

SAN GABRIEL VALLEY  
MUNICIPAL

WATER DISTRICT

AZUSA | SIERRA MADRE | MONTEREY PARK | ALHAMBRA

# EMPOWERING COMMUNITIES TO MANAGE, CONSERVE AND DEVELOP OUR WATER RESOURCE



## 2011 ANNUAL REPORT



## BOARD OF DIRECTORS



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## Mission Statement

To help our four member cities manage their water supply safely and cost-effectively by:

- Improving the quality and quantity of the water supply
- Investing in water technology and infrastructure
- Providing cost savings and stability for homes and businesses
- Promoting water conservation efforts



Darin J. Kasamoto  
General Manager



Dave Johnson  
Assistant Manager



Dear Friends:

The Water District had another successful year delivering supplemental water, providing financial stability, and expanding education and outreach for its member cities. Despite heavier than normal precipitation early in 2011, dry conditions returned later in the year. Our focus remains squarely on the "new normal" of drought-like weather conditions and the continued need for conservation and investment in water supply solutions.

The District's efficient water delivery system and financial reserves provide "water insurance" to our member cities. We delivered approximately 23,040 acre-feet (AF) of water in 2011 compared to 14,400 AF in 2010 and 11,520 AF in 2009 (one AF supplies water for a typical suburban family for one year). As in past years, this water was "banked" in the aquifer, to be drawn on by our cities.

While water costs throughout the region are rising, we have kept the cost of supplemental water sold to member cities at the low level of \$130 per AF since 1989. We've also kept our tax rate at the same low level as 2010, which is near what it has been for more than 30 years. We produced more than 2,282 MWh of "green energy" through our hydroelectric plant which resulted in a \$93,780 positive impact on our annual budget. Our financial health was confirmed by an independent audit.

Our commitment to water conservation and public education helped the San Gabriel Valley reduce demand for water by approximately 15 percent. The H<sub>2</sub>Owl mascot program touched more than 25,000 residents and 10,000 students with information about conservation and other water supply solutions. Our water conservation pilot projects continued to expose residents, large employers and government facilities to water-efficient technology and water-wise California Native Plants.

This past year, the reach of our educational programs went beyond traditional media such as our website, Pipeline e-newsletter, and bus shelter and newspaper ads to include social media such as YouTube and Facebook. We also began an educational tour program for residents, community leaders and elected officials to provide a first-hand look at our water delivery system and infrastructure.

Despite all this progress, we continue to live in a dry, desert-like region which uses more water than local supplies provide. We face mounting challenges: the drought has returned, allocations of imported water have been reduced, the Bay Delta levee system is very fragile, and the Water Bond to "fix the Delta" that was removed from the 2010 ballot is still being discussed in Sacramento.

We look forward to engaging and empowering you to take an active role in working with your elected officials on important water supply decisions that will improve your quality of life and economic well-being. We again thank our member cities for your partnership and urge your continued input and suggestions on how we can serve you better.

Sincerely,

Joe Reichenberger  
President, Board of Directors  
San Gabriel Valley Municipal Water District

# THE WATER CHALLENGE FACING OUR MEMBER CITIES

## ENGAGING AND EMPOWERING STAKEHOLDERS

### ***“An Informed Resident is our Best Water Supply Solution”***

You’ve heard a lot about water conservation, water supply solutions and public education from the San Gabriel Valley Municipal Water District and our water guru, H<sub>2</sub>Owl, the past few years. Part of our mission is to provide information, conduct education and operate pilot projects that expose people to the issues, challenges and solutions involving our precious water resource. Our mission is also to help engage and empower communities to take responsible short and long-term actions related to water because of its huge impact on public health, the economy, the environment and our quality of life.

In the course of planning this year’s annual report, there wasn’t much “new” on the horizon in terms of water supply solutions or technology, and the timing and specifics of the proposed Water Bond remained uncertain. There really has not been significant investment in water infrastructure in California since the post-WWII era more than 50 years ago when many of our local dams, storage reservoirs, aqueducts and pipelines were built.

Yet our water challenges are intractable and daunting:

- We still live in a dry region and drought conditions have returned (as they always will)
- Local water supply does not meet local demand
- Population is increasing, the economy is rebounding and businesses are expanding
- Climate-change, defined by the U.S. Environmental Protection Agency as “significant change in measures of climate lasting for an extended period resulting from natural factors, natural processes and human activities” warrants review and consideration
- Greater demands are being placed on scarcer tax dollars, and government agencies at state and local levels face serious budget shortfalls
- Environmental priorities are being addressed by legislative and court decisions that can limit access to water supplies
- Adoption of water-efficient behavior such as use of water-wise equipment and vegetation is a slow process.

These realities led us to focus this year’s Annual Report on people because if we really are going to implement long-term water supply solutions, it’s up to YOU.

*Outreach must include people of diverse cultures and languages.*



You the water consumer. You the water saver. You the water customer and bill payer. You the tax payer. You the voter who votes for, and ultimately pays for, water infrastructure. And when you do vote in the future, you will be voting more often on water-related issues and the stakes will be higher than ever.

Surely, the consequences to our economy, public health, environment and quality of life mandate that prudent investments be made in water supply solutions and infrastructure. But, will our leaders take action? They will if YOU do. So, what can you do?

Think globally and act locally is one solution. Our Water District, nearby water districts, water companies, utilities and municipalities need your support. But to do more than simply “kick the can down the road,” we have to face up to larger, regional challenges that cannot be solved piecemeal.

The answer lies in a coordinated San Gabriel Valley-wide effort to engage and empower communities to achieve local water reliability. We have to bring the discussion and the action down to the most local level and to a vast audience which includes:

- residents, business owners, private and public employers, property owners and property managers, gardeners and landscapers, municipal employees, utility workers, farmers, students, teachers and more.

There are challenges to meeting our objective. You are busy. You have competing needs and priorities. You may come from a culture or country that has experienced serious water quality problems that are not the case here in the San Gabriel Valley. Traditional media does not give a lot of attention to this issue. Newer technology and social media are just beginning to tap their potential.

Our point is that we will not stop trying to inform you and not stop trying to engage you in this critical discussion. We have to find the same passion and resolve former generations did to build the water supply and water quality infrastructure we enjoy today. And we must find a new passion and resolve to prepare for your future and that of future generations.

***YOU are our most important water supply solution!***



*Make water-efficiency a factor when choosing appliances.*

# 2011 HIGHLIGHTS

## OPERATIONS HIGHLIGHTS

The District's primary role is to deliver imported replenishment water through our pipeline and an efficient delivery system that connects to the State Water Project (California Aqueduct). We provide "water insurance" to our member cities – Alhambra, Azusa, Monterey Park and Sierra Madre – by feeding the water we import into underground aquifers where it is "banked" for future use.



*Attach nozzle restricters to hoses and use water conservatively.*



Our major operational accomplishments in 2011 included:

- **Supplemental Water** – we delivered 23,040 acre-feet (AF) of water in 2011 compared to 14,400 AF in 2010 and 11,520 AF in 2009 (one AF supplies water for a typical suburban family for one year).
- **"Green" Energy** – we have built a 1.05 megawatt hydroelectric power plant to generate "green power" as the gravity-fed water flows through our pipeline. We are conducting further studies to determine the feasibility of building additional hydroelectric plants along our pipeline route.
- **Water Conservation** – water conservation programs operated by the District and its member cities contributed to an approximate 15 percent reduction in water use across the San Gabriel Valley.

*Cisterns connect to places where rain water runs off, thus capturing and saving water for future use.*

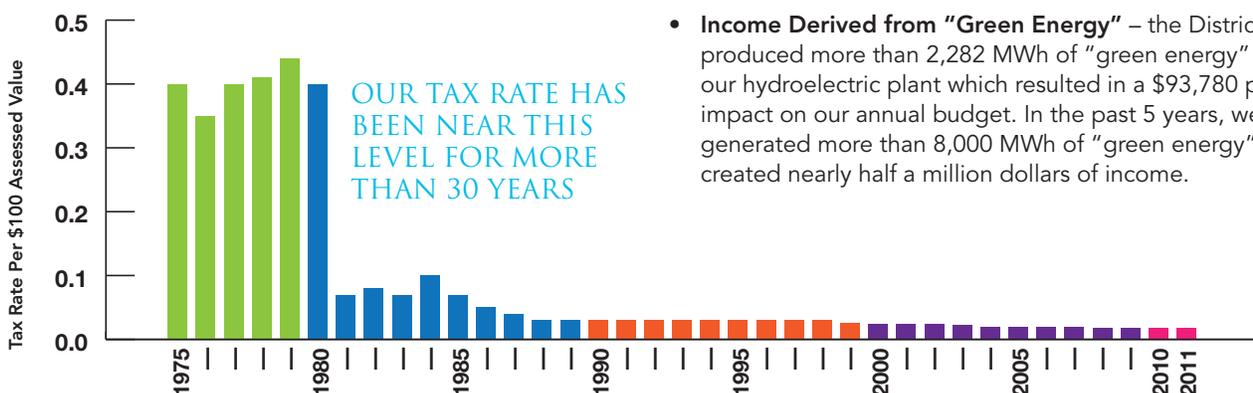


## FINANCIAL HIGHLIGHTS

As drought conditions return and imported water supplies are reduced, there will be upward pressure on water prices throughout the San Gabriel Valley and Southern California. However, due to the vision shown by voters in our member cities in 1959, SGVMWD is a State Water Contractor able to make replenishment water available to member cities at very competitive market prices.

Our major financial accomplishments in 2011 included:

- **Low Property Tax Rate** - holding our property tax rate unchanged (one year after lowering our rate by 10 percent) at the same low level as 2010 (\$.018/\$100 Assessed Value). Our tax rate has been near this level for more than 30 years (see chart).



- **Low Cost for Replenishment Water** - keeping the District's water rate at \$130 per acre-foot which is unchanged since 1989 and well below that of other importing agencies which exceed \$300 per acre-foot.
- **Dependable Financial Reserves** – the District utilized conservative financial management and investment practices to maintain a very strong balance sheet.
- **Successful Independent Audit** – the District completed a successful independent financial audit that commended our financial management systems and procedures and validated our overall financial health.
- **Income Derived from "Green Energy"** – the District produced more than 2,282 MWh of "green energy" through our hydroelectric plant which resulted in a \$93,780 positive impact on our annual budget. In the past 5 years, we have generated more than 8,000 MWh of "green energy" which created nearly half a million dollars of income.

## WATER CONSERVATION HIGHLIGHTS

The past few years, the Water District has made significant investments in pilot or demonstration projects in each city within our service area. Our objectives are to save water at each location and to provide teaching examples of technology, materials and procedures that save water. We are learning from our pilot

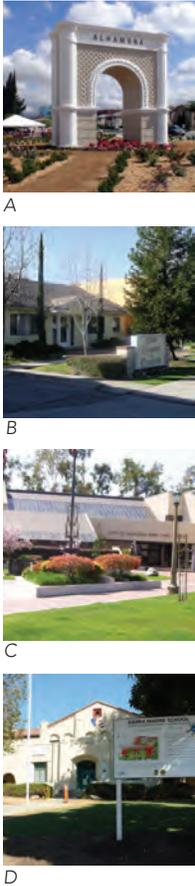
### PILOT PROJECTS

	Irrigation	Landscaping	Technology
<b>Alhambra</b>			
Gateway Plaza	●	●	
<b>Azusa</b>			
Azusa Chamber of Commerce	●	●	
Memorial Park, North Recreation Center	●	●	
Department of Light and Water	●	●	
San Gabriel Canyon Gateway Center	●	●	
<b>Monterey Park</b>			
Median California Native Project	●	●	
City Hall Planters and Smart Controller	●		●
Automated Meter Reader (AMR)			●
<b>Sierra Madre</b>			
Miramonte Reservoir/Mt. Wilson Trailhead	●	●	
Sturtevant Street Flood Control Right of Way	●	●	
Sierra Vista Park	●	●	●
<b>Large Water User Public/Commercial Locations</b>			
Azusa Pacific University	●	●	●
Sierra Madre School	●	●	●
The Alhambra "Urban Community" Planning Grant	●	●	●

projects. We want to increase our conservation partnership with large, highly visible water customers in the future. As these projects progress, we will share project information and results via tours, speaking engagements, printed materials and our website.

### WATER SAVING FEATURE

- A) Alhambra Gateway Plaza
- B) Azusa Chamber of Commerce
- C) Monterey Park City Hall
- D) Sierra Madre School



## PUBLIC EDUCATION HIGHLIGHTS

Our public education and outreach program is maturing into an ongoing source of information to our member cities. It is an essential part of our operations and central to our mission. As education and information are reviewed and understood by the public, it becomes more likely that people will change their behavior and take action to help address water supply needs in our service area and throughout the San Gabriel Valley.

Highlights of our education and outreach program in 2011 included:

- Our water conservation guru, H<sub>2</sub>Owl, reached out to more than 25,000 residents at dozens of local community events
- Continuation of our bus shelter and newspaper public information campaign designed to convey water conservation messages
- Continued operation of the Ultra Low Flush Toilet give-away program which benefits local high schools and youth
- Creation of additional educational videos, as well as linking those videos to YouTube and other social media
- Involving approximately 10,000 students and their parents in the annual "Water Quest and Home Water Survey"
- Conducting an educational water tour for leaders from member city Azusa. The tour traveled the length of the District's pipeline from the point where the Devil Canyon-Azusa pipeline "connects" to the State Water Project (California Aqueduct) and then extends 30+ miles to the San Gabriel Spreading Grounds in Azusa.



H<sub>2</sub>Owl is coming to a neighborhood near you!



What is the easiest and cheapest water supply solution?

Click for choices...

RESEARCH FOR ANSWER

# 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. Constructed from 1969-1970, 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.

### Spreading Grounds

Spreading grounds are operated and maintained by the Los Angeles County Department of Public Works. Water from our pipeline percolates from the spreading grounds 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 control system (SCADA) controls and monitors the pipeline and pressure reducing stations.



### Turnouts

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



 = SGVMWD Facility



SGVMWD headquarters

Azusa



Glendora  
Pressure  
reducing station

Pressure  
reducing station

Claremont

**Devil Canyon-Azusa Pipeline**

210 fwy

Upland

Covina

Hydroelectric Generator  
La Verne

57 fwy

10 fwy

Montclair

Pomona



California Native plants use 1/7th the amount of water as non-native vegetation

Become an informed voter about water-related issues.



**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.



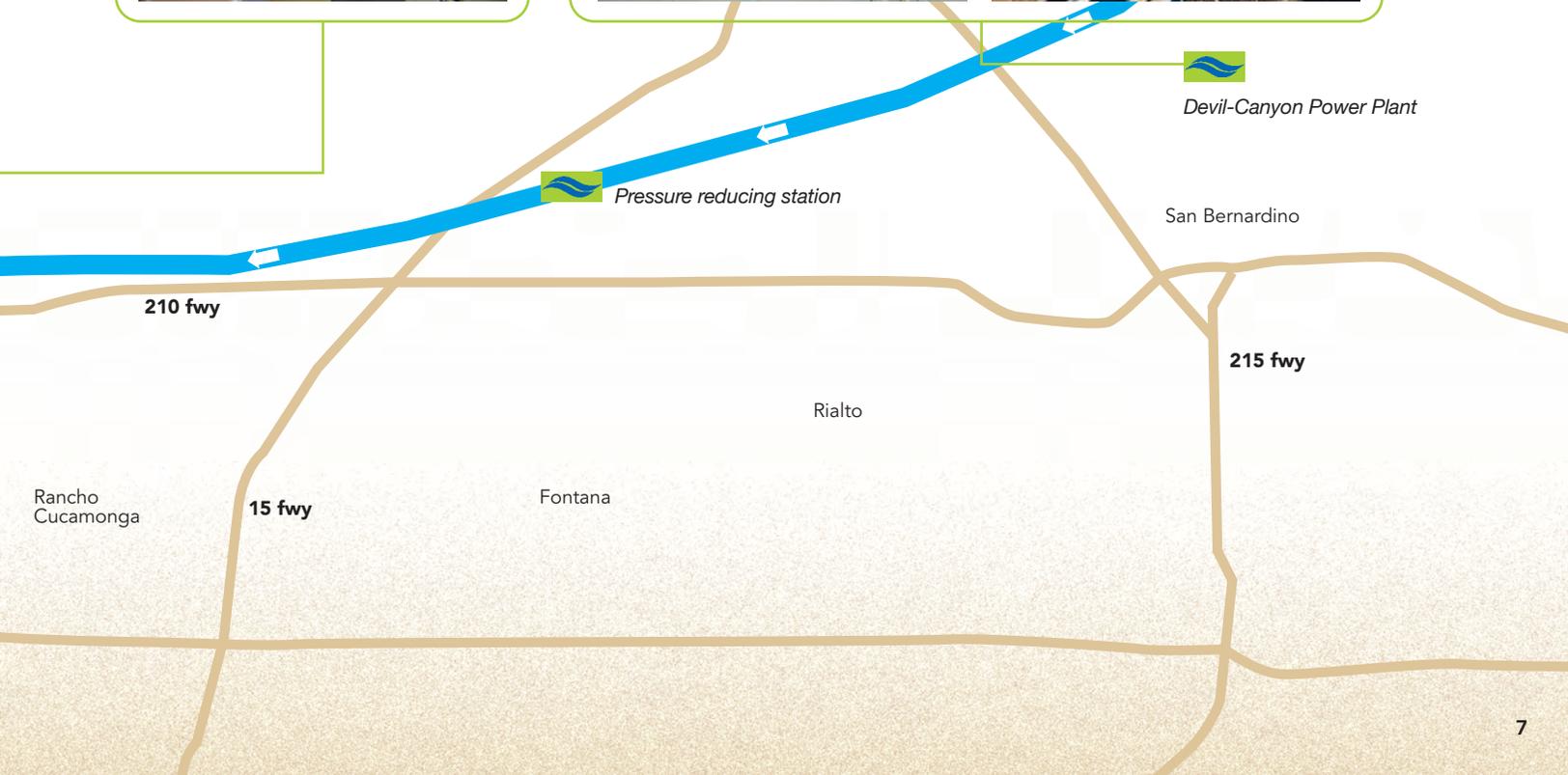
**Devil Canyon Power Plant**

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 SUPPLY SOLUTIONS

## Water Conservation

Water conservation is the cheapest, lowest-cost alternative to augment local water supplies. More than a technique, it's a "green" ethic and mindset. Modern water conservation includes increasingly sophisticated equipment, technology, materials and procedures. Mandatory water conservation techniques include rationing ordinances, restricted day/time watering ordinances, fines, penalties and price increases. New technological solutions and voluntary water conservation techniques include: satellite-based weather monitoring stations and "smart" water timers; indirect potable reuse and greywater systems; low-flush and waterless toilets, water-efficient appliances, flow restrictors, spray nozzles, sprinkler heads, and pool and spa covers; water-efficient plants and outdoor shading; and rebates/financial incentives to purchase water efficient appliances.

## Local Water Supplies

Local water supplies include groundwater pumping from local aquifers, surface reservoir storage, recycled water, and supplies imported through wheeling arrangements or transported via aqueduct from the State Water Project. Groundwater pumping provides the vast majority of historical local supplies.

## Imported Water

Water from northern California is acquired through the State Water Project and transported to the San Gabriel Valley via the California Aqueduct. The San Gabriel Valley Municipal Water District is one of approximately 30 water agencies that have contracted with the California Department of Water Resources for water deliveries from the State Water Project system.



## Recycled Water

There are a variety of types of recycled water such as indirect potable reuse and greywater. Indirect potable reuse includes recycling of wastewater (sewage) that has been treated to remove virtually all of the impurities. Recycled or reclaimed water may be pumped into or percolated down to groundwater aquifers, pumped out, treated again and finally used as drinking water. In most locations, it is only intended to be used for non-potable uses such as irrigation, dust control and fire suppression. Greywater includes collection and re-use of all the non-toilet wastewater produced in the average household including water from bathtubs, showers, sinks, washing machines and dishwashers. Such water comprises 50-80% of residential "waste" water.

## Stormwater Capture

The most efficient and natural form of water supply solution is stormwater or rainwater. The amount of stormwater that percolates down into underground aquifers depends on how much permeable surfaces are exposed, how permeable soils are, how much moisture the soils/surfaces already contain, climate, slope of the ground and other factors. Stormwater can be absorbed into the ground in many ways via mountain streams, lakes, ponds and rivers. Spreading grounds, bio-retention, rain barrels and cisterns help collect and save precipitation.

## Desalination

Desalination refers to any of several processes that remove excess salt and other minerals from water. Water is desalinated in order to convert salt water to fresh water so it is suitable for human consumption or irrigation. It is used on many seagoing ships and submarines, and desalination projects/facilities can be found locally on Catalina Island and in San Diego County. Desalination is a controversial water supply solution as it is very energy intensive, costly and can have significant effects on marine life and the environment.

AZUSA | SIERRA MADRE | MONTEREY PARK | ALHAMBRA

**CONSERVE WATER** A GOOD START TOWARDS A RELIABLE WATER SUPPLY

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