

# 2017

## Pollution Prevention Report



**Dublin San Ramon  
Services District**  
*Water, wastewater, recycled water*

7051 Dublin Blvd.  
Dublin, CA 94568  
[www.dsrsd.com](http://www.dsrsd.com)



# Table of Contents

---

## Introduction

DSRSD Background and Service Area .....	i
Treatment Plants and Processes .....	i

## CHAPTER 1 - Pollutants of Concern and Their Sources.....1

## CHAPTER 2 - Tasks to Minimize Pollutants .....3

Pretreatment and Waste Minimization Audits for Industrial Users.....	3
Mercury Control .....	3
<i>Dental Amalgam Waste</i> .....	3
<i>Collection and Recycling</i> .....	4
Copper Control .....	4
Fats/Oils/Grease (FOG) Control.....	5
Pharmaceutical Collection .....	6
Perchloroethylene Control .....	6
Cyanide Control .....	6
PCBs Control .....	7
Triclosan.....	7
Trash and Wipes .....	8

## CHAPTER 3 - Outreach Programs

Public Outreach .....	9
<i>Waste Mercury Collection and Recycling</i> .....	9
<i>Waste Pharmaceuticals Collection</i> .....	9
<i>Website Targets So-Called Flushables, FOG</i> .....	10
<i>Education Efforts for Adults</i> .....	10
<i>Education Efforts for Children</i> .....	11
Career Training.....	12
Employee Outreach.....	12
Partnering with Other Agencies and Cities .....	13
<i>Bay Area Pollution Prevention Group</i> .....	13
<i>California Association of Sanitation Agencies</i> .....	13
<i>Bay Area Biosolids to Energy Coalition</i> .....	13
<i>East Bay Municipal Utility District and Recycled Water Users</i> .....	14
Legislative and Regulatory Advocacy.....	14

## CHAPTER 4 - Measuring Effectiveness and Progress.....15

<i>Table 1 - Mercury Education and Outreach</i> .....	16
<i>Table 2 - Copper Education and Outreach</i> .....	17
<i>Table 3 - FOG Education and Outreach</i> .....	18
<i>Table 4 - Pharmaceutical Education and Outreach</i> .....	19
<i>Table 5 - Triclosan</i> .....	20
<i>Table 6 - Trash and Wipes</i> .....	20





# Introduction

---

This report on the Dublin San Ramon Services District Pollution Prevention Program from January 1 through December 31, 2017 is prepared in accordance with the requirements of National Pollutant Discharge Elimination System (NPDES) Order R2-2017-0017, NPDES Permit CA0037613.

## DSRSD Background and Service Area

Founded in 1953, Dublin San Ramon Services District (DSRSD, District) serves 173,000 people, providing potable and recycled water service to the City of Dublin and the Dougherty Valley area of the City of San Ramon, wastewater collection and treatment to Dublin and south San Ramon, and wastewater treatment to the City of Pleasanton (by contractual agreement). Its distribution and collection network includes 319 miles of potable water pipe, 68 miles of recycled water pipe, and 207 miles of collection system, along with 14 potable water reservoirs, 17 potable water pump stations, 4 recycled water reservoirs, 5 recycled water pump stations, and 2 wastewater lift stations. DSRSD pumps effluent to San Francisco Bay through pipelines operated by the Livermore Amador Valley Water Management Agency (LAVWMA) into the East Bay Dischargers Authority (EBDA) for disposal.

## Treatment Plants and Processes

DSRSD's Regional Wastewater Treatment Facility is located in Pleasanton and treats domestic, commercial, and industrial wastewater. The wastewater treatment plant discharges under National Pollutant Discharge Elimination System (NPDES) Order No. R2-2017-0017 effective July 1, 2017. With a permitted capacity of 20.2 million gallons per day (MGD) (which consists of 17.0 MGD domestic wastewater plus 3.2 MGD of Zone 7 brine), the plant currently treats approximately 10.61 MGD of wastewater utilizing an activated sludge process, sedimentation, and hypochlorite disinfection. An adjacent water recycling plant applies advanced tertiary treatment to up to 12.7 MGD of secondary effluent, using sand filtration. Currently, the sand filtration system is in the process of being expanded to a capacity of 16.2 MGD, which is due for completion in April 2018. Additionally, there is a microfiltration treatment system that has



*DSRSD uses four secondary clarifiers to remove "spent" microorganisms from treated wastewater effluent.*

the treatment capacity of 2.5 MGD. Following advanced tertiary treatment, it receives ultraviolet disinfection.



# Pollutants of Concern and Their Sources

---

A pollutant of concern (POC) is defined as a substance that exceeds the applicable water quality objectives from the California Toxic Rule (CTR), NPDES permit limits, or the water quality criteria established in the Regional Water Quality Control Board (RWQCB) Basin Plan. The District identifies pollutants of concern:

- By reviewing monitoring data from DSRSD and EBDA influent, effluent, biosolids, and industrial discharges;
- When they are designated as such by the RWQCB in the District's NPDES permit; or
- When applicable pollutants are addressed by the Bay Area Pollution Prevention Group (BAPPG) through Bay Area Clean Water Agencies (BACWA).

DSRSD has had a Pollution Prevention Program since 1995. During the current reporting period, District staff worked to monitor and reduce four pollutants of concern: mercury, copper, fats/oils/grease (FOG), and pharmaceuticals. The District performed evaluations for cyanide and polychlorinated biphenyls (PCBs) and has determined control programs are not necessary.

In addition, the District actively participates in several regional collaborations that address pollution minimization, such as with the BAPPG. Priorities and accomplishments are outlined in Chapter 4, Table 5.

The District has identified these sources for the above referenced POCs and the other pollutants:

- Mercury – dentists (amalgam waste) and the general public (thermometers, light bulbs, mercury containing products)
- Copper – vehicle service facilities, potable water system, copper plumbing, and pool/spa maintenance
- Fats/Oils/Grease (FOG) – kitchen waste from restaurants and residences
- Pharmaceuticals – improper disposal by the general public and human consumption
- Cyanide – industrial users
- PCBs – industrial users
- Triclosan – residences
- Trash and wipes – residences





## Tasks to Minimize Pollutants

---

### Pretreatment and Waste Minimization Audits for Industrial Users

Environmental Compliance inspectors continue to look for ways to expand and enhance the District's Pretreatment Program to reduce pollutants discharged into the sanitary sewer system. The Pretreatment Program currently has 25 permitted industrial and commercial users. During annual inspections, District staff evaluates the users' practices for cleaning, storing material and waste, and cleaning up secondary containment, as well as their efforts for minimizing waste. Detailed information is available in the District's Pretreatment Program Annual Report.

### Mercury Control

#### *Dental Amalgam Waste*

Mercury continues to be a pollutant of concern for the District since the San Francisco Bay is impaired by mercury. The RWQCB adopted a Total Maximum Daily Load (TMDL) for mercury in 2006. The regional watershed permit, Order No. R2-2017-0041, requires San Francisco Bay municipal wastewater dischargers to implement and maintain programs that reduce discharges of mercury amalgam waste from dental practices.

Developed in accordance with permit requirements and current American Dental Association guidelines, the District's Ordinance No. 325, mercury source control provision requires dental offices that generate mercury amalgam waste to implement Best Management Practices (BMPs) and install amalgam separators approved by the International Standards Organization (ISO). The District's Mercury Source Control Program has accomplished the following for CY 2017:

- Permitted qualifying dental practices (currently 96)
- Received documentation that 100 percent of the permitted dental practices have instituted BMPs for managing mercury amalgam waste
- Received documentation that 100 percent of the permitted dental practices have installed amalgam separators

- Conducted 81 inspections to ensure separators are installed, maintained, and used in accordance with BMPs
- Collected annual self-monitoring reports from permitted dental offices
- Maintained an up-to-date database of dental facilities that includes tracking program results

On July 14, 2017, EPA's Final Dental Rule 40 CFR Part 411 became effective. The Final Rule is technology-based pretreatment standards under the Clean Water Act to reduce mercury discharges from dental offices. The Final Rule requires dental offices to use amalgam separators, implement two best management practices and submit a one-time compliance report to the District. Existing dental dischargers are to achieve compliance with this rule by July 14, 2020. New dental dischargers are to be in compliance immediately and submit the one-time compliance report within 90 days after the first discharge to the publicly owned treatment works (POTW).

During the next 12-month period, the District plans to:

- Implement EPA's Dental Final Rule requirements
- Continue to maintain an up-to-date list of dental practices to ensure all have submitted dental practice surveys and been issued permits, if qualified
- Reissue permits to qualifying dental practices
- Continue to perform inspections as needed to ensure compliance with permit requirements

### ***Collection and Recycling***

The District educates the public about problems associated with mercury on an ongoing basis by collecting and recycling mercury-containing products such as thermometers, light bulbs, and thermostats. This program is explained further in Chapter 3, Public Outreach.

### **Copper Control**

Local limits for copper are not chronically exceeded in the District's service area. Less than five percent of the samples collected from industrial users in calendar years 2015-2017 tested above the local limit of 1.0 mg/L for copper. Three industrial users exceeded the local and/or categorical limits for copper in the last two years: Thoratec (plastic molding and forming; laser etch rinse), Valent (testing laboratories) and A-1 Enterprises (portable toilet waste). Violations for Thoratec occurred during March, April, and September 2016. The violations for Valent occurred in October 2016 and March 2017. The violation for A-1 Enterprises occurred in May 2017.

In addition, the wastewater treatment plant's copper effluent concentration average for calendar year (CY) 2017 was 7.59 ug/L. This is significantly lower than the NPDES permit maximum daily effluent limit of 69 ug/L. These results confirm copper is not a concern in DSRSD's effluent.

To ensure that our copper concentrations remain well below the maximum allowable limits, the District has continued inspections and outreach efforts as outlined below. See also Chapter 4, Table 2.

- Businesses that wash vehicles as part of their work must install wash pads equipped with solids removal devices (sand/oil interceptor), which are routinely inspected.
- Vehicle service facilities with sewer connections inside service bays are included in the vehicle inspection program.
- Residential and commercial customers are allowed to discharge pool and spa wastewater to the sanitary sewer system to avoid discharge to the storm drain system. The District's website provides information for residential and commercial customers regarding proper pool and spa maintenance to minimize the amount of copper-based algaecides discharged to the sewer system.
- Mandatory installation of dental amalgam separators will also contribute to copper control, since amalgam waste does contain some copper.
- The District continues to support BAPPG's copper pipe corrosion and pool and spa maintenance outreach efforts.

## Fats/Oils/Grease (FOG) Control

The District has had a grease reduction program for more than 22 years. Currently, 130 food service establishments participate in this program. Most restaurant grease traps and grease interceptors are inspected annually to ensure that equipment is functioning as designed and being serviced at proper intervals.

During 2017, the District conducted 136 grease trap and interceptor inspections.

For more information on inspection results, refer to Chapter 4, Tables 3 and 4. Public outreach on FOG is discussed further in Chapter 3, *Adult Education*.



*DSRSD regularly inspects grease traps at restaurants and other food service facilities.*

## Pharmaceutical Collection

A permanent pharmaceutical collection center opened within the City of Pleasanton Police Department in 2014. The collection center is a partnership between the City of Pleasanton and DSRSD. The police department houses and supervises the collection center and DSRSD handles the costs associated with collection and disposal. The center is open 24 hours a day, seven days a week. Between January and April 20, 2017, 875 lbs. of unwanted pharmaceuticals have been collected at this center.

In May 2017, the collection center became part of the Alameda Med (Medication, Education and Disposal) Project. The Med Project is a public non-profit entity that provides pharmaceutical collection kiosks throughout Alameda County. The Med Project handles costs associated with collection of unwanted pharmaceuticals. The Pleasanton Police Department continues to house and supervise the collection kiosk.

The City of Dublin recently opened a permanent pharmaceutical collection site within the Dublin Police Services lobby on November 20, 2017. The collection site is accessible to the public Monday through Friday, 8:00 a.m. to 5:00 p.m. This is a free service open to the public.

The District's website promotes both collection sites, and other local drug collection sites and events, along with the regional BAPPG website, [www.Baywise.org](http://www.Baywise.org), and the Med-Project website, <https://med-project.org>, which lists collection pharmaceutical kiosks and events throughout the Bay Area.

## Cyanide Control

The District has submitted to the RWQCB an inventory of potential contributors of cyanide to the Regional Wastewater Treatment Facility and determined there are no potential contributors of cyanide to the treatment plant. Cyanide levels were low and not considered to be significant in Significant Industrial User (SIU) discharges, treatment plant influent, and final effluent, as explained below.

During the reporting year, 40 compliance samples were collected from industrial users and analyzed for cyanide. The majority of the samples (25 out of 40) were "non-detect" and the rest of the samples were considerably lower than the District's local limit of 0.50 mg/L. All of the plant's effluent cyanide concentration levels for CY 2017 were less than the detection limit of 3.2 ug/L. The highest influent result above the detection limit was 6 ug/L. Based on all the data, the District concludes it is not necessary to implement a Cyanide Control Program at this time.



*A 24/7 drug drop box is available to the public in the Pleasanton Police Department's lobby.*

## PCBs Control

NPDES Permit, Order R2-2017-0041, requires the District to evaluate controllable sources of polychlorinated biphenyls (PCBs) to the treatment plant. The District has reviewed sampling data from industrial and commercial users within its service area and determined that there are no potential contributors of PCBs to the treatment plant. Sample results for PCBs have been virtually “non-detect” for all industrial and commercial users for the last several years.

PCBs have been found in older building sealants, but it is highly unlikely PCBs would be discharged to the sanitary sewer system during building remodeling or demolition. Sealants are solid and would be physically removed with other debris during remodeling, with little chance of being washed into the sanitary sewer. Additionally, the District requires sanitary sewer systems to be disconnected during building demolition. Based on the sampling results noted above and the requirement to disconnect sewer drains during building demolition, the District has concluded the implementation of a PCBs Control Program is not necessary at this time.

## Triclosan

The Bay Area Pollution Prevention Group (BAPPG) has been targeting Triclosan for many years. Triclosan is an antibacterial and antifungal agent, found in many consumer products, that has been linked to a range of adverse health and environmental effects. BAPPG members performed outreach that educates the public about Triclosan, its harmful effects, and which consumer products contain it.

In September 2016, the U.S. Food and Drug Administration [banned](#) Triclosan from many consumer products because manufacturers did not demonstrate that it is more effective than plain soap and water in preventing illness.

The District office is certified as an Alameda County Green Business. To achieve this endorsement, the District must verify that products containing Triclosan are not used onsite.





## Trash and Wipes

Toilets should not be used as trash cans. Non-woven wipes and other non-flushable items such as hair, Q-tips, and all hygiene products claiming to be biodegradable or flushable should not be discarded into the toilet. These items are known to cause problems with POTW's pump station equipment, grinders, and other infrastructure, as well as sanitary sewer clogs and overflows. BAPPG group members continuously perform public outreach on this topic; DSRSD's outreach efforts are described in the public outreach section of this report.





## Outreach Programs

---

### Public Outreach

The District uses public outreach programs to directly reduce sources of mercury and pharmaceuticals, encourage proper disposal of wastewater pollutants, and educate adults and school children about the ways wastewater and stormwater become polluted and what they can do to prevent it. The District website contains all forms, program descriptions, staff contacts, and resources for Pretreatment and Pollution Prevention Program participants. The District collaborates with other wastewater agencies to provide pathways to careers related to pollution prevention, prevent pollution of our waterways more efficiently and effectively, and advocate for legislation, regulations, and new technologies that reduce and prevent pollution.

### ***Waste Mercury Collection and Recycling***

Through its website, the District encourages the public and employees to properly dispose of batteries and other products that contain mercury. Anyone can drop off such products at the District Office or wastewater treatment plant for recycling or find other locations on the Bay Area Pollution Prevention Group (BAPPG) website, [www.Baywise.org](http://www.Baywise.org).

### ***Waste Pharmaceuticals Collection***

Throughout the year, the District uses its website and customer bill inserts to promote ways for residents to properly dispose of waste pharmaceuticals. These include permanent drop boxes operated by police departments in the cities of Pleasanton, San Ramon, and Dublin (newly opened in 2017), as well as regional collection sites.

In the spring and fall, water bills sent to all District customers promoted pharmaceutical take-back events conducted by Dublin Police Services on the 2017 National Drug Take-Back Days, April 29 and October 28.

### **Website Targets So-Called Flushables, FOG**

The District promotes proper disposal of so-called “flushable” products, as well as fats, oil, and grease (FOG), on its web pages, [What Not To Flush](#) and [FOG Clogs Pipes](#). Videos demonstrate the problems with flushing wipes and a link to [www.Baywise.org](http://www.Baywise.org) provides a searchable directory of FOG collection centers. In November and December, the District sent bill inserts to water customers to attract residents to these pages.



### **Education Efforts for Adults**

In 2017, District staff provided seven tours of the Regional Wastewater Treatment Facility to 39 adults and 57 students. In July, tours were suspended due to construction activity. Tour guides emphasize how individuals and businesses can prevent pollution through proper disposal of hazardous waste and grease. Quarterly public tours are promoted through customer bills, the District website, and local media. (Quarterly tours were discontinued in the fall of 2016 due to construction at the facility but are expected to resume in mid-2018.)

The District hosts an annual field trip for Cal State East Bay’s Environmental Studies class. In 2017, 18 students—all on the verge of graduating college—attended. Staff gave a presentation about the services the District provides, the wastewater treatment and water recycling processes, and the types of careers available in the wastewater industry. The students then toured the wastewater and recycled water treatment plants and the analytical laboratory.

District management hosts an annual Neighborhood Meeting to promote constructive dialog with residents living near the wastewater treatment plant. In 2017, 13 people attended and learned about two large capital improvement projects underway at the facility: a fourth anaerobic digester and receiving station for fats, oil, and grease from food service facilities which will boost on-site production of electricity from digester gas, and a major expansion of the water recycling facility.

### ***Education Programs for Children***

From 2003-09, the District made 612 classroom presentations on water conservation and pollution prevention, reaching more than 9,414 students in grades K-12. The program was suspended in July 2009 and may be reinstated if funding becomes available. In the interim, DSRSD asked its water wholesaler, Zone 7 Water Agency, to expand its water education program to include schools in Dublin and San Ramon. In 2017, Zone 7 visited 191 classrooms in the District's service area, reaching approximately 5,348 students. Zone 7's Grade 2 lesson, *Creek and Stream Environments*, teaches how water from storm drains and pollution from residential areas ends up in creeks and how students can prevent such pollution. In a middle school lesson, *The Wonder Down Under*, students learn how our groundwater and surface water systems are connected, pollutants common to our valley, and effects of urban development on our watershed. The curriculum for high school freshman discusses pollutants, including plastic bag bans; the Advanced Placement curriculum focuses on water abundance and scarcity, including economic and physical scarcity, water uses, and water rights in California.

The District's website offers free lesson plans for grades K-6. Grade 3, *The Amazing Watershed*, teaches pollution prevention and watershed protection. Grade 5, *Every Drop Counts*, reveals how little potable water we have on the earth and the need to recycle and protect water. Grade 6, *Sum of the Parts*, demonstrates the cumulative effects of pollution and the best management practices that protect the Earth's resources.



*Anna Garcia, Wastewater Treatment Plant Operator II, explains sedimentation to a student tour group at the wastewater treatment plant.*

The District organized the regional *Excellence in Water Research Awards* for the 2017 Contra Costa County and Alameda County Science and Engineering Fairs, annual events affiliated with the Intel International Science and Engineering Fair. The awards are jointly sponsored and promoted by 19 water and wastewater agencies to honor outstanding student research on water and wastewater topics. Seven of the nine winning projects were related to preventing pollution or protecting public health.

To help students understand the value of recycled water, the District distributed an activity booklet, *Give Water a Second Chance...Re-Cycle It*, to all fifth graders in areas where it treats wastewater (2,850 students at 23 schools). Teachers were encouraged to borrow the equipment needed to teach the fifth grade lesson plan, *Every Drop Counts*, and schedule tours of the wastewater and recycled water treatment plants.

### ***Career Training***

To train a skilled workforce for Bay Area wastewater treatment plants and utilities, DSRSD participates in the Bay Area Consortium of Water and Wastewater Education (BACWWE). This 19-agency partnership teams with Solano Community College to offer college-level training in water and wastewater operations.

Since 2007, more than 1,500 students have participated, either to obtain entry-level or additional certifications that will advance their careers. Students attend courses at treatment plants throughout the East Bay, including DSRSD's facility. The sponsoring agencies pay for students' tuition and books and provide working professionals as instructors. Laboratory Supervisor Raj Gumber and Wastewater Treatment Plant Operations Supervisor Levi Fuller were among the adjunct faculty in 2017.



*DSRSD Laboratory Supervisor Raj Gumber teaches water chemistry to future water and wastewater operators.*

### **Partnering with Other Agencies and Cities**

Collaborating with other agencies enables DSRSD to reach a larger audience at a lower cost. Consistent pollution prevention messages and coordinated outreach are particularly important among Bay Area wastewater agencies, which all discharge to the San Francisco Bay and its tributaries.

#### ***Bay Area Pollution Prevention Group***

The District's Clean Water Programs Specialist participates in meetings of the Bay Area Pollution Prevention Group (BAPPG), a committee of Bay Area Clean Water Agencies (BACWA) that is responsible for implementing public outreach related to pollution prevention. DSRSD also contributes funding to BAPPG to support meaningful information exchanges among wastewater agencies and coordinated regional projects. BAPPG is comprised of 44 wastewater agencies that discharge primarily into the San Francisco Bay and local waterways.

#### ***California Association of Sanitation Agencies***

The DSRSD Community Affairs Supervisor, Sue Stephenson, chairs the Communications Work Group of the California Association of Sanitation Agencies (CASA). In 2017, the Committee:

- Provided guidance for the Association's communications plan
- Published various articles related to outreach, marketing and public relations in the Association's e-news and hardcopy conference newsletters
- Participated in strategic planning and implementation of communications projects on behalf of the Association

### ***Bay Area Biosolids Coalition***

The Bay Area Biosolids Coalition consists of 15 member agencies with a mission to “develop a diverse and robust portfolio of beneficial biosolids resource recovery projects for the San Francisco Bay Area.” Over this past year, the Coalition evaluated biosolids management options with the intent of identifying three to six options that can be implemented within the next two to three years and generate a product that can be beneficially used locally in all seasons of the year. The first step of the evaluation was an initial screening process completed in October 2017. The next phase is currently underway and includes developing conceptual facilities of specific technologies that had passed the initial screening process.

The Coalition continues to pursue a multi-pronged approach that includes the following:

- Investigating viable, year-long (weather resilient) alternatives to land application that look beyond "biosolids to energy" and seek to responsibly recycle back value-added products of biosolids to the environment;
- Educating the public on biosolids management issues in California through public outreach efforts, including the creation of a public website and securing media coverage;
- Serving as a technology incubator - particularly for pre-commercial technologies;
- Supporting land application in the Bay Area by seeking to create more capacity for biosolids in the Bay Area marketplace; and
- Advancing the industry and legislative state of knowledge on biosolids as a valuable resource;

### ***East Bay Municipal Utility District and Recycled Water Users***

The District partners with East Bay Municipal Utility District to provide recycled water for irrigation and other non-potable uses in Dublin and San Ramon through the San Ramon Valley Recycled Water Program (SRVRWP). In 2013, the City of Pleasanton became a customer of SRVRWP, and to accommodate the additional demand, the treatment capacity is undergoing expansion to utilize the City’s wastewater flow. In 2017, SRVRWP produced 1.6 billion gallons of recycled water from wastewater that otherwise would have been pumped into San Francisco Bay.

## **Legislative and Regulatory Advocacy**

DSRSD supports a deliberate legislative agenda that contributes to achieving its pollution prevention goals. In 2017, DSRSD supported:

- AB 574 (Quirk), Potable Reuse, which directs the State Water Resources Control Board to adopt uniform water recycling criteria for direct potable reuse through raw water augmentation
- Adequate funding of the Clean Water State Revolving Fund to maximize financing options for clean water and water recycling projects
- Establishment of an annual Water Professionals Appreciation Week to educate Californians on the important functions of water and wastewater agencies

The District actively participates in regional, state, and federal associations that seek to speak with one voice on legislative and regulatory issues related to pollution prevention, including Bay Area Clean Water Agencies, California Association of Sanitation Agencies (CASA), Association of California Water Agencies (ACWA), WaterReuse Association, and Western Recycled Water Coalition (WRWC).





## Measuring Effectiveness and Progress

---

It is simpler and less costly to measure the effectiveness and progress for site-specific programs than it is to measure public outreach aimed at raising general awareness. For site-specific programs related to its industrial, institutional, and commercial customers, the District tracks the number of targeted businesses that are implementing best management practices, number of permits issued, number of inspections conducted, site-specific sampling results, and wastewater treatment plant influent sampling results. The District evaluates site-specific outreach and education based on the number of events and participants, the amount of materials distributed, number of impressions, or other activity-based criteria such as the amount of waste (e.g., mercury) collected or survey responses received. The District has not attempted to measure changes in general awareness of pollution prevention messages due to the prohibitive cost of such analysis.

The following tables include criteria used to measure the effectiveness of DSRSD pollution prevention programs and document the District's progress. When a public outreach activity is not easily measured, it is labeled as N/A in the table.

1. Mercury Education and Outreach
2. Copper Education and Outreach
3. FOG Education and Outreach
4. Pharmaceutical Education and Outreach
5. Triclosan
6. Trash and Wipes

**Table 1**

**Mercury Education and Outreach**

	SOURCES	
	RESIDENCES	DENTAL OFFICES
<b>Audience</b>	General and Employees	Dentists
<b>Message/Program</b>	Direct the public to baywise.org; in addition, collection containers are placed at the District Office and wastewater treatment plant for waste mercury products and used batteries	Follow recommended Dental Amalgam Best Management Practices (BMPs) Install amalgam separators if they replace and/or remove amalgam fillings Perform regular maintenance on the amalgam separator
<b>Implementation Plan/Timeline for 2017</b>	Year around: collect products during regular business hours	<i>Ongoing throughout the year:</i> 1. Issue permits to qualifying dental practices 2. Require dentists to submit forms that document implementation of BMPs and installation of amalgam separators 3. Conduct dental facility inspections as needed to ensure compliance 4. Post BMPs, forms, program description, and staff contacts on District website
<b>Evaluation Criteria</b>	The quantity of mercury items collected and recycled	1. Number of permits issued 2. Number of dentists participating in the program 3. Number of separators installed
<b>Evaluation of Effectiveness</b>	397 lbs. of lamps and ballasts, 435 lbs. of used alkaline, lead acid, nickel, and lithium batteries	1. 96 active dental permits 2. Added 17 dental facilities in 2017 3. Collected 96 completed BMP forms 4. 100% have installed amalgam separators 5. Conducted 81 site inspections
<b>Specific Tasks and Time Schedule for 2018</b>	Continue to collect and properly dispose of mercury containing products during regular business hours	<i>Ongoing throughout the year:</i> 1. Implement EPA's Dental Final Rule requirements 2. Maintain up-to-date list of dental facilities 3. Issue new permits to qualifying dentists and reissue expiring permits 4. Track the number of permitted dental offices that have installed amalgam separators 5. Conduct site inspections as needed

**Table 2**  
**Copper Education and Outreach**

	SOURCE	
	COMMERCIAL	RESIDENTIAL/COMMERCIAL
<b>Audience</b>	Vehicle service and wash facilities	Pool/spa owners
<b>Message/Program</b>	Clean sand/oil interceptors regularly and keep brake pad shavings out of the sewer and storm drains	Do not add chemicals that contain copper algaecides and drain your pool and spa to the sanitary sewer system properly. Instructions available on District website and in public lobby.
<b>Implementation Plan/ Timeline for 2017</b>	Ongoing	Ongoing
<b>Evaluation Criteria</b>	Fifty-seven (57) vehicle service/wash facilities participate in program. Number of inspections and number of notice of violations (NOV) issued	N/A
<b>Evaluation of Effectiveness</b>	Conducted 10 inspection; no NOV were issued	N/A
<b>Specific Tasks and Time Schedule for 2018</b>	Ongoing	Ongoing

**Table 3**  
**FOG Education and Outreach**

	SOURCE		
	RESIDENCES	RESIDENCES	RESTAURANTS/AUTOMOTIVE SERVICE FACILITIES
<b>Audience</b>	General	General	Restaurant managers/ employees
<b>Message/Program</b>	Inform residents about problems caused by putting used cooking oil and grease down sinks	Advertise proper FOG disposal on District vehicles	Restaurant owners and managers shall maintain their grease trap/interceptor systems properly and follow the BMPs
<b>Implementation Plan/Timeline for 2017</b>	Ongoing outreach through bill inserts, website, and social media	Used “wrap” ads on CCTV truck to create mobile billboard that is seen year-round as it works in service area	Conduct restaurant inspections
<b>Evaluation Criteria</b>	N/A	N/A	Number of inspections, number of NOV's issued
<b>Evaluation of Effectiveness</b>	N/A	N/A	Conducted 136 inspections; No NOV was issued
<b>Tasks and Time Schedule for 2018</b>	Ongoing through bill inserts, website, and social media, especially during holiday season	Continue using magnetic signs on DSRSD pickups and “wrapped” CCTV truck as mobile billboard	Continue to conduct site inspections

**Table 4**  
**Pharmaceutical Education and Outreach**

	SOURCE		
	RESIDENCES	RESIDENCES	COMMUNITY
<b>Audience</b>	General	General	Government and pharmaceutical producers
<b>Message/Program</b>	Pharmaceutical collection	Maintained permanent pharmaceutical collection center at City of Pleasanton Police Department	Support Alameda County's Safe Drug Disposal Ordinance and the California Product Stewardship Council efforts to establish more producer-funded take-back programs
<b>Implementation Plan/Timeline for 2017</b>	Promote the baywise.org and MED-Project websites and local pharmaceutical collection days	Opened September 2014	Successfully advocated for a Safe Drug Disposal Ordinance in unincorporated Contra Costa County, which will establish producer-funded take-back programs
<b>Evaluation Criteria</b>	N/A	Amount of pharmaceuticals collected	N/A
<b>Evaluation of Effectiveness</b>	Increased use of pharmaceutical collection centers throughout the Bay Area	The Pleasanton Police Department collection center collected 875 lbs. between January to April 20, 2017.	N/A
<b>Tasks and Time Schedule for 2018</b>	Continue promoting disposal sites	Alameda Med-Project has taken over this collection kiosk. DSRSD will continue to promote pharmaceutical collection locations and activities on website and outreach materials.	Contribute \$1,000 to the Product Stewardship Council's efforts

**Table 5**  
**Triclosan**

<b>Source</b>	Community
<b>Audience</b>	General and employees
<b>Message/Program</b>	Do not use products that contain Triclosan such as antibacterial soaps and toothpaste
<b>Implementation Plan/Timeline for 2017</b>	Year around outreach
<b>Evaluation Criteria</b>	N/A
<b>Evaluation of Effectiveness</b>	N/A
<b>Tasks and Time Schedule for 2018</b>	Increase outreach efforts

**Table 6**  
**Trash and Wipes**

<b>Source</b>	Residences and employees
<b>Audience</b>	General and employees
<b>Message/Program</b>	The toilet is not a trash can. Do not throw wipes, Q-tips, dental floss, non-flushable items in the toilet.
<b>Implementation Plan/Timeline for 2017</b>	Year around outreach
<b>Evaluation Criteria</b>	N/A
<b>Evaluation of Effectiveness</b>	N/A
<b>Tasks and Time Schedule for 2018</b>	Residences and employees