Upper Los Angeles River Area Watermaster

City of Los Angeles vs. City of San Fernando, et al.

Case No. 650079 – County of Los Angeles

WATERMASTER SERVICE
IN THE
UPPER LOS ANGELES RIVER AREA
LOS ANGELES COUNTY, CALIFORNIA

2004-05 WATER YEAR

OCTOBER 1, 2004 – SEPTEMBER 30, 2005

MAY 2006

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MAY 2006

FOREWARD

I am pleased to submit this annual Watermaster Report for the 2004-2005 Water Year in accordance with the provisions of the Final Judgment signed by the Los Angeles Superior Court on January 26, 1979.

This report describes the water rights in each basin, and indicates the water in storage to the credit of each party as of October 1, 2005. In addition, this report includes background information on the history of the San Fernando Case; information regarding each basin in ULARA with respect to water supply, groundwater extractions, groundwater levels, quantities of imported water use, recharge operations, and water quality conditions; and other pertinent information occurring during the 2004-05 Water Year.

Updates on the development of "Significant Events" through April 2006 are discussed in Section 1.5. These include chromium and other emerging contaminants in the San Fernando Basin, and the challenges and opportunities presented by urban runoff. We are also happy to announce our new internet web site at www.ularawatermaster.com.

Our most significant long-term challenges continue to be the contamination of groundwater in the San Fernando Basin (SFB); and the decline in stored groundwater in the SFB and Verdugo Basins.

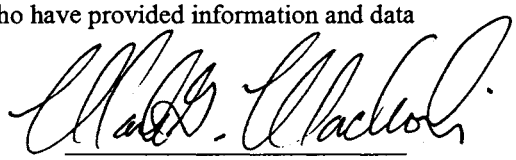
In partnership with the United States Environmental Protection Agency (USEPA) and the Los Angeles Regional Water Quality Control Board (RWQCB), the Cities of Los Angeles, Burbank, and Glendale continue their efforts to remediate groundwater contaminated with volatile organic compounds (VOCs) and hexavalent chromium, and identify the responsible parties. The City of Glendale continues its groundbreaking study of ion exchange technology to remove hexavalent chromium from groundwater in the SFB, and hopes to install a wellhead treatment system within the next year.

The Crescenta Valley Water District (CVWD) has taken the lead on a study of the Verdugo Basin that includes groundwater modeling and geophysical mapping. This study will give us a better understanding of basin geology and hydrology, and will provide guidance to CVWD and the City of Glendale for the location of future recharge and extraction facilities. The Watermaster and the Cities of Los Angeles, Glendale, and Burbank have begun discussions regarding the cause and effect of a decline in stored groundwater and the accumulation of a large amount of Stored Water Credits in the SFB. I am hopeful that this process will lead to improved basin management and long-term sustainability of water resources in the SFB.

To provide groundwater management for the ULARA basins, the Watermaster and Administrative Committee met on a quarterly basis during 2004-2005. As provided in Section 5.4 of the ULARA Policies and Procedures, the eleventh ULARA Groundwater Pumping and Spreading Plan was completed and filed with the Court in July 2005.

We welcome the new members to the Administrative Committee from the City of San Fernando: Mr. Ron Ruiz, Director of Public Works, and Mr. Daniel Wall, City Engineer. We also welcome Mr. Raul Garibay for the City of Burbank.

I thank the Court and the Administrative Committee for their continued confidence and support. I also wish to acknowledge and express appreciation to all the parties who have provided information and data that were essential to the completion of this report.



MARK G. MACKOWSKI
ULARA Watermaster

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1. INTRODUCTION

1. INTRODUCTION

1.1 Background

The Upper Los Angeles River Area (ULARA) encompasses the entire watershed of the Los Angeles River and its tributaries above a point in the river designated as Los Angeles County Department of Public Works (LACDPW) Gaging Station F-57C-R, near the junction of the Los Angeles River and the Arroyo Seco (Plates 1 and 5). ULARA encompasses 328,500 acres, composed of 122,800 acres of valley fill, referred to as the groundwater basins, and 205,700 acres of tributary hills and mountains. ULARA is bounded on the north and northwest by the Santa Susana Mountains; on the north and northeast by the San Gabriel Mountains; on the east by the San Rafael Hills, which separate it from the San Gabriel Basin; on the south by the Santa Monica Mountains, which separate it from the Los Angeles Coastal Plain; and on the west by the Simi Hills.

ULARA has four distinct groundwater basins. The water supplies of these basins are separate and are replenished by deep percolation from rainfall, surface runoff and from a portion of the water that is delivered for use within these basins. The four groundwater basins in ULARA are the San Fernando, Sylmar, Verdugo, and Eagle Rock Basins.

THE SAN FERNANDO BASIN (SFB), the largest of the four basins, consists of 112,000 acres and comprises 91.2 percent of the total valley fill. It is bounded on the east and northeast by the San Rafael Hills, Verdugo Mountains, and San Gabriel Mountains; on the north by the San Gabriel Mountains and the eroded south limb of the Little Tujunga Syncline which separates it from the Sylmar Basin; on the northwest and west by the Santa Susana Mountains and Simi Hills; and on the south by the Santa Monica Mountains.

THE SYLMAR BASIN, in the northerly part of ULARA, consists of 5,600 acres and comprises 4.6 percent of the total valley fill. It is bounded on the north and east by the San Gabriel Mountains; on the west by a topographic divide in the valley fill between the Mission Hills and the San Gabriel Mountains; on the southwest by the Mission Hills; on the east by the bedrock of Saugus Formation along the east bank of the Pacoima Wash; and on the south by the eroded south limb of the Little Tujunga Syncline, which separates it from the SFB.

THE VERDUGO BASIN, north and east of the Verdugo Mountains, consists of 4,400 acres and comprises 3.6 percent of the total valley fill. It is bounded on the north by the San

Gabriel Mountains; on the east by a groundwater divide separating it from the Monk Hill Subarea of the Raymond Basin; on the southeast by the San Rafael Hills; and on the south and southwest by the Verdugo Mountains.

THE EAGLE ROCK BASIN, the smallest of the four basins, is in the extreme southeast corner of ULARA. It consists of 800 acres and comprises 0.6 percent of the total valley fill.

1.2 History of Adjudication

The water rights in ULARA were established by the JUDGMENT AFTER TRIAL BY COURT in Superior Court Case No. 650079, entitled The City of Los Angeles, a Municipal Corporation, Plaintiff, vs. City of San Fernando, et al., Defendants, signed March 14, 1968, by the Honorable Edmund M. Moor, Judge of the Superior Court. Numerous pretrial conferences were held subsequent to the filing of the action by the City of Los Angeles in 1955 and before the trial commenced on March 1, 1966.

On March 19, 1958, an Interim Order of Reference was entered by the Court directing the State Water Rights Board, now known as the State Water Resources Control Board (SWRCB), to study the availability of all public and private records, documents, reports, and data relating to a proposed order of reference in the case. The Court subsequently entered an "Order of Reference to State Water Rights Board to Investigate and Report upon the Physical Facts (Section 2001, Water Code)" on June 11, 1958.

A final Report of Referee was approved on July 27, 1962 and filed with the Court. The Report of Referee made a complete study of the geology, insofar as it affects the occurrence and movement of groundwater and the surface and groundwater hydrology of the area. In addition, investigations were made of the history of channels of the Los Angeles River and its tributaries; the areas, limits, and directions of flow of all groundwater within the area; the historic extractions of groundwater in the basin and their quality; and all sources of water, whether they be diverted, extracted, imported, etc. The Report of Referee served as the principal basis for geological and hydrological facts for the original Trial Court Judgment in 1968, the Decision of the Supreme Court in 1975 (14 Cal 3d 199, 123 Cal Rept 1), and the Trial Court Final Judgment on remand on January 26, 1979.

The Trial Court issued its opinion on March 15, 1968. The City of Los Angeles filed an appeal from the Judgment of the Trial Court with the Court of Appeal, which held a hearing on November 9, 1972, and issued its opinion on November 22, 1972. The opinion, prepared by Judge Compton and concurred in by Judges Roth and Fleming, reversed, with direction, the original judgment handed down by Judge Moor. In essence, the City of Los Angeles was given rights to all water in ULARA, including the use of the underground basins with some limited entitlements to others. The defendants, however, were given the right to capture "return water", which is water purchased from the Metropolitan Water District of Southern California (MWD) that percolates into the basin.

A petition for rehearing was filed on December 7, 1972, but was denied by the Court of Appeal. On January 2, 1973, the defendants filed a petition for hearing with the State Supreme Court. The Court on March 2, 1973 advised the parties it would hear the case. The hearing began on January 14, 1975.

On May 12, 1975, the California Supreme Court filed its opinion on the 20-year San Fernando Valley water litigation. This opinion, which became final on August 1, 1975, upheld the Pueblo Water Rights of the City of Los Angeles to all groundwater in the SFB derived from precipitation within ULARA. The City of Los Angeles' Pueblo Water Rights were not allowed to extend to the groundwaters of the Sylmar and Verdugo Basins. However, all surface and groundwater underflows from these basins are a part of the Pueblo Waters.

The City of Los Angeles was also given rights to all SFB groundwater derived from water imported by it from outside ULARA and either spread or delivered within the SFB. The Cities of Glendale and Burbank were also given rights to all SFB groundwater derived from water that each imports from outside ULARA and delivered within ULARA. San Fernando was not a member of MWD until the end of 1971, and had never prior thereto imported any water from outside ULARA. San Fernando has no return flow rights based on a stipulation between Los Angeles and San Fernando in the March 22, 1984 amendment to the Final Judgment.

The Supreme Court reversed the principal judgment of the Trial Court and remanded the case back to the Superior Court for further proceedings consistent with the Supreme Court's opinion. On remand the case was assigned to the Honorable Harry L. Hupp, Judge of the Superior Court of Los Angeles County.

The Final Judgment (Judgment), signed by the Honorable Harry L. Hupp, was entered on January 26, 1979. (Copies of the Judgment are available from the ULARA Watermaster Office.) The water rights set forth in the Judgment are consistent with the opinion of the Supreme Court described above. In addition, the Judgment includes provisions and stipulations regarding water rights, the calculation of imported return water credit, storage of water, stored water credit, and arrangements for physical solution water for certain parties as recommended by the Supreme Court. A separate stipulation was filed in Superior Court on January 26, 1979 appointing Melvin L. Blevins as Watermaster under the Judgment in this case. On September 1, 2003 Mark G. Mackowski was appointed Watermaster by the Superior Court, succeeding Mr. Blevins after 24 years of service as Watermaster.

On August 26, 1983, the Watermaster reported to the Court pursuant to Section 10.2 of the Judgment that the Sylmar Basin was in a condition of overdraft. In response to the Watermaster's letter and a Minute Order of the Court, the Cities of Los Angeles and San Fernando responded by letter to the Court, agreeing with the Watermaster's report on overdraft. On March 22, 1984, Judge Harry L. Hupp signed a stipulation ordering, effective October 1, 1984, that the Cities of Los Angeles and San Fernando would be limited in their pumping to bring the total pumping within the safe yield of the basin, including any rights exercised by private parties.

The following table lists the judges who have succeeded Judge Hupp as Judge of Record for the San Fernando Judgment.

TABLE 1-1: JUDGES OF RECORD

Judge	Date Appointed
Susan Bryant-Deason	January 1, 1999
Ricardo A. Torres	January 1, 1993
Gary Klausner	December 9, 1991
Jerold A. Krieger	April 16, 1991
Sally Disco	May 25, 1990
Miriam Vogel	January 16, 1990
Vernon G. Foster	April 30, 1985

1.3 Extraction Rights

The extraction rights under the Judgment and Sylmar Basin Stipulation are as follows:

San Fernando Basin

Native Water

Los Angeles has an exclusive right to extract and utilize all the native safe yield water that has been determined to be an average of 43,660 acre-feet per year (AF/Y). This represents Los Angeles' Pueblo Water Right under the Judgment.

Import Return Water

Los Angeles, Glendale, and Burbank each have a right to extract the following amounts of groundwater from the San Fernando Basin.

Los Angeles: 20.8 percent of all delivered water, including reclaimed water, to valley fill lands of the SFB.

Burbank: 20.0 percent of all delivered water, including reclaimed water, to the SFB and its tributary hill and mountain areas.

Glendale: 20.0 percent of all delivered water, including reclaimed water, to the SFB and its tributary hill and mountain areas.

Physical Solution Water

Several parties are granted limited entitlement to extract groundwater chargeable to the rights of others upon payment of specified charges. Table 1-2 lists the parties and their maximum physical solution quantities.

TABLE 1-2: PHYSICAL SOLUTION PARTIES

Chargeable Party	Pumping Party	Allowable Pumping (acre-feet)
City of Los Angeles	City of Glendale	5,500
	City of Burbank	4,200
	Middle Ranch	50
	Hathaway	60
	Van de Kamp[1]	120
	Toluca Lake	100
	Sportsmen's Lodge	25
	Water Licenses	83
City of Glendale	Forest Lawn	400
	Angelica Healthcare[2]	75
City of Burbank	Valhalla	300
	Lockheed-Martin	25

1. Van de Kamp has never pumped its physical solution right.
2. Angelica Healthcare no longer pumps its physical solution rights.

Stored Water

Los Angeles, Glendale, and Burbank each have a right to store groundwater and the right to extract equivalent amounts.

Sylmar Basin

Native Water

The March 22, 1984 Stipulation assigned Los Angeles and San Fernando equal rights to the safe yield of the Sylmar Basin. On the recommendation of the Watermaster, on July 16, 1996, the Administrative Committee approved a temporary increase in the safe yield of the basin from 6,210 AF/Y to 6,510 AF/Y. The 10-year period ended on October 1, 2005, triggering a re-evaluation of the safe yield. The results of this re-evaluation will be discussed in the 2007 Watermaster Report; however, for the 2005-06 Water Year, the safe yield will be 6,510 AF.

The only potentially active private party with overlying rights within the Sylmar Basin is Santiago Estates, a successor to Meurer Engineering, M.H.C. Inc.

Santiago Estates' pumping is deducted from the safe yield and the two cities divide the remainder. Santiago Estates has not pumped since the 1998-99 Water Year.

Stored Water

Los Angeles and San Fernando each have a right to store groundwater by in-lieu practices and the right to extract equivalent amounts.

Verdugo Basin

Native Water

Glendale and the Crescenta Valley Water District (CVWD) have appropriative and prescriptive rights to extract 3,856 and 3,294 AF/Y, respectively.

Stored Water

There are no storage rights in the Verdugo Basin.

Eagle Rock Basin

Native Water

The Eagle Rock Basin has a small native safe yield.

Imported Return Water

Los Angeles delivers imported water to lands overlying the basin, and return flow from this delivered water constitutes the majority of the safe yield of the basin. Los Angeles has the right to extract or allow to be extracted the safe yield of the basin.

Physical Solution Water

DS Waters (successor to Sparkletts and Deep Rock) has physical solution rights to extract groundwater pursuant to a stipulation with the City of Los Angeles, and as provided in Section 9.2.1 of the Judgment.

Stored Water

There are no storage rights in the Eagle Rock Basin.

1.4 Watermaster Service and Administrative Committee

In preparing the annual Watermaster Report, the Watermaster collected and reported all information affecting and relating to the water supply, water use and disposal, groundwater levels, water quality, and ownership and location of new wells within ULARA. Groundwater pumpers report their extractions monthly to the Watermaster. This makes it possible to update the Watermaster Water Production Accounts on a monthly basis and determine the allowable pumping for the remainder of the year.

Section 8.3 of the Judgment established an Administrative Committee for the purpose of advising the Watermaster in the administration of his duties. The duly appointed members of the Committee, as of May 1, 2006, are:

BURBANK, CITY OF
Bill Mace (Vice-President)
Raul Garibay (Alternate)

GLENDALE, CITY OF
Peter Kavounas (President)
Raja Takidin (Alternate)

SAN FERNANDO, CITY OF
Ron Ruiz
Daniel Wall (Alternate)

LOS ANGELES, CITY OF
Thomas Erb
Mario Acevedo (Alternate)

CRESCENTA VALLEY WATER DISTRICT
Dennis Erdman
David Gould (Alternate)

The Watermaster may convene the Administrative Committee at any time in order to seek its advice. Each year the Committee is responsible for reviewing and approving with the Watermaster the proposed annual report. The Committee met in October, December, February, and April of the 2004-05 Water Year. The Committee approved the 2004-05 Watermaster Report on April 26, 2006.

1.5 Significant Events through April 2006

Burbank Operable Unit (BOU)

The BOU, operated by Burbank under a contract with ECO Resources, Inc., and funded by Lockheed-Martin, removes volatile organic compounds (VOCs) from elevated nitrate groundwater and then blends it with water from MWD for delivery to the City of Burbank. The City of Burbank, in cooperation with the USEPA and Lockheed-Martin, continued to make design and operational changes in an attempt to bring the facility up to the design capacity of 9,000 gallons per minute (gpm), or 14,000 acre-feet (AF) annually. During the 2004-05 Water Year 6,399 AF of groundwater were treated at the facility. Burbank is also reducing the levels of chromium in its groundwater supply by blending with imported supplies from MWD before delivery to the City of Burbank.

Montgomery Watson Harza (MWH) was hired by Burbank to perform a Well Field Performance Attainment Study that evaluated the well field and appurtenant facilities in an effort to bring production up to 9,000 gpm. Recommendations include drilling more wells and deflating the well packers in the existing wells. The USEPA is reviewing the study. In 2004-05 the USEPA gave conceptual approval for the redesign of screens used in the air-phase granular activated carbon (GAC) vessels.

Glendale Operable Unit (GOU)

The GOU removes VOCs and has the capability of treating up to 5,000 gpm from the Glendale North and South OU Well Fields. Treated water is blended with imported MWD supplies to reduce nitrate and hexavalent chromium levels. The GOU treated 7,541 AF during the 2004-05 Water Year.

The USEPA has accepted Glendale's interim pumping plan in an effort to control chromium levels in the blended plant effluent and to accommodate the loss of pumping from GN-3 which remains non-operational due to a damaged well screen. A repair recommendation is pending. The over-all pumping plan varies from the original Consent Decree pumping pattern, and calls for reduced pumping from higher chromium wells and increased pumping from wells lower in chromium.

Glendale, in cooperation with the cities of Los Angeles, Burbank, San Fernando, and the American Water Works Association Research Foundation (AWWARF) is continuing to perform studies for the large-scale removal of chromium from drinking water. McGuire

Malcolm Pirnie has identified weak-base anion exchange as a promising chromium removal technology. Unit cost of this technology is currently being evaluated, and wellhead demonstration-scale testing will be initiated when funding is secured.

North Hollywood Operable Unit (NHOU)

LADWP's NHOU, funded in part by a USEPA Consent Decree, is designed to remove VOCs at a rate of 2,000 gpm using a system of seven extraction wells and an air-stripping tower. The 15-year Consent Decree expired on December 31, 2004. The USEPA has stated that there are sufficient funds to continue operation and maintenance of the NHOU into 2008. However, the remedy did not perform as expected, and some VOCs have been detected at nearby LADWP well fields. The USEPA, LADWP, and the Watermaster are currently evaluating additional treatment and funding alternatives. A total of 1,042 AF were treated during the 2004-05 Water Year.

Pollock Wells Treatment Plant

LADWP's Pollock Wells Treatment Plant uses three wells and four liquid-phase GAC vessels to remove VOCs at a design rate of 3,000 gpm. The primary purpose of the facility is to prevent the loss of groundwater through the Los Angeles River Narrows due to rising groundwater outflow. An evaluation of the Pollock area was performed in 1990 that showed approximately 2,000 AF/Y of excess rising groundwater occurring in the Los Angeles river Narrows as a result of delivered water, precipitation, and percolation along the unlined portion of the river upstream of the Narrows. This is part of Los Angeles' water right, and it is lost from the SFB in the absence of pumping at the Pollock Wells.

During Water Year 2004-05 a total of 1,752 AF of groundwater was pumped and treated. As a result of excess rising groundwater, the Watermaster debited Los Angeles 247.56 AF (Appendix F).

Verdugo Park Water Treatment Plant

The City of Glendale Verdugo Park Water Treatment Plant treats groundwater from the Verdugo Basin for turbidity and bacteria, and is operating at 500 gpm instead of the expected 700 gpm. Methods to increase the efficiency of the groundwater collection system are being investigated. A total of 700 AF were treated in the 2004-05 Water Year.

Glenwood Nitrate Removal Plant

CVWD's Glenwood Nitrate Removal Plant treated 782 AF during the 2004-05 Water Year. The amount of treated water is more than three times the previous year due to the higher water table in the Verdugo Basin, which enabled CVWD to increase its pumping.

Verdugo Basin Evaluation

In June 2003 CVWD obtained an AB 303 grant to determine the cause(s) of the decline in Verdugo Basin groundwater levels, develop alternatives to reverse the decline, enhance conjunctive use of the basin, and reduce CVWD's reliance on imported supplies. The Watermaster and the City of Glendale serve on the Technical Advisory Committee. A final report was completed in May 2005 that identified several possible sites at which storm water recharge can be maximized. In October 2005 CVWD began the Verdugo Basin Geophysical Evaluation Project to guide CVWD in the selection of sites for future supply wells and recharge facilities. Both studies have been funded with AB 303 grants.

CVWD Over-Pumping in the Verdugo Basin

During the 2004-05 Water Year CVWD pumped a total of 3,310 AF, which was 16 AF (0.5%) above its adjudicated right of 3,294 AF/Y. Glendale pumped a total of 2,358 AF, which was 61% of its adjudicated right of 3,856 AF/Y.

In September 2005, prior to the end of the 2004-05 Water Year, CVWD alerted the Watermaster that it would exceed its adjudicated right by about 50 AF. The Watermaster suggested that CVWD contact Glendale regarding pumping Glendale's right, as Glendale had not yet pumped its full adjudicated right in 2004-05. CVWD contacted Glendale regarding this issue and Glendale requested that CVWD pay Glendale for pumping the unused portion of Glendale's right. No agreement was reached.

The San Fernando Judgment (Sections 6.4 and 6.7) enjoins both CVWD and Glendale from over-pumping in excess of their adjudicated rights in the Verdugo Basin. The Watermaster's Policies and Procedures dated February 1998 (Section 2.3.4) permit pumping of any unused portion of the other party's rights, but only with the Watermaster's approval. CVWD neither requested, nor received the Watermaster's approval prior to the close of the 2004-05 Water Year.

Due to a combination of lack of available supply, and low water levels, Glendale has never pumped its full adjudication of 3,856 AF/Y. Glendale has expressed its intention to increase its production capacity in the Verdugo Basin and anticipates utilizing its full adjudicated right in the near future. Although there are no Stored Water Credits in the Verdugo Basin, Glendale believes that any over-pumping by CVWD may impair Glendale's ability to pump the full quantity of its right in the future.

On February 21, 2006, after failing to reach agreement with Glendale, CVWD formally requested the Watermaster's retroactive approval for its 2004-05 over-pumping. The Watermaster has not yet acted on CVWD's request. The Watermaster has requested that CVWD and Glendale continue to attempt to reach agreement regarding the over-pumping.

Glendale and CVWD have initiated discussions with respect to CVWD's 2004-05 over-pumping and any proposed over-pumping in the future. CVWD and Glendale have agreed in concept to perform a joint study that will utilize the Verdugo Basin Groundwater Model and data obtained from the Verdugo Basin Geophysical Study to assist in managing the basin and optimizing pumping strategies for each agency.

Reclamation Projects in the San Fernando Valley

LADWP has plans to connect large recycled water customers over the next three years including the Hansen Dam Recreation Area, Valley Generating Station and Angeles National Golf Course in the eastern portion of the Valley, and the Sepulveda Basin and Pierce College in the southern portion of the Valley. Smaller users in the vicinity of these pipelines will also be connected over time with the present goal of fully utilizing the 10,000 AF/Y originally intended for groundwater recharge as part of the East Valley Water Recycling Project.

Hansen Area Water Reclamation Project Phase I consists of approximately one-half mile of 30-inch pipeline and a 7-million gallon storage tank. The primary purpose of this project is to deliver recycled water to the Valley Generating Station for cooling tower and other industrial uses. The project is scheduled to be in service in 2006.

The Hansen Area Water Reclamation Project Phase II will consist of a booster pumping station adjacent to the proposed 7-million gallon recycled water storage tank at the

Valley Generating Station, and a pipeline extending to the Hansen Dam Recreation Area and other areas.

The Sepulveda Basin Water Recycling project is designed to provide recycled water for irrigation throughout the Sepulveda Basin Recreation Area including Woodley Golf Course, Lake Balboa Recreation Area, Wildlife Area, Balboa and Encino Golf Courses, Balboa Sports Center, and Hjelte Park. The Woodley Park, West Valley Youth Baseball, and the proposed Sports Concession will be connected to the South Valley Water Recycling Project pipeline scheduled to be in service late 2007 or early 2008. Delivery to Woodley Golf Course is scheduled to begin in 2006 as soon as regulatory permitting issues are resolved.

The South Valley Water Reclamation Project includes construction of a 13-mile long pipeline from Warner Center to North Hollywood to deliver recycled water to serve irrigation and industrial users near the pipeline route including Pierce College, the Metropolitan Transportation Authority bus way currently under construction, and various park facilities.

Headworks

The Headworks Spreading Grounds is the site of multi-objective projects to improve water quality and storage, and to provide the community with an opportunity for passive recreation. LADWP has completed the preliminary design and is in the process of completing the Environmental Impact Report for the Silver Lake Reservoir Complex Storage Replacement Project in order to comply with the Stage 2 Disinfection By-Products Rule and the Long-Term 2 Enhanced Surface Water Treatment Rule. The project will remove Silver Lake and Ivanhoe Reservoirs from service as potable water reservoirs, provide potable water storage in a buried 110 million gallon reservoir located at the Headworks Spreading Grounds, and provide for hydropower generation.

The other Headworks component is the proposed wetlands project that is a joint effort between LADWP and the Army Corps of Engineers. A feasibility study for the wetlands habitat is currently underway.

Tujunga Spreading Grounds Task Force

The Watermaster initiated the Tujunga Spreading Grounds Task Force in May 1998. The use of the Tujunga Spreading Grounds has been significantly reduced in above-

normal runoff years because of environmental issues associated with methane gas migration from the nearby Sheldon-Arleta Landfill. The purpose of the task force is to restore the historic recharge capacity; enhance methane gas control and monitoring; and improve storm water management. The task force consists of representatives of the Los Angeles County Department of Public Works (LACDPW), Los Angeles Bureau of Sanitation, LADWP, and the Watermaster Office. During a study in May 2003, a consultant analyzed the impact of a controlled release of native water from the Big Tujunga Dam to test the gas collection system at the Sheldon-Arleta Landfill. Preliminary results suggested that a release of 100 cubic feet per second (cfs) into the spreading grounds over a one week period has no negative impact on the methane gas movement. Heavy storms in January 2005 confirmed that spreading in excess of 100 cfs caused methane migration from the landfill. Future planned modifications include installing additional methane collection wells. A methane gas collection system has been designed and bids accepted for construction. The bids came in much higher than estimated and have been rejected. A re-advertisement of the project is pending with a new award date anticipated in August 2006. The goal is to restore recharge capacity at the Tujunga Spreading Grounds to 250 cfs.

San Fernando Basin Recharge Task Force

In 2004 the Watermaster formed the San Fernando Basin Recharge Task Force in an effort to increase spreading of native water in the SFB. The Task Force includes LADWP, LACDPW, and Watermaster. The goal of the task force is to identify ways to capture and infiltrate more rainfall runoff.

Above-normal rainfall during the 2004-05 Water Year resulted in spreading more than 74,000 AF of runoff by LACDPW. However, artificial recharge at Hansen Spreading Grounds was curtailed in January 2005 when seepage was observed on the face of a 200'-high cut slope in the adjacent Boulevard Pit, which is owned and operated by Vulcan Materials Company as a source of sand and gravel. There was concern that this spreading-related seepage could destabilize the slope, so LACDPW confined spreading for several months to the basins furthest from Boulevard Pit. The reduced spreading resulted in a lost opportunity for LACDPW to conserve additional runoff, which benefits the City of Los Angeles under its Pueblo right.

Over the next several months, Vulcan submitted geotechnical reports to the City of Los Angeles Department of Building and Safety (LADBS) related to the stability of the slope

in the Boulevard Pit. On February 2, 2006 LADBS issued a letter stating that the slope was stable and that no additional work was necessary. During a Task Force meeting on March 9, 2006 LACDPW agreed to resume full spreading at Hansen Spreading Grounds as runoff becomes available.

Big Tujunga Dam Seismic Rehabilitation

The Big Tujunga Dam Retrofit Proposal Planning and Coordination Task Force has been meeting for several years to discuss the operation of the dam during seismic retrofit construction and after the retrofit completion. The task force includes representatives from the Federal Emergency Management Agency (FEMA), United States Forest Service (USFS), United States Fish and Wildlife Service (USFWS), California Department of Fish and Game, LACDPW, LADWP, and the Watermaster Office.

The USFS and USFWS are mandated to protect the Santa Ana Sucker (SAS) under the Endangered Species Act. They view the dam retrofit as an opportunity to reduce peak flows during the winter to prevent damage to the SAS and its habitat, and to provide low flows during the dry summer season to prevent the stream bed from drying out and adversely impacting the population of SAS.

The LACDPW is required by law to operate the dam to protect life and property from flooding. Furthermore, the LACDPW, LADWP, and Watermaster view the retrofit as an opportunity to conserve more native water, which belongs to the City of Los Angeles under its Pueblo Right.

If large controlled releases are not allowed during the winter storm season, the limited storage capacity of the reservoir could cause uncontrolled releases over the dam spillway, resulting in flood damage to property and SAS habitat along Tujunga Wash. If small releases from the dam are required during the dry summer months, this water may not reach the spreading grounds where it recharges the SFB. Small releases from the dam percolating into the stream channel alluvium will be delayed many years before reaching the SFB and becoming available to pump at the production well fields.

In November 2004 FEMA terminated its OES/FEMA Hazard Mitigation Grant of $5.4 million for the seismic retrofit project, citing a 10-year period during which the project was not constructed and the probability of further delays. Without FEMA funding the

project will probably not go forward. LACDPW appealed the FEMA decision with supporting letters from the Watermaster and other agencies.

In April 2005 LACDPW was informed that FEMA had reinstated the grant funding. However, in the meantime the project cost had risen to approximately $78 million due to increased material costs, high demand for large-scale civil construction contractors, and for additional project scope (left abutment stabilization).

To date, a total of $12 million has been secured, and LACDPW has requested additional funding from the California Department of Water Resources and from the City of Los Angeles Proposition O funds.

Due to significantly higher construction costs there is some uncertainty whether this project will be built unless additional outside funding can be secured. The project is tentatively scheduled to begin construction in summer 2006 and would be completed in about three years.

Standard Urban Stormwater Mitigation Plan (SUSMP)

The RWQCB adopted SUSMP on March 8, 2000. It requires some new developments and redevelopments to contain or treat the first ¾-inch of rainfall runoff from every storm, and encourages on-site infiltration. The Watermaster placed a temporary moratorium on urban stormwater infiltration in the San Fernando Basin due to concerns over potential impacts on groundwater quality. For the past several years we have been monitoring water quality data from several demonstration sites, and have determined that infiltration in residential and light commercial areas can be safely accomplished under certain conditions. The Watermaster is currently working with the City of Los Angeles' Watershed Protection Division to allow infiltration if those criteria are met.

Sun Valley Watershed Committee

The Watermaster Office is a stakeholder on the Sun Valley Watershed Committee. The objective of the group is to identify alternative ways to solve the local flooding problems in the Sun Valley area. These alternatives could replace or augment the traditional approach of an improved storm drain system. Some of the alternatives include on-site infiltration of storm runoff and the acquisition of gravel pits for conversion into spreading basins. The storm runoff contains contaminants that are potentially adverse to water quality in the basin. The Watermaster is concerned about potential impacts to

groundwater quality as well as conflicts with established water rights, but is working closely with the committee to resolve these issues. The Sun Valley Watershed Project Environmental Impact Report was approved by the Los Angeles County Board of Supervisors on June 29, 2004. An infiltration gallery at Sun Valley Park is currently under construction, and additional infiltration demonstration projects are being planned or are in the design phase including the stormwater project at the LADWP Valley Generating Station.

Water Augmentation Study (WAS)

The Los Angeles and San Gabriel Rivers Watershed Council has developed a WAS to determine the feasibility of infiltrating urban runoff to reduce local flooding, recharge groundwater, and reduce surface water pollution. The Watermaster serves on the Technical Advisory Committee and provides guidance with respect to water quality and water rights within ULARA. The WAS now has six sites throughout the greater Los Angeles area where it infiltrates urban stormwater and monitors the effects on underlying groundwater. These demonstration sites have given us a better understanding of the effects on groundwater quality, and an increased level of confidence in the use of urban runoff to augment recharge of our local aquifers.

Integrated Resources Plan (IRP)

The IRP is Los Angeles' plan to integrate its wastewater, storm water, potable water, and reclaimed water programs for the next 20 years. Phase I, the Integrated Plan for Wastewater Program, emphasized community outreach to help direct the program and was completed in 2001. The goal of Phase II is to develop and implement the program. The IRP uses a broader "watershed" approach to promote more efficient use of all water within the City. The Watermaster serves on the Management Advisory Committee and guides the process with respect to water rights and water quality within ULARA. The draft Environmental Impact Report has been written and distributed for public review.

The Los Angeles Unified School District IRP has been formed to ensure that new and retrofitted schools conform to the overall goals of the City's IRP.

Los Angeles River Revitalization Master Plan

In 2002, Councilman Ed Reyes led efforts to establish the Los Angeles City Council Ad Hoc Committee on the Los Angeles River to function as a clearinghouse for Los Angeles

River projects, to encourage community involvement in Los Angeles River improvements, and to help coordinate Los Angeles River-related projects within the City.

One of the most exciting initiatives started over the last three years by the Ad Hoc River Committee is the Los Angeles River Revitalizaiton Master Plan. As a result of the Ad Hoc River Committee's efforts, and with funding from the Los Angeles Department of Water and Power, the City of Los Angeles' Department of Public Works-Bureau of Engineering issued a Request for Proposals in 2005 for the preparation of a Revitalization Master Plan which would identify proposals that would make the Los Angeles river a "front door" to the City, and support a multitude of civic activities.

The 18-month Revitalization planning process will look at improvements along the project area all aimed towards celebrating neighborhoods, protecting wildlife, promoting the health of the river, and leveraging economic development. By the end of the planning process, a 20-year blueprint for development and management of the Los Angeles River will be developed for implementation by the City of Los Angeles.

To learn more about this effort and how you can participate please visit www.lariverrmp.org.

Integrated Regional Water Management Plan (IRWMP)

The County of Los Angeles has been organized into five sub-regions to more efficiently and effectively develop proposals to request Proposition 50 funds for the region. The sub-regional districts are: North Santa Monica Bay Watersheds; Upper San Gabriel River and Rio Hondo River Watersheds; Upper Los Angeles River Watershed; Lower San Gabriel and Los Angeles River Watersheds; and South Bay Watersheds. The sub-regions have until January 1, 2007 to develop proposals that are integrated to maximize regional benefits, prioritize project approaches, select priority projects, hold public hearings, and finalize and adopt the IRWMP for submission to the State.

Dewaterers

The groundwater table in parts of the SFB is near the ground surface. Dewatering is occasionally required to maintain subsurface structures. If dewatering is needed, the dewaterer is required to meter the discharge and enter into an agreement with the

affected party for payment for the pumped water. The Watermaster Office currently receives reports from several dewaterers in the SFB.

Water Licenses

Portions of ULARA located in unincorporated Los Angeles County are without water service. Working in cooperation with the County Department of Health Services and County Planning, the Watermaster and LADWP have developed a process to identify and monitor water usage through a water license agreement. The agreements allow the use of groundwater on overlying property until a water service becomes available, establish maximum annual groundwater usage, and require the monthly reporting of groundwater production to the Watermaster Office and annual payment to the City of Los Angeles.

1.6 Summary of Water Supply, Operations, and Hydrologic Conditions

Highlights of operations for the 2003-04 and 2004-05 Water Years are summarized in Table 1-3. Details of the 2004-05 Water Year operations and hydrologic conditions are provided in Section 2. Locations of the groundwater basins, water service areas of the parties and individual producers, and other pertinent hydrologic facilities are shown on Plates 2 through 8.

Average Rainfall

Precipitation on the valley floor area during the 2004-05 Water Year was 42.64 inches, 259 percent of the calculated 100-year mean (16.48 inches). Precipitation in the mountain areas was 47.54 inches, 218 percent of the calculated 100-year mean (21.76 inches). The weighted average of 45.66 inches is 232 percent of the 100-year mean (21.22 inches).

Spreading Operations

A total of 74,198 AF of water were spread. This represents a significant increase from the average annual spreading of native water for the 1968-2005 period of 26,294 AF.

Extractions

Total extractions amounted to 77,995 AF. This is a decrease of 22,761 AF from 2003-04, and less than the 1968-2005 average of 97,439 AF. Of the total for the 2004-05 Water Year, 3,352 AF were for non-consumptive use. Appendix A contains a summary of groundwater extractions for the 2004-05 Water Year.

Imports

Gross imports (including pass-through water) totaled 551,007 AF, a decrease of 52,370 AF from 2003-04. Net imports used within ULARA amounted to 311,988 AF, a 18,899 AF decrease from 2003-04.

Exports

A total of 284,178 AF were exported from ULARA. Of the 284,178 AF exported, 45,159 AF were from groundwater extractions, and 239,019 AF were from imported supplies (pass-through).

Treated Wastewater

A total of 87,498 AF of wastewater were treated in ULARA. The majority of the treated water was discharged to the Los Angeles River, a portion was delivered to the Hyperion Treatment Plant, and approximately 6 percent was used as recycled water.

Recycled Water

Total recycled water used in ULARA was 5,643 AF, a 1,756 AF decrease from last year. The recycled water is used for landscape irrigation, in-plant use, power plant use (i.e. cooling), and other industrial uses.

Sewage Export

Sewage export was estimated at 104,768 AF; this was the amount of untreated sewage delivered by pipeline to the Hyperion Treatment Plant. The estimate does not include treated wastewater discharged to the Los Angeles River that leaves ULARA as surface flow.

Groundwater Storage

Groundwater storage in the SFB during 2004-05 increased by 66,476 AF with the total cumulative increase in groundwater storage since October 1, 1968 of 150,895 AF. The 2004-05 change in storage increased due primarily to the effect of the near historic high rainfall, a significant increase in spread water, and reduced pumping by the City of Los Angeles. The calculated change in groundwater storage for the Sylmar, Verdugo, and Eagle Rock Basins was +6,694, +9,838, and +189 AF, respectively.

Wells

During the 2004-2005 Water Year no new municipal wells were drilled or destroyed. Forest Lawn Cemetery destroyed Well No. 2 (3947A) and drilled replacement Well No. 8 (3947M).

TABLE 1-3: SUMMARY OF OPERATIONS IN ULARA

Item	Water Year 2003-04	Water Year 2004-05
Active Pumpers (parties and nonparties)	30	31
Inactive Pumpers (parties)[1]	8	7
Valley Rainfall, in inches		
Valley Floor	9.52	42.64
Mountain Area	13.04	47.54
Weighted Average	12.21	45.66
Spreading Operations, in acre-feet	10,065	74,198
Extractions, in acre-feet		
Used in ULARA	34,675	32,836
Exported from ULARA	66,081	45,159
Total	**100,756**	**77,995**
Gross Imports, in acre-feet		
Los Angeles Aqueduct Water	212,805	335,617
MWD Water	390,572	215,390
Total	**603,377**	**551,007**
Exports, in acre-feet		
Los Angeles Aqueduct Water	97,546	168,898
MWD Water	174,944	70,121
Groundwater	66,081	45,159
Total	**338,571**	**284,178**
Net Imports Used in ULARA, in acre-feet	330,887	311,988
Recycled Water Use, in acre-feet	7,399	5,643
Total Water Use in ULARA, in acre-feet [2]	372,961	350,467
Treated Wastewater, in acre-feet [3]	90,546	87,498
Sewage Export to Hyperion, in acre-feet [4]	103,744	104,768

1. The seven inactive pumpers are Van de Kamp, Disney, Angelica, Santiago Estates, Greeff, Sears, Waste Management.
2. Extractions used in ULARA plus Net Imports and Recycled Water.
3. Most treated wastewater flows to LAR, a portion to Hyperion (see T2-7), and for recycled water.
4. Sewage outflow includes estimates of outflow from each of the four basins, and discharges to Hyperion from the Tillman and Los Angeles-Glendale Water Reclamation Plants.

1.7 Allowable Pumping for the 2005-06 Water Year

Table 1-4 shows a summary of extraction rights for the 2005-06 Water Year and stored water credit as of October 1, 2005, for the Cities of Los Angeles, Burbank, Glendale, San Fernando, and the CVWD. The calculation of these values is shown in more detail in Section 2.

TABLE 1-4: ALLOWABLE PUMPING 2005-06 WATER YEAR

(acre-feet)

	Native Safe Yield Credit [1]	Import Return Credit [2]	Total Native + Import	Stored Water Credit [3] (as of Oct. 1, 2005)	Allowable Pumping 2005-06 Water Year
San Fernando Basin					
City of Los Angeles	43,660	43,281	86,941	325,739	412,680
City of Burbank	---	4,350	4,350	20,191	24,541
City of Glendale	---	5,547	5,547	64,103	69,650
Total	43,660	53,178	96,838	410,033	506,871
Sylmar Basin					
City of Los Angeles	3,255	---	3,255	8,448	11,703
City of San Fernando	3,255	---	3,255	339	3,594
Total	6,510	---	6,510	8,787	15,297
Verdugo Basin					
CVWD	3,294	---	3,294	---	3,294
City of Glendale	3,856	---	3,856	---	3,856
Total	7,150	---	7,150	---	7,150

1) Native Safe Yield extraction right per Judgment, page 11.
2) Import Return extraction right per Judgment, page 17.
3) There is no Stored Credit assigned in Verdugo Basin.

2. WATER SUPPLY, OPERATIONS, AND HYDROLOGIC CONDITIONS

2. WATER SUPPLY, OPERATIONS, AND HYDROLOGIC CONDITIONS

2.1 Precipitation

Precipitation varies considerably throughout ULARA depending on topography and elevation. Mean seasonal precipitation ranges from about 14 inches at the western end of the San Fernando Valley to 33 inches in the San Gabriel Mountains. Approximately 80 percent of the annual rainfall occurs from December through March.

In the 2004-05 Water Year the valley floor received 42.64 inches of rain (259 percent of the 100-year mean), while the mountain area received 47.54 inches (218 percent of the 100-year mean). Figure 2.1 shows monthly valley floor and mountain area rainfall in ULARA. The weighted average of both valley and mountain areas was 45.66 inches (232 percent of the 100-year mean). Table 2-1 shows a record of rainfall at the valley and mountain precipitation stations, and Plate 5 shows their locations.

FIGURE 2.1: MONTHLY RAINFALL

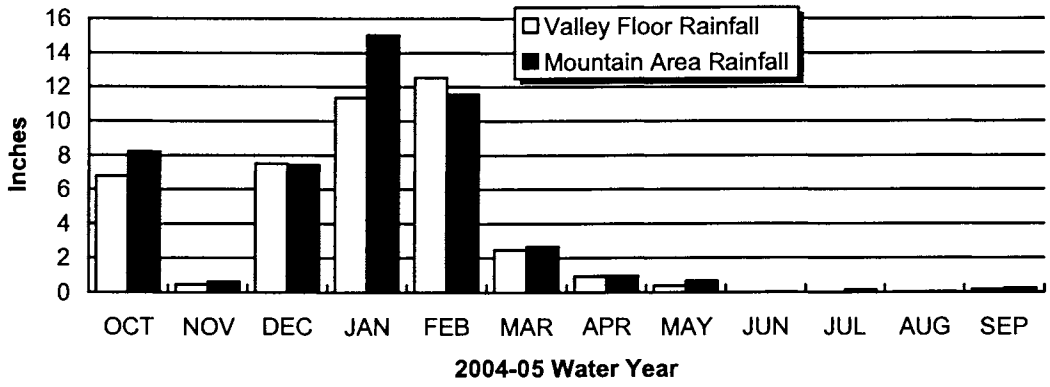


TABLE 2-1: 2004-2005 PRECIPITATION

(inches)

LACDPW Rain Gage Stations No.	Name	2004-05 Precipitation	100-Year Mean (1881-1981)	Percent of 100-Year Mean
	Valley Stations			
13C	North Hollywood-Lakeside	51.97	16.63	313%
1087D	Green Verdugo Pumping Plant	45.93	14.98	307%
465C	Sepulveda Dam	38.65	15.30	253%
21B	Woodland Hills	38.71	14.60	265%
23B	Chatsworth Reservoir	30.92	15.19	204%
25C	Northridge-LADWP	34.43	15.16	227%
251C	La Crescenta	53.74	23.31	231%
293B	Los Angeles Reservoir	42.28	17.32	244%
	Weighted Average[1]	**42.64**	**16.48**	**259%**
	Mountain Stations			
11D	Upper Franklin Canyon Reservoir	54.11	18.50	292%
17	Sepulveda Canyon at Mulholland	55.30	16.84	328%
33A	Pacoima Dam	46.90	19.64	239%
47D	Clear Creek - City School	77.80	33.01	236%
53D	Monte Cristo Ranger Station	37.08	29.04	128%
54C	Loomis Ranch-Alder Creek	44.46	18.62	239%
210C	Brand Parks	40.60	19.97	203%
797	DeSoto Reservoir	31.35	17.52	179%
1074	Little Gleason	49.84	21.79	229%
	Weighted Average[1]	**47.54**	**21.76**	**218%**
	Weighted Average Valley/Mountain Areas[1]	**45.66**	**19.64**	**232%**

1. Weighted Average calculations performed according to Report of Referee-7/62. Mountain Station Weighted Average estimated due to incomplete data.

2.2 Runoff and Outflow from ULARA

The watershed of ULARA contains 328,500 acres, of which 205,700 acres are hills and mountains. The drainage system is made up of the Los Angeles River and its tributaries. Surface and sub-surface flow originates as runoff from the hills and mountains, runoff from the impervious areas of the valley, industrial and sanitary waste discharges, domestic irrigation runoff, and rising groundwater.

A number of stream-gaging stations are maintained throughout ULARA, either by the LACDPW or the United States Geological Survey (USGS). The Watermaster has selected six key gaging stations which record runoff from the main hydrologic areas in ULARA (Plate 5 shows the location of the stations). The six gaging stations are as follows:

1. Station F-57C-R registers all surface outflow from ULARA.

2. Station F-252-R registers flow from Verdugo Canyon which includes flows from Dunsmore and Pickens Canyons.

3. Station E-285-R registers flow from the westerly slopes of the Verdugo Mountains and some flow from east of Lankershim Boulevard. It also records any releases of reclaimed wastewater discharged by the City of Burbank.

4. Station F-300-R registers all flow east of Lankershim Boulevard plus the portion of outflow from Hansen Dam which is not spread. These records also include flow through the Sepulveda Dam.

5. Station F-168-R registers all releases from Big Tujunga Dam, which collects runoff from the watershed to the northeast. Runoff below this point flows to Hansen Dam.

6. Station F-118B-R registers all releases from Pacoima Dam. Runoff below this point flows to the Los Angeles River through lined channels, or can be diverted to the Lopez and Pacoima Spreading Grounds.

Table 2-2 summarizes the 2003-04 and 2004-05 monthly runoff for these stations. The high runoff in 2004-05 is related to the historic high rainfall. The mean daily discharge rates for these six stations during 2004-05 are summarized in Appendix B.

TABLE 2-2: MONTHLY RUNOFF AT SELECTED GAGING STATIONS

(acre-feet)

Station	Water Year	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
F-57C-R	2004-05	35,240	7,590	52,290	162,600	143,800	49,620	15,550	7,410	8,140	7,410	5,660	5,120	**500,430**
L.A. River	2003-04	10,120	9,550	15,450	9,940	33,570	9,180	8,830	7,070	7,650	8,460	8,250	7,790	**135,860**
Arroyo Seco														
F-252-R	2004-05	3,650	512	3,400	9,450	10,970	3,700	1,210	836	771	960	827	786	**37,072**
Verdugo Wash	2003-04	247	296	750	250	1,840	452	235	137	198	284	314	316	**5,319**
E-285-R	2004-05	3,160	917	3,880	7,100	8,270	2,340	1,240	839	1,650	1,320	1,070	1,040	**32,826**
Burbank	2003-04	905	509	812	611	2,240	772	628	456	585	488	392	936	**9,334**
Storm Drain														
F-300-R	2004-05	23,430	8,630	40,390	142,600	125,700	41,630	13,250	4,140	6,840	4,420	5,000	5,000	**421,030**
L.A. River	2003-04	5,690	5,380	9,390	9,250	22,900	6,210	4,290	3,770	3,500	3,590	3,500	3,280	**80,750**
Tujunga Ave.														
F-168-R	2004-05	1,210	3,420	8,480	46,480	28,170	21,810	7,130	4,160	5,680	2,960	2,230	256	**131,986**
Big Tujunga	2003-04	116	3	287	2	429	1,060	177	22	0	7	9	3	**2,115**
Dam														
F-118B-R	2004-05	3	384	235	5,930	6,500	6,320	1,240	2,180	1,610	1,150	0	0	**25,552**
Pacoima Dam	2003-04	10	603	20	7	0	451	221	0	3	0	0	0	**1,315**

2.3 Components of Surface Flow

The surface flow of the Los Angeles River at Gaging Station F-57C-R consists of:

1. Storm flows;
2. Treated wastewater from the Tillman, Burbank, and Los Angeles-Glendale Water Reclamation Plants;
3. Industrial discharges and domestic irrigation runoff; and,
4. Rising groundwater.

In the Report of Referee (Volume II, Appendix O), procedures were developed for the calculation of rising groundwater for the period 1928-1958. Some of the important factors of that study are no longer significant - releases of Owens River water, operation of the Chatsworth Reservoir, and operation of the Headworks Spreading Grounds. As shown on Figure O-2 of the Report of Referee, excess rising groundwater was considered to have fallen to zero by the late 1950s. The January 1993 report by Brown and Caldwell, "Potential Infiltration of Chlorides from the Los Angeles River Narrows into the Groundwater Aquifer" studied groundwater levels along the course of the Los Angeles River. The Watermaster provided the insight and data for this evaluation. As of the end of the drought period in 1977, groundwater levels in the Los Angeles River Narrows were very low, with very little potential for excess rising groundwater. Heavy runoff occurred during the 1978-83 period, which, combined

with reduced pumping in the Crystal Springs, Grandview, and Pollock Well Fields, caused large recoveries of groundwater levels in the Los Angeles River Narrows.

An even greater factor affecting hydrologic conditions in the Los Angeles River Narrows has been the increasing releases of treated wastewater. Releases from the Los Angeles-Glendale Plant began in 1976-77 and from the Tillman Plant in 1985-86. These large year-round releases tend to keep the alluvium of the Los Angeles River Narrows saturated, even in dry years. Nevertheless, there is some opportunity for continuing percolation in the unlined reach, both upstream and downstream of the lined section near the confluence of the Verdugo Wash and the Los Angeles River. Water percolating in the unlined reach is believed to circulate through shallow zones and re-appears as rising groundwater downstream from Los Feliz Boulevard. Also, there is up to 3,000 AF of recharge from delivered water within the Los Angeles Narrows-Pollock Well Field area that adds to the rising groundwater conditions.

Rising groundwater also occurs above the Verdugo Wash Narrows, and in the unlined reach of the Los Angeles River upgradient from Gage F-57C-R. During dry periods, conditions in the unlined reach are stabilized with regard to percolation and rising water by releases of treated water. In above-normal rainfall years, rising groundwater values at Gage F-57C-R are closely related to increased rising groundwater leaving the Verdugo Basin past Gage F-252-R (Table 2-3). In 2004-05 flows of rising water at Gage F-252-R were estimated at 5,198 AF. For 2004-05 the total rising groundwater flow at Gage F-57C-R was estimated at 6,309 AF.

Field inspection during 1998-99 confirmed significant year-round unmetered flows of domestic irrigation runoff from residences, golf courses and other sites through the Sycamore Channel and several other storm drains north of Gage F-57C-R.

TABLE 2-3: ESTIMATED SEPARATION OF SURFACE FLOW AT STATIONS F-57C-R & F-252-R

(acre-feet)

Water Year	F-57C-R Rising Groundwater*	F-57C-R Waste Discharge	F-57C-R Storm Runoff	F-57C-R Total Outflow	F-252-R Rising Groundwater	F-252-R Storm Runoff	F-252-R Total Outflow
2004-05	6,309	70,828	423,293	500,430	5,198	31,874	37,072
2003-04	3,330	90,377	42,153	135,860	2,468	2,851	5,319
2002-03	3,869	75,159	106,862	185,890	3,167	5,183	8,350
2001-02	2,126	74,737	43,937	120,800	1,819	5,721	7,540
2000-01	3,000	91,795	94,065	188,860	1,500	6,370	7,870
1999-00	1,980	78,009	62,202	142,190	824	4,243	8,470
1998-99	2,000	72,790	39,110	113,900	1,000	2,534	7,250
1997-98	4,000	97,681	245,079	346,730	4,000	12,140	16,140
1996-97	3,000	75,827	76,485	155,312	3,000	13,860	16,860
1995-96	3,841	86,127	61,188	151,156	2,577	10,946	13,523
1994-95	4,900	66,209	367,458	438,567	4,809	28,881	33,696
1993-94	2,952	60,594	73,149	136,695	1,387	6,156	7,543
1992-93	4,900	77,000	478,123	560,023	3,335	20,185	23,520
1991-92	3,000	120,789	197,040	320,829	1,412	13,209	14,621
1990-91	3,203	75,647	117,779	196,629	1,157	6,865	8,022
1989-90	3,000	76,789	55,811	167,639	1,182	2,938	4,120
1988-89	3,000	80,020	56,535	136,843	1,995	4,453	6,448
1987-88	3,000	81,920	74,074	156,204	3,548	10,493	14,041
1986-87	3,000	64,125	19,060	83,295	2,100	1,690	3,790
1985-86	3,880	48,370	102,840	155,090	2,470	6,270	8,740
1984-85	3,260	21,600	46,300	71,160	2,710	3,970	6,680
1983-84	3,000	17,780	49,090	69,870	4,000	n/a	n/a
1982-83	3,460	17,610	384,620	405,690	5,330	21,384	26,714
1981-82	1,280	18,180	80,000	99,460	3,710	5,367	9,077
1980-81	4,710	19,580	51,940	76,230	5,780	2,917	8,697
1979-80	5,500	16,500	n/a	n/a	5,150	7,752	12,902
1978-79	2,840	16,450	119,810	139,100	2,470	n/a	n/a
1977-78	1,331	7,449	357,883	366,663	1,168	23,571	24,739
1976-77	839	7,128	58,046	66,013	1,683	2,635	4,318
1975-76	261	6,741	32,723	39,725	2,170	2,380	4,550
1974-75	427	7,318	56,396	64,141	1,333	4,255	5,588
1973-74	2,694	6,366	79,587	88,878	1,772	5,613	7,385
1972-73	4,596	8,776	100,587	113,959	1,706	7,702	9,408
1971-72	---	---	---	---	2,050	2,513	4,563

*Includes unaccounted water and the influence of treated waste water.

2.4 Groundwater Recharge

Precipitation has a marked influence on groundwater recharge and, with some delay, groundwater storage. Urban development in ULARA has resulted in a significant portion of the rainfall being collected and routed into lined channels that discharge into the Los Angeles River. To partially offset the increased runoff due to urbanization, Pacoima, Big Tujunga and Hansen Dams, originally built for flood control, are utilized to regulate storm flows and allow recapture of the flow in downstream spreading basins operated by the LACDPW and the City of Los Angeles.

The LACDPW operates the Branford, Hansen, Lopez, and Pacoima Spreading Grounds. The LACDPW, in cooperation with the City of Los Angeles, operates the Tujunga Spreading Grounds. The spreading grounds are primarily used for spreading native and imported water. Table 2-4 summarizes the spreading operations for the 2004-05 Water Year, Table 2-4A summarizes recharge since 1968-69 Water Year, and Plate 8 shows the locations of the spreading grounds.

TABLE 2-4: 2004-2005 SPREADING OPERATIONS IN THE SAN FERNANDO BASIN
(acre-feet)

Agency	Spreading Facility	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
LACDPW														
	Branford	128	25	135	532	243	120	90	61	46	43	14	11	1,448
	Hansen	2,090	1,240	2,430	5,750	3,960	5,620	5,570	2,520	11	1,370	1,680	1,060	33,301
	Lopez	0	313	2	39	36	250	0	206	63	31	0	0	940
	Pacoima	640	15	884	4,170	2,620	5,020	935	1,500	822	788	0	0	17,394
	Tujunga	542	0	499	3,760	961	3,820	3,720	3,240	4,120	453	0	0	21,115
	Total	**3,400**	**1,593**	**3,950**	**14,251**	**7,820**	**14,830**	**10,315**	**7,527**	**5,062**	**2,685**	**1,694**	**1,071**	**74,198**
City of Los Angeles														
	Tujunga	0	0	0	0	0	0	0	0	0	0	0	0	0
	Headworks	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Basin Total		**3,400**	**1,593**	**3,950**	**14,251**	**7,820**	**14,830**	**10,315**	**7,527**	**5,062**	**2,685**	**1,694**	**1,071**	**74,198**

TABLE 2-4A: ANNUAL SPREADING OPERATIONS IN THE SAN FERNANDO BASIN
1968-69 through 2004-05
(acre-feet)

Water Year	Los Angeles County Department of Public Works (Native)						City of Los Angeles (Imported)			GRAND TOTAL	Rainfall Weighted Average Valley/Mtns.
	Branford	Hansen	Lopez	Pacoima	Tujunga	TOTAL	Headworks	Tujunga	TOTAL		
2004-05	1,448	33,301	940	17,394	21,115	74,198	0	0	0	74,198	45.66
2003-04	444	6,424	144	1731	1322	10,065	0	0	0	10,065	12.21
2002-03	932	9,427	518	3,539	1,914	16,330	0	0	0	16,330	21.22
2001-02	460	1,342	0	761	101	2,664	0	0	0	2,664	6.64
2000-01	562	11,694	172	3,826	1,685	17,939	0	0	0	17,939	22.29
1999-00	468	7,487	578	2,909	2,664	14,106	0	0	0	14,106	16.77
1998-99	547	8,949	536	696	3,934	14,662	0	0	0	14,662	10.83
1997-98	641	28,129	378	20,714	11,180	61,042	0	77	77	61,119	38.51
1996-97	415	9,808	724	5,768	6,406	23,121	0	51	51	23,172	17.65
1995-96	345	8,232	363	4,532	7,767	21,239	0	0	0	21,239	14.48
1994-95	585	35,137	1,086	14,064	18,236	69,108	0	0	0	69,108	33.08
1993-94	462	12,052	182	3,156	4,129	19,981	0	0	0	19,981	11.86
1992-93	389	26,186	1,312	17,001	19,656	64,544	114	0	114	64,658	41.26
1991-92	653	15,461	1,094	12,914	9,272	39,394	230	0	230	39,624	32.39
1990-91	509	11,489	241	3,940	2,487	18,666	52	0	52	18,718	7.69
1989-90	327	2,029	90	1,708	0	4,154	0	0	0	4,154	9.55
1988-89	255	3,844	308	1,306	0	5,713	0	0	0	5,713	9.72
1987-88	352	17,252	1,037	4,520	0	23,161	0	0	0	23,161	21.36
1986-87	0	7,311	141	467	0	7,919	0	33	33	7,952	7.70
1985-86	290	18,188	1,735	6,704	0	26,917	0	1,433	1,433	28,350	23.27
1984-85	244	13,274	104	3,375	0	16,997	0	5,496	5,496	22,493	13.31
1983-84	213	10,410	0	3,545	0	14,168	0	24,115	24,115	38,283	11.18
1982-83	883	35,192	1,051	22,972	10,580	70,678	10	32,237	32,247	102,925	46.07
1981-82	345	14,317	243	5,495	0	20,400	3,853	0	3,853	24,253	20.16
1980-81	245	14,470	335	3,169	0	18,219	4,652	9,020	13,672	31,891	12.89
1979-80	397	31,087	1,097	15,583	0	48,164	5,448	19,931	25,379	73,543	33.66
1978-79	295	24,697	1,018	12,036	0	38,046	2,463	31,945	34,408	72,454	24.07
1977-78	2,142	28,123	445	20,472	12,821	64,003	3,200	18,247	21,447	85,450	44.84
1976-77	377	2,656	63	1,943	0	5,039	3,142	16	3,158	8,197	16.02
1975-76	470	3,128	562	1,308	0	5,468	3,837	5,500	9,337	14,805	14.20
1974-75	681	5,423	915	2,476	0	9,495	4,070	9,221	13,291	22,786	---
1973-74	672	6,287	946	2,378	0	10,283	6,205	0	6,205	16,488	---
1972-73	1,271	9,272	0	6,343	2,274	19,160	5,182	0	5,182	24,342	---
1971-72	161	1,932	0	1,113	0	3,206	7,389	0	7,389	10,595	---
1970-71	507	11,657	727	4,049	0	16,940	6,804	399	7,203	24,143	---
1969-70	674	11,927	0	1,577	2,380	16,558	11,021	0	11,021	27,579	---
1968-69	461	32,464	893	14,262	13,052	61,132	6,698	3,676	10,374	71,506	---
AVG.	544	14,326	540	6,750	4,134	26,294	2,010	4,362	6,372	32,666	

2.5 Groundwater Extractions

The original Trial Court adjudication of groundwater rights in ULARA restricted all groundwater extractions, effective October 1, 1968. On that date, total extractions in ULARA were restricted to approximately 104,040 AF/Y. This amounted to a reduction of approximately 50,000 AF from the previous six-year average. The State Supreme Court's opinion, as implemented on remand in the Judgment dated on January 26, 1979, restricts groundwater pumping within each basin, and by each party within each basin.

Figure 2.2 illustrates the imported water used in ULARA and annual groundwater extractions, beginning with the 1954-55 Water Year. It can be noted that for the 14 years prior to pumping restrictions (1954-55 to 1967-68), imports exceeded extractions by 50,000 to 90,000 AF/Y, in contrast to the past 37 years (1968-69 to 2004-05) where imports have exceeded extractions by 110,000 to 250,000 AF/Y.

A total of 77,995 AF were pumped from ULARA during the 2004-05 Water Year: 67,865 AF from the SFB, 4,253 AF from the Sylmar Basin, 5,669 AF from the Verdugo Basin, and 208 AF from the Eagle Rock Basin. The respective extraction rights for the 2004-05 Water Year were 99,709 AF (Native Safe Yield of 43,660 plus an import return credit of 56,049 AF) for the SFB; 6,510 AF for the Sylmar Basin; and 7,150 AF for the Verdugo Basin. Appendix A contains a summary of groundwater extractions for the 2004-05 Water Year, Plate 8 shows the locations of the well fields, and Plate 11 illustrates the pattern of groundwater extractions.

Of the total amount pumped in the SFB (67,865 AF), 63,275 AF constitutes extractions by Parties to the Judgment; 2,352 AF constitutes nonconsumptive use; and 1,238 AF were used for physical solutions, groundwater cleanup, testing/well development, and dewatering parties (Appendix E). Table 2-5 summarizes 2004-05 private party pumping in the SFB, and Plate 3 shows the locations of the individual producers.

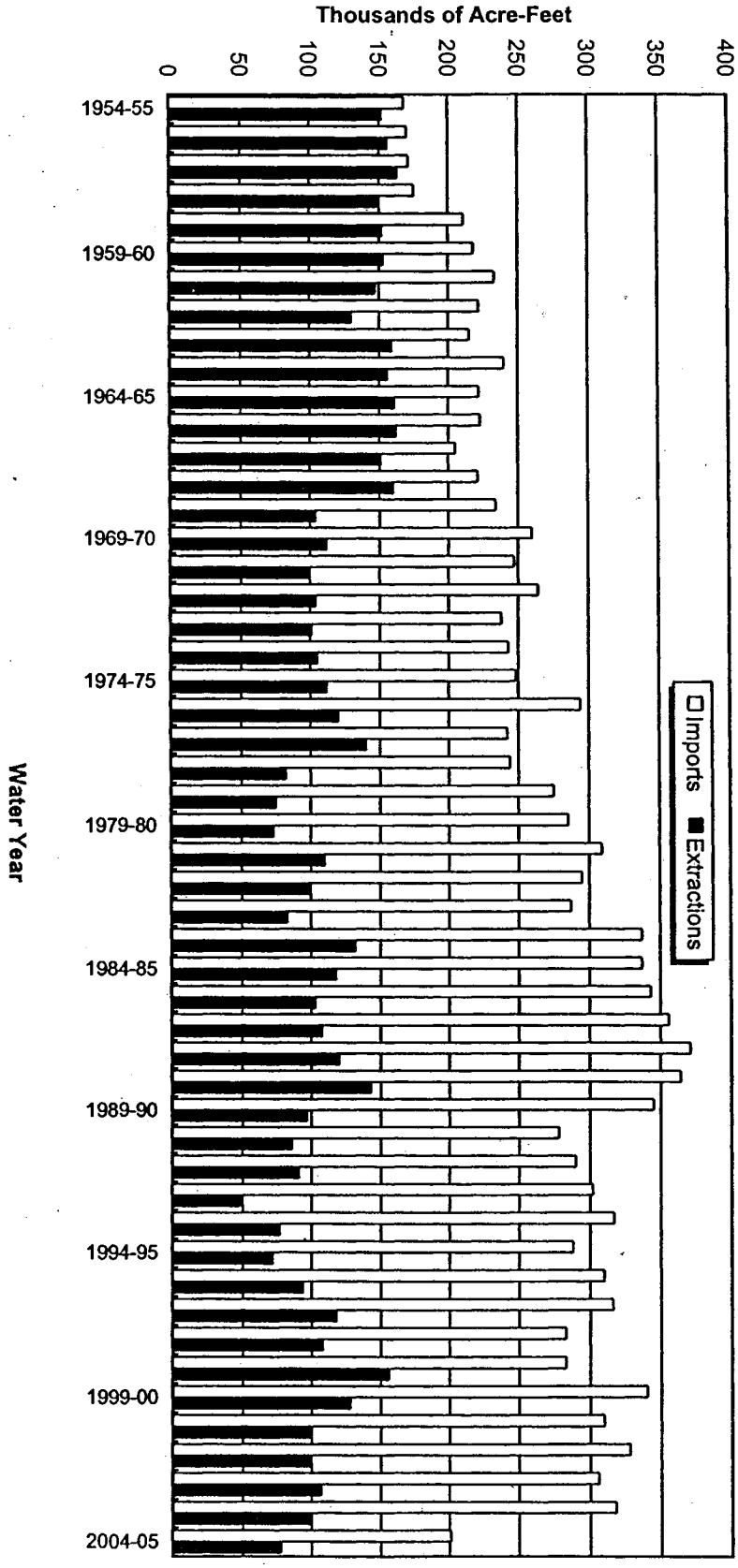


FIGURE 2.2 - YEARLY IMPORTS USED IN ULARA AND TOTAL ULARA EXTRACTIONS

TABLE 2-5: 2004-05 PRIVATE PARTY PUMPING - SAN FERNANDO BASIN

(acre-feet)

Nonconsumptive Use or Minimal Consumption		Groundwater Dewatering	
CalMat	3,351.41	Auto Stiegler	6.22
(Gravel washing)		(Charged to Los Angeles' water rights)	
Sears, Roebuck and Company	0	First Financial Plaza Site	75.09
(Air Conditioning; well disconnected 2000)		(Charged to Los Angeles' water rights)	
Sportsmens' Lodge	0.03	Trillium Corporation	26.45
Toluca Lake Property Owners	0.83	(Charged to Los Angeles' water rights)	
Walt Disney Productions	0	Metropolitan Transportation Agency	69.23
(3 wells inactive/ Not abandoned.)		(Charged to Los Angeles' water rights)	
		Metropolitan Water District (MWD)	193.90
		(Charged to Los Angeles' water rights)	
		North East Interceptor Sewer	0.64
		(Charged to Los Angeles' water rights)	
		Warner Properties Plaza 6 and 3	31.51
		(Charged to Los Angeles' water rights)	
Total	**3,352.27**	**Total**	**403.04**

Groundwater Cleanup		Physical Solution	
Boeing Santa Susana Field Lab	7.20	Forest Lawn Cemetery Assn.	311.90
(Charged to Los Angeles' water rights)		(Charged to Glendale's water rights)	
Raytheon (Hughes)	2.07	Hathaway (deMille)	43.46
(Charged to Los Angeles' water rights)		(Charged to Los Angeles' water rights)	
B.F.Goodrich (Menasco/Coltec)	0.43	Middle Ranch (deMille)	7.56
(Charged to Los Angeles' water rights)		(Charged to Los Angeles' water rights)	
Micro Matics USA, Inc.	3.57	Toluca Lake Property Owners	30.00
(Charged to Los Angeles' water rights)		(Charged to Los Angeles' water rights)	
Mobil Oil Corporation	0.58	Valhalla Memorial Park	295.35
(Charged to Los Angeles' water rights)		(Charged to Burbank's water rights)	
3M-Pharmaceutical	61.70	Waterworks District No. 21	43.53
(Charged to Los Angeles' water rights)		(Charged to Los Angeles' water rights)	
Tesoro	20.54	Water Licenses	0.76
(Charged to Los Angeles' water rights)		(Charged to Los Angeles' water rights)	
		Wildlife Waystation	5.84
		(Charged to Los Angeles' water rights)	
Total	**96.09**	**Total**	**738.40**
Total Extractions	**4,590**		

2.6 Imports and Exports of Water

Residential, commercial, and industrial expansions in ULARA have required the importation of additional water supplies to supplement that provided by the groundwater basins.

The imported supplies to ULARA are from the Los Angeles Aqueducts and the MWD. Los Angeles Aqueduct water consists of runoff from the Eastern Sierra Nevada and groundwater from Owens Valley. The MWD supplies consist of State Water Project and Colorado River Aqueduct waters.

Exports from ULARA include imported Los Angeles Aqueduct and MWD water (pass-through), and groundwater from the SFB. Exports of wastewater are by pipeline to Hyperion Treatment Plant.

Table 2-6 summarizes the imports and exports from ULARA during the 2003-04 and 2004-05 Water Years, and Figure 2.3 shows the monthly extractions and imports.

FIGURE 2.3 - TOTAL MONTHLY EXTRACTIONS AND GROSS IMPORTS

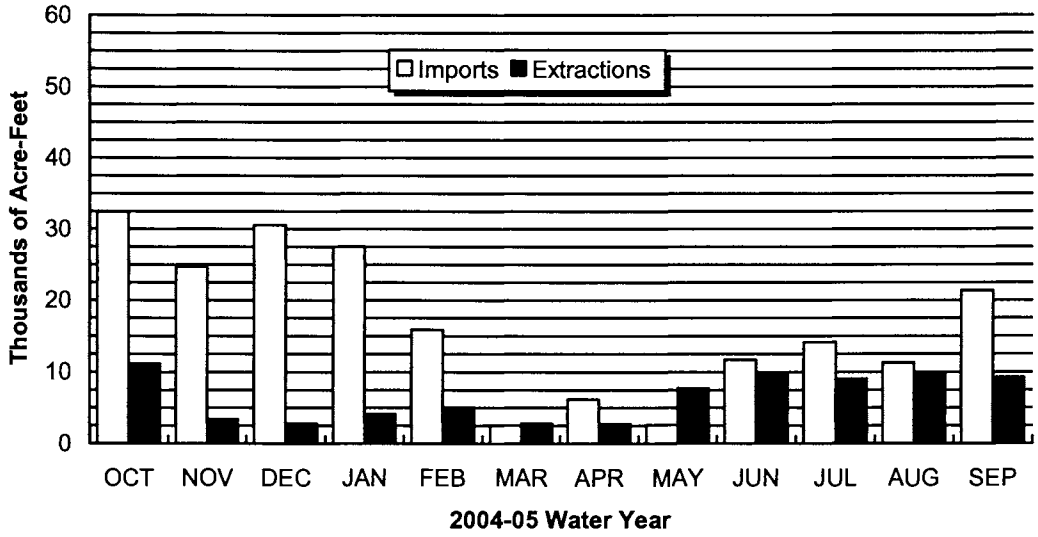


TABLE 2-6: ULARA WATER IMPORTS AND EXPORTS

(acre-feet)

Source and Agency	Water Year 2003-04	2004-05
Gross Imported Water		
Los Angeles Aqueduct		
City of Los Angeles	212,805	335,617
MWD Water		
City of Burbank	13,751	14,415
Crescenta Valley Water District	3,298	1,909
City of Glendale	24,546	21,233
City of Los Angeles [1]	338,529	168,687
La Canada Irrigation District [1]	1,408	1,197
Las Virgenes Municipal Water District [1]	8,532	7,449
City of San Fernando	508	500
MWD Total	**390,572**	**215,390**
Grand Total	**603,377**	**551,007**
Exported Water (Pass-Through)		
Los Angeles Aqueduct		
City of Los Angeles	97,546	168,898
MWD Water		
City of Los Angeles	174,944	70,121
Total	**272,490**	**239,019**
Net Imported Water	**330,887**	**311,988**

1. Deliveries to those portions of these agency service areas that are within ULARA.

2.7 Water Recycling

Water recycling presently provides a source of water for irrigation, industrial, and recreational uses. In the future, water recycling may provide water for groundwater recharge. Four wastewater reclamation plants are in operation in ULARA. The Las Virgenes Municipal Water District operates a water recycling facility outside ULARA but uses part of the treated water in ULARA. Table 2-7 summarizes the 2004-05 reclamation plant operations, and Plate 5 shows their locations.

TABLE 2-7: 2004-05 WASTEWATER RECYCLING OPERATIONS

(acre-feet)

Plant/Agency	Treated Water	Recycled Water Use	Recycled Water Use (%)	Recycled Water Delivered to SFB
City of Burbank	8,800	681 [1]	8%	681
Los Angeles-Glendale	16,321	2,999 [2]	18%	---
Los Angeles		1,888		19
Glendale		1,119		939
Donald C. Tillman	62,377	616 [3]	1%	0
The Independent Order of Foresters	N/R	N/R [4]		
Las Virgenes MWD		1,347		1,347
Total	**87,498**	**5,643**		**2,986**

1. Of the total recycled water (680.85 AF), 80.75 AF was delivered to the Burbank power plant. 600.1 AF was used by CalTrans, DeBell Golf Course and other landscape irrigation.
2. Of the total recycled water (2,999 AF), 1,111 AF was delivered to Glendale for use in Glendale's Power Plant and for irrigation water for CalTrans, Forest Lawn and Brand Park; 817 AF was for in plant use; 655 AF was delivered to Griffith Park by Los Angeles for irrigation; and 1,233 AF was used by CalTrans, Lake Side, Mt. Sinai Memorial Park, Forest Lawn 2, and Universal City MCA for irrigation.
3. Recycled water was for in plant use and then discharged to the Los Angeles River.
4. Recycled water is used for irrigation. N/R no response for 2004-05.

2.8 Water Level Elevations

The 2005 contour maps for the Spring (April) and the Fall (September) were produced by using the SFB Groundwater Flow Model. The SFB model was initially developed during the Remedial Investigation (RI) study of groundwater contamination in the San Fernando Valley. The RI study was funded through the EPA's Superfund program.

The model is comprised of up to four layers in the deepest portion of the eastern SFB, and includes 22,016 cells, ranging in size from 1,000 by 1,000 feet to 3,000 by 3,000 feet. The model parameters were calibrated by matching the simulated hydraulic-head fluctuations with the historical water level fluctuations measured at selected key monitoring wells for a 10-year period. The 2005 contours were simulated by incorporating the estimated monthly recharge (e.g. spread water, precipitation, etc.) and discharge (groundwater extractions, rising groundwater, etc.) values for the 2004-05 Water Year. The model was then run for twelve consecutive monthly stress periods beginning October 2004 through September 2005. The simulated head values at the end of the April and September 2005 stress periods were then plotted by utilizing groundwater contouring software.

The simulated Spring and Fall 2005 Groundwater Contour Maps are shown as Plates 9 and 10. These contours are intended to depict the general trend of groundwater flow for April and September 2005. Up-to-date groundwater elevations for specific locations can be obtained by contacting the Watermaster's Office at (213) 367-0921.

Plate 11 exhibits the change in groundwater elevation from the Fall of 2004 to the Fall of 2005. The increase in groundwater levels in the north portion of the SFB, specifically near the Hansen Spreading Grounds, is attributed to the increased volume of Native Runoff water spread at Hansen, 33,301 AF compared to the previous year of 2003-04 when 6,424 AF were spread. The groundwater levels in the vicinity of Pacoima Spreading Grounds increased by about 50 feet from the previous year. The water spread at Pacoima increased by about 15,663 AF compared to the 2003-04 Water Year.

The 30-44 foot recovery in groundwater levels near the Rinaldi-Toluca and North Hollywood Well Field areas is primarily attributed to increased recharge in upgradient spreading grounds and decreased groundwater extractions. Extractions for these two well fields decreased by 44 percent from 2003-04 to 2004-05 (40,652 AF to 22,972 AF). The area near the Tujunga Well Field shows an increase in groundwater levels, as much as 50 feet, due to an increase in recharge in upgradient spreading grounds and specifically at the nearby Tujunga Spreading

Grounds (TSG) where the recharge of TSG increased by about 20,851 AF between 2003-04 and 2004-05 (264 AF to 21,115 AF) and also due to reduced pumping at the Tujunga Well Field by about 1,503 AF from 2003-04 to 2004-05 (17,310 AF to 15,807 AF). The vicinity of the Burbank Operable Unit (BOU) shows an increase in groundwater levels of approximately 16 feet as a result of increased recharge in the basin and reduced pumping at BOU. Extraction from this well field decreased by about 34 percent between 2003-04 and 2004-05 (9,660 AF to 6,398 AF). In general, the SFB shows a rebound in groundwater levels as a result of low pumping, high artificial recharge, and high precipitation.

Figure 2.4 shows historic well hydrographs of wells throughout ULARA and their locations.

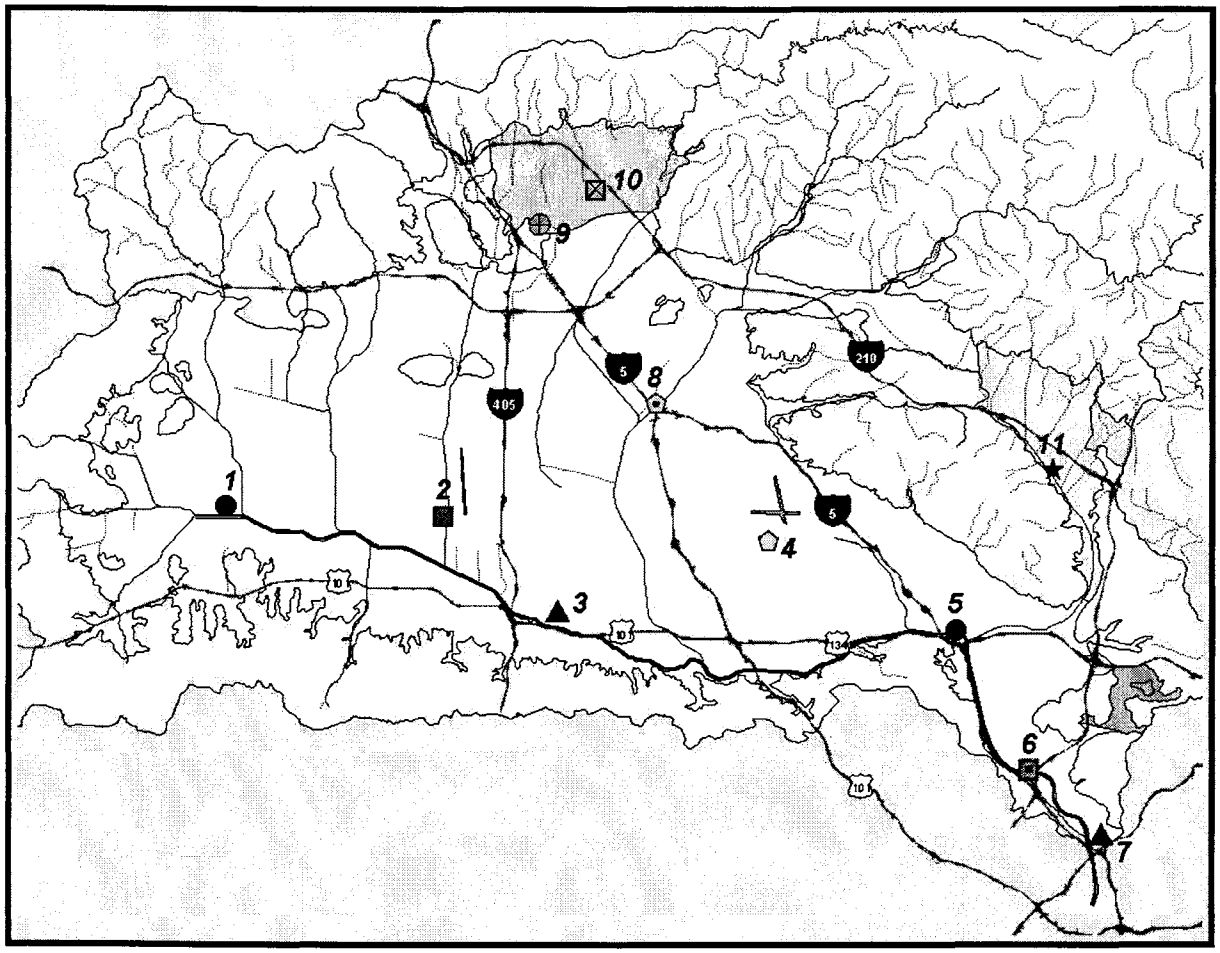
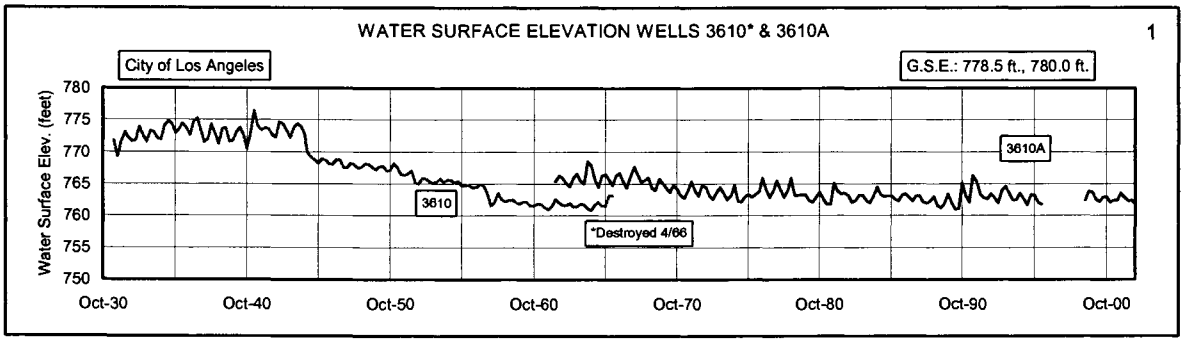
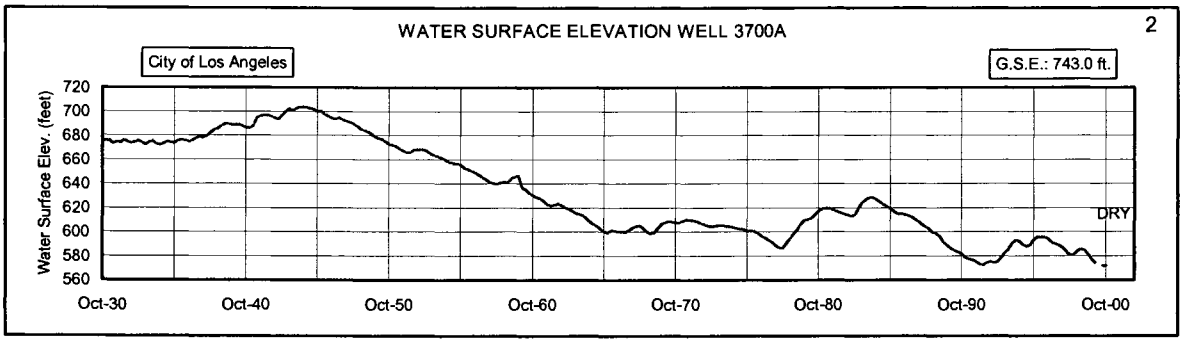
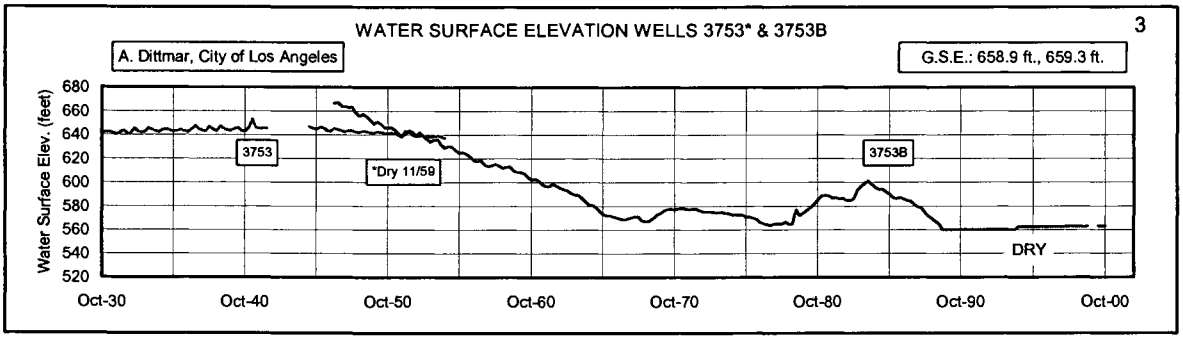


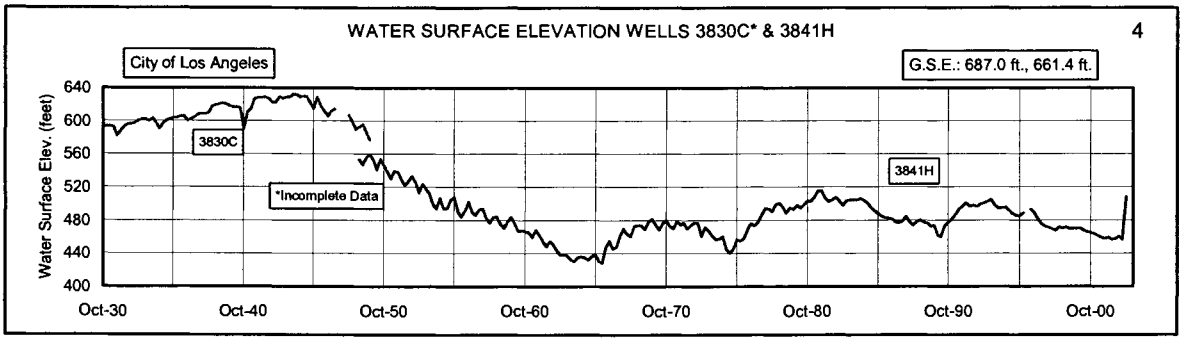
FIGURE 2.4 HYDROGRAPHS AND LOCATIONS OF WELLS THROUGHOUT ULARA

SAN FERNANDO BASIN

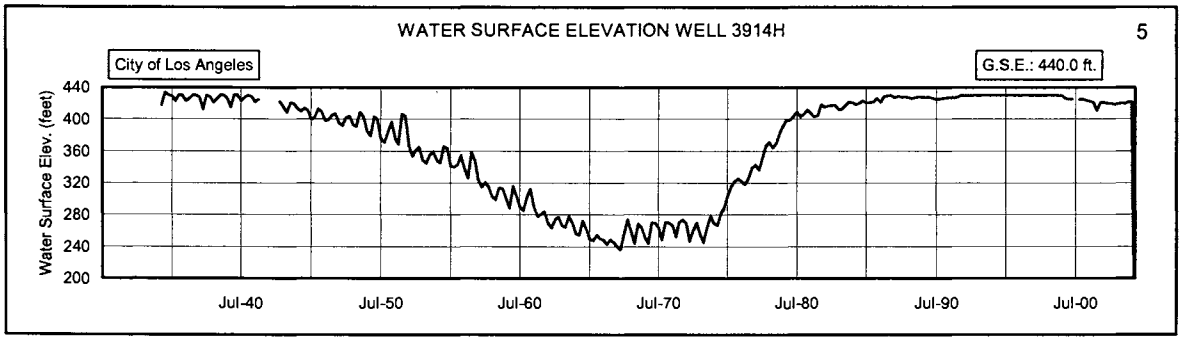


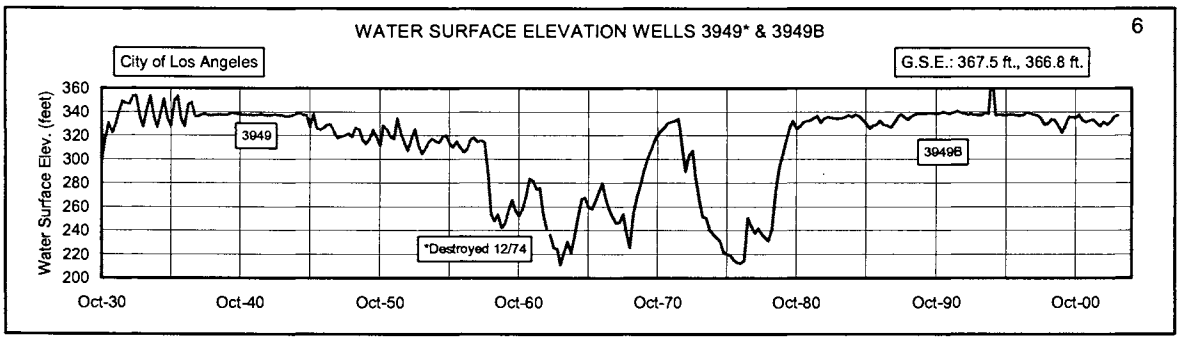


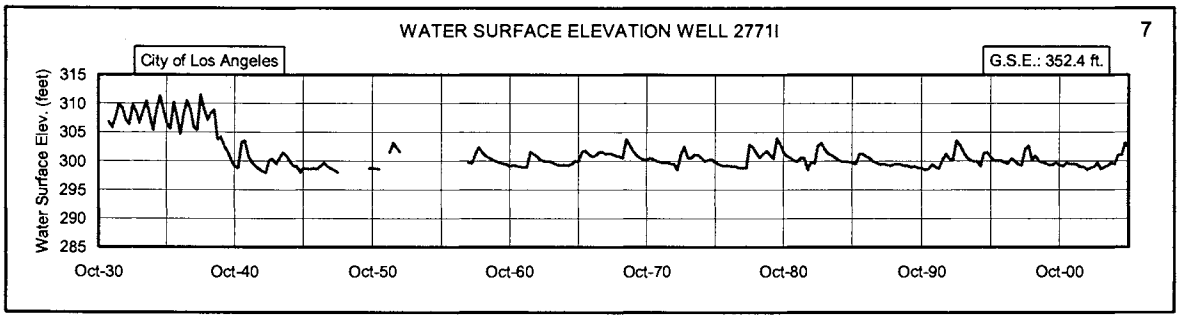


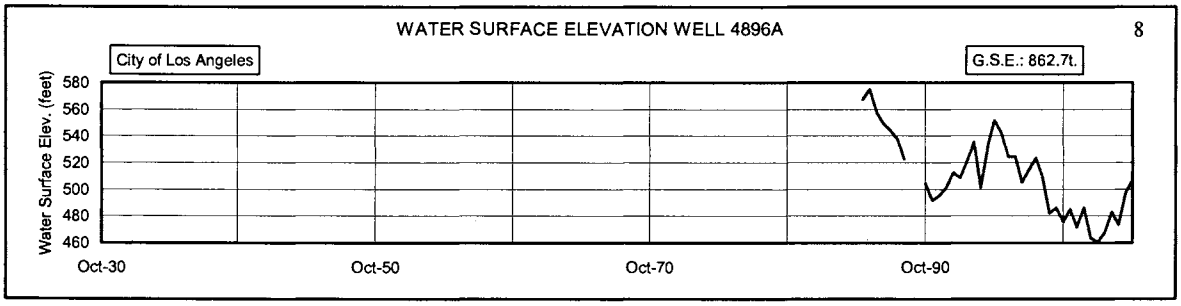


SAN FERNANDO BASIN

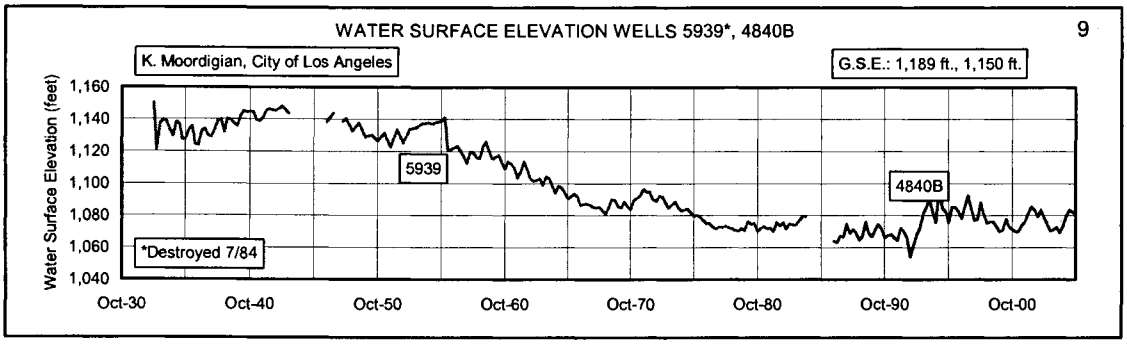


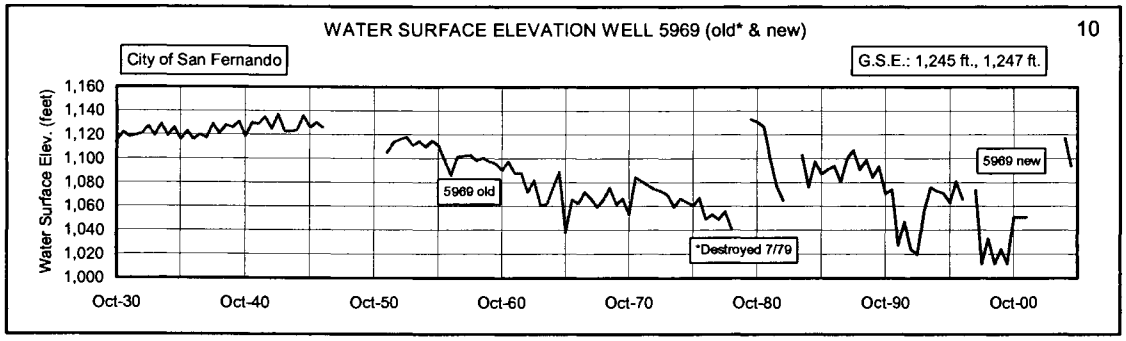






SYLMAR BASIN





VERDUGO BASIN

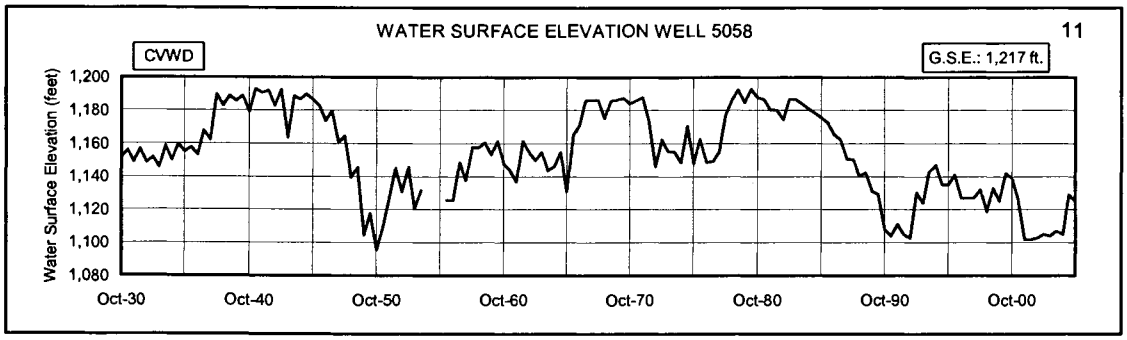


TABLE 2-8: CHANGE IN GROUNDWATER STORAGE SAN FERNANDO BASIN

Water Year	Valley Floor Precipitation (in)	Artificial Recharge (acre-feet)	Change in Storage (acre-feet)	Cumulative Change in Storage (acre-feet)	Pumping (acre-feet)
2004-05	42.64	74,198	66,476	150,895	67,865
2003-04	9.52	10,065	(22,367)	84,419	89,346
2002-03	19.41	16,330	(15,835)	106,786	95,431
2001-02	5.95	2,664	(27,094)	122,621	87,992
2000-01	19.52	17,939	(6,930)	149,715	86,946
1999-00	14.84	14,106	(31,044)	156,645	116,357
1998-99	9.81	14,662	(82,673)	187,689	141,757
1997-98	37.04	61,119	44,113	270,362	94,682
1996-97	15.17	23,172	(35,737)	226,249	105,899
1995-96	12.03	21,239	(49,223)	261,986	82,862
1994-95	33.36	69,108	79,132	311,209	58,121
1993-94	10.19	19,981	(22,238)	232,077	62,990
1992-93	36.62	64,658	106,317	254,315	36,419
1991-92	30.05	39,624	411	147,998	76,213
1990-91	14.38	18,718	(14,122)	147,587	71,065
1989-90	8.20	4,154	(29,941)	161,709	81,466
1988-89	9.12	5,713	(30,550)	191,650	127,973
1987-88	18.62	23,161	(5,000)	222,200	105,470
1986-87	5.99	7,952	(31,940)	227,200	91,632
1985-86	20.27	28,350	(7,980)	259,140	86,904
1984-85	11.00	22,493	(31,690)	267,120	101,591
1983-84	9.97	38,283	(63,180)	298,810	115,611
1982-83	39.64	102,925	121,090	361,990	68,394
1981-82	17.18	24,253	(530)	240,900	84,682
1980-81	11.04	31,891	(32,560)	241,430	92,791
1979-80	30.25	73,543	99,970	273,990	58,915
1978-79	21.76	72,454	78,080	174,020	59,843
1977-78	35.43	85,450	136,150	95,940	66,314
1976-77	14.19	8,197	(50,490)	(40,210)	125,445
1975-76	9.90	14,805	(30,090)	10,280	103,740
1974-75	14.74	22,786	(22,580)	40,370	95,830
1973-74	15.75	16,488	(21,820)	62,950	88,017
1972-73	20.65	24,342	17,020	84,770	82,004
1971-72	8.10	10,595	(17,090)	67,750	84,140
1970-71	15.57	24,143	15,340	84,840	79,010
1969-70	10.50	27,579	(9,740)	69,500	88,856
1968-69	29.00	71,506	79,240	79,240 [1]	84,186
37 Year Average	**18.58**	**32666**	**4078**		**87,750**

1. Accumulation of storage begun as of October 1, 1968.

2.9 Groundwater Storage

San Fernando Basin

The total groundwater storage capacity of the SFB was calculated by the State Water Rights Board in the Report of Referee to be approximately 3.2 million AF.

Each year, the change in storage is evaluated in three ways – between the most recent and the previous water year; for the cumulative change since Safe Yield Operation began in 1968; and, for the cumulative change since the beginning year of 1928.

In Fall 1968, following the Trial Court Judgment, Safe Yield Operation was instituted to halt the overdraft in groundwater levels that began in 1954 (Plate 13). Methodology established by the State Water Rights Board was used to derive a regulatory storage requirement of 360,000 AF for the SFB that considered normal wet-dry cycles, operational flexibility, and pumping based on the calculated safe yield. The upper boundary of 210,000 AF above the 1954 level was based on the need to prevent excess rising groundwater from leaving the basin, and the lower boundary of 150,000 AF below the 1954 level provided storage space for wet years. Ideally, the basin should be operated between the upper and lower boundaries of the regulatory storage range.

Plate 13 illustrates a 25-year overall decline in storage below the regulatory storage range beginning in approximately 1980. The trend becomes clearer when the temporary effects of above-normal rainfall years of 1982-83, 1992-93, 1994-95, 1997-98, and 2004-05 are excluded. Probable causes of this decline include increased urbanization and runoff leaving the SFB, reduced artificial recharge, and pumping in excess of long-term recharge.

The calculated change in storage in the SFB between 2003-04 and 2004-05 is +66,476 AF (Table 2-8). As indicated by the blue line on Plate 13, there has been an increase in storage of 150,895 AF since 1968, but an overall decline in storage of 504,475 AF since 1928.

In addition, since Fall 1978 there has been an accumulation of 410,033 AF of Stored Water Credits by the Cities of Los Angeles, Glendale, and Burbank through in-lieu activities (leaving groundwater in storage rather than pumping it). Stored groundwater can be extracted by the parties in excess of annual pumping rights with the approval of the Watermaster. If this groundwater had been pumped instead of stored, the cumulative change in storage since 1928 would be -914,508 AF. As indicated by the red line on Plate 13, the basin would be below the

beginning of Safe Yield Operation that began in 1968. Clearly, groundwater recharge in the SFB is not keeping pace with pumping rights.

The Watermaster is required to continue evaluating the change in groundwater storage and the safe yield within ULARA, to notify the parties and the Court of significant changes, and to consider corrective measures for the future if the imbalance continues. In accordance with his duties, the Watermaster has begun discussions with the Cities regarding this imbalance, and informed the Court on February 13, 2006 (Appendix G).

On a positive note, there is more than 500,000 AF of storage space available in the SFB. This storage can be used to capture additional native water or imported supplies during wet years. Basin storage space is a valuable resource, and the Watermaster Office supports its wise use for the benefit of the public.

Sylmar Basin

The groundwater storage capacity of the Sylmar Basin is approximately 310,000 AF. The estimated change in storage from 2003-04 to 2004-05 is +6,694 AF, and the cumulative change in storage from 1968-69 through 2004-05 is +2,895 AF.

Verdugo Basin

The groundwater storage capacity of the Verdugo Basin is approximately 160,000 AF. The estimated change in storage for 2004-05 compared to 2003-04 is +9,838 AF, and the cumulative change in storage from 1968-69 through 2004-05 is -8,551 AF.

The long-term decline in Verdugo Basin groundwater was partially reversed by the heavy rains of 2004-05. It will not be known until next year's calculations how long the increase will last. The probable causes of the decline seen in the past years include increased urbanization and runoff leaving the basin, and a significant reduction in groundwater recharge from cesspools and septic systems following the installation of sewers beginning in the 1980s. An evaluation of the basin is currently underway. The study on stormwater storage and conjunctive use was completed in May 2005 and the geophysical study is in progress.

Eagle Rock Basin

The estimated change in storage from 2003-04 to 2004-05 is +189 AF.

2.10 Water Supply and Disposal - Basin Summaries

Tables 2-9A, 2-9B, 2-9C, and 2-9D summarize water supply and disposal in the San Fernando, Sylmar, Verdugo, and Eagle Rock basins, respectively. Outflows are based on computations made by the State Water Rights Board in the Report of Referee.

2.11 Extraction Rights and Stored Water Credit - Basin Summaries

San Fernando Basin

Tables 2-10A and 2-11A show the calculation of SFB extraction rights for the 2004-05 Water Year and Stored Water Credit (as of October 1, 2004) for the Cities of Burbank, Glendale, and Los Angeles. All rights are based on the City of Los Angeles vs. City of San Fernando, et al., Judgment, dated January 26, 1979.

Sylmar Basin

Tables 2-10B and 2-11B show the calculation of Sylmar Basin extraction rights for the 2004-05 Water Year and Stored Water Credit (as of October 1, 2005) for the Cities of Los Angeles and San Fernando. All rights are based on the March 22, 1984 stipulation between the City of San Fernando and the City of Los Angeles and the action by the Administrative Committee on July 16, 1996 to temporarily increase the safe yield from 6,210 AF/Y to 6,510 AF/Y. The temporary increase has expired and is being re-evaluated.

Verdugo Basin

Glendale and CVWD have rights to extract 3,856 and 3,294 AF/Y respectively. Glendale has not pumped its full right since the Judgment was entered. In the past, CVWD has extracted in excess of its right with the permission of Glendale and the approval of the Watermaster. During the 2004-05 Water Year, CVWD unexpectedly pumped 16 AF above its adjudicated right without Glendale's consent or approval by the Watermaster. CVWD, Glendale, and the Watermaster are working to resolve the issue.

Los Angeles has a right to extract its Import Return Flows in the Verdugo Basin, but has never exercised its right.

There are no Stored Water Credits in the Verdugo Basin.

Eagle Rock

Los Angeles has the right to extract, or cause to be extracted, the entire safe yield of the basin that consists mostly of return flows of delivered water by Los Angeles. Los Angeles does not pump groundwater from the Eagle Rock Basin. DS Waters, as successor to Sparkletts and Deep Rock, has a physical solution right to extract groundwater to supply its bottled drinking water facility. DS Waters pumped 208 AF in the 2004-05 Water Year.

TABLE 2-9A: SUMMARY OF 2004-05 WATER SUPPLY AND DISPOSAL SAN FERNANDO BASIN

(acre-feet)

Water Source and Use	City of Burbank	City of Glendale	City of Los Angeles	City of San Fernando	All Others	Total
Extractions						
Municipal Use	6,399	7,792	49,085	---	0	63,276
Basin Account		0	0	---	0 [1]	0
Physical Solution	295 [2]	312 [2]	38	---	94 [7]	738
Cleanup/Dewaterers	---	---	499	---	---	499
Non-consumptive Use	---	---	---	---	3,352	3,352
Total	**6,694**	**8,104**	**49,622**	**0**	**3,446**	**67,865**
Imports						
LA Aqueduct Water	---	---	335,617	---	---	335,617
MWD Water	14,415	21,233	141,572	455	7,449 [3]	185,123
MWD Water (LA 17)			23,484			23,484
Groundwater from						
Sylmar Basin	---	---	1,110	2,860	---	3,970
Verdugo Basin		700				700
Total	**14,415**	**21,933**	**501,783**	**3,315**	**7,449**	**548,894**
Delivered Reclaimed Water	681	939	19 [4]	0	1,347 [3]	2,986
Exports						
LA Aqueduct Water						
out of ULARA	---	---	168,898	---	---	168,898
to Verdugo Basin			514			514
to Sylmar Basin			7,157			7,157
to Eagle Rock Basin	---	---	314	---	---	314
MWD Water						
out of ULARA	---	---	70,121	---	---	70,121
to Verdugo Basin	---	2,916	220	---	---	3,136
to Sylmar Basin	---	---	3,067	---	---	3,067
to Eagle Rock Basin			135			135
Groundwater	41 [5]	325 [5]	44,586	---	---	44,951
Total	**41**	**3,240**	**295,011**	**0**	**0**	**298,292**
Delivered Water						
Hill & Mountain Areas	---	---	48,330	---	---	48,330
Total - All Areas	21,749	27,735	256,412	3,315	12,242	321,453
Water Outflow						
Storm Runoff (Sta. F-57	---	---	---	---	423,293	423,293
Subsurface	---	---	---	---	407	407
Sewage	2,624	18,031	76,275	2,537	---	99,467
Reclaimed Water to						
the LA River	8,119	324	49,313	---	---	57,756
Hyperion		621 [6]	20,260 [6]			20,881
Total	**10,743**	**18,976**	**145,848**	**2,537**	**423,700**	**601,804**

1. Basin Account water for Burbank.
2. Includes Valhalla (Burbank) and Forest Lawn (Glendale).
3. Las Virgenes Municipal Water District.
4. LA total recycled water is 1,888 AF of which 19 AF were delivered to valley fill and 1,869 delivered to hill/mountains.
5. Glendale OU and Burbank OU treated groundwater discharged to Los Angeles River.
6. Water discharged from Tillman and LA-Glendale plants. Annual cities' portion from LAG based on proportion of reclaimed water.
7. Pumping from Hill and Mountain areas tributary to SFB.

TABLE 2-9B: SUMMARY OF 2004-05 WATER SUPPLY AND DISPOSAL SYLMAR BASIN

(acre-feet)

Water Source and Use	City of Los Angeles	City of San Fernando	All Others	Total
Total Extractions	1,110	3,143	0 [1]	4,253
Imports				
LA Aqueduct Water	7,157	--	--	7,157
MWD Water	3,067	45	--	3,112
Total	**10,225**	**45**	**0**	**10,270**
Exports - Groundwater to San Fernando Basin	1,110	2,860	0	3,970
Total Delivered Water	10,225	328	0	10,553
Water Outflow				
Storm Runoff	5,000 [2]			5,000
Subsurface	560 [3]	--	--	560
Sewage	830 [3]	45	--	875
Total	**6,390**	**45**	**0**	**6,435**

1. Pumping for landscape irrigation by Santiago Estates. The well was capped in 1999.
2. Surface outflow is not measured. Estimate based on Mr. F. Laverty – SF Exhibits 57 and 64.
3. Estimated in the Report of Referee.

TABLE 2-9C: SUMMARY OF 2004-05 WATER SUPPLY AND DISPOSAL VERDUGO BASIN

(acre-feet)

Water Source and Use	Crescenta Valley Water District	City of Glendale	La Canada Irrigation District	City of Los Angeles	Other	Total
Total Extractions	3,302	2,358	---	---	9 [1]	5,669
Imports						
LA Aqueduct Water	---	---	---	514		514
MWD Water	1,909	2,916	1,197	220		6,242
Total	1,909	2,916	1,197	734		6,755
Exports to San Fernando Basin	0	700	0	0		700
Delivered Reclaimed Water		180				180
Total Delivered Water	5,212	4,754	1,197	734	9	11,905
Water Outflow						
Storm Runoff (Sta. F-252) [3]					37,072	37,072
Subsurface to:						
Monk Hill Basin	---	---	---	---	300	300 [2]
San Fernando Basin	---	---	---	---	80	80 [2]
Sewage	692	1,321	0	473		2,486
Total	**692**	**1,321**	**0**	**473**	**37,452**	**39,938**

1. Private party extractions.
2. Estimated.
3. Includes rising groundwater.

TABLE 2-9D: SUMMARY OF 2004-05 WATER SUPPLY AND DISPOSAL EAGLE ROCK BASIN

(acre-feet)

Water Source and Use	City of Los Angeles	DS Waters	Total
Total Extractions	0	208 [1]	208
Imports			
LA Aqueduct Water from SFB	314	--	314
MWD Water (25+35) from SFB	135		135
MWD Water (17)	27,115		27,115
Groundwater from SFB	0	--	0
Total	**27,564**	**0**	**27,564**
Exports			
MWD Water (17) to SFB	23,484		23,484
Groundwater	0	208	208
Total	**23,484**	**208**	**23,692**
Total Delivered Water	4,080	0	4,080
Water Outflow			
Storm Runoff	--	--	-- [4]
Subsurface	50 [2]	--	50
Sewage	1,940 [3]	0	1,940
Total	**1,990**	**0**	**1,990**

1. DS Waters (formed by the merger of Suntory/Deep Rock Water Co. and McKesson/Danone Water Products) is allowed to pump as successor to Deep Rock and Sparkletts, under a stipulated agreement with the City of Los Angeles and export equivalent amounts.
2. Estimated in Supplement No. 2 to Report of Referee.
3. Estimated.
4. Not quantified.

TABLE 2-10A: CALCULATION OF 2005-06 EXTRACTION RIGHTS SAN FERNANDO BASIN

(acre-feet)

	City of Burbank	City of Glendale	City of Los Angeles
Total Delivered Water, 2004-05	21,749	27,735	256,412
Water Delivered to Hill and Mountain Areas, 2004-2005	---	---	48,330
Water Delivered to Valley Fill, 2004-2005	21,749	27,735	208,082
Percent Recharge Credit	20.0%	20.0%	20.8%
Return Water Extraction Right	4,350	5,547	43,281
Native Safe Yield Credit	---	---	43,660
Total Extraction Right for the 2005-2006 Water Year[1]	**4,350**	**5,547**	**86,941**

1. Does not include Stored Water Credit and Physical Solution.

TABLE 2-10B: CALCULATION OF 2005-06 EXTRACTION RIGHTS SYLMAR BASIN

(acre-feet)

	City of Los Angeles	City of San Fernando	All Others
Extraction Right for the 2005-2006 Water Year[1]	3,255	3,255	--- [2]

1. Does not include Stored Water Credit. The safe yield of the Sylmar Basin was increased to 6,510 AF/YR effective 7/16/1996. Effective October 1, 1984 safe yield less pumping by Santiago Estates is equally shared by Los Angeles and San Fernando.
2. Santiago Estates (Home Owners Group) stopped pumping in 1999.

TABLE 2-11A: CALCULATION OF STORED WATER CREDIT SAN FERNANDO BASIN

(acre-feet)

	City of Burbank	City of Glendale	City of Los Angeles
1. Stored Water Credit (as of October 1, 2004)	22,038	66,201	286,846
1a. Credits and debits.			(248) [1]
2. Extraction Right for the 2004-05 Water Year	4,847	6,006	88,856
3. 2004-05 Extractions			
Party Extractions	6,399	7,792	49,085
Physical Solution Extractions	295	312	131
Clean-up/Dewaterers			499
Total	6,694	8,104	49,715
4. Total 2004-05 Spread Water	0	0	0
5. Stored Water Credit [2] (as of October 1, 2005)	**20,191**	**64,103**	**325,739**

1. City of Los Angeles debited for loss of rising water at Pollock. See Appendix H.
2. Item 5 = 1 +1a + 2 – 3 + 4.

TABLE 2-11B: CALCULATION OF STORED WATER CREDIT SYLMAR BASIN

(acre-feet)

	City of Los Angeles	City of San Fernando
1. Stored Water Credit (as of October 1, 2004)	6,303	227
2. Extraction Right for the 2004-05 Water Year [1]	3,255	3,255
3. Total 2004-05 Extractions	1,110	3,143
Santiago Estates[2]	0.0	0.0
4. Stored Water Credit[3] (as of October 1, 2005)	**8,448**	**339**

1. The safe yield of the Sylmar Basin was increased to 6,510 AF/YR as of 7/16/1996.
2. Santiago Estates pumping is equally taken from the rights of San Fernando and Los Angeles. Santiago Estates capped well in 1999.
3. Item 4 = 1 + 2 - 3

3. WATER QUALITY, TREATMENT, AND REMEDIAL INVESTIGATION ACTIVITIES

3. WATER QUALITY, TREATMENT, AND REMEDIAL INVESTIGATION ACTIVITIES

3.1 Water Quality

Imported Water

1. *LOS ANGELES AQUEDUCT* water is sodium bicarbonate in character and is the highest quality water available to ULARA. Its Total Dissolved Solids (TDS) concentration averaged about 210 parts per million (ppm) for 30 years before 1969. The highest on record was 320 ppm on April 1, 1946. TDS concentration on May 17, 2005 was 267 ppm.

2. *COLORADO RIVER* water is predominantly sodium-calcium sulfate in character, changing to sodium sulfate after treatment to reduce total hardness. Samples taken at the Burbank turnout between 1941 and 1975 indicated a high TDS concentration of 875 ppm in August 1955 and a low of 625 ppm in April 1959. The average TDS concentration over the 34-year period was approximately 740 ppm. Tests conducted at Lake Matthews showed an average TDS concentration of 625 ppm for Fiscal Year 2005.

3. *NORTHERN CALIFORNIA* water (State Water Project) is sodium bicarbonate-sulfate in character. It generally contains less TDS and is softer than local and Colorado River water. Since its arrival in Southern California in April 1972, the water has had a high TDS concentration of 410 ppm and a low of 247 ppm. Tests conducted at the Joseph Jensen Filtration Plant showed an average TDS concentration of 267 ppm during Fiscal Year 2005.

4. *COLORADO RIVER/NORTHERN CALIFORNIA* water were first blended at the Weymouth Plant in May 1975. Blending ratios vary, and tests are taken from the effluent. Tests conducted at the Weymouth Plant showed an average TDS concentration of 467 ppm during Fiscal Year 2005.

Surface Water

Surface runoff contains salts dissolved from rocks in the tributary areas and is sodium-calcium, sulfate-bicarbonate in character. The most recent tests taken in September 1995 from flows in the Los Angeles River at the Arroyo Seco showed a TDS concentration of 666 ppm and a total

hardness of 270 ppm. These values also reflect the inclusion of rising groundwater in the Los Angeles River between Los Feliz Blvd. and Gage F-57C-R.

Chlorides in Surface Water

In 1997 the RWQCB Amended Resolution No. 90-04 was rescinded by Resolution No. 97-02 on chlorides. Water quality objectives for chloride for certain surface waters were revised to accommodate fluctuations in chloride concentrations that may be caused by future droughts. The Amendment to the Water Quality Control Plan to Incorporate a Policy for Addressing Levels of Chloride in Discharges of Wastewaters for ULARA in the Waterbody – Los Angeles River - between Sepulveda Flood Control Basin and Figueroa Street (including Burbank Western Channel only) currently has a maximum of 190 ppm. Chloride levels are reported in Appendix D.

Nitrogen in Surface Water

The Regional Board has ordered the cities of Burbank and Los Angeles as part of a TMDL program to determine the source of nitrogen in the Los Angeles River either from stormwater or rising groundwater entering the river. The Los Angeles City Bureau of Sanitation and the City of Burbank have contracted with a consultant to conduct the first phase of the study.

Groundwater

Groundwater in ULARA is moderately hard to very hard. The character of groundwater from the major water-bearing formations is of two general types, each reflecting the composition of the surface runoff in the area. In the western part of ULARA, it is calcium sulfate-bicarbonate in character, while in the eastern part, including Sylmar and Verdugo Basins, it is calcium bicarbonate in character.

Groundwater is generally within the recommended limits of the California Title 22 Drinking Water Standards, except for: 1) areas of the eastern SFB where high concentrations of Trichloroethylene (TCE), Tetrachloroethylene (PCE), Hexavalent Chromium, and nitrates are present; 2) areas in the western end of the SFB having excess concentrations of sulfate and TDS; and 3) areas within the Verdugo Basin that have high concentrations of nitrate. In each area the groundwater delivered is either being treated or blended to meet State Drinking Water Standards.

A history of the TDS content and mineral analyses of imported, surface, and groundwater is contained in Appendix D.

3.2 Groundwater Quality Management Plan

During the 2004-05 Water Year, the Interagency Coordinating Committee continued to implement the recommendations of the "Groundwater Quality Management Plan - San Fernando Valley Basins" issued in July 1983. The objective of this effort is to protect and improve the quality of stored water held in ULARA. Special emphasis is placed on monitoring and removing the organic contaminants TCE and PCE found in the groundwater. Table 3-1 summarizes the number of ULARA wells that are contaminated at the indicated levels above the Maximum Contaminant Level (MCL) of the California Drinking Water Standards of 5 parts per billion (ppb) for TCE and 5 ppb for PCE.

TABLE 3-1: 2004-05 NUMBERS OF WELLS IN THE ULARA WELL FIELDS EXCEEDING STATE MCL FOR TCE AND PCE

	Number of Wells													
	City of Los Angeles[3]									Sub-	Others[3]			Grand
Total Number of	NH	RT	P	HW	E	W	TJ	V	AE	Total	B	G	C	Total
Wells in Well Field[2]	35	15	3	4	7	8	12	5	7	96	16	13	12	137
Number of Wells Exceeding Contaminant Level[1]														
TCE Levels ppb														
5-20	0	5	1	-	0	3	7	0	1	**17**	0	0	0	**17**
20-100	0	0	0	-	0	0	3	0	4	**7**	7	3	0	**17**
>100	0	0	0	-	0	0	0	0	2	**2**	8	4	0	**14**
Total	0	5	1	-	0	3	10	0	7	**26**	15	7	0	**48**
PCE Levels ppb														
5-20	1	4	1	-	0	2	6	0	5	**19**	1	3	0	**23**
20-100	0	0	0	-	0	0	0	0	2	**2**	3	3	0	**8**
>100	0	0	0	-	0	0	0	0	0	**0**	11	1	0	**12**
Total	1	4	1	-	0	2	6	0	7	**21**	15	7	0	**43**

1. Wells are categorized based upon maximum TCE and PCE values measured during the 2004-05 Water Year. No data was available for some old inactive wells.
2. Includes active, inactive, and stand-by wells.
3. Well Fields:
   - NH - North Hollywood
   - P - Pollock
   - HW - Headworks
   - E - Erwin
   - W - Whitnall
   - TJ - Tujunga
   - V - Verdugo
   - AE - LADWP Aeration Tower Wells
   - B - City of Burbank
   - G - City of Glendale
   - C - Crescenta Valley Water District

3.3 Underground Tanks, Sumps, and Pipelines

The City of Los Angeles Fire Department (LAFD) continues to implement the State-mandated Underground Storage Tank (UST) Program and is actively conducting a program to bring the large number of underground tanks in the San Fernando Valley into compliance with current law. During the 2004-05 Water Year, a total of 32 sites were remediated under the direction of the LAFD. Currently, the Environmental Unit of the LAFD is monitoring the remediation of 74 sites.

The main focus of the LAFD UST Program in ULARA has been the monitoring and removal of gasoline, diesel, and their related constituents from the soil, to prevent contamination of the underlying groundwater. If a site investigation indicates groundwater contamination, the site is referred to the RWQCB for further action. Since October 1, 2004, 15 sites have been assigned to the Underground Tank Plan Check Unit.

3.4 Private Sewage Disposal Systems (PSDS)

In order to eliminate existing commercial and industrial PSDS and their discharges of nitrates to the SFB, a sanitary sewer construction program has been in progress for many years. This program is continuing to systematically install sanitary sewers in eighteen Groundwater Improvement Districts (GIDs) throughout the San Fernando Valley. To date, a total of twelve areas have had construction completed, and six areas are in various stages of right-of-way acquisition and processing. Plate 7 shows the locations of these six GIDs.

The sewer construction program ordered by the City Council required project design and construction to be funded though Assessment Act provisions. Proposition 218, approved by the electorate on November 5, 1996, now requires that a majority of mail-in ballots of property owners approve any new or increased assessments, in order to proceed with funding the projects through the Assessment Program. The passage of Proposition 218 and continued downsizing of the workforce of the City of Los Angeles has impeded the sewer construction program for the remaining six GIDs.

Toward the end of the 1998-99 Water Year, inquiries by the Watermaster regarding scheduling for the completion of the remaining six GIDs led to the revision and re-estimation of construction plans for these improvements. Those projects were reactivated with the intent of facilitating the construction through the Assessment Program. The previously completed plans

were revised as necessary and a revised construction cost estimate was prepared for each project. Those anticipated construction costs and project incidental costs were spread among the owners of benefiting property within the individual districts and the owners were notified of their proportionate share of the assessable costs for the projects.

The majority of the responding owners of each of the following five GIDs: GID No. 3 (Raymer St. Nr. Fulton Ave.), GID No. 17 (Glenoaks Blvd. Nr. Roxford St.), GID No. 19 (Sherman Way Nr. Balboa Blvd.), and GID No. 5 (Chandler Blvd. Nr. Lankershim Blvd.) and GID No. 12 (San Fernando Rd. Nr. Brazil St.) voted against construction of the assessment projects. These projects are now defunct Assessment Projects. 61 percent of the responding owners serviced by GID No. 4 (San Fernando Rd. Nr. Keswick St.) voted in favor of the project. Right-of-way acquisition for that project is pending arbitration in court to reduce the aquired right-of-way easement.

Work on the five postponed projects has been deferred because of the fiscal impact to the City of Los Angeles for right-of-way acquisition and construction. The City Council will be notified of the current impasse regarding these projects. Further work on the projects will be contingent upon direction from the City Council and authorization for alternative financing of the projects.

In order to determine the number of properties not connected to a sewer, the Bureau of Sanitation updated the database for water users not being billed for sewer usage. The analysis initially revealed that in the San Fernando Basin approximately 5,700 of these properties are located within 50 feet of an existing sewer, and 7,700 of these properties are more than 50 feet from an existing sewer. The Bureau of Sanitation has prepared a map that covers the unsewered properties and municipal water supply wells within ULARA. The map will assist Bureau of Sanitation in prioritizing field inspections, beginning with unsewered properties within 1,000 feet of a production well.

The Bureau of Sanitation field checked hundreds of addresses in the past year. Most sites have been found to be connected to a sewer but are not being billed. Other addresses have two water meters - one for irrigation and a second for residential use. Some are on septic tanks in areas were there are no sewers.

City Councilman Alex Padilla, Council District 7, obtained federal funds to subsidize sewer installation for lower-income families in the northeast San Fernando Valley. Funding applications, which became available in March 2001, are currently being processed only for

properties that have an existing available sewer to which connections can be made without construction of new public sewers.

In 2004 a settlement was reached between Santa Monica Baykeeper et al., Plaintiff, and the City of Los Angeles Bureau of Sanitation to reduce or eliminate sewage releases to surface waters. The settlement will reduce nitrate levels in the SFB only indirectly as a result of the effort to reduce sewer overflows through increased sewer inspection, maintenance, cleaning, replacement, etc. This Capital Improvement Program is expected to cost approximately $2 billion over a 10-year period.

The Industrial Waste Management Division (IWMD) of the Bureau of Sanitation continued to pursue the enforcement provisions of the PSDS elimination program.

3.5 Landfills

The Solid Waste Assessment Test (SWAT) reports for major SWAT Rank 1 to 4 landfills in the Los Angeles area have been completed and submitted to the RWQCB for approval. The reports reviewed by the RWQCB are listed in Table 3-2. As stipulated by Article 5 of Title 27, a follow-up sampling program under an Evaluation Monitoring Plan was required for some landfills due to the presence of VOCs in the underlying groundwater. Further updates to the SWAT would be triggered by post closure land use.

An application to increase the trash height at Bradley West Landfill is pending. The public comment period for the draft EIR to increase the landfill by 43 feet vertically will close April 2006. The date of closure for the landfill is April 2007.

TABLE 3-2: LANDFILLS WITH SWAT INVESTIGATIONS

(reported to Interagency Coordinating Committee)

Name	Rank	Status	Current Owner	Location	SWAT Report Completed	Final SWAT Submitted	Phase II SWAT Req.	Approved by RWQCB	Site Leak (1)	Type of Emission (2)	Further Monitoring
Bradley West	1	Open	WMDSC	Sun Valley, SE of Sheldon St.	6/87	11/90		4/92	G	NHA (I/O)	3
Sheldon-Arleta	1	Closed	City of Los Angeles Bureau of Sanitation	Sun Valley District near Hollywood & Golden State Fwys	5/87	5/87		2/90	G	MSW	4,7
Scholl Canyon	1	Open	City of Glendale	San Rafael Hills, 1 mile West of Rose Bowl	7/87	4/88		8/90	G	NHA (I/O)	3
Scholl Canyon	2	Closed	City of Glendale	San Rafael Hills, 1 mile West of Rose Bowl	7/87	8/90		12/93	G	NHA	5
Bradley East	2	Closed	WMDSC	SE of Sheldon St	6/87	11/90		4/92	G	NHA (I/O)	4, 8
Bradley West Extension	3	Open	WMDSC	Near Canyon Blvd & Sheldon St	7/88	7/89		4/92	G	MSW	3, 8
Sunshine Cyn. LA City	2	Closed	Browning - Ferris Industries	SE Santa Susana Mtns W of Golden State Fwy	7/88	7/89		4/94	G	MSW	6
Sunshine Cyn. LA County	2	Open	Browning - Ferris Industries	SE Santa Susana Mtns W of Golden State Fwy	7/88	7/89		4/94		MSW	6
Gregg Pit/Bentz	2	Closed	CalMat Properties	Between Pendleton St & Tujunga Ave	7/89	7/89		2/90	G	NHA	4
Branford	2	Closed	City of Los Angeles Bureau of Sanitation	Sun Valley District, NW of Tujunga Wash	7/88	10/90	X	6/92		MSW	4,7
CalMat (Sun Valley #3)	2	Open	CalMat Properties	Sun Valley District, NE of Glenoaks Blvd	7/88	11/90		6/92	N	Inert site	N,7
Lopez Canyon	2	Closed	City of Los Angeles Bureau of Sanitation	N of Hansen Dam near Lopez and Kagel Cyn	6/88	6/88	X				8
Toyon Canyon	2	Closed	City of Los Angeles Bureau of Sanitation	Griffith Park	6/88	3/89		4/91	L	NHA (I/O MSW)	3
Tuxford Pit	2	Closed	Aadlin Bros. (LA By-Products Co.)	Sun Valley District, SW of Golden State Fwy & Tujunga Ave	6/88	12/90		6/92		MSW	4, 8, 9
Penrose	2	Closed	Los Angeles (LA By-Products Co.)	N of Strathern St, Tujunga Ave	6/88	7/89		9/89	G	NHB (I/O)	4
Newberry	3	Closed	Los Angeles (LA By-Products Co.)	N of Strathern St, Tujunga Ave	6/88	7/89		9/89	G	NHB (I/O)	4
Hewitt Pit	2	Closed	CalMat Properties	North Hollywood District Hollywood Fwy, Laurel	6/88	7/89		5/91	G	NHB (I)	N
Pendleton St.	4	Closed	City of Los Angeles Bureau of Sanitation	Sun Valley, Pendelton St & Glenoaks Blvd	7/90	5/91		6/92	N	Inert Site	5
Stough Park	2	Open	City of Burbank	Bel Air Drive & Cambridge Drive	6/88	12/88		4/90	G	NHA Inert Site	3
Strathern			Never completed. Application 12/88.	Strathern St. & Tujunga Ave							10

1. G – Gas, L – Liquid. MSW – Municipal Solid Waste
2. NHA - Non-Hazardous but above state drinking water regulatory levels
   NHB - Non-Hazardous but below state drinking water regulatory levels
   I – Inorganic, O – Organic; N-No, Y-Yes
3. Under Title 27 Corrective Action Program (CAP), after completion of EMP.
4. Closed landfills with groundwater monitoring required under Title 27. Monitoring results are submitted to the Regional Board periodically.
5. Subject to SWAT requirements. Further monitoring may be required under Title 27.
6. All open landfills are required to have groundwater monitoring under Title 27. Monitoring results are submitted to the Regional Board quarterly or semi-annually.
7. Semi-annual groundwater monitoring.
8. Groundwater contamination Evaluation Monitoring Program (EMP) required under Title 27.
9. EPA involved in evaluation.
10. Under permit as Inert Landfill.

3.6 San Fernando Valley Remedial Investigation Activities

A remedial investigation (RI) of groundwater contamination in the San Fernando Valley was initiated in July 1987 by the USEPA to characterize the San Fernando Basin and the Verdugo Basin and their contamination with TCE and PCE. The LADWP was selected by the USEPA to serve as the lead agency in conducting the RI and entered into a cooperative agreement that has provided over $22 million in federal funding to LADWP beginning July 1987. In August 1987, the LADWP selected James M. Montgomery, Consulting Engineers, Incorporated to serve as its consultant to perform various RI tasks.

The report, "Remedial Investigation of Groundwater Contamination in the San Fernando Valley," was completed in December 1992 and is a comprehensive, five-volume report that presents the findings and characterizations of the SFB and the Verdugo Basin with regard to their geology, hydrogeology, and nature and extent of contamination. The RI report also provides a description and the documentation of the SFB Groundwater Flow Model, summarizes the RI field investigation activities, and evaluates potential risks to human health and the environment.

The SFB Groundwater Flow Model was developed as a part of the San Fernando Valley Remedial Investigation and is a comprehensive, three-dimensional, regional-scale model. A three-dimensional mass transport model has also been developed for the SFB. The model has been utilized for various groundwater projects to analyze the storage and physical characteristics of groundwater in the SFB.

USEPA's consultant, CH2M HILL, continues to periodically sample the 87 groundwater monitoring wells that were installed as part of the RI. CH2M HILL also obtains groundwater quality and groundwater elevation data from the municipalities and various agencies and facilities in the San Fernando Valley to update the SFB database. CH2M HILL utilizes the data to produce contaminant plume maps.

The RI Report and semi-annual sampling reports are available for public use at the Superfund Primary Information Repositories, which are located in the following libraries: City of Glendale, City of Burbank, LADWP, California State University-Northridge, and the University of California - Los Angeles.

The LADWP also maintains a current SFB database for use with the SFB flow model and generation of groundwater contour maps and contaminant plume maps. CH2M HILL forwards current groundwater quality data for incorporation into the LADWP database.

3.7 Water Treatment

USEPA Operable Units

The USEPA is proceeding with enforcement actions against Potentially Responsible Parties (PRPs) for the North Hollywood, Burbank, and Glendale North and South Operable Units (OUs), which are part of the USEPA's overall, long-term groundwater remediation activities in the SFB. The OUs are described below.

1. *NORTH HOLLYWOOD OU* - The North Hollywood OU (NHOU) construction was funded by the USEPA, DHS, and LADWP. The NHOU Operations and Maintenance is funded by the USEPA and LADWP. The NHOU removes VOCs by air-stripping. In 2004-05, 339 million gallons (1,042 AF) of groundwater were treated. This represents 107 AF less than the 2003-04 Water Year.

   Air discharged to the atmosphere was monitored for VOCs on a quarterly basis. All four quarters of VOC monitoring data were in conformance with permit requirements of the South Coast Air Quality Management District.

   Production at NHOU continues to be limited due to declining groundwater levels in the SFB. Although the 15-year NHOU Consent Decree expired on December 31, 2004, the VOC plume has not been fully remediated. In addition, a hexavalent chromium groundwater plume has been identified nearby, adding to the complexity of the problem. If production capacity of the NHOU is increased it might also capture the hexavalent chromium, which the NHOU is not designed to remove. The USEPA has begun a Focused Feasibility Study to evaluate the NHOU.

2. *BURBANK OU* - The Burbank OU, funded by Lockheed-Martin under a USEPA Consent Decree and operated by Burbank, uses aeration and liquid-phase

GAC to remove VOCs from high nitrate groundwater and then blends it with water from the Metropolitan Water District (MWD) for delivery to the City of Burbank.

Burbank assumed operation and maintenance of the BOU in 2001. Since that time, the facility has been unable to sustain operation at the designed treatment rate of 9,000 gpm. Burbank, Lockheed-Martin, USEPA, and the Watermaster Office have been cooperating in an effort to determine the cause(s) of the reduced treatment capacity. As a result, several modifications were found to be needed to the liquid-phase and vapor-phase GAC vessels. The modification of the liquid-phase GAC vessels is complete, and the vapor-phase modification is pending. In addition, the study showed that additional well capacity may be required to sustain operation at 9,000 gpm.

In order to further explore ways to increase production, Burbank selected Montgomery Watson Harza to conduct a Well Field Performance Attainment Study which is currently being evaluated by the USEPA. Options to increase production include deflating well packers from existing wells, drilling additional wells, and building a pipeline to blend MWD water with high chromium groundwater from the Lake Street wells.

Burbank is also concerned about hexavalent chromium in water produced at the BOU and has been blending with imported water to keep the level of hexavalent chromium at, or below, 5 ppb. The BOU was not designed to treat chromium.

A total of 6,398 AF were treated in the 2004-05 Water Year.

3. *GLENDALE NORTH AND SOUTH OUS.* Construction of the Glendale North and South Operable Units was completed and treated water was ready for delivery on September 26, 2000. The system includes four Glendale North OU extraction wells with a capacity of 3,300 gpm and four Glendale South OU extraction wells with a capacity of 1,700 gpm. The process uses aeration and liquid-phase GAC to treat groundwater contaminated with VOCs and

then blends it with MWD water at the refurbished Grandview Pump Station. A total of 7,541 AF were treated in 2004-05.

In 2004 the USEPA approved Glendale's temporary pumping plan to minimize chromium levels by reducing pumping in wells with elevated levels of chromium and increasing the pumping rate from the other wells.

Other Treatment Facilities

1. *VERDUGO PARK WATER TREATMENT PLANT (VPWTP)* – Glendale's VPWTP produces about 500 gpm and serves as a chlorination and turbidity treatment facility. A total of 700 AF were treated in 2004-05.

2. *GLENWOOD NITRATE WATER TREATMENT PLANT* - CVWD's Glenwood Nitrate Water Treatment Plant, which uses an ion-exchange process for nitrate removal, continued to operate satisfactorily during the 2004-05 Water Year. A total of 255 million gallons (782 AF) of water were treated. The 376 percent increase in the amount of treated water is due to the historic rainfall that raised the water table significantly in the Verdugo Basin. In addition, nitrate levels in the groundwater have declined during the past several years.

3. *POLLOCK WELLS TREATMENT PLANT* (PWTP) – The 3,000-gpm PWTP was dedicated on March 17, 1999. The treatment plant uses four GAC vessels to remove VOCs from Pollock Wells No. 4 and No. 6 to operation. The operation of these production wells reduces groundwater discharge to the Los Angeles River due to excess rising groundwater in the area. The treated water is chlorinated before distribution in the water system. A total of 1,752 AF of groundwater were treated during the year. This is a 54 percent increase over the historic low of 2003-04. The 248 AF lost as excess rising water has been deducted from Los Angeles' stored credit (Appendix F).

4. *BURBANK GAC TREATMENT PLANT* - The City of Burbank GAC system (Lake St. wells) was shut down in March 2001 due to the levels of hexavalent chromium in the groundwater and remained out of service during the 2004-05 Water Year. The City of Burbank has a goal of accepting a maximum of 5 ppb of hexavalent chromium after blending for distribution to its water system. If the plant is returned to service, production may be considered as

part of the designated average pumping goal of 9,000 gpm for the Burbank OU.

3.8 Groundwater Quality Investigations

There are several ongoing groundwater quality investigations in the San Fernando Basin. Some of the major sites and related activities are summarized below.

Boeing/Rocketdyne Santa Susana Field Lab, Simi Hills

This facility, located in the hills at the western end of the San Fernando Valley, was the site of rocket testing until the 1980s. As a result, soil and groundwater became contaminated with TCE and perchlorate. Several hundred monitoring wells have been installed and are being sampled and tested. Contaminated soil and groundwater are being remediated at selected locations.

CVWD-MTBE Investigation

In February 2004, methyl-tert-butyl-ether (MTBE) was discovered by CVWD in Well #5 during its annual VOC water quality sampling. DHS directed CVWD to continue monitoring Well #5 on a quarterly basis. MTBE continued to be detected through 2005. CVWD retained McGuire Malcolm Pirnie Enviornmental Consultants (McGuire) to perform a "Preliminary Evaluation of MTBE Contamination Sources at CVWD Well #5". In addition, the Watermaster requested the RWQCB to perform an investigation into potential sources of MTBE. RWQCB met with CVWD in 2005, and has begun the investigation. In March 2006 the McGuire report was completed and forwarded to RWQCB. The report identified several potential source sites. RWQCB will continue the investigation and forward their findings to CVWD and the Watermaster.

DriLube, 711 W. Broadway and 718 W. Wilson, Glendale

DriLube Company, a plating facility located in Glendale, was issued a Cleanup and Abatement Order (CAO) by the RWQCB on March 29, 2002. Two additional property owners have been identified and will be added to the CAO, which is now being revised. DriLube was named a Responsible Party by the USEPA for discharging contaminants to the Glendale South Operable Unit from its site. The results of subsurface investigations have detected soil and groundwater contaminated with chlorinated solvents, petroleum hydrocarbons, PCBs, and heavy metals including chromium. On November 15, 2002 a fire at the DriLube Company totally destroyed the Plant 1 facility and records.

PRC-DeSoto (formerly Courtaulds Aerospace), 5430 San Fernando Road, Glendale

The RWQCB issued a CAO to PRC-DeSoto (formerly Courtaulds Aerospace) on August 22, 2002. This facility has been named a responsible party by USEPA for releasing chlorinated organic solvents within the Glendale South Operable Unit. The facility's principal industrial activities involve chemical formulation of adhesives and sealants used by the U.S. Department of Defense for various aerospace applications. Periodic groundwater monitoring and reporting has been conducted at the site since 1994. Trichloroethane (1,1,1-TCA), dichloroethane (DCE), TCE, PCE, chromium, hexavalent chromium, and nickel have been found in soil and groundwater beneath the site. The third quarter 2005 sampling indicated chromium and hexavalent chromium concentrations of 580 ppb and 79.9 ppb, respectively, in groundwater beneath the site. Groundwater monitoring will begin in 2006. Three down-gradient wells will be added. PRC-DeSoto has submitted a Remedial Action Plan (RAP) for the reduction of hexavalent chromium that is under review by the RWQCB.

Excello Plating, 4057 Goodwin Ave., Los Angeles

The RWQCB issued a CAO to Excello Plating on June 20, 2003. The CAO was revised and submitted on June 2, 2005 to the property owners. This facility has been named a responsible party for releasing volatile organic compounds, chromium, hexavalent chromium, nickel, cadmium, zinc and lead. The purpose of this CAO is to ensure that Excello Plating completes the on-site and off-site assessment to delineate the lateral and vertical extent of heavy metal contaminants (specifically chromium) and, as necessary, undertake remediation of the affected soil and groundwater, on-site and off-site. Groundwater samples from the Glendale South Operable Unit wells adjacent to the Excello site in 2002 indicated levels of hexavalent chromium above 54 ppb.

On September 23, 2004 the Los Angeles City Attorney charged Excello with a violation of the federal Clean Water Act for failure to comply in a timely manner with the CAO. This criminal citation has corresponding financial penalties including fines of $50,000 per day. The firm submitted to the RWQCB a workplan for review in October 2004. Field work began in February 2005. Three new monitoring wells and 16 borings have been drilled at the site to provide additional data. Excello completed a round of groundwater sampling in February 2006.

Goodrich (formerly Menasco/Coltec Industries, Inc.) 100 E. Cedar Ave., Burbank

The RWQCB issued a CAO to Coltec Industries, Inc. on July 5, 2002. This facility has been named a Responsible Party by the USEPA for discharging contaminants to the Glendale North

Operable Unit. The facility's former industrial activities involve machining, manufacturing, metal plating and anodizing of parts and equipment used by the U.S. Department of Defense for various aerospace applications. TCE, PCE, DCE, 1,1,1-TCA and hexavalent chromium have been detected on this site. The third quarter 2005 sampling indicated maximum hexavalent chromium concentrations of 720 ppb in groundwater. Recently constructed offsite groundwater monitoring wells are being sampled quarterly.

ITT/Home Depot, 1200 S. Flower St., Burbank

Home Depot has completed construction of a store and parking lot on part of the former ITT Aerospace Controls site. ITT Aerospace Controls manufactured parts, and conducted metal finishing and plating. Groundwater contamination at the site consists of VOCs, petroleum hydrocarbons, nickel, and hexavalent chromium. In 2004 Home Depot built a slurry wall under the site to prevent lateral migration of contamination. A naturally occurring low-permeability zone located 50 feet below the ground surface is expected to prevent vertical migration of the contaminants. In preparation for the Remedial Action Plan implementation and in accordance with the mitigation measures set forth in the EIR, in late 2003, Home Depot installed four groundwater monitoring wells ouside of the planned location of the slurry wall to monitor the baseline condition. In February 2006 Home Depot began a testing of a pump and treat system for the site with 16 dual-phase extraction wells. ITT, the firm responsible for the contamination of the site, has drilled additional off-site multi-level wells and is responsible for cleanup of the regional area surrounding and below Home Depot's slurry wall barrier. The Regional Board has approved the ITT Work Plan for the construction of additional offsite groundwater monitoring wells.

Brenntag (formerly Holchem) and Paxton Street LLC (formerly Price Pfister) - Pacoima Area Groundwater Investigation

Progress has been made in the Pacoima Area investigation by a coordinated effort between Cal-EPA DTSC, the RWQCB, LADWP, and the Watermaster Office. A VOC contaminant plume was identified in the Pacoima area near the intersection of the Simi Valley Freeway (118 Freeway) and San Fernando Road. This site is approximately 2.5 miles upgradient of LADWP's Tujunga Well Field, which can supply up to 120 cfs of groundwater. LADWP installed two monitoring wells downgradient of the contaminant plume. Under DTSC guidance, Brenntag has installed a soil vapor extraction system (SVE). Brenntag installed two new wells along Sutter Avenue to the southeast of the site in spring 2003. Brenntag now has 16 monitoring wells - nine on-site and seven off-site. Since start up in January 2003 through

fourth quarter 2005, more than 27,683 lbs. of VOCs have been removed from the subsurface by the SVE.

The Paxton Street site (formerly Price Pfister), located southeast of Brenntag, has been directed to delineate the extent of VOC contamination with on-site and off-site monitoring wells. The RWQCB is the lead agency in enforcing cleanup of this site. Soil vapor extraction began in September 2002 and air sparging began in June 2003. Both systems were turned off in April 2004 to prevent damage while buildings were being demolished. The soil excavation from all source areas in the northern part of the site (approximately 2/3 of the total 25 acres) has been completed. Groundwater monitoring is on-going including replacement of two groundwater monitoring wells that will be installed soon. Recent sampling in February 2006 of two monitoring wells detected hexavalent chromium concentrations of 109 ppb and 780 ppb.

A series of community meetings were held in the Pacoima Area in 2004-2005 chaired by Los Angeles Councilmember Alex Padilla to address issues regarding the development of the Price Pfister site as a Lowe's Home Center. The contamination investigation and cleanup will continue during and after the construction development.

Honeywell (formerly Allied Signal/Bendix) 11600 Sherman Way, North Hollywood

Honeywell was issued a Clean Up and Abatement Order February 21, 2003 and an amended Clean Up and Abatement Order in September 2004. The firm was directed to prepare a workplan for additional on-site and off-site subsurface assessment of soil and groundwater. Honeywell has also provided previously unreported monitoring data from on-site wells between 1997 and 2003 that indicate TCE levels of 610 ppb in June 2003. Beginning in February 2005 four additional off-site wells were drilled. Samples from all existing wells were provided to the USEPA in December 2004. MWH, consultant for Honeywell, has completed bench-scale testing for treatment of hexavalent chromium and VOCs and is ready to present its findings. The RWQCB is reviewing the Waste Discharge Requirements application.

General Electric (formerly Pacific Airmotive), 2940 North Hollywood Way, Burbank

RWQCB has identified an apparent continuing source of VOCs at the former site of Pacific Airmotive property that is currently owned by General Electric. The soil vapor extraction system has been removing PCE vapor from underneath the adjacent property (2960 No. Hollywood Way). The cumulative PCE removal since January 2002 is approximately 6,500 gallons.

Raytheon (formerly Hughes Missile Systems Company), 8433 Fallbrook Avenue, Canoga Park

The most prominent contaminant has been 1,1-DCE with lesser amounts of TCE, PCE, TCA, BTEX and 1,1-DCA. TDS is in excess of the Basin Plan objectives, so the treated water may not be discharged to the Los Angeles River even though the origin of the high TDS is related to the naturally occurring groundwater. As a result of the high TDS, the treatment plant effluent is stored in holding tanks, and used for on-site irrigation.

Due to significant decreases in contaminant concentrations, the RWQCB has approved groundwater sampling and analyses on a semiannual basis. The remediation system has reduced the extent of the plume by more than 50 percent. A work plan submitted to the RWQCB to perform a pilot test for the effectiveness of enhanced in-situ bioremediation (EISB) was approved by the RWQCB and initial fieldwork began in September 2003. A work plan for fullscale implementation of EISB was approved with associated permitting in September 2005 and injections in two of the four proposed areas completed in October 2005. The remaining two areas will be completed in Spring 2006. Although the property is now owned by other entities, Raytheon is the current operator of the soil and groundwater treatment system.

3M (formerly Riker Lab), 19901 Nordhoff, Northridge

Contaminants at this site include chloroform, 1,2-DCE, 1,2-DCA, and Freon 11. There has been a groundwater treatment system in operation since 1997. There are currently 15 groundwater extraction wells and two air-stripping towers in series capable of treating 60,000 gallons per day. Until recently, some of the treated groundwater was used on-site for rotoclones (dust collectors), biofilters, and cooling towers, and the balance was discharged to the stormdrain under a NPDES permit. In March 2005, 3M and its consultant, Weston Solutions, Inc. completed installation of a system to re-use the discharged portion of the groundwater for landscape irrigation. All of the treated groundwater is now beneficially used on-site.

3M has obtained a license from the National Aeronautics and Space Administration for a proprietary technology that 3M has used successfully at other sites. Nanometer-size iron particles are suspended in an emulsion of vegetable oil which is injected into the contaminated groundwater. The iron particles strip the chlorine from the VOC molecules. The remaining hydrocarbon is then cometabolized by naturally-occurring bacteria in the soil and groundwater, which use the vegetable oil as a food source. 3M is evaluating whether the conditions at the Northridge site are compatible with this technology.

Micro Matics, 19791 Bahama St., Northridge

The Micro Matics site is located adjacent to 3M. The soil and groundwater beneath a portion of the property are contaminated with PCE and 1,1,1-TCA. The plume has also moved off-site to the west beneath a portion of the former 3M property, and also to the south beneath Bahama Street. The 3M parcel contaminated by Micro Matics was sold to a developer, Nordhoff Industrial, in December 2004. Preparation and submittal of a groundwater remedial action plan will follow review of the HRC pilot test data.

Treatment currently consists of pumping contaminated groundwater and treating it with liquid-phase GAC. A plan has recently been approved by the RWQCB to inject a hydrogen donating compound into the aquifer to degrade the VOCs in-situ. The first phase of the HRC™ in-situ groundwater remediation pilot test has been implemented and initial results indicate a reduction in the perchloroethylene (PCE) concentration. The second phase of the pilot test that includes injection of HRC-X™ was implemented in July 2005.

Tesoro Petroleum (former Fast Fuel, 11051 Victory Blvd., N. Hollywood)

Tesoro Petroleum is the owner of a gasoline station site in North Hollywood. A leaking underground tank caused a plume of gasoline hydrocarbons and MTBE that has migrated off-site toward several wells in LADWP's Whitnall Well Field. Tesoro, and its consultants Haley & Aldrich and Miller Brooks Environmental, have been performing soil remediation using soil vapor extraction. Working with its consultants, LADWP, RWQCB, and the Watermaster, Tesoro has implemented a groundwater cleanup plan that features ex-situ bioremediation and re-injection of the treated groundwater. Full-scale re-injection began in October 2005. During that month, a total of 1,194,735 gallons were treated of which 1,164,050 gallons were re-injected back into the aquifer. In July 2005 the National Ground Water Association (NGWA) selected this project for its 2005 NGWA Outstanding Ground Water Project Award.

Taylor Yard (Los Angeles River Narrows Area)

The remediation of the Taylor Yard of the Union Pacific Railroad Company is under the jurisdiction of the Cal-EPA DTSC. The Taylor Yard has been divided into two parts - active yard and sale parcel.

The Union Pacific Railroad originally owned this entire large parcel along the Los Angeles River Narrows. It has attracted the interest of many stakeholders including the State Parks

Department and the California State Coastal Conservancy as a potential site for habitat restoration and recreation. There is significant soil and groundwater contamination at the site, and potential issues involving water rights. The Watermaster Office is working with the stakeholders to resolve these issues. A final feasibility study was issued in June 2002, and is available through the Coastal Conservancy.

The 25-acre active yard is contaminated with VOCs, SVOCs, fuel hydrocarbons, and metals. Three soil vapor extraction systems have removed a total of 2,318 pounds of VOCs . There are currently 38 groundwater wells in the monitoring program, eight of which are sampled quarterly and 21 are sampled semi-annually. Two of the SVE systems have been shut down since June 2004 to allow for soil-gas sampling in support of the Focused Remedial Investigation. The systems will remain shut down pending the outcome of the review of the Interim Remedial Measure Closure Report due approximately March 31, 2006.

Chromium

In January 2003 the ULARA Watermaster published a report on hexavalent chromium contamination in the SFB. The RWQCB published a report of its four-year investigation of hexavalent chromium in December 2002. The presence of this contaminant threatens the use of SFB groundwater as a reliable source of water for Burbank, Glendale, and Los Angeles, and jeopardizes the Operable Units constructed with funding from the USEPA to clean up VOCs on a regional basis. The Operable Units that treat VOCs in the groundwater were not designed to treat chromium.

Total chromium is comprised of hexavalent chromium and trivalent chromium. Hexavalent chromium is a carcinogen when inhaled, but the effects when ingested are a subject of continuing debate. Trivalent chromium is a nutrient when ingested in small amounts.

A National Toxicology Program study is underway to determine a safe federal Maximum Contaminant Level (MCL) for hexavalent chromium, and should be completed in 2006 or 2007. The federal and state drinking water MCLs for total chromium are 100 ppb and 50 ppb, respectively. There are no separate standards for hexavalent chromium. Until hexavalent standards are developed, the total chromium standards will continue to be used.

At the State level, the Governor approved State Senate Bill 2127 in November 2000. This bill requires the DHS to determine the levels of chromium in the drinking water supplied by public water systems from the SFB aquifer and, in consultation with OEHHA, to assess the exposures

and risks to the public. The report was due January 1, 2002 but has not been published as of this writing.

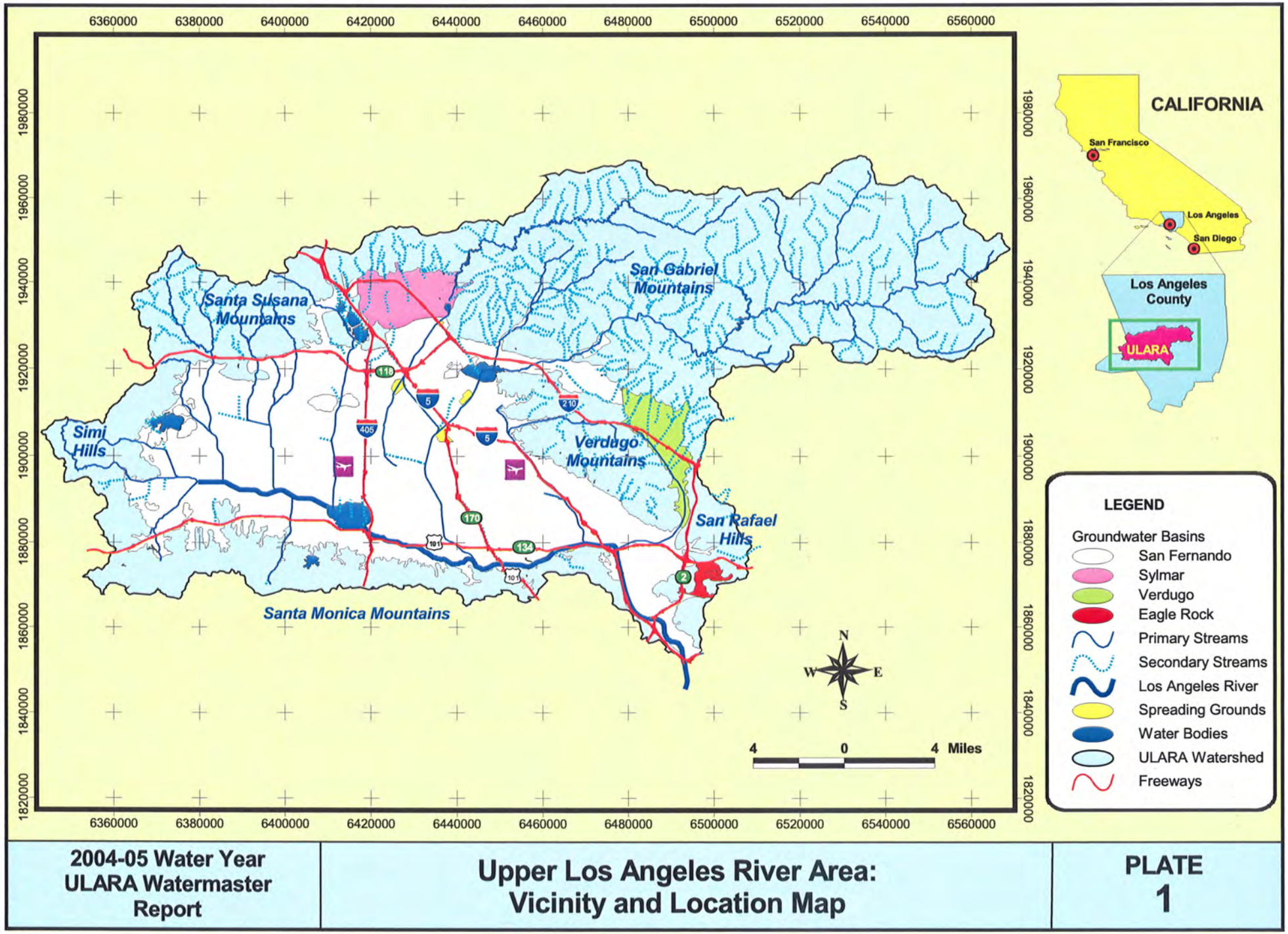
The Consent Decrees between the USEPA and the responsible parties require that certain pumping rates be maintained in the OUs to control VOC plume migration and provide contaminant removal. As these wells are pumped, the chromium plumes also migrate toward the wells, albeit at a slower rate than the VOCs. Hexavalent chromium has now appeared in all of the OUs in the SFB. Fortunately, the levels are currently low enough to allow blending with imported water to levels that meet all drinking water standards. However, should the levels become too high to allow blending to reduce chromium to acceptable level, the operation of the OUs would become compromised.

The RWQCB, with assistance from the USEPA and the cities of Burbank, Glendale, and Los Angeles has received temporary staff support to expedite investigation of possible hexavalent chromium contaminated sites. The focus is on the several sites identified last year by the RWQCB with the highest reported levels of hexavalent chromium and the greatest potential impact on the three cities' OUs and well fields. Additional suspect sites were uncovered during the investigation and these new sites have been transferred to the jurisdiction of the Cal EPA-Department of Toxic Substance Control.

A study is underway by McGuire Malcolm Pirnie Environmental Consultants to identify a cost-effective technology to remove chromium to very low levels. The USEPA, American Water Works Research Foundation, and the cities of Glendale, Los Angeles, and Burbank are funding the project. Weak base anion exchange has been identified as a promising treatment technology. When additional funding is secured the City of Glendale intends to install a treatment system on at least one of its high-chromium OU wells.

3. WATER QUALITY, TREATMENT, AND REMEDIAL INVESTIGATION ACTIVITIES

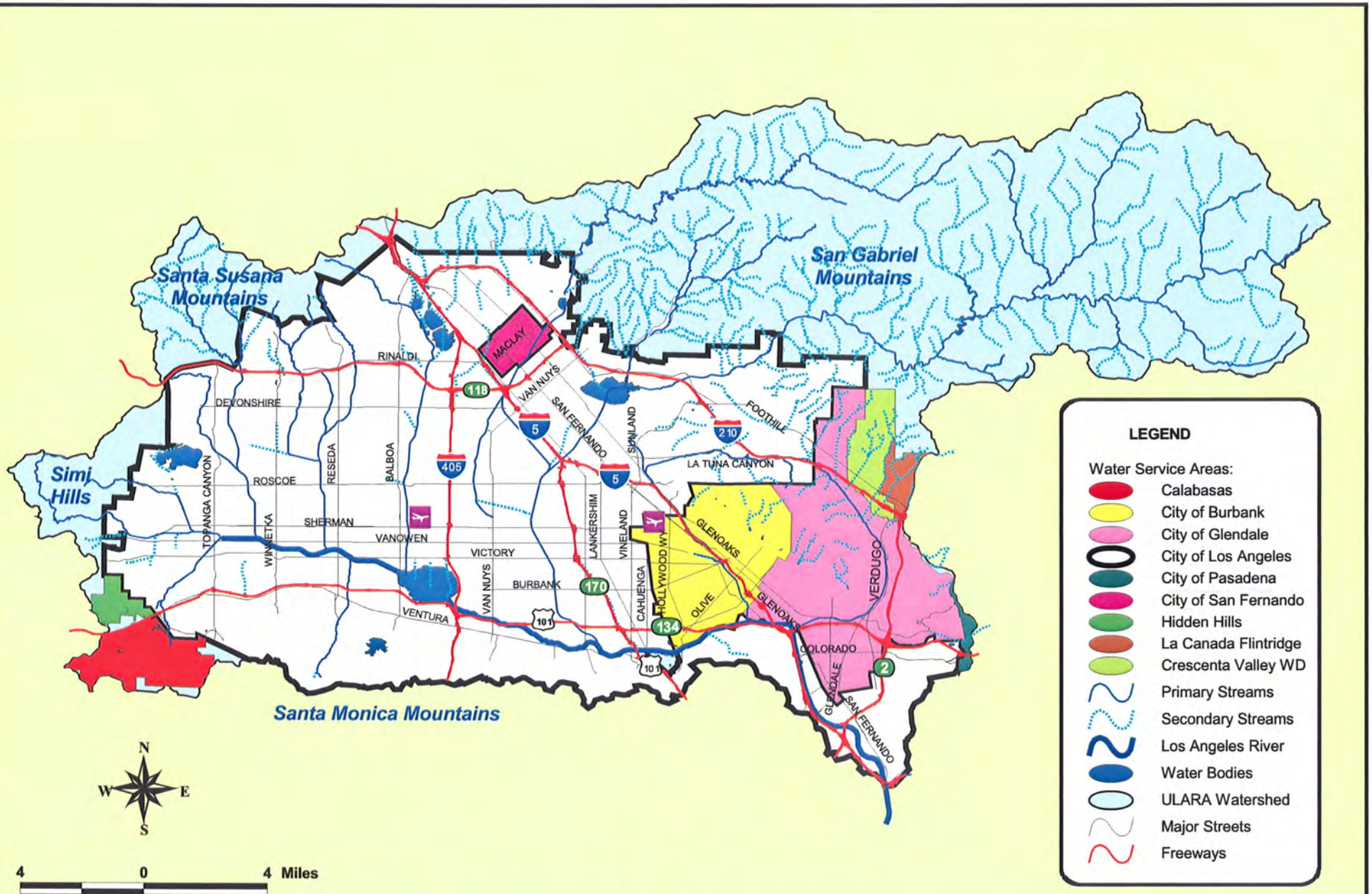
PLATES



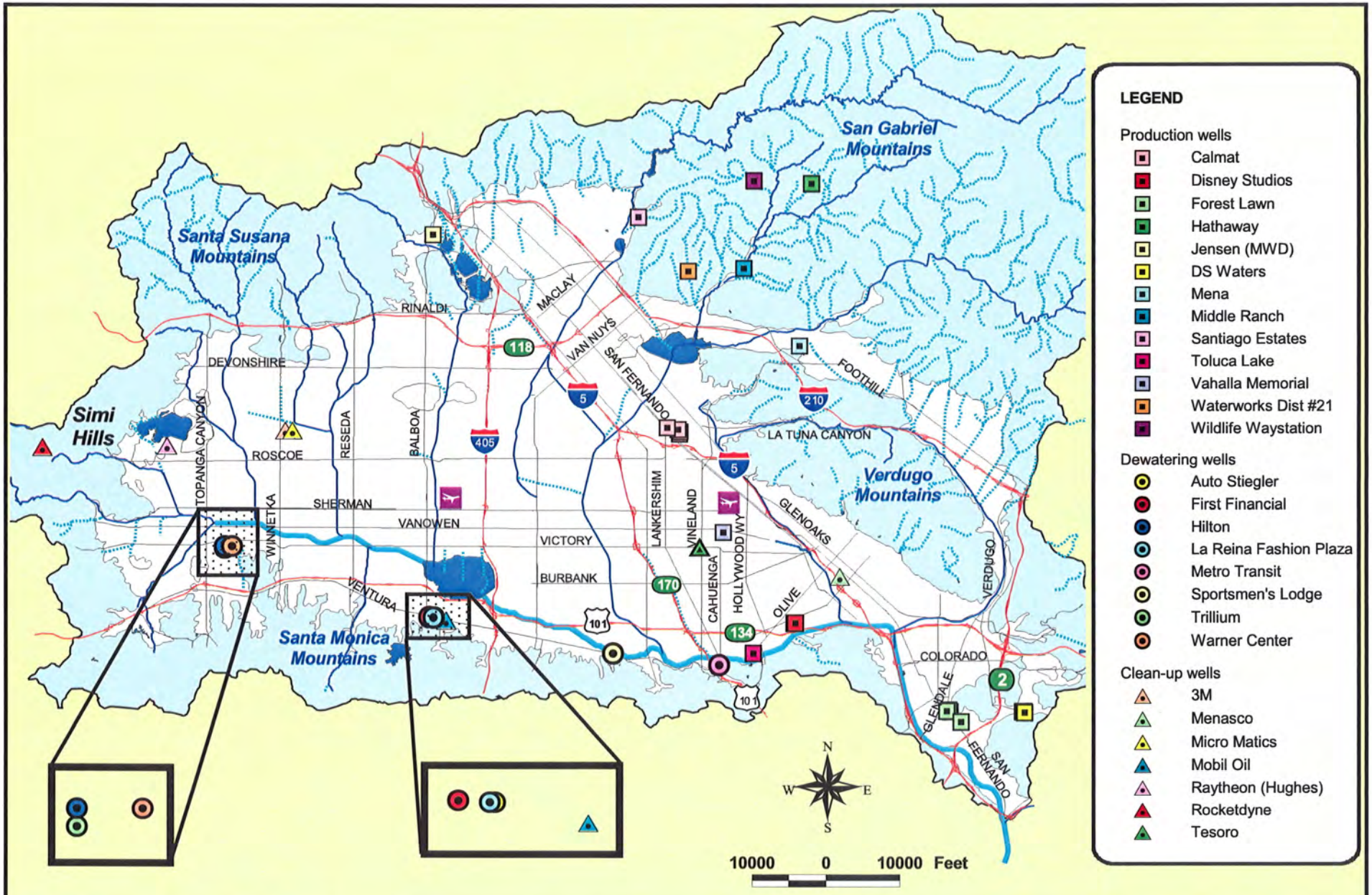
2004-05 Water Year ULARA Watermaster Report

Upper Los Angeles River Area: Vicinity and Location Map

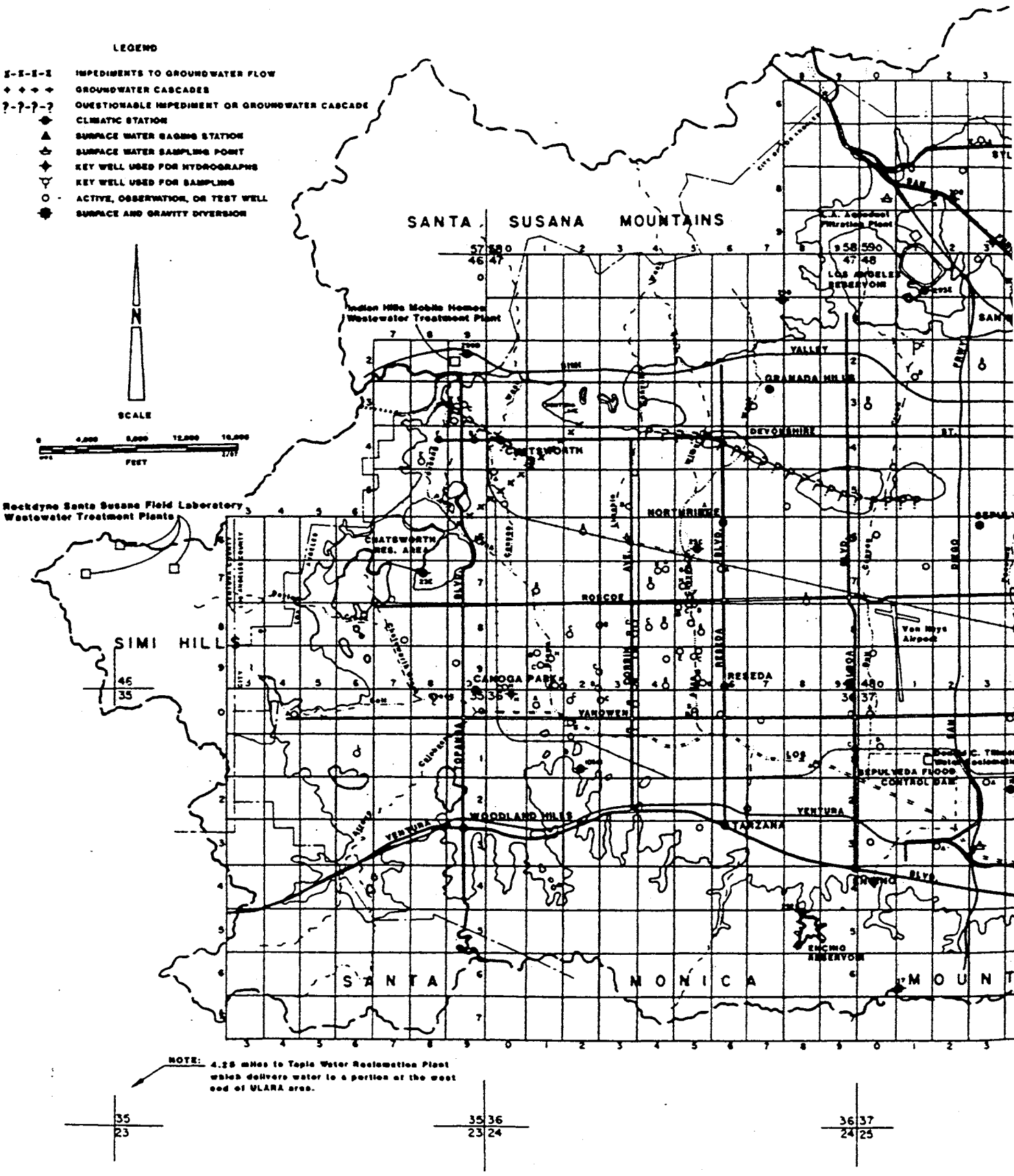
PLATE 1



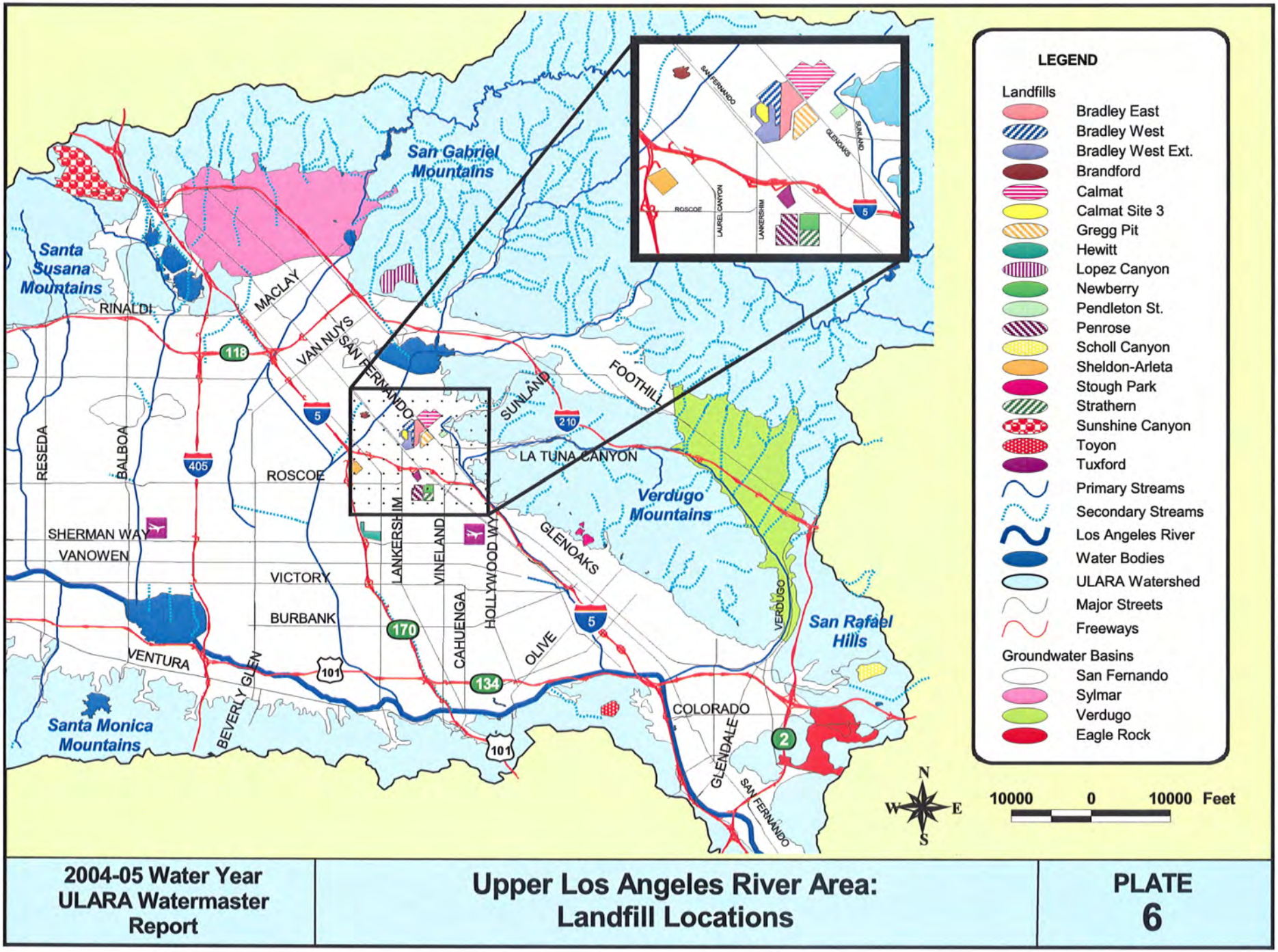
2004-05 Water Year ULARA Watermaster Report	Upper Los Angeles River Area: Water Service Areas of Public Agencies	PLATE 2



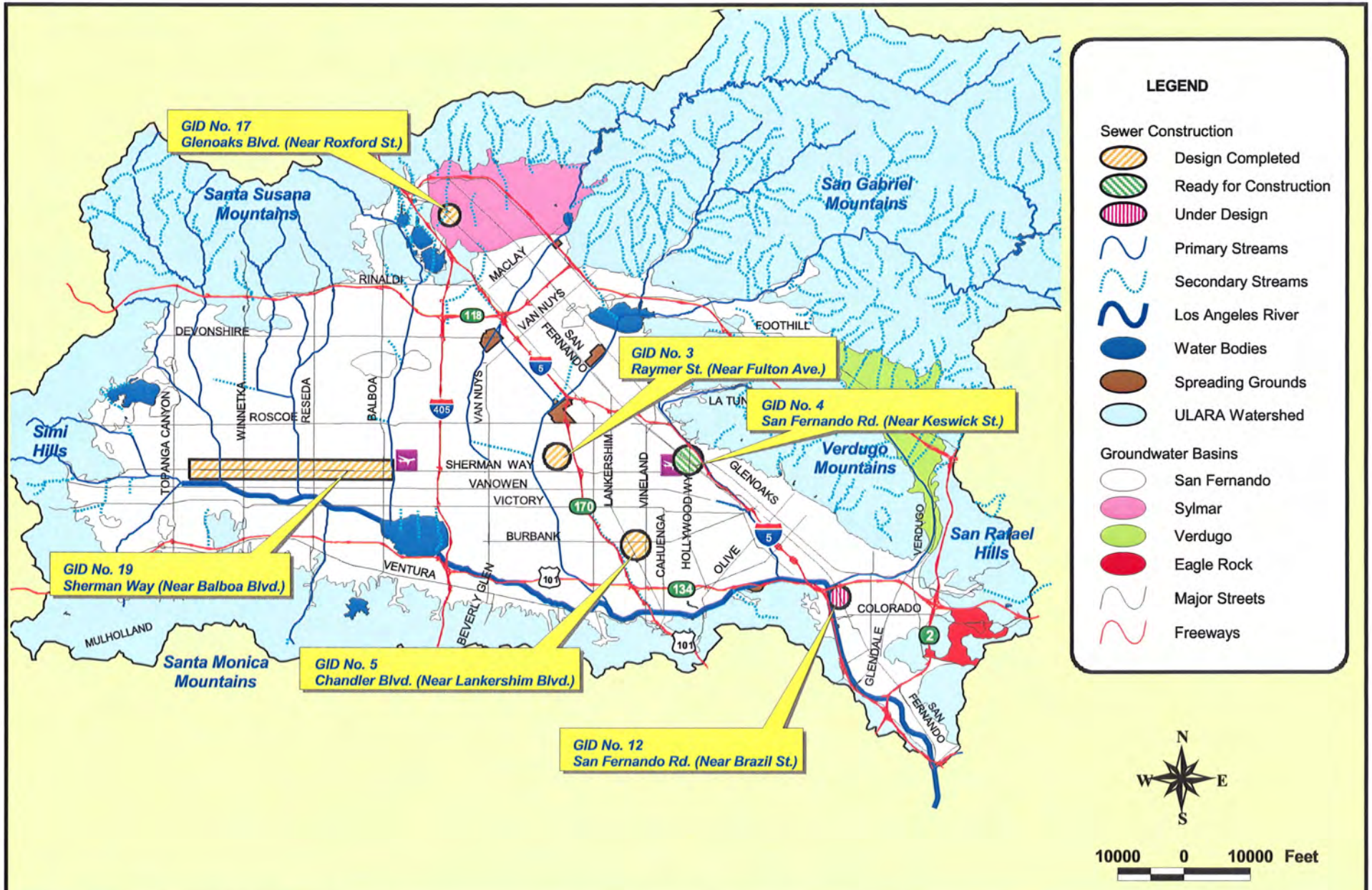
2004-05 Water Year ULARA Watermaster Report	Upper Los Angeles River Area: Location of Individual Producers	PLATE 3


LEGEND
IMPEDIMENTS TO GROUNDWATER FLOW
GROUNDWATER CASCADES
QUESTIONABLE IMPEDIMENT OR GROUNDWATER CASCADE
CLIMATIC STATION
SURFACE WATER GAGING STATION
SURFACE WATER SAMPLING POINT
KEY WELL USED FOR HYDROGRAPHS
KEY WELL USED FOR SAMPLING
ACTIVE, OBSERVATION, OR TEST WELL
SURFACE AND GRAVITY DIVERSION
N
SCALE
FEET
SANTA SUSANA MOUNTAINS
Indian Hills Mobile Homes Wastewater Treatment Plant
Rockdyne Santa Susana Field Laboratory Wastewater Treatment Plants
SIMI HILLS
SANTA MONICA MOUNTAINS
CHATSWORTH
GRANADA HILLS
NORTHRIDGE
ROSCOR
RESEDA
CANOGA PARK
WOODLAND HILLS
TARZANA
ENCINO
VENTURA
DEVONSHIRE
SEPULVEDA FLOOD CONTROL DAM
Los Angeles Reservoir
Encino Reservoir
Van Nuys Airport
NOTE: 4.25 mhos to Topia Water Reclamation Plant which delivers water to a portion of the west end of ULARA area.

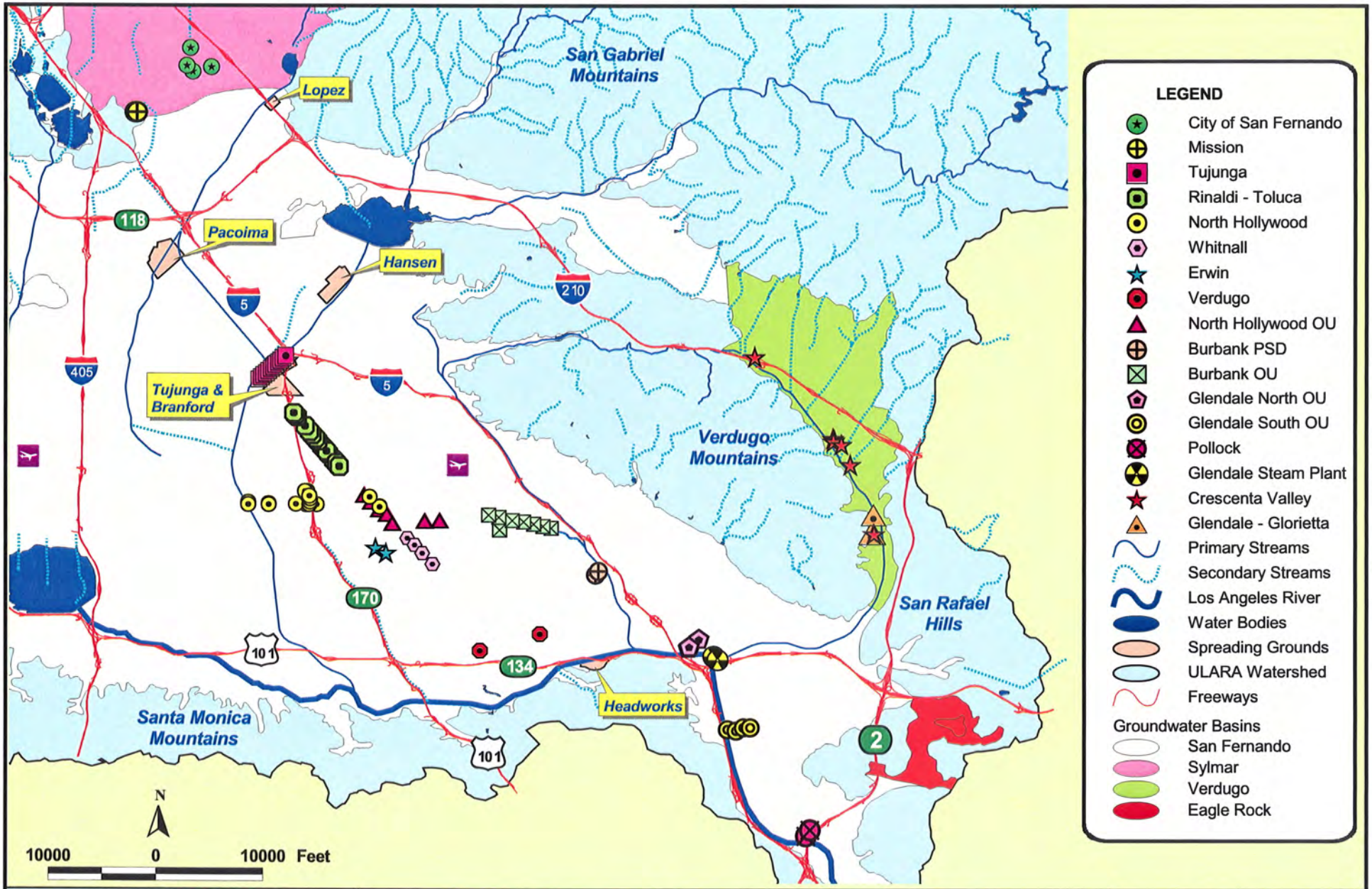
2004-05 Water Year ULARA Watermaster Report	Upper Los Angeles River Area: Water Reclamation Plants and Rain-Runoff Gages	PLATE 5



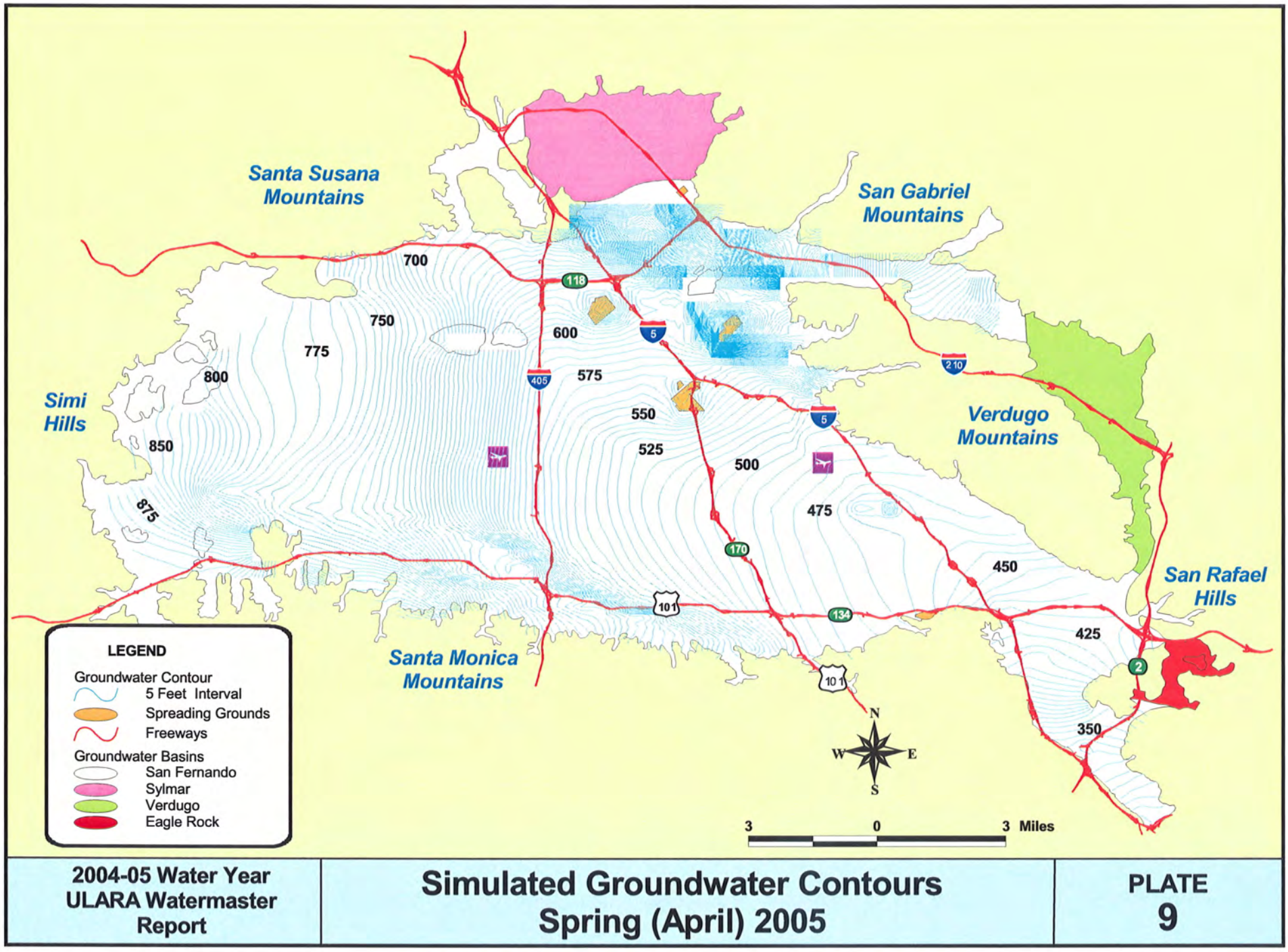
2004-05 Water Year ULARA Watermaster Report	Upper Los Angeles River Area: Landfill Locations	PLATE 6



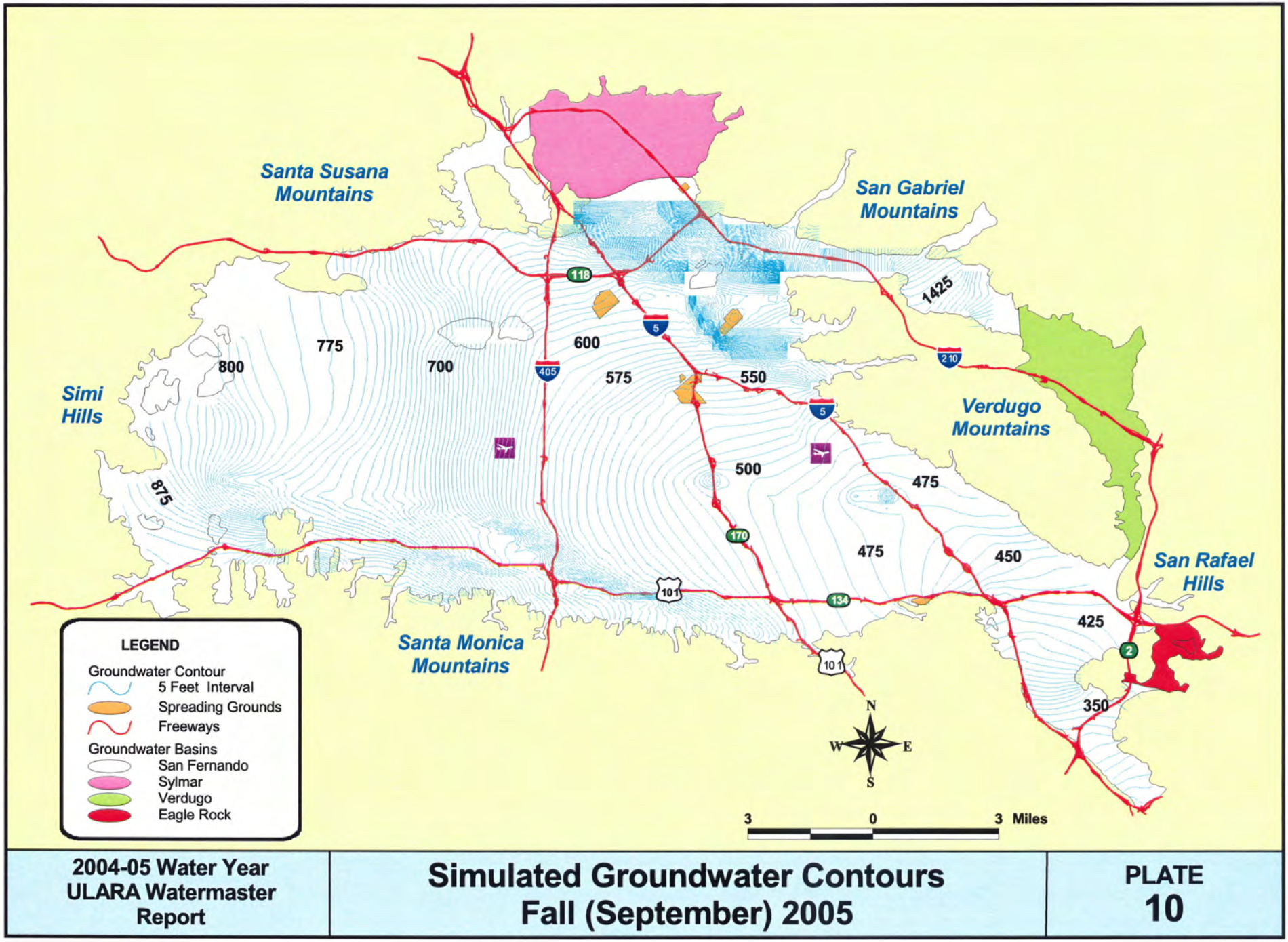
2004-05 Water Year ULARA Watermaster Report	Upper Los Angeles River Area: Los Angeles Bureau of Sanitation Sewer Construction Program for Commercial Parcels	PLATE 7



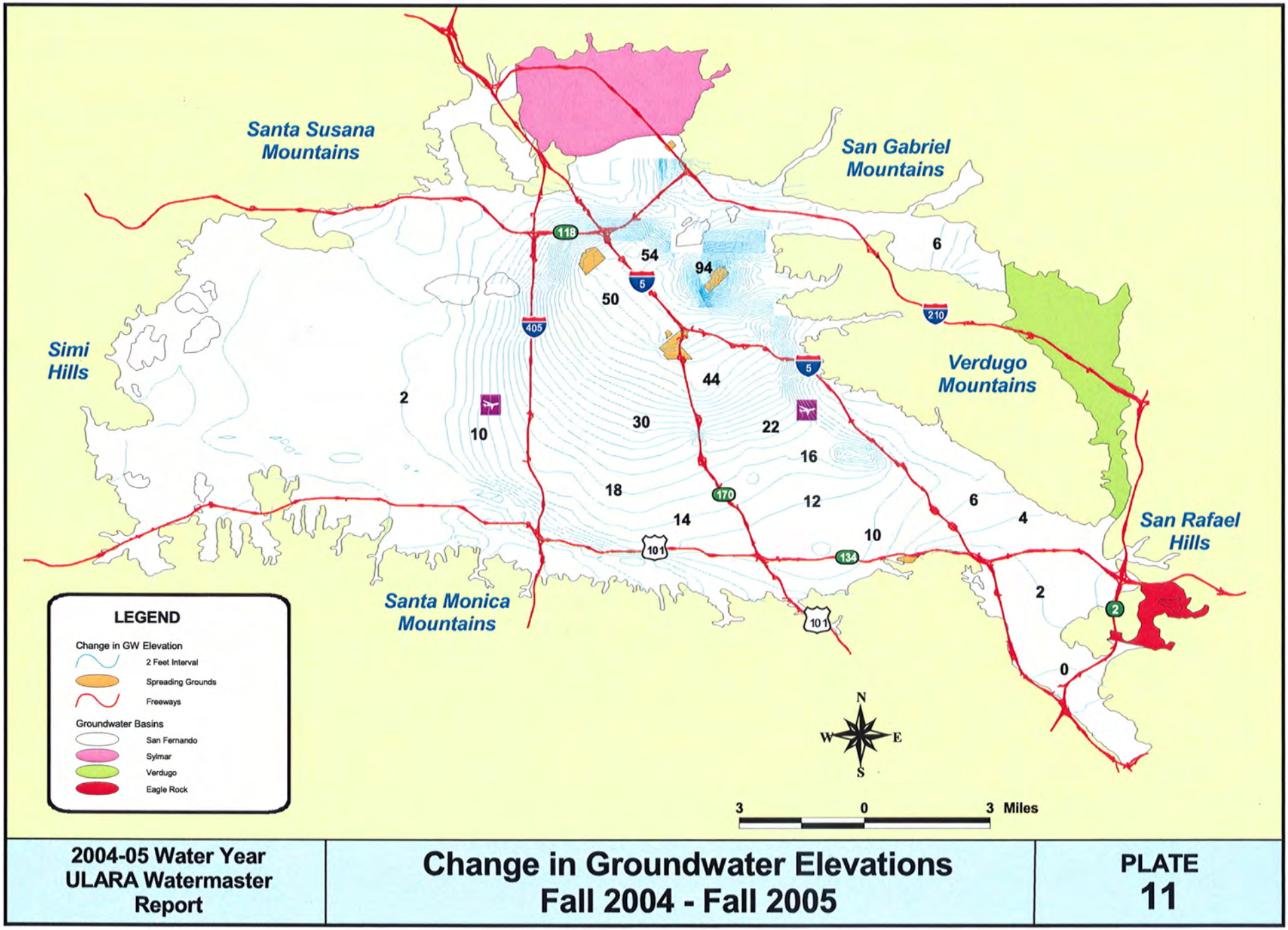
2004-05 Water Year ULARA Watermaster Report	Upper Los Angeles River Area: Major Well Fields and Spreading Grounds	PLATE 8



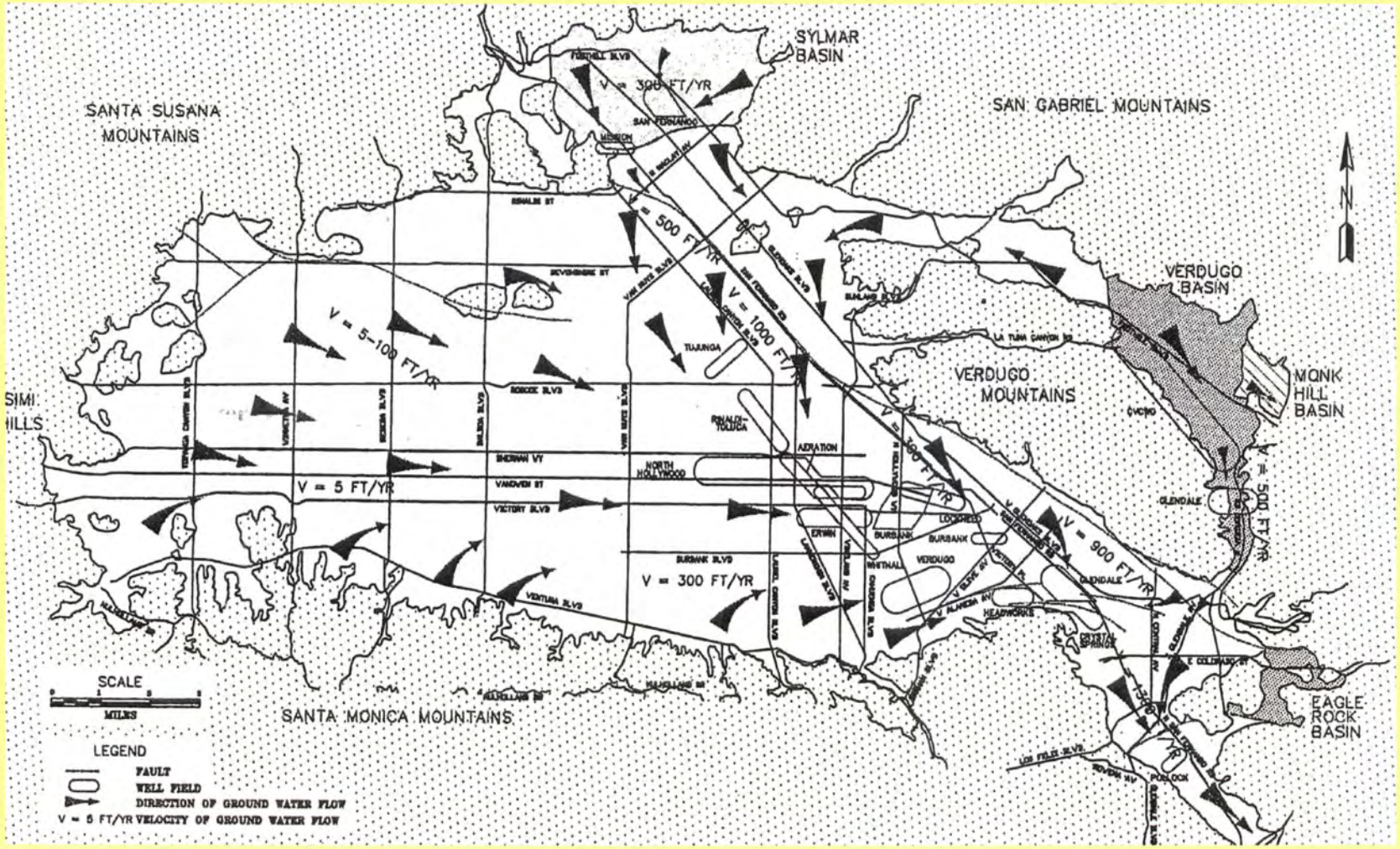
2004-05 Water Year ULARA Watermaster Report	Simulated Groundwater Contours Spring (April) 2005	PLATE 9



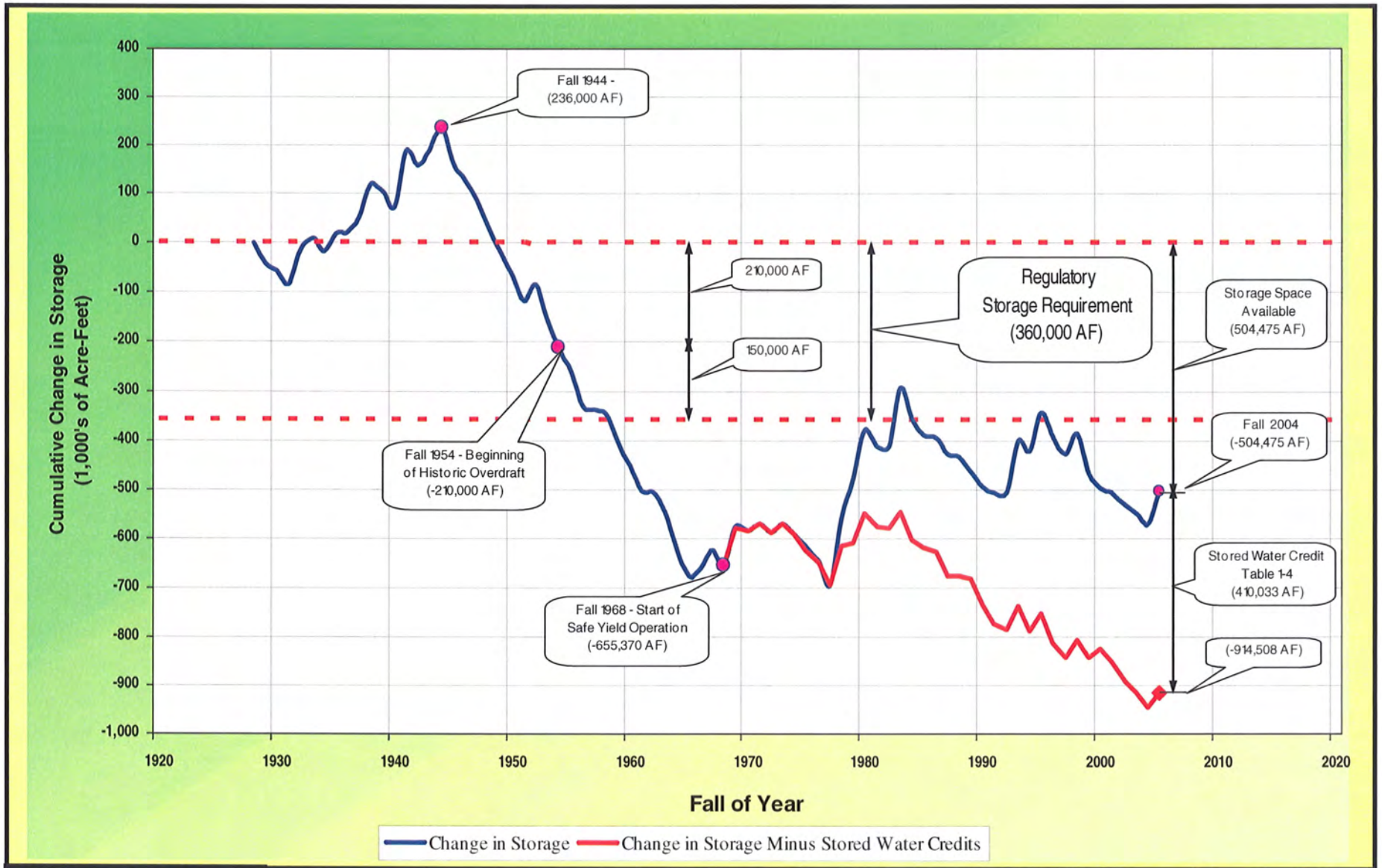
2004-05 Water Year ULARA Watermaster Report	Simulated Groundwater Contours Fall (September) 2005	PLATE 10



2004-05 Water Year ULARA Watermaster Report	Change in Groundwater Elevations Fall 2004 - Fall 2005	PLATE 11



2004-05 Water Year ULARA Watermaster Report	**Upper Los Angeles River Area: Estimated Directions and Velocities of Groundwater**	PLATE **12**



2004-05 Water Year ULARA Watermaster Report	**San Fernando Basin: Cumulative Change in Groundwater Storage**	PLATE 13

PLATE 13 B - ULARA WATERMASTER REPORT

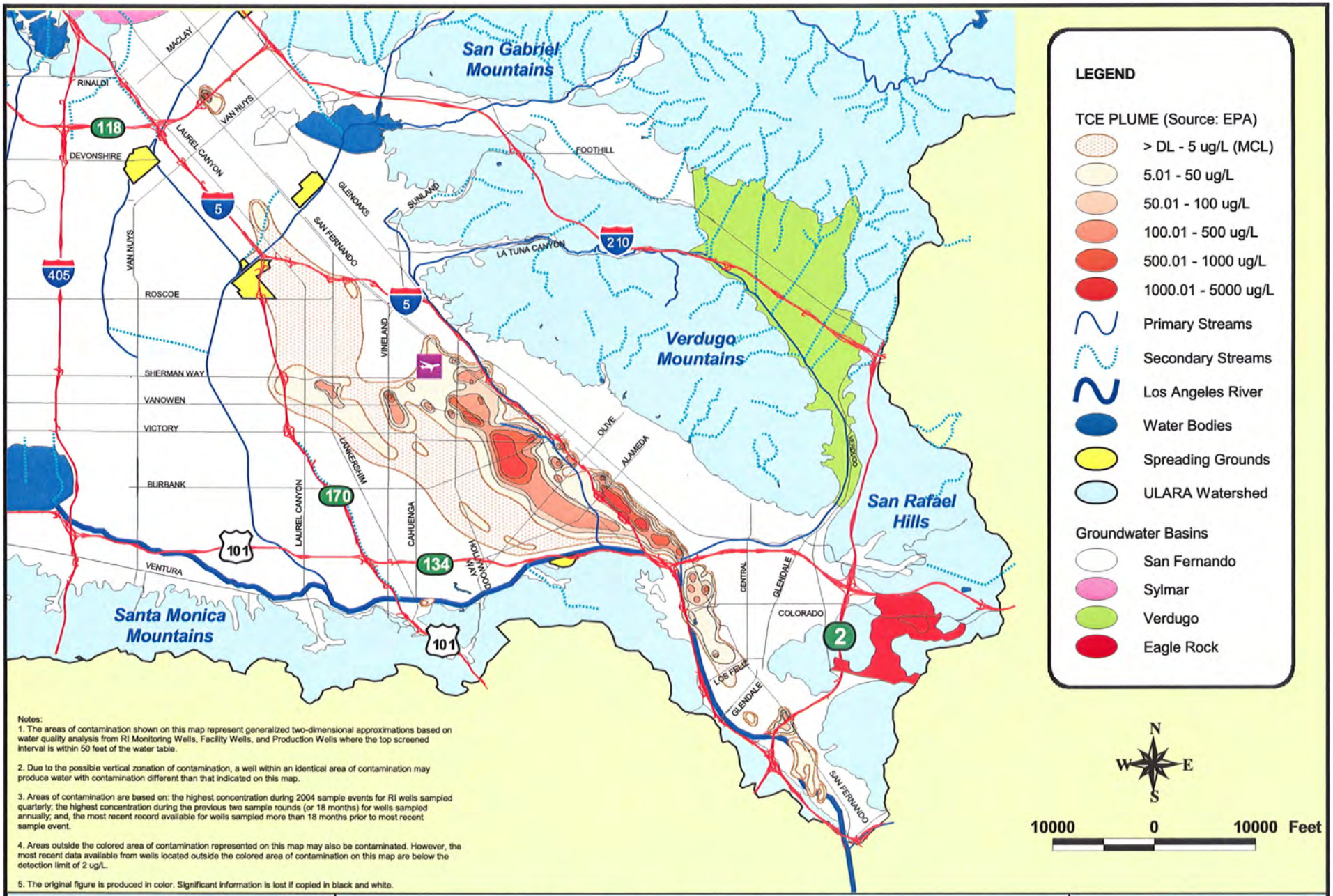
SAN FERNANDO BASIN
CUMULATIVE CHANGE IN GROUNDWATER STORAGE
(acre-feet)

Fall of Year	Change in Storage	Cumulative Chg. in Storage (1928)	Cumulative Chg. in Storage/1,000 AF	Cumulative Chg. in Storage (1944)	Cumulative Chg. in Storage/1,000 AF
1928	0	0	0		
1929	-41,510	-41,510	-42		
1930	-15,690	-57,200	-57		
1931	-26,320	-83,520	-84		
1932	67,030	-16,490	-16		
1933	26,640	10,150	10		
1934	-28,560	-18,410	-18		
1935	38,040	19,630	20		
1936	1,000	20,630	21		
1937	30,660	51,290	51		
1938	66,420	117,710	118		
1939	-12,540	105,170	105		
1940	-32,650	72,520	73		
1941	116,850	189,370	189		
1942	-31,230	158,140	158		
1943	31,030	189,170	189		
1944	47,200	236,370	236	0	0
1945	-74,180	162,190	162	-74,180	-74
1946	-33,300	128,890	129	-107,480	-107
1947	-41,200	87,690	88	-148,680	-149
1948	-52,770	34,920	35	-201,450	-201
1949	-56,360	-21,440	-21	-257,810	-258
1950	-43,390	-64,830	-65	-301,200	-301
1951	-53,290	-118,120	-118	-354,490	-354
1952	33,720	-84,400	-84	-320,770	-321
1953	-68,280	-152,680	-153	-389,050	-389
1954	-56,770	-209,450	-209	-445,820	-446
1955	-51,370	-260,820	-261	-497,190	-497
1956	-71,390	-332,210	-332	-568,580	-569
1957	-6,280	-338,490	-338	-574,860	-575
1958	-9,160	-347,650	-348	-584,020	-584
1959	-52,160	-399,810	-400	-636,180	-636
1960	-53,080	-452,890	-453	-689,260	-689
1961	-50,770	-503,660	-504	-740,030	-740
1962	-3,590	-507,250	-507	-743,620	-744
1963	-40,390	-547,640	-548	-784,010	-784
1964	-70,220	-617,860	-618	-854,230	-854
1965	-57,850	-675,710	-676	-912,080	-912
1966	14,970	-660,740	-661	-897,110	-897
1967	36,720	-624,020	-624	-860,390	-860
1968	-31,350	-655,370	-655	-891,740	-892
1969	79,240	-576,130	-576	-812,500	-813

PLATE 13 B - ULARA WATERMASTER REPORT

SAN FERNANDO BASIN
CUMULATIVE CHANGE IN GROUNDWATER STORAGE
(acre-feet)

Fall of Year	Change in Storage	Cumulative Chg. in Storage (1928)	Cumulative Chg. in Storage/1,000 AF	Cumulative Chg. in Storage (1944)	Cumulative Chg. in Storage/1,000 AF
1970	-9,740	-585,870	-586	-822,240	-822
1971	15,340	-570,530	-571	-806,900	-807
1972	-17,090	-587,620	-588	-823,990	-824
1973	17,020	-570,600	-571	-806,970	-807
1974	-21,820	-592,420	-592	-828,790	-829
1975	-22,580	-615,000	-615	-851,370	-851
1976	-30,090	-645,090	-645	-881,460	-881
1977	-50,490	-695,580	-696	-931,950	-932
1978	136,150	-559,430	-559	-795,800	-796
1979	78,080	-481,350	-481	-717,720	-718
1980	99,970	-381,380	-381	-617,750	-618
1981	-32,560	-413,940	-414	-650,310	-650
1982	-530	-414,470	-414	-650,840	-651
1983	121,090	-293,380	-293	-529,750	-530
1984	-63,180	-356,560	-357	-592,930	-593
1985	-31,690	-388,250	-388	-624,620	-625
1986	-7,980	-396,230	-396	-632,600	-633
1987	-31,940	-428,170	-428	-664,540	-665
1988	-5,000	-433,170	-433	-669,540	-670
1989	-30,550	-463,720	-464	-700,090	-700
1990	-29,941	-493,661	-494	-730,031	-730
1991	-14,122	-507,783	-508	-744,153	-744
1992	411	-507,372	-507	-743,742	-744
1993	106,317	-401,055	-401	-637,425	-637
1994	-22,238	-423,293	-423	-659,663	-660
1995	79,132	-344,161	-344	-580,531	-581
1996	-49,223	-393,384	-393	-629,754	-630
1997	-35,737	-429,121	-429	-665,491	-665
1998	44113	-385,008	-385	-621,378	-621
1999	-82673	-467,681	-468	-704,051	-704
2000	-31,044	-498,725	-499	-735,095	-735
2001	-6,930	-505,655	-506	-742,025	-742
2002	-27,094	-532,749	-533	-769,119	-769
2003	-15,835	-548,584	-549	-784,954	-785
2004	-22,367	-570,951	-571	-807,321	-807
2005	66,476	-504,475	-504	-740,845	-741



Notes:

1. The areas of contamination shown on this map represent generalized two-dimensional approximations based on water quality analysis from RI Monitoring Wells, Facility Wells, and Production Wells where the top screened interval is within 50 feet of the water table.

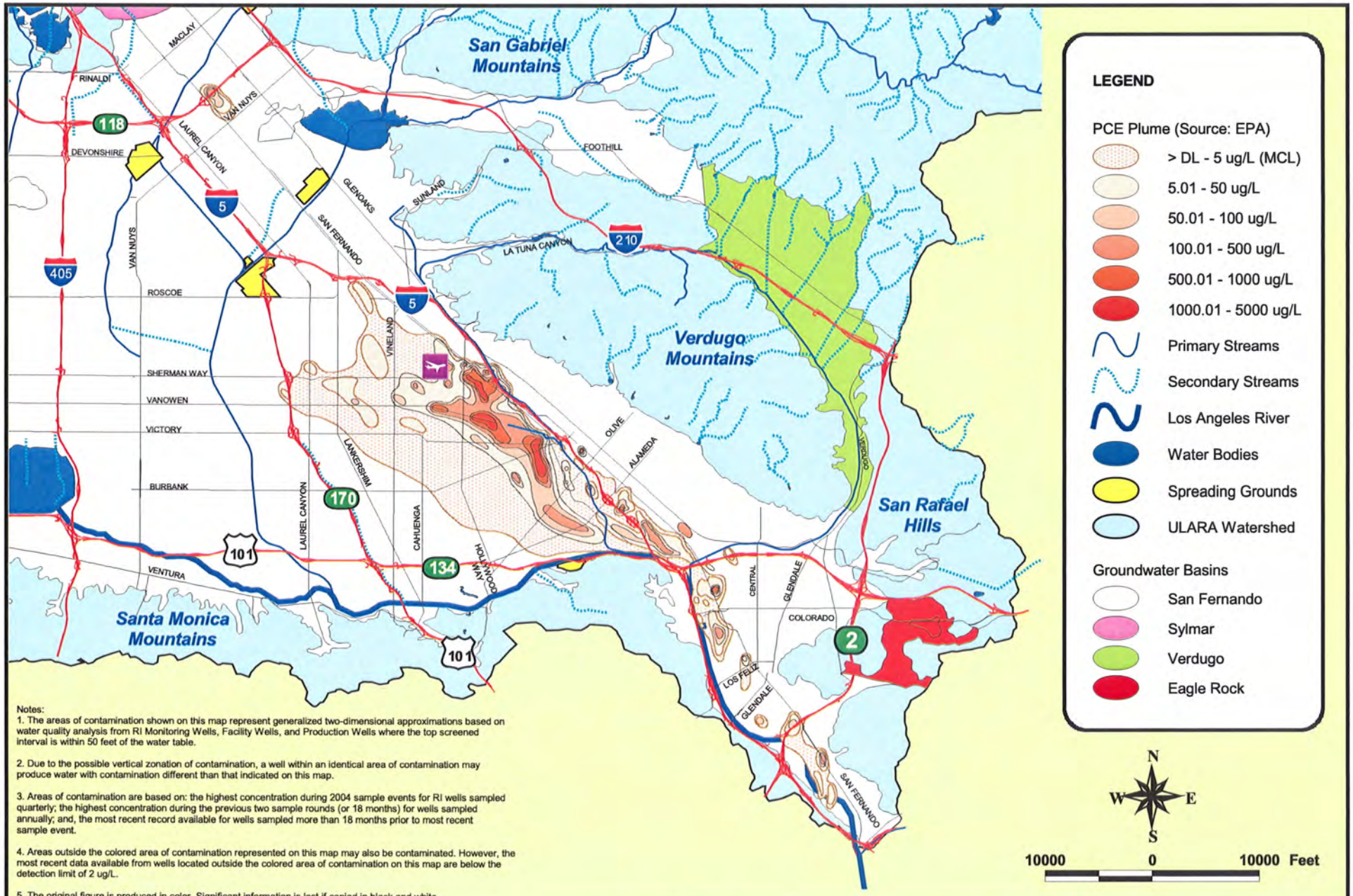
2. Due to the possible vertical zonation of contamination, a well within an identical area of contamination may produce water with contamination different than that indicated on this map.

3. Areas of contamination are based on: the highest concentration during 2004 sample events for RI wells sampled quarterly; the highest concentration during the previous two sample rounds (or 18 months) for wells sampled annually; and, the most recent record available for wells sampled more than 18 months prior to most recent sample event.

4. Areas outside the colored area of contamination represented on this map may also be contaminated. However, the most recent data available from wells located outside the colored area of contamination on this map are below the detection limit of 2 ug/L.

5. The original figure is produced in color. Significant information is lost if copied in black and white.

2004-05 Water Year ULARA Watermaster Report	Upper Los Angeles River Area: TCE Contamination (ug/L) in Shallow Zone in 2004	PLATE 14



Notes:

1. The areas of contamination shown on this map represent generalized two-dimensional approximations based on water quality analysis from RI Monitoring Wells, Facility Wells, and Production Wells where the top screened interval is within 50 feet of the water table.

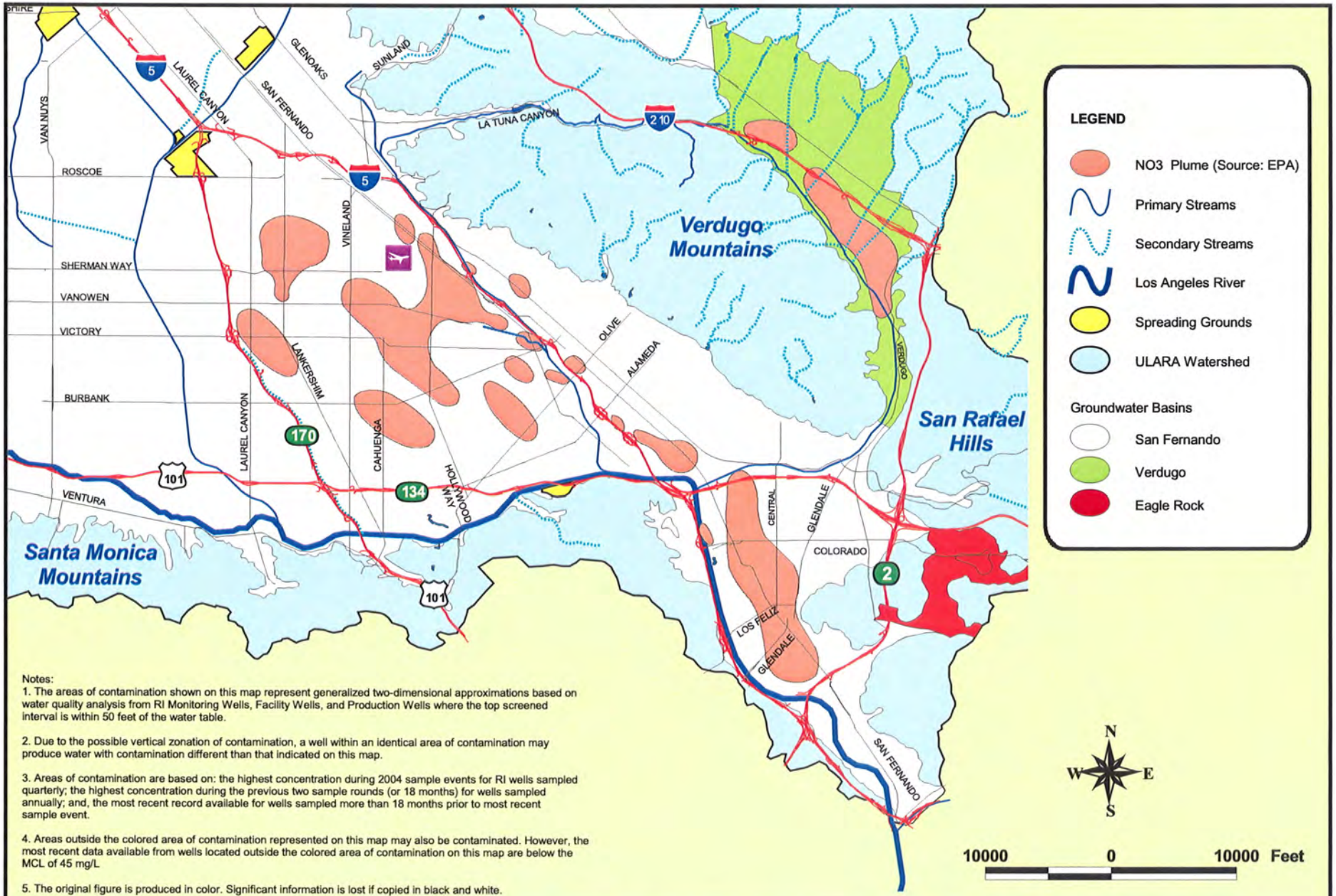
2. Due to the possible vertical zonation of contamination, a well within an identical area of contamination may produce water with contamination different than that indicated on this map.

3. Areas of contamination are based on: the highest concentration during 2004 sample events for RI wells sampled quarterly; the highest concentration during the previous two sample rounds (or 18 months) for wells sampled annually; and, the most recent record available for wells sampled more than 18 months prior to most recent sample event.

4. Areas outside the colored area of contamination represented on this map may also be contaminated. However, the most recent data available from wells located outside the colored area of contamination on this map are below the detection limit of 2 ug/L.

5. The original figure is produced in color. Significant information is lost if copied in black and white.

2004-05 Water Year ULARA Watermaster Report	Upper Los Angeles River Area: PCE Contamination (ug/L) in Shallow Zone in 2004	PLATE 15



Notes:
1. The areas of contamination shown on this map represent generalized two-dimensional approximations based on water quality analysis from RI Monitoring Wells, Facility Wells, and Production Wells where the top screened interval is within 50 feet of the water table.

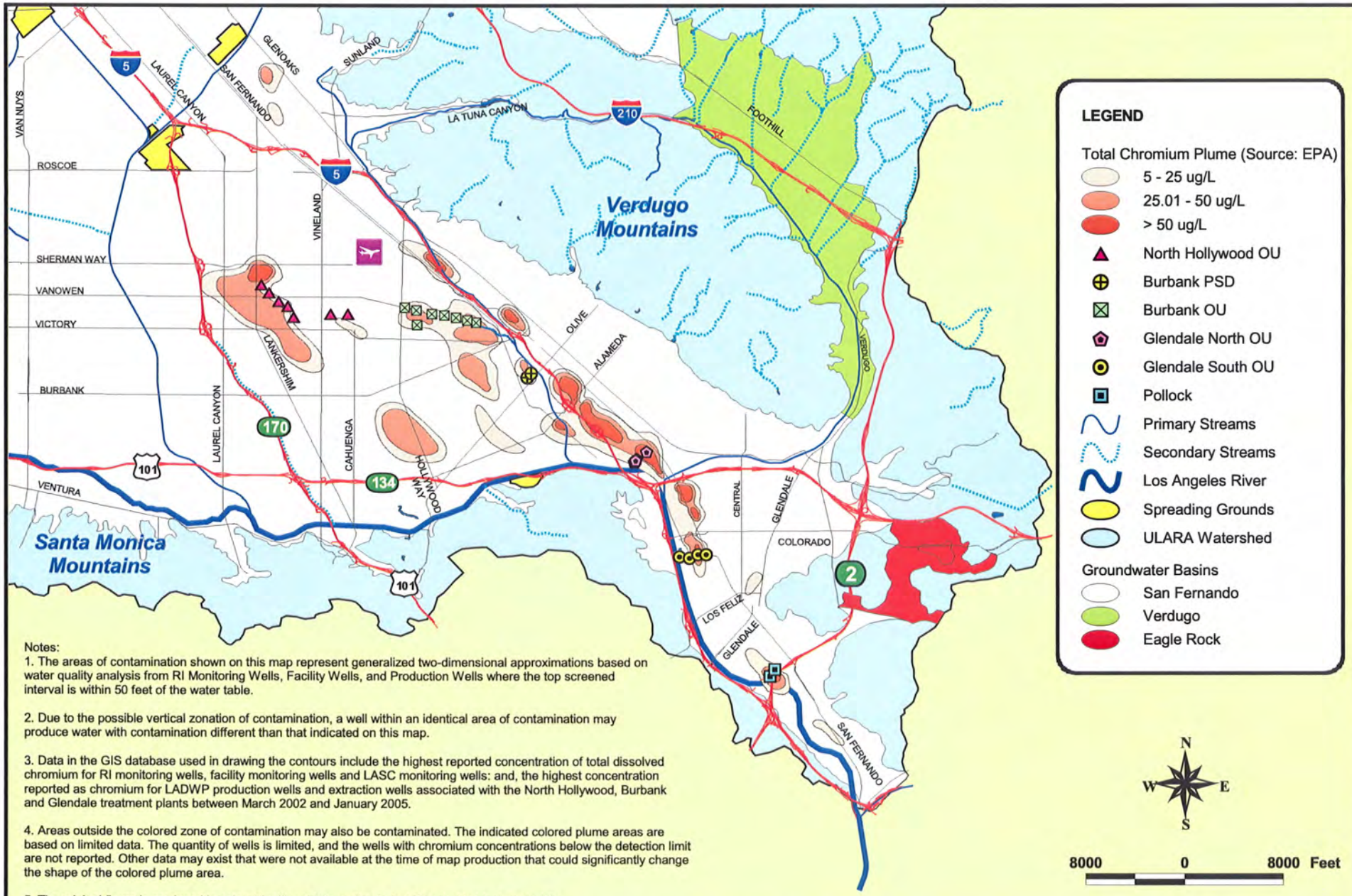
2. Due to the possible vertical zonation of contamination, a well within an identical area of contamination may produce water with contamination different than that indicated on this map.

3. Areas of contamination are based on: the highest concentration during 2004 sample events for RI wells sampled quarterly; the highest concentration during the previous two sample rounds (or 18 months) for wells sampled annually; and, the most recent record available for wells sampled more than 18 months prior to most recent sample event.

4. Areas outside the colored area of contamination represented on this map may also be contaminated. However, the most recent data available from wells located outside the colored area of contamination on this map are below the MCL of 45 mg/L

5. The original figure is produced in color. Significant information is lost if copied in black and white.

2004-05 Water Year ULARA Watermaster Report	Upper Los Angeles River Area: NO3 Contamination (mg/L) in Shallow Zone in 2004	PLATE 16



Notes:

1. The areas of contamination shown on this map represent generalized two-dimensional approximations based on water quality analysis from RI Monitoring Wells, Facility Wells, and Production Wells where the top screened interval is within 50 feet of the water table.

2. Due to the possible vertical zonation of contamination, a well within an identical area of contamination may produce water with contamination different than that indicated on this map.

3. Data in the GIS database used in drawing the contours include the highest reported concentration of total dissolved chromium for RI monitoring wells, facility monitoring wells and LASC monitoring wells: and, the highest concentration reported as chromium for LADWP production wells and extraction wells associated with the North Hollywood, Burbank and Glendale treatment plants between March 2002 and January 2005.

4. Areas outside the colored zone of contamination may also be contaminated. The indicated colored plume areas are based on limited data. The quantity of wells is limited, and the wells with chromium concentrations below the detection limit are not reported. Other data may exist that were not available at the time of map production that could significantly change the shape of the colored plume area.

5. The original figure is produced in color. Significant information is lost if copied in black and white.

2004-05 Water Year ULARA Watermaster Report	Upper Los Angeles River Area: Total Dissolved Chromium Contamination (ug/L) in Shallow Zone in 2004	PLATE 17

APPENDIX A
GROUNDWATER EXTRACTIONS

2004-2005 Water Year
(acre-feet)

LACDPW Well No.	Owner Well No.	2004 Oct.	Nov.	Dec.	2005 Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	TOTAL
					San Fernando Basin									
A. W. Warner Properties														
Plaza Six		0.90	1.02	1.08	1.57	1.69	1.97	1.81	1.78	1.70	1.56	1.42	1.38	17.88
A. W. Warner Properties														
Plaza Three		0.75	0.84	0.87	1.30	1.34	1.51	1.39	1.36	1.13	1.10	1.00	1.04	13.63
Angelica Healthcare Services		(abandoned 12/97)												
3934A	M050A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Auto Stiegler														
---	---	0.14	0.01	0.00	0.85	0.89	0.36	0.00	0.50	0.40	0.43	1.34	1.30	6.22
Boeing (Rockwell International No further pumping until 2000)														
---	E-1 to E-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boeing Santa Susana Field Laboratory														
Delta	WS-09A	0.74	0.80	0.36	0.00	0.00	0.26	0.91	1.02	1.23	0.95	0.80	0.00	7.06
	RD-24	0.07	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
	Total:	0.81	0.81	0.41	0.00	0.00	0.26	0.91	1.02	1.23	0.95	0.80	0.00	7.20
Burbank, City of														
3841C	6A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3882P	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3851E	12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3851K	13A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3882T	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3841G	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burbank Operable Unit														
3871L	VO-1	71.54	77.46	68.22	8.81	8.12	11.36	56.93	0.00	114.17	38.46	23.58	16.75	495.40
3861G	VO-2	79.28	113.19	111.06	126.85	32.24	50.26	95.06	0.00	26.56	141.48	144.52	106.08	1,026.58
3861K	VO-3	117.91	93.13	118.56	37.22	0.06	22.49	1.38	0.00	132.76	80.72	0.00	37.95	642.18
3861L	VO-4	65.20	106.93	102.77	37.00	31.56	94.25	54.61	0.00	0.00	0.00	0.18	103.82	596.32
3850X	VO-5	78.59	0.12	10.57	0.00	0.00	0.00	119.50	0.00	0.00	0.00	0.00	16.74	225.52
3850Z	VO-6	102.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97.97	191.81	128.85	91.72	612.57
3850AB	VO-7	101.64	122.10	120.48	119.33	32.91	130.32	103.11	0.00	134.70	123.62	40.93	0.00	1,029.14
3851C	V0-8	178.79	163.02	169.05	179.47	19.98	137.76	171.22	0.00	186.21	193.69	189.74	182.03	1,770.96
	Total:	795.17	675.95	700.71	508.68	124.87	446.44	601.81	0.00	692.37	769.78	527.80	555.09	6,398.67
CalMat														
4916A	2	28.04	2.31	19.65	24.30	32.07	32.07	19.95	0.00	57.56	0.00	0.04	0.00	215.99
4916	3	49.70	50.32	41.92	47.20	65.90	65.90	60.64	51.69	7.10	47.78	56.22	33.50	577.87
4916(x)	1	20.64	84.39	83.10	90.20	122.00	122.00	76.80	121.31	126.74	82.15	123.25	57.41	1,109.99
Sheldon Pond		134.94	133.98	107.93	105.14	32.12	32.12	158.88	162.12	171.37	148.79	152.11	108.06	1,447.56
	Total:	233.32	271.00	252.60	266.84	252.09	252.09	316.27	335.12	362.77	278.72	331.62	198.97	3,351.41
First Financial Plaza Site														
N/A	F.F.P.S.	2.83	2.75	3.44	12.59	12.43	14.40	7.71	5.16	4.33	3.29	3.52	2.64	75.09

2004-2005 Water Year
(acre-feet)

LACDPW Well No.	Owner Well No.	2004 Oct.	Nov.	Dec.	2005 Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	TOTAL
					San Fernando Basin (cont'd)									
Forest Lawn Memorial Park														
3947A	2	6.43	2.86	1.52	1.32	0.79	1.81	5.69	0.00	0.00	0.00	0.00	0.00	20.42
3947B	3	6.37	2.80	1.52	1.04	1.09	1.89	13.25	23.81	25.45	29.15	16.28	27.42	150.07
3947C	4	6.03	2.42	1.29	0.91	0.95	1.63	12.06	22.40	24.05	27.80	15.38	26.49	141.41
3858K	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3947M	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total:	18.83	8.08	4.33	3.27	2.83	5.33	31.00	46.21	49.50	56.95	31.66	53.91	311.90
Glendale, City of														
3924N	STPT 1	9.79	0.00	0.00	0.00	30.08	5.03	0.15	0.00	0.00	41.28	135.83	9.08	231.24
3924R	STPT 2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.62	11.23	0.00	19.85
GVENT	GVENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total:	9.79	0.00	0.00	0.00	30.08	5.03	0.15	0.00	0.00	49.90	147.06	9.08	251.09
Glendale North/South														
	GN-1	95.05	92.36	94.87	93.13	84.41	94.46	83.80	95.46	91.93	87.33	94.57	91.60	1,098.97
	GN-2	57.05	53.65	59.18	85.98	79.17	95.50	90.53	95.92	87.20	73.30	78.67	64.16	920.31
	GN-3	58.09	52.99	50.60	9.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	171.33
	GN-4	238.97	230.35	236.78	233.01	143.69	234.23	226.91	232.83	224.61	230.45	230.46	221.79	2,684.08
	GS-1	54.35	55.92	57.90	51.23	34.12	54.21	55.43	57.58	54.91	44.74	44.17	37.86	602.42
	GS-2	77.38	79.36	81.84	74.64	61.93	80.18	78.14	78.84	76.76	74.44	71.80	65.65	900.96
	GS-3	45.38	43.33	44.66	46.03	8.83	46.14	45.41	47.91	42.44	33.36	31.46	38.46	473.41
	GS-4	55.53	53.18	55.47	41.62	62.13	62.03	63.06	65.04	67.11	60.39	54.33	50.01	689.90
	Total:	681.80	661.14	681.30	635.29	474.28	666.75	643.28	673.58	644.96	604.01	605.46	569.53	7,541.38
Greeff Fabrics														
----	-----	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hathaway (successor to deMille)														
----	1	1.15	0.84	1.06	0.93	0.64	0.00	0.00	1.65	2.82	2.94	2.24	2.47	16.74
	2	1.81	1.70	0.90	1.39	1.34	1.85	3.20	1.73	2.02	1.76	1.75	2.40	21.85
	3	1.04	0.59	0.36	0.00	0.00	1.24	0.54	0.09	0.00	0.14	0.02	0.85	4.87
	Total:	4.00	3.13	2.32	2.32	1.98	3.09	3.74	3.47	4.84	4.84	4.01	5.72	43.46
Jose Diaz														
---		0.00	0.00	0.00	0.55	0.02	0.02	0.02	0.02	0.04	0.03	0.03	0.03	0.76
Menasco/Coltec Site														
---		0.00	0.01	0.00	0.01	0.01	0.03	0.06	0.04	0.10	0.02	0.07	0.08	0.43
Metropolitan Transportation Authority														
---	1065	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
---	1075	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
---	1130	0.23	0.06	0.04	0.26	0.70	0.74	0.60	0.52	0.70	0.74	0.82	0.69	6.10
---	1140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
---	1150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
---	1070	2.62	3.36	2.97	3.54	3.08	3.80	4.99	4.68	6.82	6.48	8.81	11.30	62.45
---	1133	0.00	0.00	0.00	0.00	0.00	0.62	0.00	0.06	0.00	0.00	0.00	0.00	0.68
	Total:	2.85	3.42	3.01	3.80	3.78	5.16	5.59	5.26	7.52	7.22	9.63	11.99	69.23

2004-2005 Water Year
(acre-feet)

LACDPW Well No.	Owner Well No.	2004 Oct.	Nov.	Dec.	2005 Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	TOTAL
					San Fernando Basin (cont'd)									
Metropolitan Water District														
	Jensen	13.30	13.30	13.90	13.50	16.50	12.30	17.00	18.90	19.80	18.10	19.10	18.20	193.90
Middle Ranch (Successor to deMille)														
4931 x	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4940-1	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
new	5	0.02	0.02	0.01	0.02	0.01	0.01	0.03	0.03	0.04	0.05	0.03	0.06	0.33
4940-3	6	0.01	0.02	0.01	0.01	0.07	0.07	0.01	0.00	0.00	0.99	0.99	0.54	2.72
4940-2	7	0.46	0.39	0.21	0.44	0.08	0.09	0.59	0.53	0.78	0.02	0.02	0.00	3.61
new	8	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.19	0.14	0.14	0.01	0.58
	Spring 1&2	0.03	0.03	0.02	0.04	0.01	0.01	0.03	0.03	0.03	0.03	0.03	0.03	0.32
	Total	0.52	0.46	0.25	0.61	0.17	0.18	0.66	0.59	1.04	1.23	1.21	0.64	7.56
Micro Matics														
JEW	1	0.26	0.27	0.38	0.15	0.00	0.00	0.00	0.00	0.37	0.37	0.31	0.33	2.44
JEW	2	0.04	0.06	0.05	0.05	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.07	0.29
RMW	10	0.11	0.10	0.08	0.05	0.00	0.00	0.00	0.00	0.15	0.15	0.13	0.07	0.84
	Total	0.41	0.43	0.51	0.25	0.00	0.00	0.00	0.00	0.53	0.53	0.44	0.47	3.57
Mobil Oil Corporation														
---	---	0.01	0.02	0.02	0.06	0.10	0.15	0.16	0.06	0.00	0.00	0.00	0.00	0.58
(NEIS) Northeast Interceptor Sewer City of LA BOS														
---	---	0.64												0.64
Raytheon (Formerly Hughes Missile Systems)														
----	-----	0.24	0.21	0.15	0.36	0.37	0.30	0.10	0.08	0.02	0.01	0.13	0.10	2.07
Quaranto # 010004														
----	----								0.00	0.00	0.00	0.00	0.00	0.00
Sears Roebuck & Co. (Well disconnected 10/2000)														
3945	3945	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sportsmen's Lodge														
3785A	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.03
3M-Pharmaceuticals														
---	---	4.60	5.01	4.06	5.08	4.88	4.72	5.89	4.35	5.72	5.94	5.53	5.92	61.70
Tesoro Petroleum Corporation														
---	MW-15	1.02	0.92	0.99	2.20	1.72	2.09	2.12	2.96	2.26	1.95	1.84	0.47	20.54
Toluca Lake Property Owners Association														
3845F	3845F	2.99	2.38	1.80	0.00	0.00	0.00	0.44	3.77	3.01	6.04	4.41	5.99	30.83
Trillium Corporation														
Well #1	---	2.10	1.49	1.81	1.66	1.30	1.98	1.20	0.00	1.77	1.77	1.77	1.77	18.62
Well #2	---	0.29	0.24	0.00	2.90	0.27	0.29	0.00	0.00	0.96	0.96	0.96	0.96	7.83
	Total:	2.39	1.73	1.81	4.56	1.57	2.27	1.20	0.00	2.73	2.73	2.73	2.73	26.45
Valhalla Memorial Park and Mortuary														
3840K	4	11.85	9.83	4.38	0.00	0.00	0.00	0.00	5.98	54.97	90.06	68.74	49.54	295.35
Waste Management Disposal Services of Calif.														
4916D		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2004-2005 Water Year
(acre-feet)

LACDPW Well No.	Owner Well No.	2004 Oct.	Nov.	Dec.	2005 Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	TOTAL
San Fernando Basin (cont'd)														
Walt Disney Pictures and Television		(wells inactive/ not abandoned)												
3874E	EAST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3874F	WEST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3874G	NORTH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Walt Disney Riverside Building														
---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waterworks District No. 21														
---	---	4.51	2.18	4.47	3.58	3.21	4.10	5.10	4.20	3.40	2.35	3.63	2.80	43.53
Wildlife Waystation														
Rehab Canyon		0.17	0.29	0.23	0.61	0.53	0.64	0.59	0.53	0.43	0.39	0.41	0.49	5.31
Foreman Hill Spring		0.00	0.00	0.00	0.00	0.03	0.04	0.03	0.02	0.02	0.01	0.01	0.01	0.17
	Total:	0.17	0.29	0.23	0.61	0.56	0.68	0.62	0.55	0.45	0.40	0.42	0.50	5.48
Los Angeles, City of														
Aeration (A)														
3800E	A-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3810U	A-2	0.39	0.00	8.95	13.66	16.69	7.97	13.52	9.96	11.82	17.17	19.63	20.75	140.51
3810V	A-3	0.39	0.00	7.44	12.24	13.52	8.79	9.62	7.67	9.14	18.41	20.02	25.99	133.23
3810W	A-4	0.05	0.00	0.14	0.00	0.02	4.29	7.67	5.44	9.87	12.53	14.28	14.88	69.17
3820H	A-5	0.09	0.00	0.69	4.02	3.37	2.02	4.50	3.33	4.78	6.06	7.00	8.86	44.72
3821J	A-6	0.00	0.00	5.95	38.45	30.33	13.87	21.51	12.14	21.26	28.54	32.97	34.41	239.43
3830P	A-7	0.78	0.00	4.43	24.06	19.42	10.06	19.77	13.68	15.56	29.25	31.63	33.31	201.95
3831K	A-8	0.00	0.00	0.02	44.15	34.83	15.70	23.94	13.41	23.81	32.19	16.28	9.09	213.42
	A Total:	1.70	0.00	27.62	136.58	118.18	62.70	100.53	65.63	96.24	144.15	141.81	147.29	1,042.43
Erwin (E)														
3831H	E-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3821I	E-2A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3831G	E-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3821F	E-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3831F	E-5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3821H	E-6	181.66	129.36	98.74	176.54	237.49	5.37	0.00	259.09	124.45	50.53	0.00	0.00	1,263.23
3811F	E-10	0.00	4.32	55.95	101.35	142.58	3.37	0.00	128.17	76.74	68.53	112.56	169.21	862.78
	E Total:	181.66	133.68	154.69	277.89	380.07	8.74	0.00	387.26	201.19	119.06	112.56	169.21	2,126.01
Headworks (H)		Inactive Well Field												
3893Q	H-27A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3893R	H-28A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3893S	H-29A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3893T	H-30A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	H Total:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2004-2005 Water Year
(acre-feet)

LACDPW Well No.	Owner Well No.	2004 Oct.	Nov.	Dec.	2005 Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	TOTAL
San Fernando Basin (cont'd)														
North Hollywood (NH)														
3800	NH-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3780A	NH-4	111.23	35.03	0.00	29.36	57.30	18.62	0.00	122.27	196.19	149.33	159.87	201.12	1,080.32
3810S	NH-5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3770	NH-7	81.04	25.07	0.14	17.22	32.90	5.79	0.05	39.55	62.83	42.24	32.67	38.15	377.65
3810	NH-11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3810A	NH-13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3810B	NH-14A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3790B	NH-15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3820D	NH-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3820C	NH-17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3820B	NH-18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3830D	NH-19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3830C	NH-20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3830B	NH-21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3790C	NH-22	68.66	0.21	0.00	0.00	0.23	0.02	0.00	0.57	0.71	0.00	0.30	353.42	424.12
3790D	NH-23	289.16	90.27	0.44	0.00	0.16	0.16	0.18	255.00	329.36	374.33	329.22	356.04	2,024.32
3800C	NH-24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3790F	NH-25	0.00	0.00	0.11	0.11	0.00	0.00	0.00	0.16	0.14	0.00	150.94	275.21	426.67
3790E	NH-26	212.60	20.41	0.14	0.07	0.21	0.14	0.14	0.11	0.00	0.00	156.61	332.85	723.28
3820F	NH-27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3810K	NH-28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3810L	NH-29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3800D	NH-30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3810T	NH-31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3770C	NH-32	140.36	42.40	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	109.99	234.34	527.11
3780C	NH-33	210.26	65.04	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	147.59	313.54	736.52
3790G	NH-34	417.29	20.89	0.41	0.00	0.18	0.64	0.28	307.81	427.59	0.00	57.51	0.41	1,233.01
3830N	NH-35	0.00	0.00	0.00	0.00	93.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	93.43
3790H	NH-36	340.73	26.17	0.71	0.00	0.00	34.53	0.00	206.89	331.66	262.17	254.55	269.77	1,727.18
3790J	NH-37	0.00	0.00	0.11	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.07	0.34
3810M	NH-38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3810N	NH-39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3810P	NH-40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3810Q	NH-41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3810R	NH-42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3790K	NH-43A	407.78	20.84	0.55	61.75	27.16	34.00	0.00	279.87	373.62	77.92	77.02	0.53	1,361.04
3790L	NH-44	405.17	21.37	0.00	0.00	0.21	30.85	67.13	254.91	353.51	173.03	312.40	378.86	1,997.44
3790M	NH-45	552.25	28.86	0.00	0.00	0.30	43.11	0.00	353.95	489.76	239.88	432.55	189.35	2,330.01
	NH Total:	3,236.53	396.56	2.63	108.51	212.08	168.11	67.78	1,821.09	2,565.37	1,318.90	2,221.22	2,943.66	15,062.44

2004-2005 Water Year
(acre-feet)

LACDPW Well No.	Owner Well No.	2004 Oct.	Nov.	Dec.	2005 Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	TOTAL
San Fernando Basin (cont'd)														
Pollock (P)														
3959E	P-4	1.84	0.00	0.00	0.00	0.00	89.53	172.54	148.76	71.51	0.00	0.00	0.00	484.18
3958H	P-6	122.34	65.01	38.86	147.29	269.33	45.75	0.00	0.28	191.80	99.72	246.44	41.44	1,268.26
3958J	P-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	P Total:	124.18	65.01	38.86	147.29	269.33	135.28	172.54	149.04	263.31	99.72	246.44	41.44	1,752.44
Rinaldi-Toluca (RT)														
4909E	RT-1	0.21	0.00	0.18	0.00	14.67	25.44	0.00	0.71	0.00	0.25	0.53	0.34	42.33
4898A	RT-2	123.74	0.00	0.00	0.00	0.51	0.00	0.00	0.64	0.00	0.60	0.00	1.29	126.78
4898B	RT-3	478.24	43.96	0.28	94.12	245.45	31.70	0.00	0.67	0.00	1.33	0.00	0.30	896.05
4898C	RT-4	410.72	37.92	0.00	87.08	221.92	28.58	0.00	0.78	0.00	1.24	105.56	0.16	893.96
4898D	RT-5	287.17	26.88	0.30	0.30	0.37	26.86	0.00	0.55	0.00	104.45	402.82	136.29	985.99
4898E	RT-6	424.24	38.20	1.12	0.00	12.53	30.21	0.00	182.81	206.54	96.60	374.86	367.15	1,734.26
4898F	RT-7	291.32	11.23	0.02	0.21	15.29	6.91	0.00	0.57	0.00	318.43	149.29	1.29	794.56
4898G	RT-8	0.16	0.00	0.00	0.00	21.99	0.55	0.00	136.13	152.64	84.14	370.84	379.57	1,146.02
4898H	RT-9	454.84	12.19	0.00	0.00	0.62	0.00	0.00	1.06	0.00	0.83	410.54	139.83	1,019.91
4909G	RT-10	0.46	0.00	0.00	101.58	146.28	0.00	0.00	0.96	0.00	0.28	1.70	0.37	251.63
4909K	RT-11	0.32	0.00	0.69	0.00	0.67	0.00	0.00	0.51	0.00	0.41	0.53	0.30	3.43
4909H	RT-12	0.46	0.00	0.55	0.16	1.58	0.00	0.00	0.69	0.00	0.87	0.62	0.34	5.27
4909J	RT-13	0.28	0.23	1.19	0.00	1.38	0.00	0.00	0.73	0.00	0.21	0.57	0.25	4.84
4909L	RT-14	0.46	0.00	0.16	0.00	0.83	0.00	0.00	0.60	0.00	0.23	0.48	0.32	3.08
4909M	RT-15	0.21	0.00	0.11	0.00	0.46	0.00	0.00	0.48	0.00	0.30	0.00	0.48	2.04
	RT Total:	2,472.83	170.61	4.60	283.45	684.55	150.25	0.00	327.89	359.18	610.17	1,818.34	1,028.28	7,910.15
Tujunga (T)														
4887C	T-1	377.41	0.00	0.32	88.93	225.85	50.73	0.32	404.43	668.30	606.73	510.17	735.15	3,668.34
4887D	T-2	349.08	0.00	0.00	78.67	202.96	44.95	0.25	353.72	342.47	0.00	0.23	493.89	1,866.22
4887E	T-3	414.60	0.00	0.96	0.69	0.34	0.00	0.00	0.53	302.34	662.42	558.01	623.37	2,563.26
4887F	T-4	392.08	0.00	0.57	85.86	217.26	31.50	0.57	385.70	642.72	583.86	302.30	0.60	2,643.02
4887G	T-5	235.63	0.00	0.64	0.80	0.85	24.52	0.64	393.39	423.39	0.00	0.30	0.57	1,080.73
4887H	T-6	0.23	0.00	0.73	0.73	0.73	0.00	0.73	0.51	0.64	0.00	0.37	0.62	5.29
4887J	T-7	0.34	0.00	0.85	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42
4887K	T-8	0.67	0.00	1.15	0.46	1.49	0.00	0.57	0.00	1.06	0.00	0.28	1.03	6.71
4886B	T-9	0.00	0.00	0.00	0.00	1.19	0.00	0.64	0.00	224.75	607.23	312.37	0.28	1,146.46
4886C	T-10	140.43	0.00	2.59	88.64	232.48	2.82	0.57	405.26	417.22	0.00	0.32	0.30	1,290.63
4886D	T-11	0.69	0.00	1.95	0.69	0.00	0.00	0.00	0.00	0.69	0.00	0.30	0.30	4.62
4886E	T-12	0.32	0.00	2.25	0.46	1.26	0.00	0.67	0.25	247.91	649.20	588.52	39.53	1,530.37
	T Total:	1,911.48	0.00	12.01	346.16	884.41	154.52	4.96	1,943.79	3,271.49	3,109.44	2,273.17	1,895.64	15,807.07

2004-2005 Water Year
(acre-feet)

LACDPW Well No.	Owner Well No.	2004 Oct.	Nov.	Dec.	2005 Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	TOTAL
					San Fernando Basin (cont'd)									
Verdugo (V)														
3863H	V-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3863P	V-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3863J	V-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3863L	V-11	186.16	145.32	105.74	191.21	270.18	5.62	0.60	227.69	0.00	0.00	0.00	0.00	1,132.52
3853G	V-13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3854F	V-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3844R	V-24	273.35	210.06	146.19	272.13	388.38	8.91	0.00	0.07	0.80	75.85	0.30	0.05	1,376.09
	V Total:	459.51	355.38	251.93	463.34	658.56	14.53	0.60	227.76	0.80	75.85	0.30	0.05	2,508.61
Whitnall (W)														
3820E	W-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3821B	W-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3821C	W-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3821D	W-4	0.00	0.83	0.18	0.21	0.00	0.32	0.18	0.00	0.34	0.55	0.18	0.18	2.97
3821E	W-5	0.00	0.51	0.14	0.16	0.00	0.23	0.14	0.00	0.28	0.44	0.14	0.14	2.18
3831J	W-6A	274.54	196.56	145.41	259.60	349.59	7.90	0.16	384.07	151.40	269.38	141.69	114.26	2,294.56
3832K	W-7	0.00	0.44	0.07	0.09	0.00	0.16	0.07	207.67	84.11	144.65	77.64	60.86	575.76
3832L	W-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3832M	W-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3842E	W-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	W Total:	274.54	198.34	145.80	260.06	349.59	8.61	0.55	591.74	236.13	415.02	219.65	175.44	2,875.47
	Los Angeles, City of Total:	8,662.43	1,319.58	638.14	2,023.28	3,556.77	702.74	346.96	5,514.20	6,993.71	5,892.31	7,033.49	6,401.01	49,084.62
	San Fernando Basin Total:	10,456.28	2,984.49	2,320.78	3,491.16	4,492.14	2,131.97	1,993.99	6,629.15	8,858.54	7,800.45	8,807.10	7,899.14	67,865.19

					Sylmar Basin									
Los Angeles, City of														
Plant	Mission													0.00
4840J	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4840K	6	0.00	0.00	0.00	0.00	0.00	0.00	0.85	124.04	0.80	53.03	177.60	167.95	524.27
4840S	7	0.00	0.00	0.00	0.00	0.00	0.00	0.39	122.02	0.11	70.43	195.70	197.31	585.96
		0.00	0.00	0.00	0.00	0.00	0.00	1.24	246.06	0.91	123.46	373.30	365.26	1,110.23
Santiago Estates														
5998	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2004-2005 Water Year
(acre-feet)

LACDPW Well No.	Owner Well No.	2004 Oct.	Nov.	Dec.	2005 Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	TOTAL
							Sylmar Basin (cont'd)							
San Fernando, City of														
5969D	2A	158.46	5.80	7.43	101.32	76.89	92.31	147.12	166.15	175.25	200.73	200.38	182.59	1,514.43
5959	3	83.49	1.66	8.07	73.83	77.79	78.53	72.72	82.59	92.65	101.76	90.70	92.70	856.49
5969	4	14.67	1.01	1.97	18.35	17.52	20.46	19.18	17.86	18.50	23.41	25.44	22.69	201.06
5968	7A	51.92	2.43	4.47	43.61	43.82	46.46	52.30	60.07	59.10	76.76	66.51	63.61	571.06
	Total:	308.54	10.90	21.94	237.11	216.02	237.76	291.32	326.67	345.50	402.66	383.03	361.59	3,143.04
	Sylmar Basin Total:	308.54	10.90	21.94	237.11	216.02	237.76	292.56	572.73	346.41	526.12	756.33	726.85	4,253.27

							Verdugo Basin							
Crescenta Valley County Water District														
5058B	1	22.25	23.83	26.38	16.64	11.14	23.70	46.20	42.10	43.98	44.69	45.32	45.30	391.53
5036A	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5058H	5	55.99	56.87	60.46	58.56	32.82	21.86	43.45	57.24	52.10	55.64	23.28	42.37	560.64
5058	6	9.43	3.99	2.83	3.79	3.91	2.34	9.35	5.71	2.79	9.50	9.89	10.57	74.10
5047B	7	5.78	0.26	0.00	2.52	37.71	37.76	13.18	15.28	20.73	18.94	18.63	15.40	186.19
5069J	8	31.82	30.10	31.40	31.86	29.90	22.59	0.00	33.68	33.34	40.11	39.20	38.07	362.07
5047D	9	17.48	18.86	19.96	18.23	20.27	27.05	35.91	36.47	35.47	36.11	35.27	34.68	335.76
5058D	10	9.08	10.14	16.25	7.16	7.99	18.20	39.15	55.37	62.94	59.64	65.73	36.53	388.18
5058E	11	14.33	15.87	16.69	20.05	7.82	24.78	33.80	33.35	30.80	30.03	29.19	23.18	279.89
5058J	12	19.92	19.07	18.67	19.56	19.80	18.33	0.00	0.00	0.00	0.29	14.17	20.60	150.41
5069F	14	36.46	35.04	35.20	35.88	32.50	36.05	41.29	41.98	40.70	40.80	39.78	39.25	454.93
	15	4.18	3.91	3.47	3.09	3.90	5.80	7.23	5.40	7.80	7.12	5.90	5.78	63.58
	PICKENS (CVWD)	3.66	3.51	3.62	3.72	3.84	5.71	4.98	5.48	5.12	5.19	5.21	4.90	54.94
	Total:	230.38	221.45	234.93	221.06	211.60	244.17	274.54	332.06	335.77	348.06	331.57	316.63	3,302.22
Knowltons														
	PICKENS	0.69	0.66	0.69	0.69	0.62	0.69	0.66	0.93	0.96	0.93	0.96	0.93	9.41
Glendale, City of														
3961-3971	GL3-4	58.40	58.81	73.79	74.91	75.20	66.08	73.63	106.82	104.53	118.94	124.90	103.49	1,039.50
3970	GL-6	45.69	46.03	46.86	48.00	48.69	65.35	69.33	74.05	69.69	75.03	29.75	0.00	618.47
---	VPCKP	51.76	53.32	50.77	34.55	55.79	60.12	34.86	70.61	72.88	76.90	78.08	59.28	698.92
---	MM-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total:	155.85	158.16	171.42	157.46	179.68	191.55	177.82	251.48	247.10	270.87	232.73	162.77	2,356.89
	Verdugo Basin Total:	386.92	380.27	407.04	379.21	391.90	436.41	453.02	584.47	583.83	619.86	565.26	480.33	5,668.52

2004-2005 Water Year
(acre-feet)

LACDPW Well No.	Owner Well No.	2004 Oct.	Nov.	Dec.	2005 Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	TOTAL
					Eagle Rock Basin									
Sparkletts														
3987A	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3987B	2	4.30	4.56	4.17	4.21	5.71	5.17	3.92	2.44	3.30	2.63	5.61	2.07	48.09
3987F	3	5.22	4.36	5.87	4.39	5.02	6.09	4.68	5.48	7.14	6.35	5.96	7.97	68.53
3987G	4	7.30	5.40	8.34	7.04	5.37	8.41	6.76	7.74	9.89	8.68	8.50	8.18	91.61
	Total:	16.82	14.32	18.38	15.64	16.10	19.67	15.36	15.66	20.33	17.66	20.07	18.22	208.23
Eagle Rock Basin Total:		16.82	14.32	18.38	15.64	16.10	19.67	15.36	15.66	20.33	17.66	20.07	18.22	208.23

ULARA Total:		11,168.56	3,389.98	2,768.14	4,123.12	5,116.16	2,825.81	2,754.93	7,802.01	9,809.11	8,964.09	10,148.76	9,124.54	77,995.21

APPENDIX B
KEY GAGING STATIONS OF SURFACE RUNOFF

Los Angeles County Dept of Public Works

USDAY V43 Output 10/06/2005

Summary Report

Site: F57C Los Angeles River Above Arroyo Seco
USGS #:
Beginning Date: 10/01/2004
Ending Date: 09/30/2005

Daily Mean Discharge in Cubic feet/second Water Year Oct 2004 to Sep 2005

DRC 10/13/05

Day	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117	90.2	102	493	232	863	407	104	120	131	97.7	91.7
2	116	91.8	105	990	224	791	383	105	128	140	91.7	92.0
3	116	94.6	104	6240	222	1010	359	110	125	147	83.5	88.8
4	121	96.5	103	688	221	2170	337	108	122	136	87.5	90.0
5	122	102	780	381	214	1070	316	249	122	128	86.3	91.4
6	123	104	146	386	231	1030	296	156	119	123	87.5	89.0
7	133	107	103	3950	169	964	277	104	130	105	87.1	88.9
8	123	130	259	4710	164	880	259	109	111	117	83.6	86.7
9	124	114	106	17500	143	815	242	194	124	121	83.4	86.9
10	117	113	106	16500	144	811	226	107	129	123	81.6	85.6
11	113	112	103	9560	5780	663	212	102	133	120	82.7	84.3
12	115	112	106	3700	931	635	198	93.0	131	121	88.9	78.8
13	113	110	108	2470	382	633	185	99.9	130	113	93.7	78.0
14	138	112	105	1570	363	646	173	103	137	106	96.7	79.1
15	143	112	107	1400	301	639	161	105	137	118	121	79.7
16	144	112	114	1210	200	639	150	107	209	114	80.9	82.8
17	1310	114	115	1100	1000	639	140	118	132	115	80.3	80.8
18	603	112	111	1110	4360	678	122	106	125	116	80.9	81.5
19	2210	120	112	1090	8500	715	124	108	128	122	78.5	82.5
20	5210	158	118	1090	8310	654	117	105	130	118	84.9	200
21	122	540	127	1040	14700	645	115	105	145	122	91.5	78.5
22	99.4	101	126	405	7420	2980	116	110	160	123	92.0	74.1
23	90.5	100	126	451	5490	813	116	115	168	127	96.9	73.3
24	88.8	104	129	433	3600	528	126	116	157	132	99.9	74.1
25	91.1	105	125	381	3000	502	119	128	161	121	102	73.1
26	2830	96.4	125	396	2430	471	119	117	157	119	103	77.1
27	2670	219	910	412	2210	441	114	131	141	120	105	76.7
28	180	138	11000	1070	1570	427	2110	130	135	116	103	78.3
29	104	103	6080	442	------	425	117	134	130	113	103	75.0
30	92.2	103	984	433	------	420	106	127	129	107	101	80.9
31	89.3	------	3620	368	------	420	------	130	------	102	96.2	------
Total	17768.3	3826.5	26365	81969	72511	25017	7842	3735.9	4105	3736	2851.9	2579.6
Mean	573	128	850	2644	2590	807	261	121	137	121	92.0	86.0
Max	5210	540	11000	17500	14700	2980	2110	249	209	147	121	200
Min	88.8	90.2	102	368	143	420	106	93.0	111	102	78.5	73.1
Acre-Ft	35240	7590	52290	162600	143800	49620	15550	7410	8140	7410	5660	5120

Wtr Year 2005	Total	252307.2	Mean	691	Max	17500	Min	73.1	Acre-Ft 500400
Cal Year 2004	Total	98745.2	Mean	270	Max	11000	Min	88.8	Acre-Ft 195900

Los Angeles County Dept of Public Works USDAY V43 Output 10/06/2005

Summary Report

Site: F118B Pacoima Creek Flume below Pacoima Dam
USGS #:
Beginning Date: 10/01/2004
Ending Date: 09/30/2005

DVW 10/13/05

Daily Mean Discharge in Cubic feet/second Water Year Oct 2004 to Sep 2005

Day	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	141	76.0	156	80.2	0	165	0	0	0
2	0	15.1	0	140	94.5	162	0	0	19.3	0	0	0
3	0	24.0	0	140	103	131	0	0	0	0	0	0
4	0	23.8	0	139	34.8	116	93.3	0	.64	0	0	0
5	0	23.6	0	139	0	116	128	0	5.79	3.42	0	0
6	0	23.5	0	138	0	117	126	216	28.6	2.71	0	0
7	0	23.4	0	137	74.5	117	46.8	245	33.2	.25	0	0
8	0	23.2	0	387	112	118	0	0	28.9	0	0	0
9	0	22.9	0		111	117	0	0	13.9	0	0	0
10	0	14.1	0	0	109	105	0	0	6.44	0	0	0
11	0	0	0	0	36.7	90.0	88.8	0	4.66	0	0	0
12	0	0	0	0	0	90.1	64.5	0	2.98	214	0	0
13	0	0	0	0	0	89.9	0	0	1.30	93.8	0	0
14	0	0	0	0	120	89.9	0	0	161	0	0	0
15	0	0	0	0	159	87.4	0	0	54.9	0	0	0
16	0	0	0	0	97.3	86.1	0	0	2.11	0	0	0
17	0	0	0	0	60.9	86.3	0	263	4.33	0	0	0
18	0	0	0	0	0	86.1	0	203	6.70	.84	0	0
19	1.34	0	0	0	442	85.7	0	0	9.25	0	0	0
20	0	0	0	0		85.2	0	0	11.9	0	0	0
21	0	0	0	161		85.5	0	0	14.5	0	0	0
22	0	0	0	243		85.8	0	0	17.1	0	0	0
23	0	0	0	240		85.9	0	0	19.7	0	0	0
24	0	0	0	236		85.4	0	0	22.6	0	0	0
25	0	0	0	232	559	84.3	0	0	25.5	0	0	0
26	0	0	0	129	413	84.5	0	0	28.5	192	0	0
27	0	0	0	78.3	414	83.9	0	0	31.5	74.3	0	0
28	0	0	0	77.5	259	83.5	.02	0	34.5	0	0	0
29	0	0	9.13	76.8	------	77.8	0	0	37.5	0	0	0
30	0	0	35.4	76.6	------	135	0	0	19.5	0	0	0
31	0	------	73.7	76.3	------	162	------	174	------	0	0	------
Total	1.34	193.6	118.23	2987.5	3275.7	3185.3	627.62	1101	811.80	581.32	0	0
Mean	.043	6.45	3.81	99.6	142	103	20.9	35.5	27.1	18.8	0	0
Max	1.34	24.0	73.7	387	559	162	128	263	165	214	0	0
Min	0	0	0	0	0	77.8	0	0	0	0	0	0
Acre-Ft	2.7	384	235	5930	6500	6320	1240	2180	1610	1150	0	0

Wtr Year 2005	Total	12883.41	Mean	35.9	Max	559	Min	0	Acre-Ft	25550
Cal Year 2004	Total	564.90	Mean	1.54	Max	73.7	Min	0	Acre-Ft	1120

Los Angeles County Dept of Public Works USDAY V43 Output 10/06/2005

Summary Report

Site: F168 Big Tujunga Creek Below Big Tujunga Dam
USGS #:
Beginning Date: 10/01/2004
Ending Date: 09/30/2005

Daily Mean Discharge in Cubic feet/second Water Year Oct 2004 to Sep 2005

Day	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	35.5	47.5	637	119	566	170	94.4	94.6	40.4	45.6	7.65
2	.10	54.7	47.5	615	113	581	161	102	105	25.9	45.5	7.57
3	.10	80.3	47.5	538	111	631	149	101	104	25.0	45.9	6.90
4	.10	84.3	47.5	379	108	621	122	102	104	24.9	46.0	6.63
5	.09	75.5	48.4	374	105	523	105	103	104	48.9	46.0	6.36
6	.09	114	48.3	367	104	359	98.6	83.9	103	61.7	46.0	4.79
7	.09	112	48.3	366	103	360	153	99.8	102	61.7	46.0	1.52
8	.09	108	48.3	1090	98.6	360	142	101	76.6	61.7	46.1	.94
9	.09	72.5	48.3	3660	99.3	358	136	110	74.5	61.5	46.4	.88
10	.10	45.7	48.3	3720	95.3	357	135	118	75.1	61.1	44.1	.88
11	.11	45.8	48.3	3200	127	363	109	102	75.1	60.8	42.7	.82
12	.10	45.5	48.3	1230	420	363	109	56.4	75.0	60.4	43.6	.78
13	.10	45.4	48.3	866	449	360	123	26.4	74.8	60.8	43.6	.79
14	.10	45.7	48.3	843	276	357	109	25.5	96.9	53.7	43.6	.80
15	.11	46.2	48.3	814	254	353	115	25.2	94.7	50.7	40.8	.79
16	.15	46.8	48.3	777	178	348	114	25.4	87.5	50.7	37.8	10.4
17	.37	46.8	48.3	731	161	343	113	25.3	123	50.7	37.6	25.4
18	.26	46.8	48.3	408	183	339	113	25.3	121	46.4	37.4	24.5
19	.88	46.8	48.3	255	545	333	113	25.3	121	44.7	37.4	9.72
20	103	47.0	48.8	295	781	327	110	40.1	118	44.8	37.5	1.65
21	166	48.1	49.9	356	2230	320	110	48.5	117	44.8	38.1	1.20
22	41.3	48.3	49.8	341	1990	314	108	48.9	115	44.8	37.0	1.00
23	39.8	48.3	49.7	322	1530	311	109	56.7	114	44.9	36.9	.92
24	38.1	48.3	49.8	193	1120	305	109	69.1	112	45.1	33.3	.93
25	36.5	48.3	49.9	88.1	914	297	106	66.1	110	45.2	26.9	.92
26	33.2	48.3	49.9	154	760	287	104	69.1	108	45.2	22.4	.89
27	30.6	48.7	50.8	209	655	266	103	69.1	75.4	45.2	19.4	.91
28	29.9	47.4	158	199	571	243	103	69.1	60.8	45.3	16.0	.85
29	29.4	47.5	1420	154	------	161	126	69.1	60.8	45.4	13.7	.94
30	29.1	47.5	888	132	------	145	117	69.1	60.8	45.4	11.1	.97
31	28.6	------	494	123	------	147	------	69.1	------	45.4	8.83	------
Total	608.63	1726.0	4273.2	23436.1	14200.2	10998	3594.6	2095.9	2863.6	1493.2	1123.23	129.30
Mean	19.6	57.5	138	756	507	355	120	67.6	95.5	48.2	36.2	4.31
Max	166	114	1420	3720	2230	631	170	118	123	61.7	46.4	25.4
Min	.09	35.5	47.5	88.1	95.3	145	98.6	25.2	60.8	24.9	8.83	.78
Acre-Ft	1210	3420	8480	46480	28170	21810	7130	4160	5680	2960	2230	256

Wtr Year 2005	Total	66541.96	Mean	182	Max	3720	Min	.09	Acre-Ft 132000
Cal Year 2004	Total	7470.79	Mean	20.4	Max	1420	Min	0	Acre-Ft 14820

Los Angeles County Dept of Public Works USDAY V43 Output 10/06/2005

Summary Report

Site: F252 Verdugo Wash At Estelle Avenue
USGS #:
Beginning Date: 10/01/2004
Ending Date: 09/30/2005

Daily Mean Discharge in Cubic feet/second Water Year Oct 2004 to Sep 2005

Day	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.42	7.29	11.1	19.9	16.3	46.5	20.1	14.7	11.3	15.6	14.3	15.4
2	5.42	7.01	10.9	70.0	15.7	43.5	20.1	14.5	11.4	15.6	14.2	12.1
3	5.42	7.95	8.11	159	15.3	43.9	20.1	15.2	11.8	15.8	14.3	11.7
4	5.42	7.13	7.36	29.4	15.3	345	19.6	15.0	11.4	15.8	14.5	12.3
5	5.42	7.19	34.8	19.8	15.3	180	18.5	29.3	11.5	15.9	14.0	12.7
6	5.42	6.98	7.80	16.8	15.3	57.6	17.7	19.7	10.9	16.2	12.8	11.2
7	5.42	6.94	7.19	264	15.3	40.3	17.7	14.5	10.9	16.0	12.5	10.4
8	5.42	7.44	8.51	648	14.9	34.2	17.7	13.2	11.9	16.1	15.0	11.4
9	5.42	7.14	7.06	1350	14.0	31.6	17.7	14.7	12.0	17.3	15.4	12.4
10	5.42	7.41	6.94	957	13.1	29.8	17.3	13.1	12.0	16.8	14.5	12.9
11	5.42	7.36	6.74	494	459	28.4	16.5	12.3	12.0	16.4	15.3	13.5
12	5.42	7.22	6.82	178	254	28.2	16.5	12.3	12.0	16.7	14.0	12.8
13	5.42	6.78	6.97	87.1	67.1	26.8	16.5	12.3	11.9	16.8	16.3	11.5
14	5.42	6.60	7.24	49.0	30.5	26.8	16.5	12.8	12.3	16.9	15.1	12.8
15	5.42	6.62	7.37	41.2	20.4	25.4	16.5	12.8	12.4	16.7	13.7	13.2
16	5.55	6.38	6.34	36.1	17.3	23.7	15.9	13.1	11.0	16.1	11.7	12.2
17	38.6	6.66	6.43	31.7	23.5	22.7	15.3	13.1	12.0	16.0	12.5	13.3
18	29.5	7.26	6.35	28.4	237	23.1	15.3	13.3	12.2	16.0	12.0	12.5
19	270	7.29	6.21	27.4	679	24.1	16.1	12.8	12.5	15.9	12.6	13.4
20	538	24.3	7.03	24.8	762	23.9	16.5	12.9	12.6	16.1	12.6	36.8
21	21.7	18.4	6.79	22.7	1060	22.7	15.5	12.6	13.6	16.5	12.4	15.8
22	7.58	7.40	7.27	21.7	570	239	15.7	13.1	15.2	15.9	13.0	14.1
23	7.10	6.85	6.68	21.4	533	265	16.6	12.6	15.2	16.1	12.7	12.7
24	7.05	7.16	6.47	19.7	256	56.6	17.2	12.0	15.2	16.7	13.0	12.2
25	6.41	7.12	6.31	17.9	170	34.5	16.0	11.9	16.0	13.8	13.1	12.5
26	204	7.76	6.55	19.7	116	28.0	15.3	11.3	16.6	13.1	12.8	11.4
27	504	21.5	48.9	20.6	72.0	25.1	15.3	11.5	15.3	12.8	13.0	10.1
28	91.6	8.04	805	30.8	54.4	23.0	118	10.7	15.2	13.1	13.0	10.6
29	14.1	6.16	464	25.0	------	22.6	16.3	11.4	15.2	13.4	12.6	10.6
30	8.23	8.98	26.5	18.2	------	21.4	15.4	11.2	15.2	13.7	11.8	11.8
31	7.33	------	151	17.2	------	21.4	------	11.5	------	14.0	12.0	------
Total	1842.05	258.32	1712.74	4766.5	5531.7	1864.8	609.4	421.4	388.7	483.8	416.7	396.3
Mean	59.4	8.61	55.2	154	198	60.2	20.3	13.6	13.0	15.6	13.4	13.2
Max	538	24.3	805	1350	1060	345	118	29.3	16.6	17.3	16.3	36.8
Min	5.42	6.16	6.21	16.8	13.1	21.4	15.3	10.7	10.9	12.8	11.7	10.1
Acre-Ft	3650	512	3400	9450	10970	3700	1210	836	771	960	827	786

Wtr Year 2005	Total	18692.41	Mean	51.2	Max	1350	Min	5.42	Acre-Ft 37080
Cal Year 2004	Total	5841.82	Mean	16.0	Max	805	Min	1.42	Acre-Ft 11590

DVW 10/13/05

Los Angeles County Dept of Public Works USDAY V43 Output 10/06/2005

Summary Report

Site: E285 Burbank-Western Storm Drain
USGS #:
Beginning Date: 10/01/2004
Ending Date: 09/30/2005

Daily Mean Discharge in Cubic feet/second Water Year Oct 2004 to Sep 2005

Day	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.7	12.5	15.7	42.9	38.7	45.5	19.8	12.3	17.9	39.1	23.4	18.5
2	16.7	12.2	14.5	58.4	32.2	38.3	19.7	12.6	19.2	34.5	17.4	16.6
3	16.7	12.4	13.7	290	27.4	38.9	19.7	12.9	18.4	34.8	17.4	16.3
4	17.0	12.3	14.8	99.0	24.3	139	18.6	13.4	19.1	31.3	16.8	15.7
5	14.6	12.4	23.9	43.1	23.1	66.4	18.2	26.9	17.8	28.6	13.6	16.4
6	15.0	13.2	21.0	38.9	22.7	32.7	18.2	13.1	19.8	28.5	16.3	17.6
7	15.5	13.7	15.1	192	20.2	24.4	17.8	12.6	20.0	29.6	17.6	18.3
8	15.2	14.8	13.8	262	19.0	20.9	16.8	12.7	20.2	28.5	17.6	18.0
9	15.1	13.1	13.3	725	18.2	18.7	16.8	14.1	20.9	28.0	17.7	18.4
10	15.5	12.9	13.6	467	18.2	18.2	16.8	13.0	20.3	29.8	18.0	20.0
11	15.6	12.4	13.6	204	324	17.1	15.9	13.5	21.8	29.3	18.0	20.7
12	15.6	13.1	13.6	157	98.9	16.8	15.4	13.0	24.7	19.6	19.8	18.1
13	15.6	14.2	13.7	119	41.2	16.8	15.4	11.9	24.8	17.4	19.3	19.1
14	16.1	14.8	13.8	91.9	23.9	16.8	14.4	12.1	32.7	17.3	15.3	18.7
15	15.6	15.6	13.0	79.8	20.0	15.9	14.1	11.9	31.8	17.0	17.3	19.4
16	17.7	10.5	12.3	68.3	19.7	15.4	14.1	12.4	30.7	18.3	15.7	21.1
17	70.8	8.39	11.6	58.8	75.8	15.4	14.1	12.4	31.4	18.3	15.5	20.0
18	50.9	7.90	11.7	43.3	566	15.4	14.1	12.4	31.6	16.7	15.8	20.2
19	254	7.64	11.1	37.0	554	15.4	13.0	11.9	32.6	15.7	16.7	20.5
20	363	18.0	11.4	36.4	546	14.5	14.2	13.3	32.8	14.5	17.3	33.6
21	22.4	73.6	11.5	34.7	627	14.1	12.8	11.8	35.5	16.2	17.8	15.1
22	13.6	19.1	11.5	29.2	303	204	13.1	12.3	37.2	16.1	18.4	14.1
23	13.0	13.6	12.3	26.2	289	105	12.9	13.8	36.8	16.5	17.7	13.5
24	13.1	12.9	14.1	25.2	167	65.1	13.2	13.7	33.4	15.5	18.3	14.1
25	13.1	13.5	14.1	25.2	111	44.0	13.2	13.9	33.4	13.9	16.9	13.0
26	288	13.8	12.1	25.2	64.5	28.1	12.7	14.0	34.9	15.3	16.1	14.2
27	166	16.5	82.6	25.2	47.6	25.2	12.8	14.3	33.3	14.4	16.4	12.9
28	31.5	16.4	765	89.5	47.0	24.2	183	14.3	32.4	13.8	17.0	13.4
29	14.6	14.8	442	84.9	------	23.1	12.7	15.3	31.3	13.9	17.7	13.2
30	13.3	16.0	96.6	54.1	------	22.1	12.5	15.3	34.6	13.4	18.4	13.2
31	13.1	------	207	44.0	------	21.2	------	15.8	------	18.6	18.2	------
Total	1594.6	462.23	1954.0	3577.2	4169.6	1178.6	626.0	422.9	831.3	664.4	539.4	523.9
Mean	51.4	15.4	63.0	115	149	38.0	20.9	13.6	27.7	21.4	17.4	17.5
Max	363	73.6	765	725	627	204	183	26.9	37.2	39.1	23.4	33.6
Min	13.0	7.64	11.1	25.2	18.2	14.1	12.5	11.8	17.8	13.4	13.6	12.9
Acre-Ft	3160	917	3880	7100	8270	2340	1240	839	1650	1320	1070	1040

Wtr Year 2005	Total	16544.13	Mean	45.3	Max	765	Min	7.64	Acre-Ft 32810
Cal Year 2004	Total	7596.84	Mean	20.8	Max	765	Min	1.58	Acre-Ft 15070

DKW 10/13/05

Los Angeles County Dept of Public Works

USDAY V43 Output 10/06/2005

Summary Report

Site: F300 Los Angeles River at Tujunga Avenue
USGS #:
Beginning Date: 10/01/2004
Ending Date: 09/30/2005

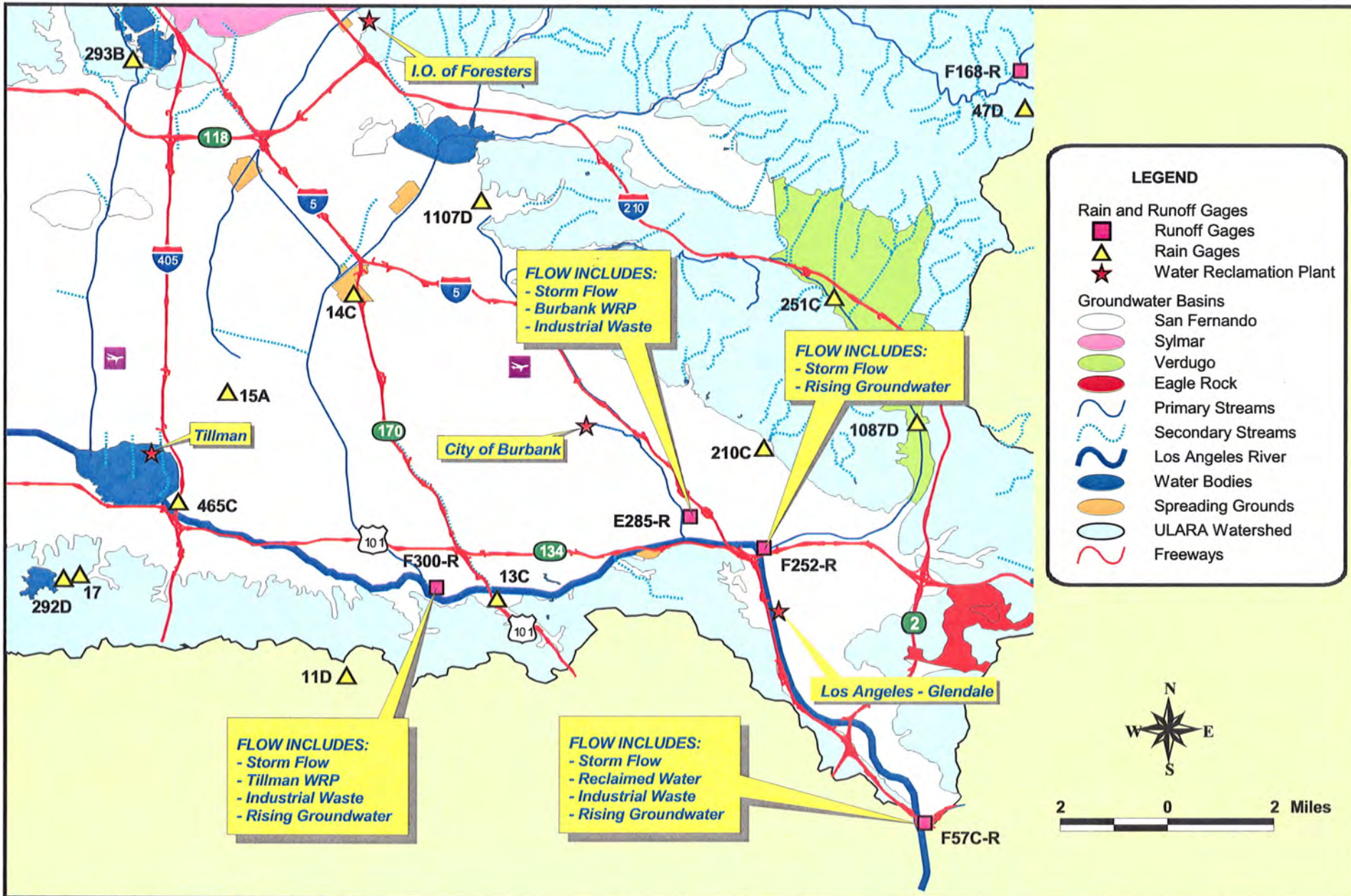
Daily Mean Discharge in Cubic feet/second Water Year Oct 2004 to Sep 2005

Day	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57.3	82.3	94.0	512	187	665	162	131	64.1	90.9	62.1	83.1
2	55.6	82.1	92.0	758	174	728	151	113	66.8	90.8	61.7	82.9
3	56.4	84.6	90.3	5460	164	958	145	102	70.1	90.2	57.9	82.7
4	56.2	88.2	87.9	620	156	1330	141	92.5	72.9	90.1	85.2	82.5
5	56.5	92.7	592	497	153	954	136	162	76.4	90.0	86.2	82.7
6	55.0	88.8	105	529	152	897	133	160	107	89.7	86.8	82.7
7	57.9	93.2	137	3940	155	810	132	78.8	149	76.5	87.4	82.7
8	49.6	130	207	3450	152	633	131	67.8	150	71.7	84.2	82.4
9	53.9	97.5	85.6	14400	149	562	130	110	146	73.1	86.4	82.6
10	50.4	98.8	83.6	15800	145	552	128	84.1	142	74.1	86.7	81.9
11	53.5	94.3	80.7	9060	4840	571	128	55.1	138	75.7	84.9	81.7
12	54.9	90.7	82.2	3560	825	568	128	42.8	133	79.3	84.9	81.8
13	63.4	89.6	87.4	1830	612	568	127	38.4	129	81.1	84.7	81.9
14	78.0	91.5	73.8	1310	608	568	116	40.1	127	72.4	85.1	81.0
15	79.0	92.4	80.4	1180	594	568	101	41.9	125	71.2	108	80.4
16	90.4	34.7	81.5	1020	584	568	101	42.7	174	72.7	82.2	80.6
17	935	178	78.8	940	1080	568	101	46.5	174	73.8	79.1	79.7
18	377	308	76.8	722	4130	621	93.7*	48.2	134	66.0	75.0	80.0
19	1840	305	76.4	576	7300	675	109	48.8	120	60.4	68.9	79.7
20	2890	402	82.2	548	6860	571	188	48.3	113	60.9	75.6	277
21	100	520	83.1	519	12300	562	231	47.9	108	60.9	80.2	79.4
22	95.4	290	80.5	522	7390	2230	209	47.5	107	60.8	79.0	71.3
23	75.1	172	74.5	531	4840	681	183	47.4	115	60.7	85.0	72.6
24	76.9	99.7	80.8	528	2700	570	171	47.0	112	62.1	83.5	69.7
25	82.7	89.9	76.2	492	2430	568	159	47.1	107	62.1	83.8	68.9
26	2400	85.9	77.1	456	1820	568	145	41.5	104	62.2	81.0	74.5
27	1530	161	975	417	1680	568	131	43.0	101	62.4	81.6	68.6
28	187	111	8350	804	1200	541	2340	46.4	98.0	62.2	82.6	60.9
29	93.8	99.6	4090	457	------	343	371	50.5	95.0	62.1	83.3	61.6
30	81.0	97.4	1030	266	------	234	160	54.2	92.7	62.1	84.0	62.9
31	78.4	------	3070	204	------	187	------	58.8	------	62.4	83.1	------
Total	11810.3	4350.9	20361.8	71908	63380	20987	6681.7	2085.3	3451.0	2230.6	2520.1	2520.4
Mean	381	145	657	2320	2264	677	223	67.3	115	72.0	81.3	84.0
Max	2890	520	8350	15800	12300	2230	2340	162	174	90.9	108	277
Min	49.6	34.7	73.8	204	145	187	93.7	38.4	64.1	60.4	57.9	60.9
Acre-Ft	23430	8630	40390	142600	125700	41630	13250	4140	6840	4420	5000	5000

Wtr Year 2005	Total	212287.1	Mean	582	Max	15800	Min	34.7	Acre-Ft	421100
Cal Year 2004	Total	66620.9	Mean	182	Max	8350	Min	32.8	Acre-Ft	132100

DVL 10/13/05

APPENDIX C
COMPONENTS OF LOS ANGELES RIVER FLOW



2004-05 Water Year ULARA Watermaster Report	Upper Los Angeles River Area: Components of Los Angeles River	PLATE C.1

UPPER LOS ANGELES RIVER AREA: COMPONENTS OF LOS ANGELES RIVER FLOW			
2004-05 WATER YEAR			
TOTAL FLOW AT GAGE F-57C-R			F-57C-R: Storm, Reclaimed, Industrial, Rising Ground
			F300-R: Storm, Tillman, Industrial Waste, and Rising
Total:	500,430		E285-R :Storm, Burbank WRP, Industrial Waste
			F252-R: Storm, Rising Water
I. RECLAIMED WATER DISCHARGED TO L.A. RIVER IN ULARA			
Tillman:	42145	: Record	
L.A.-Glendale:	11378	: Record	
Burbank WRP:	8119	: Record	
Total:	**61642**		
II. INDUSTRIAL WATER and STORM FLOWS DISCHARGED TO L.A. RIVER IN ULARA			
Upstream of F300-R			
Industrial Water	322	: From F300-R separation of flow	
F168	131986		
F118	25552		
Storm Flows @300	211600	Storm flows less F168 and F118	
	369460		
Between F300-R and E-285			
Burbank OU	41	Burbank Operable Unit	
MTA	69		
Storm Drains and Unaccounted water	4620	:6.4 cfs assumes 4,620	
Headworks:	0	:pilot project record	
Western Drain:	2780	: From E285-R separation of flow	
Storm Flows @285	16088		
	23598		
Between E-285 and F57C-R			
Storm Flows@ 252	30780		
Irrigation and Industrial Flows	2871	:From F252-R separation of flow	
Glendale Operable Unit	325		
Eagle Rock Blow Off	2000		
Pollock Treatment	200		
Sycamore Canyon	1100	Estimated from historic flows	
Storm Drains and Unaccounted water	2145	:3.0 cfs assumes 1,245 from F57C -R separation of flows	
	39421		
Total Part II	**432479**		
III. RISING WATER IN L.A. RIVER IN ULARA			
Total:	6309	: See Section 2.3 of the Watermaster's Report	

APPENDIX D
WATER QUALITY DATA

REPRESENTATIVE MINERAL ANALYSES OF WATER

Well Number or Source	Date Sampled	Spec. Cond. µmho/c	Mineral Constituents in milligrams per liter (mg/l) pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	TDS mg/l	Hardness as $CaCO_3$ mg/l
Imported Water																
Colorado River Water at Eagle Rock Reservoir	2005FY	785	8.2	43	20	85	3.8	0	110	164	82	2.4	0.18	0.15	467	190
LA Aqueduct No 1. Influent	5/17/2005	382	8.2	22.1	4.7	46.3	4.9	0	122	24.4	29.3	ND	0.81	0.81	267	82.8
LA Aqueduct Filtration Plant Influent	11/1/2005	345	8.3	25	6.0	35.9	4.1	8.4	121	19.8	19.3	ND	0.65	0.52	215	87.6
State Water Project at Joseph Jensen Filtration Plant (Influent)	2005FY	476	7.9	27	13.5	45	2.8	0	103	53	57	2.7	0.16	0.18	267	123
Surface Water																
Tillman Rec. Plant Discharge to LA River	2005FY	-	-	-	-	-	-	-	-	141	121	0.77	0.84	0.7	539	207
Los Angeles River at Arroyo Seco	9/95	981	8.0	68.1	24.3	96.5	9.75	ND	171	191	108	7.4	0.3	0.58	666	270
LA/Glendale Rec. Plant Discharge to LA River	2005FY	-	7.2	-	-	-	-	-	-	140	140	1.53	0.3	0.4	626	240
Ground Water																
(San Fernando Basin - Western Portion)																
4757C (Reseda No. 6)	10/13/83	944	7.8	115	31	43	2.1	-	301	200	33	2.6	0.31	0.24	595	416
(San Fernando Basin - Eastern Portion)																
3800 (No. Hollywood No. 33)	5/19/2004	1150	7.8	80.5	27.4	132	3.9	-	109	320	67.2	3.06	0.45	0.56	729	321
3851C V0-8/Burbank No. 10	4/8/2004	-	7.5	-	-	-	-	ND	286	-	36.5	32.7	-	-	442	314
Glendale OU GN-1	4/6/2004	977	7.2	120	31	44	5.1	0.33	318	140	58	8.7	0.32	0.16	620	261
(San Fernando Basin - L.A. Narrows)																
3959E (Pollock No. 6)	5/19/2004	933	7.2	92	30.4	52.9	2.55	0	262	129	76.8	42.4	0.28	0.24	591	347
(Sylmar Basin)																
4840J (Mission No. 5)	6/27/2002	627	7.7	79.8	17.3	28.4	3.69	0	256	60.9	25.5	28.7	0.31	-	396	287
5969 (San Fernando No. 4A)	5/28/2003	445	7.8	48	9.3	27	4.3	0.72	175	47	13	15.4	0.21	-	280	158
(Verdugo Basin)																
3971 (Glorietta No. 3)	3/20/2003	1045	6.8	111	36.3	43.8	3.69	-	-	239	125	79.2	34.7	-	546	196
5069F (CVWD No. 14)	2005	760	7.1	120	19	33	2.7	ND	200	110	64	47	0.28	ND	510	330

APPENDIX E
DEWATERING AND REMEDIATION PROJECTS

DEWATERING PROJECTS

No.	Company	Contact	Address	ID	Start Date
1	Danalax Engineering Corp.	Krell, Alex	11239 Ventura Blvd.	P	
2		Henkin, Doug	8806 Etiwanda Ave.	P	
3	Delta Tech. Engineering	Abbasi, Z. A.	12800 Ventura Blvd.	P	
4	Commercial Project	Helfman, Haloosim & Assoc.: Varadi, Ivan	5550 Topanga Canyon	D	Jun 19, 1989
5	Encino Spectrum Project	Helfman, Haloosim & Assoc.: Varadi, Ivan	15503 Ventura Blvd.	D	Jun 14, 1989
6	Home Savings of America	Eli Silon & Associates	13949 Ventura Blvd.	D	Jun 14, 1989
7	Warner Center Ent. Complex	Tsuchiyama and Kaino	5955 Owensmouth Ave.	D	Jun 26, 1989
8	T Violes Construction Company	Viole, Tim, Jr.	15840 Ventura Blvd.	P	
9		Eccleston, C. W.	22020 Clarendon St.	P	
10		Marks, Ronald	5348 Topanga Canyon	P	
11	Helfman, Haloosim & Assoc.	Varadi, Ivan	21820 Burbank Blvd.	P	
12	Park Hill Medical Plaza	Anjomshoaa, Mahmoud	7303 Medical Center Dr.	D	Dec 27, 1989
13	Danalex Engineering		12050 Ventura Blvd.	P	
14	Ellis Plumbing Co.	Ellis, Chris	4235 Mary Ellen Ave.	P	
15	Tarzana Office Plaza	Varadi Engineering	18701 Burbank Ave.	P	
16	Helfman, Haloosim & Associates	Varadi, Ivan	5350 White Oak Ave.	P	
17	First Financial Plaza Site	Slade, Richard	16830 Ventura Blvd.	D	Oct 9, 1987
18	Trillium	Arnold, Daryl	6310 Canoga Ave.	D	Apr 27, 1988
19	LAMCO	O'Neil, John	21300 Victory Blvd	D	Apr 27, 1988
20	La Reina Fashion Plaza	Blumenfeld, Dolores	14622 Ventura Blvd.	D	Apr 27, 1988
21	Auto Stiegler	Stiegler, John	16721 Ventura Blvd.	D	Oct 31, 1987
22	Sherway Properties	Vasquez, Rodney	4477 Woodman Ave.	P	
23	Ellis Plumbing Co.	Ellis, Chris	19951 Roscoe Blvd.	P	
24	Metropolitan Transportation Authority	Laury, Victor	Metro Red Line	D	April 1, 1995
25		Carter, Dennis	4547 Murietta Ave	P	Jan 16, 1997
26	MWD Sepulveda Feeder Pipeline Cons	David Dean	Jensen Plant	TD	August 1, 1998
27	A H Warner Properties Plaza 3	Bernier, Dave	21650 Oxnard	D	June 4, 1997
28	A H Warner Properties Plaza 6	Bernier, Dave	21700 Oxnard	D	June 4, 1997
29	Brent & Miller	Brent, Stanley	4328 Mammoth Ave	D	January 13, 2000
30	Northeast Interceptor Sewer	Nick Demos	Bureau of Engineering	TD	October 1, 2001
31	MTA Underground Pedestrian Crossing	Tim Lindholm	MTA	TD	November 1, 2001

Notes:

1) ID - Refers to the type of project;
   D: Permanent dewatering required.
   P: No dewatering required presently, however there is potential for dewatering in the future.
   TD: Temporary Dewatering

2) Start Date - Date project was brought to the attention of the ULARA Watermaster.

REMEDIATION PROJECTS

No.	Company	Contact	Address	ID	Start Date
1	Mobil Oil	Alton Geoscience	16461 Ventura Blvd.	R	May 11, 1989
2	Thrifty Oil	Delta Tech. Eng.	18226 Ventura Blvd.	R	Feb 2, 1990
3	Boeing (Rockwell International)	Lafflam, S. R.	6633 Canoga Park Ave.	R	Jun 10, 1990
4	Lockheed	Gene Matsushita	N. Hollywood Way	R	Jan 5, 1989
5	3M Pharmaceutical	Bob Paschke	19901 Nordhoff St.	R	Feb 8, 1989
6	Philips Components	Wade Smith	4561 Colorado St.	R	Jul 14, 1987
7	Raytheon (Hughes)	Tim Garvey	Canoga Park, CA	R	February 1995
8	Holchem	Cuthbert, Andrew	Pacoima, CA	R	February 1, 2000
9	Micro Matic USA Inc.	Reinhard Ruhmke	Northridge CA	R	April, 1999
10	Menasco	George Piantka	Burbank, CA	R	October 31, 2001
11	Home Depot	Karen Arteaga	Burbank, CA	R	March 19, 2001
12	Drilube	Artik Avanessians	Glendale, CA	R	March 29, 2002
13	PRC-Desoto (Courtald)	Christer Sorenson	Glendale, CA	R	August 22, 2002
14	Honeywell (Allied Signal)	Benny Dehghi	No.Hollywood, CA	R	February 21, 2003
15	Excello Plating	Glen Harleman	Los Angeles, CA	R	June 20, 2003
16	Tesoro	Peter Stampf	No. Hollywood,CA	R	May 8, 2004
17	ITT	Teresa Olmstead	Burbank, CA	R	June 9, 2004

Notes:

1) ID - Refers to the type of project;
R: Ground water remediation site.

2) Start Date - Date project was brought to the attention of the ULARA Watermaster.

APPENDIX F
POLLOCK WELL FIELD REMEDIATION PROJECT
PRODUCTION

UPPER LOS ANGELES RIVER AREA WATERMASTER

CITY OF LOS ANGELES VS. CITY OF SAN FERNANDO, ET AL
CASE NO. 650079 -- COUNTY OF LOS ANGELES

MARK G. MACKOWSKI -- WATERMASTER

OFFICE LOCATION:
111 North Hope Street, Room 1450
Los Angeles, CA 90012
TELEPHONE: (213) 367-0896
FAX: (213) 367-0939

MAILING ADDRESS:
ULARA WATERMASTER
P.O. Box 51111, Room 1450
Los Angeles, CA 90051-0100

January 5, 2006

Mr. Thomas Erb
Director of Water Resources
Los Angeles Department of Water and Power
111 N. Hope Street, Room 1460
Los Angeles, CA 90012

Dear Mr. Erb:

Subject: Pollock Well Field Remediation Project

The Pollock Well Field Remediation Project (Pollock) was constructed primarily to reduce or eliminate excess rising groundwater from entering the Los Angeles River, leaving the San Fernando Basin (SFB) as surface flow, and wasting to the ocean. This groundwater belongs to Los Angeles under its Pueblo and import return water rights.

The 1994 Project Description and California Environmental Quality Act (CEQA) Negative Declaration for Pollock acknowledge the need to eliminate this excess rising groundwater. In addition, a letter dated November 8, 1994 from the Los Angeles Department of Water and Power (LADWP) to the Los Angeles Regional Water Quality Control Board requested a National Pollutant Discharge Elimination System (NPDES) permit for Pollock so that this excess rising groundwater can be minimized. According to these and other documents, the facility was designed to operate at approximately 2,300 acre-feet per year (AF/yr.) to preserve Los Angeles' water rights in the SFB.

Since the 1998-1999 Water Year, annual pumping at Pollock has been as follows:

Water Year	Annual Pumping (AF)
1998-1999	1,512.98
1999-2000	1,851.37
2000-2001	1,255.98
2001-2002	1,642.55
2002-2003	1,720.41
2003-2004	1,137.16
2004-2005	1,752.44

LADWP's July 26, 2001 letter to the Watermaster states, "...LADWP respects the need to operate the Pollock Wells for approximately six months per year to achieve a long-

term average of 2,400 AF/yr. of groundwater pumping." And, "Year-to-year fluctuations in the date of operation commencing for the Pollock Plant do not inhibit LADWP's effectiveness in addressing the excess rising groundwater discharges to the Los Angeles River so long as the long-term average of 2,400 AF/yr. of Pollock Plant operation is satisfied. In satisfying the long-term average of Pollock Plant operation, the City of Los Angeles is able to maintain its SFB water right."

On August 2, 2001, the Watermaster Office sent you a letter reducing the required baseline extraction rate to 2,000 AF/yr. in an effort to help Los Angeles preserve its water rights. Based on the data in the above table, pumping has never reached 2,000 AF/yr. for a single year, nor has it achieved 2,400 AF/yr. on a long-term average. The long-term average pumping is 1,553 AF/yr.

Pumping during the 2004-2005 Water Year again failed to meet the required 2,000 AF/yr. baseline by 247.56 AF. Therefore, we will be debiting 247.56 AF from Los Angeles' pumping credits. This debit is necessary to account for losses of groundwater from the SFB and to provide a realistic view of actual water in storage.

We hope that pumping in the current and future years can be increased to at least 2,000 AF/yr. to preserve Los Angeles' water rights in the SFB.

Sincerely,

Mark G. Mackowski
ULARA Watermaster

MGM:bw
A:\Pollock 2004-05\MGM02
c: Administrative Committee Members
Mr. William Mace, City of Burbank
Mr. Ronald Ruiz, City of San Fernando
Mr. Dennis Erdman, Crescenta Valley Water District
Mr. Peter Kavounas, City of Glendale

Watermaster Office
Mr. Mark G. Mackowski, Watermaster
Mr. Frederic A. Fudacz, Special Counsel
Mr. Melvin L. Blevins, Consultant to the Watermaster
Ms. Patricia T. Kiechler, Assistant Watermaster

bc: FileNet

APPENDIX G
COURT NOTIFICATION re: DECLINING WATER TABLE

UPPER LOS ANGELES RIVER AREA WATERMASTER

CITY OF LOS ANGELES VS. CITY OF SAN FERNANDO, ET AL
CASE NO. 650079 -- COUNTY OF LOS ANGELES

MARK G. MACKOWSKI -- WATERMASTER

OFFICE LOCATION:
111 North Hope Street, Room 1450
Los Angeles, CA 90012
TELEPHONE: (213) 367-0896
FAX: (213) 367-0939

MAILING ADDRESS:
ULARA WATERMASTER
P.O. Box 51111, Room 1450
Los Angeles, CA 90051-0100

February 13, 2006

The Honorable Susan Bryant-Deason
Judge of the Los Angeles Superior Court
111 North Hill Street, Department 52
Los Angeles, CA 90012

Dear Judge Bryant-Deason:

Subject: Decline in Storage in the San Fernando Basin

You may recall from our periodic status conferences that I have been concerned for some time over a general decline in stored groundwater in the San Fernando Basin. During our last meeting on December 5, 2005, I provided you a graph (Plate 99 enclosed) that illustrates my concern.

The blue line clearly shows an overall decline in stored groundwater beginning in approximately 1983. In addition, the red line illustrates the effect on stored groundwater if the Cities of Los Angeles, Glendale, and Burbank (Cities) had pumped their full adjudicated water rights each year instead of accumulating Stored Water Credits beginning in 1968.

The problem is, therefore, twofold: a decline in actual groundwater stored in the San Fernando Basin, and groundwater pumping rights that exceed long-term recharge.

I met with the Cities on January 19, 2006 to discuss my concerns. There was a general consensus on the main issues, although the Cities have requested additional information and background. Therefore, the Watermaster Office is coordinating a workshop with the Cities to provide technical background on the original calculations of Safe Yield, Return Flow Credits, and other relevant data and information. This is an important first step in developing a common understanding of the issues.

In my opinion, the San Fernando Basin is experiencing a continuing decline in stored groundwater and an accumulation of Stored Water Credits that must be addressed. I want to assure the Court that the Watermaster Office is working with the Cities to develop a plan that returns the San Fernando Basin to long-term sustainability.

The Watermaster Office will continue to keep the Court informed of our progress toward this goal. If you have any questions, please call me at (213) 367-0896.

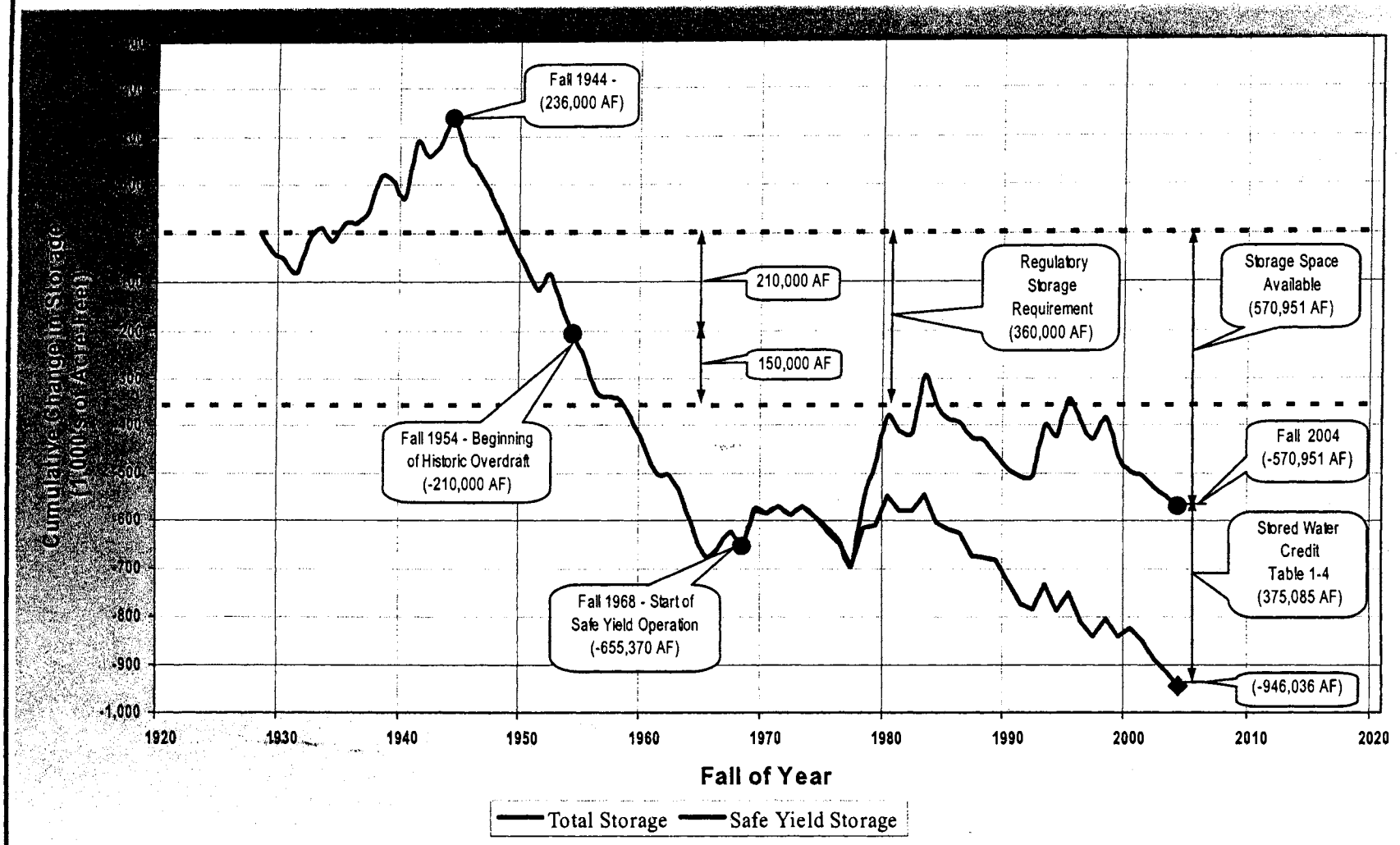
Sincerely,

Mark G. Mackowski
ULARA Watermaster

MGM:bw
Enclosure
A:\SFB Decline in Storage\MGM02
c: Administrative Committee
Mr. William Mace, City of Burbank
Mr. Peter Kavounas, City of Glendale
Mr. Ronald Ruiz, City of San Fernando
Mr. Dennis Erdman, Crescenta Valley Water District
Mr. Thomas M. Erb, City of Los Angeles

Watermaster Staff
Mr. Frederic A. Fudacz, Special Counsel
Mr. Melvin L. Blevins, Consultant
Ms. Patricia T. Kiechler, Assistant Watermaster

bc: FileNet



San Fernando Basin:
Cumulative Change in Groundwater Total and Safe Yield Storage

PLATE
99

APPENDIX H
WELLS DRILLED OR ABANDONED

WELLS DRILLED OR ABANDONED

2004-05 WATER YEAR

Forest Lawn

Forest Lawn, a party to the Judgment, destroyed Well No. 2 (3947A) and replaced it with newly drilled Well No. 8 (3947M).

APPENDIX I
ACTION ITEMS 2005-06

ACTION ITEMS

WATERMASTER ACTIVITIES FOR 2005-06 WATER YEAR

- Support the parties in their efforts to deal with increasingly stringent stormwater discharge requirements.

- Continue to keep the parties informed regarding current and emerging water quality issues, such as chromium, perchlorate, 1,4-Dioxane, and 1,2,3 TCP.

- Continue to attend meetings of public interest groups, such as the Los Angeles and San Gabriel Rivers Watershed Council, the Sun Valley Watershed Committee, Bureau of Sanitation Integrated Resources Plan Committee, the Los Angeles City Ad Hoc Committee on the Los Angeles River, and others to support and promote the goals of the parties and the overall health of the basins within ULARA.

- Continue to attend meetings of technical groups, such as the Association of Groundwater Agencies (AGWA), Groundwater Resources Association (GRA), and others to exchange ideas and information regarding water quality and basin management.

- Explore ways to maximize the spreading of native water and increase the infiltration of urban runoff in the SFB.

- Continue to support the ongoing Verdugo Basin Groundwater Evaluation, and investigate ways to maximize conjunctive use in the Verdugo Basin.

- Continue exploring ways to maximize spreading at the Tujunga and Hansen Spreading Grounds.

- Continue to investigate the unauthorized use of groundwater in unincorporated areas of ULARA and develop processes to expedite water license agreements and access to well drilling permits for property owners.

- Continue to work with the U.S. Forest Service, U.S. Fish and Wildlife Service, LACDPW, and LADWP to support the seismic retrofit of Big Tujunga Dam, with the goal of providing maximum water conservation, protection against flood damage, preservation of habitat for endangered species, and protection of Los Angeles' Pueblo water right.

- Continue to support the City of Burbank in its effort to purchase imported supplies from MWD for spreading and recharging in the SFB.

- Participate in the IRWMP process to increase the amount of grant support for water projects in the Greater Los Angeles Region.

APPENDIX J
WATER EQUIVALENTS

Water Equivalents

Volume

1 gallon*.....= 3.7854 liters (L) =231** cubic inches (in^3)
.....= 0.003785 cubic meters (m^3) = 0.132475 cubic feet (ft^3)

100 cubic feet (HCF)****.....= 748 gallons (gal) = 2.83317 cubic meters (m^3)
.....= 2,832 liters (L) = 3.70386 cubic yards (yd^3)
.....= 6,230.8 pounds of water (lb) = 2,826.24 kilograms (kg)

1 acre-foot (AF)***.....= 43,560** cubic feet (ft^3) = 1233.5 cubic meters (m^3)
.....= 325,851 gallons (gal) = 1,233,476.3754 liters (L)
.....= the average amount of water used by two families for one year

Flow

1 cubic foot per
second(cfs).....= 448.83 gallons per minute (gpm) = 0.028317 cubic meters/sec (m^3/s)
.....= 646,317 gallons per day (gal/day) = 1.70 cubic meters/min
.....= 1.98 AF/day = 2446.6 cubic meters/day

1,000 gallons per
minute(gpm) .....= 2.23 cubic feet per second (cfs) = 0.063 cubic meters/sec (m^3/s)
.....= 4.42 AF/day = 5452.6 cubic meters/day
.....= 11,613.01 AF/year = 1.99 million cubic meters/yr

1 million gallons per
day (mgd) .....=3.07 AF/day =3785 cubic meters/day
.....=1,120.14 AF/year =1.38 million cubic meters/yr.

Concentration

.....1.0 milligrams per liter (mg/L) = 1.0 parts per million (ppm)

.....1.0 micrograms per liter (μg/L) = 1.0 parts per billion (ppb)

* U.S. gallons
** Exact Value
*** An acre foot covers one acre of land one foot deep
**** This is a billing unit of DWP

APPENDIX K
LIST OF ABBREVIATIONS

List of Abbreviations

AF	Acre-feet
BOU	Burbank Operable Unit
BTEX	Benzene, tolulene,ethylbenzene,and total xylene
CVWD	Crescenta Valley Water District
Cal-EPA	California Environmental Protection Agency
DCA	Dichloroethane
DCE	Dichloroethylene
DHS	California Department of Health Services
DTSC	California Department of Toxic Substances Control
DWP	Department of Water and Power (see also LADWP)
EPA	Environmental Protection Agency (see also USEPA)
EVWRP	East Valley Water Recycling Project
LAFD	Los Angeles Fire Department
GAC	Granular Activated Carbon
gpm	Gallons Per Minute
LACDPW	Los Angeles County Department of Public Works
LADWP	Los Angeles Department of Water and Power
MCL	Maximum Contaminant Level
mg/L	Milligrams per Liter
MTA	Metropolitan Transportation Authority
MWD	Metropolitan Water District
OEHHA	Office of Environmental Health Hazard Assessment
OU	Operable Unit
PCE	Tetrachloroethylene
PHG	Public Health Goal
PSDS	Private Sewage Disposal Systems
RAW	Removal Action Workplan
RI	Remedial Investigation
RWQCB	Regional Water Quality Control Board
SFB	San Fernando Basin
SUSMP	Standard Urban Stormwater Mitigation Plan
SWCRB	State Water Resouces Control Board
SWAT	Solid Waste Assessment Test
TCA	1,1,1- Trichloroethane
TCE	Trichloroethylene
TDS	Total Dissolved Solids
ug/L	Micrograms per Liter
ULARA	Upper Los Angeles River Area
UST	Underground Storage Tank
VOC	Volatile Organic Compound
VPWTP	Glendale-Verdugo Park Water Treatment Plant
USGS	United States Geological Survey