



SAN GABRIEL VALLEY  
MUNICIPAL



WATER DISTRICT

AZUSA | SIERRA MADRE | MONTEREY PARK | ALHAMBRA



THE VALUE OF  
**WATER**  
ESSENTIAL FOR LIFE!



2015-2016 ANNUAL REPORT



## BOARD OF DIRECTORS



Mark R. Paulson  
Division I - Alhambra



John S. Leung  
Division II -  
Alhambra and  
Monterey Park



Thomas Wong  
Division III -  
Monterey Park,  
President



Raul Romero  
Division V - Azusa



Thomas Love  
Division IV,  
Sierra Madre

## Mission Statement

The San Gabriel Valley Municipal Water District provides reliable supplemental water for the communities of Alhambra, Azusa, Monterey Park and Sierra Madre in a cost-effective and environmentally responsible manner.



Darin J. Kasamoto  
General Manager



Ed Hills  
Assistant General  
Manager



Dear Friends:

*These past few years have been the most challenging for the District in decades. We've seen the driest 5 year period in downtown Los Angeles in more than a century and a half of record keeping. Despite all the focus on El Niño we had less rainfall in the San Gabriel Valley in 2015 than in 2014, and local groundwater levels are at historic lows. Our ongoing, severe drought has highlighted the need for investments in our water infrastructure and prudent financial management.*

*In the face of these challenges, the Board of Directors, our hard working staff, and our member cities, in partnership with other water agencies, have stepped up efforts to ensure a dependable water supply. We completed an emergency connection for Sierra Madre's residents to access water and developed an emergency solution to deliver water to Azusa to prevent wells there from running dry.*

*The District has enhanced its community education efforts as well, centering those efforts around promoting the "Value of Water" to help encourage water conservation and further instill the ethic of efficient water use. Our newly re-designed website is a great resource for students, schools, homes and employers, and our mascot, H<sub>2</sub>Owl, has become synonymous with water conservation.*

*This past year, we provided water conservation education to every 3rd, 4th, and 5th grader in our public schools, engaged the public at nearly 50 community events, provided half a million dollars for information and rebates for water efficient appliances, installed new water efficient landscapes at several local schools and city halls, held numerous educational Town Hall events, and provided water conservation banners and lawn signs for member cities to place in public locations.*

*Our efforts paid off. We all played a role in helping meet the State's goal for mandatory water use reductions. It was a tremendous success story, of everyone working together – residents, employers and cities. California's urban areas collectively conserved nearly one fourth of our water supply, with our four cities saving a combined 3.8 billion gallons of water!*

*The District has taken steps to work towards water supply reliability in the long term as well. We're actively exploring opportunities to develop and enhance local water supplies, including recycled water and stormwater capture, as well as exploring water transfers and exchange agreements.*

*We've done all this work while continuing to maintain the lowest wholesale replenishment water rate in the region by far, nearly one fourth the rate of some of our neighboring agencies.*

*As drought conditions and long-term climate change persist, rest assured that we are committed to helping you do more with less, and to developing a sustainable, reliable and affordable water supply for today and for generations to come.*

Sincerely,

Thomas Wong  
President, Board of Directors  
San Gabriel Valley Municipal Water District

# THE WATER CHALLENGE FACING OUR MEMBER CITIES

## The Value of Water

Water is precious – especially fresh water. Of all the water on Earth, only 3% of it is fresh. Yet, this 3% provides the whole world’s drinking water, delivers food through fishing and crop irrigation, supports manufacturing, is necessary for health and sanitation, generates power, is essential to medicinal and chemical processes and much more.

So, what is the value of water? Because many water projects in this country have been built as public works initiatives by government agencies, the current cost of water to U.S. consumers does not necessarily reflect its value. There is a gap between what we pay for water and its true value.

- The human body is about 60% water.
- Humans need a bare minimum of 5 gallons of water per day for hydration and sanitation.
- The average American uses 176 gallons of water per day.
- 349 billion gallons of freshwater are withdrawn every day in the United States. 37% is used for irrigation to produce food and beverages; 46% is used for manufacturing of every-day products.
- 20% of the U.S. economy would cease to function without reliable, clean water.

Source: [www.thevalueofwater.org](http://www.thevalueofwater.org)

Costs of water to urban consumers are increasing as supplies become more limited and it’s become more costly for water purveyors to provide water on demand. Because the prices that water agencies charge are related directly to their costs,

prices we pay will continue to increase in the future. People’s views and ethics are evolving as they become better informed about the value of water. That’s why we’ve seen such a remarkable response to the State’s mandatory and voluntary water conservation guidelines as people are reducing non-essential water use.

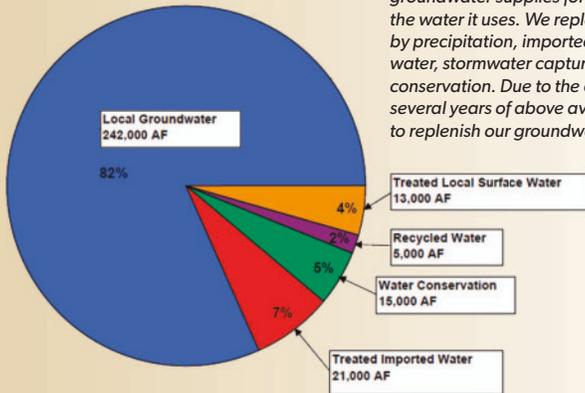
Informing and engaging with you in this water dialogue is one of our top priorities. With greater understanding comes awareness and ability to make choices that benefit our people, employers, environment and economy.

*“When the well’s dry, we know the worth of water.” – Ben Franklin*

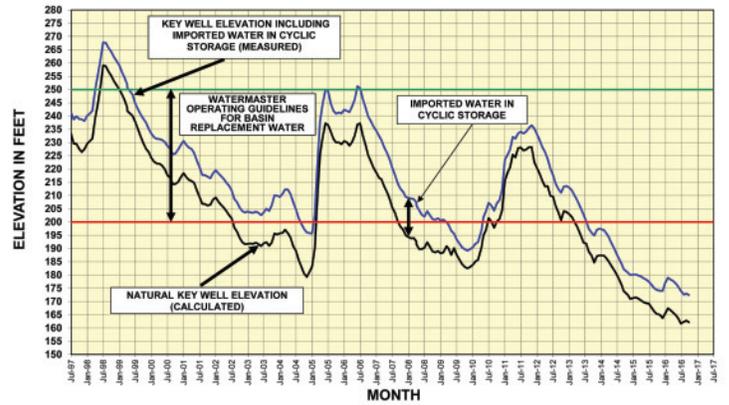
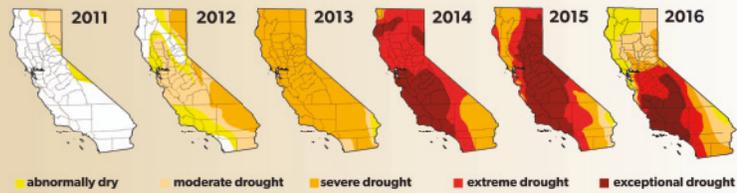
## Threats to Our Local Water Supply

### Where Our Water Comes From

The San Gabriel Valley depends on local groundwater supplies for more than 80% of the water it uses. We replenish those supplies by precipitation, imported water, recycled water, stormwater capture and water conservation. Due to the drought, it will take several years of above average precipitation to replenish our groundwater supplies.



**Drought and Climate Change** – More than 60% of the State remains in “extreme drought.”



**Extreme Heat** – Extreme heat (days of 95 degree temperatures or higher) increase surface evaporation and water consumption. A UCLA study indicates the Valley could see its number of extreme heat days climb from 32 to 74 by 2050, and 117 by 2100.

**Imported Water Deliveries** – Imported water allocations were 5% in 2014, 20% in 2015 and 60% in 2016. We continue to “withdraw” water from our local aquifers and wells, but we’ve not been replenishing them at the desired rate. The graph of the Baldwin Park Key Well (above) shows local groundwater supplies are at historic low levels.

**Contamination** – The Main San Gabriel Basin is one of the most contaminated groundwater basins in the nation due to ground disposal - dating back to World War II - of synthetic organic compounds used primarily as solvents in industrial and commercial activities. Careful monitoring and remediation efforts involving the U.S. EPA, the San Gabriel Basin Water Quality Authority and local water treatment facilities ensure our water supply remains safe.

**Aging Infrastructure** – Nationally, we lose 1.7 trillion gallons of drinking water every year to faulty, aging, or leaky pipes. When you add in leakage from sewer and stormwater pipes, that number rises to 6 trillion gallons.

## Protecting Our Valuable Water Resource

The drought has led to a dramatic increase in public and private efforts to develop water supply solutions including water conservation, recycled water and stormwater capture. Enhancements to the State Water Project and imported water deliveries are also being studied. Statewide, several ballot measures and new laws have addressed our water quality and water supply needs. The most important was the nearly \$7.5 billion Water Bond approved by voters in 2014.

Two years later, we’re seeing both wise investments in projects that enhance our water supply, as well as a much broader dialogue about future funding for water-wise infrastructure and technology. The Emergency Drought declarations and mandatory water conservation measures enacted by the State in 2014 and 2015 served as a wake-up call for local government, residents and employers.

## Water Conservation – Secret Weapon and Success Story

In 2015, the State changed its policy from a voluntary water conservation goal of 20% to a mandatory level of 25%. The response from the public was extraordinary. Statewide, we met the 25% goal. More remarkable was how fast this happened. In a matter of months, conservation rose to desired levels. Let’s put this in perspective:

- Water Conservation levels of 25% were achieved statewide at little cost, other than to provide public information and to enact limited enforcement.
- Saving water is cost-effective: we do not need to spend money on relatively expensive water supply solutions such as imported, recycled or desalinated water.
- Saving water is efficient: the savings are immediate and accomplished by cities, counties, residents and employers.
- The District’s member cities – Alhambra, Azusa, Monterey Park and Sierra Madre – collectively saved 3.8 billion gallons of water.

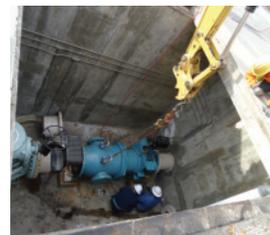
# 2015-16 HIGHLIGHTS

## WATER SUPPLY RELIABILITY & OPERATIONS HIGHLIGHTS

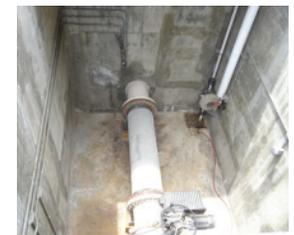
As one of 29 State Water Contractors, the District's primary mission and operational responsibility is to deliver imported water from the State Water Project through our pipeline to replenish groundwater in the San Gabriel Valley to be stored for future use. The District provides "water insurance" to our member cities and we continue to develop long-term water reliability strategies.

### Major operational accomplishments in the 2015-2016 fiscal year included:

- **Supplemental Water** – water deliveries from the State to the District increased in 2015 to 5,760 acre-feet (AF) from the drought-lowest level of 1,200 AF in 2014. The District has begun its delivery of 16,088 AF for the current fiscal year. This compares to 10,080 AF of water in 2013, 18,720 AF in 2012, 23,040 in 2011 and 14,400 AF in 2010 (one AF supplies water for a family for one year).
- **2015 Urban Water Management Plan** – adopted by the Board and filed with the California Department of Water Resources.
- **Emergency Repair at Azusa Flow Control Structure** – a damaged valve received emergency/temporary repair (see photo) enabling timely water deliveries to the San Gabriel Canyon spreading grounds and replenishment of at-risk wells in Azusa. Refurbishment of the new valve and meter facility is scheduled for early 2017.
- **Hydro-Electric Facilities Study** – a 30% Engineering and Design study was completed for potential hydro-electric facilities at the Emerald Pressure Reducing Station in La Verne and the Azusa Flow Control Structure in Azusa. A more detailed study is being considered by the Board of Directors.
- **Emergency Connection to Covina Irrigation Company** – for the first time in the District's history, a direct connection from our pipeline enabled 2,548 AF of water to be delivered to their water treatment facility.
- **Delivery of 2,200 AF through the Sierra Madre Emergency Connection.**



Damaged Valve



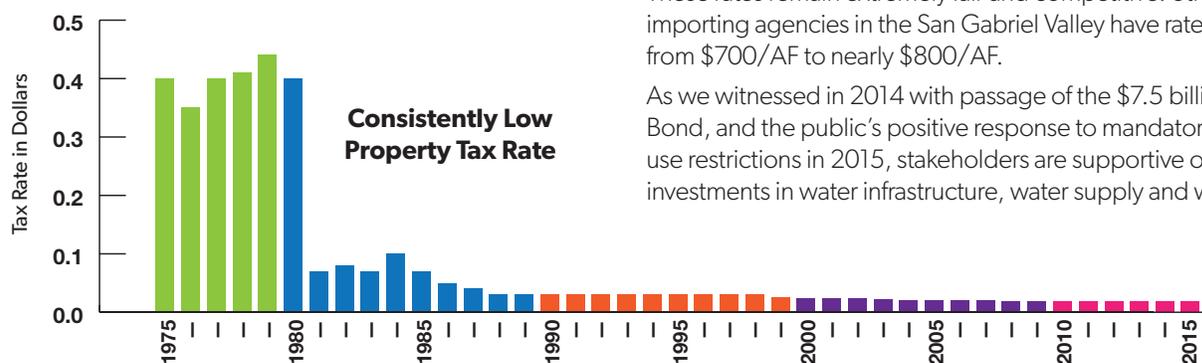
Temporary Emergency Connection

## FINANCIAL HIGHLIGHTS

### Doing More with Less

The District is committed to prudent financial management. Historically, the District has had a strong balance sheet with adequate financial reserves. Over the past 5 years, as the drought worsened, the District's financial reserves declined by approximately \$10 million due to both rapidly increasing State Water Project costs and declining water sales revenue.

State Water Project costs are fixed costs, regardless of our annual water allocation from the State. These costs have increased dramatically in recent years, from an average of \$5.4 million per year from 2010-2014, to \$6.8 million in 2015 (26% increase), requiring the District to seek additional sources of revenue and to reduce discretionary expenses.

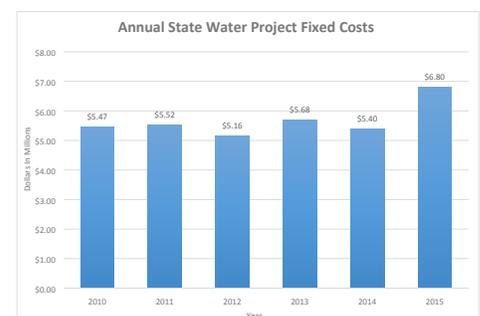


### The "New Normal" for Financial Management

In recent years, the District adjusted its water rate for member cities to compensate for the sharply rising State Water Project costs. In 2015, we

raised our rate from \$130 per acre-foot (AF) (which it had been since 1989) to \$145/AF, and we have now begun a three-year rate adjustment that will move our rate to \$200/AF by 2018-2019. These rates remain extremely fair and competitive: other water importing agencies in the San Gabriel Valley have rates ranging from \$700/AF to nearly \$800/AF.

As we witnessed in 2014 with passage of the \$7.5 billion Water Bond, and the public's positive response to mandatory water use restrictions in 2015, stakeholders are supportive of prudent investments in water infrastructure, water supply and water quality.



## WATER CONSERVATION AND PUBLIC EDUCATION HIGHLIGHTS



The District has been a leader in developing educational water conservation programs in the San Gabriel Valley for both new and more experienced water savers. As water conservation became mandatory in California in 2015 due to the serious, ongoing drought, the District's vision in initiating such programs more than 7 years ago was rewarded as communities in our service area and throughout the San Gabriel Valley conserved water at record levels, preserving our precious groundwater. Water conservation is the least expensive and most efficient of our water supply solutions. Highlighted below are the District's most prominent efforts to educate and inform stakeholders about water issues and to motivate adoption of a long-lasting, water-wise ethic and behavior.

### Redesigned Educational Website – [www.sgvmd.org](http://www.sgvmd.org)

The District's new website utilizes a "Content Management System (CMS) which enables faster and more efficient site management. The new look and functionality makes it easier for visitors to access educational information, videos, news articles, rebates and links. New website analytics confirm that website traffic is driven by consumer interest in water conservation.

### 2016 Water Forum

The District pioneered the successful San Gabriel Valley Water Forum, which first took place in 2012. The 2016 Forum was held on September 20, 2016 at the convenient and modern Sheraton Fairplex Conference Center in Pomona. We welcomed residents, city officials, educators and students, business owners and employers, community leaders, environmentalists and the press to attend.

The theme for this year's Forum is "Coming Together...For a Sustainable Water Supply." Please visit the Forum's website ([www.sgvwaterforum.com](http://www.sgvwaterforum.com)) for further information.



### Federal, State and Local Government Outreach

Our local elected officials are partners in developing a reliable water supply, achieving high water quality and exceeding water-use restrictions. Each year, we visit Sacramento to talk with legislators and their staffs, and meet locally with District staff in the San Gabriel Valley to keep everyone abreast of major water issues and the District's services and programs.

Attending the District's annual Sacramento meetings were Board President Thomas Wong and Directors John Leung and Raul Romero. They are pictured with A) Senator Ed Hernandez, B) Assemblyman Chris Holden and C) Assemblyman Ed Chau.



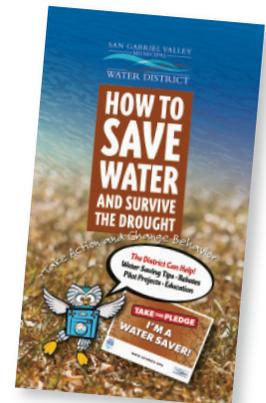
### Educational Town Halls and Speakers' Bureau

The District continues to outreach to community, business and media groups to share important water supply, water quality and water conservation information. One very important Town Hall reaches out to Asian media due to the large number of Asian-American residents and businesses in our service area. Board members and management regularly speak at educational workshops presented by legislators, business groups and others.



### "Advanced" Water Saving Tips Brochure and Rebate Program

Many people tell us they are utilizing basic water saving techniques and would like to do more. Others say they want to prepare for the future and be on the cutting-edge of water conservation. As a result, the District developed an informational brochure with "advanced" water saving tips including grey water recycling, recycled wastewater, rainwater capture, rebates and more. Visit our website for more information about rebates for water-efficient washing machines, smart irrigation controllers, high-efficiency toilets, rain barrels and waterless urinals.



### Youth, School and Community Outreach Program

"H<sub>2</sub>Owl" is the District's water conservation guru and ambassador. Our Home Water Survey program provides hands-on water conservation education to every elementary school in our service area. Students learn when they see H<sub>2</sub>Owl they should think of water conservation, just like when they see Smokey the Bear they think about fire prevention. H<sub>2</sub>Owl attends community and school events throughout our service area all year long. Kids, adults and community leaders enjoy interacting with our water conservation mascot at schools, libraries, concerts, Earth Day events, parks and more. Our community outreach program is highlighted below, from left to right, in Alhambra, Monterey Park and Sierra Madre.



# OPERATIONAL OVERVIEW

## Delivering Supplemental Water to the San Gabriel Valley

The San Gabriel Valley Municipal Water District was approved in 1959 by voters in Alhambra, Azusa, Monterey Park and Sierra Madre to help those cities meet their long-term water needs. The District's Devil Canyon-Azusa Pipeline delivers water from northern California via the State Water Project to the Main San Gabriel Basin to replenish the aquifer underlying our communities. This thoughtfully planned and engineered system is maintained and operated by Water District personnel 365 days a year. The District entered into a contract with the State of California Department of Water Resources in 1962 for the delivery of water each year from the State Water Project. Today the District is one of 29 State Water Contractors who obtain water from the vast State Water Project and who pay for retirement of the bond used to construct it, as well as its operation and maintenance. Starting in 1975 and continuing today, the District has been importing water from Northern California to replenish groundwater supplies in the San Gabriel Basin.

### Spreading Grounds

Spreading grounds are operated and maintained by the Los Angeles County Department of Public Works. Water from our pipeline is delivered into spreading grounds where it percolates to recharge underground aquifers.



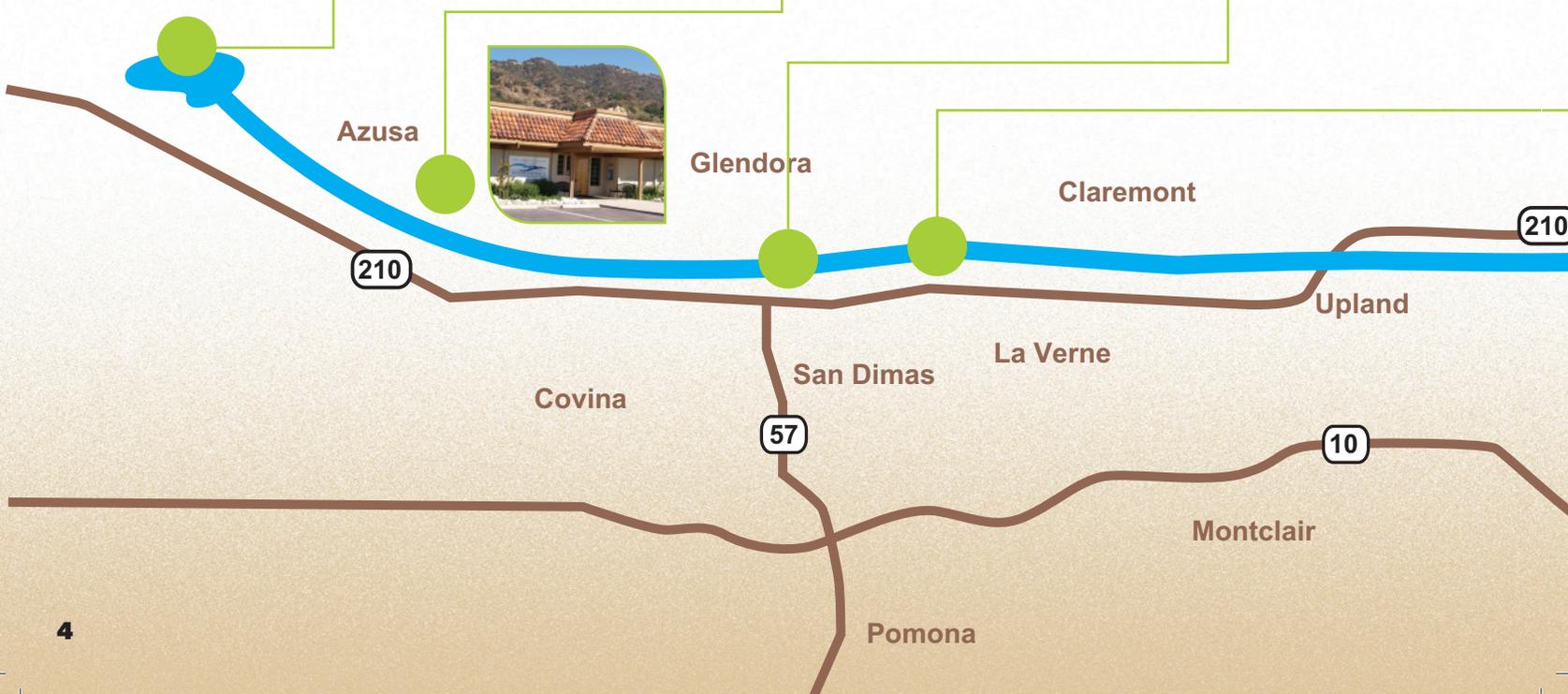
### Operation Center

The Operation Center is located at District headquarters. The state-of-the-art computerized Supervisory Control and Data Acquisition system (SCADA) controls and monitors the pipeline and pressure reducing stations.



### Green Power/Hydroelectric Generator

A turbine generator, powered by water flowing in the pipeline, creates electricity. Built in 1985, this generator produces enough electricity for over 500 homes annually. The revenue helps to offset some of our operating costs.



### Flow Control Facilities

As water flows from the State Water Project to the spreading grounds, the water flow and pressure are controlled at pressure-reducing stations located in Glendora, La Verne and Fontana.



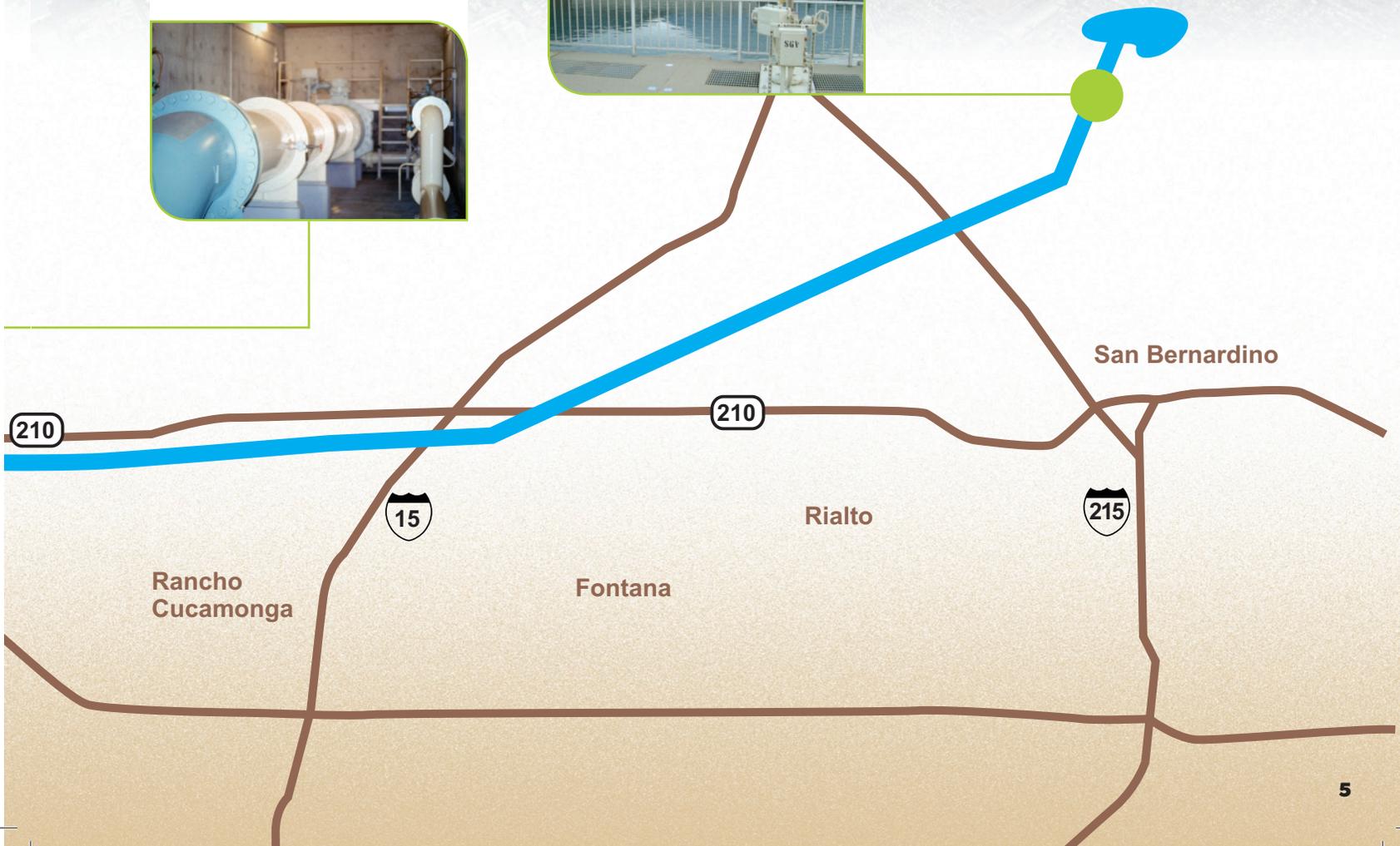
### Devil Canyon/Power Plant

Water coming from the State Water Project (California Aqueduct) powers turbines in the Devil Canyon Power Plant near Lake Silverwood and then enters the pipeline through the slidegate.



### State Water Project (California Aqueduct)

Water for the Main San Gabriel Basin originates from the State Water Project, also known as the California Aqueduct. Pumps and gravity help move the water from northern California to our Basin.



## WATER CONSERVATION AND WATER QUALITY PILOT AND DEMONSTRATION PROJECTS

The Water District has provided approximately \$12 million of zero-interest loans and grants to support water supply and water quality projects in member cities. The District also has invested in water conservation pilot/demonstration projects in each member city since 2009. Our goal has been to both save water short-term and provide information to help people, schools, businesses and other organizations adopt long-term water saving technology, materials and procedures. Our strategy has been to implement pilot projects at highly visible, high water-consumption locations.

We have four pilot projects remaining in the planning and execution stages: Paramount and Mountain View Elementary Schools in Azusa; City Hall in Alhambra; Demonstration Gardens in Monterey Park; and a median turf removal and water-wise irrigation project in Azusa.

<b>Pilot Projects</b>	<b>Water Saving Feature: Irrigation Landscape Technology</b>
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**Alhambra**

Gateway Plaza (2009-2010)	◆	◆		
The Alhambra Urban Community (2011-2012)	◆	◆	◆	
West San Gabriel Valley YMCA (2013-2014)	◆	◆	◆	
Fire Station (2014-2015)	◆	◆		
City Hall (2015-2016)	◆	◆		



Alhambra Fire Station

**Azusa**

Azusa Chamber of Commerce (2009-2010)	◆	◆		
Memorial Park, North Recreation Center (2009-2010)	◆	◆		
Department of Light and Water (2009-2010)	◆	◆		
San Gabriel Canyon Gateway Center (2009-2010)	◆	◆		
Azusa Pacific University (2010-2011)	◆	◆	◆	
Paramount Elementary School (2014-2016)	◆	◆		
Mountain View Elementary School (2014-2016)	◆	◆		
Median Water and Tree Saving Project (2016)	◆	◆		



Azusa Median Project

**Monterey Park**

California Native Median Project (2011-2012)	◆	◆		
City Hall Planters and Smart Controller (2009-2010)	◆	◆	◆	
Automated Meter Reader (AMR) (2009-2010)	◆	◆	◆	
Brightwood Elementary School (2014-2015)	◆	◆		
Macy Intermediate School (2014-2015)	◆	◆		
Demonstration Gardens (2015-2016)	◆	◆	◆	



Macy Intermediate School (Monterey Park)

**Sierra Madre**

Miramonte Reservoir/Mt. Wilson Trailhead (2009-2010)	◆	◆		
Sturtevant Street Flood Control Right of Way (2009-2010)	◆	◆		
Sierra Vista Park (2009-2010)	◆	◆	◆	
Sierra Madre School (2011-2012)	◆	◆		
City Hall (2014-2015)	◆	◆	◆	



Sierra Madre City Hall