

# **APPENDIX**

This document is added to Appendix H of the EIR

## **Water Supply Assessment**

The Appendices to the Water Supply Assessment are on file and Available for review at the Department of City Planning, City Hall, 200 N. Spring Street, Room 750, Los Angeles



# **WATER SUPPLY ASSESSMENT FOR THE PLAZA AT THE GLEN PROJECT**

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City of Los Angeles Department of Public Works, Bureau of Sanitation Sewer Generation Rates Table	
Landscape Water Manager Program v1.4, developed by Irrigation Training and Research Center	
California Department of Water Resources California’s Groundwater Bulletin 118 Update 2003	
Green Book for the Long-Term Groundwater Management Plan for the Owens Valley and Inyo County	

## Appendices

- A. The Los Angeles Department of City Planning letter, dated June 4, 2008 and updated April 14, 2009, Request for a Water Supply Assessment
- B. Water Conservation Commitment Letters
- C. Project Location Maps
- D. Water Supply Assessments Adopted by the LADWP Board of Commissioners
- E. Groundwater Pumping Right Judgments
- F. Water Supply Assessment Provisions – California Water Code Section 10910-10915
- G. Metropolitan Water District of Southern California
- H. Water Supply Assessment Checklist

## Introduction

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Proposed major projects subject to certain requirements in the California Water Code require that the City or County identify any public water system that may supply water to the proposed project and request the public water system to determine whether the projected water demand associated with the proposed project was included as part of the most recently adopted Urban Water Management Plan per California Water Code Section 10910.

The Los Angeles Department of City Planning (Planning Department), serving as the lead agency for the proposed Plaza at the Glen Project has identified the Los Angeles Department of Water and Power (LADWP) as the public water system that will supply water to the Plaza at the Glen Project. In response to the Planning Department's request for a water supply assessment, LADWP has performed the assessment contained herein.

LADWP has served the City of Los Angeles (City) a safe and reliable water supply for over a century. Over time, the City's water supplies have evolved from primarily local groundwater to predominantly imported supplies. Today, the City relies on over 85 percent of its water from imported sources. As such, LADWP has taken an active role in regional and statewide water management. The sustainability of Los Angeles' water supplies are dependent on the City's ability to maximize water conservation and increase recycled water use. The Mayor's action plan, "Securing L.A.'s Water Supply" dated May 2008, states that the City will develop significant additional water conservation and water recycling, as well as other water resource actions to ensure a reliable water supply.

This water supply assessment has been prepared to meet the applicable requirements of state law as set forth in California State Water Code Sections 10910-10915. Significant references and data for this assessment are from the City's 25-year water resource plan, entitled City of Los Angeles Department of Water and Power 2005 Urban Water Management Plan (UWMP). The UWMP is incorporated by reference and is available for review through LADWP's website, [www.ladwp.com](http://www.ladwp.com).

## Findings

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The proposed Plaza at the Glen Project (Project) is estimated to increase water demand within the site by approximately 186 acre feet (AF) annually based on review of information submitted by the Planning Department. The developer, Sir Francis Drake Holdings, LP, has committed to implement additional water conservation measures that are beyond those required by law. In addition, the developer has committed to use recycled water for all existing and proposed irrigation needs and proposed water fountains.

The developer also has acknowledged that the Project may be subject to additional requirements as a condition of water service, including a fee to fund expansion of the recycled water program. The developer has committed to pay any fees that may be imposed on the Project pursuant to, and consistent with, California law.

LADWP's water supply assessment finds that adequate water supplies will be available to meet the water demands of the Project. LADWP anticipates that the projected water demand from the Project can be met during normal, single-dry, and multiple-dry water years, in addition to the existing and planned future demands on LADWP.

The basis for approving water supply assessments for new developments is the City's UWMP. LADWP's water demand forecast as contained in the UWMP use a long term demographic projection such as land use, population, and employment. The California Urban Water Management Planning Act requires water suppliers to develop an UWMP every five years to identify short-term and long-term water resources management measures to meet growing water demands during normal, dry, and multiple-dry years.

The LADWP Board of Water and Power Commissioners has adopted Shortage Year Rates and implemented Phase III of its Water Conservation Ordinance for water service, both of which will become effective June 1, 2009. Shortage Year Rates and Phase III conservation shall remain in effect until the water supply currently available to the City is found sufficient for normal demands. It is LADWP staff's judgment that the City's current water shortage is a transitory event consistent with historical multiple dry-year water cycles accounted for in the LADWP's 2005 Urban Water Management Plan.

It is anticipated that the imposition of Shortage Year Rates and Phase III conservation will reduce demands consistent with what occurred in 1991 when the City first implemented water rationing and associated financial penalties for overuse. The LADWP implemented water rationing, with associated financial penalties for overuse, for the first time in March 1991. Water rationing and financial penalties remained in place until May 1992. During this period of time, customers were required to reduce water usage by 15 percent. Each customer's allotment of water was 85% of their historical usage. Water usage above a customer's allotment was a violation of the ordinance and was billed at the penalty rate. This resulted in total in city water conservation of approximately 25 percent. Based on this experience, LADWP staff believes the imposition of Shortage Year Rates and Phase III conservation will have a similar effect and will reduce the City's water demand by at least 15 percent, sufficient to meet the projected water demands associated with the Project.

The anticipated water demand from the Project falls within the UWMP's projected water supplies for normal, single-dry, and multiple-dry years through the year 2030 and within the UWMP's 25-year water demand growth projection. Therefore, the Plaza at the Glen Project's water supply assessment can be approved based on the fact that this Project's water need falls within the scope of the UWMP's projected increase in citywide water demands, while anticipating multi-year dry water supply conditions occurring at the same time.

## **Project Description**

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The following project information was obtained from the Planning Department's Water Supply Assessment Request Letter (Appendix A).

Project Name:	The Plaza at the Glen
Developer:	Sir Francis Drake Holdings, LP
Planning Community:	North Hollywood – Valley Village

The proposed Project is a development of approximately 35 acres of general commercial land use within the North Hollywood-Valley Village Community Plan for commercial, retail, and residential land uses. The proposed Project area is located in the North Hollywood - Valley Village Community of the City of Los Angeles, and is roughly bounded by Hamlin Street and Kittridge Street on the north, Tujunga Wash and Ethel Avenue on the west, Victory Boulevard on the south, and Coldwater Canyon Avenue on the east. The Project consists of approximately 140,000 square feet of retail use, approximately 45,000 square feet of market, approximately 115,000 square feet of restaurant space, approximately 150 of multi-family residential units, approximately 230 room hotel, approximately 450,000 square feet of office building, approximately 100,000 square feet of medical building, approximately 2,700 seat theater complex, approximately 45,000 square feet of gymnasium, approximately 100,000 square feet of landscaping, approximately 200,000 square feet of common space, and approximately 3,312 parking spaces in a structure.

The site intended for development requires a General Plan Amendment and Zone Change to conform to the intensity and use of the Project.

This water supply assessment will no longer be valid if modifications to the Project require greater water demand than stated in this assessment. A revised assessment will then be required.

## **Project Water Demand Estimate**

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The projected water demand increase for the Project is estimated to be approximately 186 AF annually. Table I shows a breakdown of current and proposed types of use and corresponding estimated volume of usage with the implementation of the conservation measures committed to by the developer. The types of use were derived from the Water Supply Assessment Request Letter in Appendix A. The Project's total water demand is based on the projected water use taking into account the conservation measures the developer plans to implement on the Project. Table II lists the conservation measures committed to by the developer.

<b>TABLE I</b>				
<b>The Plaza at the Glen Project</b>				
<b>Estimated Increase In Water Use</b>				
<b>Existing Use</b>	<b>Quantity</b>	<b>Unit</b>	<b>Existing Water Use</b>	
			<b>(gpd)</b>	<b>(af/y)</b>
Shopping Center	151,000	sf	58,996	66.09
<b>Existing Total:</b>			<b>58,996</b>	<b>66</b>
<b>Proposed Use</b>	<b>Quantity</b>	<b>Unit</b>	<b>Proposed Water Demand with Conservation</b>	
			<b>(gpd)</b>	<b>(af/y)</b>
Store: Retail	87,500	sf		
Barber Shop	2,500	sf		
Beauty Parlor	4,000	sf		
Bowling Alley	30,000	sf		
Museum (All areas)	16,000	sf		
Theatre: Cinema	2,700	seat		
<b>Retail Total</b>			<b>5,698</b>	<b>6.38</b>
<b>Market</b>	<b>45,000</b>	<b>sf</b>	<b>1,330</b>	<b>1.49</b>
Cocktail Lounge	1,000	seat		
Dancing Area of Bar or Nightclub	3,000	sf		
Restaurant: Fast Food Indoor Seat	1,000	seat		
Restaurant: Fast Food Outdoor Seat	500	seat		
Restaurant: Full Service Indoor Seat	4,133	seat		
Restaurant: Full Service Outdoor Seat	500	seat		
Restaurant: Take-out	5,000	sf		
<b>Restaurant Total</b>			<b>115,880</b>	<b>129.81</b>
<b>Medical Building</b>	<b>100,000</b>	<b>sf</b>	<b>3,476</b>	<b>3.89</b>
Office Bldg	450,000	sf		
Common Area	200,000	sf		
<b>Office Bldg Total</b>			<b>12,925</b>	<b>14.48</b>
Hotel Guest Rooms	230	room		
Banquet Room/Ballroom	15,000	sf		
Health Club/Spa	45,000	sf		
<b>Hotel Total</b>			<b>42,951</b>	<b>48.11</b>
Condo - 2 Bdrm	100	du	9,504	10.65
Condo - 3 Bdrm	50	du	7,012	7.86
<b>Building Subtotal</b>			<b>198,775</b>	<b>222.67</b>
<b>Cooling Tower</b>			<b>26,076</b>	<b>29.21</b>
Weather-based Irrigation Controller	100,000	sf		
Native Plants (25%) & Rotating Sprinkler				
<b>Landscaping Subtotal - 100% Recycled Water to be used</b>			<b>4,069</b>	<b>-N/A</b>
<b>TOTAL POTABLE WATER DEMAND</b>			<b>224,851</b>	<b>252</b>

**TABLE 2**  
**The Plaza at the Glen Project**  
**Proposed Water Conservation Measures**

**Office, Theater, Gymnasium, Retail, Restaurant and Market uses:**

- Bathroom Faucet Aerators – 0.25 gallons per cycle “self closing”
- Kitchen Faucet Aerators – 1.5 gallons per minute
- High Efficiency Toilets – 1.28 gallons per flush
- High Efficiency Urinals – 0.125 gallons per flush
- Low Flow Aerated Showerheads – 1.8 gallons per minute (gym)

**Hotel use:**

- Bathroom Faucet Aerators – 0.25 gallons per cycle “self closing”
- Kitchen Faucet Aerators – 1.5 gallons per minute
- High Efficiency Toilets – 1.28 gallons per flush
- High Efficiency Urinals – 0.125 gallons per flush
- High Efficiency Clothes Washers – water savings factor of 7.5 or better
- Low-Flow Aerated Showerheads – 2.2 gallons per minute (guest rooms)
- Low Flow Aerated Showerheads – 1.8 gallons per minute (back of house)

**Residential use:**

- Bathroom Faucet Aerators – 0.5 gallons per minute
- Kitchen Faucet Aerators – 1.5 gallons per minute
- High Efficiency Toilets – 1.28 gallons per flush
- High Efficiency Clothes Washers – water savings factor of 5.0 or better
- Energy Star Dishwashers and Clothes Washers
- Low Flow Aerated Showerheads – 2.2 gallons per minute

Note: All project Cooling Towers will be required to operate at minimum of 5.5 cycles of concentration.

**Irrigation:**

- Responsible Design
- Appropriate plant species selection
- California Natives
- Xeriscaping
- Drought tolerant plantings
- Designed Irrigation Efficiency
- Flow Sensors with Master Shut off
- Matched precipitation (flow) rates for sprinkler heads
- Drip irrigation – Micro-spays – Subsurface
- Bubblers
- Zoned Irrigation
- Use of reservoir irrigation
- Minimum system distribution uniformity of 75 percent
- Weather control (smart controllers)
- Separate Water Metering by Use and Zone

## Water Demand Forecast

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The UWMP projects yearly water demand to reach 776,000 acre feet by 2030, or an increase of 17% from 2005. Water demand projections in 5-year increments through 2030 are available in the UWMP for each of the major customer classes single-family, multi-family, commercial, governmental, and industrial. Demographic data from the Southern California Association of Government's 2004 Regional Transportation Plan as well as billing data for each major customer class, weather, and conservation were factors used in forecasting future water demand growth.

The UWMP used a service area-wide method in developing its water demand projections. This methodology does not rely on individual development demands to determine area-wide growth. Rather, the growth in water use for the entire service area was considered in developing long-term water projections for the City of Los Angeles through the year 2030.

The UWMP is updated every five years as required by California law. This process entails, among other requirements, an update of water supply and water demand projections for water agencies. In the 2010 update, LADWP will develop a revised demand forecast that will factor in the water demand for which all water supply assessments have been prepared in addition to future demands. Water supply planning will be based on meeting these long-term demands.

Efforts are underway to increase water recycling, further conserve local stormwater runoff, and expand LADWP's water conservation program to decrease reliance on imported water for future demand. The City plans to meet all future increases in water demand through a combination of water conservation and water recycling as explained in LADWP's Water Supply Action Plan.

Collaboration between LADWP and the Metropolitan Water District (MWD) is critical in ensuring that the City's anticipated water demands are incorporated into the development of MWD's long-term Integrated Regional Plan (IRP). MWD's IRP directs a continuous regional effort to develop regional water resources involving all of MWD's member agencies. Successful implementation of MWD's IRP has resulted in reliable supplemental water supplies for the City from MWD.

State law further regulates distribution of water in extreme drought conditions. Section 350-354 of the California Water Code states that when a governing body of a distributor of a public water supply declares a water shortage emergency within its service area, water will be allocated to meet needs for domestic use, sanitation, fire protection, and other priorities. This will be done equitably and without discrimination between customers using water for the same purpose(s).

## LADWP - Water Supply Action Plan

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In response to water supply uncertainties, including those impacting MWD, the Mayor and LADWP released a Water Supply Action Plan (Action Plan) on May 17, 2008. The plan, entitled “Securing L.A.’s Water Supply,” serves as a blueprint for creating sustainable sources of water for the future of Los Angeles to reduce dependence on imported supplies. It is an aggressive multi-pronged approach that includes: investments in state-of-the-art technology; a combination of rebates and incentives; the installation of smart sprinklers, efficient washers and urinals; and long-term measures such as expansion of water recycling and investment in cleaning up the local groundwater supply.<sup>1</sup> The Action Plan also takes into account the realities of climate change and the dangers of drought and dry weather.

The premise of the Action Plan is that the City will meet all new demand for water due to projected population growth through a combination of water conservation and water recycling. In total, the City will conserve or recycle 32.6 billion gallons of water—enough to fill one foot of water across the entire San Fernando Valley, and enough to supply water to 200,000 homes for one year.<sup>2</sup> By the year 2019, half of all new demand will be filled by a six-fold increase in recycled water supplies and by 2030 the other half will be met through ramped-up conservation efforts.<sup>3</sup>

The Action Plan also specifically addresses current and future State Water Project (SWP) supply shortages. The California Department of Water Resources estimates that the December 15, 2008, U.S. Fish and Wildlife Service’s Biological Opinion on Delta Smelt will limit MWD exports of their anticipated SWP supply by up to 50 percent in a normal year.<sup>4</sup> The Action Plan concludes, however, that MWD’s actions in response to this threat will ensure continued reliability of its water deliveries. The Action Plan further states that “despite concerns about ongoing water shortages and higher costs, MWD has upheld its pledge to plan for emergencies and natural disasters throughout this region.” MWD estimates its end of year 2009 non-emergency storage to be 733,000 acre-feet in surface and groundwater storage accounts - including Diamond Valley Lake near Hemet – plus an additional 673,500 acre-feet of storage reserved for emergencies.<sup>5</sup> In total, this reserve of water supplies will be utilized to buffer the severity of a potential shortage.<sup>6</sup> Furthermore, by focusing on demand reduction, implementation of the Action Plan will ensure that long-term dependence on MWD supplies will not be exacerbated by potential future shortages.

The Action Plan includes key short-term and long-term strategies to secure water supply described below.

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<sup>1</sup> Mayor Antonio Villaraigosa and LADWP, *Securing L.A.’s Water Supply*, at 1 (May 2008).

<sup>2</sup> *Securing L.A.’s Water Supply* at 1.

<sup>3</sup> *Id.* at 1.

<sup>4</sup> *Appendix G page A-7.*

<sup>5</sup> *MWD’s Water Surplus and Drought Management Plan (August 21, 2008)*

<sup>6</sup> *Securing L.A.’s Water Supply* at 8.

## Short-Term Conservation Strategies

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**Enforcing prohibited uses of water.** The prohibited uses of water are intended to eliminate waste and increase awareness of the need to conserve water. While in effect at all times, the prohibited uses have not been actively enforced since the early 1990s. In November 2007, LADWP resurrected its Drought Buster (now called the “Water Conservation Team”) Program to heighten awareness and educate customers about the prohibited uses. Under enforcement, failure to comply would be subject to penalties, which can range from a written warning for a first violation to monetary fines and water service shutoff for continued non-compliance.<sup>7</sup>

**Expanding the prohibited uses of water.** In August 2008, the City updated and strengthened its Emergency Water Conservation Plan Ordinance (No. 180148) by expanding the list of prohibited uses of water, developing new phases of conservation depending on the severity of water shortages, and increased financial penalties for non-compliance. Prohibited uses in effect at all times include:

- No water leaks are allowed to go unattended.
- No outdoor irrigation between the hours of 9:00 a.m. to 4:00 p.m.
- No outdoor irrigation that results in excess water flow leaving the property.
- No outdoor irrigation during rain events.
- No outdoor irrigation with standard sprinklers for more than 10 minutes per station.
- No outdoor irrigation with rotating sprinklers for more than 15 minutes per station.
- No large landscape irrigation systems without automatic shutoff rain sensors.
- No watering hard surfaces (sidewalks, walkways, driveways, or parking areas).
- No water for decorative fountains unless the water is part of a recirculating system.
- No installation of single-pass cooling systems in new buildings.
- No installation of non-recirculating systems in new commercial laundry facilities.
- No installation of non-recirculating systems in new conveyor car washes.
- No car washing with a hose, unless an automatic shut-off device is attached.
- No water served to customers in eating establishments, unless requested.
- No daily towel and linen service option must be offered to Hotel and Motel guests.

**Extending outreach efforts.** LADWP has committed to \$2.3 million for an aggressive conservation outreach and education campaign. Some activities include: step up communication with ratepayers to include bus placards, LADWP vehicle placards, newspapers, radio, and television, among other types of media; outreach to Homeowner Associations and Neighborhood Councils to promote water conservation; train LADWP field staff as well as field staff from Public Works, Recreation and Parks, and other appropriate City departments in identifying and reporting prohibited uses of water; and ramp up marketing of water conservation incentive and rebate programs.<sup>8</sup>

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<sup>7</sup> *Id.* at 11.

<sup>8</sup> *Id.* at 12.

**Encouraging regional conservation measures.** Work with MWD to encourage all water agencies in the region to adopt water conservation ordinances which include prohibited uses and enforcement.<sup>9</sup>

## **Long-Term Strategies**

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### **1.0 Increase water conservation through reduction of outdoor water use and new technology.**

The following are new and continuing water conservation programs as well as goals and benchmarks designed to measure their progress through 2030:

**Residential Smart Sprinkler Systems:** Smart sprinkler systems improve water efficiency and are already used in parks and golf courses around the City will be extended to homes throughout L.A.'s neighborhoods.

Goal: Install 2,500 smart sprinkler controllers per year starting in the summer of 2009, with a total of 63,500 by 2020.

Water Savings: 4,962 AFY by 2030.

Action Plan: LADWP will begin to provide smart controllers and installation services free of charge to qualifying residential customers. Program plans include the installation of 2,500 controllers in the first year of program, moving to 5,250 controllers per year on a sustained basis. The program is scheduled to launch in late-2009.<sup>10</sup>

#### **Conservation Rebates and Incentives:**

Goal: Increase participation in Water Conservation Rebate and Incentive Programs.

Water Savings: 48,457 AFY by 2030.

Action Plan: LADWP is continuing to expand rebates and incentives for homeowners and business owners to encourage them to purchase water-saving technology.<sup>11</sup> Rebate and incentive programs include the following:

High Efficiency Clothes Washer Program. LADWP increased the rebate offered for residential high efficiency clothes washers from \$250 to \$350. Since the program was launched in 1998, more than 60,000 water-saving clothes washers have been installed in Los Angeles residents' homes through the program.<sup>12</sup> LADWP will further expand the program through a pilot "Point of Purchase" rebate program, offering customers an instant rebate when they buy the appliance from a Los Angeles retailer.

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<sup>9</sup> *Id.*

<sup>10</sup> *Id.* at 13.

<sup>11</sup> *Id.* at 14.

<sup>12</sup> *Id.*

Commercial Rebate Program. Water conservation rebates and incentives were increased significantly in 2007 to offset the costs of replacing water-wasting toilets and urinals with high efficiency models. The current rebates offset most or all of the total replacement cost (including installation). LADWP will increase program promotion to raise awareness of these significant financial incentives, resulting in increased program participation. Since this program's inception, more than 32,800 toilets have been replaced by commercial, industrial and institutional customers, and LADWP is working to implement a grant-funded Cooling Tower program for commercial customers.<sup>13</sup>

High Efficiency Urinal Programs. Offering perhaps the greatest potential for quick implementation is the replacement of standard urinals with high efficiency urinals (0.5 gallon per flush (gpf) or less, including no-flush). In addition, recent changes in the Los Angeles Building Code now provide for the installation of completely water-free urinals.<sup>14</sup>

Additional Water Saving Efficiency Measures and Programs. As part of the City's ongoing effort to encourage customers to adopt passive water conservation measures (i.e., measures that can help customers conserve water on a daily basis without thinking about it) in their homes and businesses, LADWP will continue to distribute water-saving bathroom and kitchen faucet aerators and shower heads free-of-charge. LADWP also plans to add rebates for products such as high-efficiency dishwashers and synthetic turf for residential customers to help increase their daily conservation efforts.<sup>15</sup>

#### **Action by Public Agencies:**

Goal: Improving water efficiency at all City Department facilities. LADWP provides incentive funding and technical assistance to City Departments for the installation of high efficiency urinals and smart irrigation controllers, and helps them identify other opportunities to improve water use efficiency.

Water Savings: Estimated to save at least 10 percent from existing use, totaling as much as 1,888 AFY in water savings.

Action Plan: LADWP will assist City Departments and other public agencies in leveraging incentive funds to retrofit their facilities. The Public Sector Conservation Incentive Program, offered through MWD in conjunction with LADWP, provides up-front incentives for public agencies to purchase water-efficiency technology.<sup>16</sup>

#### **Enhancing Conservation through Review of New Developments:**

Goal: Ensure specifications for the Los Angeles Green Building program include water efficiency measures.

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<sup>13</sup> *Id.*

<sup>14</sup> *Id.* at 14-15.

<sup>15</sup> *Id.* at 15.

<sup>16</sup> *Id.* at 18-19.

Water Savings: The Green Building Program can yield significant water savings through water conservation measures.

Action Plan: LADWP will continue working with the City's Green Building Team to pursue desired changes in local codes and standards to promote water efficiency in new construction projects and major building renovations.<sup>17</sup>

## 2.0 Water Recycling

The City's goal is to increase the total amount of recycled water used in the City of Los Angeles six-fold by 2019—expanding from the current 1% to 6% of annual water demand. This will result in a planned water savings of 50,000 AFY by 2019.<sup>18</sup> In order to achieve this goal, the City will take the following actions:

**Develop a Recycled Water Master Plan.** LADWP will prepare a detailed Recycled Water Master Plan that will outline the steps and costs of boosting the City's recycled water level to 6 percent of total demand for the City. The Master Plan will provide a blueprint for reaching this goal by expanding the existing recycled water pipeline system and using recycled water for groundwater replenishment.<sup>19</sup>

**Increase Recycled Water for Irrigation and Industrial Use.** LADWP's current Water Recycling Capital Budget provides funding for 17 large capital projects that will increase recycled water deliveries from 4,500 AFY to 19,350 AFY by 2014, adding more than 106,300 feet of new pipe and saving potable water for nearly 31,000 households throughout the City.<sup>20</sup> Potential customers in future years include several parks (Taylor Yard, Elysian, Branford, and Balboa parks); Harbor and Scattergood Generating Stations; Hansen Dam and Van Nuys golf courses; oil refineries in the Harbor area; LAX cooling towers; schools in the Sepulveda Basin, and the Los Angeles Zoo. Under the City's Water/Wastewater Integrated Resources Plan, 30,250 AFY of treated water will continue to be used to support habitat in the Japanese Gardens, Lake Balboa, the Wildlife Lake and the Los Angeles River.<sup>21</sup>

**Use Recycled Water for Groundwater Replenishment.** Advanced treated recycled water can be sent to spreading basins to percolate underground and become part of the City's groundwater system for later use. This process, also termed groundwater replenishment, is a proven alternative for expanding locally produced, safe, high-quality drinking water. The process has been successfully implemented in Orange County, Australia, and Singapore, and is being considered in other U.S. and worldwide locations.<sup>22</sup>

**Initiate Stakeholder Planning Process.** LADWP will engage stakeholders from the Water/Wastewater Integrated Resources Plan (IRP) process in analyzing alternatives

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<sup>17</sup> *Id.* at 21.

<sup>18</sup> *Id.* at 22.

<sup>19</sup> *Id.* at 24.

<sup>20</sup> *Id.*

<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

necessary for maximizing recycled water. These alternatives include implementing groundwater recharge with advanced treatment in the San Fernando Valley as well as expanding the purple pipe system to supply recycled water for irrigation and industrial uses.<sup>23</sup>

**Upgrade Tillman Wastewater Treatment Plant:** Groundwater replenishment will require upgrading the Tillman Plant with state-of-the-art, advanced treatment capability similar to the Orange County Water District's recently implemented Groundwater Replenishment System, which has received widespread support. Advanced treatment would be constructed at the Tillman Plant, and the highly treated wastewater would be piped to spreading basins for groundwater recharge.<sup>24</sup>

### 3.0 Enhancing Stormwater Capture

The City's goal is to increase groundwater recharge by retrofitting the Big Tujunga Dam and other large-scale projects through cooperative efforts with the Los Angeles County Flood Control District and other agencies. LADWP is moving forward with several stormwater capture projects with the goal of increasing long-term groundwater recharge by a minimum of 20,000 AFY.<sup>25</sup> The following are the large-scale projects that are expected to be completed or in construction within the next five years:

**Big Tujunga Dam – San Fernando Basin Groundwater Enhancement Project:** On September 18, 2007, the LADWP Board approved Agreement No. 47717 to provide \$9 million to the Los Angeles County Flood Control District for the construction of the Big Tujunga Dam Project – an effort to seismically retrofit the dam, increase its water storage capacity, improve its reliability as a supply source, enhance flood protection measures, and green the environment. The restoration of the dam is conservatively estimated to result in the additional capture and recharge of 4,500 AFY at the Hansen and Tujunga Spreading Grounds, and more in wet years. The project will make structural improvements to Big Tujunga Dam to restore its historical retention capacity of 6,000 acre-feet; currently the dam is restricted to 1,500 acre-feet of storage capacity.<sup>26</sup>

- Schedule: In construction; scheduled to be completed by December 2010.
- Budget: \$100 million of which LADWP is providing \$9 million.
- Resources: Los Angeles County Flood Control District is the project manager.
- Potential Water Savings: Capture an additional 4,500 AFY of stormwater on average, up to 10,000 AFY or more in extremely wet years.

**Sheldon-Arleta Project – Cesar Chavez Recreation Complex Project Phase I:**

On December 19, 2006, the Board of Water and Power Commissioners approved Agreement No. 47448 to provide up to \$5.25 million to the City of Los Angeles Department of Public Works for the construction of the project (the total project cost is

<sup>23</sup> *Id.* at 25.

<sup>24</sup> *Id.*

<sup>25</sup> *Id.* at 26.

<sup>26</sup> *Id.* at 27.

about \$9 million). The project will upgrade the methane gas extraction system at the Sheldon-Arleta Landfill that is necessary to allow the full use of the adjacent Tujunga Spreading Grounds. Currently, the spreading grounds are restricted to an operating capacity of 50 cubic feet per second (cfs) or 20 percent of the full operating capacity of 250 cfs.<sup>27</sup>

- Schedule: In construction; scheduled to be completed by early 2009.
- Budget: \$9 million of which LADWP is providing \$5.25 million.
- Resources: Los Angeles Department of Public Works is the project manager.
- Potential Water Savings: Capture of an additional 6,000 to 10,000 AFY of stormwater.

**Hansen Spreading Grounds Enhancement Project:** LADWP has entered into Agreement No. 47739 to share the costs of the construction of the Hansen Spreading Grounds Project with the District. The project will increase the capacity and efficiency of the spreading grounds by: 1) combining and deepening the existing basins, and 2) installing and building a new rubber dam, intake structure, control house, and upgrading the telemetry system. The Los Angeles County Board of Supervisors approved the agreement on March 11, 2008, and the LADWP Board of Commissioners approved it on April 1, 2008.<sup>28</sup>

- Schedule: In construction; scheduled to be completed by December 2009.
- Budget: Up to \$15 million; LADWP is providing up to \$7.5 million, with remaining costs covered by the LA County Flood Control District.
- Resources: Los Angeles County Flood Control District is the project manager.
- Potential Water Savings: Capture of an additional 1,200 to 3,000 AFY of stormwater.

**Tujunga Spreading Grounds Enhancement Project:** This project proposes to deepen the spreading basins, increase their storage capacity, replace the existing diversion structure with two diversion structures, and add remote automation of the operating structures.<sup>29</sup>

- Schedule: Planning and design 2009-10; construction in 2011.
- Budget: \$1.3 million for design; \$24 million for construction (LADWP funded).
- Resources: LADWP will be the project manager.
- Potential Water Savings: Capture of an additional 8,000 to 12,000 AFY of stormwater.

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<sup>27</sup> *Id.*

<sup>28</sup> *Id.* at 27-28.

<sup>29</sup> *Id.* at 28.

**Pacoima Spreading Grounds Enhancement Project:** This project proposes to deepen the spreading basins, increase their storage capacity, replace existing diversion structure, and add remote automation of the operating structures.<sup>30</sup>

- Schedule: Planning and design 2010-11; construction in 2012.
- Budget: \$1.3 million for design; \$20 million for construction (LADWP may provide some funding for this project).
- Resources: Los Angeles County Flood Control District will be the project manager.
- Potential Water Savings: Capture of an additional 1,500 to 3,000 AFY of stormwater.

#### 4.0 Accelerating Clean-Up of the San Fernando Groundwater Basin

The City's goal is to clean up the contaminated San Fernando Groundwater Basin to expand groundwater storage and the ability to fully utilize the City's groundwater supplies. The result will be a reduction of imported water supply of up to 87,000 AFY – LADWP's annual allocation of San Fernando Valley groundwater supplies.<sup>31</sup> LADWP will also work to ensure that this Basin remains a consistent, stable and reliable resource for years to come. The following actions are proposed to achieve this goal:

**Work with Regulatory Agencies and Governmental Officials:** LADWP will continue to encourage the EPA to develop a long-term, comprehensive solution for existing and emerging contamination issues in the Basin. In addition to the EPA, LADWP will work with the Los Angeles Regional Water Quality Control Board and the California Department of Toxic Substances to find and hold polluters accountable for cleaning up the Basin.<sup>32</sup>

**Groundwater System Improvement Study (GSIS):** LADWP will conduct a comprehensive groundwater study for the Basin. This study is a necessary step to evaluate the groundwater quality in the Basin and recommend treatment options to maximize the utility of the groundwater supply.<sup>33</sup>

- Schedule: Contract award in early-2009; contract term is 6 years.
- Budget: \$11.5 million (LADWP funded).
- Resources: LADWP will serve as contract manager and administrator.
- Benefit: Will provide vital information to develop a long-term strategy to remediate groundwater contamination in the San Fernando Basin.

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<sup>30</sup> *Id.*

<sup>31</sup> *Id.* at 29.

<sup>32</sup> *Id.* at 30.

<sup>33</sup> *Id.*

**Monitoring Well Drilling Contract:** LADWP will install up to 40 new monitoring wells throughout the Basin to provide vital water quality information necessary for the Groundwater System Improvement Study.<sup>34</sup>

- Schedule: Construction contract award in mid-2009; contract term is 2 years.
- Budget: \$8.0 million (LADWP funded).
- Resources: LADWP will serve as contract manager and administrator.
- Benefit: The monitoring wells be routinely sampled during and after the GSIS to provide vital information on groundwater contaminants and their concentration levels.

**Interim Wellhead Treatment:** LADWP will install interim treatment for select wellheads in the Tujunga Well Field in order to maintain groundwater pumping production. An amount of \$3 million has been included in the budget for this work.<sup>35</sup>

## 5.0 Expanding Groundwater Storage

LADWP is investigating opportunities for increased storage of groundwater, creating a cost-effective, environmentally friendly reserve of water resources in case of extreme drought or other emergencies. Currently, the City has significant amounts of stored groundwater in the San Fernando Basin. However, as noted above, contamination restricts the ability to effectively utilize this resource.<sup>36</sup>

LADWP is investigating the following opportunities: groundwater storage along the Los Angeles Aqueduct; a groundwater conjunctive use storage project in the Los Angeles County groundwater basins; and construction of an interconnection between the Los Angeles Aqueduct and the California Aqueduct, located where the two aqueducts intersect in the Antelope Valley. The interconnection will allow for water transfers or exchanges, and could be used to help move water to facilitate groundwater storage opportunities. The design phase of the interconnection is almost complete. LADWP is waiting for a permit to build on land owned by DWR. LADWP plans to begin construction in 2009.<sup>37</sup>

## Water Supplies

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The Los Angeles Aqueducts (LAA), local groundwater, purchased water from the MWD, and recycled water are the primary sources of water supplies for the City of Los Angeles. Table III shows LADWP water supplies over the last ten years from these sources.

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<sup>34</sup> *Id.*

<sup>35</sup> *Id.*

<sup>36</sup> *Id.*

<sup>37</sup> *Id.* at 31.

**TABLE III**  
**LADWP Water Supply**

Year	Los Angeles Aqueducts	Local Groundwater	MWD	Recycled Water	Transfer, Spread, Spills, and Storage	Total
1998	466,836	80,003	56,510	1,326	7,769	596,906
1999	309,037	170,660	164,112	1,812	-3,507	649,128
2000	255,183	87,946	336,116	1,998	2,569	678,674
2001	266,923	79,073	309,234	1,675	-1,994	658,899
2002	179,338	92,376	410,329	1,945	-1,405	685,392
2003	251,942	90,835	322,329	1,759	2,528	664,338
2004	202,547	71,831	391,834	1,774	-2,958	670,944
2005	368,839	56,547	185,346	1,401	3,140	608,993
2006	378,922	63,270	188,781	4,890	-1,336	637,199
2007	129,400	89,018	439,436	3,639	1,044	660,449
2008	147,365	60,149	429,110	7,051	1,664	642,011

Note: Units are in AF

## Los Angeles Aqueducts

Snowmelt runoff from the Eastern Sierra Nevada Mountains is collected and conveyed to the City of Los Angeles via the Los Angeles Aqueducts (LAA). LAA supplies come primarily from snowmelt and secondarily from groundwater pumping, and can fluctuate yearly due to the varying hydrologic conditions. In recent years, LAA supplies have been less than the historical average because of environmental restoration obligations in Mono and Inyo Counties.

The City holds water rights in the Eastern Sierra Nevada where LAA supplies originate. These supplies originate from both streams and from groundwater. In 1905, the City approved a bond measure for the purchase of land and water rights in the Owens River Valley. By 1913, the First LAA began its deliveries of water to the City primarily from surface water diversions from the Owens River and its tributaries. Historically, these supplies were augmented from time to time by groundwater extractions from beneath the lands that the City had purchased in the Owens Valley.

In 1940, the First LAA was extended north to deliver Mono Basin water to the City pursuant to water rights permits and licenses granted by the State Water Resources Control Board. In 1970, the Second LAA was completed increasing total delivery capacity of the LAA system to approximately 561,000 AF per year. The Second Los Angeles Aqueduct was to be filled by completing the Mono Basin diversions originally authorized in 1940, by a more effective use of water for agricultural purposes on City-owned lands in the Owens Valley and Mono Basin and by increased groundwater pumping from the City's lands in the Owens Valley.

In 1972, Inyo County filed a California Environmental Quality Act lawsuit challenging the City's groundwater pumping program for the Owens Valley. The lawsuit was finally ended in 1997, with the County of Inyo and the City of Los Angeles entering into a long-term water agreement for the management of groundwater in the Owens Valley. That water agreement, entered as a judgment of the Superior Court in the County of Inyo

(County of Inyo vs. City of Los Angeles, Superior Court No. 12908) outlines the management of the City's Owens Valley groundwater resources. As a result of this water agreement and subsequent Memorandum of Understanding, LADWP has dedicated 37,000 AF of water annually for enhancement and mitigation projects throughout Owens Valley which includes the rewatering of 62 miles of the Lower Owens River. LADWP also provides approximately 80,000 AF of water annually for other uses in the Owens Valley such as irrigation, town water supplies, stockwater, wildlife and recreational purposes.

Further, in September 1994 by virtue of the public trust doctrine, the State Water Resources Control Board issued Decision 1631 which placed conditions on LADWP's water gathering activities from Mono Basin. LADWP currently export approximately 16,000 AF of water annually from the Mono Basin. LADWP has implemented an extensive restoration and monitoring programs in Mono Basin to increase the level of Mono Lake and to improve stream conditions, fisheries and waterfowl habitats in Walker, Parker, Rush and Lee Vining Creeks. With reduced diversions from the Mono Basin and favorable hydrologic conditions, Mono Lake's elevation has risen overtime. Once the elevation of Mono Basin reaches 6,391 feet above mean sea level, a moderate increase in water exports from the Mono Basin will be permitted pursuant to the Decision 1631. Currently, up to 74,000 AF of water annually is being utilized for environmental restoration in Mono Basin.

In July 1998, LADWP and the Great Basin Unified Air Pollution Control District (GBUAPCD) entered into a Memorandum of Agreement to mitigate dust emissions from Owens Lake. As of December 31, 2008, LADWP has mitigated dust emissions from 29.8 square miles of Owens Lake in accordance with the GBUAPCD's 2003 revised State Implementation Plan. LADWP is currently working on mitigating dust emissions from an additional 12.7 square miles of Owens Lake in accordance with the GBUAPCD's 2008 State Implementation Plan. Upon completion of this latest phase by April 2010, LADWP would have mitigated dust emissions from 42.5 square miles of Owens Lake requiring approximately 95,000 AF of water annually to sustain the dust mitigation program.

Average deliveries from the LAA system has been approximately 262,550 AF of water annually over the last five fiscal years. Based on computer modeling results, LADWP projects that the average annual LAA delivery is expected to be approximately 230,000 AF.

## **Groundwater**

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LADWP traditionally extracts groundwater from various locations throughout the Owens Valley and four local groundwater basins. LADWP owns extensive property in the Owens Valley. LADWP appropriates groundwater from beneath its lands for use in the Owens Valley and in Los Angeles. It has a long-term groundwater management plan in place. Additionally, LADWP currently exercises its adjudicated extraction rights in three local groundwater basins: San Fernando, Sylmar, and Central.

The Owens Valley, located on the eastern slope of the Sierra Nevada Mountains, encompasses approximately 3,300 square miles of drainage area. LADWP has

extracted the following quantities of groundwater from the Owens Valley in the last five runoff years (April 1 – March 31):

- 2003-2004 87,726 AF
- 2004-2005 85,820 AF
- 2005-2006 57,412 AF
- 2006-2007 58,621 AF
- 2007-2008 60,337 AF

Owens Valley is not identified as an overdrafted basin in the California Department of Water Resources California's Groundwater Bulletin 118 Update 2003. Further, Bulletin 118 Update 2003 does not project the Owens Valley to become overdrafted if present groundwater management conditions continue.

In 1990, the City of Los Angeles and Inyo County as part of the preparation of the long-term groundwater management agreement, prepared the "Green Book for the Long-Term Groundwater Management Plan for the Owens Valley and Inyo County". It contains plans and procedures to prevent overdraft conditions from groundwater pumping as well as to manage vegetation in the Owens Valley.

The San Fernando and Sylmar basins are subject to the judgment in City of San Fernando vs. the City of Los Angeles. Pumping is reported to the court-appointed Upper Los Angeles River Area (ULARA) Watermaster. The Central Basin is also subject to court judgments. Pumping is reported to the California Department of Water Resources (DWR) who acts as Watermaster.

The San Fernando Basin is the largest of four basins within ULARA. The basin consists of 112,000 acres of land and comprises 91.2 percent of the ULARA valley fill. LADWP has accumulated nearly 375,190 AF of stored water credit in the San Fernando Basin as of October 2007. This is water LADWP can withdraw from the basin during normal and dry years or in an emergency, in addition to LADWP's approximately 87,000 AF annual entitlement in the basin. The majority of LADWP's groundwater is extracted from the San Fernando Basin. Sylmar Basin is located in the northern part of the ULARA, consisting of 5,600 acres and comprises 4.6 percent of the ULARA valley fill. LADWP currently has an annual entitlement of 3,405 AF from the Sylmar Basin.

The court decision on pumping rights in the ULARA was implemented in a judgment on January 26, 1979. Enclosed with the assessment are copies of those pages from the judgment showing the entitlements (see Appendix E). Further information about the ULARA basin is in the ULARA Watermaster Report. The ULARA Watermaster report and the judgment are available for review at the office of the ULARA Watermaster.

LADWP additionally has adjudicated rights to extract groundwater from the Central Basin. Annual entitlement to the Central Basin is 15,000 AF. See Appendix E for copies of relevant portions of the judgments. The complete judgments are available for review at DWR.

For the period of October 2007 to September 2008, LADWP extracted 50,009 AF, 2,996 AF, and 10,754 AF from the San Fernando, Sylmar, and Central Basins, respectively.

LADWP plans to continue production from its groundwater basins in the coming years to offset reductions in imported supplies. Extraction from the basins will however be limited by water quality and overdraft protection. Both LADWP and DWR have programs in place to monitor wells to prevent overdrafting. LADWP's groundwater pumping practice is based on a "safe yield" operation. The objective, over a period of years, is to extract an amount of groundwater equal to the native and imported water that recharges. Extractions by LADWP from the San Fernando, Sylmar, and Central Basins for the last available 5 years are shown on Table IV.

**TABLE IV**  
**Local Groundwater Basin Supply**

Water Year (Oct-Sep)	San Fernando	Sylmar	Central
2003-2004	68,626	3,033	15,209
2004-2005	49,085	1,110	13,401
2005-2006	38,042	2,175	13,725
2006-2007	76,251	3,919	13,609
2007-2008	50,009	2,996	10,754

Note: Units are in AF

## **Metropolitan Water District of Southern California (MWD)**

MWD is the largest water wholesaler for domestic and municipal uses in Southern California. As one of 26 member agencies, LADWP purchases water from MWD to supplement LADWP supplies from local groundwater and the LAA. MWD imports a portion of its water supplies from Northern California through the State Water Project's California Aqueduct and from the Colorado River through MWD's own Colorado River Aqueduct. LADWP will continue to rely on MWD to meet its current and future supplemental water needs.

All 26-member agencies have preferential rights to purchase water from MWD. Pursuant to Section 135 of the MWD Act, "Each member public agency shall have a preferential right to purchase from the district for distribution by such agency, or any public utility therein empowered by such agency for the purpose, for domestic and municipal uses within the agency a portion of the water served by the district which shall, from time to time, bear the same ratio to all of the water supply of the district as the total accumulation of amounts paid by such agency to the district on tax assessments and otherwise, excepting purchase of water, toward the capital cost and operating expense of the district's works shall bear to the total payments received by the district on account of tax assessments and otherwise, excepting purchase of water, toward such capital cost and operating expense." This is known as a preferential right. As of June 30, 2006, LADWP has a preferential right to purchase 21.16 percent of MWD's total water supply.

LADWP has worked with MWD in developing a framework for allocating water supplies during periods of shortage as well as surplus. MWD has a Water Surplus and Drought Management Plan that provides such a framework. LADWP intends to work within the framework established through the Water Surplus and Drought Management Plan in acquiring its drought supplies from MWD in the future.

MWD has also been developing plans and taking efforts to provide additional water supply reliability for the entire southern California region. LADWP coordinates closely with MWD to ensure implementation of these water resource development plans. Part of this planning effort is the inclusion of a “buffer” supply that is meant to protect against uncertainties in water resource supply like the Federal Courts restrictions on export pumping from the San Francisco Bay-Delta. MWD’s long-term plans to meet its member agencies’ growing reliability needs are through water transfer programs, outdoor conservation measures, and development of additional local resources, such as recycling, brackish water desalination, and seawater desalination. Additionally, MWD has more than 5.0 million AF of storage capacity available in reservoirs and banking/transfer programs, with approximately 1.08 million AF currently in that storage.

MWD established a policy objective for water supply reliability as part of its Integrated Resources Plan (IRP). The policy objective is: Through the implementation of the IRP, MWD and its member agencies will have the full capability to meet full-service demands at the retail level at all times.

#### *Recent Issues Related to the State Water Project*

Federal ESA Litigation filed by several environmental interest groups in the United States District Court for the Eastern District of California alleged that existing biological opinions and incidental take statements inadequately analyzed impacts on listed species under the Federal ESA. On May 25, 2007, Federal District Judge Wanger issued a decision on summary judgment finding the United States Fish and Wildlife Service’s biological opinion for Delta smelt was invalid. On December 14, 2007, Judge Wanger issued his Interim Remedial Order requiring that the State Water Project and Central Valley Project operate according to certain specified criteria until a new biological opinion for the Delta smelt is issued. The United States Fish and Wildlife Service released the new biological opinion on December 15, 2008. Based on the Water Allocation Analysis released by the Department of Water Resources on December 19, 2008, which analyzed the biological opinion’s effects on State Water Project operations, export restrictions under median hydrologic conditions could reduce deliveries to Metropolitan by 300,000 to 700,000 acre-feet for 2009. These events have highlighted the challenges that water suppliers throughout the state currently face regarding supplies from the Delta.

At present, several on-going proceedings concerning Delta operations are evaluating options to address delta smelt impacts and other environmental concerns. Governor Schwarzenegger’s cabinet-level advisors, the Delta Vision Committee (Committee), released recommendations contained in the *Delta Vision Implementation Report* on January 2, 2009. This report considered the recommendations detailed in the Delta Vision Blue Ribbon Task Force (BRTF) *Delta Vision Strategic Plan* (October 2008) report. The Committee’s report recommended a comprehensive solution that includes dual conveyance (construction beginning in 2011), water use reductions, additional groundwater storage, completion of surface storage investigations, a major commitment to local resource development, habitat improvements, and commitments to the Delta as a “unique and valued place.” In addition, the report recognizes the urgency of the water supply crisis facing the state and that action must be taken immediately to ensure a

sustainable future for California's water supply. The Committee embraced the primary conclusion that California's Delta must be managed with two fundamental co-equal goals and these goals should be incorporated into state law: *"Restore the Delta ecosystem and create a more reliable water supply for California."*

The Committee prioritized the following fundamental actions for a sustainable Delta:

- The report recommends the following immediate actions:
  - Complete the Bay Delta Conservation Plan (BDCP);
  - Construct Delta gates and barriers in 2009 for water quality, water supply, and ecosystem improvements.
  - Manage non-water-supply-related stressors in the Delta system (e.g. invasive species, urban stormwater runoff, agricultural drainage, and wastewater discharges).
  - Revise regulatory flow and water quality requirements, including "streamflow recommendations throughout the annual hydrograph for tributaries to the Delta."
- A new system of dual water conveyance (construction beginning in 2011) through and around the Delta to protect municipal, agricultural, environmental, and the other beneficial uses of water;
- An investment commitment and strategy to restore and sustain a vibrant and diverse Delta ecosystem, including the protection and enhancement of agricultural lands that are compatible with the Plan's goals;
- Additional storage to allow greater system operational flexibility that will benefit water supplies for both humans and the environment and to adapt to a changing climate;
- An investment plan to protect and enhance unique and important characteristics of the Delta region;
- A comprehensive Delta emergency preparedness strategy and a fully integrated Delta emergency response plan;
- A plan to significantly improve and provide incentives for water conservation – through both wise use and reuse – in both urban and agricultural sectors throughout the state;
- Strong incentives for local and regional efforts to make better use of new sources of water such as brackish water cleanup and seawater desalination; and
- An improved governance system that has reliable funding, clear authority to determine priorities and strong performance measures to ensure accountability to the new governing doctrines controlling the Delta.

The Committee acknowledged the urgency of moving forward toward a "Delta Fix." It also proposed a timeline for immediate interim actions and a phased implementation of most of the supporting strategies from the BRTF's Delta Vision Strategic Plan.

In response to these recent developments in the Delta, MWD is engaged in planning processes that will identify local solutions that, when combined with the rest of its supply portfolio, will ensure a reliable long-term water supply for its member agencies. In the near-term MWD will continue to rely on the plans and policies outlined in its Regional Urban Water Management Plan (RUWMP) and Integrated Water Resources Plan to address water supply shortages and interruptions (including potential shut downs of SWP pumps) to meet water demands. Campaigns for voluntary conservation, curtailment of replenishment water and agricultural water delivery are some of the actions outlined in

the RUWMP. If necessary, reduction in municipal and industrial water use and mandatory water allocation could be implemented. An in depth discussion on MWD is attached in Appendix G.

## **Secondary Sources and Other Considerations**

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Water conservation and recycling will play an increasing role in meeting future water demands. LADWP has implemented conservation and recycling programs with efforts under way to further promote and increase the level of these programs. LADWP is committed to supply a higher percentage of the City's water demand through conservation and recycling.

Integrated planning has also filled an important role in developing secondary sources of supply for Los Angeles. It is generally true for large undertakings that a concerted effort with others who share a common goal will produce a higher degree of success. This is an approach that has been taken in southern California with overall water resources planning. The City of Los Angeles works closely with MWD, the City's Bureau of Sanitation (wastewater agency), other regional water providers, and various stakeholder groups to develop and implement programs that reduce overall water use. The City has also pioneered community-based job programs to assist in conservation program implementation. While significantly assisting with program implementation, these community-based organizations also provide important social and economic benefits to neighborhoods.

Integrated resources planning is a process that is being used by many water and wastewater providers to meet their future needs in the most effective way possible, and with the greatest public support. The planning process differs from traditional planning processes in that it incorporates:

- public stakeholders in an open, participatory process;
- multiple objectives such as reliability, cost, water quality, environmental stewardship, and quality of life;
- risk and uncertainty; and
- partnerships with other agencies, institutions, and non-governmental organizations.

Through integrated planning, not only water-use efficiency and recycling activities are maximized, but potential alternative supplies such as water transfer, seawater desalination, and stormwater runoff reuse are considered and evaluated as part of the City's long-term water resources portfolio.

## **Rates**

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Capital costs to finance facilities for the delivery of water supply to LADWP's service area are supported through customer-billed water rates. The LADWP Board of Commissioners (Board) sets the rates subject to approval of the City Council by ordinance.

The Board is obligated by the City Charter to establish water rates and collect charges in an amount sufficient to service the water system indebtedness and to meet its expenses of operation and maintenance.

The water rate structure contains water procurement adjustments under which the cost of purchased water from MWD, demand-side management programs which includes water conservation programs, and reclaimed water projects are recovered. In addition, the rate structure contains a water quality improvement adjustment to recover expenditures to upgrade and equalize water quality throughout the City of Los Angeles and to construct facilities to meet state and federal water quality standards, including the payment of debt service on bonds issued for such purposes.

LADWP Board-approved capital program expenditures are either financed through the sale of revenue bonds or the cost of the program is transferred to LADWP customers through rate adjustments.

## **Findings**

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The proposed Plaza at the Glen Project is estimated to increase water demand within the site by 186 acre feet annually based on review of information submitted by the Planning Department.

The approximate 186 acre feet increase falls within the available and projected water supplies for normal, single-dry, and multiple-dry years through the year 2030 as described in LADWP's year 2005 UWMP. LADWP finds that it will be able to meet the water demand of the Plaza at the Glen Project as well as existing and planned future water demands of its service area.