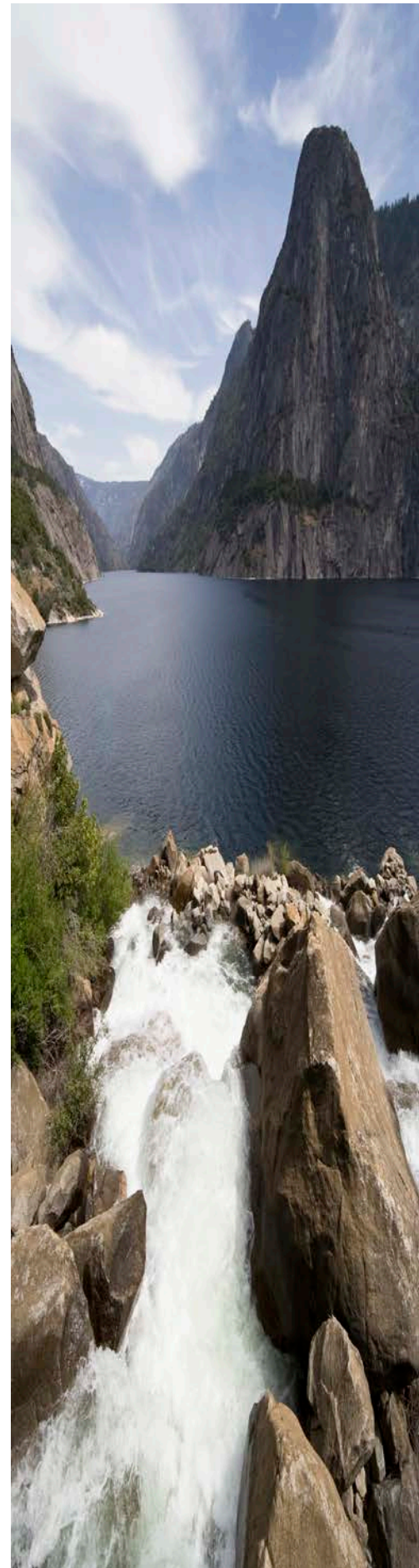


# BAWSCA Annual Water Conservation Report

FY 2015-16



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# 1. INTRODUCTION

The Bay Area Water Supply and Conservation Agency (BAWSCA) provides regional water supply planning, resource development, and conservation program services to enhance the water supply reliability of the 16 cities, 8 water districts, and 1 private water provider, and 1 university that provide water to over 1.78 million people and 40,000 commercial, industrial and institutional accounts in Alameda, Santa Clara and San Mateo Counties.

BAWSCA was established as a multicounty agency authorized to “plan for and acquire supplemental water supplies, to encourage water conservation and use of recycled water on a regional basis.....” (Bay Area Water Conservation Agency Act, AB2058). Consistent with the legislature’s intent, BAWSCA’s water management objective is to ensure a reliable supply of high quality water at a fair price to protect the health, safety, and economic well-being of the people, businesses, and community organizations within its service area. To this end, BAWSCA manages a Regional Water Conservation Program that is made up of several different programs and initiatives and is designed to support and augment the member agency and customer efforts to use water more efficiently. These efforts:

- ☐ Extend the limited supplies of water that are available to meet both current and future water needs;
- ☐ Increase the drought reliability of the existing water system; and
- ☐ Save money for both the member agencies and the customer.

In Fiscal Year (FY) 2015-16, BAWSCA continued implementation of a Regional Water Conservation Program that was designed to build upon the Water Conservation Implementation Plan (WCIP), completed in September 2009, and the Regional Demand and Conservation Projections Project (Demand Study), completed in September 2014. These efforts included the administration of several regional water conservation programs and initiatives, including both Core Programs, implemented regionally throughout the BAWSCA service area, and Subscription Programs, funded by individual member agencies that elect to participate and implemented within their respective service areas.

The Regional Water Conservation Program included both education programs and rebate programs. BAWSCA launched new core and subscription measures in FY 2015-16 to assist with drought response. These measures include the Water Conservation 101 Public Education Program, the Free Sprinkler Nozzles Program and the WaterSense Fixtures Giveaway Program. As can be seen in Table 1-1, all 26 member agencies benefitted from the core conservation programs implemented by BAWSCA, and 23 different member agencies participated in one or more of the 10 subscription programs offered by BAWSCA, including rebates and large landscape audit measures.

This report documents BAWSCA’s continued implementation of its Regional Water Conservation Program, which includes conservation measures that (1) are included as part of

its annual work plan and (2) are consistent with the objectives of the WCIP (2009) and Demand Study (2014).

As evidenced in the data presented in subsequent sections and with exception to the Washing Machine Rebate Program, participation in the BAWSCA Regional Water Conservation Program increased overall in FY 2015-16. It is believed that this increase is primarily due to heightened awareness and outreach resulting from the statewide drought. BAWSCA will continue to adjust the type and number of conservation measures that it offers to match the needs of its member agencies and their customers. As part of this effort, BAWSCA staff will continue to evaluate the resources needed to successfully manage and implement the Regional Water Conservation Program.

**Table 1-1: BAWSCA Agency Participation in Regional Water Conservation Program from FY 2010-11 to FY 2015-16**

Agency	BAWSCA Core Conservation Programs			BAWSCA Subscription Water Conservation Program										
	Landscape Education Class Participants	WaterWise Garden On-Line Tool	Public Outreach (c)	Washing Machine Rebates	High-Efficiency Toilet Rebates	School Education: WaterWise Kits	School Education: EarthCapades Assemblies	School Education: Tuolumne River Trust	Large Landscape Audits (d)	Rain Barrel Rebates (f)	Lawn Be Gone! Landscape Rebates	Free Sprinkler Nozzles	Home Water Use Reports	Water-Sense Fixtures
<b>Alameda County</b>														
Alameda CWD	X	X	X		X				X	X	X			
Hayward	X	X	X	X	X	X	X		X	X				X
<b>San Mateo County</b>														
Brisbane/GVMID	X	X	X	X	X				X	X	X			
Burlingame	X	X	X	X	X	X						X		
CalWater-BG	X	X	X	X	X		X				X			
CalWater-MidPen	X	X	X	X	X		X				X			
CalWater-SSF	X	X	X	X	X		X				X			
Coastside CWD	X	X	X	X	X		X	X	X		X			
Daly City	X	X	X	X	X		X		X		X			
East Palo Alto	X	X	X	X										
Estero MID	X	X	X	X	X	X	X	X	X		X			X
Hillsborough	X	X	X	X	X	X	X		X			X		X
Menlo Park	X	X	X	X	X	X	X		X		X			
Mid-Peninsula WD	X	X	X	X	X	X	X	X	X	X	X			
Millbrae	X	X	X	X	X	X	X	X	X	X		X		X
North Coast CWD	X	X	X	X		X		X		X	X			X
Redwood City	X	X	X	X	X	X	X	X	X	X	X			
San Bruno	X	X	X	X	X		X		X		X			
Westborough WD	X	X	X	X	X		X							
<b>Santa Clara County</b>														
Milpitas (e)	X	X	X											
Mountain View	X	X	X						X				X	
Palo Alto	X	X	X											
Purissima Hills WD	X	X	X											
San Jose (e)	X	X	X			X	X			X			X	
Santa Clara (e)	X	X	X										X	
Stanford	X	X	X									X		
Sunnyvale	X	X	X							X				

**Notes:**

- (a) Tables includes an "X" if an agency has participated in a specific measure in at least one of the last five years.
- (b) An absence of an "X" may not mean that agency does not implement a measure, just that it does not participate through BAWSCA on that measure.
- (c) Includes several different programs that benefit the region, including Garden Tours, Outreach Events, and Sponsorships.
- (d) Cal Water and Hillsborough Large Landcape Audit programs began with BAWSCA but were administered by the agencies starting in FY 2013-14.
- (e) The City of San Jose contracted with BAWSCA in FY 2011-12 to offer Water Conservation School Education Programs in Milpitas, Santa Clara and San Jose.
- (f) Through the San Mateo Countywide Water Pollution Prevention program, all San Mateo county residents were eligible for a \$50 rain barrel rebate. Only those agencies that offered a matching rebate are listed.

## 2. OVERVIEW OF THE BAWSCA REGIONAL WATER CONSERVATION PROGRAM

In creating and implementing the BAWSCA Regional Water Conservation Program, BAWSCA follows several key principles:

- ☐ Meet the specific needs and requirements of the BAWSCA agencies.
- ☐ Offer increased water savings at a lower cost to the agency and its customers.
- ☐ Agencies pay the costs for each conservation measure in which they participate.

BAWSCA's Regional Water Conservation Program is a two-tier program that offers a "Core Program" and a "Subscription Program":

- ☐ The Core Program is funded through the BAWSCA's annual budget and contains those conservation measures that benefit from regional implementation and that provide regional benefit, irrespective of individual agency jurisdictions.
- ☐ The Subscription Program is fully funded by the individual agency that elects to participate in the measure based on their participation level and includes conservation measures whose benefits can be realized in individual water agency service areas.

The following sections summarize the Core Programs and Subscription Programs that were offered as part of the BAWSCA Regional Water Conservation Program in FY 2015-16. In addition to the BAWSCA programs, many of the member agencies administer additional water conservation measures independently or through another entity such as the Santa Clara Valley Water District (SCVWD).

### Core Programs

In FY 2015-16, BAWSCA offered the following water conservation programs and initiatives as part of the Core Programs:

- ☐ Water Efficient Landscape Education Classes
- ☐ Water-Wise Gardening in the Bay Area Landscape Educational Tool
- ☐ Native Garden Tours and Symposiums
- ☐ Water Conservation Database
- ☐ Water Conservation 101 Education Classes
- ☐ Regional Water Demands and Conservation Projections (DSS Model)
- ☐ Public Outreach

### Subscription Programs

In FY 2015-16, BAWSCA offered the following water conservation programs as part of the Subscription Programs:



- ☐ High-Efficiency Toilet (HET) Rebates
- ☐ High-Efficiency Residential Washing Machine Rebates
- ☐ Home Water Use Reports
- ☐ Free Sprinkler Nozzles Program
- ☐ Lawn Be Gone! Turf Replacement Rebates
- ☐ Rain Barrel Rebates
- ☐ Large Landscape Audits
- ☐ Water-Wise School Education Kits and Curriculum
- ☐ EarthCapades Assemblies School Education Program
- ☐ Tuolumne River Trust School Education Program
- ☐ WaterSense Fixtures Bulk Pricing Program

Each of the above water conservation measures were administered at a regional level through BAWSCA in a cost-effective and efficient manner.

## Drought Response

On January 17, 2014, Governor Brown proclaimed a State of Emergency and directed state officials to take all necessary actions to prepare for drought conditions. On January 31, 2014, San Francisco Public Utilities Commission (SFPUC) asked all customers of the San Francisco Regional Water System (SF RWS) to voluntarily curtail water consumption. The goal was to reduce system-wide usage by 10 percent. This request was extended through calendar year 2016. Consistent with its Urban Water Management Plan, the SFPUC implements rationing in early years of a drought to provide for sufficient supplies should a multiple year drought occur. The BAWSCA agencies exceeded the 10% target and achieved a total of 29% savings on SFPUC purchases in FY 2015-16 (Source: SFPUC Commercial Division Records).

On April 1, 2015, Governor Brown issued an executive order directing the State Water



Resources Control Board (SWRCB) to implement mandatory water reductions across California to reduce water usage by 25 percent. In accordance with the Executive Order, the SWRCB adopted an emergency regulation for statewide water conservation in May 2015. The regulation established mandatory water use

reduction targets, referred to as “conservation standards”, for each urban water supplier in California, in order to achieve a statewide 25% reduction in potable water use. Individual water suppliers’ conservation standards were established based on summer 2014 residential per capita water use. These standards range from 8 percent to 36 percent, and the weighted average standard for the BAWSCA service area was 15 percent. Through the compliance



period of June 2015 to May 2016, BAWSCA agencies reduced total potable water use by 27% as compared to the same months in 2013.

To assist its member agencies in achieving the targeted water use reductions, BAWSCA coordinated with SFPUC to implement a public information campaign from July 2014 through October 2014. The campaign encouraged customers to take specific actions to reduce their water use, such as taking shorter showers, fixing leaks, and reducing watering. The public information campaign included billboard advertisements, online video and movie theater public service announcements, and BART station advertisements.

In addition to the regional public information, BAWSCA assisted member agencies with drought response in FY 2015-16 by:

- ☐ Assisting BAWSCA agencies in complying with State drought water use reduction requirements
- ☐ Developing drought campaign graphics for public outreach
- ☐ Coordinating the bulk purchase of drought outreach materials
- ☐ Updating the BAWSCA website with drought information and water use reduction ideas
- ☐ Providing speakers at a variety of community events and other forums
- ☐ Expediting the launch of new water conservation subscription programs for FY 2015-16

## **Other Activities**

In addition to the Regional Water Conservation Program, BAWSCA continued its efforts to, among other things:

- ☐ Conduct public outreach promoting water awareness and conservation
- ☐ Develop and foster regional partnerships
- ☐ Investigate alternatives to secure grants or other financial support
- ☐ Support agency water conservation reporting and budgeting efforts
- ☐ Provide technical support and training to the member agencies
- ☐ Provide analysis on specific legislation for the member agencies

## **Program Participation and Budget Overview**

The following section provides a comparison of the participation and associated expenditures in BAWSCA's Core and Subscription Programs each year since FY 2005-06. In FY 2015-16, overall expenditures increased by 29% due to a heightened need for water conservation due to the drought. When compared to the \$147,243 expended in FY 2001-02, when BAWSCA began offering regional programs, total expenditures are up by 830%, reflecting the increasing focus on water conservation among the BAWSCA member agencies. BAWSCA will

continue to evaluate the effectiveness of each of its conservation program offerings as part of its Regional Water Conservation Program management.

Table 2-1, Table 2-2 and Table 2-3 detail the level of participation in dollars spent by the member agencies in each of the core and subscription water conservation measures offered by BAWSCA on a regional basis. Table 2-1 presents the total BAWSCA water conservation program budgets each year since FY 2001-02. Table 2-2 shows BAWSCA's regional core water conservation program summary since FY 2005-06 and Table 2-3 shows selected BAWSCA program expenditures from FY 2001-02 through FY 2015-16.

Program spending increased in nearly all BAWSCA Regional Water Conservation programs in FY 2015-16. The downward trend of the Washing Machine Rebate Program continued this fiscal year with a 48% decrease in program spending. This is consistent with program activity among other Bay Area water agencies and is largely due to code changes impacting the number of machines eligible for the rebate. The Lawn Be Gone Rebate Program saw a 25% increase, with expenditures totaling \$177,170, and the Large Landscape Audit program saw a 59% increase, the highest increase among any subscription program in FY 2015-16, due to an additional amount of field surveys performed through the program.

## **Support for Water Conservation Programs and Agency Reporting**

As part of its work plan, BAWSCA is actively working with the member agencies to implement and build upon the WCIP (2009) and Demand Study (2014). BAWSCA agencies have expressed a continued desire to participate in the ongoing and new conservation measures that BAWSCA offers. Participation in the BAWSCA Regional Water Conservation Program assists agencies in complying with the Best Management Practices (BMPs) for Urban Water Conservation as described by the California Urban Water Conservation Council (CUWCC) and in meeting the Senate Bill x7-7 requirements for achieving a 20% reduction in urban water use by 2020.

The following Chapters provide detailed information regarding BAWSCA's Regional Water Conservation Program and individual conservation measures.

**Table 2-1: BAWSCA Water Conservation Program Budgets**

<b>Fiscal Year</b>	<b>Budget (a)</b>	<b>% Change</b>
FY 2001-02	\$147,243	--
FY 2002-03	\$435,163	196%
FY 2003-04	\$229,734	-47%
FY 2004-05	\$453,605	97%
FY 2005-06	\$485,177	7%
FY 2006-07	\$602,599	24%
FY 2007-08	\$687,063	14%
FY 2008-09	\$980,225	43%
FY 2009-10	\$1,635,110	67%
FY 2010-11	\$1,299,502	-21%
FY 2011-12	\$967,075	-26%
FY 2012-13	\$860,763	-11%
FY 2013-14	\$831,155	-3%
FY 2014-15	\$1,060,118	28%
FY 2015-16	\$1,369,456	29%

**Notes:**

(a) Actual expenditures for all core and subscription programs including administration costs

**Table 2-2: BAWSCA Regional Core Water Conservation Program Summary**

Fiscal Year	Landscape Education Classes				Native Garden Tours, Conferences & Symposiums		WaterWise Gardening Website			Water Conservation 101 Classes			
	Number of Classes	Number of Agency Hosts	Number of Attendees	Expenditures	Number of Agencies	Expenditures	Number of Agencies	Number of Website Visits	Expenditures	Number of Classes	Number of Agency Hosts	Avg. Number of Attendees	Expenditures
FY 2005-06 (a)	12	4	87	\$3,173	--	\$0	--	--	\$1,500	--	--	--	--
FY 2006-07 (a)	12	6	110	\$3,150	all	\$3,000	all	n/a	\$13,500	--	--	--	--
FY 2007-08 (b)	13	8	150	\$3,620	all	\$4,000	all	n/a	--	--	--	--	--
FY 2008-09 (c), (f)	17	11	320	\$7,199	all	\$5,000	all	n/a	\$5,000	--	--	--	--
FY 2009-10 (d)	41	14	918	\$20,059	all	\$5,814	all	10,321	\$5,100	--	--	--	--
FY 2010-11 (e), (f)	56	17	1,283	\$25,780	all	\$6,500	all	5,862	\$5,000	--	--	--	--
FY 2011-12	57	17	1,498	\$26,618	all	\$9,739	all	6,170	\$6,500	--	--	--	--
FY 2012-13	52	16	1,306	\$25,401	all	\$8,184	all	6,343	\$5,000	--	--	--	--
FY 2013-14	51	16	1,191	\$29,098	all	\$7,000	all	10,682	\$5,000	--	--	--	--
FY 2014-15 (g)	64	16	1,629	\$35,104	all	\$6,020	all	12,675	\$11,500	1	1	35	\$0
FY 2015-16	71	16	1,625	\$31,397	all	\$2,500	all	9,334	\$5,000	12	10	25	\$2,100

**Notes:**

(a) In FY 2005-06 and FY 2006-07 BAWSCA partnered with member agencies to offer 4 landscape classes. However, BAWSCA also helped promote 8 additional classes that were being held by other member agencies (i.e., a total of 12 classes).

(b) In FY 2007-08, BAWSCA co-sponsored 7 classes and co-promoted 13.

(c) In FY 2008-09 BAWSCA co-sponsored 10 classes and co-promoted 17.

(d) In FY 2009-10 BAWSCA co-sponsored 38 classes and co-promoted 3.

(e) In FY 2010-11 BAWSCA co-sponsored 55 classes and co-promoted 1.

(f) The \$5,000 per year licensing fee for the GardenSoft software for FY 2010-11 was actually paid for in FY 2008-09 because of the

(g) In FY 2014-15 Water-Wise Gardening Website expenditures include a licensing fee (\$5,000) and website redesign and enhancement costs.

**Table 2-3: BAWSCA Regional Subscription Water Conservation Program Summary**

Subscription Program		Fiscal Year										
		FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Residential Washing Machine Rebates	Number of Agencies	16	16	15	16	15	17	18	18	18	15	14
	Expenditures	\$404,113	\$449,100	\$468,199	\$573,132	\$942,381	\$658,955	\$467,631	\$441,401	\$344,773	\$309,087	\$161,321
High-Efficiency Toilet Rebates	Number of Agencies	--	--	--	13	14	14	14	15	12	14	14
	Expenditures	\$0	\$0	\$0	\$169,997	\$393,786	\$317,282	\$161,543	\$170,676	\$201,096	\$314,917	\$335,737
Lawn Be Gone! Landscape Rebates	Number of Agencies	--	--	--	--	--	9	9	10	12	12	10
	Expenditures	\$0	\$0	\$0	\$0	\$0	\$6,751	\$17,778	\$8,611	\$11,392	\$141,832	\$177,170
Rain Barrel Rebates	Number of Agencies	--	--	--	--	--	--	--	--	--	8	10
	Expenditures	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$34,537	\$46,484
Large Landscape Audit	Number of Agencies	4	4	9	11	12	9 (a) (b)	9 (a) (b)	9 (a) (b)	8 (a) (b) (c)	9 (a) (b) (c)	10 (a) (b) (c)
	Expenditures	\$24,720	\$40,826	\$84,425	\$108,382	\$163,879	\$103,948	\$100,789	\$67,377	\$86,816	\$63,381	\$100,992
School Education - EarthCapades Assemblies	Number of Agencies	--	--	--	--	--	12	13	12	13	13	13
	Expenditures	\$0	\$0	\$0	\$0	\$0	\$53,295	\$64,305	\$64,110	\$58,565	\$52,180	\$64,575
School Education - Tuolumne River Trust	Number of Agencies	--	--	--	--	--	--	--	--	--	5	6
	Expenditures	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000	\$3,600
School Education - Water Wise Kits	Number of Agencies	6	11	14	14	12	11	8	6	8	8	8
	Expenditures	\$51,671	\$93,023	\$126,819	\$111,515	\$104,091	\$121,990	\$112,172	\$70,003	\$87,415	\$90,562	\$99,582
Free Sprinkler Nozzles	Number of Agencies	--	--	--	--	--	--	--	--	--	--	4
	Expenditures	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,244
Home Water Use Reports	Number of Agencies	--	--	--	--	--	--	--	--	--	--	3
	Expenditures	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$325,751
WaterSense Fixtures Bulk Purchase Program	Number of Agencies	--	--	--	--	--	--	--	--	--	--	5
	Expenditures	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,003.52

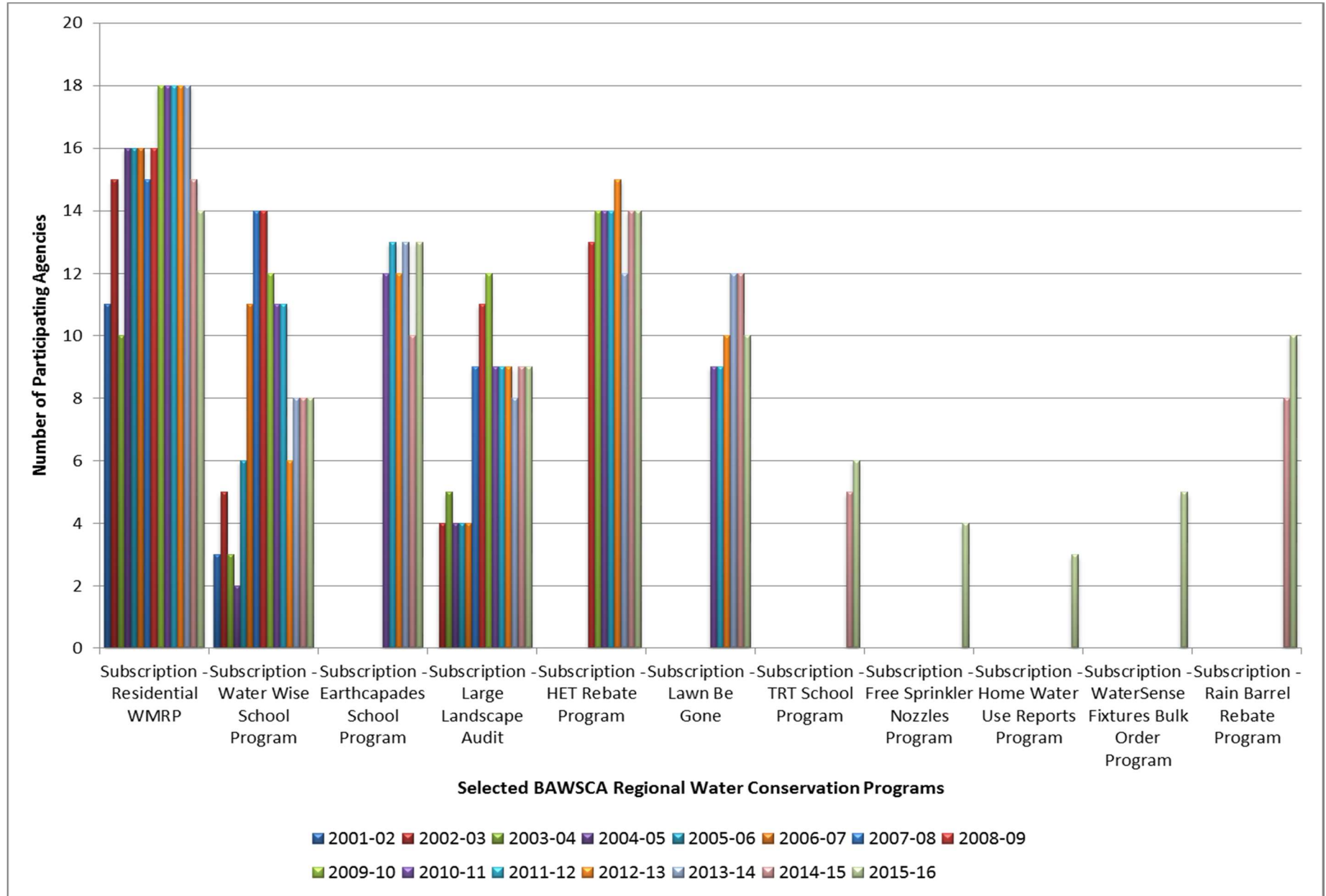
**Notes:**

(a) Cal-Water continues to offer the program, but now implements the program independently because it has taken the BAWSCA program state-wide in all of its districts, and is not included herein.

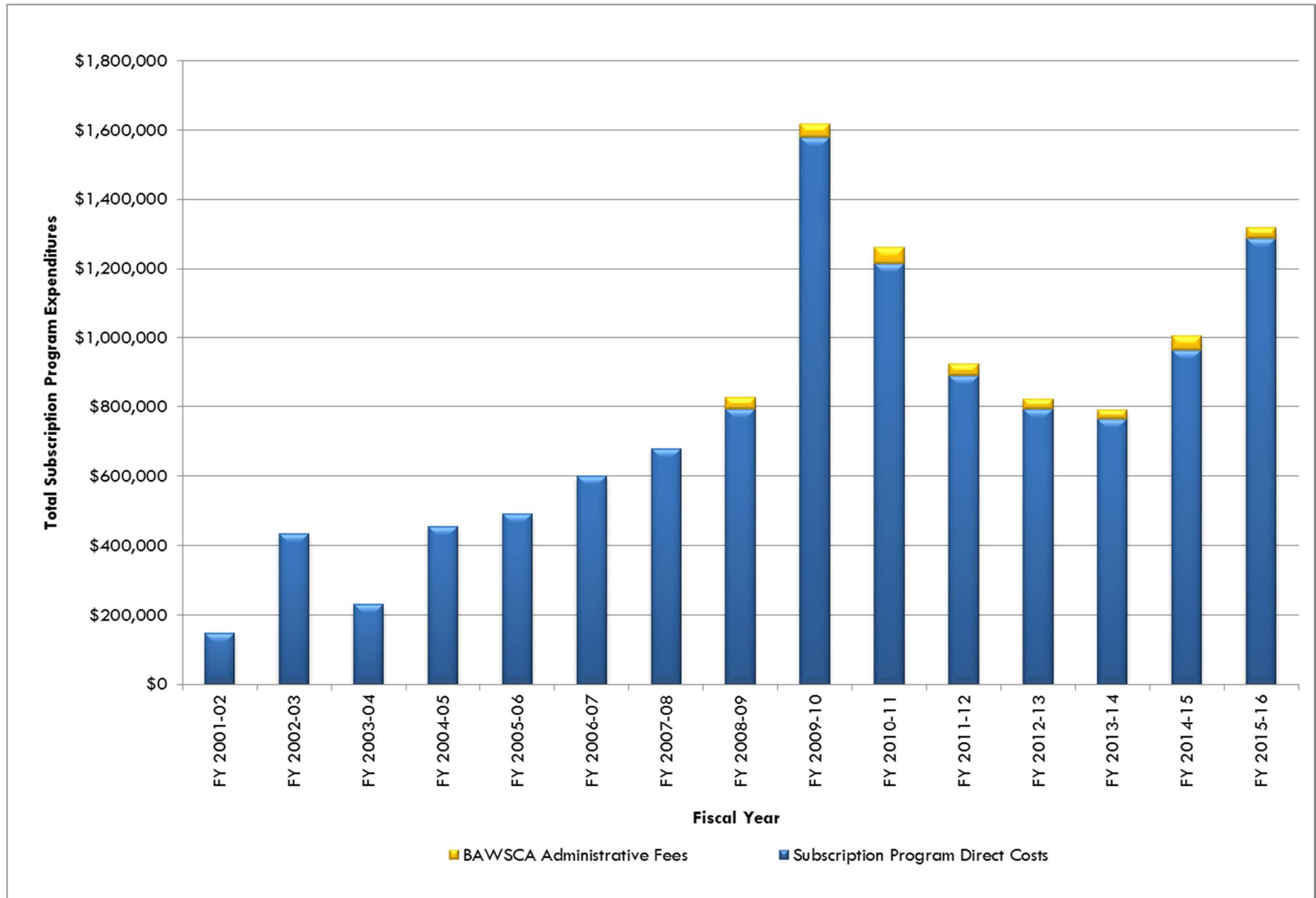
(b) Hillsborough continues to offer the program, but now implements the program independently for all of its single-family residential customers and is not included herein.

(c) Mountain View continues to offer the program, but now implements the program through the SCVWD and is not included herein.

**Figure 2-1: BAWSCA Regional Subscription Water Conservation Program Participation**

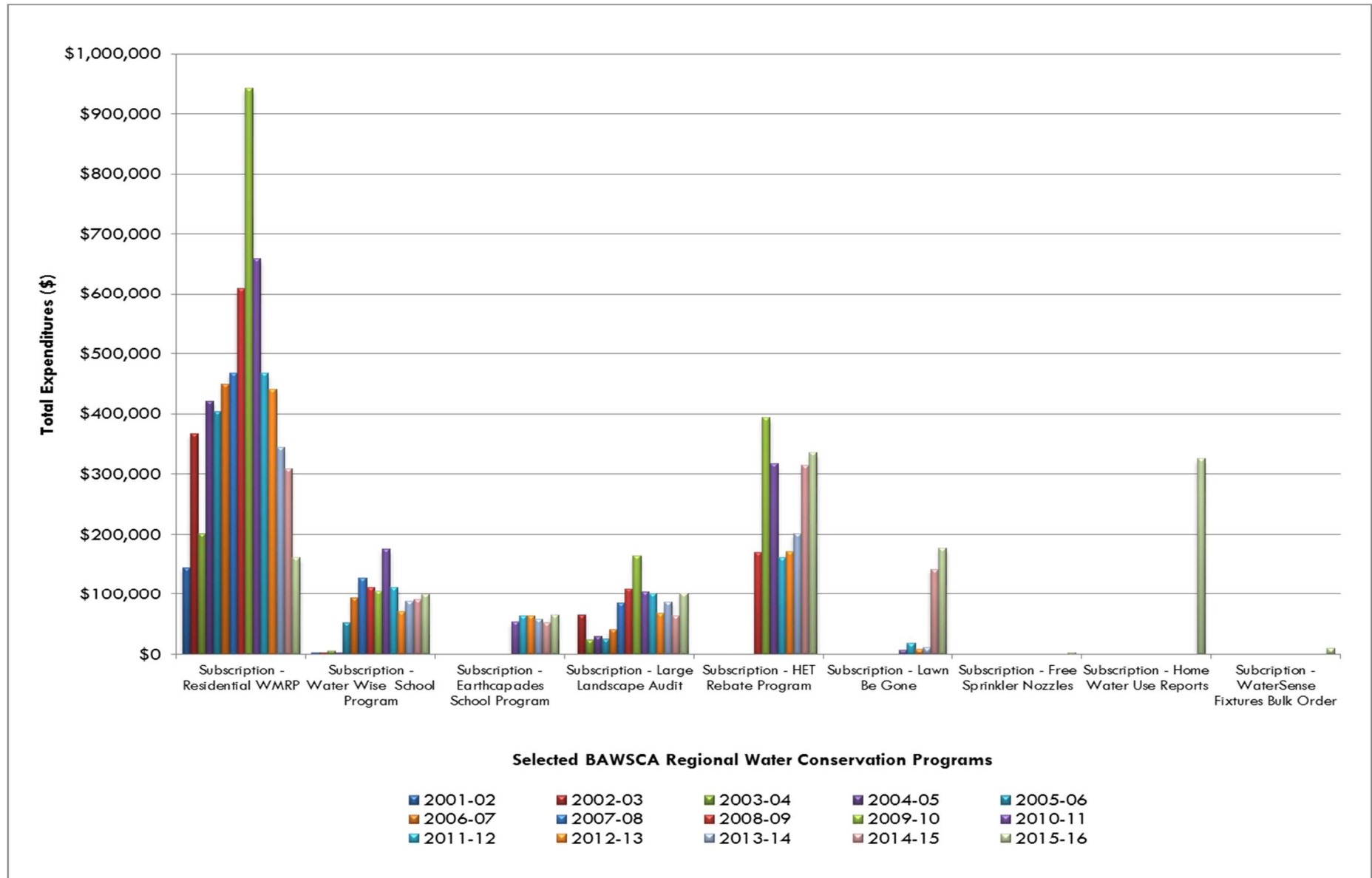


**Figure 2-2: Total Subscription Program Expenditures**





**Figure 2-3: BAWSCA Subscription Program Expenditures for Selected Programs**



### 3. BAWSCA CORE WATER CONSERVATION PROGRAM

The following sections present detailed information on the individual conservation programs and initiatives that constituted the BAWSCA Core Programs in FY 2015-16.

#### **Water-Efficient Landscape Education Classes**

In FY 2015-16, BAWSCA continued to partner with the member agencies to offer Water-Efficient Landscape Education Classes. The classes are offered in the spring and fall and are free to the public. They are designed to introduce homeowners and landscape professionals to the concepts of sustainable landscape design, with a focus on creating beautiful, water-efficient gardens as an alternative to lawns. Types of classes include (1) lecture classes and (2) hands-on workshops where attendees participate in the installation or maintenance of a water-efficient garden.

BAWSCA offered its Fall series of classes from August through November 2015. A total of 29 landscape classes and hands-on workshops were held throughout the BAWSCA service area. Topics covered included a focus on the use of California native plants to create beautiful low water use and drought-tolerant gardens, efficient irrigation techniques, alternatives to lawn, and landscape maintenance during drought. The total attendance for the landscaping classes that BAWSCA sponsored in Fall 2015 was approximately 580 people.

BAWSCA offered its Spring series of classes from the end of February 2016 through the end of May 2016. Topics covered included a focus on efficient irrigation, graywater reuse, alternatives to lawns, and edible landscaping, as well as drought-specific topics such as tree care during drought. BAWSCA coordinated and sponsored a total of 42 landscape classes, including seventeen hands-on workshops, throughout the BAWSCA service area. The total attendance for the landscaping classes that BAWSCA sponsored in Spring 2016 was approximately 1045 people.

BAWSCA began offering Water-Efficient Landscape Education Classes throughout the BAWSCA region in Spring 2006. Customer interest in the classes has increased and, as a result, BAWSCA has continued to increase the number of classes throughout the region to meet customer demands. As illustrated in Figure 3-1, the number of classes and attendees in FY 2015-16 largely remained the same from FY 2014-15 despite having slightly more classes. BAWSCA is currently examining different marketing techniques and effective class structures to increase participation.

#### **Water Wise Gardening in the Bay Area Landscape Educational Tool**

In FY 2015-16, the BAWSCA member agencies continued to promote the popular landscape educational tool - *Water-Wise Gardening in the Bay Area*. Initially created as a CD-ROM in FY 2006-07, the educational tool is now available online via BAWSCA's website so that it can be readily accessed by the public. The *Water-Wise Gardening in the Bay Area* tool contains information on how to create and maintain a beautiful, low-water-use garden and includes photographs of water-efficient gardens and provides links to the plants that compose the

featured gardens. The featured gardens are primarily composed of sites in the Bay Area, specifically within the BAWSCA service area.

In FY 2015-16, the *Water-Wise Gardening in the Bay Area* website had approximately 5,227 unique visitors and 9,334 total visits, a 26% decrease in total visits from FY 2014-15. Since BAWSCA began tracking website analytics in FY 2009-10, average total visits is 8,770.

## Native Garden Tours and Symposiums

BAWSCA cosponsored two garden tours in FY 2015-16 that took place in the months of April and May 2016. Each tour was designed to showcase homes around the Bay Area that have beautiful water conserving gardens comprised primarily of California native plants. The tours are regional throughout the Bay Area, although many of gardens featured in the tours were located within the BAWSCA service area.

- ☐ ***The Going Native Garden Tour.*** The fourteenth annual Going Native Garden Tour took place on April 9th and 10th, 2016. The 4,609 registrants who signed up for the tour made 6,664 visits to the open gardens. There were 219 volunteers participating, and serving as docents and greeters at the 56 open gardens. The 5 nursery sponsors conducted 6 native plant sales at selected tour gardens and informative talks were given at several gardens. Participants supplied many positive comments about the tour, the plant sales and the talks. ([http://www.gngt.org/report/2016\\_TourReport.pdf](http://www.gngt.org/report/2016_TourReport.pdf)).
- ☐ ***The Bringing Back the Natives Garden Tour.*** The eleventh annual Bringing Back the Natives Garden Tour took place on Sunday, May 1, 2016, and showcased gardens and nurseries located in seventeen cities and unincorporated areas in Alameda and Contra Costa counties. The 5,500 registrants who signed up for the tour made 10,644 visits to 36 open gardens and nurseries. Over 50 talks and demonstrations were given at the showcased gardens and nurseries on tour.

## BAWSCA Regional Water Conservation Database

In FY 2015-16 BAWSCA worked with its consultant, Brown & Caldwell, and its member agencies on the ongoing effort to maintain and populate the BAWSCA regional Water Conservation Database (WCDB). The WCDB was developed by BAWSCA, with input from the agencies, to track agency water conservation efforts associated with implementation of the WCIP. The WCDB was also used in the completion of the Demand Study and in the preparation of BAWSCA's Annual Survey.

The objectives of the WCDB are to:

- ☐ Facilitate data collection and data management to support the following activities:
  - Internal agency reporting and budgeting;
  - BAWSCA Annual Survey Report;
  - CUWCC BMP reporting

- DWR UWMP and annual Public Water Supervision System (PWSS) reporting requirements.
- Streamline data collection to support tracking of water conservation activities in the region and to monitor quantifiable water savings in the BAWSCA region.

The WCDB was deployed in FY 2010-11 wherein it was configured for all agency users and the agencies were trained as to how to use the WCDB. The WCDB is configured to interact directly with the existing BAWSCA databases for the Regional HET Rebate, Lawn Be Gone!, and Washing Machine Rebate Programs so that agencies who participate in those measures through BAWSCA did not have to enter those data into the WCDB separately.

## **BAWSCA Regional Water Conservation 101 Education Program**

In FY 2015-16 BAWSCA launched the Water Conservation 101 public education program. The purpose of the program is in an effort to provide the general public with valuable information on water supplies, drought impacts and water use restrictions, as well as ways to monitor and reduce household water use. The program and curriculum was developed by BAWSCA in FY 2014-15, and a pilot class was held with Mid-Peninsula Water District. The program was made available to all BAWSCA agencies in FY 2015-16 to support agencies in their drought response efforts.

This public education program includes a series of Lecture Classes that are 2 hours long and are offered free of charge to residents within the BAWSCA service area.

- FY 2015-16 Member agency participants included:
  - City of Burlingame
  - California Water Service Company
  - Town of Hillsborough
  - City of Millbrae
  - City of Mountain View
  - City of Palo Alto
  - City of Redwood City
  - Mid-Peninsula Water District
  - City of San Jose
  - Stanford University
  - City of Menlo Park

In FY 2015-16, Water Conservation 101 gained popularity due to Governor Brown's statewide mandatory water use reductions. In partnership with the participating member agencies, BAWSCA held 21 classes in FY 2015-16 with an average of 27.25 attendees per class. This program may be offered during future drought periods but will not be continued on an annual basis.

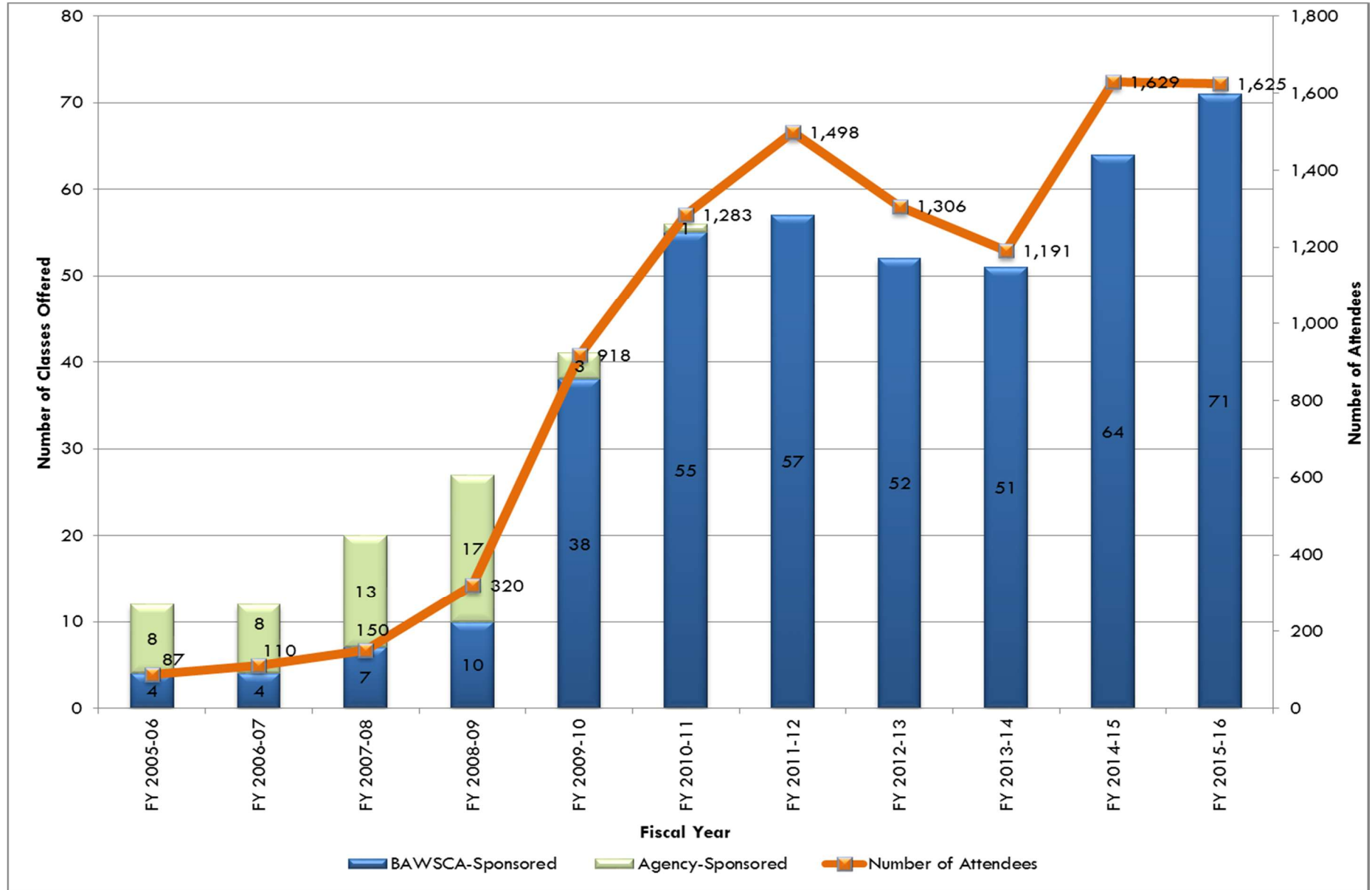
## **BAWSCA Regional Demand and Conservation Savings Projections**

During FY 2015-16, BAWSCA supported the use of the Decision Support System (DSS) Models developed for each agency as part of the Regional Demand and Conservation Projections Project (Demand Study). The Demand Study, completed in September 2014, developed transparent, defensible, and uniform demand and conservation projections for each BAWSCA member agency. These projections were used to support the development of BAWSCA's Long-Term Reliable Water Supply Strategy (Strategy) as well as other regional and individual agency efforts. The specific objectives of the Demand Study were as follows:

- ☐ Quantify the total average-year water demand for each BAWSCA member agency through the year 2040;
- ☐ Quantify the passive and active conservation water savings potential for each individual BAWSCA member agency through 2040;
- ☐ Identify conservation programs for further consideration for regional implementation by BAWSCA; and
- ☐ Provide each BAWSCA member agency with a user-friendly model that can be used to support ongoing demand and conservation planning efforts.

In FY 2015-16, BAWSCA provided each agency with DSS Model Support Services, funded by participating agencies on an as-needed basis, to support development of individual agency 2015 Urban Water Management Plans.

**Figure 3-1: Water-Efficient Landscape Education Class Participation**



## 4. BAWSCA SUBSCRIPTION WATER CONSERVATION PROGRAMS

The following sections present detailed information on the individual conservation programs that constituted the BAWSCA Subscription Program in FY 2015-16. BAWSCA's subscription programs included three rebate programs, two school education programs, and a large landscape program.

### High-Efficiency Toilet Rebates

The BAWSCA HET Program (HET Program) was initiated in September 2008. Prior to the formation of the BAWSCA program, a very small number of BAWSCA agencies offered HET rebates to their customers. Through the HET Program, the participating member agencies offer customers a \$75 or \$125 rebate for replacing a high-volume toilet (i.e., 1.6 gallons per flush, GPF, or more) with a WaterSense certified high-efficiency toilet that uses 1.28 GPF or less. In order to receive the higher rebate, customers must purchase a MaP Premium Toilet (i.e. 1.06 GPF or less).

Fourteen agencies participated in the HET Program in FY 2015-16. In total, the participating BAWSCA member agencies issued 3,128 rebates in FY 2015-16, for a total expenditure of \$335,737 including program administration costs. To date, through the HET Program, a total of 16,404 rebates have been paid to customers within the BAWSCA service area. Some BAWSCA member agencies not participating in the program also offer HET rebates either individually or as part of the SCVWD conservation programs. Additional details for measure implementation and BAWSCA agency participation are shown in Table 4-1 and Figure 4-1.

The number of customer rebates provided by the HET Program increased by 11 percent from FY 2014-15. This increase in participation is attributed to expanded outreach and heightened awareness of the program due to the drought.

As part of its administration of the HET Program for the participating member agencies, BAWSCA performed the following activities:

- ☐ Proposition 84 Grant Administration
- ☐ Development and production of promotional materials
- ☐ Advertising and outreach
- ☐ Hosting information and application forms on the BAWSCA website
- ☐ Receive and process rebate applications
- ☐ Manage HET database
- ☐ Coordinating management of rebate distribution and approvals to the participating agencies
- ☐ Technical and customer support agencies and rebate applicants
- ☐ Track progress against Agency conservation targets



- Initiated development of an online rebate application system

In addition, BAWSCA and the other participating Bay Area water agencies were awarded grant funding from the State to support the HET Program and other water conservation programs in the Bay Area. In FY 2015-16, BAWSCA's HET Program was supported by the Proposition 84 Round 3 grant, which provided \$160,000 to partially reimburse rebate costs at up to \$75 per HET rebate issued.

Through BAWSCA's successful efforts to secure this grant, the BAWSCA member agencies will have access to additional funds to increase customer participation in the HET Program and they will benefit from the increased cost-effectiveness of the measure. As can be seen in Table 4-1, the cost-effectiveness of the HET Program in FY 2015-16 is estimated at \$367 per AF of water saved. Thus, even in absence of the grant funds, this measure continues to be a cost-effective means of achieving water conservation savings in the home, especially when compared to the wholesale cost of purchasing water from the SFPUC, which was \$1,803<sup>1</sup> per AF for FY 2015-16.

## **High-Efficiency Residential Washing Machine Rebates**

In 2002, nine large Bay Area water agencies, including BAWSCA, joined forces to offer a single Bay Area Water Utility Regional Washing Machine Rebate Program (Bay Area WMRP) that collectively targeted 2.7 million residential accounts. BAWSCA administers and advertises the program on behalf of the participating BAWSCA member agencies. In addition to BAWSCA, the other participants in the Bay Area WMRP include Contra Costa Water District, Zone 7 Water Agency, East Bay Municipal Utility District (EBMUD), Alameda County Water District, SCVWD, Marin Municipal Utility District, Sonoma County Water Agency, City of Davis, SFPUC, and Solano County Water Agency. From 2001 to 2006, Electric & Gas Industries Association (EGIA) supported the administration of the Bay Area WMRP. In 2006, BAWSCA and the other Bay Area water agencies contracted with Pacific Gas & Electric (PG&E) to administer and advertise the Bay Area WMRP.

In FY 2015-16, the Bay Area WMRP provided eligible customers with a \$150 rebate for clothes washers that met or exceeded the Energy Star Most Efficient (ESME) specification (i.e., a Water Factor of 3 or less). Of the \$150 total rebate available to customers, the water utilities provided a \$100 rebate and PG&E provided a \$50 rebate. These rebate amounts were effective on January 1, 2016.

Fourteen agencies participated in the WMRP in FY 2015-16. In total, the participating BAWSCA member agencies issued 1,468 rebates in FY 2015-16, for a total expenditure of \$161,321. To date, a total of 58,236 rebates have been paid to customers within the BAWSCA service area. Some BAWSCA member agencies not participating in the program also offer clothes washer rebates either individually or through the SCVWD conservation programs. Additional details for measure implementation and BAWSCA agency participation are shown in Table 4-2 and Figure 4-1.

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<sup>1</sup> Represents the SFPUC FY 2015-16 wholesale water rate plus the BAWSCA bond surcharge.

The decline in customer participation in this program observed in FY 2015-16 was primarily due to code changes that reduced the number of machines eligible for the rebate and was experienced by other Bay Area WMRP participants as well.

As part of its administration of the Bay Area WMRP for the benefit of the participating member agencies, BAWSCA performed the following activities:

- ☐ Proposition 84 Grant Administration
- ☐ Development and production of BAWSCA-specific promotional materials
- ☐ Advertising and outreach
- ☐ Hosting information on the BAWSCA website
- ☐ Contract negotiation with PG&E
- ☐ Coordination with other members of the Bay Area WMRP
- ☐ Coordinating management of rebate distribution and approvals to and from PG&E and the participating agencies
- ☐ Liaison between agencies and PG&E
- ☐ Manage agency invoicing for rebate payment
- ☐ Track progress against individual agency conservation targets

BAWSCA and the other participating Bay Area water agencies were awarded grant funding from the State to support the WMRP and other water conservation programs in the Bay Area. The Proposition 84 Round 3 grant provided \$225,000 to partially reimburse clothes washer rebate costs in FY 2015-16.

Through BAWSCA's successful efforts to secure this grant and other grants, the BAWSCA member agencies have had access to additional funds to increase customer participation in the Bay Area WMRP and benefit from the overall cost-effectiveness of the program. As can be seen in Table 4-2, the unit cost of water saved for the Bay Area WMRP in FY 2015-16 is estimated at \$320 per AF. Thus, this measure continues to be a very cost-effective means of achieving water conservation savings in the home, especially when compared to the wholesale cost of purchasing water from the SFPUC, which was \$1,803 per AF for FY 2015-16.

## **Lawn Be Gone! Program**

BAWSCA's Lawn be Gone! Program offers rebates to customers for replacing turf with water-efficient landscaping. In FY 2015-16, the program provided customers with rebates of \$1 to \$4 per square foot of turf replaced, as determined by the participating BAWSCA member agency. Per the Lawn Be Gone! Program terms, the new landscape must include at least 50 percent live plant coverage, with the difference completed in permeable hardscape, and all plants must be low water use plants from the BAWSCA-Approved Plant List. Participation in this program provides BAWSCA members a way to offer their customers an incentive, via rebates, to reduce their outdoor water use and create permanent and lasting water savings. This program also has

an educational element (i.e., demonstrating to the wider public that low water use landscaping can be an attractive alternative to lawns).

Ten agencies participated in the BAWSCA Lawn Be Gone! Program in FY 2015-16 (see Table 4-3). In total, the BAWSCA member agencies issued 93 rebates in FY 2015-16 and supported the conversion of 102,461 square feet of turf grass to water-efficient landscaping. The total expenditure including administration costs was approximately \$177,170.

As part of its administration of the BAWSCA Lawn Be Gone! Program for the participating member agencies, BAWSCA performed the following activities:

- ☐ Proposition 84 Grant Administration
- ☐ Development and production of BAWSCA-specific promotional materials
- ☐ Development of the BAWSCA-Approved Plant list, which includes over 1,600 plants and denotes whether they are appropriate for the Coast, Peninsula or East Bay climates, as well as their water demand
- ☐ Advertising and outreach
- ☐ Hosting information on the BAWSCA website
- ☐ Coordinating management of rebate distribution and approvals to and from customers and the participating agencies
- ☐ Track progress against individual agency conservation targets
- ☐ Initiated development of online rebate application system

In FY 2015-16, BAWSCA's Lawn Be Gone! Program was supported by the Proposition 84 Round 3 grant, which provided \$150,000 to partially reimburse Lawn Be Gone! rebate costs at a rate of \$0.75 per square foot of turf replaced.

As can also be seen in Table 4-3, the cost-effectiveness of the BAWSCA Lawn Be Gone! Program in FY 2015-16 is estimated to be \$1,459 per AF of water saved. Thus, this measure is a cost-effective means of achieving water conservation savings, especially when compared to the wholesale cost of purchasing water from the SFPUC, which was \$1,803 per AF for FY 2015-16.

## **Rain Barrel Rebate Program**

Beginning in October 2014, BAWSCA partnered with the San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) to offer rebates of up to \$100 for the purchase and installation of rain barrels. Rain barrels are used to collect rainwater from hard surfaces, such as rooftops, and store this water for later use in watering landscapes. For FY 2015-16, the SMCWPPP provided rain barrel rebates of up to \$50 per rain barrel for installations within San Mateo County. Participating BAWSCA member agencies also provided rebates of up to \$50 per rain barrel, for a total maximum customer rebate of \$100 in areas where both rebates were offered.

Ten agencies participated in the Rain Barrel Rebate Program in FY 2015-16 (see Table 4-4). In total, the participating BAWSCA member agencies issued 445 rain barrel rebates. An additional 122 rain barrel rebates, funded by the SMCWPPP, were issued within the BAWSCA service area in San Mateo County. Total expenditures were \$46,484. Water savings associated with each rain barrel installation is dependent on a variety of factors, including precipitation and time between storm events.

## Large Landscape Audits

BAWSCA first offered Large Landscape Audits to member agencies in FY 2002-03. This measure enables participating BAWSCA agencies to save water used for outdoor landscaping and to meet the requirements of the CUWCC Programmatic Best Management Practice that targets landscape customers in a cost-effective manner.

The Large Landscape Audit measure includes large landscape surveys to assess landscape watering needs and monthly distribution of landscape water budgets for selected accounts. This work is done by Waterfluence, under contract to BAWSCA. A key component of the measure implementation is the ongoing tracking of actual water use and estimated water savings at surveyed sites. Audits are offered to qualifying commercial and residential accounts.

A total of 973 sites in nine different agencies were part of the BAWSCA Large Landscape Audit measure in FY 2015-16, as shown in Table 4-5 and Figure 4-1. Additional BAWSCA member agencies also offer this program, but contract with Waterfluence independently or through SCVWD. The 2016 Waterfluence Annual Report found that the sites participating in the program reduced average water use by 1,432 acre-feet in 2016. These water savings are down from FY 2014-15 mainly due to California Water Services landscaping sites not being included in the official report. Although less savings were reflected this year than last fiscal year, the figure is still larger than any other year since the launch of the program.

As part of its administration of the BAWSCA Large Landscape Audit measure for the participating member agencies, BAWSCA performed the following activities:

- ☐ Hosting information on the BAWSCA website
- ☐ Contract negotiation with Waterfluence
- ☐ Liaison between agencies and Waterfluence
- ☐ Manage agency invoicing
- ☐ Track progress against individual agency conservation targets

As can be seen in Table 4-5, the unit cost of water saved of the Large Landscape Audit measure in FY 2015-16 is conservatively estimated at \$71 per AF.<sup>2</sup> Thus, this measure continues to be very cost effective, especially when compared to the wholesale cost of purchasing water from the SFPUC, which was \$1,803 per AF for FY 2015-16.

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<sup>2</sup> The unit cost of water saved for this program varies year to year based on weather, observed water savings, the number of landscape surveys completed, and changes in program offerings and cost.

## School Education – Water Wise Kits

Since FY 2005-06, BAWSCA has contracted with Resource Action Programs to implement the Water Wise school education measure that includes in-classroom water conservation informational materials and the distribution of indoor and outdoor water conservation kits (i.e., the Water Wise Kits) to 5th grade students. Resource Action Programs works directly with the teachers and schools to provide them with this turn-key, in-classroom program and the Water Wise Kits.

The Water Wise curriculum has been designed to be easily implemented by teachers, and easily understood and taken back into the home by the students. The Water Wise Kits include water saving devices that can be installed at the student's homes (e.g., low-flow showerheads and faucet aerators) and a water audit that the students can perform with their parents. The students are provided with the motivation, information, and tools they need to perform an in-home water audit. The information and material provided to the teachers and students also includes methods that can be used to quantify the water savings as a result of installing the equipment contained in the kit and performing the recommended, water-conserving actions.

After the student performs the audit and installs the water and energy saving devices, affidavits signed by the parents are returned to the school, collected by the teacher, and forwarded to Resource Action Programs for documentation of measure implementation and the estimated water savings. Resource Action Programs then prepares a final report for distribution to the participating agencies.

Based on information provided by Resource Action Programs, participation in the Water Wise school education program in FY 2015-16 is expected to save over 228 AF of water over the next 10 years. In addition to helping member agencies save water, the Water Wise school education measure assists participating agencies in implementing the CUWCC Foundational Education Programs, which include Public Information and School Education, as well as the CUWCC Programmatic Best Management Practice that targets residential customers.

In FY 2015-16, 2,452 kits were distributed. To date, 31,253 students and teachers have participated in the Water Wise school education measure with an estimated total lifetime water savings of as much as 5,480 AF. See Table 4-6 and Figure 4-1.

As part of its administration of the Water Wise school education measure for the participating member agencies, BAWSCA performed the following activities:

- ☐ Development and production of BAWSCA-specific promotional materials to insert into the Water Wise kits
- ☐ Hosting information on the BAWSCA website
- ☐ Contract negotiation with Resource Action Programs
- ☐ Liaison between agencies and Resource Action Programs
- ☐ Manage agency invoicing
- ☐ Track progress against individual agency conservation targets

In addition, in FY 2015-16 BAWSCA continued its efforts to work with Resource Action Programs to increase participation in, and results from, the Water Wise school education measure. As part of this effort, BAWSCA provided an incentive to the classrooms and students in the participating service areas. The incentives were provided by BAWSCA and distributed by Resource Action Programs based on the following protocols:

- ☐ A \$100 cash prize was given to the classrooms where the teachers enroll in the Water Wise school education measure and the Water Wise surveys are returned with at least an 80% response rate
- ☐ A gift with an up to \$5 value was given to those students that complete the Water Wise surveys that document whether they installed the water conserving-devices from the kits in their homes, complete all the homework, and/or score a greater than 80% on the final written test that is given as part of the Water Wise school education measure

As can also be seen in Table 4-5, the cost-effectiveness of the Water Wise school education measure in FY 2015-16 is estimated at \$437 per AF of water saved, a slight increase from FY 2014-15. Thus, this measure continues to be very cost-effective means of achieving water conservation savings and educating students, especially when compared to the wholesale cost of purchasing water from the SFPUC, which was \$1,803 per AF for FY 2015-16.

## School Education – EarthCapades Assemblies

BAWSCA school education efforts for FY 2015-16 included a school assembly program run by EarthCapades. EarthCapades performances combine age-appropriate state science standards with circus skills, juggling, music, storytelling, comedy, and audience participation to teach environmental awareness, water science and conservation. The EarthCapades assemblies are designed to include local water source and watershed education and information that the participating member agencies would like to share with the community. BAWSCA and the participating member agencies provided specific information to EarthCapades regarding the San Francisco Regional Water System and other topics (e.g., recycled water). EarthCapades integrated this information into the specific script used for assemblies conducted within the participating member agencies service areas.

In FY 2015-16, thirteen agencies sponsored 118 shows throughout the BAWSCA service area for a total expenditure of \$64,575. A total of 24,861 children attended the assemblies from 68 different schools within the BAWSCA service area. The shows were generally very well received by the schools and agencies alike as evidenced by this quote from a survey submitted by a teacher after the show.

“The music, animated acting, and visuals were all excellent tools to engage the students and help them understand the concept. The performers were very engaging, and the students thoroughly enjoyed and understood what was being taught.

I hope this will be a yearly event. It is so important, especially with the current drought, that the students are made aware of the issue. Excellent!”

*Teacher Woodrow Wilson Elementary School Daly City*



As part of its administration of the EarthCapades school education measure for the participating member agencies, BAWSCA performed the following activities:

- ☐ Hosting information on the BAWSCA website
- ☐ Contract negotiation with EarthCapades
- ☐ Liaison between agencies and EarthCapades
- ☐ Manage agency invoicing
- ☐ Track progress against individual agency conservation targets

### **School Education - Tuolumne River Trust**

Since FY 2010-11, BAWSCA has partnered with TRT to support the TRT's water conservation outreach to elementary schools in the BAWSCA service area. The TRT's school outreach is called "That's the Tuolumne in My Tap" and includes a slideshow presentation to fourth and fifth graders about the Tuolumne river resource and water conservation. The TRT's outreach is designed to educate local students about where their water comes from and to promote an ethic of environmental stewardship. The presentation focuses on the history and special qualities of the Tuolumne River, the animals that depend on the River, and what can be done to help protect the River by conserving water. More information about the TRT's School education efforts can be seen on their website, <http://www.tuolumne.org>.

In prior years, BAWSCA's partnership with TRT on this program included supplied the TRT with information and materials that described the local water conservation options that the TRT distributed to the students. Beginning in FY 2014-15, BAWSCA expanded the partnership with TRT include sponsorship of the classroom presentations at selected schools. In FY 2015-16, six agencies sponsored 36 presentations at schools within their respective service areas.

### **Free Sprinkler Nozzles Program**

Beginning in FY 2015-16, BAWSCA, through a MOU with Western Municipal Water District, administered a Free Sprinkler Nozzles Program to provide BAWSCA member agencies with a system to provide free high-efficiency sprinkler nozzles to customers within their respective service areas. The objective of the program is to reduce outdoor water use among Local Water Agency customers by improving the efficiency of customer irrigation systems. The program is administered via the FreeSprinklerNozzles.com website. To receive a voucher, customers must log in to the website using their Local Water Agency account information. Vouchers are issued for standard among of 25 nozzles per single family customer or 100 nozzles per commercial or multi-family customers.

Four agencies participated in the Free Sprinkler Nozzles Program in FY 2015-16. In total, the BAWSCA member agencies provided customers with 901 high-efficiency sprinkler nozzles through the voucher program. This results in an estimated annual water savings of 374,906 gallons and an estimated lifetime savings of 5.75 acre feet (if we assume the devices have a lifespan of five years). As can be seen in Table 4-7, the cost effectiveness is reflected by the unit cost of water saved which was approximately \$564 per acre foot, especially when



compared to the wholesale cost of purchasing water from the SFPUC, which was \$1,803 per AF for FY 2015-16.

## **Home Water Use Reports Program**

In FY 2014-15 BAWSCA entered into a contract with WaterSmart Software to administer a Home Water Use Reports Program in order to develop and deliver individual household reports that use data analytics and behavioral science techniques to provide customized water consumption information, messaging, and water saving recommendations. The object of the Program is to motivate customers to improve water use efficiency through changes in behavior or adoption of more water efficient technology by increasing customer awareness of household water usage when compared to peers.

Three agencies participated in the Home Water Use Reports Program in FY 2015-16. During that time WaterSmart Software sent bi-monthly reports to approximately 50,350 residential accounts enrolled in the program. As shown in Table 4-8 the unit cost of water saved in FY 2015-16 is estimated at \$1,305 per AF of water saved. Thus, this measure provides a cost-effective means of achieving water conservation savings and increasing customer engagement, especially when compared to the wholesale cost of purchasing water from the SFPUC, which was \$1,803 per AF for FY 2015-16.

## **WaterSense Fixtures Bulk Purchase Program**

The WaterSense Fixtures Bulk Purchase Program, launched in FY 2015-16, enables BAWSCA member agencies to purchase water conservation fixtures, devices, and giveaway items from AM Conservation through BAWSCA at a pre-negotiated bulk rate. Participating agencies then distribute these devices to their customers, free of charge, to support customers in using water efficiently. Devices available through this program include: low-flows showerheads, faucet aerators, hose nozzles, toilet leak detection tablets, shower timers, and soil moisture meters.

Agencies may participate in the program on a rolling basis, placing orders through BAWSCA as needed throughout the year. In FY 2015-16, 5 agencies participated in the WaterSense Fixtures Bulk Purchase Program. As shown in Table 4-9, a total of 5,597 fixtures were purchased among all participating agencies. These purchases included 1330 shower heads, 1750 faucet aerators, 125 toilet tank bags, 1200 leak detection dye tablets, 300 shower timers, 268 hose nozzles, and 624 moisture meters.

**Table 4-1: High Efficiency Toilet Rebates Summary**

<b>Fiscal Year</b>	<b>Number of Participating BAWSCA Agencies</b>	<b>Total Rebates Issued</b>	<b>Estimated Annual Water Savings (acre-feet, AF) (a)</b>	<b>BAWSCA Administrative Cost (b)</b>	<b>Program Cost (Rebates Paid to Customers)</b>	<b>Unit Cost of Water Saved (\$/AF) (c)</b>
FY 2008-09	13	1,053	4	\$12,047	\$157,950	\$447
FY 2009-10	14	2,515	11	\$16,536	\$377,250	\$552
FY 2010-11	14	2,005	8	\$16,532	\$300,750	\$541
FY 2011-12	14	1,436	6	\$12,271	\$149,272	\$385
FY 2012-13	15	1,612	7	\$6,299	\$164,377	\$362
FY 2013-14	12	1,848	8	\$9,464	\$191,632	\$368
FY 2014-15	14	2,807	12	\$13,926	\$300,991	\$384
FY 2015-16	14	3,128	13	\$10,180	\$325,557	\$367
<b>Totals</b>	<b>--</b>	<b>16,404</b>	<b>69</b>	<b>--</b>	<b>--</b>	<b>--</b>

**Notes:**

(a) Estimated water savings based on water use differential between a 3.5 gallon per flush (gpf) toilet and a 1.28 gpf toilet. Assumes 5 flushes per toilet per day per person, 2.64 persons per household, and 2.2 toilets per household (modified from Vickers, Handbook of Water Use and Conservation, 2001). Water savings assumptions are only associated with the level of new activity documented for single year, and do not represent cumulative savings over time. Further, since this calculation is based only on single family, it likely underestimates savings because it does not account for savings at multi-family or commercial accounts.

(b) Includes BAWSCA staff hours, database management, materials design and printing and other administrative services.

(c) Assumes a 15-year toilet life and 15 years of resultant water savings. Assumes a discount rate of 3.01% and a cost of water and wastewater of \$1,803 per acre-foot each, which represents the SFPUC FY 15-16 rate including bond surcharges.

**Table 4-2: Residential Washing Machine Rebates Summary**

<b>Program Information</b>	<b>Number of Participating BAWSCA Agencies (f)</b>	<b>Total Rebates Issued</b>	<b>Estimated Annual Water Savings (acre-feet, AF) (a)</b>	<b>Program Administrator Cost (b)</b>	<b>BAWSCA Administrative Cost (c)</b>	<b>Program Cost (Rebates Paid to Customers) (d)</b>	<b>Unit Cost of Water Saved (\$/AF) (e)</b>
FY 2001-02	11	1,244	23	\$19,308	--	\$125,325	\$417
FY 2002-03	15	3,091	58	\$31,192	--	\$336,200	\$336
FY 2003-04	10	1,805	34	\$22,433	--	\$178,400	\$315
FY 2004-05	16	2,914	55	\$41,913	--	\$379,375	\$409
FY 2005-06	16	2,332	44	\$33,484	--	\$404,113	\$530
FY 2006-07	16	3,254	61	\$36,300	--	\$449,100	\$422
FY 2007-08	15	4,162	73	\$30,015	--	\$468,199	\$338
FY 2008-09	16	5,339	93	\$40,356	\$21,501	\$511,275	\$322
FY 2009-10	15	6,941	122	\$69,558	\$21,448	\$851,375	\$408
FY 2010-11	17	7,030	123	\$74,525	\$23,980	\$560,450	\$391
FY 2011-12	18	6,003	105	\$66,628	\$13,898	\$387,105	\$227
FY 2012-13	18	5,706	100	\$62,350	\$16,851	\$362,200	\$226
FY 2013-14	18	4,272	75	\$45,735	\$9,964	\$289,075	\$235
FY 2014-15	15	2,675	47	\$29,250	\$6,852	\$272,985	\$337
FY 2015-16	14	1,468	26	\$9,950	\$4,546	\$146,825	\$320
<b>Totals</b>	<b>--</b>	<b>58,236</b>	<b>1,038</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>

**Notes:**

(a) Estimated water savings based on water use differential between a 1990's era washing machine that uses 43 gallons/load and a present era washing machine that uses 27 gallons/load. Assumes 2.64 persons per household and 0.37 loads/person/day (Vickers, Handbook of Water Use and Conservation, 2001). Water savings assumptions are associated with the level of activity documented for single year, and do not represent cumulative savings over time.

(b) Includes EGIA or PG&E staff hours, database management, materials design and printing and other administrative services.

(c) Includes BAWSCA staff hours, database management, materials design and printing and other administrative services.

(d) Cost to agencies before accounting for grant funding. In FY 2015-16, grant funding of \$75 per rebate issued was available to agencies.

(e) Assumes a 15-year machine life and 15 years of resultant water savings. Assumes a discount rate of 3.01% and a cost of water of \$1,803 per acre-foot each, which represents the SFPUC FY 2015-16 rate including bond surcharges.

(f) In FY 2013-14, Cal Water participated in the program through December 31, 2013 only.

**Table 4-3: Lawn Be Gone Rebates Summary**

<b>Fiscal Year</b>	<b>Number of Participating BAWSCA Agencies</b>	<b>Total Rebates Issued</b>	<b>Total Square Feet Converted</b>	<b>Estimated Annual Water Savings (acre-feet, AF) (a)</b>	<b>BAWSCA Administrative Cost (b)</b>	<b>Program Cost (Rebates Paid to Customers) (c)</b>	<b>Unit Cost of Water Saved (\$/AF) (d)</b>
FY 2010-11	9	16	17,079	0.86	\$1,734	\$5,017	--
FY 2011-12	9	16	37,635	2.09	\$3,760	\$14,018	\$434
FY 2012-13	10	16	10,226	0.7	\$2,914	\$5,697	\$628
FY 2013-14	12	17	11,852	0.82	\$2,420	\$8,972	\$709
FY 2014-15	12	100	89,349	6.2	\$10,329	\$131,503	\$1,168
FY 2015-16	10	93	102,461	12.2	\$3,540	\$173,630	\$1,459
<b>Totals</b>	<b>--</b>	<b>258</b>	<b>268,602</b>	<b>22.87</b>	<b>--</b>	<b>--</b>	<b>--</b>

**Notes:**

(a) Estimated water savings based on water use differential between a turf grass (assumed to use 3.5 acre-feet per acre) and either water-efficient plantings (assumed to use 1.0 acre-feet per acre) or permeable hardscape, which is assumed to use no water.

(b) Includes BAWSCA staff hours, database management, materials design and printing and other administrative services.

(c) In FY 2015-16, the cost to agencies was \$1 to \$2 per square foot of turf grass replaced.

(d) Assumes a 15-year project life and 15 years of resultant water savings. Assumes a discount rate of 3.01% and a cost of water of \$1,803 per acre-foot each, which represents the SFPUC FY 2015-16 rate including bond surcharges.

**Table 4-4: Rain Barrel Rebates Summary**

<b>Fiscal Year</b>	<b>Number of Participating BAWSCA Agencies</b>	<b>Rebates Issued by BAWSCA Agencies</b>	<b>Additional Rebates Issued by SMCWPPP (b)</b>	<b>BAWSCA Administrative Cost</b>	<b>Program Cost (Rebates Paid to Customers)</b>
FY 2014-15 (a)	8	331	110	\$6,808	\$27,729
FY 2015-16	10	445	122	\$8,436	\$38,048
<b>Totals</b>	<b>--</b>	<b>776</b>	<b>232</b>	<b>--</b>	<b>--</b>

**Notes:**

(a) Program launched on October 1, 2014

(b) Rebates within San Mateo County, outside the service area of a participating BAWSCA member agency, are funded entirely by the SMCWPPP.

**Table 4-5: Large Landscape Audits Summary**

<b>Program Information</b>	<b>Number of Participating BAWSCA Agencies</b>	<b>Number of Landscaping Sites (f)</b>	<b>Estimated Annual Water Savings (acre-feet, AF) (a)</b>	<b>BAWSCA Administrative Cost (d)</b>	<b>Program Cost</b>	<b>Unit Cost of Saved Water (\$/AF) (e)</b>
FY 2002-03	4	240	N/A	--	\$65,132	N/A
FY 2003-04	5	240	299	--	\$23,802	\$80
FY 2004-05	4	258	212	--	\$29,663	\$140
FY 2005-06	5	258	520	--	\$24,720	\$48
FY 2006-07	6	273	543	--	\$23,362	\$43
FY 2007-08	9	630	602	--	\$84,425	\$63 - 124
FY 2008-09 (b)	11	712	435	--	\$108,382	\$83 - 125
FY 2009-10 (c)	12	958	1,080	\$1,776	\$162,103	\$58
FY 2010-11	9	646	632	\$1,332	\$102,764	\$82
FY 2011-12	9	711	786	\$1,332	\$66,045	\$131
FY 2012-13	9	810	990	\$1,332	\$66,045	\$90
FY 2013-14	8	787	865	\$1,184	\$85,632	\$99
FY 2014-15	9	1248	2,204	\$1,332	\$62,049	\$29
FY 2015-16	9	973	1,432	\$1,184	\$99,808	\$71
<b>Totals</b>	<b>--</b>	<b>--</b>	<b>10,600</b>	<b>--</b>	<b>--</b>	<b>--</b>

**Notes:**

(a) Water savings estimated on a calendar year basis. Savings reflect the difference between reporting year's water use and pre-program annual water use.

(b) For FY 2008-09, includes water use for the sites that have been in the program since 2004.

(c) For FY 2009-10, includes water use for the sites that have been in the program prior to 2009.

(d) Includes BAWSCA staff hours, materials printing and other administrative services.

(e) For FY 2007-08 through FY 2015-16, unit cost of saved water from Landscape Program Summary Reports (2008; 2009; 2010; 2011; 2012; 2013; 2014; 2015; 2016).

(f) Does not include California Water Service sites for FY 2015-16.

**Table 4-6: Water Wise School Education Summary**

<b>Fiscal Year</b>	<b>Number of Participating BAWSCA Agencies</b>	<b>Number of Participants</b>	<b>Estimated Annual Water Savings (gallons per kit) (a) (b)</b>	<b>Estimated Lifetime Savings for Kits Installed (acre-feet, AF) (a) (b)</b>	<b>BAWSCA Administrative Cost (c)</b>	<b>Program Costs (Kit Distribution)</b>	<b>Unit Cost of Saved Water (\$/AF) (b)</b>
FY 2005-06	6	1,554	17,451	499	--	\$51,671	\$103
FY 2006-07	11	2,871	17,451	922	--	\$93,023	\$101
FY 2007-08	14	3,737	17,451	1,201	--	\$126,819	\$106
FY 2008-09	14	3,685	9,785	975	--	\$111,515	\$114
FY 2009-10	12	2,903	6,475	512	--	\$104,091	\$203
FY 2010-11 (d)	8	3,342	4,844	316	\$4,887	\$117,103	\$385
FY 2011-12 (d)	8	3,221	3,892	262	\$3,221	\$108,951	\$427
FY 2012-13 (d)	6	2,144	5,110	165	\$2,144	\$67,859	\$425
FY 2013-14 (d)	8	2,668	4,324	184	\$2,668	\$84,747	\$474
FY 2014-15 (d)	8	2,676	4,965	216	\$2,676	\$87,886	\$420
FY 2015-16 (d)	8	2,452	5,284	228	\$2,452	\$97,130	\$437
<b>Totals</b>	--	<b>31,253</b>	<b>97,032</b>	<b>5,480</b>	--	--	--

**Notes:**

(a) For years prior to FY 2008-09, water savings estimated based on an assumed 60 percent installation rate and a 10 year lifetime. For FY 2008-09 through FY 2015-16, water savings estimated based on actual reported installation rate and a 10 year lifetime. (Resource Action Reports, 2009; 2010; 2011; 2012). Starting in 2010 water savings estimates were modified to reflect updated estimates by EPA WaterSense.

(b) Includes BAWSCA staff hours, materials design and printing and other administrative services.



**Table 4-7: Free Sprinkler Nozzles Program Summary**

<b>Fiscal Year</b>	<b>Number of Participating BAWSCA Agencies</b>	<b>Number of Nozzles</b>	<b>Estimated Annual Water Savings (gallons) (a)</b>	<b>Estimated Lifetime Savings (acre feet - AF) (b)</b>	<b>BAWSCA Administrative Cost</b>	<b>Program Costs (Nozzle Distribution)</b>	<b>Unit Cost of Saved Water (\$/AF) (b)</b>
FY 2015-16 (d)	4	901	374,906	5.753	\$0	\$3,243.60	\$564
<b>Totals</b>	--	<b>901</b>	<b>374,906</b>	<b>6</b>	--	--	--

**Notes:**

(a) Assumes 1.14 gpd per nozzle of water savings

(b) Assumes five year life of the device

**Table 4-8: Home Water Use Reports Program Summary**

<b>Fiscal Year</b>	<b>Number of Participating BAWSCA Agencies</b>	<b>Number of Households Enrolled (a)</b>	<b>BAWSCA Administrative Cost</b>	<b>Program Costs</b>	<b>Unit Cost of Saved Water (\$/AF)</b>
FY 2015-16	3	50,350	\$0	\$325,750.90	\$1,305
<b>Totals</b>	--	<b>50,350</b>	<b>\$0</b>	<b>\$325,750.90</b>	<b>\$1,305</b>

**Notes:**

(a) Water savings calculation provided by WaterSmart analytics platform which calculated water savings for participating households at 2-5%.

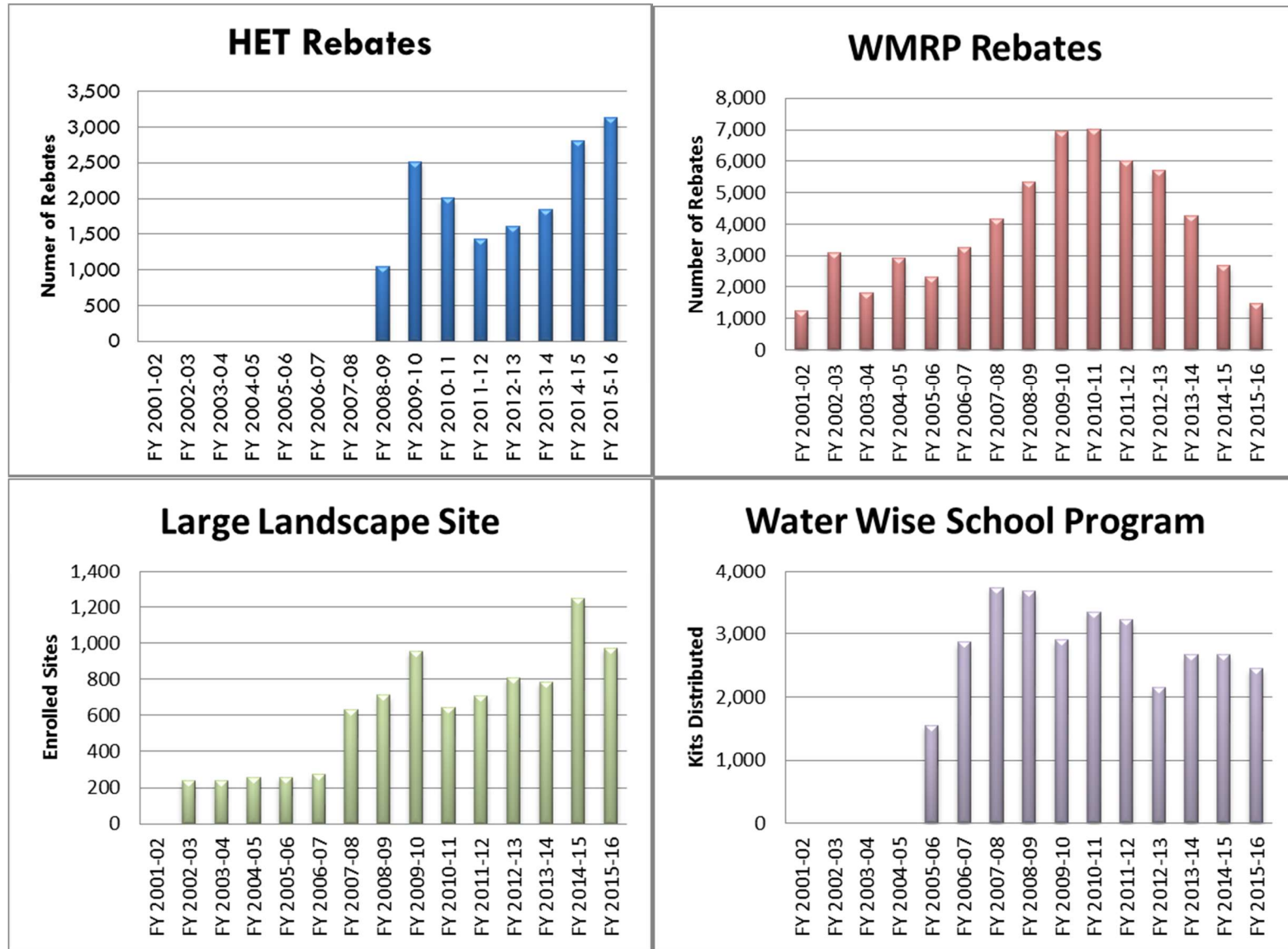
**Table 4-9: WaterSense Fixtures Bulk Purchase Program**

<b>Fiscal Year</b>	<b>Number of Participating BAWSCA Agencies</b>	<b>Number of Fixtures Purchased</b>	<b>BAWSCA Administrative Cost (a)</b>	<b>Program Costs</b>
FY 2015-16	5	5,597	\$0	\$10,003.52
<b>Totals</b>	--	<b>5,597</b>	<b>\$0</b>	<b>\$10,003.52</b>

**Notes:**

(a) No BAWSCA administrative costs for first program year.

**Figure 4-1: Participation in BAWSCA Subscription Measures**



## 5. BAWSCA PUBLIC OUTREACH AND REGIONAL PARTNERSHIPS

The following sections summarize some of the additional public outreach and partnership activities that BAWSCA pursued in FY 2015-16 to support and promote the Regional Water Conservation Program.

### **Silicon Valley Water Conservation Awards**

BAWSCA continued its participation in the Silicon Valley Water Conservation Awards program. The program started in 2008 when BAWSCA joined with the Tuolumne River Trust, Clean Water Action, Sustainable San Mateo County, Sustainable Silicon Valley, Joint Venture Silicon Valley, SCVWD and others to form the Silicon Valley Water Conservation Award Coalition (Coalition) (<http://www.waterawards.org/>). The Coalition recognizes those organizations, agencies, businesses and individuals whose programs and leadership have advanced water conservation in Silicon Valley (i.e., San Mateo County, Santa Clara County and portions of Alameda County). Award categories include Large Business, Small Business, Government Agency, Education, Greenscape Management, and Organization.

### **Water Conservation Showcase**

Over the last several years, BAWSCA has formed close and productive partnerships with other water utilities and organizations in the Bay Area. For example, BAWSCA is a Founding Partner and sponsor the Annual Water Conservation Showcase, which is put on by PG&E, the United States Green Building Council, and EBMUD. The Water Conservation Showcase is a one-day event that presents cutting edge water-conserving strategies through expert-led presentations and exhibits. The Water Conservation Showcase is designed to encourage cross industry dialogue, and brings together government agencies, private and non-profit organizations, and consumers.

An estimated 600 people as well as 48 businesses and organizations participated in the 2016 Water Conservation Showcase.

### **Public Outreach**

BAWSCA attended and was a featured speaker at several events in FY 2015-16 with the purpose of educating the public and others about BAWSCA, the Regional Water System, BAWSCA's water supply strategy, and water conservation opportunities. These events and forums, hosted by several entities and/or organizations, included but were not limited to:

- ☐ Sustainable Silicon Valley
- ☐ San Mateo Leadership Group
- ☐ San Mateo Rotary
- ☐ WaterSmart Innovations

- ☐ City/County Association of Governments of San Mateo County
- ☐ Sustainable San Mateo County
- ☐ San Mateo Water Wise Landscape Symposium
- ☐ Utah Water Conservation Forum

In all cases, BAWSCA was approached by the above entities and asked to present, host a booth, or sponsor an event. In each case BAWSCA evaluated how the purpose and message of the event aligned with BAWSCA outreach objectives and the audience that BAWSCA would be able to target. BAWSCA then made the decision to allocate its limited resources in the most effective way possible to reach a specific target audience with a specific message.

## **Civic Spark Internship**

In FY 2015-16, BAWSCA collaborated with the San Mateo County Energy Watch (SMCEW) on several regional water conservation initiatives, spearheaded by a CivicSpark fellow. CivicSpark is a Governor's Initiative AmeriCorps program dedicated to building capacity for local governments to address climate change and water management issues in California. The program is administered by the Local Government Commission in partnership with the Governor's Office of Planning & Research.

BAWSCA's CivicSpark fellow worked on specific initiatives that focused on BAWSCA's water conservation programs, including the development and implementation of community outreach campaigns in order to increase participation in water-efficiency and water-energy nexus programs including the Lawn Be Gone rebate program, the High Efficiency Toilet rebate program, the Rain Barrel rebate program, and the Landscape Education Program.