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COUNTY OF INYO
WATER DEPARTMENT

May 1, 2003

Mr. Gene L. Coufal
Manager, Aqueduct Business Group
300 Mandich Street
Bishop, California 93514

Subject: Comments on LADWP's Proposed Operations and Pumping Plan for the 2003-2004 Runoff Year

Dear Gene:

On April 21, 2003, LADWP provided the Inyo County Water Department with LADWP's proposed 2003-2004 Operations Plan and Pumping Program ("proposed plan"). This letter presents the Inyo County Water Department's comments on the proposed plan**.**

The Water Department appreciates LADWP's efforts to present a conservative proposed plan. However, as presented below, there are several areas in the Owens Valley where the Water Department believes that vegetation conditions are not consistent with the goals of the Water Agreement, and even the relatively conservative proposed plan will worsen the existing vegetation conditions in these areas. Please note that a primary responsibility placed upon the Water Department is to strive to achieve the vegetation protection goals of the Water Agreement; therefore, in fulfillment of this responsibility, the Water Department is compelled to recommend that LADWP's groundwater pumping in 2003-2004 be limited to between 64,050 acre-feet and 69,550 acre-feet (depending on whether exempt wells 218 and 219 in the Big Pine wellfield are operated). LADWP proposes to pump 89,800 acre-feet. (Note: the amount of recommended pumping would increase by approximately 3,500 acre-feet if a proposed test in the Thibaut-Sawmill wellfield is conducted, by approximately 2,000 acre-feet if a proposed test in the Lone Pine wellfield is conducted, and by an unknown amount if a test in the Taboose-Aberdeen wellfield is conducted.)

GENERAL COMMENTS

In the section titled "Introduction," the proposed plan states: "[T] his year's pumping program is consistent with the management strategy of the Water Agreement…" However, the proposed plan does not include discussion of the "Drought Recovery Policy" ("DRP") that was adopted by the Standing Committee in the early 1990s to serve as a management overlay to the Water Agreement. In order to be consistent with the Water Agreement, the plan must be in compliance with the DRP. The DRP provides in pertinent part:

> *The goal of this policy is that soil water within the rooting zone recover to a degree sufficient so that the vegetation protection goals of the Agreement are achieved. To this end, groundwater pumping during this drought, as well as the period of recovery, will be conducted in an environmentally conservative manner, taking into consideration soil water, water table, and vegetation conditions.*

Further, soil water, water tables, and vegetation conditions will be monitored by the Technical Group…for purposes of evaluating the effectiveness of the existing well turn-off/turn-on provisions.

This policy is to provide guidance to the Standing Committee for establishing annual pumping programs during the current drought as well as during a period of recovery.

The Standing Committee will establish annual pumping programs based on an evaluation of current conditions, including soil moisture level, water table depth, degree of water table recovery, soil type, vegetation conditions, the results of studies pertaining to vegetation recovery, and compliance with the goals of the Agreement.

The Water Department believes that the DRP should continue to govern groundwater pumping in many areas of the valley. As presented below, in these areas, prior to the adoption of the DRP, groundwater pumping caused the water tables to be severely lowered and, in many cases, "disconnected" from the vegetation. As a result, vegetation conditions declined below baseline levels. In these areas, the water tables have not "reconnected" with the vegetation by recovering to levels needed to recharge soil in the vegetation root zone sufficient to allow perennial vegetation cover to achieve baseline levels.

Further, the proposed plan is based, at least in part, upon its compliance with the "on/off" management provisions of the Water Agreement. However, an assumption that the proposed plan will achieve the goals of the Water Agreement because the proposed plan is in compliance with on/off management is not supported by the facts.

As required by the DRP, soil water, water tables and vegetation conditions have been monitored for the purpose of evaluating the effectiveness of the on/off management provisions. The results of the evaluation reveal that in many instances, on/off management is not effective in achieving the vegetation protection goals of the Water Agreement. For example, Table 1 below shows the 13 monitoring sites for which there are data beginning in 1987 (1987 was the end of baseline period and the beginning of the 1987-92 drought). This table shows that in 2002, cover is less than 1987 cover for all monitoring sites. Further, at several sites in "on" status, the 2002 cover is substantially less than 1987 cover. At these "on" sites, the cover ranges from 45% below 1987 levels to more than 90% below 1987 levels.

Table 1. Comparison of Vegetation Cover at Monitoring Sites

		TOTAL COVER		**CHANGE IN COVER**	
site	status	1987	2002	ABS.	REL.
L1	ON	19.46	4.79	-14.67	-75.39
L2	ON	33.53	7.19	-26.34	-78.56
BP2	OFF	20.66	9.28	-11.38	-55.08
BP3	ON	12.57	4.79	-7.78	-61.89
TA2	OFF	41.62	22.16	-19.46	-46.76
TA3	OFF	16.17	11.08	-5.09	-31.48
TS1	OFF	52.69	17.66	-35.03	-66.48
IO1	OFF	53.59	29.04	-24.55	-45.81
IO2	ON	28.44	2.69	-25.75	-90.54
SS1	ON	25.15	13.77	-11.38	-45.25
SS2	ON	34.43	4.19	-30.24	-87.83
SS3	ON	23.80	12.87	-10.93	-45.92
SS4	ON	32.93	4.49	-28.44	-86.37

Additional evidence that on/off management alone will not achieve the goals of the Water Agreement was presented in a February 25, 2003 report by Drs. Aaron Steinwand and Robert Harrington titled, "*Water Table Fluctuations Resulting From Management Under the Drought Recovery Policy*

and the Green Book, 1989 to 2000." As concluded in that report, there would have been less water table recovery had on/off management been followed for the period 1989-1999 instead of following management under the DRP. Further, the level of vegetation recovery achieved under the DRP, would not have occurred if only on/off management had been employed during the period.

It also must be noted that the proposed plan section titled "Proposed 2003-2004 Owens Valley Pumping and Uses," states "in this year of below normal runoff, the water table can be expected to decline naturally throughout the valley." The Water Department does not agree with this general assumption; to the contrary, as described below, groundwater models indicate that in the absence of the proposed pumping, groundwater tables will remain relatively stable.

Also, in the same section, the proposed plan states that "…high water tables persist throughout the valley…" to the contrary, the analyses described below show that water tables are not high throughout the valley. The analyses of water table conditions presented below are based on measurements of water levels in indicator wells in selected wellfields (Table 2). Multiple linear regression models were applied to these data to predict the effect of the proposed plan on the water table (Table 3). These models use the observed relationship between pumping, runoff, and water levels to forecast future variations in water levels. Measured and predicted water levels are compared to baseline water levels. The baseline water level is the average April water level for 1985, 1986, and 1987. (The probability of water tables reconnecting with monitoring site root zones was computed using Monte Carlo simulation of Owens Valley runoff applied to multiple linear regression models linking indicator wells with monitoring sites. This method was presented in a February 25, 2003 report by Drs. Aaron Steinwand and Robert Harrington titled, "*Simulation of Water Table Fluctuations at Permanent Monitoring Sites to Evaluate Groundwater Pumping.*")

Finally, to be consistent with the Water Agreement, the final plan should state that, except for increases due to freeze protection, the annual amount of groundwater pumping in the Owens Valley, and the annual amount of groundwater pumping from each wellfield, will not be exceeded unless the plan is modified as provided in Section V.D.5 of the Water Agreement.

WELLFIELD BY WELLFIELD COMMENTS

Laws Wellfield

The proposed plan calls for 5,800 acre-feet of groundwater pumping. Pumping during runoff year 2002-03 was 4,395 acre-feet. Table 5 of the proposed plan lists Wells 245, 247, 387, and 388 as exempt from ON/OFF management. Table 5 also shows Well 247 as linked to Laws L1. Well 247 is not exempt, but is linked to L1. Wells 245, 387 and 388 are not exempt, but are not currently linked to a monitoring site. The plan should be revised accordingly.

The proposed plan states that the pumped water will supply irrigation, E/M projects and the Laws town water system. Will water be pumped to supply stockwater? If so, the proposed plan should also state that the pumped groundwater will be used to supply stockwater.

The proposed plan does not contemplate the operation of either of the McNally canals.

Vegetation Conditions: In 2002, LAW110 and LAW122, the two parcels nearest the Owens River (that is, in topographically low-lying areas) were still showing perennial cover near or above baseline. These parcels are classified by the Water Department as DRP-free. In contrast, most parcels near the McNally canals and the central Laws area were either still subject to the DRP, or the vegetation in these parcels is below baseline. In 2002, eight parcels, LAW030, LAW052, LAW062, LAW065, LAW082,

LAW085, LAW112, and LAW137, were classified by the Water Department as subject to the DRP.

In 1999, water tables and perennial cover in many Laws vegetation parcels increased as a result of low pumping and spreading from the McNally canals in 1998, but many of these parcels, whether or not they reached baseline conditions in 1999, exhibited 2002 perennial cover below baseline. Of the fifteen Laws parcels reinventoried in 2002, fourteen had perennial cover below baseline (these include all of the eight DRP parcels listed above, and the following DRPfree parcels: LAW063, LAW078, LAW107, LAW120, LAW122, and FSL051). Further, perennial cover in parcels LAW052, LAW082, and LAW085 (which are the subject of a dispute) has been below baseline for many years.

Water Table Conditions: Water levels in the six Laws area indicator wells currently range from slightly above baseline to approximately 6 feet below baseline. If the McNally canals are not operated, and if the planned 5,800 acre-feet of pumping takes place, water tables at indicator wells are predicted to decline between an additional 0.5 and 3.1 feet. This will further lower water levels, including water levels under LAW052, LAW082, and LAW085. If the proposed pumping of 5,800 acre-feet is conducted, the probability of reconnecting the water table with the root zone at permanent monitoring sites in Laws is less than 7% during the next three years.

In contrast, if groundwater pumping is limited to 1,500 acre-feet, and sufficient water is diverted into the McNally canals to supply the remaining irrigation, E/M projects, stockwater demands, water levels in all indicator wells, except Well 490T, are predicted to remain approximately steady or increase.

Type E Lands: The proposed plan states that "[S]prinkler irrigation of lands of lands (sic) that have not received irrigation water in recent years will commence after approvals are received and the infrastructure installed." Currently, a proposed project for irrigation of lands in Laws is under consideration by LADWP and the County. Under the proposed project, approximately 600 acres in the Laws area would be sprinkler irrigated and approximately 1,000 acres would be flood irrigated. If the proposed project is approved, will the flood-irrigated areas receive water this year? If so, the plan should state how much and when. If the proposed project is not approved, does LADWP intend to irrigate any lands in Laws this year? If so, the plan should state what acreage will be irrigated and when.

Recommended Operations in Laws: In order to prevent the additional lowering of water tables under parcels classified by the Water Department as subject to the DRP, and under parcels with vegetation conditions below baseline, it is recommended that groundwater pumping be limited to 1,500 acre-feet and that sufficient water be diverted from the Owens River into the McNally canals to supply the remaining irrigation, E/M projects, and stockwater demands. Also, given the severe decline in vegetation parcels LAW052, LAW082, and LAW085, during this runoff year, it is recommended that water be diverted from the Owens River into the Lower McNally canal, and diverted out of the canal, as was done in the past, to raise the water levels under these parcels.

Therefore, the amount of pumping recommended by the Water Department is 1,500 acre-feet in comparison to the LADWP proposal of 5,800 acre-feet.

(It should be noted that at the April 30, 2003 meeting of the Inyo County Water Commission, the Commission recommended that 5,800 acre-feet be pumped if the Laws area is irrigated this year, and that the pumping be limited to 1,500 acre-feet if the area is not irrigated.)

Bishop Wellfield

The proposed plan calls for 12,000 acre-feet of groundwater pumping in accordance with the Hillside Decree. Pumping during runoff year 2002-03 was 10,644 acre-feet. Table 5 of the proposed plan states that the wells in Bishop are 140, 141, 207, 238, 371, 406, 407, and 408. In recent years, Wells 207, 238 and 141 have been replaced. Does LADWP plan to operate Wells 207, 238 and 141, their replacement wells, or both? If the replacement wells are to be operated, the plan should identify these wells.

Vegetation Conditions: Six parcels in the Bishop wellfield area were reinventoried in 2002. Of these, two parcels, BIS068 and BIS085, have been classified by the Water Department as still subject to the DRP; the remaining four (FSL065, FSL116, FSL123, and PLC007) were classified as DRPfree. In 2002, perennial cover in all six parcels averaged less than baseline.

Recommended Operations in Bishop: Provided that the pumped groundwater is used to supply water for irrigation and other uses, which are located on the Bishop Cone downstream of the pumping wells, the Water Department does not object to the proposed pumping of 12,000 acre-feet.

Big Pine Wellfield

The proposed plan calls for 27,300 acre-feet of groundwater pumping. Pumping during runoff year 2002-03 was 26,318 acre-feet. The proposed plan states that "…pumping from the Big Pine Wellfield is to supply Fish Springs Fish Hatchery and the town water system on a year round basis." (Approximately 21,000 acre-feet are required to supply the fish hatchery.) The proposed plan also states "wells associated with BP3 will run throughout the year." Please note that wells associated with BP3 do not supply the fish hatchery or the town water system. The plan should be revised to correctly identify the uses that will be supplied by the proposed pumping on these wells.

Recently, LADWP replaced the well that supplied the Big Pine town water system with Well 415. The plan should state whether the old town supply well or Well 415 will be operated. Also, Table 5 of the plan indicates that Well 415 is exempt. The Technical Group has not approved an exemption for Well 415; therefore, Table 5 should be corrected.

Water Table Conditions: Water tables in the three Big Pine area indicator wells are between 2.9 to 5.6 feet below baseline. Under LADWP's proposed pumping plan, water tables are predicted to decline an additional 0.1 to 0.9 feet. In particular, water levels under vegetation parcels FSP004 and FSP006, are approximately 2.9 feet and 3.1 feet below baseline respectively. If the proposed pumping of 27,300 acre-feet is conducted, the probability of reconnecting the water table with the root zone at the BP3 vegetation monitoring site is less than 6% within the next three years.

Vegetation Conditions: In 2002, three parcels, BGP162, FSP004, and FSP006 were classified by the Water Department as subject to the DRP. Further, eight of the nine Big Pine wellfield parcels reinventoried in 2002 (the three DRP parcels listed above as well as BGP088, BGP154, BGP157, TIN028, and TIN030) showed perennial cover below baseline.

Recommended Operations in Big Pine: In view of the water table and vegetation conditions in the parcels described above, and because groundwater pumping from the wells associated with BP3 will further lower the water tables under these parcels, it is recommended that the wells associated with BP3 not be operated this year.

Therefore, the amount of pumping recommended by the Water Department is the amount required to supply the fish hatchery and the town, approximately 21,500 acre-feet in comparison to the LADWP proposal of 27,300 acre-feet. However, if exempt Wells 218 and 219 are operated, pumping would increase to approximately 27,000 acre-feet.

Taboose-Aberdeen Wellfield

The proposed plan calls for 12,100 acre-feet of groundwater pumping. Pumping during runoff year 2002-03 was 12,881 acre-feet. The proposed plan calls for the pumping of approximately 2,244 acre-feet

from exempt Well 118, and the remainder of the pumping from Well 349.

As has been noted in prior years, the Water Department does not believe that the monitoring site linked to Well 349 is a reliable tool to be used to manage the operation of the well. Therefore, although the site may be in "on" status, it does not indicate that the operation of the well will not cause impacts inconsistent with the goals of the Water Agreement. It should be noted, because the site is in "on" status, Well 349 has been continuously operated at full capacity since May 2001.

Water Table Conditions: Water levels in the seven Taboose-Aberdeen indicator wells currently range from approximately 1.8 to 4.8 feet below baseline. Under the proposed plan, water levels are predicted to decline an additional 0.5 to almost 2 feet, except in 502T which is predicted to recover slightly. The Water Department predicts that if pumping from this wellfield is limited to 5,000 acre-feet, water tables would remain stable in indicator wells and monitoring site wells in the vicinity of Well 349.

Vegetation Conditions: The proposed plan states "[V]egetation conditions associated with TA5 (the monitoring site to which Well 349 is linked) are either unchanged or in better condition than baseline conditions." However, this is not true. Perennial cover in the parcel directly associated with TA5 (TIN068) was below baseline in 2002 and has been classified by the Water Department as DRP. Other reinventoried parcels that may be affected by pumping from W349 include the DRP parcel BLK002 and the DRPfree parcels BLK142, TIN064, TIN050, and TIN053. All but TIN053 had 2002 perennial cover below baseline. Seven other reinventoried parcels in the TA wellfield include four DRP parcels with 2002 cover below baseline (BLK009, BLK021, BLK024, and BLK033) and three DRPfree parcels (BLK016, BLK044, and BLK039). (2002 perennial cover was below baseline for the last two parcels listed).

New Monitoring Well: At the June 7, 1999 Standing Committee meeting, the County expressed concern over the proposed operation of Well 349 and the need for three additional monitoring wells in the vicinity of this well in order to monitor the potential impacts resulting from the operation of the well. As reflected in the minutes of the June 7, 1999 meeting:

> *DWP indicated that it will include the request for three additional monitoring wells with Inyo County's previous request for additional monitoring wells, and will respond with a plan for installation of monitoring wells within approximately 30 days.*

Only one new monitoring well has been installed in the vicinity of Well 349 since the June 1999 Standing Committee meeting. The Water Department continues to believe that at least one additional monitoring well is necessary in the vicinity of Well 349 to insure that the operation of the well does not adversely affect groundwater dependent vegetation.

Recommended Operations in Taboose-Aberdeen: Given the downward trend of the vegetation in the described parcels, and the downward trend in the water tables under these parcels caused by the pumping of Well 349, to be conservative, groundwater pumping should be limited to 5,000 acre-feet (the amount that maintains current water levels). However, to provide the Technical Group with information to better manage the operation of Well 349, the Water Department proposes that a test, similar to the test proposed for Wells 380 and 381, be conducted. Pumping could continue from Well 349, or be discontinued immediately. If pumping continues, once a protocol for the test is agreed upon, the operation of the well would be discontinued to allow water levels in the vicinity of the well to return to baseline levels. Operation of the well would then recommence and would continue for as long as provided in the test protocol.

Therefore, unless there is agreement on a protocol for a test of Well 349, the amount of pumping recommended by the Water Department for the Taboose-Aberdeen wellfield is 5,000 acre-feet in comparison to the LADWP proposal of 12,100 acre-feet.

Thibaut-Sawmill Wellfield

The proposed plan calls for 15,900 acre-feet of groundwater pumping. Pumping during runoff year 2002-03 was 14,001 acre-feet. The plan calls for the pumping of exempt Wells 351 and 356 to supply the Blackrock Fish Hatchery, the pumping of wells associated with monitoring site TS3 (Wells 103, 104 and 382), and Wells 380 and 381.

Water Table Conditions: Water levels in the five Thibaut Sawmill area indicator wells currently range from 1.1 to 9.5 feet below baseline. Under the proposed plan, water levels are predicted to additionally decline up to 1.9, feet depending on location.

Vegetation Conditions: All eight reinventoried parcels in this wellfield had 2002 perennial cover below baseline. Four parcels are classified as DRP (BLK075, BLK077, BLK094, and IND029), and four parcels are classified as DRPfree (BLK069, BLK074, BLK099, and IND035).

Wells 380 and 381. The proposed plan states "[T] his year LADWP will operate wells W380 and W381 which are screened within the deep aquifer, in order to provide data to be used in developing a deep well management plan." The proposed plan also states "LADWP encourages the County to participate in cooperatively developing a protocol for this deep aquifer pumping that considers the needs of both the County and LADWP.

It must be noted that the Water Department is seeking to cooperatively develop a protocol for the operation of these wells in order to evaluate the potential impacts of their operation. On February 5, 2003, the Water Department submitted written comments to LADWP on the proposed protocol. As of this date, the Water Department has received no response from LADWP.

The results of the test pumping of these wells under the protocol will be used by the Technical Group to develop the monitoring/management plan for the wells. The proposed plan should note that before these wells will be operated, any pumping from these wells for the tests will be in conformance with an agreed upon protocol.

Well 382: During previous test pumping of this well, there were indications that the operation of this well may affect the availability of water to the Thibaut Springs area. Therefore, Well 382 should not be operated until the Technical Group develops a plan for monitoring in the Thibaut Springs area so that the potential impacts of the operation of Well 382 on the spring area can be detected and managed to prevent adverse impacts.

Recommended Operations in Thibaut-Sawmill: Until there is agreement by the Technical Group on a protocol for a test of Well 380 and 381, and agreement on a monitoring plan for the Thibaut Springs area, groundwater pumping should be limited to the amount necessary to supply the Blackrock Fish Hatchery, approximately 12,400 acre-feet. Finally, in order to conduct a valid test of Wells 380 and 381, Wells 103 and 104 should not be operated prior to or during the test of these wells.

Therefore, in comparison to the LADWP proposal of 15,900 acre-feet, the amount of pumping recommended by the Water Department is the amount necessary to supply the Blackrock Fish Hatchery, approximately 12,400 acre-feet, plus any pumping in accordance with an agreed upon protocol for a test of Wells 380 and 381, and any pumping from Well 382 after the Technical Group has agreed upon a monitoring plan for the Thibaut Springs area.

Independence-Oak Wellfield

The proposed plan calls for 8,500 acre-feet of groundwater pumping. Pumping during runoff year 2002-03 was 10,557 acre-feet. The plan calls for the pumping of only exempt wells "generally" to supply E/M projects and the town water system. The use of the word "generally" creates some ambiguity. Does LADWP intend to operate the wells to supply non-E/M irrigation and/or stockwater demands and/or to supply E/M projects or other uses that are located away from the Independence area?

Water Table Conditions: In 2002-03, water levels held steady in the six Independence area indicator wells despite a predicted decline. Water levels in indicator wells currently range from 1.6 to 5.1 feet below baseline. Under the proposed plan, water levels are predicted to decline less than 2 feet in the indicator wells, with perhaps a greater decline in the vicinity of the pumping wells.

Vegetation Conditions: Six of the seven reinventoried parcels in the Independence area had 2002 perennial cover below baseline. The other DRP parcel is IND111. Two parcels were classified as DRPfree (IND011 and IND019), and three parcels were classified as in need of more study.

Recommended Operations for Independence-Oak: The Water Department does not object to the proposed pumping of 8,500 acre-feet from exempt wells provided that the pumped water is only used to supply water to E/M projects in the Independence area and to supply the town water system.

Symmes-Shepherd Well Field

The proposed plan calls for 4,800 acre-feet of groundwater pumping. Pumping during runoff year 2002-03 was 1,138 acre-feet. The plan states that the water will be pumped from exempt Well 402 (Well 402 is exempt from ON/OFF management during the time its operation is required to supply irrigation water because the flow in Shepherd Creek is too low to allow sufficient diversion for irrigation), and from wells associated with monitoring sites SS3 and SS4. (Wells 92 and 396 are linked to SS3 and Wells 75 and 345 linked to monitoring site SS4.)

Water Table Conditions: Water levels in the seven Symmes-Shepherd area indicator wells currently range from slightly above baseline to 11.2 feet below baseline. With the pumping of 1,138 acre-feet in 2002-03, water levels increased slightly in the indicator wells in the southern part of the wellfield, and declined in the northern part of the wellfield. Under the proposed plan, water levels are predicted to decline up to an additional 2.5, feet depending on location.

Vegetation Conditions: Five out of the six parcels re-inventoried in this wellfield in 2002 have been classified as still subject to the DRP by the Water Department. These parcels are IND132, IND133, IND139, IND231, and MAN007. One parcel, MAN006, has been classified as DRPfree. In 2002, all six SS parcels had perennial cover below baseline.

Recommended Operations for Symmes-Shepherd: The pumping proposed in the plan would further lower water levels under parcels still subject to the DRP**.** Consequently, pumping in this wellfield should be limited to the operation of exempt Well 402 to the extent necessary to supply irrigation water--not to exceed a total of 1,200 acre-feet. With pumping limited to 1,200 acre-feet, it is predicted that the water tables will remain at approximately current levels.

Therefore, the amount of pumping recommended by the Water Department is 1,200 acre-feet in comparison to the LADWP proposal of 4,800 acre-feet.

Bairs-Georges Well Field

The proposed plan calls for 2,000 acre-feet of groundwater pumping. Pumping during runoff year 2002-03 was 983 acre-feet. The plan states that the water will be pumped from exempt Well 343 for irrigation, and during the second half of the year, from Wells 403 and 348 that are linked to monitoring site

BG2.

It should be noted that the vegetation monitoring site for BG2 was destroyed in a fire in the spring of 2002; therefore, there is no on/off management for this site.

Water Table Conditions: Water levels in indicator wells currently range from 0.7 feet above baseline to 0.4 feet below baseline. With the pumping of 983 acre-feet in 2002-03**,** water levels held steady in the indicator wells, but declined 1.51 feet at Well 812T at the BG2 monitoring site. Under the proposed plan, the water table is predicted to decline 0.4 to 1.9 feet in the indicator wells.

Vegetation Conditions: Perennial cover in vegetation parcel MAN037 has been consistently below baseline. Because of poor vegetation conditions prior to the 2002 fire, extremely low cover was measured in the parcel during the summer of 2002 (7.5% in 2002 compared with 42% baseline), and cover at the permanent monitoring site in this parcel, as measured by LADWP, was 0%. In contrast, a DRPfree parcel in the Laws area (LAW122) with relatively high groundwater and cover in 2001 completely burned during spring 2002, yet its perennial cover in 2002 rebounded to 58.8% an amount that was nearly equal to the baseline level of 59.6%.

Recommended Operations for Bairs-Georges: In the absence of a monitoring site for BG2, groundwater pumping should be managed very conservatively. Further, since it is predicted that with the proposed pumping of 2,000 acre-feet, the water tables under MAN037 will decline, it is recommended that pumping in this wellfield be limited to the operation of exempt Well 343 to the extent necessary to supply irrigation water--not to exceed a total of 550 acre-feet. The Agreement, Green Book and EIR require that the Technical Group develop a monitoring program for Reinhackle Spring to ensure that groundwater pumping does not adversely impact spring flow. Therefore, if LADWP intends to operate Wells 403 and 348 despite the recommendations of the Water Department, no such pumping should take place prior to approval by the Technical Group of a monitoring program for Reinhackle Spring.

Therefore, the amount of pumping recommended by the Water Department is 550 acre-feet in comparison to the LADWP proposal of 2,000 acre-feet.

Lone Pine Well Field

The proposed plan calls for between 1,400 acre-feet and 3,400 acre-feet of groundwater pumping. Pumping during runoff year 2002-03 was 1,364 acre-feet. The proposed plan states that 1,400 acre-feet will be pumped to supply E/M projects and the town water system; further, the proposed plan states that an additional approximate amount of 2,000 acre-feet will be pumped from Well 416 if a protocol is reached for a test of this well.

Table 5 of the plan indicates that Well 416 is exempt. The Technical Group has not approved an exemption for Well 416; therefore, Table 5 should be corrected.

The plan should state whether LADWP plans to pump any water to supply Diaz Lake from the Lone Pine wellfield, or whether LADWP expects the County to pump any needed water for Diaz Lake from the County's well in the Bairs-Georges wellfield.

Vegetation Conditions: One reinventoried parcel in the Lone Pine area has been classified as DRPfree (LNP045). However, in 2002, its perennial cover was significantly below baseline. (The protocol for the test pumping of Well 416 should contain provisions for monitoring and management of Well 416 during the test to ensure that its operation does not draw down water levels beneath groundwater dependent vegetation in the Lone Pine area.)

Recommended Operations for Lone Pine: The proposed pumping of 1,400 acre-feet for E/M projects and to supply the town water system is acceptable. Further, if the Technical Group agrees to a test

protocol for a test of Well 416, pumping from Well 416 in the amount allowed under the protocol is also acceptable. No pumping from Well 416 should take place prior to the Technical Group reaching an agreement on the protocol.

Therefore, the amount of pumping recommended by the Water Department is the same as LADWP's proposal.

E/M PROJECTS AND IN VALLEY USES

The proposed plan states that there will be full irrigation supplies of 5 acre-feet per acre, and that native pasture E/M projects will receive 3 acre-feet per acre. The plan also states that there will be a reduction in supply to E/M projects of approximately 5,000 acre-feet. Specifically, the plan states that the LORP will be reduced 3,000 acre-feet, the Laws area ponds and pasturelands will be reduced 1,500 acre-feet, and Klondike Lake will be reduced 700 acre-feet. (These are the same reductions as in past years.

The plan should include a commitment that even with the reduction in the water supply to the LORP, sufficient water will be released to the Owens River so that it does not dry up before reaching Owens Lake, as has occurred in past years.

If a proposed modification of the Klondike Lake E/M project is approved by LADWP and the County, under the modification, the project is to receive 1,700 acre-feet of water per year (instead of the 1,500 acre-feet proposed in the plan). Further, under the proposed modification, the Technical Group is to commence test releases from Klondike Lake to a habitat area south of the lake this May. As it appears that the public review period of the CEQA document that addresses the proposed modification of the Klondike Lake project will not be completed by this May, will LADWP agree to the Technical Group conducting the release studies to the habitat area south of the lake this May? If so, the plan should state that such studies will be conducted.

Finally, please note that the reduction in the water supplies to the E/M projects must be approved by the Board of Supervisors (see page 17 of the Agreement).

CONCLUSION

As required by the Agreement, a Technical Group meeting should take place by May 12, 2003, for the purpose of attempting to resolve the concerns expressed in this letter regarding the proposed plan. Representatives of the Water Department and of the County are prepared to discuss the proposed plan for 2003-2004 at any time prior to the Standing Committee meeting scheduled for June 6, 2003 in Bishop. Finally, as provided in the DRP, the Standing Committee must approve an operations plan for the areas that are still subject to the DRP; consequently, the plan for these areas may not be implemented until the Standing Committee has approved a plan for these areas.

Thank you for the opportunity to comment on the proposed plan. Please contact me if you have any questions.

Sincerely,

Greg James, Director
Inyo County Water Department

CC: Members of the Inyo County Board of Supervisors
Members of the Inyo County Water Commission
Inyo County Administrator
Inyo County Counsel

Attachments: Table 2
Table 3

Table 2. Depth to water (DTW) at indicator wells, April 1-2, 2003. All data are in feet. Baseline is the average of 1985, 1986, 1987 April water levels. Negative change from April '02 indicates a declining water table; negative deviation from baseline indicates the water table is below baseline. Predicted change from '02 is based on actual pumping and the April '02 forecasted runoff of 302,100 AF.

Well ID	DTW from RP	DTW, April '02	Change from April '02	Predicted change from '02	Baseline DTW from RP	Deviation from baseline
			Bairs George			
398T	5.71	5.50	-0.21	-1.11	6.38	+0.67
399T	3.35	3.89	+0.54	+0.18	2.96	-0.39
400T	6.07	5.62	-0.45	-0.46	6.32	+0.29
			Symmes Shepherd			
401T	19.16	19.26	+0.10	-1.10	17.87	-1.29
402T	9.87	10.04	+0.17	+0.17	8.03	-1.85
510T	6.10	6.61	+0.51	+0.22	4.98	-1.12
403T	4.99	5.59	+0.60	+0.41	5.32	+0.33
404T	4.43	4.85	+0.42	+0.10	3.55	-0.88
511T	6.23	6.66	+0.43	+0.50	4.60	-1.63

447T	33.36	31.66	-1.70	+0.94	22.20	-11.16
			Independence Oak			
407T	10.10	9.65	-0.45	-1.84	7.57	-2.53
406T	3.12	3.39	+0.27	-0.72	1.53	-1.59
408T	5.05	4.53	-0.52	-1.03	3.13	-1.92
546T	7.31	7.06	-0.25	-1.40	3.60	-3.71
412T	8.04	8.04	0.00	-0.64	4.29	-3.75
453T	10.59	9.39	-1.20	-2.62	5.48	-5.11
			Thibaut Sawmill			
413T	18.79	15.31	-3.48	-0.90	9.34	-9.45
414T	12.60	12.23	-0.37	-------	6.37	-6.23
415T	20.14	18.56	-1.58	-1.61	18.54	-1.60
454T	4.72	5.30	+0.58	-0.05	1.74	-2.98
507T	5.74	6.38	+0.64	-0.16	4.62	-1.12
			Taboose Aberdeen			
417T	31.16	29.72	-1.44	-2.53	26.92	-4.24
418T	10.00	9.79	-0.21	-0.71	8.18	-1.82
419T	8.86	7.69	-1.17	-2.39	6.55	-2.31
421T	38.15	36.11	-2.04	-2.48	34.31	-3.84
502T	12.30	10.85	-1.45	-0.56	7.49	-4.81
504T	13.28	11.63	-1.65	-3.08	10.78	-2.50
505T	22.76	21.33	-1.43	-2.62	18.60	-4.16
			Big Pine			
425T	20.47	19.00	-1.47	-1.36	14.89	-5.58
426T	15.68	14.78	-0.90	-0.83	11.57	-4.11
469T	24.63	23.88	-0.75	-0.23	21.73	-2.90
			Laws			
107T	29.95	28.89	-1.06	-1.06	24.00	-5.95
436T	9.97	9.39	-0.58	-1.49	8.40	-1.57
438T	14.63	14.24	-0.39	-0.35	9.61	-5.02
490T	15.78	15.71	-0.07	-1.04	13.03	-2.75
492T	32.50	30.59	-1.91	-2.77	32.83	+0.33
493T	23.52	22.25	-1.27	-3.28	17.48	-6.04

Table 3. Predicted water level changes for indicator wells under LADWP's proposed annual operations plan for 2003 and for minimal pumping levels (sole source exempt pumping). All values are in feet and negative values denote a decline.

Station ID	Predicted change in DTW 2003 to 2004		Pumping to maintain DTW
Bairs George	2000 AF	250 AF	(AF)
398T	-1.85	+0.14	500
399T	-0.40	+0.01	250
400T	-0.38	+0.02	250
Symmes Shepherd	4800 AF	1200 AF	
401T	-2.54	-0.75	<1100
402T	-0.27	+0.12	2100
510T	-0.28	+0.06	1600
403T	-1.12	-0.02	1100
404T	-0.38	+0.05	1600
511T	-0.11	+0.35	3600
447T	-1.36	+1.30	2600
Independence Oak	8500 AF	7000 AF	
407T	-1.03	-0.62	<6000

406T	-0.53	-0.40	<6000
408T	-0.48	-0.19	6000
546T	-0.74	-0.48	6000
Thibaut Sawmill	15900 AF	12400 AF	
415T	-1.88	+0.52	13000
507T	-0.60	-0.09	15000
Taboose Aberdeen	12100 AF	300 AF	
417T	-1.44	+1.29	5500
418T	-0.47	+0.78	7500
419T	-1.46	+1.50	6000
421T	-1.23	+1.75	7000
502T	+0.21	+1.42	>13000
504T	-1.67	+2.05	6500
505T	-1.53	+1.30	5000
Big Pine	27300 AF	21000 AF	
425T	-0.89	-0.01	20000
426T	-0.56	-0.05	20500
469T	-0.08	+0.56	26500

Laws	McNally diversions: 0 AF		McNally diversions: 5000 AF	
	5800 AF	1500 AF	5800 AF	1500 AF
107T	-1.03	+0.40	+0.19	+1.63
436T	-1.24	-0.65	-0.54	+0.05
438T	-0.47	0.00	+0.28	+0.76
490T	-1.06	-0.83	-0.42	-0.19
492T	-2.42	-0.16	-1.07	+1.18
493T	-3.11	-1.60	-0.54	+0.97