

INSTALL HIGH-EFFICIENCY TOILETS. ALWAYS. USE A CARWASH. ALWAYS. COVER YOUR POOL. ALWAYS. FIX LEAKS. ALWAYS. REPORT WATER WASTE. WATERING TIMES. ALWAYS. WATER LESS. ALWAYS. SWEEP, DON'T SPRAY, YOUR PATIO. ALWAYS. PLANT NATIVE. ALWAYS. USE RAIN BARRELS. ALWAYS. SURVEYS. ALWAYS. VISIT WASTENOWATER.ORG. ALWAYS. LEARN ABOUT PURE WATER SAN DIEGO. ALWAYS. WASH FULL LOADS OF LAUNDRY. ALWAYS. IN THE DISHWASHER. ALWAYS. INSTALL LOW-FLOW SHOWERHEADS. ALWAYS. TAKE 5-MINUTE SHOWERS. ALWAYS. INSTALL HIGH-EFFICIENCY TOILETS. WASH. ALWAYS. COVER YOUR POOL. ALWAYS. FIX LEAKS. ALWAYS. REPORT WATER WASTE. ALWAYS. KNOW YOUR WATERING TIMES. ALWAYS. WATER LESS. ALWAYS. SWEEP, DON'T SPRAY, YOUR PATIO. ALWAYS. PLANT NATIVE. ALWAYS. USE RAIN BARRELS. ALWAYS. SURVEYS. ALWAYS. VISIT WASTENOWATER.ORG. ALWAYS. LEARN ABOUT PURE WATER SAN DIEGO. ALWAYS. WASH FULL LOADS OF LAUNDRY. ALWAYS. WASH FULL LOADS IN THE DISHWASHER. ALWAYS. INSTALL LOW-FLOW SHOWERHEADS. ALWAYS. TAKE 5-MINUTE SHOWERS. ALWAYS. INSTALL HIGH-EFFICIENCY TOILETS. ALWAYS. USE A CARWASH. ALWAYS. COVER YOUR POOL. ALWAYS. REPORT WATER WASTE. ALWAYS. KNOW YOUR WATERING TIMES. ALWAYS. WATER LESS. ALWAYS. SWEEP, DON'T SPRAY, YOUR PATIO. ALWAYS. PLANT NATIVE. ALWAYS. USE RAIN BARRELS. ALWAYS. SURVEYS. ALWAYS. VISIT WASTENOWATER.ORG. ALWAYS. LEARN ABOUT PURE WATER SAN DIEGO. ALWAYS. WASH FULL LOADS OF LAUNDRY. ALWAYS.

SAN DIEGANS  
**WASTE  
NO WATER**

# ALLWAYS. ALLWAYS.



## CITY OF SAN DIEGO Public Utilities Department

### Annual Water Conservation Report Fiscal Year (FY) 2014



Calendar year 2013 closed as the driest year in recorded history for most areas of California, and the severe drought continued through the summer of 2014. The United States Drought Monitor identified on August 12, 2014, that approximately 82 percent of the state is in extreme or exceptional drought. Governor Edmund G. Brown Jr. declared a drought state of emergency on January 17, 2014, and directed state officials to take all necessary actions to prepare for water shortages.

This declaration was followed by the adoption of emergency water regulations on July 29, 2014, by the State Water Resources Control Board (SWRCB). These emergency regulations consist of the following: 1) water waste prohibitions applicable to all Californians; 2) a requirement that water suppliers activate their drought response plans at a level that includes mandatory outdoor water use restrictions; and, 3) monthly reporting on potable water production.

Water purchased from the San Diego County Water Authority (Water Authority) represents approximately 85 percent of the City's current water supply sources. The Water Authority has made significant progress since the 1990s in diversifying San Diego's regional water supply portfolio and expanding and adding surface storage reservoirs of emergency and seasonal water storage in order to improve our region's vulnerability to shortages from the region's two imported water systems: the Colorado River and the State Water Project (SWP). Whereas in 1990 the Water Authority was 95 percent dependent on water purchases from the Metropolitan Water District of Southern California (MWD), water purchases from MWD in 2013 were reduced to 46 percent. The balance of 49 percent is now comprised of water purchased from the Imperial Irrigation District (100,000 acre-feet per year of Colorado River water with high priority rights), new water as a result of a conservation project to line portions of the All-American and Coachella Canals (80,000 acre-feet per year), enhanced water conservation by consumers, and the development of additional local supplies such as groundwater and recycled water. Additionally, construction on a 50 million-gallon-per-day seawater desalination facility is currently underway and is expected to be completed in the fall of 2015. This will provide another 56,000 acre feet per year of a drought-proof water supply for the San Diego region.

Compounding the lack of precipitation this year has been unprecedented increases in temperature, causing increased demands for water by consumers. According to the National Weather Service, 2014 is the warmest year on record since record keeping on weather began in 1872. The National Weather Service also predicted the chance of an El Niño weather event decreasing to about 65 percent during the fall and early winter. Historically, strong El Niño weather events can bring wetter weather to California, particularly to Southern California.

As a result of extended dry conditions, continued demand for Colorado River water, and extensive depletion of groundwater basins, storage quantities and reservoir levels have decreased drastically since 2000. During this period, total system storage has fallen to 30.4 million acre feet (MAF), or 51 percent of capacity. However, the 2014 water year (October 2013 to September 2014) is seeing improved conditions compared to recent years with precipitation, snowpack, and inflows to the Colorado River. To date, an official shortage has never been declared on the Colorado River for the Lower Basin. However, record-low water levels in storage coupled with the trending multi-year dry hydrology in the basin indicate increased probabilities of shortages in the next few years. Interim Guidelines for allocating water during shortages were established for the lower basin Colorado River states in 2007. Due to California's high priority rights on the river, it is largely protected from impacts of shortages and its allocation remains at 4.4 MAF through all three shortage scenarios.



## STATE WATER PROJECT

In April of 2014, the California Department of Water Resources (DWR) established that the allocation of water deliveries from the State Water Project (SWP) would be only 5 percent – the lowest delivery level in its history. The SWP allocation in 2013 was 35 percent and, over the last eight years, the average SWP allocation was a meager 42.5 percent. With little snowpack accumulation on April 24, 2014, Governor Brown issued a second executive order to further strengthen the state's ability to effectively manage water and protect wildlife habitat in drought conditions.

As of August 18, 2014, storage levels in the SWP's major reservoirs are well below average for this time of year, at 47 percent of average. The good news for Southern California is that MWD was able to largely replenish its water storage levels in 2013, providing a much needed buffer against SWP shortages in 2014. However, MWD has been quickly drawing down its reserves in order to meet current demands. Absent sufficient precipitation in the SWP watersheds this winter, MWD will consider enacting water delivery restrictions to its member agencies by the Spring of 2015.

## SAN DIEGO REGION

On July 24, 2014, the San Diego County Water Authority declared a Drought Alert condition and implemented the Supply Enhancement Stage of its Water Shortage and Drought Response Plan. This declaration signals to the Water Authority's 24 retail member agencies the need to implement mandatory water use restrictions at the customer level. The City of San Diego implemented a (voluntary) Level 1 Drought Watch within its service area to add to the mandatory restrictions already in place.

## Water Savings

In 1985, the San Diego City Council officially established the City's Water Conservation Section to reduce San Diego's dependency upon imported water. The City's commitment to resource efficiency was further highlighted on September 23, 1991, when the City joined the California Urban Water Conservation Council (CUWCC) by signing the Memorandum of Understanding (MOU) for Urban Water Conservation in California. The MOU is a collaborative effort by members of the CUWCC which gives strength and commitment to water rights decisions that affect California's water allocations and commits the City to implementing Best Management Practices (BMPs) as defined in the MOU.

**Today, programs initiated by the Water Conservation Section account for water savings of more than 32.2 million gallons per day (mgd), or 36,166 AF per year. Depending on conditions, this savings can be as much as 20 percent of raw water purchases annually.**

Today, programs initiated by the Water Conservation Section account for water savings of more than 32.2 million gallons per day (mgd) or 36,166 AF per year. Depending on conditions, this savings can be as much as 20 percent of raw water purchases annually. The savings have been achieved by creating a water conservation ethic, adopting programs, policies and ordinances designed to promote water conservation practices, and implementing an ongoing public information and education program.

## Water Planning

Based on the City's 2010 Urban Water Management Plan (UWMP) approved by the City Council on September 28, 2011, [<http://www.sandiego.gov/water/pdf/110519uwmp.pdf>] the Water Conservation Section has an updated overall goal of 40,400 AF of water saved by 2020. One AF of water equals 325,851 gallons, or enough water to cover an area of land about the size of a football field one foot deep. Depending on use, one AF of water can supply two typical California homes with a year's worth of water for all indoor and outdoor needs.

The UWMP builds upon the previously approved 2005 Urban Water Management Plan, the 2002 City of San Diego Long-Range Water Resources Plan (2002 – 2030) and the Strategic Plan for Water Supply (1997 – 2015). The Public Utilities Department recently undertook an effort to update the 2002 plan with a *Long Range Water Resources Plan (2012 Plan)*. In developing the 2012 Plan, the department convened a stakeholder committee, who provided guidance and input on alternative strategies for meeting San Diego's water needs through 2035. The updated plan addressed various concerns, including those related to population growth, water resource diversification, climate change and other issues affecting water reliability. The 2012 Plan was adopted by the City Council on December 10, 2013.

## Water Conservation Act of 2009

In February 2008, the State of California introduced a comprehensive plan for improving the Sacramento-San Joaquin Delta. The Delta is located roughly between Sacramento on the north and Stockton on the south and encompasses about 1,000 miles of waterways. The main contributing rivers are the Sacramento River, coming in from the north, and the San Joaquin River, coming in from the south. Other rivers feeding into the two major rivers include the American, Mokelumne, Cosumnes and Calaveras rivers. These rivers empty into the Pacific Ocean via San Francisco Bay. Approximately two-thirds of all Californians--an estimated 23 million people--obtain at least some of their water from the Delta. This means the Sacramento-San Joaquin Delta is the single largest source of California's water.

The Water Conservation Act of 2009 (also known as SB x7-7) requires the California Department of Water Resources (DWR) to develop a plan to reduce statewide per capita urban water use by 20 percent by the year 2020. One of the primary focus points of the statewide 20x2020 Plan will be on urban retail water suppliers, such as the City of San Diego--which services a population of approximately 1.3 million residents. The City is required to adopt and achieve water use targets based on a 20 percent reduction, with broad discretion regarding the water efficiency measures to be implemented for each customer sector.

SB x7-7 requires the City to establish gallon per capita day (gpcd) water use targets by using one of four methods.

- Method 1: Eighty percent of the urban retail water supplier's baseline per capita daily water use using a 10-year average starting no earlier than 1995.
- Method 2: The per capita daily water use that is estimated using the sum of several defined performance standards. This method requires quantifying the landscaped area and the baseline commercial, industrial, and institutional use.
- Method 3: Ninety-five percent of the applicable state hydrologic region target, as set forth in the DWR Guidebook (DWR, 2011). The City is located in DWR's South Coast Hydrologic Region Number 4.
- Method 4: A provisional method that was released by DWR in February 2011 that develops the target based on indoor residential, commercial, industrial, institutional, outdoor, and water loss components.

An urban water supplier must select one of the aforementioned methods to set their per capita water use target. Water suppliers may choose to change the selected method until 2015. The City selected Method 3 for establishing the 2020 per capita water use target of 142 gpcd, as it is a straightforward target and is achievable.

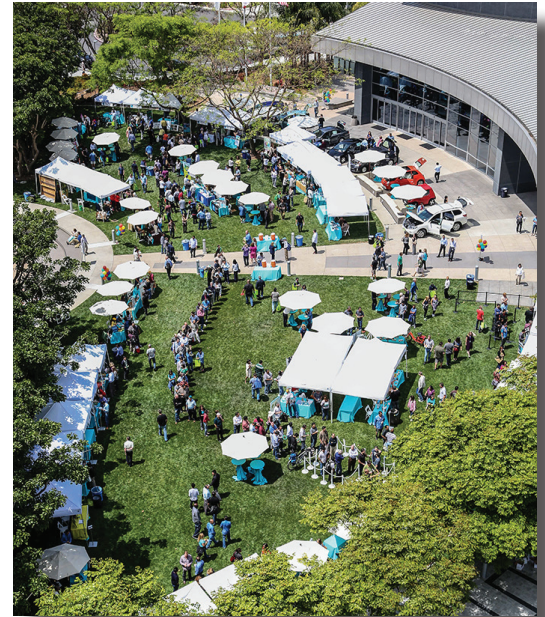
# Water Conservation Programs

To meet established goals, the Water Conservation Section integrates new programs into existing programs, all focused on achieving water savings. The following outlines ongoing programs and initiatives.

## PUBLIC EDUCATION, INFORMATION AND COMMUNITY OUTREACH

Water Conservation staff members actively participate in community fairs and events, or as speakers to community groups, providing informational brochures on the various programs and promoting both simple and highly technical water conservation measures. In FY 2014, Water Conservation staff attended 72 events, made thirteen public speaking presentations and hosted five classes on water conservation. As an example of one of our larger events, the Water Conservation Section has participated in Earth Fair at Balboa Park since 1990.

The Water Conservation Section continues to maintain its interactive educational display at the Reuben H. Fleet Science Center in Balboa Park. The exhibit, entitled “San Diego’s Water, From Source to Tap,” details the long journey our water makes to reach our faucets and the technology involved in providing water to our customers. The exhibit is part of the Science Center’s TechnoVation collection, showcasing local technological achievements. The exhibit reaches an annual audience of 2.1 million. The project was created in partnership with the CWA and made possible through a grant from the Hans and Margaret Doe Charitable Trust.



*City Conservation staff attended Qualcomm's Earth Day event.*



*Meeting with Junior Lifeguards to talk about water conservation.*



*Earth Fair, Balboa Park, 2014.*

## OUTDOOR WATER CONSERVATION REBATES

In FY 2014, the Water Conservation Section continued to utilize \$1.1 million dollars in funding from a California Proposition 50 Integrated Regional Water Management (IRWM) Plan grant to offer customers rebates for outdoor water conservation projects and devices. Additional funding of \$200,000 was provided by the City's Storm Water Pollution Prevention Program (Storm Water) along with \$100,000 from the MWD. The Water Conservation Section is contributing \$178,000 worth of "in kind" services including: providing on-site consultation to customers participating in the rebate program, application and rebate processing, program website development and maintenance, customer support on how to complete landscape projects, and program administration duties.

The program offers customers a variety of rebates including: Smart Controllers (weather based irrigation controllers), Micro Irrigation (micro-spray, drip, and in-line emitters) and Grass Replacement. The goal is to conserve potable water while also reducing pollutant-laden dry weather urban runoff flows into sensitive receiving waters.

In FY 2014, rebates for residential and commercial properties were processed for: 90 smart controllers; 102 micro-irrigation conversions; and 109 sustainable low-water use landscape installations. Department customers can participate in the rebate program on a first-come, first-served basis while funds are available. Estimated annual water savings in Fiscal Year 2014 generated by this program is 56 acre-feet water per year.



*Before and after photos of a San Diego residency that participated in the City's grass replacement rebate program, turning a traditional grass lawn into a beautiful drought-tolerant landscape.*

For information on the City's conservation programs and resources, visit [www.wastenowater.org](http://www.wastenowater.org).

## RAIN BARREL REBATES

The Water Conservation Section teamed up with Storm Water to include rain barrels as an item that can receive a rebate through the “Outdoor Water Conservation Rebate Program.” Storm Water provides funding for rebates and staff time, while Water Conservation manages program operations.



*Through the City’s rebate program, customers can install rain barrels to harvest rainwater for irrigation.*

Visit [www.sandiego.gov/water/conservation/rebates/rainbarrel](http://www.sandiego.gov/water/conservation/rebates/rainbarrel) for rebate program information and applications.

Rain barrels are used to collect rainwater from hard surfaces, such as rooftops. When residential customers install a rain barrel at their home, they are helping to maintain a healthy urban watershed by reducing demand on the urban water system, and by reducing the amount of wet weather runoff that is sent into the storm water system.

Proper water conservation techniques and rain barrels assist the City’s Storm Water Pollution Prevention Program in meeting its BMPs. Excess irrigation and wet weather water often flows out of landscapes and directly into storm drains. Everything that flows into a storm drain goes untreated into canyons, creeks, bays, lagoons and ultimately the ocean. Irrigation and wet weather runoff water carries pesticides, fertilizers, motor oil, pet waste and silt. The Federal Clean Water Act prohibits disposal of wastes and pollutants into creeks, bays, lakes and oceans. Such pollutants have harmful effects on recreational areas, waterways and wildlife.

Use of rain barrels, and the diversion of rooftop runoff from the storm drain to on-site landscape areas, can help reduce storm water pollution and reduce the use of potable water for irrigation. The program was kicked off mid-way through the rainy season in FY 2012. Through June 2014, the Water Conservation Section has rebated 398 rain barrels with an average size of 261 gallons of storage capacity for a total rebate amount of over \$30,000. Based on average San Diego rainfall, water savings is estimated to be 1.4 million gallons per year.

## WATER-WISE BUSINESS SURVEY

A Water-Wise Business Survey is a service offered to all City of San Diego Public Utilities Department commercial, industrial and institutional customers. The survey provides a customized review of water usage, including an on-site visit to identify areas where water use efficiencies can be achieved and effectively implemented. Recommendations can help business customers use water more efficiently and save energy. During FY 2014 the Department selected a new engineering firm to take on this task. Surveys are back on the menu of items available to customers, and the Department is pleased to once again offer this service in FY 2015.



## WATER WASTE INVESTIGATIONS

Water Conservation Section staff respond to water waste complaints generated by citizens throughout the Department's service area. The majority of complaints are due to either excessive irrigation or leaks. To resolve water waste issues, City staff contact the property owner or manager and work to eliminate water waste issues and associated hazards. Water waste complaints can vary drastically. A typical example would be a broken sprinkler head which can waste up to 20 gallons per minute (gpm) and flood adjacent properties and streets. In FY 2014, over 891 water waste complaints were processed at an estimated 60 gpd per complaint. This translates to estimated water savings of 19.5 million gallons annually.



*Public Utilities conservation staff investigates reports of water waste that violates current water use restrictions, such as runoff due to overirrigation.*

## WATER CONSERVING MUNICIPAL CODES – PLUMBING RETROFIT UPON RESALE

A Memorandum Decision was issued on March 28, 1991, by U.S. District Court Judge Rudi Brewster in concluding a lawsuit filed by the United States Government, the State of California and the Sierra Club against the City of San Diego (Civil Case # 88-1101-B) over violations of the Clean Water Act. The plaintiffs established evidence that the City had been in violation of the Clean Water Act due to: insufficient control of pretreatment of sewage by industrial customers; sewage spills; and, the absence of secondary treatment at the Point Loma Waste Water Treatment Plant.

Judge Brewster imposed a \$3 million penalty against the City, \$500,000 of which was to be payable to the U.S. Treasury upon entry of the judgment. The remaining \$2.5 million was to be paid to the U.S. Treasury on January 1, 1992, unless the City opted to act on an "optional credit project" as an offset of \$2.5 million of the \$3 million fine. The credit project consisted of permanent water conservation codes including the installation of water conserving plumbing fixtures in new construction, a plumbing retrofit upon re-sale and bathroom alteration code, and a rebate program that offered financial incentives to residential and commercial customers for installing ultra-low-flush toilets (ULFTs), low-flush urinals, low-flow showerheads and faucet aerators at a funding level of \$500,000 or more per year for five years.

By March 14, 1991, San Diego had an ordinance which required the installation of ultra-low flush toilets (ULFTs) in all new construction. In addition, the City Council requested that the City Manager develop a separate ordinance requiring the replacement of existing toilets with ULFTs when remodeling a bathroom or upon change of property ownership. Over 138,000 certificates of compliance with San Diego Municipal Code (SDMC) 147.04 have been filed since its inception, with 4,922 certificates completed in FY 2014. Since the ordinance was implemented, this retrofit requirement has accounted for an estimated 3.7 million gallons of water saved per day.

## SoCal Water\$mart Rebates

The MWD and its member agencies, inclusive of the City of San Diego, offer a limited number of rebates each year on various devices including: high-efficiency toilets (HETs), high-efficiency clothes washers (HEWs), smart controllers or weather-based irrigation controllers (WBICs), rotating sprinkler nozzles, air cooled ice machines, cooling tower conductivity controllers and waterless urinals. Funds for these rebates are limited. Customers can contact SoCal Water\$mart by phone at 1-888-376-3314 or via the internet at [www.socalwatersmart.com](http://www.socalwatersmart.com).

City customers received incentives for 14,712 devices in FY 2014. This is almost three times more devices than in the previous fiscal year.



*A conservation staff member tests for leaks inside a customer's bathroom during a residential survey.*

## RESIDENTIAL INTERIOR/EXTERIOR WATER SURVEYS

The Water Conservation Section first implemented the Residential Water Survey Program in July of 1992. This program offers residential customers an interior and exterior water use survey of their home. To date, over 48,000 surveys have been completed. San Diego's residential survey program is one of the largest ongoing water survey programs in the nation.

During a survey appointment, a trained water surveyor meets with a residential customer for approximately one hour, shows them how to read the meter, measures the flows of all interior water use fixtures, identifies leaks, checks the water pressure and provides conservation tips. The surveyor then performs a landscape irrigation evaluation including identification of up to 26 potential problems or sources of water waste, and provides an irrigation schedule specific to the soil type, plant material and micro-climate zone where the customer lives.

**To date, over 48,000 residential water surveys have been completed. San Diego's residential survey program is one of the largest ongoing water survey programs in the nation.**

A typical participating single-family dwelling can reduce water consumption by an estimated 13 to 28 percent. In FY 2014, the Section completed 1,398 surveys at single-family residences. Starting in FY 2012, an emphasis was placed on reaching out to multi-family customers. In FY 2014 this resulted in multifamily surveys at 12 properties totaling 242 units.

## COMMERCIAL LANDSCAPE SURVEY PROGRAM (CLSP)

Commercial properties can also receive a free survey of their irrigation system, water-saving recommendations and a water use budget. In FY 2014, Water Conservation staff performed four CLSP surveys along with seven irrigation checkups. This program saves approximately 2.1 million gallons of water per day.

## WATER CONSERVATION FILM CONTEST

The City of San Diego Water Conservation Section kicked off its 5th Annual Water Conservation Film Contest, titled “San Diegans Waste No Water” in the spring of 2014. This contest was open to high school students and college students in the cities of San Diego, Coronado and Imperial Beach. The film contest created an opportunity to engage students directly about the importance of conserving water, allowing the creativity of the students to inspire the rest of our community to use water more efficiently.

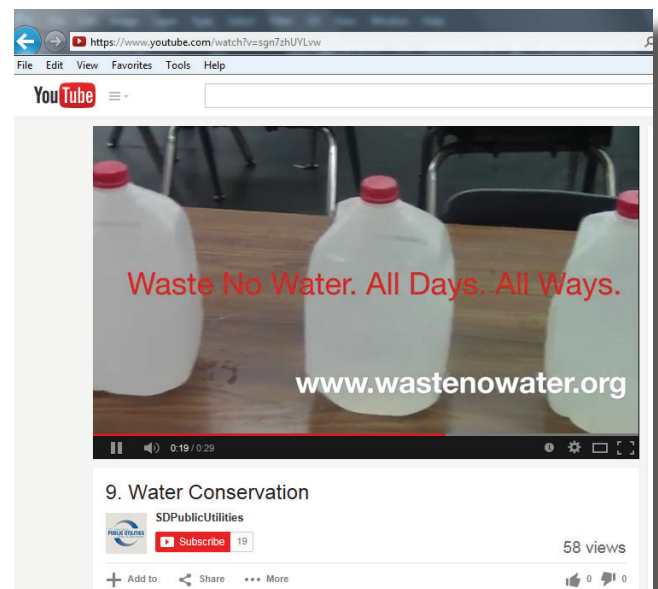
All contest entrants were recognized, and the finalists’ films were shown at a special “Red Carpet Premiere” on Wednesday, May 21, 2014, at the IMAX Theater at the Reuben H. Fleet Science Center in Balboa Park. At the premiere, the Grand Prize, 2nd Place and 3rd Place winners were announced and received prize packages donated by local businesses.

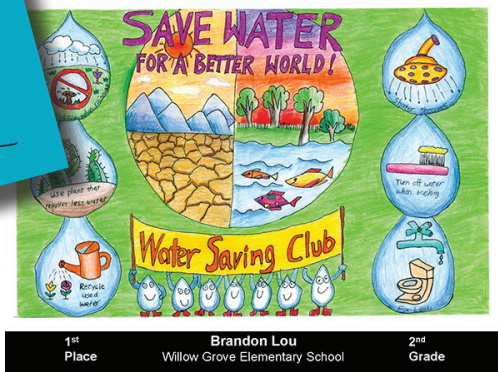
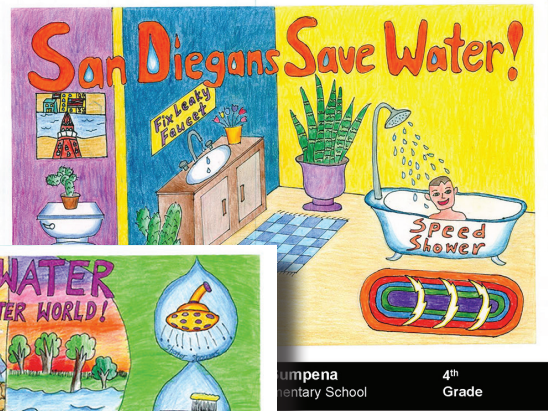


Film contest winners jump for joy outside the red carpet premiere at the Reuben H. Fleet Science Center.

Winning filmmakers Ana Little-Sana and Mia Rollins from E3 Civic High School took home the grand prize for their film “How to Reuse Greywater,” which features great cinematography and includes three simple tips on how to waste no water at home. The winning film was also shown at Mission Valley and Plaza Bonita AMC Theaters, and the Mira Mesa Edwards Theater as a public service announcement before feature presentations.

To watch the videos, click [www.sandiego.gov/water/conservation/contests/film](http://www.sandiego.gov/water/conservation/contests/film) and click on the video links.





## WATER CONSERVATION POSTER CONTEST

The San Diego City Council celebrated the creative efforts of the winners of the 14th Annual Water Conservation Poster Contest in the City Council Chambers on May 19, 2014. The ceremony honored the 19 outstanding student artists who won this year's contest and included their proud teachers and family members.

Held each year by the department, the poster contest provides a focal point for teachers to talk with their students about the importance of using water wisely. This year's "San Diegans Waste No Water: All Days. All Ways" theme gave thousands of students the opportunity to artistically illustrate meaningful water conservation and recycled water messages by creating original artwork. All students who enter the contest received a certificate of participation. Nineteen winners received prizes and will have their artwork featured in a calendar, on the City's website, and displayed at various public venues including the San Diego County Fair.



*Poster Contest Winners in City Council Chambers.*

The department then made another splash in its partnership with the San Diego Watercolor Society. The winning posters from the 2014 Children's Water Conservation Poster Contest were on exhibit alongside original watercolor paintings reflecting the "Bubbling Up" theme at the Watercolor Society's Gallery in the Naval Training Center Promenade at Point Loma's Liberty Station. To kick off the month-long exhibit, a special reception was held on Friday, June 6, 2014, at the Watercolor Society's Showcase Gallery. The event honored the 19 winners of the 2014 contest. During the reception, student artists and member artists were recognized. Awards and prizes were given out by the Watercolor Society and the department. In addition, the department bestowed an award to Drew Bandish for his painting "Wet Knight on the Prado."

## STUDENT EDUCATION

Separate from student education through the film and poster contests, the department uses additional methods to educate students in San Diego, Coronado and Imperial Beach. In partnership with the San Diego County Water Authority (CWA), students have access to the following: a DVD titled “Be Water Smart;” “Water Supply” and “Water Cycle” posters; water quality testing kits for high school classroom use, “Splashlab” a self-contained mobile lab that provides students with hands-on science experience; and, two theater programs “Waterology” and “H2O, Where Did You Go?”

Another student education program is the City of San Diego Junior Lifeguard program, which provides a fun and safe aquatic education course to the youth of San Diego with an emphasis on developing confidence, mental and physical fitness along with respect for others and the coastal environment. In cooperation with “Think Blue San Diego,” the Water Conservation Section participated in two, one-day events that were dedicated to promoting environmental awareness. Over 1,000 Junior Guards cycled through seven booths each day and participated in educational activities regarding recycling, watershed/water pollution awareness and water conservation. At the end of the session, each participant received a backpack containing additional information supporting the important messages delivered throughout the day.

Separate but complimentary to the Junior Lifeguard and CWA efforts, the City funds school assemblies with Ms. Smarty-Plants™. Ms. Smarty-Plants™ is the student educator at the Water Conservation Garden on the Campus of Cuyamaca College. She tutors kids about the fascinating adaptations of drought tolerant plants, and they also learn that they can make a difference with the conservation action steps Ms. Smarty-Plants™ teaches. In FY 2014, the City funded education and outreach assemblies via Ms. Smarty-Plants™ reaching 6,842 school children.



*Ms. Smarty Plants*

## WATER CONSERVATION GARDEN (THE GARDEN) ON THE CAMPUS OF CUYAMACA COLLEGE

Ms. Smarty-Plants™ is just part of the education efforts at The Garden. The Garden is a state-of-the-art demonstration garden that operates as an educational center for San Diego County residents. The Garden hosts events, festivals, plant sales and classes. The Garden also offers a beautiful collection of California-Friendly landscaping and other water-wise gardening techniques.

The four-and-a-half acre site includes multiple educational exhibits, a 350 seat amphitheatre, over 360 trees, and 100,000 square feet of water wise landscaping. The Garden encourages homeowners, developers and landscape professionals to use California-Friendly landscaping, efficient irrigation design and appropriate maintenance, which can reduce outdoor water use by 30 to 70 percent.

Visit [www.thegarden.org](http://www.thegarden.org) to learn more about the Water Conservation Garden.

The Garden is a not-for-profit corporation focusing on education, and supported partially by earned income and contributions of six member agencies, including the City of San Diego. The Water Conservation Garden’s Spring Garden

Festival “Celebrating Community Farms and Gardens” was held on Saturday, May 3rd 2014, and included members of the aforementioned San Diego Water Color Society, who held their monthly “paint out” in the garden led by accomplished watercolorist Chuck McPherson. Approximately 42 percent of the Garden’s 45,000 annual visitors and participants who registered at the gate are residents of the City of San Diego. A new attraction at the Garden, the Dorcas E. Utter Butterfly Pavilion, drew record crowds this year. The department contributes to The Garden through an annual assessment and sends delegates to the Garden Board, strategic Planning Committee and Facilities Maintenance Committee.



*Water Conservation Garden at Cuyamaca College.*



## CALIFORNIA-FRIENDLY LANDSCAPE CONTEST

The department participated in the regional 2014 Water Agency California-Friendly Landscape Contest. The Best in District winner was Amelia Lima, whose house is pictured here. Ms. Lima received a \$250 gift certificate to a local nursery at the award ceremony at The Garden on May 17, 2014.

## CALIFORNIA IRRIGATION MANAGEMENT INFORMATION SYSTEM (CIMIS) STATIONS

One of the keys to effectively managing irrigation for commercial nurseries is accurate weather information. Weather patterns (solar radiation, wind, rain and relative humidity) have a direct impact on the watering needs for turf, trees, shrubs and other plants. The City of San Diego partners with the DWR to calibrate and maintain three CIMIS weather stations. CIMIS stations are passive data loggers that gather accurate weather data to create and track evapotranspiration (ET) values. ET provides the quantitative data needed to accurately determine plant watering needs. Real-time weather data can be used to determine appropriate watering schedules for central control irrigation systems and conventional controllers.

CIMIS is a recognized standard and the equipment calibration is performed regularly. City staff, working in conjunction with the DWR, provide local support for the four CIMIS stations located in the maritime, coastal, central and inland weather bands of San Diego. The data from these stations is used to develop water budgets used in the Commercial Landscape Survey Program. Data from the University of California, Berkeley, shows a water reduction of 13 percent when CIMIS data is used, which equals 32.85 million gallons of water saved annually for the City’s nurseries and large landscape sites.

## Conclusion

In FY 2014, the Water Conservation Section continued its award winning public information and community outreach campaign that is successful in reducing the City's overall water demands by more than 36,100 AF per year. The Section is currently focused on California's drought.

Should California's drought continue, the Section is preparing for the City's "Drought Response Level 2 – Drought Alert Condition." A Drought Alert requires customers to limit irrigation to three days per week. The Section is preparing to add additional staff as needed for drought response and enforcement.

Finally, the programs described in this report undergo annual reevaluation to ensure the realization of forecasted savings. Additionally, changes in water conservation technologies require reassessment of long-range water conservation plans. Because of these changes, this document is updated at the end of each fiscal year to provide an ongoing assessment, redirecting or enhancing efforts as needed. The spreadsheet on Page 16 outlines estimated water savings and how each program contributes to city-wide water savings.

As an example, the City increased the Grass Replacement Rebate to \$2 per square foot to residential and commercial customers looking to replace grass with water wise landscapes. In addition, the MWD offers a similar program, and City of San Diego customers may qualify for both. With each program offering up to \$2 per square foot in rebates, applicants are eligible to receive a total of \$4 per square foot if they qualify for both rebates. The additional incentive is intended to boost interest in re-landscaping and increase program participation. Program funding is expected to resume in the Spring of 2015.

# Water Conservation Estimated Water Savings

Program Title	2009 RESULTS	2010 RESULTS	2011 RESULTS	2012 RESULTS	2013 RESULTS	2014 RESULTS
Retired Water Conservation Programs* (gpd)	10,099,427	10,107,498	10,107,661	10,107,661	10,107,661	10,107,661
Outdoor Water Conservation Rebates/IRWM Grant (gpd)			4,356			
Water-Wise Business Surveys (gpd)				25,529	40,080	69,622
Rainbarrel Rebates (gpd)				9,223	13,803	13,803
Water Waste Investigations (gpd)	207,892	515,512	680,752	738,472	782,152	835,612
SDMC 147.04 (gpd)**	3,274,080	3,361,224	3,441,720	3,533,568	3,641,112	3,759,240
Res HEWs (gpd)	668,895	731,039	878,578	941,161	1,003,744	1,046,317
ULFTs/HETs/Urinals (gpd)	10,045,723	10,214,671	10,258,182	10,263,461	10,274,401	10,363,513
CII Devices (gpd)	1,172,875	1,177,763	1,189,304	1,192,352	1,206,742	1,227,001
MWD Irrigation Controllers (gpd)	59,337	290,686	332,699	436,569	450,608	481,072
Irrigation Nozzles (gpd)	11,191	23,936	66,479	119,665	131,530	162,982
Residential Water Survey Program (gpd) †	1,484,669	1,561,049	1,561,049	1,561,049	1,561,049	1,561,049
Enhanced Multi-Family Survey Program (gpd)			71,280	75,240	97,350	141,702
Commercial Landscape Survey Program (gpd)	2,108,501	2,112,652	2,114,614	2,119,056	2,122,187	2,123,759
CIMIS Station Program (gpd)	90,000	90,000	90,000	90,000	90,000	90,000
Enhanced Public Education (gpd)	300,000	300,000	300,000	300,000	300,000	300,000
Total Gallon Savings Per Day	29,522,590	30,486,030	31,096,675	31,513,872	31,825,469	32,287,168
Total Gallon Savings Per Year	10,775,745,350	11,127,401,020	11,350,286,232	11,502,563,346	11,616,296,163	11,784,816,298
Total Acre Feet Savings Per Year	33,070	34,149	34,833	35,300	35,649	36,166

\* Retired Water Conservation Programs refer to programs fulfilled years ago, such as the City Facilities Retrofit Program where all City of San Diego facilities were retrofitted with low flow plumbing fixtures.

\*\* Passive water savings included here starting in 2005 to be consistent with CWA stats and the City's own 2005 Urban Water Management Plan.

† Residential Water Survey Program water savings has plateaued, with new surveys replacing water savings lost from surveys that occurred years ago.



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# Helpful Resources

Report Water Waste	(619) 533-5271
City Information	(619) 236-5555
Residential or Commercial Water Use Survey	(619) 570-1999
Customer Service	(619) 515-3500
Main Breaks, Leaks, Sewer Spills, Water Pressure	(619) 515-3525
Water Quality	(619) 668-3232

[www.wastenowater.org](http://www.wastenowater.org)



INSTALL HIGH-EFFICIENCY TOILETS. ALWAYS. USE A CARWASH. ALWAYS. COVER YOUR POOL. ALWAYS. FIX LEAKS. ALWAYS. REPORT WATER WASTE.  
 TERING TIMES. ALWAYS. WATER LESS. ALWAYS. SWEEP, DON'T SPRAY, YOUR PATIO. ALWAYS. PLANT NATIVE. ALWAYS. USE RAIN BARRELS. ALWAYS.  
 WASTE NO WATER  
 WASTE NO WATER  
**ALLWAYS.  
 ALWAYS.**  
 SURVEYS. ALWAYS. VISIT WASTENOWATER.ORG. ALWAYS. LEARN ABOUT PURE WATER SAN DIEGO. ALWAYS. WASH FULL LOADS OF LAUNDRY. ALWAY  
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