

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

**Annual Owens Valley Operations Report
Conditions of Owens Valley
Status of 1991 Environmental Impact Report Mitigation Measure
Status of Other Studies, Projects, and Activities**

Prepared by

**Los Angeles Department of Water and Power
Water Resources Business Unit
Aqueduct Business Group**

May 2006

TABLE OF CONTENTS

Summary	iv
1. Introduction	
1.1 Water Agreement	1-1
1.2 Annual Operations Plan Obligations of Agreement	1-1
1.3 1997 Owens Valley MOU	1-2
1.4 1991 Owens Valley EIR Monitoring Program	1-2
2. Annual Owens Valley Operations Plan for Runoff Year 2006-07	
2.1 Owens Valley Runoff Estimate	2-1
2.2 Owens Valley Groundwater Production	2-1
2.3 Owens Valley Uses (Including Enhancement/Mitigation Projects)	2-20
2.4 Aqueduct Operations	2-21
2.5 Water Exports to Los Angeles	2-21
3. Conditions in the Owens Valley	
3.1 Well On/Off Status	3-1
3.2 Wellfield Hydrographs	3-1
3.3 Precipitation Record and Runoff Forecast	3-1
3.4 Owens Valley Water Supply and Use	3-14
3.5 Vegetation Conditions	3-14
3.6 Reinhackle Spring Monitoring	3-15
3.7 Bishop Cone Audit	3-15
3.8 Water Spreading in the Owens Valley	3-23
4. Enhancement/Mitigation Project Status	4-1
5. 1991 Environmental Impact Report Mitigation Measure Status	5-1
6. Status of Other Studies, Projects, and Activities	
6.1 Irrigation Project in the Laws Area 2005 Progress Report	6-1
6.2 Mitigation Monitoring Report for the Irrigation Project In the Laws Area	6-4

TABLES

1	Owens Valley Runoff Forecast for 2006-2007 Runoff Year	2-3
2	Summary of Estimated Recharge and Historical Pumping (1986-2006) In AF for Water Year 1987-2006	2-4
3	Planned Owens Valley Pumping Groundwater Pumping for 2006-07 Runoff Year in Acre-Feet	2-5
4	Soil/Vegetation Water Balance Calculations According to Green Book for April 2006	2-9
5	Available Pumping Capacity According to Monitoring Sites with ON Status and Planned Pumping for Runoff Year 2006-2007	2-10
6	Historic (1981-82) and Projected (2006-2007) Water Uses in the Owens Valley (ac-ft)	2-22
7	Owens Valley Groundwater Pumping for Production and E/M Wells (1984-2006)	2-23
8	Planned Los Angeles Aqueduct Operations for 2006-2007 Runoff Year	2-24
9	Owens Valley Monitoring Site Status (ON/OFF) as of April 2006	3-4
10	List of Exempt Wells in the Owens Valley	3-5
11	Owens Valley Precipitation during RY2005-06	3-12
12	Owens Valley Water Supply and Uses	3-16
13	Owens Valley Water Uses for 1985-86 through 2005-06 and Planned 2006-07 Runoff Year	3-19
14	Water Supplied to Enhancement/Mitigation Projects During 2005-2006 Runoff Year	3-20
15	Reinhackle Spring Flow in cfs During 2005-06 Runoff Year	3-22
16	E/M Project Status	4-2
17	1991 EIR Mitigation Measures	5-2
18	Laws Area Mitigation and Monitoring Program	6-8
19	Big Pine Area Mitigation and Monitoring Program	6-11
20	Agreement Provisions	6-12
21	MOU Provisions	6-17

22	Cooperative Studies	6-23
23	Revegetation Projects, Progress, and Proposed Future Work	6-26
24	Mitigation and Monitoring Program for the Lower Owens River Project	6-30

FIGURES

1	Owens Valley Groundwater Pumping	2-6
2	Laws Wellfield	2-11
3	Bishop Wellfield	2-12
4	Big Pine Wellfield	2-13
5	Taboose-Aberdeen Wellfield	2-16
6	Thibaut-Sawmill and Independence-Oak Wellfields	2-17
7	Bairs-Georges and Symmes-Shepherds Wellfields	2-18
8	Lone Pine Wellfield	2-19
9	Los Angeles Aqueduct Exports	2-25
10	Sources of Water for the City of Los Angeles	2-26
11	Summary of Owens Valley Conditions	3-3
12a	Depth to Water from April 1985 to April 2006 – Laws Well Field	3-6
12b	Depth to Water from April 1985 to April 2006 – Big Pine and Bairs-Georges Well Fields	3-7
12c	Depth to Water from April 1985 to April 2006 – Taboose–Aberdeen Well Field	3-8
12d	Depth to Water from April 1985 to April 2006 – Thibaut-Sawmill Well Field	3-9
12e	Depth to Water from April 1985 to April 2006 – Independence-Oak Well Field	3-10
12f	Depth to Water from April 1985 to April 2006 – Symmes-Shepherds Well Field	3-11
13	Owens Valley Runoff – Percent of Normal	3-13
14	Owens Valley Water Supply and Uses	3-17
15	Los Angeles Aqueduct Water Supply	3-18
16	Owens Valley Vegetation Conditions	3-21

APPENDICES

A The Bishop Cone Audit for the 2004-2005 Runoff Year

SUMMARY

This report includes LADWP's proposed Owens Valley operations plan for the 2006-2007 runoff year, an update on Owens Valley conditions, the current status of LADWP's environmental and mitigation projects.

Owens Valley Annual Operations Plan Summary

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. According to the well ON/OFF provisions of the Water Agreement, approximately 142,000 acre-feet of water are available for groundwater pumping from Owens Valley wellfields.

Owens Valley Conditions

The 2006-2007 runoff year will be the second wet year following six straight years of lower than average runoff conditions in the Owens Valley. The average Eastern Sierra snow pack as of April 1, 2006 was 135% of normal. Similarly, precipitation on the valley floor has been above normal with approximately 7.02 inches as compared to the long-term average of 5.9 inches. The actual precipitation in 2005-06 runoff year ranged between 3.93 inches at the Lone Pine gauge and 10.54 inches at the Tinemaha Reservoir gauge. Due to last years' above-average precipitation and runoff, overall vegetation cover in the Owens Valley was above the mid-1980's baseline conditions in 2004 (2005 data is not available) and groundwater levels generally moved upward.

Enhancement/Mitigation Project Status

Enhancement/Mitigation projects are environmental projects that were implemented prior to the 1991 Owens Valley Groundwater Pumping EIR. Some of these projects were identified in the EIR as mitigations for impacts due to LADWP's water gathering activities. There are twenty six projects identified as enhancement/mitigation measures; 22 of these have been completed or are being implemented, one is being constructed, and three are in the planning stage.

Mitigation Project Status

There are thirty-six mitigation projects identified for thirteen impacts considered in the EIR. The majority of these projects have been completed or are being implemented. Seven of the mitigation projects have not been completed. All seven are in the process of being constructed or implemented. Four of the seven projects are Enhancement/Mitigation Projects.

Other Studies

Inyo County and LADWP are jointly working toward the completion of nine cooperative studies to develop a better understanding of Owens Valley natural resources and their connection to LADWP water gathering activities.

The status of the Mitigation Monitoring and Reporting Programs for the Laws 2004 revegetation project, Well 415 in Big Pine, and the LORP project has been updated. The status on implementation of the 1991 Water Agreement and the 1997 MOU provisions has also been updated.