

**2. ANNUAL OWENS VALLEY OPERATIONS PLAN FOR  
RUNOFF YEAR 2006-07**

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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 pumping program is also consistent with the court order in Case Number S1CVCV01-29768, Sierra Club and Owens Valley Committee vs. City of Los Angeles Department of Water and Power, dated August 9, 2005 (Court Order). While the Court's Order is in effect, LADWP is required to limit groundwater pumping from the Owens Valley to 57,412 acre-feet per year, annually 16,294 acre-feet of aqueduct water is to be supplied for groundwater recharge in the Laws Wellfield, and provide water to City-owned lands, Enhancement/Mitigation projects and mitigation measures pursuant to Section IV.A of the Water Agreement.

### **2.1 Owens Valley Runoff Estimate**

LADWP forecasts runoff from the eastern Sierra Nevada Mountains based on the actual snow survey of gauge stations located along the eastern front of the Sierra Nevada Mountains. For the period of April 1, 2006 to March 31, 2007, the forecasted Owens Valley runoff is 556,100 acre-feet, or 135% of normal based on the April 1 snow survey (Table 1). This is a revised forecast table as the eastern Sierra Nevada Mountains received a large amount of precipitation after the April 1, 2006 snow survey.

The amount of groundwater pumping allowed from each wellfield in the Owens Valley is determined based on the ON/OFF status of vegetation monitoring sites located throughout Owens Valley (Section V of Water Agreement). According to the ON/OFF provisions, as of April 2006, approximately 142,000 acre-feet of water (Table 5) is available for groundwater pumping from Owens Valley wellfields.

### **2.2 Owens Valley Groundwater Production**

LADWP has developed a planned 2006-07 Annual Operations Plan based on the goals and principles of the Water Agreement and to comply with the Court Order. The planned 2006-07 Annual Operations Plan focuses on avoiding undesirable decreases and changes in vegetation while providing a reliable supply of water for export to Los Angeles and for use in Inyo County. Due to this year's operation requirements of the Los Angeles Aqueduct (LAA), LADWP will be spreading water during the first four months (April, May, June, and July) in Laws, Big Pine, and alluvial fans near Independence. To meet the Court Order, a minimum of 16,294 acre-feet of water from the Owens River will be utilized for recharging the groundwater aquifer in the Laws Wellfield during the runoff year.

LADWP's planned pumping is limited to 57,412 acre-feet, far less than the long-term average pumping from the Owens Valley since 1971, and under the terms of the Water Agreement, to meet the Court Order. Figure 1 shows Owens Valley groundwater pumping from 1970-71 runoff year to the planned pumping for the 2006-07 runoff year. In considering the ON/OFF protocols of the Water Agreement which provide for approximately 142,000 acre-feet of groundwater available for pumping this year, and the Owens Valley groundwater pumping provisions of the Court Order, LADWP's planned Owens Valley pumping for the 2006-07 runoff year is 57,412 acre-feet. This is about 40% of the pumping allowed under the ON/OFF provisions of the Green Book.

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

Attached tables provide detailed information on pumping and uses.

Consistent with the goals of the Water Agreement, pumping in all areas is within the allowable limits and consistent with the groundwater mining provisions of the Green Book. Table 2 shows the latest update of the mining calculations based on the procedures described in the Green Book. LADWP is evaluating ways to improve the Green Book procedures for preparing and updating the mining table. LADWP is interested in working with ICWD staff to evaluate and implement revisions to groundwater mining calculations.

Table 3 details planned pumping for the 2006-07 runoff year on a month-to-month basis for each wellfield. Pumping for town domestic use is included in that distribution.

**Table 1. Owens Valley Runoff Forecast for 2006-07 Runoff Year**

**2006 RUNOFF FORECAST**  
**April 1, 2006**

**APRIL THROUGH SEPTEMBER RUNOFF**

	<b>MOST PROBABLE VALUE</b>		<b>REASONABLE MAXIMUM</b>	<b>REASONABLE MINIMUM</b>	<b>LONG-TERM MEAN (1951 - 2000)</b>
	<u>(Acre-feet)</u>	<u>(% of Avg.)</u>	<u>(% of Avg.)</u>	<u>(% of Avg.)</u>	<u>(Acre-feet)</u>
<b>MONO BASIN:</b>	<b>154,900</b>	<b>149%</b>	161%	136%	104,277
<b>OWENS VALLEY:</b>	<b>423,000</b>	<b>139%</b>	152%	126%	305,167

**APRIL THROUGH MARCH RUNOFF**

	<b>MOST PROBABLE VALUE</b>		<b>REASONABLE MAXIMUM</b>	<b>REASONABLE MINIMUM</b>	<b>LONG-TERM MEAN (1951 - 2000)</b>
	<u>(Acre-feet)</u>	<u>(% of Avg.)</u>	<u>(% of Avg.)</u>	<u>(% of Avg.)</u>	<u>(Acre-feet)</u>
<b>MONO BASIN:</b>	<b>180,200</b>	<b>147%</b>	160%	134%	122,557
<b>OWENS VALLEY:</b>	<b>556,100</b>	<b>135%</b>	147%	122%	413,210

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

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

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

**Table 2 - Summary of Estimated Recharge and Historical Pumping in AF for Water Year 1987-2006**

<b>Water Year</b>	<b>LAWS</b>		<b>BISHOP</b>		<b>BIG PINE</b>		<b>TABOOSE-THIBAUT</b>		<b>IND-SYM-BAIRS</b>		<b>LONE PINE</b>		<b>OWENS VALLEY</b>	
	Recharge	Pumping	Recharge	Pumping	Recharge	Pumping	Recharge	Pumping	Recharge	Pumping	Recharge	Pumping	Recharge	Pumping
1987	12,405	25,779	38,443	9,558	22,816	44,991	29,544	53,906	30,067	34,254	12,193	1,956	145,468	170,444
1988	12,539	38,025	36,728	10,900	20,629	40,830	25,906	61,545	27,168	43,234	11,295	1,655	134,265	196,189
1989	12,776	38,167	36,679	11,961	19,966	35,915	23,439	54,284	27,095	34,728	11,104	1,668	131,059	176,723
1990	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	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	10,877	8,907	34,915	11,326	18,596	24,345	20,829	23,761	25,543	14,154	10,533	1,626	121,293	84,119
1993	19,796	7,541	44,671	8,404	27,785	22,627	35,379	19,424	40,409	11,689	15,622	1,519	183,662	71,204
1994	12,044	21,206	36,019	10,193	19,634	24,962	22,288	23,557	28,454	14,878	11,667	1,281	130,107	96,077
1995	28,115	7,053	53,861	4,799	38,758	21,970	46,375	17,121	55,103	12,631	22,296	1,037	244,508	64,611
1996	12,606	11,535	50,980	9,153	33,432	24,331	42,408	19,906	51,461	12,382	19,870	1,106	210,758	78,413
1997	15,255	8,349	50,176	9,606	33,678	24,002	43,149	21,774	52,448	9,461	20,075	1,128	214,780	74,320
1998	28,213	470	53,999	7,159	40,270	23,729	47,156	16,496	55,953	7,946	20,455	1,365	246,046	57,165
1999	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	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	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	11,202	3,480	35,740	10,839	19,920	26,885	22,807	25,288	29,168	10,279	12,216	1,345	131,053	78,116
2003	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	11,138	7,412	37,149	11,777	21,126	26,149	25,044	25,159	29,771	15,750	11,357	1,118	135,586	87,365
2005 (c)	17,739	3,841	49,864	7,093	34,664	19,423	42,506	18,674	45,115	18,585	16,692	1,128	206,580	68,744
2006 (a)	19,473	244	52,112	2,385	36,936	10,185	45,242	8,557	47,891	1,179	17,572	202	219,226	22,752
(b) TOTAL	300,252	237,440	839,587	189,163	520,347	515,892	627,055	536,545	738,926	311,551	289,777	27,393	3,315,945	1,817,984
Estimated Apr-Sep Pumping Limit		62,812		650,424		4,455		90,510		427,375		262,384		1,497,961

(a) Estimated Recharge for the 2006 Water Year, Approximate Pumping for First Half of Water year 2006 (Oct-Mar).

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

(c) Recharge values for 2005 are calculated using regression equations from Green Book.

**Table 3 - Planned Owens Valley pumping for 2006-07 runoff year in Acre Feet**

Month	Laws	Bishop	Big Pine	Taboose- Aberdeen	Thibaut- Sawmill	Indep.- Oak	Symmes- Shepherd	Bairs- Georges	Lone Pine	TOTAL
April	780	1,200	1,700	240	1,100	1,000	220	0	200	6,440
May	780	1,200	1,700	240	1,100	1,000	220	0	200	6,440
June	780	700	1,700	240	1,100	1,000	220	0	200	5,940
July	780	700	1,700	240	1,100	1,000	220	0	200	5,940
August	780	700	1,700	240	1,100	1,000	220	0	200	5,940
September	780	700	1,700	240	1,100	1,000	220	0	85-410	5,825-6,150
October	15	150	1,700	240	1,100	300	0	0	25	3,530
November	10	150	1,700	240	1,100	100	0	0	25	3,325
December	10	150	1,700	240	1,100	100	0	0	25	3,325
January	10	150	1,700	240	1,100	100	0	0	25	3,325
February	10	150	1,700	240-1,035	1,100	100	0	0	25	3,325-4,120
March	10	150	1,700	240-1,035	1,100	500	0	0	32	3,732-4,527
<b>TOTAL</b>	<b>4,745</b>	<b>6,100</b>	<b>20,400</b>	<b>2,880-4,470</b>	<b>13,200</b>	<b>7,200</b>	<b>1,320</b>	<b>0</b>	<b>1,231-1,566</b>	<b>57,412</b>

Note: The total planned Owens Valley pumping for 2006-07 runoff year is 57,412 acre-feet.

**Figure 1 – Owens Valley Groundwater Pumping**

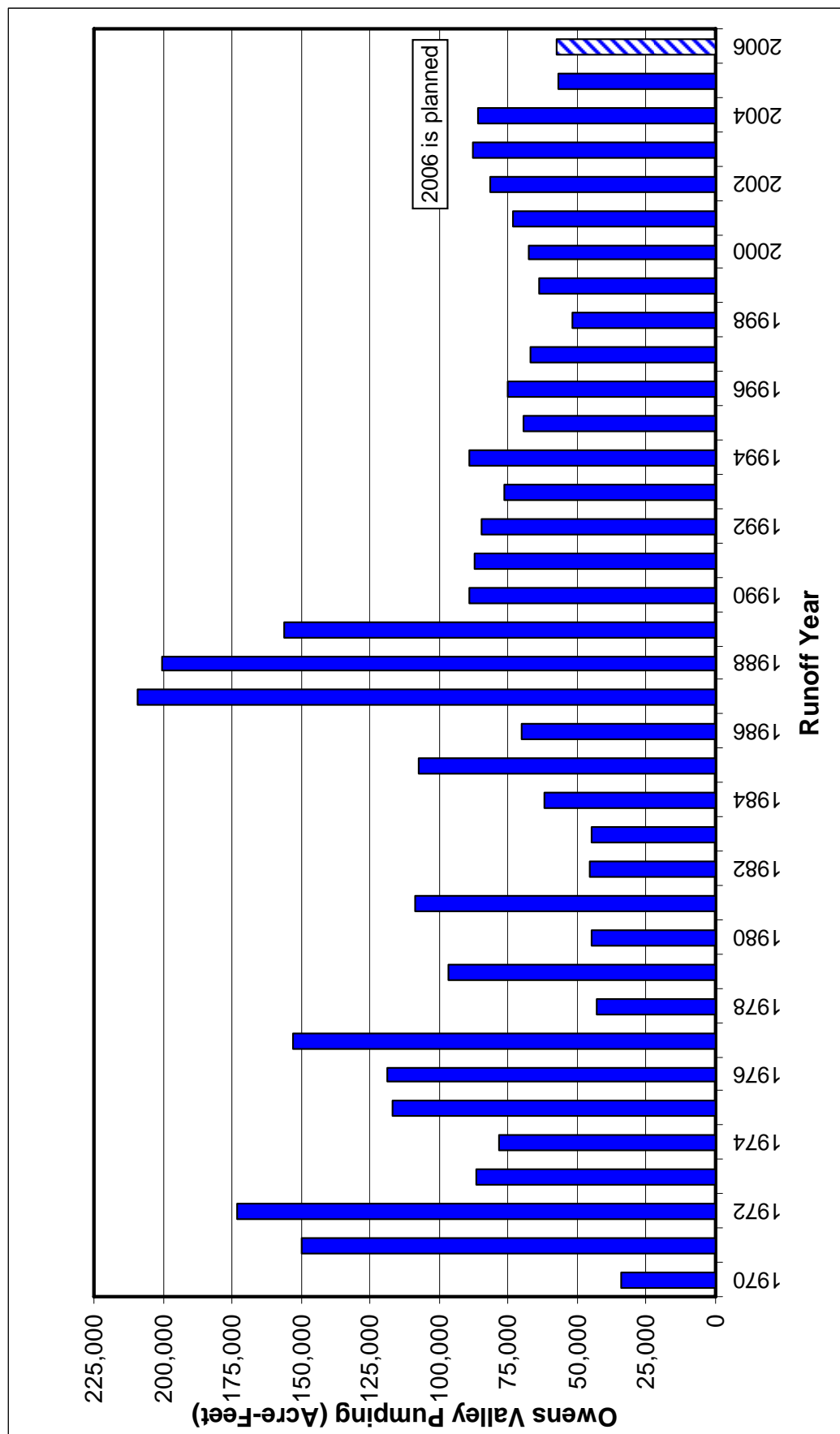


Table 4 lists the April 2006 soil water status and projected soil water for each monitoring site using the methodology described in the Green Book.

Table 5 lists monitoring sites, production wells associated with each monitoring site, available production capacity according to the ON/OFF status as described in the Water Agreement, and planned pumping from each wellfield in the Owens Valley. Since October of 2005 sites L2, L3, BP3, and TS3 have changed from OFF to ON status.

The following is a discussion of the planned pumping program by wellfield. Figures 2 through 8 detail LADWP's Owens Valley Wellfields. The total planned Owens Valley groundwater pumping for the 2006-07 runoff year is 57,412 acre-feet. This number is consistent with the provisions of the Water Agreement and the Court Order.

### ***Laws Wellfield (Figure 2)***

Monitoring sites L1, L2, and L3 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 9,410 acre-feet. Exempt wells within the Laws Wellfield have a capacity of 3,340 acre-feet. Total capacity in the Laws Wellfield is 45,106 acre-feet and available based on ON/OFF status. Well W236, associated with monitoring site L2, used partially along with W365 as an exempt well to provide irrigation water. Minimum pumping in this wellfield is 4,745 acre-feet to supply the irrigated land in Laws Wellfield. To meet the terms of the Court Order and as a result of operational requirements of LAA, during the runoff year LADWP will spread 16,294 acre-feet of Owens River water in the Laws Wellfield through Upper and Lower McNally canals. The timing of the spreading activities will depend on the amount and timing of the Owens Valley runoff. In response to the amount and timing of spreading, LADWP plans to pump some of the wells associated with monitoring sites L1, L2, and L3 during the year. The planned groundwater pumping from the Laws Wellfield is 4,745 acre-feet for the 2006-07 runoff year.

### ***Bishop Wellfield (Figure 3)***

Pumping in Bishop Wellfield is governed by the provisions of the Hillside Decree. Provisions of the Hillside Decree allow LADWP to pump an amount equal to the water use on LADWP-owned land within the Bishop Cone area. LADWP operations in the Bishop Cone area will be in accordance with the provisions of the Hillside Decree. Currently, the total available pumping capacity in the Bishop Wellfield is 13,000 acre-feet. The planned groundwater pumping from the Bishop Wellfield is 6,100 acre-feet for the 2006-07 runoff year.

### ***Big Pine Wellfield (Figure 4)***

Monitoring sites BP3 and BP4 are in ON status. Production wells controlled by BP3 have an available production capacity of 4,850 acre-feet. Production well W331, controlled by monitoring site BP4, has a production capacity of 7,530 acre-feet but has high sulfide levels that make it unsuitable for pumping. Exempt wells W218,



W219, town supply wells, and Fish Spring Fish Hatchery wells in the Big Pine Wellfield have a combined capacity of 25,486 acre-feet. A total capacity of 37,867 acre-feet is available in the Big Pine Wellfield based on ON/OFF status. Since 2006-07 is forecasted to be a high runoff year, LADWP expects to spread water from Big Pine Canal and tributary streams of Owens River in the Big Pine Wellfield as runoff conditions and LAA operation requires. The required pumping from the Big Pine Wellfield includes supplying Fish Spring Fish Hatchery and the town water system on a year-round basis. LADWP is planning to pump the required groundwater for fish hatchery and town supply uses during this runoff year. The planned groundwater pumping from the Big Pine Wellfield is 20,400 acre-feet in 2006-07 runoff year.

According to the mining calculations shown in Table 2, the pumping limit for Big Pine Wellfield during the first half of 2006-07 runoff year is 4,455 acre-feet. As the planned pumping during this period is 10,200 acre-feet, LADWP will spread a minimum of 5,745 acre-feet in spreading grounds adjacent to Big Pine Canal and creeks contributing to recharge in Big Pine area. This spreading activity will ensure that mining will not occur in Big Pine Wellfield. When compared to last year's conditions, as runoff and pumping are expected to be about the same and with additional spreading, the groundwater levels in the Big Pine Area should continue to rise through April 2007.

**Table 4 - Soil / Vegetation Water Balance Calculations According to Green Book for April 2006**

Site	Oct 2005 Soil AWC (cm)	50% Annual Precip. (cm)	Proj. soil AWC	Oct. 2005 Veg. Water Req./ Water Req. for Well Turn-On (cm)	Oct 2005 Status	April 2006 soil AWC (cm)	April 2006 Status	Soil AWC Req. for Well Turn-On (cm)
L1	16.6	7.9	24.5	13.6/NA	ON	119.9	ON	NA
L2	4.4	NA	4.4	20.5/20.5	OFF	21.7	ON	NA
L3	24.4	NA	24.4	30.4/26.3	OFF	41.2	ON	NA
BP1	0.7	NA	0.7	11.0/22.9†	OFF	7	OFF	22.9†, OFF 10-97
BP2	0.7	NA	0.7	26.6/28.4	OFF	10.4	OFF	28.4, OFF 7-98
BP3	5.1	7.6	12.7	14.1/NA	OFF	19.5	ON	NA
BP4	34.0	8.2	42.2	19.2/NA	ON	45.2	ON	NA
TA3	5.0	NA	5	10.5/25.9	OFF	19.4	OFF	25.9, OFF 7-98
TA4	6.3	NA	6.3	30.1/23.2	OFF	18	OFF	23.2, OFF 10-98
TA5	19.8	8.2	28	9.8/NA	ON	26.2	ON	NA
TA6	8.0	NA	8	39.3/26.8†	OFF	19.1	OFF	26.8†, OFF 7-96
TS1	0.9	NA	0.9	28.5/20.4†	OFF	9.7	OFF	20.4†, OFF 10-96
TS2	5.7	NA	5.7	21.5/19.5	OFF	17.4	OFF	19.5, OFF 7-98
TS3	20.4	7.3	27.7	35.7/NA	OFF	62.3	ON	NA
TS4	27.6	NA	27.6	73.1/47.9	OFF	46.3	OFF	47.9, OFF 10-03
IO1	16.7	NA	16.7	74.6/42.2	OFF	28.7	OFF	42.2, OFF 10-98
IO2	3.3	NA	3.3	14.8/14.8	OFF	9.1	OFF	14.8, OFF 7-05
SS1	10.2	NA	10.2	39.3/39.3	OFF	16.5	OFF	39.3, OFF 7-05
SS2	2.0	NA	2	23.9/13.4	OFF	7.8	OFF	13.4, OFF 7-03
SS3	7.7	NA	7.7	46.4/37.7	OFF	17.8	OFF	37.7, OFF 10-03
SS4	1.6	NA	1.6	15.9/15.9	OFF	4.3	OFF	15.9, OFF 7-05
BG2	24.0	6.6	30.6	33.7/NA	OFF	26.2	OFF	33.7, OFF 10-05

† 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 5 - Available Pumping Capacity According to Monitoring Sites with ON Status and Planned Pumping for Runoff Year 2006-2007**

<b>Wellfield</b>	<b>Monitoring Site</b>	<b>Associated Production Wells</b>	<b>Available Capacity (AF)</b>	<b>Proposed Pumping (AF)</b>
<b>Laws</b>	L1	247, 248, 249, 398	12,670	
	L2	236**, 239, 243, 244	10,492	
	L3	240, 241, 399, 376, 377	9,195	
	L5*	245, 387, 388	9,412	
	Exempt	236**, 354, 365, 413	3,337	
	<b>Wellfield Pumpage</b>		<b>45,106</b>	<b>4,745</b>
<b>Bishop</b>	All wells	140, 207, 238, 371, 406, 407, 408, 412	13,000	
	<b>Wellfield Pumpage</b>		<b>13,000</b>	<b>6,100</b>
<b>Big Pine</b>	BP3	222, 223, 231, 232	4,851	
	BP4	331	7,530	
	Exempt	218, 219, 330, 332, 341, 352, 415	25,486	
	<b>Wellfield Pumpage</b>		<b>37,867</b>	<b>20,400</b>
<b>Taboose</b>	TA5	349	10,570	
<b>Aberdeen</b>	Exempt	118	1,810	
	<b>Wellfield Pumpage</b>		<b>12,380</b>	<b>2,880-4,470</b>
<b>Thibaut</b>	TS3	103, 104, 382EM	2,968	
<b>Sawmill</b>	Exempt	351, 356	12,598	
	<b>Wellfield Pumpage</b>		<b>15,566</b>	<b>13,200</b>
<b>Indep. - Oak</b>	Exempt	59, 60, 61, 65, 357, 383EM, 384EM, 401	13,973	
	<b>Wellfield Pumpage</b>		<b>13,973</b>	<b>7,200</b>
<b>Symmes Shepherd</b>	Exempt	402EM	1,320	
	<b>Wellfield Pumpage</b>		<b>1,320</b>	<b>1,320</b>
<b>Bairs Georges</b>	Exempt	343	1,158	
	<b>Wellfield Pumpage</b>		<b>1,158</b>	<b>0</b>
<b>Lone Pine</b>	Exempt	344, 346, 390	1,231	
	Other	416	335	
	<b>Wellfield Pumpage</b>		<b>1,566</b>	<b>1,242-1,567</b>
<b>Owens Valley Total</b>			<b>141,936</b>	<b>57,412</b>

\* Monitoring site has yet to be located.

\*\* Well W236 is used partially for making up the irrigation water

Note: The total planned Owens Valley pumping for 2006-07 runoff year will be 57,412 acre-feet.

Figure 2

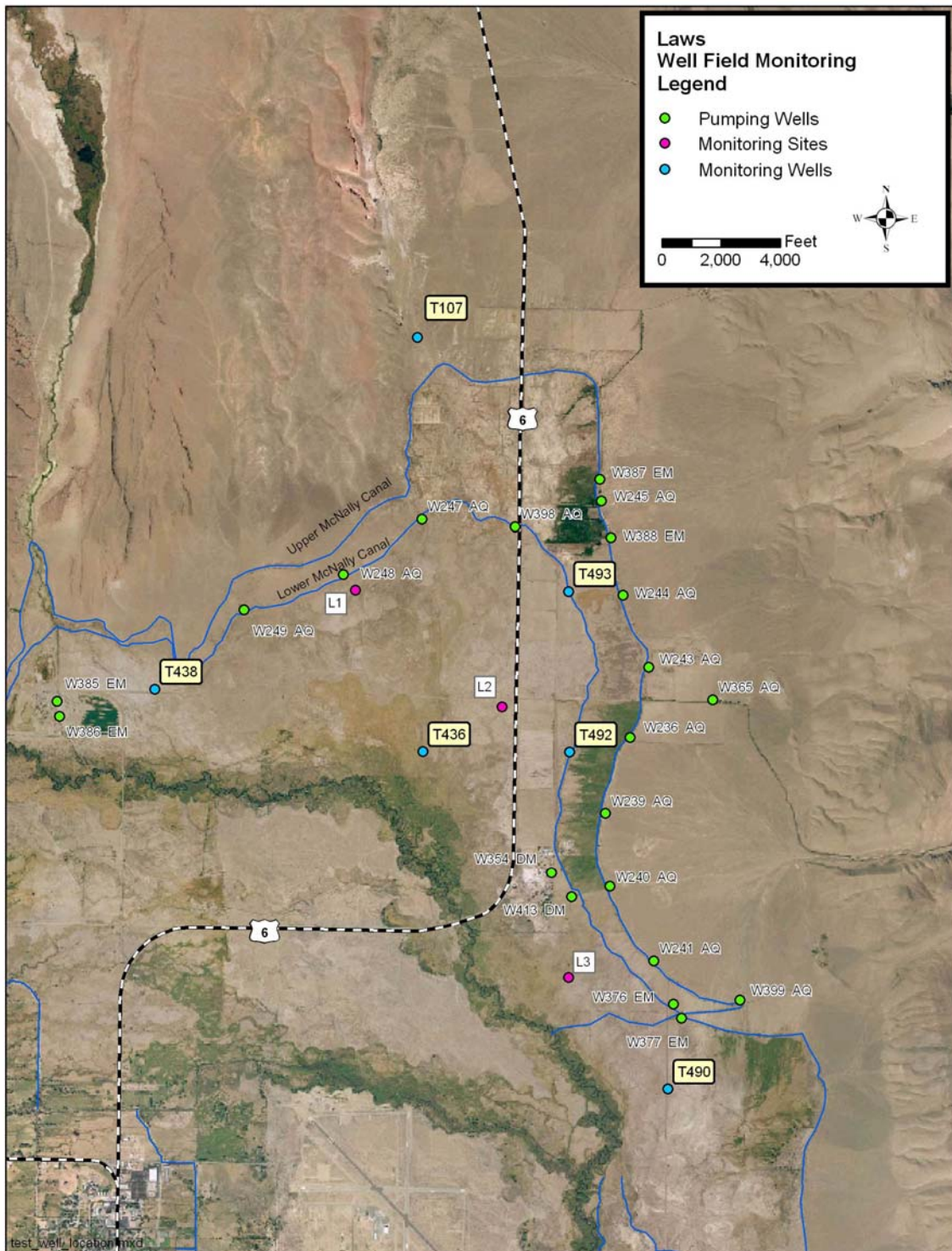




Figure 3

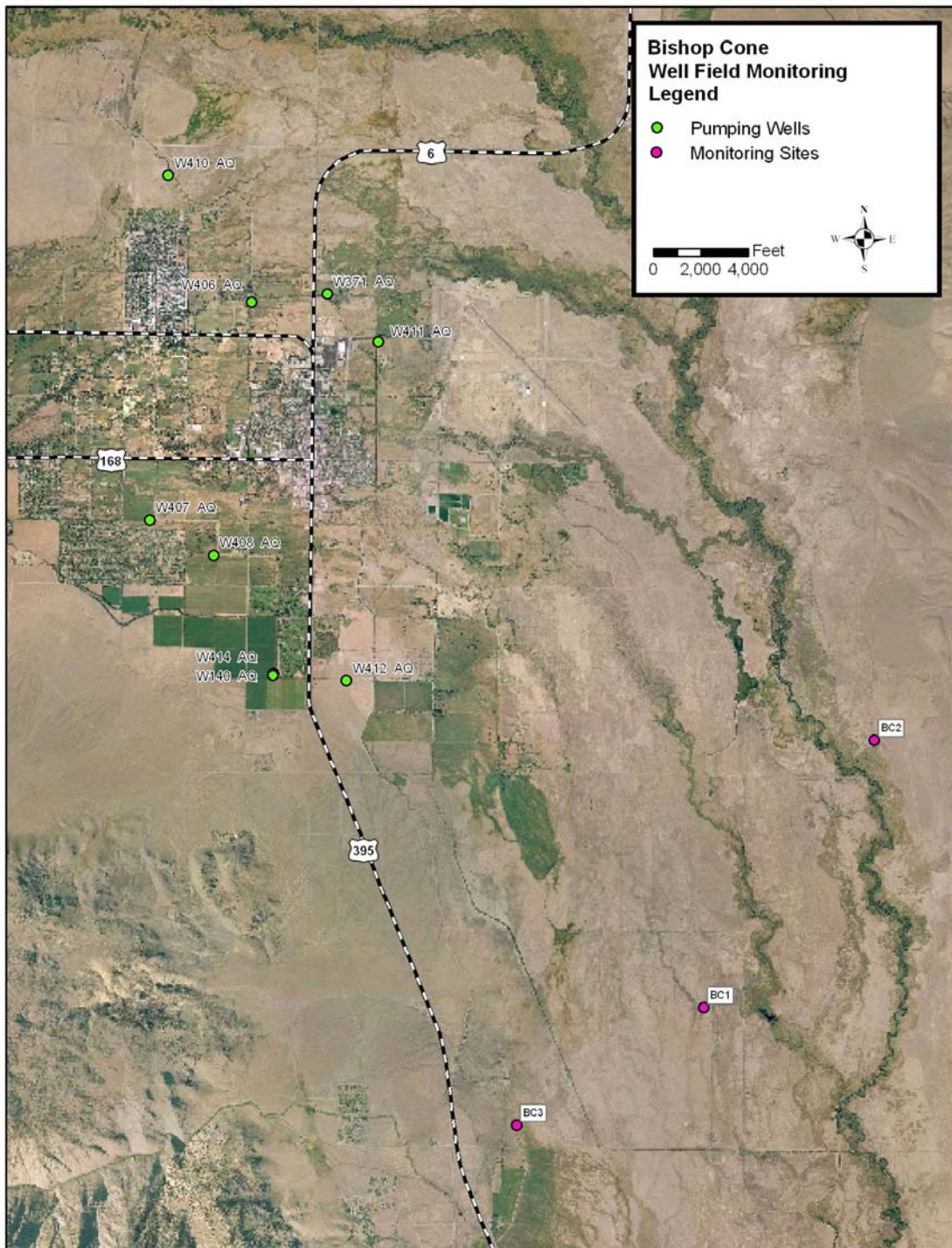
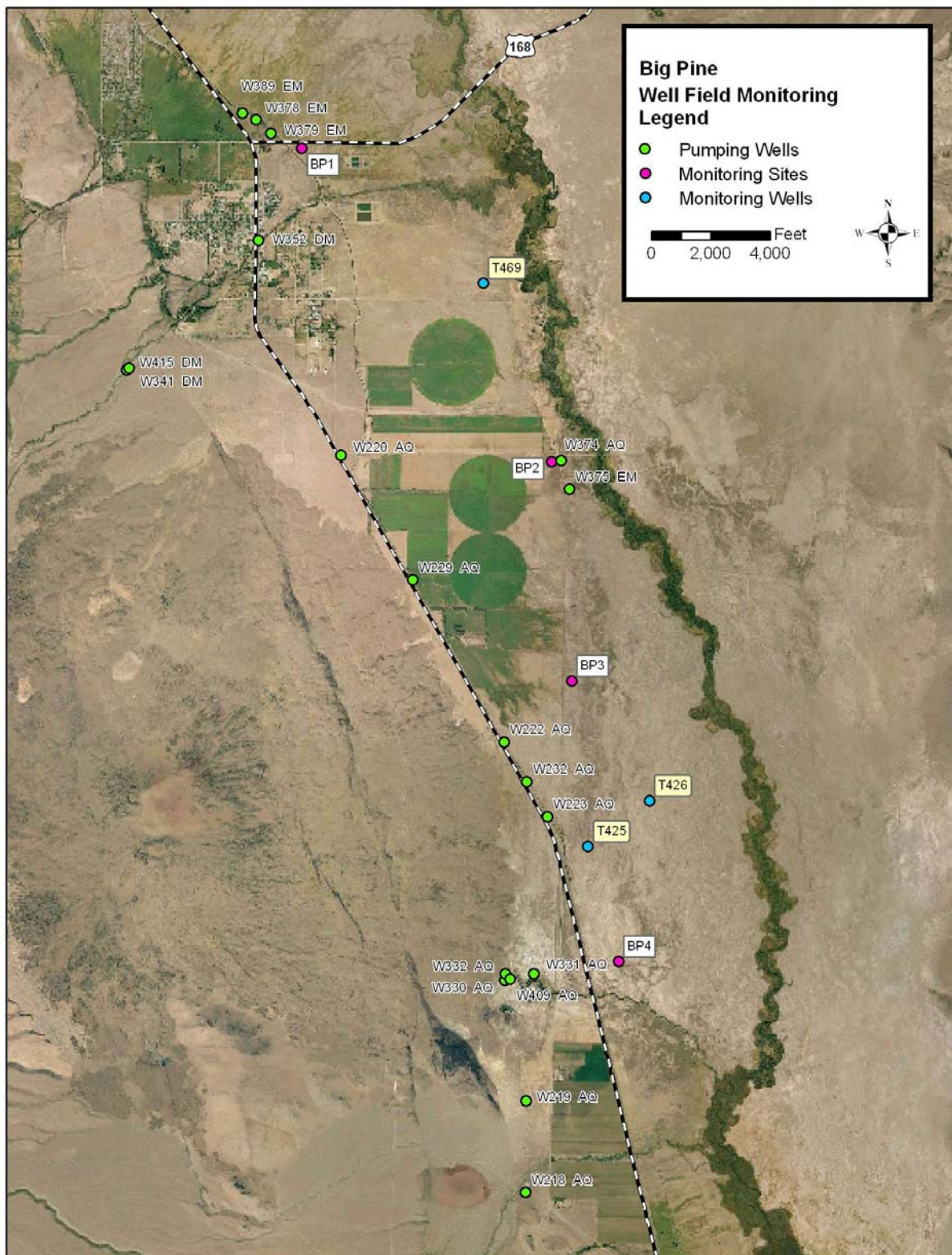




Figure 4



### ***Taboose-Aberdeen Wellfield (Figure 5)***

Monitoring site TA5 is in ON status. Production well W349, controlled by this monitoring site, has an available pumping capacity of about 10,570 acre-feet. Exempt well W118 in the Taboose-Aberdeen Wellfield has a capacity of 1,810 acre-feet. The total available groundwater pumping capacity of in the Taboose-Aberdeen Wellfield based on the ON/OFF status is 12,380 acre-feet. The exempt well W118 will run throughout the year. Well W349 is going to be on a timer to maintain water level in a pond adjacent to the well for the first ten months of the year and may be operated full time during the last two months of the year to allow a total of 57,412 acre-feet of pumping for the 2006-07 runoff year. The planned groundwater pumping from Taboose-Aberdeen Wellfield is between 2,880 acre-feet and 4,470 acre-feet for the 2006-07 runoff year.

### ***Thibaut-Sawmill Wellfield (Figure 6)***

Monitoring site TS3 is in ON status. Production wells controlled by this monitoring site have an available pumping capacity of 2,968 acre-feet. Exempt Wells W351 and W356 supplying Blackrock Fish Hatchery have a capacity of 12,598 acre-feet and 8,110 acre-feet respectively. A total capacity of 15,566 acre-feet is available in the Thibaut-Sawmill Wellfield based on the ON/OFF status. The required pumping in this wellfield for supplying Blackrock Fish Hatchery is 13,200 acre-feet. The planned groundwater pumping from Thibaut-Sawmill Wellfield is 13,200 acre-feet for the 2006-07 runoff year.

### ***Independence-Oak Wellfield (Figure 6)***

Vegetation monitoring site IO2 switched to OFF status in July of 2005 and remained OFF as of April 2006. Pumping from this wellfield will include exempt wells for supplying E/M projects, LAA, and the town water system. Total available pumping capacity in Independence-Oak Wellfield is 13,973 acre-feet. The minimum pumping in this wellfield is 6,300 acre-feet. The planned groundwater pumping from Independence-Oak Wellfield is 7,200 acre-feet for the 2006-07 runoff year.

### ***Symmes-Shepherd Wellfield (Figure 7)***

Sites SS1 and SS4 turned to OFF status in July 2005 and remained in OFF status as of April 2006. All monitoring sites in Symmes-Shepherd Wellfield are in OFF status as of April 2006. Exempt Well W402 in the Symmes-Shepherd Wellfield has an available capacity of 1,320 acre-feet. The planned groundwater pumping from Symmes-Shepherd Wellfield is 1,320 acre-feet for the 2006-07 runoff year.

### ***Bairs-Georges Wellfield (Figure 7)***

Monitoring site BG2 has been in OFF status since October 2005. An operational testing related to Reinhackle Spring was interrupted as a result of monitoring site BG2 turning to OFF status and will resume when the monitoring site returns to ON status. Currently, LADWP is not planning to operate any wells in the Bairs-Georges Wellfield for the 2006-07 runoff year.

### ***Lone Pine Wellfield (Figure 8)***

LADWP operated wells in Lone Pine Area include town supply wells W344 and W346 and E/M well W390. These three wells pump approximately 1,231 acre-feet per year to meet the demand. As outlined in section IV.B of the Green Book, LADWP is planning to activate pumping Well W416, which was drilled in 2002. These guidelines allow operation of a new well at full capacity for six month while monitoring water levels and vegetation. In response to ICWD's concerns, LADWP is planning to limit operation of W416 to one (1) month, pumping approximately 335 acre-feet. Data collected during the one-month operation will be utilized to develop a long-term management plan for this production well. The required pumping in this wellfield is about 1,231 acre-feet. The planned groundwater pumping from Lone Pine Wellfield is between 1,231 acre-feet and 1,566 acre-feet for the 2006-07 runoff year.



Figure 5

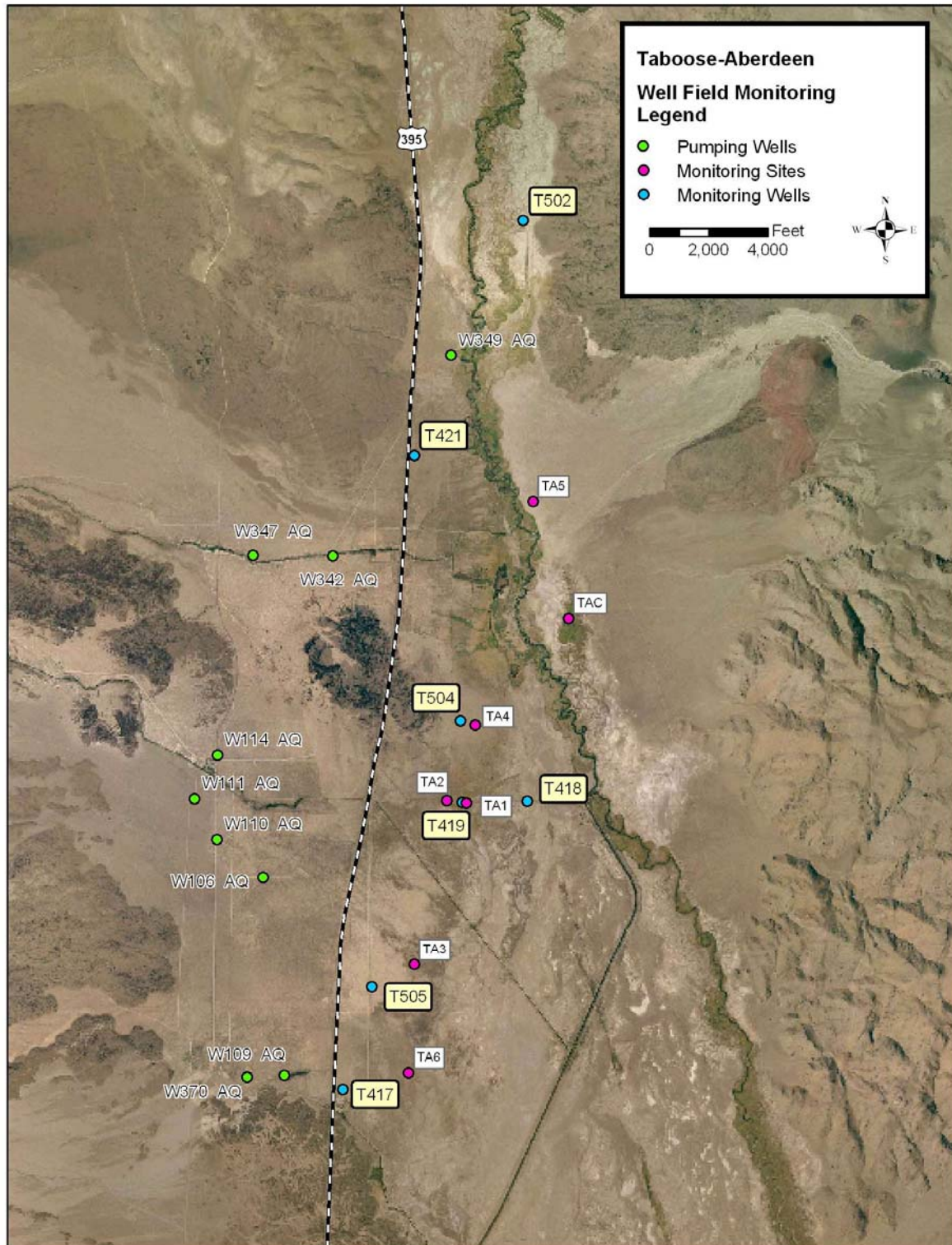




Figure 6

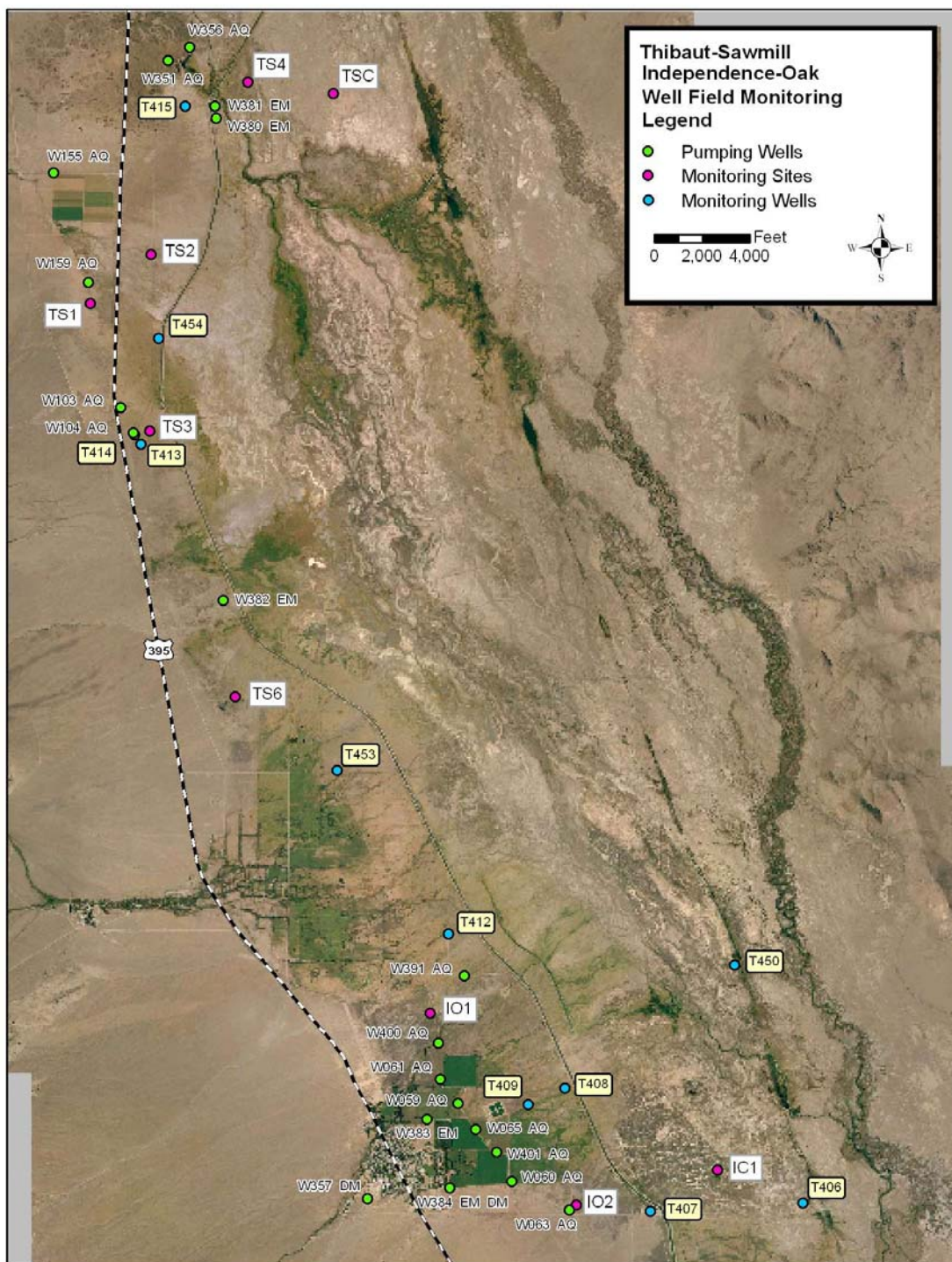




Figure 7

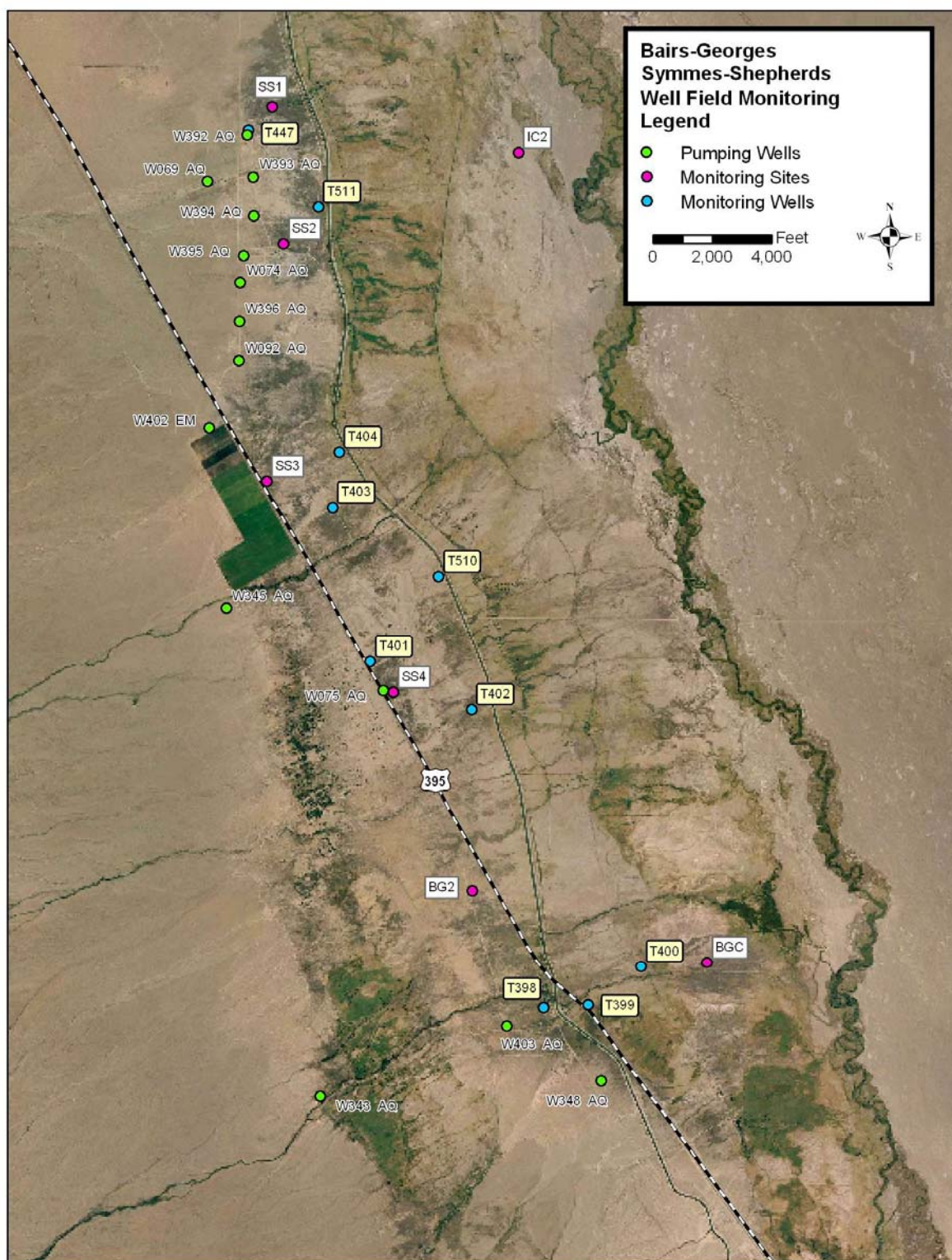
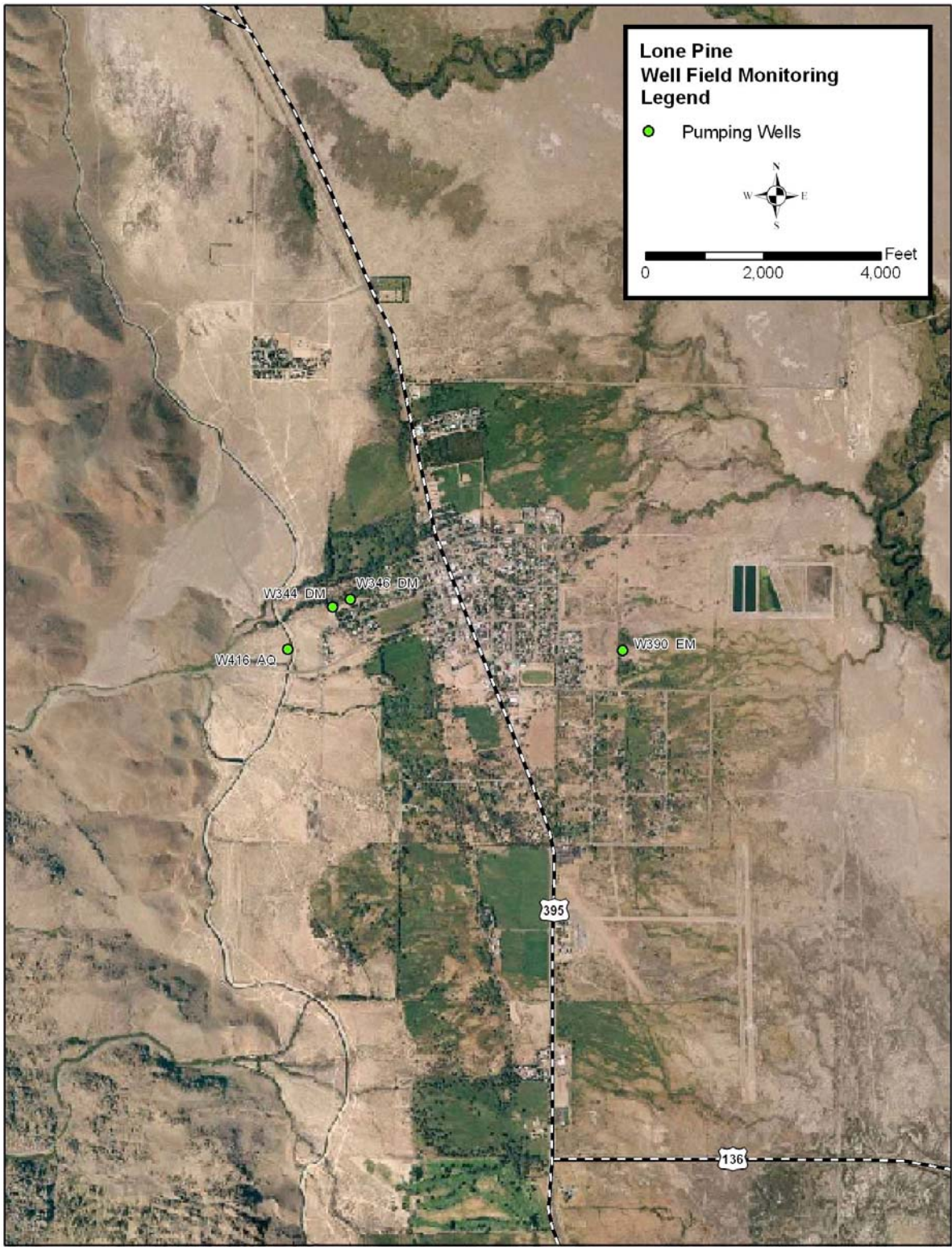




Figure 8



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

As stated in the Court Order, item 2C, the in-valley water supply should be adequate to provide water to the city owned lands, Enhancement/Mitigation projects, and mitigation measures, pursuant to Section IV.A of the Water Agreement.

Similar to runoff years 1996-97 through 2005-06, full allotments will be available for most in-valley uses in 2006-07. LADWP leases will be provided with their normal allotted duty. Alfalfa and improved pasture E/M projects' allotted 5 acre-feet duty will receive 5 acre-feet per acre. Native pasture E/M projects' allotted 3 acre-feet duty will receive 3 acre-feet per acre. Table 6 shows the historic (1981-1982) and planned monthly Owens Valley uses for 2006-07. The in-valley uses shown on Table 6 consists of irrigation, stock water supply, operation, and E/M supply, which includes all releases to the LORP project. As shown in the table, LADWP plans to provide approximately 107,650 acre-feet for in-valley uses this runoff year. LADWP is currently evaluating a program to encourage water conservation on some irrigated lands leased by LADWP.

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 7 also shows the planned water supply to E/M projects and the forecasted imbalance between the E/M projects water use and the E/M well supplied with groundwater pumping by the end of 2006-07 runoff year.

Meeting the E/M water use in the program described above is expected to result in a shortfall of E/M pumping totaling approximately 24,088 acre-feet during 2006-07 runoff year and a cumulative shortfall of approximately 185,646 acre-feet by the end of 2006-07 runoff year. This shortfall will be made up partially by pumping Los Angeles Aqueduct supply wells and/or by providing surface water from the Los Angeles Aqueduct.

Releases to the Lower Owens River Project will be increased starting late fall of 2006, compared to past years, to facilitate the rewetting of the entire length of the Owens River below Los Angeles Aqueduct (LAA) intake. Releases will commence at the LAA intake and shall be augmented through additional releases at the Independence, Blackrock, Georges, and Locust spill gates to maintain a continuous flow in the river channel. Table 6 shows a category water use as LORP rewetting on a monthly basis. This will result in a planned increase of approximately 5,450 acre-feet of supply to the Lower Owens River Project during 2006-07 runoff year. Once LORP project is implemented tables will be updated to reflect water use for LORP as a mitigation project.

## **2.4 Aqueduct Operations**

Table 8 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 368,280 acre-feet will be exported from Eastern Sierra in 2006-07 runoff year.

## **2.5 Water Exports to Los Angeles**

Figure 9 provides a record of Owens Valley and Mono Basin combined annual exports from 1970 to present, averaging 375,000 acre-feet per year. Figure 10 shows how the Owens Valley and Mono Basin contribution to the water supply for the City of Los Angeles water supply compares to the total supply between 1970 and present. During the 2005-06 runoff year, approximately 59% of the water supply for the City of Los Angeles was provided by imports from the Owens Valley and Mono Basin. Figure 10 also shows the planned water supply mix for the City of Los Angeles for 2006-07 runoff year, which estimates that Owens Valley and Mono Basin will provide approximately 55% of water supply for the City of Los Angeles despite a 135% forecasted runoff in Owens Valley. This is mainly because of additional water demand in the Owens Valley by LORP project and Owens Lake dust mitigation measures, and lower groundwater pumping resulted from the Court Order.

[illegible]



**Table 7 - Owens Valley Groundwater Pumping for Production and E/M Wells (1984-2006)**

<b>Runoff Year (Apr-Mar)</b>	<b>Owens Valley Runoff (1) (% of normal)</b>	<b>Total Pumping (acre-feet)</b>	<b>Non-E/M Pumping (acre-feet)</b>	<b>E/M Pumping (acre-feet)</b>	<b>E/M Water Uses (acre-feet)</b>	<b>E/M Pumping &amp; Use Imbalance (acre-feet)</b>	<b>Cumulative E/M Pumping &amp; Use Imbalance (acre-feet)</b>
1985/86	104	107,718	107,718	0	109		0
1986/87	159	69,887	69,887	0	12,696	(3)	0
1987/88	68	209,393	179,883	29,510	29,360		0
1988/89	63	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	62	84,135	70,370	13,765	18,357	-4,592	-9,319
1993/94	107	76,329	67,338	8,991	19,310	-10,319	-19,638
1994/95	67	89,153	78,143	11,010	20,812	-9,802	-29,440
1995/96	155	69,740	57,168	12,572	22,914	-10,342	-39,782
1996/97	136	74,817	57,894	16,923	23,949	-7,026	-46,808
1997/98	125	66,910	52,756	14,154	21,500	-7,346	-54,154
1998/99	150	51,575	47,354	4,221	19,672	(3)	-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	82	87,726	80,728	6,998	21,116	-14,118	-136,656
2004/05	78	85,803	78,090	7,710	18,327	-10,617	-147,273
2005/06	138	56,806	51,735	5,071	19,356	-14,285	-161,558
2006/07 (2)	135	57,412	52,000	5,412	29,500	-24,088	-185,646

(1) 1951-2000 average: 413,210 acre-feet

(2) planned values

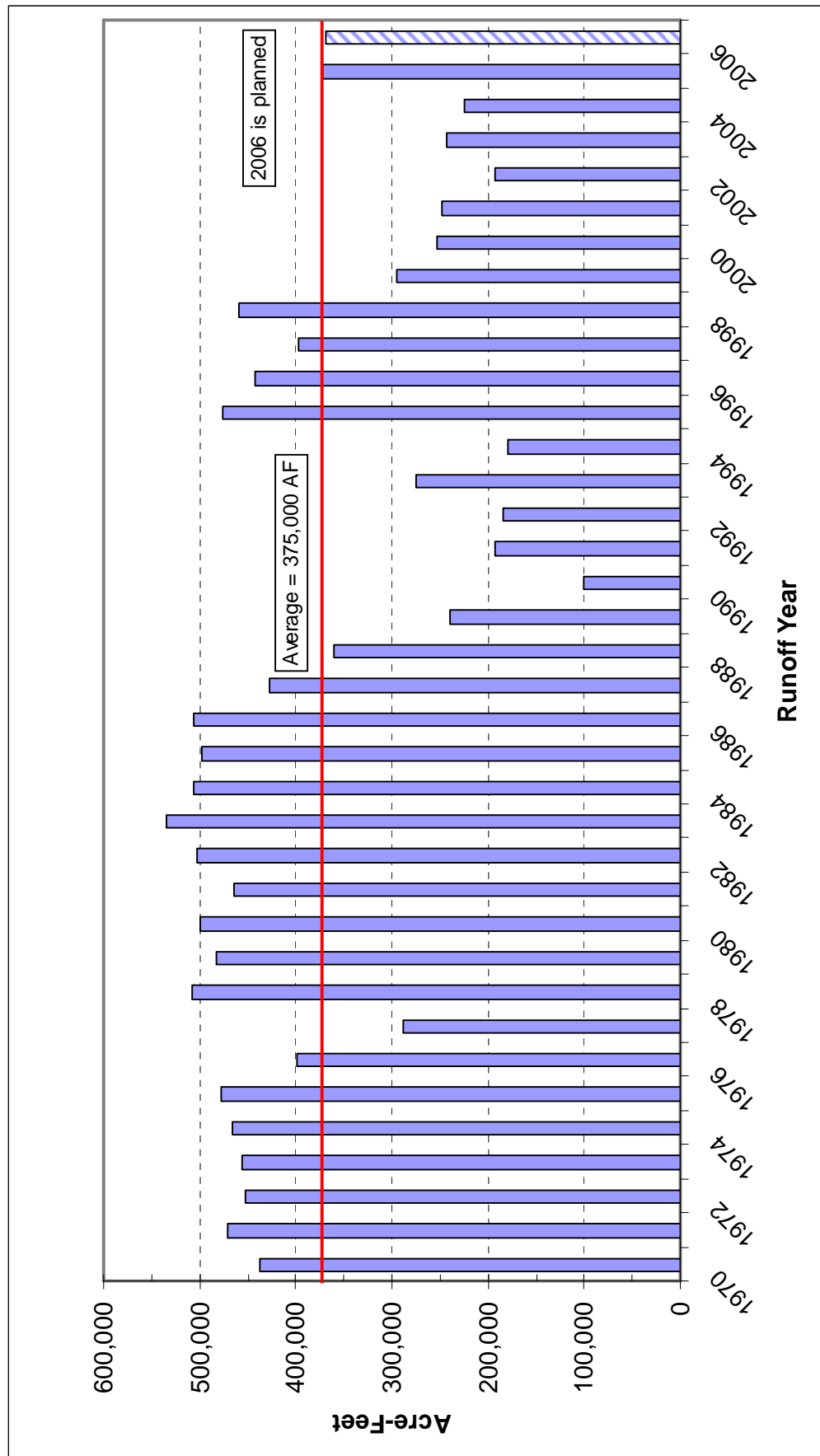
(3) surface water was available



**Table 8 - Planned Los Angeles Aqueduct Operations  
for 2006-07 Runoff Year**

<b>Month</b>	<b>Owens Valley Reservoir Storage (1st of Month) (acre-feet)</b>	<b>Aqueduct Deliveries to LA (acre-feet)</b>
April	179,210	32,727
May	162,285	36,893
June	156,733	35,702
July	17,223	43,041
August	184,332	46,116
September	176,102	44,628
October	150,948	33,818
November	133,772	26,777
December	129,826	23,058
January	138,010	18,446
February	147,561	8,628
March	159,445	18,446
<b>TOTAL</b>		<b>368,280</b>

**Figure 9 – Los Angeles Aqueduct Exports**



**Figure 10 – Sources of Water for the City of Los Angeles**

