REQUEST FOR COUNCIL ACTION CITY OF SAN DIEGO		CERTIFICATE NUMBER (FOR COMPTROLLER'S USE ONLY)
TO: CITY COUNCIL	FROM (ORIGINATING DEPARTMENT): Public Utilities - Water	DATE: 10/12/2012
SUBJECT: Annual Water Conservation Report		
PRIMARY CONTACT (NAME, PHONE): Chris Robbins ,(619) 533-4203 MS 904A	SECONDARY CONTACT (NAME, PHONE): Luis Generoso , (619) 533-5258 MS 904A	

COMPLETE FOR ACCOUNTING PURPOSES

FUND					
DEPT / FUNCTIONAL AREA					
ORG / COST CENTER					
OBJECT / GENERAL LEDGER ACCT					
JOB / WBS OR INTERNAL ORDER					
C.I.P./CAPITAL PROJECT No.					
AMOUNT	0.00	0.00	0.00	0.00	0.00
FUND					
DEPT / FUNCTIONAL AREA					
ORG / COST CENTER					
OBJECT / GENERAL LEDGER ACCT					
JOB / WBS OR INTERNAL ORDER					
C.I.P./CAPITAL PROJECT No.					
AMOUNT	0.00	0.00	0.00	0.00	0.00

COST SUMMARY (IF APPLICABLE):

ROUTING AND APPROVALS

CONTRIBUTORS/REVIEWERS:		APPROVING AUTHORITY	APPROVAL SIGNATURE	DATE SIGNED
Liaison Office		ORIG DEPT.	Sasaki, Ann	10/17/2012
		CFO		
		DEPUTY CHIEF	Bailey, Roger	11/1/2012
		COO		
		CITY ATTORNEY		
		COUNCIL PRESIDENTS OFFICE		

PREPARATION OF: ☐ RESOLUTIONS ☐ ORDINANCE(S) ☐ AGREEMENT(S) ☐ DEED(S)

Information item only.

STAFF RECOMMENDATIONS:
Information item only.

SPECIAL CONDITIONS (REFER TO A.R. 3.20 FOR INFORMATION ON COMPLETING THIS SECTION)

COUNCIL DISTRICT(S): Citywide

COMMUNITY AREA(S):	Citywide
ENVIRONMENTAL IMPACT:	N/A
CITY CLERK INSTRUCTIONS:	N/A

COUNCIL ACTION
EXECUTIVE SUMMARY SHEET
CITY OF SAN DIEGO

DATE: 10/12/2012
ORIGINATING DEPARTMENT: Public Utilities - Water
SUBJECT: Annual Water Conservation Report
COUNCIL DISTRICT(S): Citywide
CONTACT/PHONE NUMBER: Chris Robbins /(619) 533-4203 MS 904A

DESCRIPTIVE SUMMARY OF ITEM:
Annual report on water conservation actions and activities that provide ongoing water savings.
STAFF RECOMMENDATION:
Information item only.
EXECUTIVE SUMMARY OF ITEM BACKGROUND:

The City of San Diego's Water Conservation Program reduces water demand through promoting or providing incentives for the installation of hardware that provides permanent water savings, and by providing services and information to help San Diegans make better decisions about water use. During the last drought, the City promoted its programs and activities, and informed the public about water supply and water use restrictions using the No Time to Waste, No Water to Waste campaign, and it was helpful in achieving significant water savings. After the drought was lifted in May 2011, the campaign transformed into San Diegans Waste No Water, an affirmation of the successful collective effort to save water and a recognition that "wasting no water" has become an adopted ethic in San Diego.

This report provides an update on water conservation programs and activities implemented in Fiscal Year 2012 to help sustain reduced water demands, policies and reduction goals in place, and program related water savings achieved this past fiscal year.

FISCAL CONSIDERATIONS:N/A

EQUAL OPPORTUNITY CONTRACTING INFORMATION (IF APPLICABLE): N/A

PREVIOUS COUNCIL and/or COMMITTEE ACTION (describe any changes made to the item from what was presented at committee):

The 2011 Annual Water Conservation Report was incorporated into the 2010 Urban Water Management Plan approved by the City Council on September 28, 2011 (R-306896).

COMMUNITY PARTICIPATION AND PUBLIC OUTREACH EFFORTS:

Central to the overall water conservation goal is community participation and public outreach efforts. The outreach campaign is structured to reach schoolchildren as well as adults. Components of the campaign include: an annual children's poster contest; article placements in community newspapers; participation in community fairs and events; the water conservation

exhibit at the Reuben H. Fleet Space Theatre in Balboa Park, and; the Water Conservation Garden on the campus of Cuyamaca College.

KEY STAKEHOLDERS AND PROJECTED IMPACTS:

Water customers City-wide have opportunities to take advantage of the Department's water conservation programs.

Sasaki, Ann
Originating Department

Bailey, Roger
Deputy Chief/Chief Operating Officer

City of San Diego
Public Utilities Department

Annual Water Conservation Report
Fiscal Year (FY) 2012

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 River, the Mokelumne River, the Cosumnes River and the Calaveras River. 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% 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 has selected Method 3 for establishing the 2020 per capita water use target of 142 gpcd, as it is a straightforward target and appears to be achievable.

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. Today, programs initiated by the Water Conservation Section account for over 35,000 acre-feet (AF) of water savings each year. This savings has been achieved by creating a water conservation ethic, adopting programs, policies and ordinances designed to promote water conservation practices, and implementing comprehensive public information and education campaigns.

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/2010uwmp.pdf] the Water Conservation Section has an updated overall goal of 40,400 acre-feet (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 is currently developing a *2012 Long-Range Water Resources Plan.*

Water Budget Based Billing Evaluation Project

By definition, a water budget can be used as a tool to price water at a reasonable and equitable rate for customers based on the projected usage required to sustain indoor and outdoor water needs. According to the American Water Works Association Journal, "water budget based billing is attractive to water agencies searching for stable revenue generation, improved customer acceptance, increased water use efficiency, and improved drought response," (*AWWA, Vol. 100 Issue 5, May 2008, Water Budgets and Rate Structures: Innovative Management Tools).* In May 2012, Department staff reported to the Natural Resources & Culture Committee [http://docs.sandiego.gov/councilcomm_agendas_attach/2012/NRC_120523_6.pdf] on the results of a pilot study that developed a methodology to create water budgets for a test group of single-family residential customers. With positive results from the pilot study showing that a model could reasonably build water budgets for the test homes included in the study, the Department retained Red Oak Consulting to assist staff in further evaluating water budgets.

Red Oak has experience assisting in the development and implementation of water budget based billing methodologies in municipalities and water agencies throughout the western United States. In FY 2012, Red Oak validated the pilot study model and began evaluating the applicability of water budget structures to the City's entire customer base. Working closely with Water Conservation staff into FY 2013, Red Oak will identify hurdles to overcome in order to establish a water budget program in San Diego and propose long-term water conservation initiatives that support a water budget program. With direction from the Mayor and City Council, the consultant will evaluate and model a tiered rate structure that supports a water budget program, giving policy makers the additional information needed to decide whether to implement water budgets in the City of San Diego.

Water Conservation Modeling

The Water Conservation Section retained another consultant, CDM-Smith, to develop a powerful statistical modeling tool utilizing over 30 years of historical data specific to San Diego to tease out various factors that impact water demand, including the price of water, economic conditions, the presence of drought, weather, active conservation efforts and conservation derived from plumbing code regulations. The model can be used to explain past aggregate water use and estimate how much water conservation was achieved in a given time period. It can also be used for short-term demand forecasting which can assist in operational planning efforts and in estimating whether the City is on target to meet its aforementioned 20x2020 conservation goals.

The Drought Is Over, But Not Forgotten

San Diegans reduced their water consumption by 14 percent during the recent drought alert from June 1, 2009 until May 26, 2011. During FY 2012, the Water Conservation Section demonstrated ongoing commitment and capability in communicating water supply issues to the public by continuing the *San Diegans Waste No Water* public education and outreach campaign.

With the local water supply conditions improving, the main communication objectives of the campaign were to make water conservation more personal and less strict. Throughout this ongoing campaign, the Water Conservation Section reinforced San Diegans' commitment to the wise use of water in a manner consistent with its long-term goals of water management. While an increase in conservation may have been caused by this sense of urgency, the community's positive response to the shortage is a foundation for creating and maintaining a San Diego lifestyle that exhibits environmental stewardship to protect and maintain vital natural resources.

The slogan "San Diegans Waste No Water" recognizes the recent successful efforts to conserve water, that many residents helped to achieve, and that 'wasting no water' has become an adopted ethic in San Diego.

New Water Conservation Programs

Outdoor Water Conservation Rebates

In FY 2012, 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. The City's Storm Water Pollution Prevention Program (Storm Water) provided $200,000 toward the rebate program, and the Water Conservation Section is contributing $178,000 worth of "in kind" services, including: providing site visits 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, and Sustainable Landscape-Turf Replacement. The goal is to conserve potable water while also reducing pollutant-laden dry weather urban runoff flows into sensitive receiving waters.

In FY 2012, 89 smart controllers were installed, approximately 157,200 square feet of high application irrigation systems were converted to micro-irrigation, and nearly 226,700 square feet of high water use turf was replaced with sustainable low water use landscapes. Single-family, multi-family and commercial customers can participate in the rebate program on a first-come, first-served basis while funds are available. While all three rebates were very popular with customers in FY 2012, the Sustainable Landscape-Turf Replacement rebate was the most popular – so much so that toward the end of the fiscal year the program was put on hold as funds were exhausted. The Water Conservation Section is requesting a modification to the grant to allow a re-allocation of funds so that additional rebates can once again be offered to customers interested in converting their turf grass to water wise landscapes. Annual water savings generated from this program in FY 2012 is estimated to be 7,728,145 gallons per year. It is anticipated that this program will continue for several more years before grant funding has been fully utilized by customers.

Water-Wise Business Survey

A Water-Wise Business Survey is a new, no additional charge service implemented in FY 2012. The survey offers all City of San Diego Public Utilities Department commercial, industrial and institutional customers with a customized review of their water usage, including an on-site visit to identify areas where water use efficiencies can be achieved and effectively implemented. Recommendations can help customers use water more efficiently and save energy.

During FY 2012 surveys were conducted for five businesses including two restaurants, a YMCA, a children's center, and SDG&E's downtown office building. Typical savings range from 10 - 20% of total water consumption. However, it is estimated that one of the restaurants may achieve water savings closer to 50%. Based on the information obtained to date, estimated water savings for the businesses for which surveys were conducted are approximately 3,366,760 gallons per year.

Rain Barrel Rebates

The Water Conservation Section again 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.

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 public storm water system.

Proper water conservation techniques and rain barrels assist Storm Water in meeting goals. 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. Forty-one applications from customers for 98 rain barrels were received during the first six months of this pilot program providing estimated potable water savings of 316,090 gallons annually.

Ongoing Conservation Programs and Initiatives

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.

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 is wasting up to 20 gallons per minute (gpm) and flooding adjacent properties and streets. In FY 2012, over 962 water waste complaints were addressed at an estimated 60 gpd per complaint. This translates to estimated water savings of 21,067,800 gallons annually.

Water Conserving Municipal Code – Emergency Water Regulations

In March of 2008, the San Diego County Water Authority (CWA) approved a Model Drought Ordinance designed to improve consistency between its member agencies when responding to regional water supply shortages. This model ordinance specifies and clarifies restrictions on the use of water in the event consumer demand reductions become necessary in order to meet an anticipated reduction in supplies. The model ordinance includes four different demand reduction targets at 10%, 20%, 40% and greater than 40% levels which provide a basis for action by the CWA and provide a framework for county retail agencies to respond in unison. On December 2, 2008, the San Diego City Council officially approved an Ordinance revising the City's Emergency Water Regulations, San Diego Municipal Code (SDMC) 67.38. Subsequently, on November 27, 2009, additional modifications were approved based on feedback from citizens. Further changes that established a 72 hour timeline for repairing water leaks was approved in FY 2012.

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 then 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 128,000 certificates of compliance with SDMC 147.04 have been filed since its inception, with 3,827 certificates completed in FY 2012.

SoCal Water$mart Rebates for Single-family Dwellings

The Metropolitan Water District of Southern California (MWD) and its member agencies, including the City of San Diego, offer a limited number of rebates each year on high-efficiency clothes washers (HEWs), smart controllers or weather-based irrigation controllers (WBICs) and rotating sprinkler nozzles. Funds for these rebates are limited. Customers can contact SoCal Water$mart by phone at 1-888-376-3314 or via the internet at http://socalwatersmart.com/index.php.

City customers received incentives for: 2,721 HEWs, 66 WBICs, and 1,296 rotating sprinkler nozzles (which use 20 percent less than conventional spray heads) in FY 2012. This equates to estimated water savings of 31,521,400 gallons annually.

Save A Buck Rebates for Commercial, Industrial, Institutional and Multi-Family Properties

The MWD also coordinates its Save A Buck rebate program for Commercial, Industrial, Institutional (CII) and multi-family properties. Save A Buck offers cash rebates on a wide variety of water-saving technologies including high-efficiency toilets (HETs) and urinals, WBICs for outdoor landscaping as well as many industry specific water conserving devices. In FY 2012, incentives for City of San Diego customers were provided for: 58 CII toilets/urinals, 282 WBICs, 6,948 rotating nozzles, ten computerized central irrigation controllers, three cooling tower controllers and two dry vacuum pumps. Savings from these commercial rebates is estimated at 51,686,746 gallons annually.

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 46,000 surveys have been completed. San Diego's residential survey program is one of the largest ongoing water survey programs in the nation.

During a scheduled survey appointment, a trained water surveyor meets with a residential customer for approximately one hour, reviews 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. A typical participating single-family dwelling can reduce water consumption by an estimated 13 - 28%. In FY 2012, the Section completed 1,142 surveys at single-family residences.

In FY 2012, an emphasis was placed on reaching out to multi-family customers. This effort was designed to offer both a comprehensive and an abbreviated multi-family survey, depending on the needs of the multi-family property. With the comprehensive approach, a trained water surveyor visits every unit on the property, and collects raw data on-site. Using this technique, four properties with a total of 60 units were surveyed during the fiscal year.

With an abbreviated approach, the property manager is trained by City staff to read the meter, look for leaks and measure fixture flow in gallons per minute (gpm) and perform the surveys themselves. Property managers proved to be enthusiastic in learning about the landscape, how to conduct interior surveys, and were highly responsive in completing the requested documentation. Detailed information was returned to the City for 52 units. Savings from these residential surveys equates to water savings of 26,455,200 gallons annually.

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 2012, Water Conservation staff performed twelve CLSP surveys for new water savings of 1,621,330 gallons annually.

Water Conservation Film Contest

The City of San Diego Water Conservation Section kicked off its 4th Annual Water Conservation Film Contest, titled "San Diegans Waste No Water" in the Spring of 2012. This contest was open to 11th and 12th grade high school students and all 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, 2012, at the IMAX Theater at the Reuben H. Fleet Science Center in Balboa Park. At the premiere, 3rd Place, 2nd Place, and the Grand Prize Winner were announced and received prize packs donated by local businesses and attractions. This year's winners of the Film Contest, Jason Smidt and William Swim of Point Loma High School, had their film seen by over one million moviegoers from June 22 to August 2 at AMC Mission Valley 20, AMC Plaza Bonita 14 and Edwards Mira Mesa Stadium 18. Their winning film, *"Walter the Water Glass,"* was played during the preview before the featured film was presented. It can be seen here: http://www.sandiego.gov/water/conservation/kids/film/index.shtml .

Water Conservation Poster Contest

The entire San Diego City Council celebrated the creative efforts of the winners of the 12th Annual Water Conservation Poster Contest in the City Council Chambers on May 1, 2012. 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 City of San Diego Public Utilities 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" 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 receive 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 and San Diego International Airport. The 19 winning works of art will be on display at the airport on the Youth Art Wall during the summer and autumn of 2012 in the lower level of Terminal 2 East. This exhibit welcomes travelers and encourages them to be honorary San Diegans who "waste no water."

The Public Utilities Department then made another splash in partnership with the San Diego Watercolor Society. The winning posters from the 2012 Children's Water Conservation Poster Contest were on exhibit alongside original watercolor paintings reflecting the "Running Clear" 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 1, 2012, at the Watercolor Society's Showcase Gallery. The event again honored the 19 winners who submitted posters to the 2012 contest. During the reception, student artists and member artists were recognized. Awards and prizes were given out by the Watercolor Society and the City of San Diego Public Utilities Department. In appreciation for featuring these young artists, the City of San Diego proclaimed June 1, 2012, as San Diego Watercolor Society Day in the City of San Diego and awarded Susan Weinberg-Hartner for her outstanding watercolor painting entitled, "Wetlands."

Water Conservation Garden on the Campus of Cuyamaca College

The Water Conservation 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, including "Ms. Smarty Plants." Ms. Smarty Plants takes children on a fun, interactive journey through plant adaptations, the water cycle, conservation, animal habitats and more. 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 - 70%.

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 "Urban Farming" was held on Saturday, April 28, 2012, 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% of the Garden's 45,000 annual visitors and participants are residents of the City of San Diego.

The Public Utilities Department contributes to the Garden through an annual assessment and sends delegates to the Garden Board, Marketing Committee and Facilities Committee. At major events, the Department staffs information tables and assists with promoting and facilitating events.

California-Friendly Landscape Contest

The City of San Diego Public Utilities Department participated in the regional 2012 ***Water Agency California-Friendly Landscape Contest***. The Best in District winner was Jennifer Brimhall and Lee Howeth who received a $250 gift certificate to a local nursery at the award ceremony at The Garden on May 19, 2012.

Brimhall and Howeth started the makeover in February of 2012, adding California-Friendly plants. The Normal Heights couple hired a landscape architect with instructions from Brimhall to make it "low water and low maintenance." The couple didn't sacrifice attractiveness at all. They routinely get compliments from neighbors, some of whom are asking for advice on how to do similar makeovers.

California Irrigation Management Information System (CIMIS) Stations

One of the keys to effectively managing irrigation for commercial nurseries and agricultural customers is accurate weather information. Weather patterns (solar radiation, wind, rain, 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 three CIMIS stations located in the maritime, central and coastal 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% when CIMIS data is used, which equals 32,850,000 gallons of water saved annually for the City's agricultural customers, nurseries and commercial sites.

Jr. Lifeguards

The City of San Diego Junior Lifeguard program 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 550 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.

Public Education, Information and Community Outreach

Water Conservation staff members actively participate in community fairs or 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 2012, Water Conservation staff attended 47 events and made thirteen public speaking presentations. As an example of one of our larger events, the Water Conservation Section has participated in EarthFair 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.

Conclusion

In FY 2012, the Water Conservation Section continued its award winning public information and community outreach campaign that continues to reduce the City's overall water demands by more than 35,000 acre-feet per year. The Section is now focused on long-term water conservation savings needed to meet the requirements of Senate Bill SB x7-7, which calls for a statewide 20 percent reduction in urban per capita water use by 2020. The attached spreadsheet outlines estimated water savings and how each program contributes to City-wide water savings. The spreadsheet does not take into account transitory water savings achieved by temporary behavior patterns, such as recent Drought Level 2 irrigation restrictions or savings from the use of recycled water. The programs outlined here undergo periodic 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 reviewed and revised at the end of each fiscal year to provide an ongoing assessment and status update, redirecting or enhancing efforts as needed.

Water Conservation Implementation Plan

Program Title	2008 ACTUAL	2009 ACTUAL	2010 ACTUAL	2011 ACTUAL	2012 ACTUAL
Retired Water Conservation Programs* (gpd)	10,056,926	10,099,427	10,107,498	10,107,661	10,107,661
Outdoor Water Conservation Rebates/IRWM Grant (gpd)				4,356	25,529
Water-Wise Business Surveys (gpd)					9,223
Rainbarrel Rebates (gpd)					866
Water Waste Investigations (gpd)	137,932	207,892	515,512	680,752	738,472
SDMC 147.04 (gpd)**	3,224,496	3,274,080	3,361,224	3,441,720	3,533,568
Res HEWs [currently MWD SoCal Water$mart] (gpd)	584,103	668,895	731,039	878,578	941,161
ULFTs/HETs/Urinals [currently MWD] (gpd)	9,990,819	10,045,723	10,214,671	10,258,182	10,263,461
CII Incentives [currently MWD Save A Buck] (gpd)	1,064,560	1,172,875	1,177,763	1,189,304	1,192,352
MWD Irrigation Controllers [Water$mart $ Save A Buck] (gpd)	2,480	59,337	290,686	332,699	436,569
Irrigation Nozzles [Water$mart $ Save A Buck] (gpd)		11,191	23,936	66,479	119,665
Residential Water Survey Program (gpd)†	1,398,869	1,484,669	1,561,049	1,561,049	1,561,049
Enhanced Multi-Family Survey Program (gpd)				71,280	75,240
Commercial Landscape Survey Program (gpd)	2,023,229	2,108,501	2,112,652	2,114,614	2,119,056
CIMIS Station Program (gpd)	90,000	90,000	90,000	90,000	90,000
Enhanced Public Education (gpd)	250,000	300,000	300,000	300,000	300,000
Total Gallon Savings Per Day	28,823,414	29,522,590	30,486,030	31,096,675	31,513,872
Total Gallon Savings Per Year	10,520,546,110	10,775,745,350	11,127,401,020	11,350,286,232	11,502,563,346
Total Acre Feet Savings Per Year	32,286	33,070	34,149	34,833	35,300

* 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 retrofit 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.