenance activities including a payment in 2008 of \$140,655 for a total of \$1,417,390. LADWP has paid Inyo County a total of over \$3,249,304 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, & Maintenance.	The County formed a collaborative group to generate a Recreational Use Plan for the LORP in 2007. This group is made up of County, City, and local Chamber personnel, as well as interested members of the public. This group was formed to exchange ideas and concerns with regard to recreation, and pursue the development of a Recreational Use Plan for the LORP. From this effort, the County submitted a grant proposal to the Sierra Nevada Conservancy in December 2007 for grant monies to fund two individuals to conduct scoping efforts and write a draft Plan. Award of these funds is pending. Recreation in the Lower Owens River area was addressed by LADWP in the LORP EIR. Recreation issues discussed in the LORP EIR do not include camping but do include the use of adaptive management for locating facilities, fencing of sensitive areas and maintaining access by providing walkthroughs and parking areas. Recreation issues from Pleasant Valley Reservoir to the aqueduct Intake are being addressed in the Owens Valley Management Plans that are being developed by LADWP.
Financial Assistance for Water-Related Activities	LADWP is to make an annual payment to Inyo County to assist the 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 \$1,311,075 in July 2008. Funds provided by Los Angeles have been expended to fund the County Water Department. LADWP has paid Inyo County over \$21M since 1988 for this purpose.
General Financial Assistance to the County	LADWP is to make an annual payment to Inyo County to assist the 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 \$3,147,991 in 2008. Funds provided by Los Angeles have been deposited into the County General Fund and expended on County services as directed by the Board of Supervisors. LADWP has paid Inyo County more than \$33.2 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 has implemented Phase 1, 2 and 3 of the project. 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 2008 the Big Pine Ditch System consumed 303 acre-feet of water.
Park & 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 \$175,820 in 2008. LADWP has paid the City of Bishop \$1,846,589 since 1997 for this purpose. The 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 LA-owned land within the Bishop city limits; and LADWP is to release for sale 75 acres of LA-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. An auction occurred on April 28, 2008 for the release of the Phase 1 lands and one parcel out of eighteen sold. A new auction is in the planning process.
Additional Sales of City-owned Lands	LADWP will negotiate in good faith for the sales of additional surplus Los Angeles-owned land in or near valley towns for specific identified needs. Any such sales are to occur subsequent to those described above.	No additional sales of City-owned lands occurred in 2008.
Lands for Public Purposes	Los Angeles will negotiate in good faith for the sale or lease to the County of any Los Angeles-owned land requested by the County for use as a public park or for other public purposes.	In 2008, there were no lands released for public purposes.
Withdrawn Lands	Inyo County will support passage of withdrawn land legislation pertaining to federally-owned lands in the County.	There is no withdrawn land legislation pending.
Legislative Coordination	Except under certain circumstances, LADWP and Inyo County are to refrain from seeking or	The legislative coordination policy has somewhat been followed.

	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.	
Dispute Resolution	The agreement provides a process for resolving disputes between LADWP and Inyo County regarding issues related to the 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.

6.5 Provisions of the MOU

See Table 24 for the Provisions of the MOU.

TABLE 24
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 Long Term 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 20, "1991 EIR Mitigation Measures" (Impact #10-14), and Table 23, "Agreement Provisions." Phase I releases began on December 6, 2006. Project baseflows of 40 cfs were achieved in February 2007. On February 13, 2008, a 200 cfs flow was initiated as mandated in the Lahontan permit for the project. In 2008, Thibaut Ponds and the Winterton area also 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 L.A. Aqueduct. 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 pumpback 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	This component of the project is ongoing.

Title	Provision	Status
	through flow and land management to provide habitat for fisheries, waterfowl, shorebirds and other animals. These habitats will be as self-sustaining as possible.	
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 forecasted runoff for 2008-2009 was 86%. 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, 430 acres in the BWMA was flooded this year. Acreage was combined between the Winterton & Thibaut units. There are no requirements for each unit and were no plans for allocating a set amount of water to each unit. CDFG consultation occurred prior to Standing Committee approval.
LORP (cont)	see Table 23, Agreement Provisions."	
LORP (cont)	LADWP and the County will direct and assist Ecosystem Sciences, Inc. 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 MOU, government agencies, LADWP ranch lessees, and the public will be consulted as the plan is developed.	Ecosystem Sciences 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 MOU Group. 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 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

Title	Provision	Status
	the LORP will commence upon certification of the LORP EIR.	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, Inc. 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, Inc. in consultation with LADWP, the lessee for the area and the parties to the MOU. The evaluations were to be completed within 36 months of the discharge of the writ, but the deadline has been extended by the MOU Group. 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 with the comment period ending March 27, 2006. 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. When this alternative is completed, it will be added to the Draft EIR and the document will be released again for public comment. Following the public comment period, the EIR will be finalized. It is anticipated that the Final EIR will be presented to the Board of Water and Power Commissioners for their consideration in 2009. If approved, implementation will follow.
Inventories of Plants and Animals at Springs and Seeps (within 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 by Ecosystem Sciences, Inc. The deadline has been extended by the MOU Group.	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. ESI completed and submitted results of its inventory to the MOU parties in June 2001. ESI has completed this work.
Additional Mitigation	A total of 1600 acre feet 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, Ecosystem Sciences, Inc., will recommend reasonable and feasible on-site and/or off-site mitigation measures, including the	This issue was also addressed in the Stipulation and Order of 2004. The Consultants completed draft plans for the 1600 acre-foot water allocation. Comments were submitted by the Parties. Currently there is an ad hoc process which includes MOU and other interested Parties trying to resolve issues regarding the additional sites. Conceptual plans have been completed. When these plans are agreed to by the MOU Parties, CEQA will be completed and submitted for Board approval. The plans will then be implemented.

Title	Provision	Status
	<p>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 Group.</p>	
Owens Valley Management Plans	<p>LADWP, in consultation with the parties to the MOU and others, is to identify areas of Los Angeles-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 Ecosystem Sciences, Inc. 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.</p>	<p>ESI has completed draft land management plans for Los Angeles land within the LORP area. Ecosystem Sciences and LADWP personnel are currently developing the land management plans for all of LADWP lands in Inyo County. The final draft report has been completed and Corporate Environmental is performing the CEQA review.</p>
Inventories of Plants and Animals at Springs and Seeps (outside the LORP Planning Area)	<p>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.</p>	<p>LADWP has completed data collection for spring and seep discharge. LADWP had Ecosystem Sciences, Inc. complete the inventory of plants and animals.</p>
Type E Vegetation	<p>By December 1999, LADWP and the County are to develop baseline</p>	<p>The inventory of Type E Vegetation was conducted by Resource Concepts,</p>

Title	Provision	Status
	conditions for management of vegetation classified as Type E in the long-term agreement. These conditions will be adopted by the Standing Committee.	Inc. (RCI) under a contract administered by Inyo County and funded by LADWP. The final report on the inventory 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 MOU group. As of January 2002, Ecosat Geobotanical Surveys, Inc., the consultant conducting the study, completed reports addressing the 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.	<p>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 may have been 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.</p> <p>CEQA documentation was completed for the <u>Independence Eastside Regreening Project</u> and Town Water System on 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 Commission approved the project in May 2005. CEQA was completed for the project with the well location on the project site. Inyo County requested changes to the project after the completion of CEQA including: relocation of the</p>

Title	Provision	Status
		<p>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. Inyo County has agreed to complete additional CEQA if required to address project changes.</p> <p><u>Big Pine Northeast Regreening Project-Mitigation Plans</u> for the project 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. 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. A letter was sent to Inyo County in February 2008 asking for 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. As a consequence, an amended mitigation plan will be submitted for Technical Group approval and CEQA will be completed..</p>
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 2008. This report is intended to fulfill the obligation for 2009.
Fish Slough	The MOU acknowledges that LADWP and DFG 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 DFG.	A letter agreement was never memorialized; however, LADWP has worked closely with DFG on the Fish Slough Area of Critical Environmental Concern (ACEC).
Dispute Resolution and	The parties to the MOU will maintain	The parties to the MOU, called the

Title	Provision	Status
Litigation	frequent, informal communications to minimize disagreements. In the event of a dispute among the parties over the 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 MOU is to be commenced in the Inyo County Superior Court.	"MOU Signatory Group," have met regularly on an as needed basis. In addition, the Group 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 MOU.	The specified amounts have been paid by the County to the identified parties.

6.6 Cooperative Studies

See Table 25 for the details of the Cooperative Studies approved by the Standing Committee.

TABLE 25
Cooperative Studies

Title	Provision	Status
<p>Development of Hydrological Modeling Tools (Robert Harrington, ICWD; Saeed Jorat, LADWP)</p>	<p>The purpose of this study is to improve hydrological models developed by previous cooperative studies to evaluate the impact of groundwater pumping, weather variations, surface water management, and other hydrologic changes on groundwater levels. Because groundwater modeling is the only method for consistent interpretation of groundwater data and evaluation of management options, this task is a prerequisite to fulfill the monitoring and technical goals of the Water Agreement. Inyo Count and LADWP want to jointly develop a common set of modeling tools so that methods and analyses are understood and accessible to each agency.</p>	<p>The first model to be considered for improvement was the regional groundwater model by USGS. With the assistance from USGS staff, this model has been updated and recalibrated. A draft final report was completed in 2004.</p>
<p>Development of a Model for Predicting Phreatophyte Water Use and Soil Water Replenishment (Aaron Steinwand, Robert Harrington, ICWD; Saeed Jorat, Paula Hubbard, LADWP)</p>	<p>The purpose of this study is to combine information from vegetation, groundwater, precipitation, and soil water monitoring into a model to predict depletion and replenishment of stored soil water above a fluctuating water table. This capability will help protect Owens Valley vegetation by predicting how long soil water will support the vegetation after pumping commences. If soil water information is to continue to be used to trigger pumping decisions, this type of models needed by the Technical Group to evaluate the environmental effects of opposed pumping scenarios and to provide reliable forecasts of expected pumping yields.</p>	<p>The study is underway.</p>
<p>Evapotranspiration from Groundwater-Dependent Plant Communities: Comparison of Micrometeorological Measurements and Vegetation-based Measurements (Robert Harrington, Aaron Steinwand, ICWD; Paula Hubbard, David Martin, LADWP)</p>	<p>The objective of this study is to provide direct measurements of evapotranspiration (ET), the combination of evaporation from the ground surface and plant water use, using micrometeorological methods to corroborate current estimates of vegetation transpiration. ET estimates are essential to the Green Book methods for managing pumping and may remain an important component of groundwater management strategies in the future. Results from this study will be applied to improve the ET</p>	<p>This project was completed in 2004.</p>

Title	Provision	Status
	component of numerical groundwater models (study #1) and soil water models (study #2).	
Characterization of Confining Layer Hydrologic Conductivity and Storage Properties in the Owens Valley (Randy Jackson, ICWD; Saeed Jorat, LADWP)	The purpose of this study is to determine confining layer hydrologic properties to assist groundwater modeling efforts (study #1) and to improve the management of wells sealed to the deep aquifer. Pumping from deep aquifers potentially could be managed differently than the Green Book methods. Without information to be developed by this study, however, the magnitude and timing of the water table drawdown from pumping deep aquifers is difficult to predict, complicating any assessment of the effects of different pumping scenarios. A stepwise approach is proposed, starting with analysis of existing data and progressing to low and high intensity field projects, if necessary.	The first phase was completed in April 2003. The final report included sections on identification of methods and tool for characterizing confining layer, analysis of existing aquifer pumping test data, and development of GIS layers for confining layer characteristics in the Owens Valley. A work plan was prepared in March 2004 to perform short-term aquifer pumping tests on 11 production wells throughout Owens Valley to further refine distribution of the confining layer and its hydraulic characteristics.
Shallow and Deep Groundwater Geochemistry and the Source of Spring and Seep Water in the Owens Valley (Aaron Steinwand, Randy Jackson, ICWD; Saeed Jorat, Paula Hubbard, LADWP)	Springs and seeps are valuable and sensitive habitats in the Owens Valley. The purposes of this study are to monitor basic water quality indices seasonally for one year to develop a database to be used to assist restoration of spring waters should any impacts occur. Secondly, the geochemical signatures of water from selected springs and seeps will be examined and compared to shallow and deep groundwater samples to identify the source of the water. These results will be used to link spring and seep flows to particular aquifers to improve groundwater models (study#1) used to assess potential effects of pumping on these areas. An expert in geochemical modeling will be selected by the fall of 2000 to assist the principal investigators with this study.	In Spring 2002, sampling and chemical analysis from shallow test holes, springs, deep wells, surface water and seep area from Lone Pine to Big Pine was completed. A second, more limited round of sampling was conducted in Spring of 2003. A final report on the chemical analyses is complete, which includes results of the chemical analysis and the final interpretations on the source of water in each of the springs and seeps.
Application of Canonical Community Ordination (CANOCO) to Assess Owens Valley Vegetation Change (Sally Manning, ICWD; David Martin, LADWP)	Over the past decade, the Technical Group has collected a vegetation data set that contains information on species abundances and several environmental data sets have become available. Multivariate data analysis techniques provide a means to analyze the vegetation data in conjunction with the environmental influences. By applying these analyses, the Technical Group will be better able to understand the	Since 2000, the principal investigators have worked independently on studying factors influencing vegetation change. The results of preliminary County evaluations have been produced for internal County review and were presented by the County at a meeting of the Ecological Society of America.

Title	Provision	Status
	relationship between environmental variables and vegetation change, the rates of change, and the predisposing conditions that are likely to result in significant long-term, adverse conditions.	
Inventory and Classification of Riparian Vegetation in the Owens Valley for Use in Future Monitoring (Consultant)	The objective of this study is to inventory, map, and classify riparian (Type D) vegetation on Los Angeles-Owned land in the Owens Valley to improve monitoring and management of these areas. This study was suggested in the Green Book but has not been completed.	The Inyo/Los Angeles Standing Committee agreed that this work will be conducted by a consultant through an RFP process. During the 2006 growing season Ecosystem Sciences completed an inventory and classification of all riparian areas in Inyo and Mono Counties as part of their preparation of the Habitat Conservation Plan associated with the Owens Valley Land Management Plan. Therefore, this project is complete.
Development of a Demographic Model for Nevada saltbush (<i>Atriplex torreyi</i>) (Sally Manning, ICWD; David Martin, LADWP)	The purpose of this study is to develop a stage-based demographic model for the native, invasive shrub, Nevada Saltbush (<i>Atriplex lentiformis</i> spp. <i>torreyi</i>). Development of a demographic model will allow existing data to be used to estimate the probability of populations reaching certain sizes in the future, given various assumptions about environmental factors. Model development will also allow a sensitivity analysis to be performed in which points in the species' life cycle, having the most impact on population growth, would be identified. Identification of such points could be extremely useful to determine the nature and timing of intervention which could be implemented to control Nevada Saltbush in places where its invasion could cause a conversion in vegetation type that is not allowed under the long-term water agreement.	Since 2000, the principal investigators have worked independently on this study.
Owens Lake Groundwater Evaluation	LADWP has proposed pumping groundwater from Owens Lake for use in the abatement of dust on the lake bed. Any pumping by LADWP from the lake is subject to the provisions of the Inyo/Los Angeles Agreement	The Consulting firm of Camp, Dresser & McKee, Inc. (CDM) completed an evaluation of proposed pumping from the lake. In 2000, CDM submitted a report to the Standing Committee presenting the public's views on the objectives and standards that should govern Owens Lake pumping and a work plan for a long term groundwater evaluation. MWH, Inc. was selected by Inyo County and LADWP to implement the implement the recommendations of the CDM work plan.

6.7 Revegetation/Regreening Projects, Progress, and Proposed Future Work

See Table 26 for the details of the Revegetation/Regreening Projects, Progress, and Proposed Future Work.

TABLE 26
Revegetation/Regreening Projects, Progress, and Proposed Future Work

Title	Provision	Status
Laws 90	The site has been fenced.	In fall 2005, an irrigation system was installed in a portion of this parcel. In addition, 20 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 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 thru October. All basins were weeded and reseeded.
Laws 94	The site has been fenced.	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 thru October. All basins were weeded and reseeded.
Laws 95	The site has been fenced.	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 thru October. All basins were weeded and reseeded.
Laws 118	The site has been fenced. Permanent	Plan is to convert approximately 32

Title	Provision	Status
	<p>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 conducted studies on dryland revegetation techniques using native seed and various treatments.</p>	<p>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 till 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 till 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 thru October. All basins were weeded and reseeded.</p>
Laws 129	<p>This site has been fenced.</p>	<p>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 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 thru October. All basins were weeded and reseeded.</p>
Five Bridges	<p>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</p>	<p>In 2006, high runoff and high flows in the Owens River resulted in the Five Bridges area receiving water nearly continuously during the growing season. Therefore, no additional releases were conducted. In 2007, releases from the Bishop Creek Canal via C Drain were conducted three times during the growing season. Permanent</p>

Title	Provision	Status
	<p>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. Grass qualitative monitoring has been conducted and the results of this and the monitoring noted above indicate that the area is responding well to the water releases.</p>	<p>photo points and transects were monitored. Grass qualitative monitoring was conducted. Weed control continued. A grazing management plan has been developed and was implemented for this area. In 2008, releases from the Bishop Creek Canal via C Drain were conducted three times during the growing season. Permanent photo points and transects were monitored. Grass qualitative monitoring was conducted. Weed control continued.</p>
Bishop 97	<p>The site has been fenced. Permanent transects have been installed and baseline monitoring has been conducted. Permanent transects were run in 2003 to document any changes from baseline conditions. MWH conducted studies on dryland revegetation techniques using native seed and various treatments.</p>	<p>Potential water sources are being evaluated and a drip irrigation system is being designed for this site. Implementation at this site will commence one year after the project at Big Pine 160 is fully implemented and operating properly. Once the irrigation system is installed and operational, seed from species identified for this site will be placed at emitters.</p>
Big Pine NE Regreening	<p>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 the County in 2005.</p>	<p>The 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. A letter was sent to Inyo County in February 2008 asking for 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. As a consequence, an amended mitigation plan will be submitted for Technical Group approval and CEQA will be completed for the project described.</p>
Big Pine 160	<p>The site has been fenced. Permanent transects have been installed and baseline monitoring has been conducted. MWH conducted studies on dryland revegetation techniques using native seed and various treatments.</p>	<p>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, seed from species identified for this site will be placed at emitters. The irrigation system will cover an area of approximately 17</p>

Title	Provision	Status
		acres. During 2009-2010 LADWP will implement 3 of the 17 acres.
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 Group 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.
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 in 2004 to assess cover at this site.
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 2005 to assess cover at the site.
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.	No action until after Hines Springs on-site mitigation is completed.
Independence Regreening	A revised scope of work has been submitted to ICWD that reflects the interests of the citizens of the community of Independence	CEQA was filed for the Independence East Side Regreening Project and Town Water System September 23 with a public comment period from September 23 to October 29, 2004.

Title	Provision	Status
		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 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. Inyo County has agreed to complete additional CEQA if required to address project changes.
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 be 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 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 reveg 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.

6.8 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, 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 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 Habitat 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 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 Habitat Area, Pump 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.)

For each mitigation, the timing of the measure, the party responsible for implementing the measure, the agency responsible for mitigation monitoring, and the monitoring method are identified. 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/ PM10 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.

Pumpstation and Associated Facilities

Air Quality

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

To minimize dust/ PM10 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 pump station site.

LADWP stabilized the sediment stockpile at the pump 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 pump 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 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 pump 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 pump station.

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

- LADWP notified representatives of regional Native American Tribes prior to beginning earthwork for the pump 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 Pump Station in June of 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 pump 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 Habitat Area

Air Quality

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

To minimize dust/ PM10 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 Habitat Area.

Temporarily disturbed upland habitats in the Blackrock Waterfowl Habitat 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 Habitat 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.

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

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 June 30, 2008, LADWP has provided \$533,336 to the Inyo-Mono County Agricultural Commissioner for this provision.

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 2008 at key access points to the LORP area, such as Mazourka Canyon Road, Manzanar Reward Road, the pump 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. 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.

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 will be improved as a result of these concerns. Additionally, LADWP staff will utilize 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.

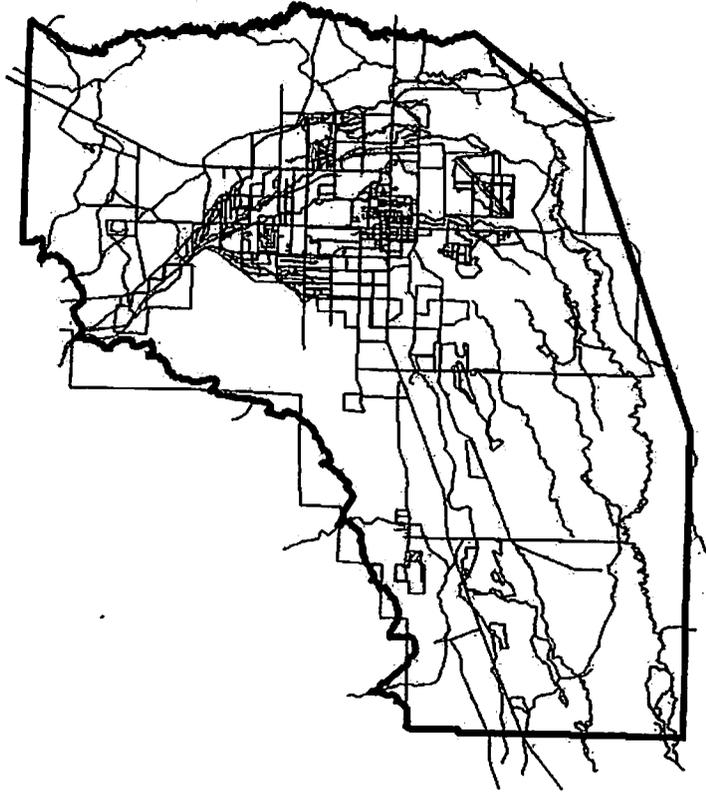
Although no work has been conducted that would require action for this mitigation measure, LADWP has conducted a training program for LADWP and Inyo County personnel working within the LORP on identifying and reporting of cultural resources or potential cultural resources at LADWP or Inyo County facilities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

APPENDIX A

The Bishop Cone Audit for 2007-2008 Runoff Year

Final

THE BISHOP CONE AUDIT FOR THE 2007-2008 RUNOFF YEAR



Randy Jackson
Senior County Hydrologist



Inyo County Water Department
Report 2008-1
July 1, 2008

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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." (See Appendix A of this report for Section VII.A of the Inyo County/Los Angeles long-term groundwater management agreement).

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 2006-2007 and 2007-2008.

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

LADWP ACCOUNT NUMBER	RUNOFF YEAR* ¹ 2005-2006 (AF)	RUNOFF YEAR* ¹ 2007-2008 (AF)
BA354B or BA362B	724.00	27.00
BA302A	211.62	217.00
BA302B	606.97	832.09
BA311	2,822.08	2528.24
BA313	433.82	489.91
BA324 ³	787.59	812.36
BA324A	NO DATA	NO DATA
BA324C	NO DATA	NO DATA
BA387A	624.15	758.00
BARECF	211.75	226.57
BA339	202.46	249.46
BA342	NO DATA	NO DATA

LADWP ACCOUNT NUMBER	RUNOFF YEAR*¹ 2006-2007 (AF)	RUNOFF YEAR*¹ 2007-2008 (AF)
BA362C	NO DATA	NO DATA
BA362D	74.85	920.08
BA304	78.00	89.00
BA324B	NO DATA	NO DATA
BA387B	NO DATA	NO DATA
BA397 (SAME AS BA387B-NEW LEASE HOLDER)	2,437.44	2560.04
BA361A	1,022.79	866.30
BA361B	2,019.53	1552.62
BA354A or 362A	294.00	944.00
BARECA	138.00	536.00
BARECC	63.07	66.00
BARECD	2,223.59	2404.00
BA338	2,150.10	2326.49
BAOPRA	0.00	0.00
BAOPRB	0.00	0.00
BAGWRA	NO DATA	NO DATA
RV361	216.85	0.00
RV361B	NO DATA	NO DATA
RVRECA	2,561.00	1200.00
LARECB	NO DATA	NO DATA
LAE&MH	3.00	253.00
BAICR	NO DATA	NO DATA
BA1478 (SAME AS BAICR-NEW LEASE HOLDER)	208.13	157.88
BA353	186.92	189.40
BA393	74.68	53.00
BA500 ^{*3}	676.93	913.53
* ² BAGOLF	0.00* ²	0.00* ²
* ³ BA005A	74.09	71.45
* ² BA005B	110.00	110.00
* ² BA006A	69.19 (No Credit)	64.20(No Credit)
BA1479	25.00	66.00
TOTAL	21,262.41	21,419.42

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

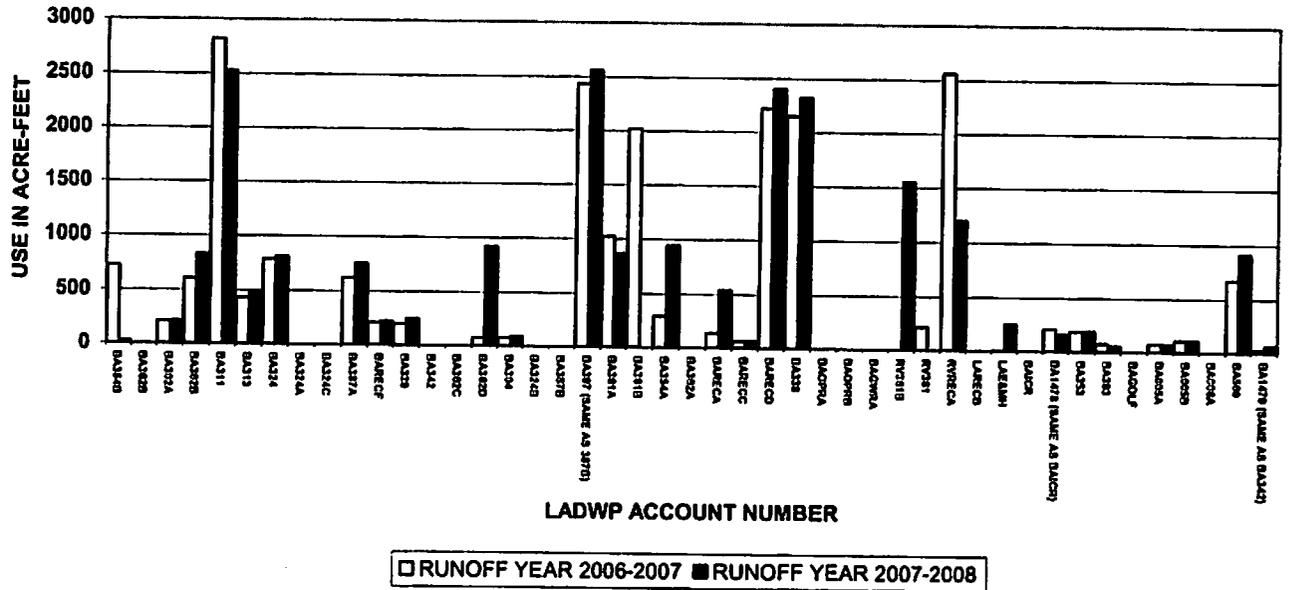
*² Accounts were first listed in the 2002-2003 runoff year. The accounts (BAGOLF, BA005A, BA005B and BA006A) are active water use accounts, but in the past have been denied by Inyo for lack of measuring devices. A device has been installed at BA005A and at BA005B and inspected by ICWD personnel. Devices have not yet been installed at accounts BA006A and BAGOLF). 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.

Figure 1, below, is a bar graph comparing water use in LADWP account numbers on the Bishop Cone for runoff years 2006-2007 and 2007-2008. In general, there was an increase in water use, on most accounts from runoff years 2006-2007 to 2007-2008 as well as an overall total increase in water use of 157.01 acre-feet in 2007-2008.

FIGURE 1: LADWP BISHOP CONE WATER USE COMPARISON FOR RUNOFF YEARS 2006-2007 AND 2007-2008



No additional measurement device was installed for LADWP Account BA006A and as a result no credit for reported uses was granted for this account this runoff year. No field inspections were made for this runoff year Bishop Cone Audit.

TOTAL LADWP GROUNDWATER EXTRACTION ON LADWP-OWNED LAND ON THE BISHOP CONE FOR RUNOFF YEARS 2007-2008 AND 2007-2008

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 groundwater LADWP extraction and groundwater extraction classified as flowing and pumped groundwater in acre-feet, on the Bishop Cone for the runoff years of 2006-2007 and 2007-2008, are shown in Table 2, below. The 2007-2008 Runoff Year groundwater extraction shows an increase over the previous runoff year's extraction but is within the range of extractions previously

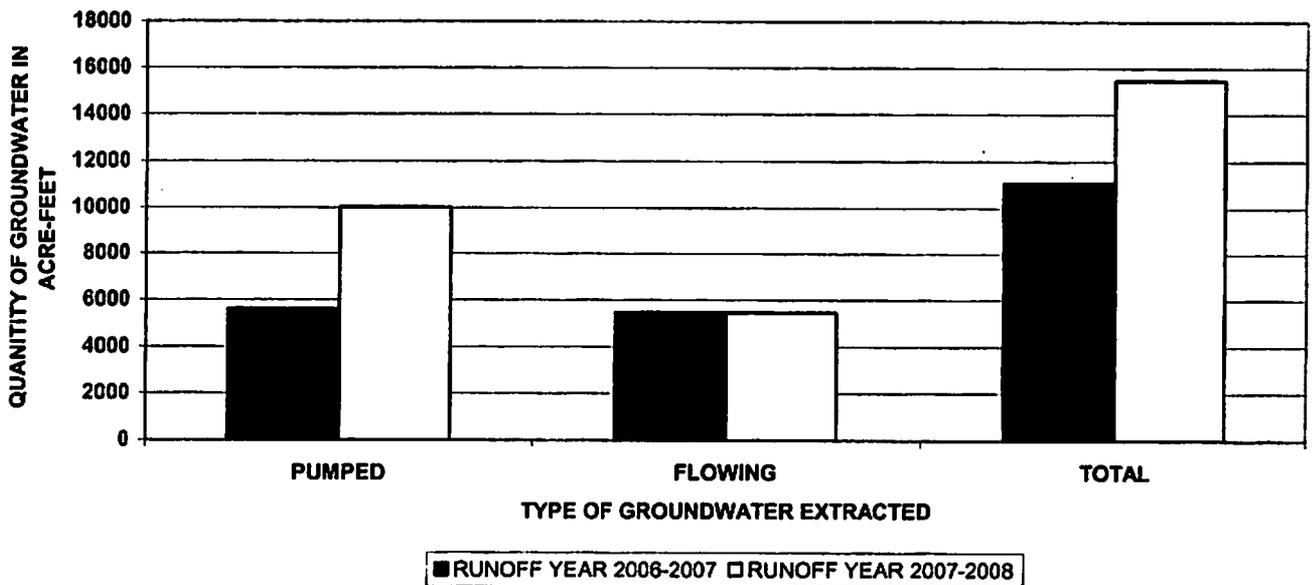
conducted by LADWP since the Bishop Cone Audit began in Runoff Year 1996-1997. The 2007-2008 runoff year extraction is lower than extraction in seven of the twelve previous runoff years since the Bishop Cone Audit began in the Runoff Year 1996-97.

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

TYPE OF GROUNDWATER	RUNOFF YEAR 2006-2007 (AF)	RUNOFF YEAR 2007-2008 (AF)
PUMPED	5,612.00	10,018.00
FLOWING	5,478.00	5,454.00
TOTAL	11,090.00	15,472.00

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 2, below.

FIGURE 2: TYPE OF LADWP GROUNDWATER AND TOTAL GROUNDWATER EXTRACTION ON THE BISHOP CONE FOR RUNOFF YEARS 2006-2007 AND 2007-2008



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 3, below, shows that LADWP was within compliance with the above provision for runoff years 2006-2007 and 2007-2008.

TABLE 3. LADWP USES IN COMPARISON TO LADWP GROUNDWATER EXTRACTION ON THE BISHOP CONE.

	RUNOFF YEAR 2006-2007(AF)	RUNOFF YEAR 2007-2008(AF)
TOTAL USES	21,262.41	21,419.42
TOTAL GROUNDWATER EXTRACTION	11,090.00	15,472.00

APPENDIX A

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

Section IV.D of the Green Book

THE INYO/LA AGREEMENT

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

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

7 The Technical Group may agree that some existing
8 wells that now supply enhancement/mitigation projects be
9 converted to Department production wells. Wells that are the
10 only source of supply for an enhancement/mitigation project
11 shall not be converted. Water for the enhancement/mitigation
12 project formerly supplied by a converted well will be supplied
13 as necessary from Department production wells. Any enhance-
14 ment/mitigation well converted to a production well could
15 later be reverted to an enhancement/mitigation well if agreed
16 to by the Technical Group.

17 VII. GROUNDWATER PUMPING ON THE BISHOP CONE ✓

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

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

1 of such water uses.

2 The Department's annual groundwater extractions
3 from the Cone shall be limited to an amount not greater
4 than the total amount of water used on Los Angeles-owned
5 lands on the Cone during that year. Annual groundwater
6 extractions by the Department shall be the total of all
7 groundwater pumped by the Department on the Cone, plus
8 the amount of artesian water that flowed out of the
9 casing of uncapped wells on the Cone during the year.
10 Water used on Los Angeles-owned lands on the Cone, shall
11 be the quantity of water supplied to such lands, includ-
12 ing conveyance losses, less any return flow to the
13 aqueduct system.

14 B. The overall management goals and principles and the spe-
15 cific goals and principles for each vegetation classifi-
16 cation of this Stipulation and Order apply to vegetation
17 on the Cone.

18 VIII. GROUNDWATER RECHARGE FACILITIES

19 It is recognized that development of new groundwater
20 storage, and the implementation and operation of feasible
21 groundwater banking and recharge facilities in the Owens
22 Valley and in the Rose Valley that will not cause significant
23 effects on the environment may be beneficial. The development
24 of any such facilities in the Owens Valley and in Rose Valley
25 are subject to agreement of the Inyo County Board of Supervi-
26 sors and the Department, acting through the Standing Commit-
27 tee. The Inyo County Board of Supervisors shall not unreason-
28 ably refuse to agree to a feasible groundwater banking facili-
29 ty that will not cause significant decrease or change in
30 vegetation or a significant effect on the environment. The

GREEN BOOK

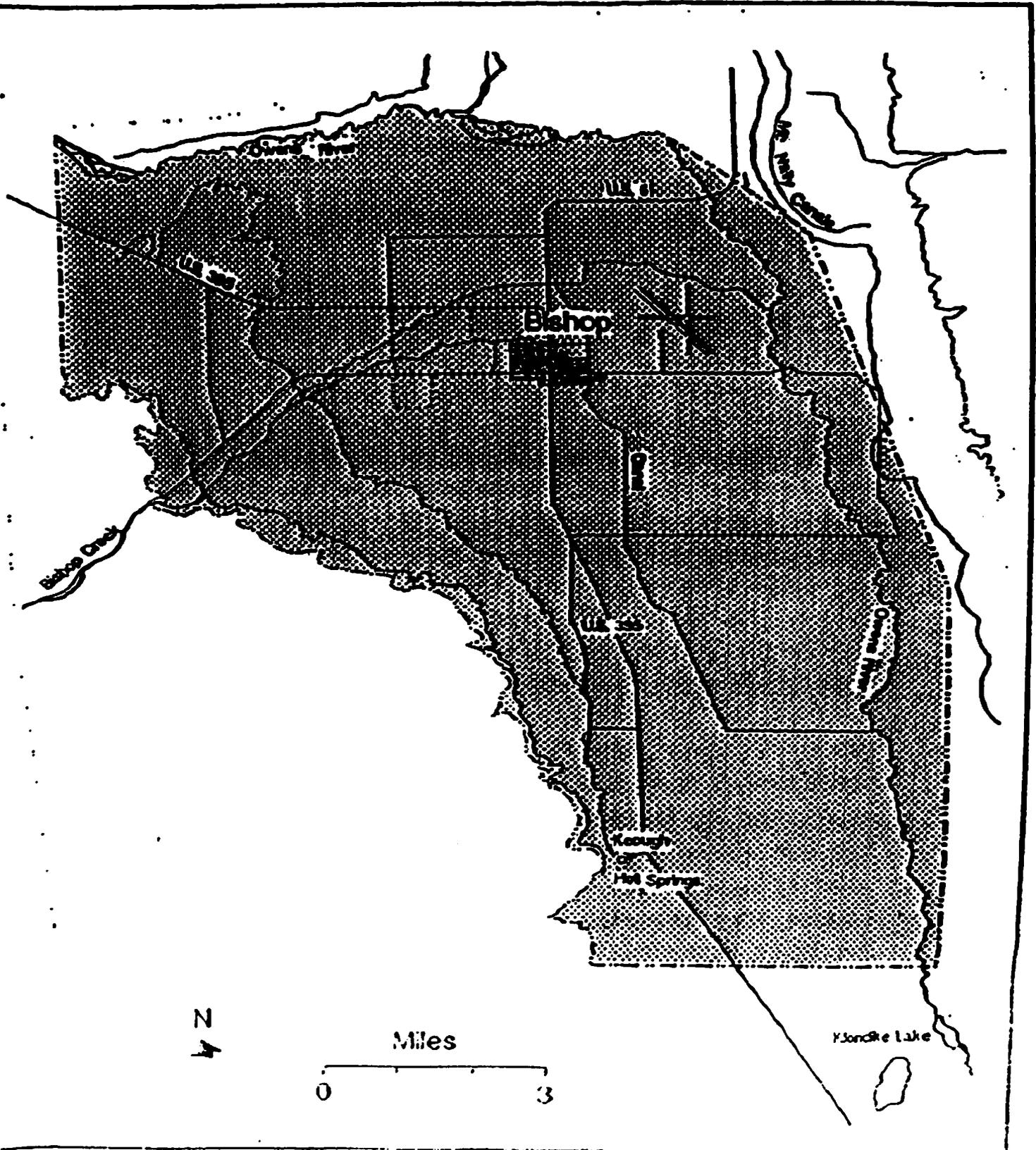
D. Bishop Cone Audit

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 BANEST (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

RECEIVED

ANTONIO R. VILLARAIGOSA
Mayor

Commission
NICK PATSAOURAS, *President*
EDITH RAMIREZ, *Vice President*
LEE KANON ALPERT
WALLY KNOX
FORESCEE HOGAN-ROWLES
BARBARA E. MOSCHOS, *Secretary*

H. DAVID NAHAI
Chief Executive Officer and General Manager
MAY 13 2008
2:21 pm

Inyo Co. Water Department

May 7, 2008

Mr. Robert Harrington, Acting Director
Inyo County Water Department
163 May Street
Bishop, CA 93514

Dear Mr. Harrington:

Subject: Bishop Cone Audit

Enclosed is flowing well data from Bishop Cone for the 2007-2008 runoff year. The Los Angeles Department of Water and Power also pumped 10,018 acre-feet of groundwater from the Cone during the year.

Also enclosed is the Bishop Cone Audit Report for the 2007-2008 runoff year.

If you have any questions, please contact Mr. Wayne Hopper at (760) 873-0267.

Sincerely,

Gene L. Coufal
Manager
Aqueduct Section

Enclosures

c: Mr. Wayne Hopper

(BCA)
4/28/08
10:17

BISHOP CONE AUDIT

FROM 3/01/08 TO 3/31/08

A C C O U N T S & S T A T I O N S		PERIOD	A C R E - F E E T MAR M-T-D	S I N C E 4/01/07
-----		-----	-----	-----
BA354B	SMITH A-1 DRAIN			
3031	A-1 DRAIN PP #1 @ HALL DITCH	.00	.00	.00
3032	A-1 DRAIN PP #3 @ WELL 140	27.00	27.00	27.00
*TOTALS	ACRES= 148 ALOT= 740 LEFT= 713	27.00	27.00	27.00
BA302A	ALICE J. BOOTHE, ET AL HALL DITCH			
3006	HALL DITCH @ GOLF COURSE RETURN	.00	.00	217.00
B02A11	HALL DITCH @ BOOTHE	2.56	2.56	37.28
B02A21	STOCKWATER	2.56-	2.56-	37.28-
B02A32	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 47 ALOT= 235 LEFT= 18	.00	.00	217.00
BA302B	ALICE J. BOOTH, ET AL BISHOP CREEK CANAL			
3161	BISHOP CREEK CANAL #16	46.00	46.00	666.00
3162	BISHOP CREEK CANAL #17	.00	.00	331.00
3164	BISHOP CREEK CANAL #20	25.00	25.00	567.00
3165	BISHOP CREEK CANAL #21	.00	.00	.00
B02B21	STOCKWATER @ #16	30.07-	30.07-	346.47-
B02B22	STOCKWATER @ #20	6.20-	6.20-	73.00-
B02B41	DITCH MAKE	.00	.00	.00
B02B31	OPERATIONS	34.73-	34.73-	312.44-
*TOTALS	ACRES= 120 ALOT= 600 LEFT= 232-	.00	.00	832.09
BA311	J.W. CASHBAUGH, ET AL BISHOP CREEK CANAL			
3166	BISHOP CREEK CANAL #5	.00	.00	411.00
3022	BISHOP CREEK CANAL #5A	.00	.00	390.00
3167	BISHOP CREEK CANAL #9	.00	.00	417.00
3168	BISHOP CREEK CANAL #30	85.00	85.00	2334.00
B11201	STOCKWATER @ #30	30.69-	30.69-	361.69-
3022	CREDIT FOR TATUM RETURN @ #5A	.00	.00	390.00-
B11301	OPERATIONS	54.31-	54.31-	272.07-
3169	FORD RAWSON CANAL DIVERSION #1	.00	.00	.00
B11302	OPERATIONS @ DIVERSION #1	.00	.00	.00
*TOTALS	ACRES= 561 ALOT= 2805 LEFT= 276	.00	.00	2528.24
BA313	BOYD & ONEY NORTH INDIAN DITCH			
3016	NORTH INDIAN ABOVE MUMY LANE #58E	516.00	516.00	6125.00
3017	WONACOTT A-2	60.00	60.00	822.00
3015	WONACOTT A-1	60.00-	60.00-	963.00-
3054	WONACOTT A-3 RETURN	.00	.00	107.00-
3051	WONACOTT 58F	48.00-	48.00-	719.00-
3018	NORTH INDIAN B-2	391.00-	391.00-	3917.00-
B13401	NORTH INDIAN DITCH LOSS	65.00-	65.00-	703.24-
B13402	WONACOTT DITCH LOSS	12.00-	12.00-	47.85-
B13404	WONACOTT DITCH MAKE	.00	.00	.00
B13301	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 84 ALOT= 420 LEFT= 69-	.00	.00	489.91

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FROM 3/01/08 TO 3/31/08

A C C O U N T S & S T A T I O N S		PERIOD	A C R E - F E E T MAR M-T-D	S I N C E 4/01/07
BA324 ROSSI				
NORTH & SOUTH INDIAN DITCH				
3370	NORTH INDIAN DIVERSION W/O SUNLAND	.00	.00	8.00
3270	SOUTH INDIAN D-3	140.00	140.00	2652.00
3005	SOUTH INDIAN DITCH D-4	165.00-	165.00-	1872.00-
B244	DITCH LOSS	.00	.00	93.64-
B2442	DITCH MAKE	25.00	25.00	118.00
B243	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 163 ALOT= 815 LEFT= 2	.00	.00	812.36
BA1478 INDIAN CREEK RANCH (BL-1478)				
GEORGE & N. INDIAN DITCH				
3002	GEORGE DITCH WEST OF SUNLAND AVENUE	45.00	45.00	735.00
3068	GEORGE DITCH C-3	34.00-	34.00-	485.00-
BICR42	GEORGE DITCH LOSS	11.00-	11.00-	143.95-
BAICR4	DITCH MAKE	.00	.00	153.00
3264	NORTH INDIAN DITCH BELOW A-1 DRAIN B3A	205.00	205.00	1840.00
3370	NORTH INDIAN DIVERSION W/O SUNLAND	.00	.00	8.00-
3364	NORTH INDIAN DITCH W/O HWY 395	196.00-	196.00-	1939.00-
BICR43	NORTH INDIAN DITCH LOSS	9.00-	9.00-	5.83
BAICR3	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 41 ALOT= 205 LEFT= 47	.00	.00	157.88
BA387A GIACOMINI				
NORTH INDIAN DITCH				
3043	NORTH INDIAN DITCH B-3	.00	.00	548.05
3011	WEST LINE L-2	.00	.00	228.00
B87A3	OPERATIONS	.00	.00	18.05-
*TOTALS	ACRES= 122 ALOT= 610 LEFT= 148-	.00	.00	758.00
BARECF RECREATION FOREST SERVICE				
KINGSLEY DITCH				
3023	KINGSLEY DITCH C-4	63.00	63.00	1413.00
3183	CEMETERY DITCH	43.00-	43.00-	656.00-
BRCF41	DITCH MAKE	.00	.00	.00
BRCF42	DITCH LOSS	20.00-	20.00-	530.43-
*TOTALS	ACRES= 43 ALOT= 215 LEFT= 11-	.00	.00	226.57
BA339 DOHNEL				
KINGSLEY DITCH				
3170	KINGSLEY DITCH C-1	28.00	28.00	546.00
B39201	STOCKWATER @ C-1	21.09-	21.09-	276.63-
B39301	OPERATIONS	6.91-	6.91-	19.91-
*TOTALS	ACRES= 39 ALOT= 195 LEFT= 54-	.00	.00	249.46
BA393 CABALLERO				
KINGSLEY DITCH				
3061	KINGSLEY DITCH PUMP PLANT	.00	.00	53.00
3171	BISHOP CREEK DITCH # 11	.00	.00	50.00
BA933	OPERATIONS @ #11	.00	.00	50.00-
*TOTALS	ACRES= 18 ALOT= 90 LEFT= 37	.00	.00	53.00

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A C C O U N T S & S T A T I O N S	P E R I O D	A C R E - F E E T	
		MAR M-T-D	SINCE 4/01/07
BA362D D.L., J.J., & L.J. TATUM DAIRY DITCH			
3388 INDIAN SOUTH RETURN ON SEE-VEE LANE	31.00	31.00	1121.00
3389 INDIAN MIDDLE RETURN ON SEE-VEE LANE	.00	.00	32.00
3390 INDIAN NORTH RETURN ON SEE-VEE LANE	25.00	25.00	300.00
3001 DAIRY DITCH # 69	5.00	5.00	1022.00
B62D21 DAIRY STOCKWATER	5.00-	5.00-	275.90-
B62D31 OPERATIONS DAIRY DITCH	56.00-	56.00-	1181.02-
3160 INDIAN IRRIGATION/DAIRY DITCH	.00	.00	98.00-
*TOTALS ACRES= 182 ALOT= 578 LEFT= 342-	.00	.00	920.08
BA304 ANDREW & DAN BOYD NEWLON DITCH			
3026 NEWLON DITCH BOYD PUMP PLANT	8.00	8.00	89.00
*TOTALS ACRES= 48 ALOT= 240 LEFT= 151	8.00	8.00	89.00
BA500 TALBOT GEORGE & S. INDIAN DITCH			
3012 GEORGE DITCH C-1	37.00	37.00	887.00
3002 GEORGE DITCH WEST OF SUNLAND AVENUE	45.00-	45.00-	735.00-
B24B41 BUHS STOCKWATER	.00	.00	91.50-
B24B44 DITCH LOSS	.00	.00	10.88-
B24B04 DITCH MAKE	8.00	8.00	43.00
3365 PARK WEST RETURN S/O A-DRAIN	28.00	28.00	207.00
3047 4 X - 58D	383.00	383.00	3211.00
3366 SOUTH INDIAN DITCH DIVERSION # 1 N/O S	.00	.00	35.00
3367 SOUTH INDIAN DITCH DIVERSION # 2 N/O S	.00	.00	509.00
W408 WELL # 408	.00	.00	1122.00
3046 SOUTH INDIAN RETURN AT A-1 DRAIN	214.00-	214.00-	1113.00-
3270 SOUTH INDIAN D-3	140.00-	140.00-	2652.00-
B004 DITCH LOSS	57.00-	57.00-	498.09-
B0040 DITCH MAKE	.00	.00	.00
B50B31 OPERATIONS	.00	.00	.00
*TOTALS ACRES= 178 ALOT= 890 LEFT= 23-	.00	.00	913.53
BA397 GIACOMINI BISHOP CREEK CANAL			
3172 BISHOP CREEK DITCH # 16-A	.00	.00	.00
3163 BISHOP CREEK DITCH # 19	.00	.00	615.00
3173 BISHOP CREEK DITCH # 19-A	.00	.00	.00
3174 BISHOP CREEK DITCH # 22	.00	.00	606.00
3019 BISHOP CREEK CANAL DIVERSION # 24	48.00	48.00	1176.00
3020 BISHOP CREEK CANAL DIVERSION # 25	.00	.00	247.00
3024 BISHOP CREEK CANAL DIVERSION # 29	41.00	41.00	770.00
B9721 STOCKWATER @ #29	28.65-	28.65-	299.09-
B9722 BOOTHE STOCKWATER @ #19	.00	.00	54.60-
B9723 STOCKWATER @ #19 & #24	29.14-	29.14-	254.78-
B9731 OPERATIONS	31.21-	31.21-	245.49-
*TOTALS ACRES= 482 ALOT= 2410 LEFT= 150-	.00	.00	2560.04

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A C C O U N T S & S T A T I O N S		PERIOD	MAR M-T-D	SINCE 4/01/0
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BA361A ST RANCH				
NORTH FORK BISHOP CREEK				
3036	NORTH FORK BISHOP CREEK I-1	124.00	124.00	1444.00
3004	NORTH FORK BISHOP CREEK I-2	.00	.00	.00
3042	TATUM RETURN AT HIGHWAY 6	.00	.00	43.00
3039	TATUM RETURN AT BISHOP CREEK CANAL	43.00-	43.00-	401.00-
3022	BISHOP CREEK CANAL #5A	.00	.00	390.00-
B61A21	STOCKWATER @ I-1	30.69-	30.69-	361.73
3316	WELL #406	.00	.00	879.00
B61A41	DITCH MAKE	.00	.00	.00
B61A31	OPERATIONS	50.31-	50.31-	260.97-
*TOTALS	ACRES= 262 ALOT= 1005 LEFT= 138	.00	.00	866.30
BA361B ST RANCH				
MATLICK DITCH				
3009	MATLICK DITCH F-10	162.00	162.00	1696.00
3040	MATLICK DITCH F-13 N	157.00	157.00	1695.00
3008	MATLICK DITCH F-13 E	47.00	47.00	673.00
3007	MATLICK DITCH F-14	5.00	5.00	79.00
3035	MATLICK DITCH #154	58.00	58.00	1064.00
3154	TATUM RETURN G-2	4.00-	4.00-	81.00-
3037	MATLICK DITCH #63A	57.00-	57.00-	739.00-
3038	TATUM RETURN H-1	.00	.00	261.00-
3003	MATLICK DITCH RETURN @ B-1 DRAIN	4.00-	4.00-	44.00-
3010	MATLICK RETURN @ C DRAIN	236.00-	236.00-	1592.00-
B61B41	DITCH LOSS #154 TO RETURN @ B1	54.00-	54.00-	379.92-
B61B42	DITCH MAKE F-10 TO RETURN @ C DRAIN	.00	.00	25.54
B61B21	SPENCER STOCKWATER	15.50-	15.50-	183.00-
B61B22	STOCKWATER @ F-10	30.69-	30.69-	362.34-
B61B31	OPERATIONS	27.81-	27.81-	37.66-
*TOTALS	ACRES= 412 ALOT= 2365 LEFT= 812	.00	.00	1552.62
BA354A SMITH				
HALL DITCH				
3027	HALL DITCH PUMP PLANT #2	5.00	5.00	27.00
3028	HALL DITCH PUMP PLANT #4	28.00	28.00	917.00
*TOTALS	ACRES= 219 ALOT= 1095 LEFT= 151	33.00	33.00	944.00
BARECA RECREATION FARMERS PONDS				
BISHOP CREEK CANAL				
3155	BISHOP CREEK CANAL #5B	.00	.00	536.00
BRCA31	OPERATIONS @ #5B	.00	.00	.00
*TOTALS		.00	.00	536.00
BARECC RECREATION SADDLE CLUB				
BISHOP CREEK CANAL				
3021	BISHOP CREEK CANAL #67	.00	.00	66.00
BRECC3	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 13 ALOT= 65 LEFT= 1-	.00	.00	66.00

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A C C O U N T S & S T A T I O N S		PERIOD	MAR M-T-D	SINCE 4/01/
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BARECD	RECREATION BUCKLEY PONDS			
	SOUTH FORK BISHOP CREEK			
3194	S FORK BISHOP CR BELOW BISHOP CR CANAL	331.00	331.00	5170.00
3193	SANDERS POND RETURN	190.00-	190.00-	2147.00
3066	RAWSON POND # 3 RETURN TO OWENS RIVER	49.00-	49.00-	619.00
BRCD31	OPERATIONS	.00	.00	.00
*TOTALS		92.00	92.00	2404.00
BA338	YRIBARREN			
	FORD-RAWSON CANAL & KEOUGH			
2003	FORD RAWSON CANAL DIVERSION #2	37.00	37.00	889.00
2024	FORD RAWSON CANAL DIVERSION #3	16.00	16.00	3277.00
2004	FORD RAWSON CANAL DIVERSION #7	.00	.00	862.00
2043	YRIBARREN RETURN #2	.00	.00	.00
B38402	FORD RAWSON CANAL LOSS	16.00-	16.00-	600.30
B38201	STOCKWATER @ #2	30.29-	30.29-	349.00
B38401	FORD RAWSON CANAL DITCH MAKE	.00	.00	.00
3368	RAWSON & KEOUGH DITCH E/O HWY 395	101.00	101.00	656.00
3369	RAWSON & KEOUGH DITCH RETURN AT A-DRAI	76.00-	76.00-	479.00
B38202	CASHBAUGH STOCKWATER	12.40-	12.40-	89.40
B38403	KEOUGH DITCH LOSS	12.60-	12.60-	79.40
B38301	OPERATIONS	6.71-	6.71-	36.30
*TOTALS	ACRES= 427 ALOT= 2135 LEFT= 191-	.00	.00	2326.40
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
RV361	ST RANCH			
	HORTON CREEK			
BC361	HORTON CREEK E-7	.00	.00	.00
BC3613	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 26 ALOT= 130 LEFT= 130	.00	.00	.00
RVRECA	RECREATION MILL POND			
	MCGEE CREEK			
3185	MCGEE CREEK @ ABELOUR RANCH	263.00	263.00	2282.00
3235	MILL POND RETURN	131.00-	131.00-	1082.00
RRCA41	DITCH MAKE	.00	.00	.00
*TOTALS		132.00	132.00	1200.00

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 FROM 3/01/08 TO 3/31/08

A C C O U N T S & S T A T I O N S		PERIOD	A C R E - F E E T	
			MAR M-T-D	SINCE 4/01/07
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LAE&MH	FIVE BRIDGES RECHARGE BISHOP CREEK CANAL			
3242	BISHOP CREEK CANAL DIVERSION #2	.00	.00	457.00
LEMGE5	MITIGATION WATER @ DIVERSION #4	.00	.00	.00
3317	BISHOP CREEK CANAL DIVERSION #6	21.00	21.00	181.00
LEMH2	STOCKWATER @ DIVERSION #2 & #6	21.00-	21.00-	385.00-
LEMH3	OPERATIONS	.00	.00	.00
*TOTALS		.00	.00	253.00
BA353	HADELER & MILORADICH WONACOTT & SMITH DITCH			
3015	WONACOTT A-1	60.00	60.00	963.00
3053	TOMMY SMITH DITCH # 162-A	1.00	1.00	70.00
3013	164-B WATTERSON	.00	.00	.00
3017	WONACOTT A-2	60.00-	60.00-	822.00-
BA3534	WONACOTT DITCH LOSS	1.00-	1.00-	21.60-
BA3533	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 38 ALOT= 190 LEFT= 0	.00	.00	189.40
BAGOLF	BISHOP GOLF COURSE WELL AND HALL DITCH			
*TOTALS		.00	.00	.00
BA005A	ONEY OTEY DITCH			
3049	# 161 OTEY	69.00	69.00	787.00
3377	OTEY DITCH RETURN AT MATLICK DITCH	65.00-	65.00-	677.00-
B05A4	DITCH LOSS	4.00-	4.00-	41.55-
B05A42	DITCH MAKE	.00	.00	3.00
*TOTALS	ACRES= 13 ALOT= 65 LEFT= 6-	.00	.00	71.45
BA005B	SAFSTROM MATLICK DITCH			
3378	OTEY DITCH DIVERSION ABOVE MATLICK DIT	.00	.00	110.00
*TOTALS	ACRES= 20 ALOT= 100 LEFT= 10-	.00	.00	110.00
BA006A	BARTON MATLICK DITCH			
3064	MATLICK DITCH AT INTAKE # 61	149.00	149.00	2510.00
3377	OTEY DITCH RETURN AT MATLICK DITCH	65.00	65.00	677.00
3378	OTEY DITCH DIVERSION ABOVE MATLICK DIT	.00	.00	110.00-
3379	MATLICK DITCH N/O MCCLAREN	1.00-	1.00-	10.00-
B06A4	DITCH LOSS	213.00-	213.00-	3002.80-
*TOTALS	ACRES= 14 ALOT= 70 LEFT= 5	.00	.00	64.20
BA1479	HIDDEN CREEKS RANCH SOUTH INDIAN DITCH			
3025	SOUTH INDIAN DITCH DIVERSION # 3	.00	.00	66.00
B14793	OPERATIONS	.00	.00	.00
*TOTALS	ACRES= 27 ALOT= 135 LEFT= 69	.00	.00	66.00

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A C C O U N T S & S T A T I O N S	P E R I O D	A C R E - F E E T		
		MAR M-T-D	SINCE 4/01/07	
AREA SUMMARY	IRG	68.00	68.00	16798.05
	SW	293.97	293.97	3801.42
	OPER	267.99	267.99	2433.91
	E&M	.00	.00	253.00
	GWRC	.00	.00	.00
	REC	224.00	224.00	4432.57
	IND	.00	.00	.00
	DOM	.00	.00	.00
	LORP	.00	.00	.00
TOTAL WATER USE		853.96	853.96	27718.95

TOTAL IRG AC 3747 TOTAL ALOT 18403 DUTY TO DATE 4.5 AF/AC

**2007/2008 RUNOFF YEAR BISHOP CONE FLOWING WELL TOTALS
(ACRE-FEET)**

WELL	2007												2008					TOTAL
	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR						
F121	3	3	3	3	3	3	3	3	3	3	3	3	3	36				
F122	11	12	12	13	15	15	18	18	16	12	12	10	10	164				
F123	6	8	7	9	9	9	9	14	28	24	19	15	15	157				
F124	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
F125	90	89	85	85	83	83	86	82	84	85	81	88	88	1021				
F126	15	20	25	24	23	24	26	25	25	25	22	25	25	279				
F127	33	33	33	36	34	32	33	24	13	33	32	35	35	371				
F128	22	24	26	30	31	30	30	27	28	27	21	22	22	318				
F129	7	13	19	21	20	19	18	17	17	17	15	16	16	199				
F130	19	20	20	20	22	22	22	20	18	18	19	22	22	242				
F131	84	87	81	82	81	80	82	78	81	82	76	81	81	975				
F132	28	29	26	28	28	27	28	26	25	26	26	28	28	325				
F133	41	39	41	40	39	38	38	40	45	44	41	44	44	490				
F134	65	68	65	64	53	53	48	55	59	61	55	54	54	700				
F136	18	13	15	15	14	12	14	15	16	15	14	16	16	177				
TOTAL	442	458	458	470	455	447	455	444	458	472	436	459	459	5454				

2007/2008 RUNOFF YEAR BISHOP CONE PUMPING TOTALS
(ACRE FEET)

	BISHOP	LAWS	BIG PINE	TA	TS	IO	SS	BG	LP	TOTAL
APR	1174	352	1690	78	947	987	188	0	132	5548
MAY	1307	376	1755	66	1028	1024	207	52	135	5950
JUN	1316	1161	1707	67	1081	1015	196	108	150	6801
JUL	1401	1438	1765	71	1133	1065	185	109	161	7328
AUG	1521	1458	1762	70	1140	1082	197	104	159	7493
SEP	1508	1315	1689	62	1063	895	191	93	100	6916
OCT	458	172	1724	28	1090	675	103	0	81	4331
NOV	338	1	1652	27	1059	22	0	0	49	3148
DEC	291	3	1695	26	1084	131	0	0	48	3278
JAN	278	0	1688	21	1085	51	0	0	44	3167
FEB	283	0	1583	43	1019	12	0	0	43	2983
MAR	143	10	1696	373	1003	76	0	0	94	3395
TOTAL	10018	6286	20406	932	12732	7035	1267	466	1196	60338

10-Dec, 116 af pumped for Aqueduct freeze protection

10-Jan, 39af pumped for Aqueduct freeze protection