
Central Contra Costa Sanitary District Annual Pollution Prevention Report (For Calendar Year 2017)

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2017 POLLUTION PREVENTION ANNUAL REPORT

I. ACKNOWLEDGMENTS

Central Contra Costa Sanitary District's (Central San's) Pollution Prevention (P2) Program is the result of the combined efforts of every employee and Board member, as it works toward its mission of protecting the environment. The following staff members deserve special recognition for their contributions to this report:

- Colleen Henry, Senior Environmental Compliance Inspector
- Chris Carpenter, Community Affairs Representative
- Tim Potter, Environmental Compliance Superintendent
- Jeff Skinner, Senior Environmental Compliance Inspector
- David Wyatt, Household Hazardous Waste Supervisor
- Khang Nguyen, Staff Engineer
- Adrianna Mendoza, Administrative Assistant

II. EXECUTIVE SUMMARY

A. Central San's Wastewater Treatment Facilities

Central San owns and operates a municipal wastewater collection system and a secondary wastewater treatment plant rated for 53.8 million gallons per day. Central San collects, treats, recycles, and discharges wastewater from 484,200 residents and more than 3,000 businesses within ten cities and four unincorporated communities in central Contra Costa County. The collection area covers 145 square miles and includes over 1,500 miles of sewer pipelines. Central San's treatment plant consists of screening, pre-aeration, grit removal, primary sedimentation, anaerobic selection, biologically activated sludge secondary treatment, secondary clarification, and ultraviolet disinfection. Each year, Central San sends approximately 600 million gallons of treated effluent to a dual-media tertiary treatment plant to produce recycled water. The treatment plant uses about 400 million gallons of recycled water with the balance of 200 million gallons of recycled water sent to a portion of Central San's service area primarily for landscape irrigation. The remaining treated effluent discharges via a deep-water outfall to Suisun Bay.

B. Central San's Pollution Prevention (P2) Program

Central San has conducted several award-winning P2 programs in the service area and beyond, including:

- Our Water Our World Integrated Pest Management Program
- Sewer Science for high school students
- Water Wizards for 3rd and 5th grade students
- Delta Discovery Voyage for 5th grade students

P2 activities are often multifunctional programs, requiring coordination among several operating units at Central San which, when taken together, contribute to an effective P2 Program:

- The Household Hazardous Waste Collection Program (HHWCP) provides a solution for proper disposal of toxic household products and chemicals.
- Communication Services staff provides regular outreach and educational materials to the public and Central San employees about how to keep toxics out of sewers and storm drains, tips for "going green", and other information to encourage less toxic choices and purchases.
- Environmental Compliance staff performs wastewater inspections, stormwater inspections, and P2 audits at businesses and industries in Central San's service area.
- Laboratory staff samples and analyzes constituents to identify and monitor pollutants of concern and determine the effectiveness of P2 efforts.

- Central San staff provides representation, leadership, project management, and technical support on local, regional, statewide, and national committees to collaborate on P2 campaigns, projects, and issues.

Central San works with the following agencies and organizations to take advantage of local, regional, statewide, and national efforts for reducing wastewater pollution and protecting water quality:

- Bay Area Clean Water Agencies (BACWA)
- Bay Area Pollution Prevention Group (BAPPG)
- California Association of Sanitation Agencies (CASA)
- Central Contra Costa Solid Waste Authority
- Contra Costa Clean Water Program (CCCWP)
- Contra Costa County Hazardous Materials Commission
- Contra Costa Environmental Health
- Contra Costa Green Business Program (CCGBP)
- National Association of Clean Water Agencies (NACWA)

C. Central San's 2017 Pollutants of Concern

Central San's pollutants of concern for 2017 are comprised of three groups of pollutants, described below.

1. Priority Pollutants

Pollutants with effluent limits in Central San's 2012 and 2017 National Pollutant Discharge Elimination System (NPDES) Permits or in the San Francisco Bay Mercury and Polychlorinated Biphenyls (PCBs) Watershed Permit are classified as priority pollutants. Fats, oils, grease (FOG), and flushable products are also classified as priority pollutants because of their significant contribution to sanitary sewer overflows. Although Central San does not have a Selenium effluent limit in the current NPDES permit, a Total Maximum Daily Load (TMDL) has been established for Selenium in the North San Francisco Bay. Central San's Priority Pollutants for 2017 were:

- | | |
|--------------------------------|--|
| • Mercury | • PCBs |
| • Dioxins | • Ammonia |
| • Cyanide | • FOG |
| • Copper | • Flushable and Non-dispersible Products |
| • Acrylonitrile | • Selenium |
| • Bis (2-ethylhexyl) phthalate | |

2. Watch List Pollutants

Central San's Watch List pollutants appeared in previous NPDES Permits, but do not have effluent limits in the 2012 and 2017 NPDES Permits. Pollutants are removed from the Watch List if they have not had effluent limits in

Central San's NPDES Permit for two permit cycles. Lead was the only Watch List Pollutant for 2017.

3. Pollutants of Emerging Concern

This category includes chemicals and products emerging as pollutants of concern to water quality. It also includes pollutants for which Total Maximum Daily Loads are being developed. The following were Central San's Pollutants of Emerging Concern for 2017:

- Pesticides
- Flame retardants
- Nanotechnology
- Nonylphenol Ethoxylates
- Pharmaceuticals and personal-care products
- Microplastics
- Air toxics

D. Central San's 2017 Summary of P2 Activities

The following table provides the results of the activities that Central San committed to complete in the 2017 P2 Plan.

Table 1. Central San's 2017 P2 Accomplishments

| Section 1: Priority Pollutants | | | |
|--------------------------------|---|---|--|
| Pollutant | Plan Activity for 2017 | Measurement of Activity Effectiveness | 2017 Accomplishments |
| Mercury | Continue evaluating P2 performance/impacts by conducting targeted monitoring for mercury, as appropriate. | Conduct monitoring and report any observed trends. | Sampling performed. Monthly effluent and annual average effluent concentrations continued to be low. |
| | Maintain Mandatory Amalgam Separator Program, including permitting new practitioners. Continue routine inspections. | Report compliance level of dental facilities. Report number of new dental operations permitted and number of inspections conducted. | Continued issuing permits and processing certifications from new or sold practices (325 practices currently permitted). Based on information in self-certifications, periodic compliance reports, and on-site inspections, all dental facilities achieved compliance with amalgam separator installation. One dentist was given a Warning Notice for an improperly maintained amalgam separator. 86 site visits were conducted at 83 dental practices. |
| | Continue sampling two existing mercury-monitoring sites downstream of dental offices, to track effectiveness of amalgam separator installations and adherence to other dental amalgam best management practices (BMP). Follow up with inspections of upstream dental practices, as necessary. | Report any trends observed and any follow-up action taken. | Sewer monitoring results continued to show positive results with some periodic variability. Results remain consistently lower than the baseline data obtained prior to the amalgam separator installations. No targeted follow-up inspections were performed at the upstream dental practices in 2017. |
| | Track development of the Federal Dental Amalgam Rule and incorporate program changes, as necessary. | Description of necessary program changes, if any. | The United States Environmental Protection Agency (EPA) Administrator signed the final Federal Dental Amalgam Rule on December 15, 2016, which was published on June 14, 2017 with an effective date of July 14, 2017. Central San does not need to make significant changes to its program to comply with the final rule. The initial certification form used to document the installation and maintenance of amalgam separators was modified to capture the detail required in the final rule. |

Section 1: Priority Pollutants

| Pollutant | Plan Activity for 2017 | Measurement of Activity Effectiveness | 2017 Accomplishments |
|----------------------------|--|---|---|
| Mercury (continued) | Continue collecting, tracking, and properly disposing of elemental mercury and mercury-containing products via Central San's HHWCP. | Track the amount of elemental mercury and mercury-containing products collected and properly disposed of by the HHWCP. | The HHWCP collected over 91 pounds of elemental mercury and 11.2 pounds of mercury-containing products for a total of almost 102.6 pounds of mercury-containing wastes. This included 416,701 feet of fluorescent lamps. |
| | Continue the Mercury Thermometer Exchange Program for residents and schools (chemistry laboratories) via the HHWCP. | Track the number of mercury thermometers exchanged for digital (residents) and spirit-filled (schools) thermometers. | 814 mercury-filled, fever-grade thermometers were exchanged for 132 digital thermometers. |
| | Continue recycling the mercury-containing lamps used in the Ultraviolet Disinfection Facility in Central San's treatment plant. | Track the number of lamps properly recycled. | Central San recycled approximately 5,017 spent ultraviolet mercury lamps. |
| | Continue partnerships with local hardware stores in Central San's service area to provide in-store outreach on proper disposal of mercury-containing items. | List of partner stores and outreach materials prepared. Report amount of mercury-containing waste collected through these partnerships. | No new retail locations were established. However, fluorescent lamp and household battery collection continued at the seven existing Ace Hardware stores in the service area. These retail partners collected over 68,300 feet of fluorescent lamps and over 15,965 pounds of household batteries, which were disposed through the HHWCP. |
| | Continue to enforce the tiered local discharge limits (LDL) for mercury, as adopted in February 2007. | Report number of businesses permitted under the tiered mercury LDL. | 325 dental offices in Central San's service area were permitted under the mercury LDL as of December 2017. In addition, all of Central San's permitted industries have the mercury LDL included in their permits. No new industries classified as Significant Industrial Users (SIU) were permitted in 2017. |
| Dioxins | Continue evaluating P2 performance/impacts by conducting targeted monitoring for dioxins, as appropriate. | Conduct monitoring and report any observed trends. | Sampling performed. Results for dioxins were consistent with previous years. |
| | Continue collecting, tracking, and properly disposing of dioxin-containing wastes via the HHWCP. Tracked substances include pentachlorophenol, 2,4,5-T, and trichlorophenol. | Track the amount of dioxin-containing wastes collected and properly disposed of by the HHWCP. | The HHWCP collected 479 pounds of dioxin-containing wastes. |
| | Continue to enforce the discharge prohibition for dioxin compounds, as adopted in February 2007. | Continue enforcement of the discharge prohibition for dioxin compounds. | Facility inspections continued. No significant sources of dioxins were identified. |

Section 1: Priority Pollutants

| Pollutant | Plan Activity for 2017 | Measurement of Activity Effectiveness | 2017 Accomplishments |
|-----------|---|--|--|
| Cyanide | Continue evaluating P2 performance/impacts by conducting targeted monitoring for cyanide, as appropriate. | Conduct monitoring and report any observed trends. | Sampling performed. Results for cyanide were consistent with previous years. See the Cyanide Action Plan section of this report for additional details. |
| | Continue collecting, tracking, and properly disposing of cyanide-containing wastes via the HHWCP. | Track the amount of cyanide-containing wastes collected and properly disposed of by the HHWCP. | The HHWCP collected 41 pounds of cyanide-containing wastes. |
| | Continue to implement the Cyanide Action Plan of the Cyanide Site Specific Objective, which includes: <ul style="list-style-type: none"> • Maintain inventory of significant cyanide sources • Conduct required monitoring of identified cyanide sources • Investigate any cyanide excursions that occur in treatment plant monitoring | Description of appropriate Cyanide Action Plan requirements completed. | Central San continued to implement the Cyanide Control Program elements, including inspection of the two off-site facilities identified in the original inventory of significant cyanide sources. Central San continued to monitor these facilities for cyanide to determine if their discharges are a significant source of cyanide to Central San's system. No cyanide excursions were identified during routine plant monitoring in 2017. |
| | Continue to enforce the tiered LDL for cyanide, including discharge prohibition for unpermitted Central San businesses, as adopted in February 2007. | Report number of businesses permitted under the cyanide LDL. | Facility inspections continued. No new industries were permitted under the cyanide LDL. All of Central San's permitted industries received the cyanide LDL in their permits. |
| Copper | Continue evaluating P2 performance/impacts by conducting targeted monitoring for copper, as appropriate. | Conduct monitoring and report any observed trends. | Sampling performed. Results for copper were consistent with previous years. |
| | Continue collecting, tracking, and properly disposing of copper-containing wastes via the HHWCP. | Track the amount of copper-containing wastes collected and properly disposed of by the HHWCP. | The HHWCP collected 3,501 pounds of copper-containing wastes. |
| | Continue Pretreatment Program, which includes inspection of radiator shops and auto repair facilities, including permitting new facilities. | Track the number of pretreatment inspections conducted at radiator shops and auto repair facilities. | Central San's Environmental Compliance staff completed 283 inspections at 205 vehicle service facilities. Citations (24 Notice of Violations (NOVs) and 19 Warning Notices) were issued as a result of these inspections. |

Section 1: Priority Pollutants

| Pollutant | Plan Activity for 2017 | Measurement of Activity Effectiveness | 2017 Accomplishments |
|------------------------------|--|--|---|
| Copper (continued) | Continue implementation of the Copper Action Plan, which includes the following elements: <ul style="list-style-type: none"> • Support of the BAPPG's Regional Copper Project • Central San's Pool and Spa Permitting Program • Communication with water purveyors in Central San's service area regarding copper algaecide dosing of reservoirs and corrosion control practices. | Continue implementation and report results. | <ul style="list-style-type: none"> • BAPPG contractor Stephanie Hughes provided one presentation in 2017, reaching 15 student apprentices. • 34 Special Discharge Permits were issued to authorize the discharge of pool, spa, and fountain water to Central San's collection system. • Central San periodically communicates with water purveyors regarding corrosion control practices and copper algaecide dosing of reservoirs. No significant changes reported in the corrosion control practices and no correlation with copper algaecide dosing contributing to elevated copper concentrations in Central San's influent. |
| | Continue implementation of tiered LDL for copper as adopted in February 2007. | Track the number of businesses permitted under the tiered copper LDL. | Applications for Class III BMP permits continued to be sent to vehicle service facilities that could potentially have elevated copper in their discharge. There were 277 facilities with BMP Permits as of December 2017. Eight businesses were issued Class III Industrial User (IU) Permits as of December 2017 due to engine degreasing activities. |
| Acrylonitrile | Continue evaluating P2 performance/impacts by conducting targeted monitoring for acrylonitrile, as appropriate. | Conduct monitoring and report any observed trends. | Sampling performed. Results for acrylonitrile were consistent with previous years. |
| | Continue accepting, tracking, and properly disposing of acrylonitrile-containing products, e.g. adhesives, auto-finishing paints, and wood surface products, via the HHWCP. | Since acrylonitrile is an occasional component of paint-related material, the measurement will be the amount of paint-related materials collected and properly disposed of by the HHWCP. | Central San's HHWCP collected 252,350 pounds of paint-related material. |
| Bis (2-ethylhexyl) phthalate | Continue evaluating P2 performance/impacts by conducting targeted monitoring for bis (2-ethylhexyl) phthalate, as appropriate. | Conduct monitoring and report any observed trends. | Sampling performed. Results for bis (2-ethylhexyl) phthalate were consistent with previous years. |

Section 1: Priority Pollutants

| Pollutant | Plan Activity for 2017 | Measurement of Activity Effectiveness | 2017 Accomplishments |
|---|--|---|---|
| Polychlorinated Biphenyls (PCBs) | Continue evaluating P2 performance/impacts by conducting targeted monitoring for PCBs, as appropriate. | Conduct monitoring and report any observed trends. | Sampling performed. PCBs were not detected in Central San's influent or effluent when using the EPA-approved method. |
| | Continue collecting, tracking, and properly disposing of PCB-containing wastes (less than 50 ppm) via the HHWCP. | Track the amount of PCB-containing wastes collected and properly disposed of by the HHWCP. | The HHWCP collected 2,800 pounds of PCB-containing wastes. |
| | Continue investigating potential significant sources of PCBs in Central San's service area. Coordinate with CCCWP efforts to identify and inventory PCB sources, as required under the newly adopted Municipal Regional Stormwater Permit. | Summarize potential PCB sources. | Inspections of facilities within Central San's service area did not identify any significant sources of PCBs. |
| | Perform outreach encouraging proper disposal of PCB-containing light ballasts at the HHWCP. | Describe outreach. | Outreach included in HHWCP list of accepted materials. |
| Ammonia | Continue surveying/researching potential significant sources of ammonia to Central San's wastewater, aside from human waste. | Report any significant sources found and summarize any follow-up programs created. | Central San has not identified any manufacturers that generate ammonia in significant quantities. Staff continued to conduct limited surveys of potential operations with potential large quantities of ammonia. No controllable sources were identified. |
| | Continue to collect and properly dispose of ammonia-containing wastes at the HHWCP. | Track the amount of ammonia-containing wastes collected and properly disposed of by the HHWCP. | The HHWCP collected 1,625 pounds of ammonia-containing products. |
| Fats, Oil and Grease (FOG) | Continue collecting, tracking, and properly disposing of residential FOG wastes via the HHWCP. | Track the amount of residential FOG collected and properly disposed of by the HHWCP. | The HHWCP collected about 3,912 gallons of residential FOG. Collected FOG was sent to a biofuel refining company. |
| | Continue inspecting and enforcing existing standards for controlling discharges of FOG wastes to Central San's sewer system using a targeted frequency based on potential for FOG discharges. | Track the number of inspections completed at food service facilities and number of enforcement actions taken. | Environmental Compliance staff completed 535 FOG inspections at 399 food service facilities. Due to these inspections, 21 NOVs and 26 Warning Notices were issued. |
| | Continue outreach on proper FOG disposal. | Description of outreach. | Proper FOG disposal was covered in Central San's Fall 2017 <i>Pipeline</i> newsletter (see Appendix A). It was also frequently mentioned on social media accounts. |

Section 1: Priority Pollutants

| Pollutant | Plan Activity for 2017 | Measurement of Activity Effectiveness | 2017 Accomplishments |
|--|--|---|--|
| FOG (Continued) | Continue making presentations at Contra Costa County Food Safety Classes and other forums to educate Food Service staff about proper FOG disposal. | Number of presentations given by Central San staff. | Environmental Compliance staff presented information on proper disposal of FOG at seven Contra Costa County Food Safety Classes. |
| Non-dispersible and Flushable Products | Continue outreach to encourage all customers not to flush wipes and other products labeled as flushable. | Description of outreach. | This topic was covered in Central San's Spring 2017 <i>Pipeline</i> newsletters (see Appendix A). Wipes were also discussed at all community events and speaking engagements. |
| | Continue outreach program, targeting neighborhoods with high accumulations of wipes with direct mailers to encourage behavior change. | Report number of outreach pieces sent. | Central San's Collection System Planner mailed out 182 <i>Wipes Clog Pipes!</i> postcards in 2017. |
| | Continue to track opportunities to weigh in on the development of flushability standards and submit comments when appropriate. | Continue tracking opportunities. Include any comment letters written. | NACWA and the Water Environment Federation (WEF) continued to facilitate efforts between the two national workgroups comprised of wastewater and wipes industry representatives. Central San discontinued participation on the wipes Product Stewardship Initiative workgroup prior to 2017. |
| Selenium | Continue evaluating P2 performance/impacts by conducting targeted monitoring for selenium, as appropriate. | Conduct monitoring and report any observed trends. | Monitoring performed. Results for selenium were consistent with previous years. |
| | Continue investigating potential sources of selenium in Central San's service area. | Summary of potential selenium sources. | Facility inspections continued. No significant sources of selenium were identified. |

Section 2: Watch List Pollutants

| Pollutant | Plan Activity for 2017 | Measurement of Activity Effectiveness | 2017 Accomplishments |
|-------------|--|--|---|
| Lead | Continue evaluating P2 performance/impacts by conducting targeted monitoring for lead, as appropriate. | Conduct monitoring and report any observed trends. | Sampling performed. Results for lead were consistent with previous years. |
| | Continue collecting, tracking, and properly disposing of lead-containing wastes via Central San's HHWCP. | Track the amount of lead-containing wastes collected and properly disposed of by the HHWCP. | The HHWCP collected 53,571 pounds of lead-acid batteries, 174 pounds of lead compounds, and 284 pounds of metallic lead that was recycled. |
| | Continue Pretreatment Program, which includes inspections of radiator shops and auto repair facilities, including permitting new facilities. | Track the number of pretreatment inspections conducted at radiator shops and auto repair facilities. | Environmental Compliance staff completed 283 inspections at 205 vehicle service facilities. Citations (24 NOVs and 19 Warning Notices) were issued as a result of these inspections. |
| | Continue implementation of tiered LDL for lead as adopted in February 2007. | Track the number of businesses permitted under the tiered LDL. | Applications for Class III BMP permits continued to be sent to vehicle service facilities that could potentially have elevated lead in their discharge. In 2017, 277 facilities were issued BMP Permits to control lead and other metals. Eight businesses were issued Class III Industrial User Permits as of December 2017 due to engine degreasing activities. |

Section 3: Pollutants of Emerging Concern

| Pollutant | Plan Activity for 2017 | Measurement of Activity Effectiveness | 2017 Accomplishments |
|-------------------|---|---|--|
| Pesticides | Continue collecting, tracking, and properly disposing of pesticides via the HHWCP. | Track the amount of pesticides collected and properly disposed of by the HHWCP. | The HHWCP collected 24,565 pounds of pesticides, which included 12,670 pounds of pyrethroid pesticides. |
| | Continue outreach on pesticide reduction and proper disposal. | Description of outreach. | Outreach included in HHWCP list of accepted materials. |
| | Continue providing support for future research studies related to pesticides of emerging concern. | Description of support provided, if applicable. | Central San supported ongoing pesticide research, conducted by the San Francisco Estuary Institute (SFEI), with its participation in the Alternate Monitoring and Reporting Permit (R2-2016-0008). Fees associated with the permit went to SFEI's Regional Monitoring Program (RMP). |

Section 3: Pollutants of Emerging Concern

| Pollutant | Plan Activity for 2017 | Measurement of Activity Effectiveness | 2017 Accomplishments |
|---|---|---|--|
| Pesticides (continued) | Continue leading and supporting BACWA/BAPPG's efforts to track and comment on Federal and State pesticide registration activities in support consideration of water quality concerns and reduce pesticide discharges at their source. | Support and describe efforts by BACWA/BAPPG. | Central San continued to employ a landscaping company that utilizes Integrated Pest Management in their maintenance of Central San's grounds. Central San continued to explore ways to reduce pesticide usage in structural pest control applications. |
| Pharmaceuticals & Personal Care Products | Continue to maintain and promote our Pharmaceutical Collection Program, which includes collection sites at 13 law enforcement agencies throughout our service area. | Track the amount of pharmaceutical waste collected and proper disposal. | Over 16,600 pounds of unwanted medications were collected and properly disposed of at 13 collection sites. |
| | Continue participation and support of regional, statewide, and national projects on the establishment of pharmaceutical collection programs that are funded by the product chain (manufacturers and retailers). | Continued participation and description of support activities by Central San staff. | Central San staff continued to participate in the dialogues on establishing collection programs for unwanted medications. In addition, Central San supported a regional research project by quantifying 104 pharmaceutical and personal care products in Central San's treatment plant influent, primaries, pre-UV, and effluent. A total of 13 samples were collected in April and July 2017. The samples were sent to Axys Analytical for analysis. The analytical data was shared with SFEI staff who will compile Central San's data with those of other treatment plants and inform the Regional Board staff of any specific pharmaceutical or class of pharmaceuticals that nears published effect levels for aquatic organisms. |
| | Continue accepting and properly disposing of personal care products via Central San's HHWCP. | Continued acceptance and proper disposal of personal care products by the HHWCP. | The HHWCP continued to collect personal care products from residents, although the amount collected was not tracked. |
| | Continue outreach to encourage customers to dispose of pharmaceuticals and personal care products properly. | Description of outreach. | Proper pharmaceutical disposal (with list of collection sites) was covered in each issue of the <i>Pipeline</i> newsletter (see Appendix A). |

Section 3: Pollutants of Emerging Concern

| Pollutant | Plan Activity for 2017 | Measurement of Activity Effectiveness | 2017 Accomplishments |
|-------------------------|---|--|---|
| Flame Retardants | Continue accepting and properly disposing of flame retardants via the HHWCP. | Continued acceptance and proper disposal of flame retardants by the HHWCP. | The HHWCP collected five pounds of flame retardants. |
| | Continue to track developing information on the sources and control of flame retardants. | Continue to track information. | Central San staff relies on regional programs studying flame retardants in the San Francisco Bay (e.g. RMP and BAPPG). |
| Nanotechnology | Continue supporting BACWA/BAPPG and CASA efforts to track developing information on nanotechnology and comment in support of water quality concerns on any federal regulatory action on products and chemicals that use nanotechnology. | Continue support. | Central San supports BACWA/BAPPG and CASA projects to monitor EPA and Department of Pesticide Regulation registrations for products containing nanomaterials. |
| Nonylphenol Ethoxylates | Evaluate any potential sources of nonylphenol ethoxylates in the commercial laundries within Central San's service area. | Summary of potential sources found and follow-up actions taken. | Inspections did not identify any significant sources of nonylphenol ethoxylates in Central San's service area. |
| Microplastics | Continue outreach on microplastics. | Description of outreach. | Central San did not conduct direct outreach in 2017, but relied on BACWA-supported studies and outreach on microplastics. |

Section 3: Pollutants of Emerging Concern

| Pollutant | Plan Activity for 2017 | Measurement of Activity Effectiveness | 2017 Accomplishments |
|----------------------------------|--|---|--|
| Microplastics (continued) | Continue providing support for future research studies related to microplastics. | Description of support provided, if applicable. | <p>Central San provided staff time in support of BACWA's effort to improve the microplastics method. Staff carried out experiments evaluating different sample digestion procedures.</p> <p>Staff worked through BACWA to submit comments on the sampling plan and microplastics Standard Operating Procedure (SOP) developed by the 5-Gyres institute.</p> <p>The BACWA microplastics workgroup held to the previous year's goals for an SOP:</p> <ul style="list-style-type: none"> • Routinely performed • Not too expensive • Not too complex • Robust Quality Assurance/Quality Control criteria • Inter-laboratory reproducibility • Complete documentation and transparency |
| Air Toxics | Monitor development of the Bay Area Air Quality Management District's (BAAQMD's) proposed Regulation 11: Rule 18 air toxics regulations to identify potential pollutants of concern with cross-media impacts and potential reduction through P2 efforts. | Description of regulation development progress and identification of pollutants of concern. | <p>The BAAQMD adopted Regulation 11: Rule 18 on November 15, 2017. The purpose of the rule is to ensure that emissions of toxic air contaminants from existing facilities do not pose an unacceptable health risk to people living and working nearby. The BAAQMD will conduct a Health Risk Assessment (HRA) to quantify the health risk associated with Central San's Treatment Plant. Central San is working with a contractor to develop an internal HRA to strategize different scenarios to reduce the associated cancer risk.</p> |

Section 4: Continuous P2 Efforts

| | Plan Activity for 2017 | Measurement of Activity Effectiveness | 2017 Accomplishments |
|--------------------------|--|---|---|
| Continuous P2 Activities | Continue the operation and promotion of Central San's HHWCP to keep pollutants out of the wastewater stream. | Track the total amount of Household Hazardous Waste (HHW) collected and properly disposed of by the HHWCP. | The HHWCP completed its 20 th year of operation and collected 2,260,330 pounds of hazardous waste in 2017. Three videos produced to promote HHW's 20th Anniversary Collection Week. See Community Outreach section for links. |
| | Continue Pretreatment and Stormwater Inspection Programs. Continue student education programs (Water Wizards, Sewer Science, and Delta Discovery Voyage). | Track the number of inspections conducted and enforcement actions taken. Track the number of students participating in each program. | These programs were continued. 1,328 pretreatment inspections were conducted at 1,018 facilities with 48 NOVs and 38 Warning Notices issued. 1,040 stormwater inspections were completed at 883 facilities with 25 NOVs and 28 Warning Notices issued. 955 students participated in the Water Wizards Program. 1,584 students participated in the Sewer Science Program. 4,000 students participated in the Delta Discovery Voyage Program. |
| | Continue attendance at environmental/community events. | Description of events. | Central San shared P2 messages with more than 4,750 people at 11 environmental/community events. |
| | Continue Treatment Plant and Household Hazardous Waste Collection Facility tours to educate people about P2. | Track number of people given tours. | Central San conducted plant tours for 300 people. |
| | Continue conducting Annual Pollution Prevention Awards Program to recognize local businesses for achieving excellence in P2 and sustainability. | Description of program. | Central San chose four businesses to receive Pollution Prevention Awards in 2017. Central San also recognized 41 "Water Quality Community Partners" and two "Recycled Water Champions." |
| | Continue education and outreach through Central San's website, television (TV) ads, social media, and various publications. | Description of outreach and relevant statistics. | Central San's website received 80,084 visitors in 2017. Video ads/Public Service Announcements aired on TV more than 1,400 times. Multiple posts were made on our Facebook, Twitter, YouTube, and blog sites. |
| | Maintain green business certification standards and continue making green improvements in Central San's operations that will ensure the next green business recertification. | Maintain green business certification. Description of any green measures added or improvements made. | Central San maintained its green business certification in 2017. |

| Section 4: Continuous P2 Efforts | | | |
|--------------------------------------|--|---|--|
| | Plan Activity for 2017 | Measurement of Activity Effectiveness | 2017 Accomplishments |
| Continuous P2 Activities (Continued) | Continue tracking and supporting the development of the Department of Toxic Substances Control's (DTSC) Green Chemistry Initiative. | Provide an update on progress and include copies of any comment or support letters submitted. | Central San supports the BAPPG and CASA projects that track developments under this program. |
| | Continue active participation, membership, and support (where appropriate) of various regional, statewide, and national organizations/programs that serve as a conduit for P2 information, such as BACWA, BAPPG, CCCWP, California Water Environment Association, CASA, Household Hazardous Waste Information Exchange (HHWIE), California Product Stewardship Council, NACWA, and the North American Hazardous Materials Management Association (NAHMMA). | Continued active participation, membership, and support of the various organizations/programs listed. | Central San staff continued active participation and/or financial support of the various organizations committed to in 2017. |

E. Central San's 2018 P2 Plan

Central San's 2018 P2 Plan reflects continued efforts to mitigate pollutants of concern. For many pollutants, there are no reasonable methods to assess the effectiveness of Central San's P2 efforts. In these cases, success is measured by the number of events conducted, the amount of flyers distributed, the number of participants using the HHWCP, etc. Table 2 on the following pages outlines Central San's P2 Plan for 2018.

Table 2. Central San's 2018 P2 Plan

| Section 1: Priority Pollutants | | |
|---------------------------------------|--|--|
| Pollutant | Plan Activity for 2018 | Measurement of Activity Effectiveness |
| Mercury | Continue evaluating P2 performance/impacts by conducting targeted monitoring for mercury, as appropriate. | Conduct monitoring and report any observed trends. |
| | Maintain Mandatory Amalgam Separator Program, including permitting new practitioners. Continue routine inspections. | Report compliance level of dental facilities. Report number of dental operations permitted (existing and new) and number of inspections conducted. |
| | Continue sampling two existing mercury-monitoring sites downstream of dental offices, to track effectiveness of amalgam separator installations and adherence to other dental amalgam BMPs. Follow up with inspections of upstream dental practices, as necessary. | Report any trends observed and any follow-up action taken. |
| | Implement the Federal Dental Amalgam Rule provisions, and incorporate program changes as necessary. | Description of necessary program changes, if any. |
| | Track development of the statewide objectives for mercury water quality. Monitor effect on San Francisco Bay Watershed Permit to determine if changes will be driven by addition of subsistence consumption of fish. | Description of necessary program changes, if any. |
| | Continue collecting, tracking, and properly disposing of elemental mercury and mercury-containing products via Central San's HHWCP. | Amount of elemental mercury and mercury-containing products collected and properly disposed of by the HHWCP. |
| | Continue the Mercury Thermometer Exchange Program for residents and schools (chemistry laboratories) via the HHWCP. | Number of mercury thermometers exchanged for digital (residents) and spirit-filled (schools). |
| | Continue recycling the mercury-containing lamps used in the Ultraviolet Disinfection Facility in Central San's treatment plant. | Number of lamps properly recycled. |
| | Continue partnerships with local hardware stores in Central San's service area for proper disposal of mercury-containing lamps. | Report number of partner stores and amount of mercury-containing waste collected through these partnerships. |
| | Continue to enforce the tiered LDL for mercury, as adopted in February 2007. | Report number of businesses permitted under the tiered mercury LDL. |
| Dioxins | Continue evaluating P2 performance/impacts by conducting targeted monitoring for dioxin, as appropriate. | Conduct monitoring and report any observed trends. |
| | Continue collecting, tracking, and properly disposing of dioxin-containing wastes via the HHWCP. Tracked substances include pentachlorophenol, 2,4,5-T and trichlorophenol. | Amount of dioxin-containing wastes collected and properly disposed of by the HHWCP. |
| | Continue to enforce the discharge prohibition for dioxin compounds, as adopted in February 2007. | Continue enforcement of the discharge prohibition for dioxin compounds. |

Section 1: Priority Pollutants

| Pollutant | Plan Activity for 2018 | Measurement of Activity Effectiveness |
|---------------|---|--|
| Cyanide | Continue evaluating P2 performance/impacts by conducting targeted monitoring for cyanide, as appropriate. | Conduct monitoring and report any observed trends. |
| | Continue collecting, tracking, and properly disposing of cyanide-containing wastes via Central San's HHWCP. | Amount of cyanide-containing wastes collected and properly disposed of by the HHWCP. |
| | Continue to implement the Cyanide Action Plan of the Cyanide Site Specific Objective, which includes: <ul style="list-style-type: none"> • Maintaining inventory of significant cyanide sources • Conducting required monitoring of identified cyanide sources • Investigating any cyanide excursions that occur in treatment plant monitoring | Description of appropriate Cyanide Action Plan requirements completed in 2017. |
| | Continue to enforce the tiered LDL for cyanide, including discharge prohibition for unpermitted Central San businesses, as adopted in February 2007. | Report number of businesses permitted under the cyanide LDL. |
| Copper | Continue evaluating P2 performance/impacts by conducting targeted monitoring for copper, as appropriate. | Conduct monitoring and report any observed trends. |
| | Continue collecting, tracking, and properly disposing of copper-containing wastes via Central San's HHWCP. | Amount of copper-containing wastes collected and properly disposed of by the HHWCP. |
| | Continue Pretreatment Program, which includes inspection of radiator shops and auto repair facilities, including permitting new facilities. | Number of pretreatment inspections conducted at radiator shops and auto repair facilities. |
| | Continue implementation of the Copper Action Plan, which includes the following elements: <ul style="list-style-type: none"> • Support of the BAPPG's Regional Copper Project • Central San's Pool and Spa Permitting Program • Communication with water purveyors in Central San's service area regarding copper algaecide dosing of reservoirs and corrosion control practices | Continue implementation and report results. |
| | Continue implementation of tiered LDL for copper as adopted in February 2007. | Number of businesses permitted under the tiered copper LDL. |
| Acrylonitrile | Continue evaluating P2 performance/impacts by conducting targeted monitoring for acrylonitrile, as appropriate. | Conduct monitoring and report any observed trends. |
| | Continue accepting, tracking, and properly disposing of acrylonitrile-containing products, such as adhesives, auto finishing paints, wood surface products, etc. via Central San's HHWCP. | Since acrylonitrile is an occasional component of paint-related material, the measurement will be the amount of paint-related materials collected and properly disposed of by the HHWCP. |

Section 1: Priority Pollutants

| Pollutant | Plan Activity for 2018 | Measurement of Activity Effectiveness |
|---|--|---|
| PCBs | Continue evaluating P2 performance/impacts by conducting targeted monitoring for PCBs, as appropriate. | Conduct monitoring and report any observed trends. |
| | Continue collecting, tracking, and properly disposing of PCB-containing wastes (less than 50 ppm) via Central San's HHWCP. | Amount of PCB-containing wastes collected and properly disposed of by the HHWCP. |
| | Continue investigating potential significant sources of PCBs in our service area. Coordinate with CCCWP efforts to identify and inventory PCB sources, as required under the Municipal Regional Stormwater Permit. | Summary of potential PCB sources. |
| | Perform outreach encouraging proper disposal of PCB-containing light ballasts at Central San's HHWCP. | Description of outreach. |
| Ammonia | Continue surveying/researching potential significant sources of ammonia to Central San's wastewater, aside from human waste. | Report any significant sources found and summarize any follow-up programs created. |
| | Continue to collect and properly dispose of ammonia-containing wastes at Central San's HHWCP. | Amount of ammonia-containing wastes collected and properly disposed of by the HHWCP. |
| FOG | Continue collecting, tracking, and properly disposing of residential FOG wastes via Central San's HHWCP. | Amount of residential FOG collected and properly disposed of by the HHWCP. |
| | Continue inspecting and enforcing existing standards for controlling discharges of FOG wastes to Central San's sewer system using a targeted frequency based on potential for FOG discharges. | Number of inspections completed at food service facilities and number of enforcement actions taken. |
| | Continue outreach on proper FOG disposal. | Description of outreach. |
| | Continue making presentations at Contra Costa County's Food Safety Class and other forums to educate Food Service staff about proper FOG disposal. | Number of presentations given by Central San's staff. |
| Non-dispersible and Flushable Products | Continue outreach to encourage all customers not to flush wipes and other products labeled as flushable. | Description of outreach. |
| | Continue outreach program, targeting neighborhoods with high accumulations of wipes with direct mailers to encourage behavior change. | Report number of outreach pieces sent. |
| | Continue to track opportunities to give input on the development of flushability standards and submit comments when appropriate. | Identify support provided under these opportunities. Include any comment letters submitted. |
| Selenium | Continue evaluating P2 performance/impacts by conducting targeted monitoring for selenium, as appropriate. | Conduct monitoring and report any observed trends. |
| | Continue investigating potential sources of selenium in our service area. | Summary of potential selenium sources. |

| Section 2: Watch List Pollutants | | |
|----------------------------------|---|--|
| Pollutant | Plan Activity for 2018 | Measurement of Activity Effectiveness |
| Lead | Lead was removed from the Watch List Pollutants list for the 2018 P2 Plan since the NPDES permit has not contained a lead effluent limit for two permit cycles. Central San will continue with its commitment to monitor and control sources of lead. | |
| Bis(2-ethylhexyl) phthalate | <p>Continue evaluating P2 performance/impacts by conducting targeted monitoring for bis (2-ethylhexyl) phthalate, as appropriate.</p> <p>Per the 2017 NPDES Permit, "reasonable potential analysis shows that the discharge no longer demonstrates reasonable potential for this pollutant to cause or contribute to exceedances of the applicable Water Quality Orders. This Order, therefore, does not retain these limitations". Bis (2-ethylhexyl) phthalate was moved out of the Priority Pollutants section and into the Watch List pollutant for the 2018 P2 Plan.</p> | Conduct monitoring and report any observed trends as needed. |

| Section 3: Pollutants of Emerging Concern | | |
|--|---|---|
| Pollutant | Plan Activity for 2018 | Measurement of Activity Effectiveness |
| Pesticides | Continue collecting, tracking, and properly disposing of pesticides via Central San's HHWCP. | Amount of pesticides collected and properly disposed of by the HHWCP. |
| | Continue outreach on pesticide reduction and proper disposal. | Description of outreach. |
| | Consider supporting future research studies related to pesticides of emerging concern. | Description of support provided, if applicable. |
| | Continue leading and supporting BACWA/BAPPG's efforts to track and comment on Federal and State pesticide registration activities in support consideration of water quality concerns and reduce pesticide discharges at their source. | Support and describe efforts by BACWA/BAPPG. |
| Pharmaceuticals and Personal Care Products | Continue to maintain and promote Central San's Pharmaceutical Collection Program, which includes collection sites at 13 law enforcement agencies throughout the service area. | Amount of pharmaceutical waste collected and properly disposed of. |
| | Continue support of statewide and national projects on the establishment of pharmaceutical collection programs that are funded by the product chain (manufacturers and retailers). | Describe support activities by Central San staff. |
| | Track implementation of the Contra Costa County Safe Drug Disposal ordinance and support adoption by the cities in the Central San service area. | Describe program implementation as it affects Central San. |
| | Continue accepting and properly disposing of personal care products via Central San's HHWCP. | Continue acceptance and proper disposal of personal care products by the HHWCP. |
| | Continue outreach to encourage customers to dispose of pharmaceuticals and personal care products properly. | Description of outreach. |

| Section 3: Pollutants of Emerging Concern | | |
|---|---|--|
| Pollutant | Plan Activity for 2018 | Measurement of Activity Effectiveness |
| Flame Retardants | Continue accepting and properly disposing of flame retardants via Central San's HHWCP. | Continue acceptance and proper disposal of flame-retardants by the HHWCP. |
| | Continue to track developing information on the sources and control of flame retardants. | Continue to track information. |
| Nanotechnology | Continue supporting BACWA/BAPPG and CASA efforts to track developing information on nanotechnology and comment in support of water quality concerns on any federal regulatory action on products and chemicals that use nanotechnology. | Identify support provided. |
| Nonylphenol Ethoxylates | Evaluate any potential sources of nonylphenol ethoxylates in the commercial laundries and other large laundry operations within Central San's service area. | Summary of potential sources found and follow-up actions taken. |
| Microplastics | Continue outreach on microplastics. | Description of outreach. |
| | Continue providing support for future research studies related to microplastics. | Description of support provided, if applicable. |
| Air Toxics | The BAAQMD adopted Regulation 11: Rule 18 air toxics regulations. Central San will continue to identify potential pollutants of concern with cross-media impacts and potential reduction through P2 efforts. | Identify potential pollutants of concern to ensure compliance with the new regulation. |

Section 4: Continuous P2 Efforts

| | Plan Activity for 2018 | Measurement of Activity Effectiveness |
|--------------------------|---|--|
| Continuous P2 Activities | Continue the operation and promotion of Central San's HHWCP to keep pollutants out of the wastewater stream. | Total amount of HHW collected and properly disposed of by the HHWCP. |
| | Continue Pretreatment and Stormwater Inspection Programs. | Number of inspections conducted and enforcement actions taken. |
| | Continue student education programs (Water Wizards, Sewer Science, and Delta Discovery Voyage). | Number of students participating in each program. |
| | Continue attendance at environmental/community events. | Description and number of events attended. |
| | Continue Treatment Plant and HHWCP tours to educate people on the efforts to reduce pollution by the treatment of wastewater and the collection and proper disposal of HHW. | Number of people given tours. |
| | Continue conducting Central San's Annual Pollution Prevention Awards Program to recognize local businesses for achieving excellence in P2 and sustainability. | Description of recognition program. |
| | Continue education and outreach through Central San's website, TV ads, social media, and various publications. | Description of outreach and relevant statistics. |
| | Continue partnership with CCGBP. Continue providing environmental compliance inspection services to aid in certifying green businesses in Central San's service area. | Continue partnership and green business inspections. Report number of new and existing businesses certified in Central San's service area. |
| | Maintain green business certification standards and continue making green improvements in Central San's operations that will ensure the next green business recertification. | Maintain green business certification. |
| | Continue active participation, membership, and support (where appropriate) of various regional, statewide, and national organizations/programs that serve as a conduit for P2 information, such as BACWA, BAPPG, CCCWP, CWEA, CASA, HHWIE, NACWA, and NAHMMA. | Continue active participation, membership, and support of the various organizations/programs listed. |

III. REQUIRED STATUS REPORTS

The San Francisco Bay Regional Water Quality Control Board (Regional Water Board) required reporting on the status of the following items by the various regulatory instruments noted below.

A. Cyanide Control Program

1. Reporting Requirement

The Cyanide Site-Specific Objective for San Francisco Bay (Order No. R2-2006-0086) required the implementation of a Cyanide Control Program and a status report of the Program in the annual P2 Report. The Program requirements consisted of the following:

- Inspect each potential source and assess the need to include that contributing source in the control program.

- Inspect contributing sources included in the control program annually.
- Develop and distribute educational materials to contributing sources regarding the need to prevent cyanide discharges.
- Prepare an emergency monitoring and response plan for implementation if a significant cyanide discharge occurs.

2. Central San's Status Report for 2017

Central San maintained an inventory of significant cyanide sources, which included two SIUs and the on-site sewage sludge incinerators at Central San's treatment plant. Central San continued to implement the Cyanide Action Plan elements, including regular inspection and monitoring of the two off-site facilities.

In 2017, Central San did not document any violations of Central San's cyanide LDL from the two SIUs on the inventory of significant cyanide sources.

In the event of a significant cyanide discharge, Central San has prepared an emergency monitoring and response plan. In 2017, cyanide concentrations in Central San's treatment plant influent and effluent were evaluated regularly. No excursions were identified in the effluent samples. All the influent samples were in the normal range of 1 to 3 ug/L. Central San's HHWCP collected and properly disposed of 41 pounds of cyanide-containing wastes in 2017.

B. Copper Control Program

1. Reporting Requirement

The Copper Site-Specific Objective (SSO) for San Francisco Bay (Order No. R2-2007-0042) required submittal of a list of potential copper sources to the treatment plant, implementation of a Copper Control Program, and reporting on the status of the Program in the P2 Report annually.

Central San was not initially required to develop Copper Control Program elements under the Copper SSO as Central San operated under a final copper effluent limit not based on the Copper SSO. Later, Central San's 2012 NPDES Permit contained a copper effluent limit based on the Copper SSO, requiring Central San to implement the elements of the Copper Control Program in 2012.

2. Central San's Program

Central San conducted the necessary elements of the Copper Control Program prior to receiving the Copper SSO requirements in 2012. Central San's Inventory of Potential Copper Contributors included one SIU, the Bay Area Rapid Transit (BART) train maintenance facility in Concord.

The inventory further referenced copper plumbing for the water supply system as a major source of the remaining copper, with the remaining fraction originated from a large percentage of the domestic and non-domestic users of Central San's collection system. The BART facility pre-treated its process water prior to discharge and received regular inspection and sampling by Central San to ensure compliance with copper limits.

The following describes Central San's activities and outreach intended to fulfill the requirements of the Regional Water Board's prescribed Copper Control Program for the ubiquitous copper contributions discharged to Central San's system:

- Education and outreach to the public.

Central San developed outreach materials alone and in conjunction with the CCCWP on proper pool, spa, and fountain maintenance, including proper draining techniques to avoid copper discharges to the sewer system. These materials were posted on Central San's website, distributed at public events, and have been the focus of several articles appearing in Central San's *Pipeline* community newsletters.

- If corrosion is determined to be a significant copper source, work cooperatively with local purveyors to reduce and control water corrosivity, as appropriate, and ensure that local plumbing contractors implement BMPs that minimize copper discharges.

In addition to periodically reviewing corrosion control efforts among the various water purveyors in the service area, Central San's Environmental Compliance Superintendent receives and reviews aquatic pesticide application reports from the Contra Costa Water District annually, and looks for correlations with treatment plant monitoring during/after the pesticide applications. No correlations in the Central San monitoring data have been observed to date.

Central San continued to support funding for the BAPPG's regional Copper Outreach Project to educate plumbing apprentices, plumbers, designers, and building inspectors on ways to minimize copper discharges from copper plumbing installations.

- Educate owners, plumbers, designers, and maintenance contractors for pools and spas to encourage BMPs that minimize copper discharges.

Central San's Environmental Compliance section has developed and implemented a Pool, Spa, and Fountain Discharge Permitting Program, issuing no-fee permits to residents or businesses to control copper discharges from pools, spas, and fountains to Central San's sewer

system. In addition, the permit informs the public and pool contractors about the concerns of copper algaecides in pool water.

- **Additional Activities**

In addition to the activities listed above, Central San's Environmental Compliance staff developed a no-fee Class III BMP Permitting Program in 2009 to regulate vehicle service, machine shop, and car wash facilities that potentially discharge process wastewater with elevated copper (or lead) levels. Facilities were added and removed from this program as they moved into and out of Central San's service area. Inspectors evaluated facilities during inspections to determine if a currently permitted business followed the BMPs and if a permit was necessary for currently unpermitted businesses.

Because of the BMP Permitting Program effort, Central San identified businesses that degreased engines, potentially resulting in greater concentrations of copper (or lead) entering the sewer. These facilities were placed under a Class III IU Permit, requiring more frequent reporting, pretreatment upgrades (if necessary), and sampling.

In addition, Central San collected and properly disposed of copper-containing wastes at Central San's HHWCP, ensuring that the copper did not enter the water environment.

3. Central San's Status Report for 2017

Central San's regular monitoring program yielded copper influent results consistent with previous years, so Central San continued the elements of the Copper Control Program as described in the section above. In addition to continuing to issue and maintain permits for 277 Class III BMP permits to vehicle service, machine shops, and car washes, Central San's Environmental Compliance section issued 34 Special Discharge Permits for pool, spa, and fountain dischargers in 2017. Central San's HHWCP collected and properly disposed of 3,501 pounds of copper-containing wastes. Central San supported BAPPG's Regional Copper Outreach Project in 2017. BAPPG's consultant Stephanie Hughes conducted a presentation on copper discharge minimization to approximately 15 student apprentices in 2017.

C. Polychlorinated Biphenyls

1. Reporting Requirement

The San Francisco Bay Mercury and PCBs Watershed Permit established Waste Discharge Requirements for Mercury and PCBs from municipal and industrial wastewater discharges of mercury to San Francisco Bay (Order No. R2-2012-0096 and Order No. R2-2017-0041). This Order required each Municipal Discharger, subject to the PCBs effluent limitations, to evaluate

whether there are controllable sources of PCBs (e.g. industrial equipment containing PCBs) to its treatment system. Each discharger is required to submit the results of this evaluation, including any proposed control actions with an implementation schedule, in their annual P2 Report.

2. Central San's Status Report for 2017

Central San's Environmental Compliance staff previously evaluated controllable sources of PCBs to the collection system, and identified PG&E electrical maintenance facility in Concord and PG&E laboratory facility in San Ramon as potential sources of PCBs. The PG&E laboratory facility in San Ramon operated under a Class III IU Permit and was inspected annually. No significant sources of PCBs were identified at this facility in 2017.

While the PG&E maintenance facility in Concord was inspected periodically, it was not operating under an IU Permit. Central San inspected this facility in 2016 and did not identify any changes in PCB sources since the last inspection.

Central San's HHWCP collected and properly disposed of over 2,800 pounds of PCB-containing wastes in 2017.

IV. DETAILED DISCUSSION OF 2017 P2 ACTIVITIES

A. Household Hazardous Waste Collection Program

Central San's HHWCP serves as a direct link between the community and Central San's promotion of pollution prevention. The HHWCP provides an opportunity for over 194,000 households, including residents and small businesses, in central Contra Costa County to reduce, reuse, recycle, and properly dispose of unwanted pesticides, cleansers, paint, oil, batteries, and other hazardous waste.

The HHWCP was promoted on a continuous basis through Central San's community newsletter *Pipeline*, city newsletters, garbage bill inserts, a dedicated toll-free information line, County recycling guides, and numerous community and agency websites including Central San's own website.

In October, the HHWCP celebrated its 20th year in operation. Since 1997, more than 36 million pounds of hazardous wastes have been collected from over 515,000 participants. Of the waste that was collected, more than 90 percent was either used as it was intended via our Reuse Program, recycled into like materials, or used as a supplemental fuel for making Portland cement. The remaining 10 percent was disposed of by thermal destruction, treatment, or landfilled (0.3 percent).

The HHWCP has been a committed and longstanding partner for our community and has done a great job in helping us divert hazardous wastes from sewers, waterways, and landfills through reuse, recycling, and proper disposal.

1. 2017 Collection Results

In 2017, the HHWCP collected 2,260,330 pounds of hazardous waste and served 34,257 residential and 335 small business participants. This represented an average load of 65 pounds per participant. Over 89 percent of what was collected was diverted from landfills and waterways by being reused, recycled, or fuel blended (supplemental fuel source) for beneficial use. The remaining hazardous waste was processed for disposal through neutralization and/or destructive incineration, leaving only 4,535 pounds of hazardous waste (asbestos and medical sharps) to be landfilled.

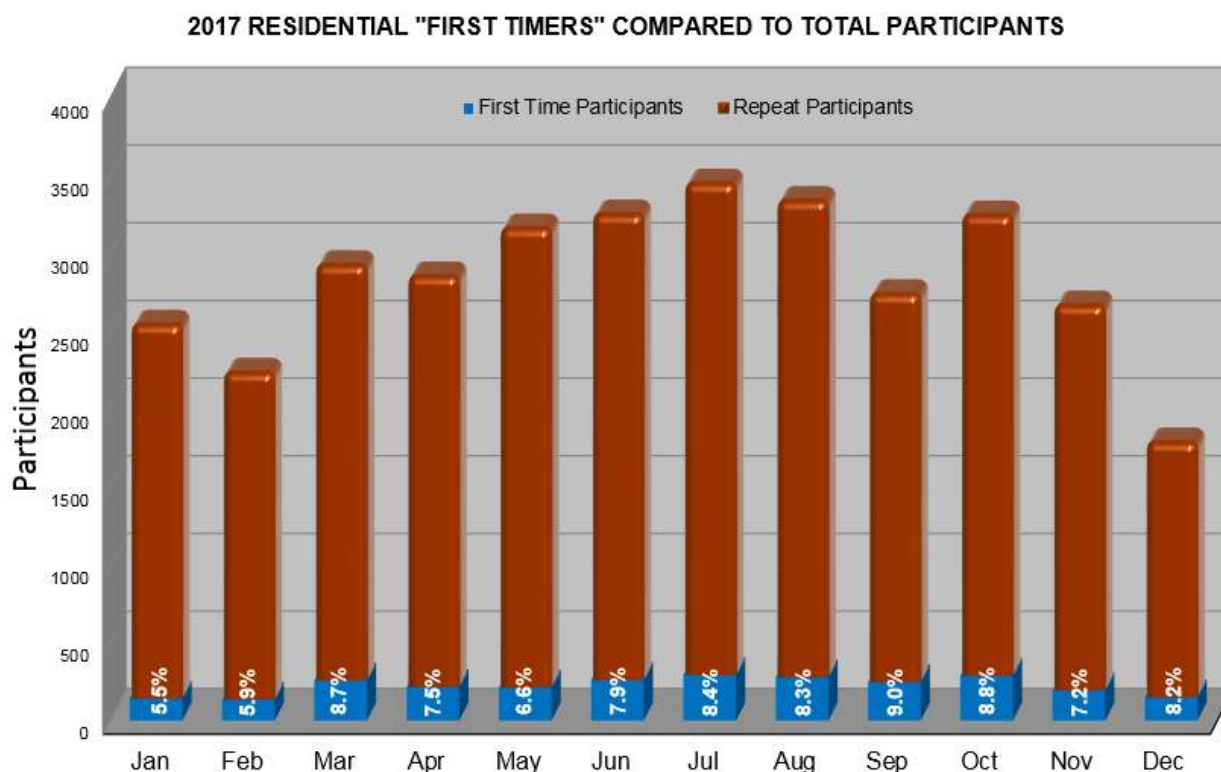
Over 410,232 pounds of reusable household chemical products were given away to the public during 2017. Offering these new and partially full containers of still-useable products, reduced the amount of hazardous waste requiring disposal and completed the product's lifecycle, reducing the need to produce more products and use up resources. This reuse component is given priority in the overall HHWCP waste management strategy.

Table 3. Summary of HHWCP Participation 1998 – 2017

| Year | Total # of Participants | % Change in Use (from previous year) | Total Waste Collected (lbs.) | % Change in Collection (from previous year) | Average Load per Participant (lbs./participant) |
|-------------|--------------------------------|---|---|--|--|
| 1998 | 14,600 | n/a | 1,096,234 | n/a | 75 |
| 1999 | 14,460 | <1% | 898,431 | -18% | 62 |
| 2000 | 15,649 | 8% | 1,159,913 | 29% | 74 |
| 2001 | 17,308 | 11% | 1,300,031 | 12% | 75 |
| 2002 | 19,215 | 11% | 1,400,000 | 8% | 73 |
| 2003 | 22,667 | 18% | 1,399,559 | <1% | 62 |
| 2004 | 23,735 | 4.7% | 1,373,054 | -2% | 58 |
| 2005 | 23,372 | -1.6% | 1,545,953 | 12.6% | 66 |
| 2006 | 25,038 | 6.7% | 1,863,429 | 20.5% | 74 |
| 2007 | 27,695 | 10.6% | 1,880,109 | 0.8% | 68 |
| 2008 | 28,560 | 3.1% | 1,877,032 | -0.1% | 66 |
| 2009 | 28,817 | 0.9% | 1,811,065 | -3.5% | 63 |
| 2010 | 29,686 | 3.0% | 2,018,412 | 11.4% | 68 |
| 2011 | 29,796 | <1% | 1,896,534 | -6% | 64 |
| 2012 | 29,056 | -2.5% | 2,042,502 | 7.7% | 70 |
| 2013 | 30,214 | 4.0% | 1,966,642 | -3.9% | 65 |
| 2014 | 30,948 | 1.2% | 2,002,649 | 1.8% | 65 |
| 2015 | 32,771 | 10.6% | 2,143,327 | 7.0% | 65 |
| 2016 | 32,691 | -0.2% | 2,093,893 | -2.3% | 64 |
| 2017 | 34,592 | 5.8% | 2,261,509 | 8.0% | 65 |

Because of the HHWCP's continuous promotion, it was difficult to tie visits to the HHWCP to the number of people in the Central San service area receiving outreach information. Figure 1 shows the variability over the years of first-time HHWCP participants compared to the variability of repeat participants.

Figure 1. 2017 Comparison of First Time to Repeat HHWCP Participants



2. Mercury Collection Program

Central San's HHWCP promoted proper mercury disposal by accepting all types of mercury-containing wastes, including elemental mercury, mercury-containing devices (fluorescent bulbs, batteries, mercury switches, thermometers, and mercury containing medical devices), and mercury containing compounds (paints and pesticides that contain mercury).

Since the inception of Central San's Mercury Thermometer Exchange Program in 1999, more than 6,100 digital thermometers were provided to customers in exchange for a mercury thermometer dropped off at the HHWCP. In 2017, 814 mercury-filled thermometers were exchanged for 132 digital fever thermometers. Assuming 1 gram of mercury per fever-grade thermometer, the HHWCP kept approximately 1.79 pounds of elemental mercury out of the environment.

HHWCP staff closely tracked the quantities of mercury collected in mercury-containing devices, such as fluorescent lamps, thermometers, thermostats, switches, button cell batteries, and elemental mercury. In 2017, the HHWCP collected approximately 102.6 pounds of mercury contained in these types of wastes.

The majority of the 102.6 pounds of mercury mentioned above was from the 91.4 pounds of elemental mercury that was collected in various sized containers over the year (see Table 4 for summary).

Table 4. 2017 Mercury Collection Summary

| Mercury-Containing Devices | Number of Items | Units | Estimated Quantity of Mercury | Total Pounds |
|--|-----------------|------------|---------------------------------|---------------|
| Thermostats (3 grams Hg/unit) | 124 | Ea. | 372 grams ¹ | 0.82 |
| Thermometers (1 grams Hg/unit) | 814 | Ea. | 814 grams ² | 1.79 |
| Elemental Hg (lbs.) | 91.41 | Lb. | 91.41 lbs. | 91.41 |
| Switches | 12.78 | Lb. | 6.39 lbs. ³ | 6.39 |
| Mercury Batteries | 44 | Lb. | 137,500 milligrams ⁴ | 0.30 |
| Fluorescent Lamps | 416,701 | Feet | 864,655 milligrams ⁵ | 1.90 |
| Total Hg in Pounds | | | | 169.79 |
| | | | | |
| Paints, pesticides and other compounds containing mercury | 0 | Containers | 2.5 lbs. ⁶ | 0 |
| <p>1. Each HVAC type thermostat contains approximately 3 grams of Hg in each ampoule.</p> <p>2. A number of studies report that mercury-containing thermometers contain between 0.5 and 3 grams depending on their size. As a result, the fever-sized thermometer (1gram Hg/thermometer) will be used to calculate the quantity of mercury in all thermometers. Depending on the size of the thermometer, an estimated equivalent number of fever-sized thermometers will be used (i.e., laboratory thermometers contain an average of 5 grams of mercury per thermometer. This sized thermometer would contain 5 fever-sized thermometers.).</p> <p>3. Switches - As there are no standard sizes or quantities of mercury in switches, all switches will be weighed and 50% of the gross weight of switches will be subtracted to account for the containers.</p> <p>4. Mercury Batteries - Studies show that button cell batteries contain up to 25 mg of mercury in each battery. Since there is a wide variety in the sizes of button cells, the following is assumed: There are roughly 250 various sized button cells in one pound. An average of 12.5 mg/cell accounts for all sizes. Therefore, 250 cells x 12.5 mg = 3,125 mg of mercury per pound of button cell batteries.</p> <p>5. Based on numerous studies, fluorescent lamps have as little as 3.5 mg of mercury with some having as much as 60 mg. The average concentration found after 1994 is 22.8 mg per 4-foot lamp. For this report, 22.8 mg per 4-foot lamp (or 2.075 mg per foot of lamp) was used.</p> <p>6. The weight of paints, pesticides, and other is not included in the Total Pounds Hg figure. The actual mercury content is unknown. On product labels, the concentration is not always listed. The weight of mercury is calculated as the weight of pesticides is in Table 5 (on the following page).</p> | | | | |

3. Pesticide Collection Program

Some legacy pesticides and other pollutants of concern (POC) were tracked separately to provide more accurate reporting of the collected compounds. Table 5 shows which pesticides and POCs were tracked and the quantity collected in 2017. Since containers of waste can be full to nearly empty, containers are averaged as half-full based on their size. This has proven to be a conservative estimate.

Table 5. 2017 Pesticide Collection Summary

| Pollutant of Concern | Liquids (container sizes) | | | Solids (container sizes) | | | Total by Waste Stream (lbs.) |
|----------------------------------|---------------------------|-----------------------|----------------------|--------------------------|------------------------|-----------------------|------------------------------|
| | Pint (1.0625 lbs.) | Quart (2.125 lbs.) | Gallon (8.5 lbs.) | <5 lbs. (2.5 lbs.) | <15 lbs. (7.5 lbs.) | <30 lbs. (15 lbs.) | |
| Tributyltin | 31 | 7 | 70 | 0 | 0 | 0 | 643 |
| Diazinon | 176 | 376 | 17 | 200 | 15 | 0 | 1,743 |
| Chlorpyrifos | 105 | 287 | 67 | 145 | 2 | 2 | 1,698 |
| Carbaryl | 122 | 275 | 38 | 585 | 6 | 0 | 2,545 |
| Pyrethroids | 5,616 | 799 | 473 | 289 | 33 | 1 | 12,670 |
| Copper | 206 | 439 | 242 | 111 | 2 | 0 | 3,501 |
| 2,4,5-T, Penta-, Trichlorophenol | 27 | 24 | 47 | 0 | 0 | 0 | 479 |
| Lindane | 63 | 28 | 3 | 5 | 0 | 0 | 164 |
| Chlordane | 26 | 85 | 9 | 53 | 0 | 0 | 417 |
| DDT (4,4'-DDE) | 16 | 8 | 0 | 16 | 0 | 0 | 59 |
| Dieldrin | 2 | 0 | 1 | 0 | 1 | 0 | 18 |
| Aldrin/Heptachlor/Endrin | 6 | 1 | 0 | 14 | 1 | 0 | 51 |
| Mercury Compounds | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fipronil | 29 | 8 | 1 | 6 | 0 | 0 | 42 |
| Arsenic Compounds | 60 | 75 | 5 | 130 | 0 | 0 | 531 |
| Total Pounds 24,561 | | | | | | | |

4. Pharmaceutical Collection Program

The Program collected and properly disposed of more than 110,000 pounds of expired or unwanted medication from residents in Central San's service area since the program began as a pilot project in 2009. In 2017, 16,680 pounds of medication were dropped off at 13 law enforcement partner sites in the service area.

Advertising for Central San's Pharmaceutical Collection Program consisted of outreach in the *Pipeline* community newsletter, newspaper articles, and City, County and District websites, in addition to brochures located at hospitals and pharmacies.

In Central San's partnership arrangement with the communities, Central San paid the cost of promotion, collection, and disposal, and the law enforcement agencies were responsible for supervising the collection site.

B. Pretreatment Program

Central San implements an approved Pretreatment Program that regulates the industrial and commercial wastewater discharges into the sewer system. The primary components of this program include:

- Legal Authority (Title 10 of District Code: Source Control Ordinance)
- Permitting
- Sampling/Monitoring of Discharge Quality
- Inspections
- Enforcement Response

Central San successfully reduced the loading of heavy metals and other pollutants of concern using the Pretreatment Program elements to regulate the wastewater discharge practices of certain types of businesses. This regulatory program enhanced Central San's ability to control pollution at its source by creating incentives for businesses to achieve and exceed compliance with the federal and local pretreatment standards.

Central San's Source Control Ordinance applied to all non-residential users in Central San's service area. In addition, the cities of Concord and Clayton entered into a Memorandum of Understanding authorizing Central San to conduct the Pretreatment Program within the boundaries of their respective collection systems. Central San's regulatory strategy is to permit companies that pose a higher risk for discharging larger quantities of pollutants of concern and to enforce the ordinance requirements through a comprehensive inspection effort covering smaller and more diverse types of businesses. The implementation of this regulatory program contributes to Central San operating in compliance with its NPDES Permit. Pretreatment Program results are summarized in Table 6.

Table 6. 2017 Pretreatment Program Results

| | |
|--|-------|
| Number of Inspections Conducted | 1,328 |
| Number of Businesses Inspected | 1,018 |
| Class I and II IUs (Significant Industrial Users) Permits | 18 |
| Class III Industrial Users and Long-term Special Discharge Permits | 63 |
| Dental Class III BMP Permits | 325 |
| Vehicle Service BMP Permits | 277 |
| Mobile Washer Permits | 29 |
| Short-term Special Discharge Permits Issued | 19 |
| Pool, Spa, Fountain Discharge Permits Issued | 34 |
| NOVs Issued | 48 |
| Warning Notices Issued | 38 |

C. Dental Amalgam Program

Central San's Environmental Compliance staff continued implementing a Mandatory Dental Amalgam Program to reduce mercury from dental operations. This Program consisted of issuing no-fee permits to dental offices in Central San's service area that generate amalgam waste, requiring them to adhere to eight dental BMPs, including installation and maintenance of an ISO-certified amalgam separator. The following milestones were completed in 2017:

- Continued to issue permits to new dental offices and processed self-certifications of amalgam separator installation.
- Sent reminder letters to permitted dental offices regarding the Periodic Compliance Report (PCR) which:
 - Ensured dental offices follow maintenance procedures
 - Updated Central San's database on practicing dentists
- Continued site visits of dental facilities to determine if the BMPs were being followed and to verify installation and maintenance of amalgam separators. Beginning in 2017, the frequency of re-inspections was changed from a 3-year cycle to a 5-year cycle based on the extensive experience gained from working with the dental practices in Central San's service area since 2007.
- Continued taking and analyzing samples from two existing sewer-monitoring sites downstream of dental offices to track effectiveness of amalgam separator installations and adherence to dental amalgam BMPs.

Based on information in self-certifications, PCRs, and on-site inspections, all dental facilities in Central San's service area achieved compliance with amalgam separator installation as of December 31, 2017. One practice was given a Warning Notice in 2017 for an improperly maintained amalgam separator, which was corrected after the citation.

Central San's Environmental Compliance staff continued to monitor dental practices to ensure that all amalgam-generating dentists were permitted and meeting Central San's Mandatory Dental Amalgam Program requirements. The site visits were effective in identifying problems at several sites and provided Central San inspectors the opportunity to work with the dental facilities to address problems discovered.

D. Stormwater Inspection Program

In fiscal year 1996-97, Central San entered into an interagency agreement with the CCCWP to conduct stormwater inspections at commercial and industrial facilities in conjunction with Central San's pretreatment inspections. Central San conducts stormwater inspections either in conjunction with pretreatment inspections or solely to determine compliance with the cities' stormwater ordinances. Central San provided these inspection services in all ten central county cities. Central San coordinated inspection efforts of the West County Wastewater District in four west county cities in addition to the efforts of Delta

Diablo in two east county cities.

Stormwater Inspection Program results for the participating central Contra Costa cities are summarized in Table 7. Food service and vehicle service facilities continued to represent the largest number of facilities inspected under this agreement. An integral part of this inspection effort was reviewing businesses' operations for P2 opportunities and providing feedback on such opportunities.

Table 7. 2017 Stormwater Inspection/Enforcement Program Results

| | |
|---------------------------------|-------|
| Number of Inspections Conducted | 1,040 |
| Number of Businesses Inspected | 883 |
| NOVs Issued | 25 |
| Warning Notices Issued | 28 |

This interagency partnership was a great example of agencies working together to efficiently implement a regulatory program that benefits businesses by combining these two important water quality protection programs into one inspection, resulting in less overall time impact on the businesses in the service area. Corrective actions for a stormwater violation may result in the need for a business to redirect discharge to the sanitary sewer. An inspector with authority over both the stormwater and pretreatment regulatory programs can provide business operators with possible solutions that efficiently maintain compliance with both programs

E. Integrated Pest Management Program

1. Background

Central San's IPM Program included Central San's partnerships with the Contra Costa Master Gardeners and local hardware stores as well as support of the regional *Our Water Our World* campaign via Central San's membership in the BAPPG.

2. Store Partnership

Through the Store Partnership, Central San promoted P2 messages to customers of participating hardware stores and nurseries by providing displays, signs, and labels that offer P2 tips and information about proper disposal of household hazardous wastes.

F. Student Education

1. Water Wizards

In 2017, Central San's Water Wizards program was presented 41 times at 13 schools to 955 students in third and fifth grades.

The program included a 60-minute in-class presentation with activities that teach the importance of water, the water cycle, the flow of water from homes to the Bay, how wastewater is treated at Central San, and what students and their families can do to prevent water pollution. Students received an Activity Booklet and materials to share with parents about Central San's HHWCP and water pollution in general.

Water Wizards correlated with State Science Content Standards, making it easy for teachers to incorporate it into their curriculum.

Goals and objectives for the program included helping students to:

- Learn about the water cycle and the physical states of water.
- Develop an appreciation for the importance of water as a limited resource and dependence on clean water.
- Understand how wastewater flows through household drains and sewers, and how daily activities affect water quality.
- Learn the basics about wastewater treatment.
- Identify household products that can pollute water.
- Discover what they can do to prevent water pollution.
- Gain confidence in their ability to affect water quality positively.

Table 8 shows the number of participating students in recent years:

Table 8. Four-Year Water Wizards Program Participation

| | 2014 Water Wizards | 2015 Water Wizards | 2016 Water Wizards | 2017 Water Wizards |
|-------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| Students | 1263 | 661 | 664 | 955 |
| Classrooms | 49 | 27 | 25 | 41 |
| Schools | 15 | 10 | 9 | 13 |

Overall, teachers' responses indicated a high degree of satisfaction with the program, its instructors, and the hands-on aspect of the presentation, as summarized Table 9.

Table 9. Summary of Water Wizard Teacher Evaluations

| Question | Average Rating (5 = Highest) |
|--|---|
| How would you rate the scheduling and pre-visit information provided in helping prepare you and your students for the program? | 3.8 |
| How effective was the presenter? | 4.1 |
| How effective were the materials and/or displays in providing interest and motivation for the students? | 4.3 |
| How well did the program support, enhance, or connect to your curriculum? | 4.5 |

| Question | Average Rating (5 = Highest) |
|--|---------------------------------|
| What is your overall rating for the Central San program? | Very Effective to Positive |
| Would you be willing to participate in this program again? | All responded YES |

The results of the pre- and post-tests, in Table 10, administered to students verified that learning occurred during the Water Wizards presentations.

Table 10. Overview of Water Wizards Program Results

| Schools | Pre-Test % Correct (Average of all students) | Post-Test % Correct (Average of all students) |
|---------|---|--|
| 13 | 65% | 79% |

2. Sewer Science

In 2017, Central San conducted the five-day Sewer Science Wastewater Treatment Laboratory Program in six schools for approximately 1,584 students.

The Program integrated biology, chemistry, physics, and math to introduce wastewater, stormwater, and water quality concepts, all of which provided a foundation to discuss P2. Students prepared simulated wastewater and spent a week analyzing and treating it by simulating primary sedimentation, biological treatment, secondary sedimentation, filtration, and disinfection. The students measured water quality parameters, analyzed data, and compared results with Central San's NPDES permit effluent limits for ammonia, chemical oxygen demand, pH, and turbidity. Wastewater kits, including the necessary tanks, pumps, testing kits, pH paper, pipette tips, clamps, etc., were provided to each classroom. Each student received a workbook.

Wrap-up presentations linked the lessons in the laboratory to what Central San does for the community and covered Central San's mission, service area, collection and treatment processes, and P2 programs. The presentations discussed how grease, roots, wipes, and pollutants affected the collection and treatment processes and what students can do differently to help. Central San's recycled water program was also discussed.

Table 11 shows the number of students over the past four years:

Table 11. Four-Year Trend of Sewer Science Program Participation

| | 2014 | 2015 | 2016 | 2017 |
|-----------------|-------|-------|-------|-------|
| Students | 1,190 | 1,169 | 1,620 | 1,584 |
| Schools | 6 | 7 | 8 | 7 |

Table 12 shows how pre- and post-tests verified students are learning from Sewer Science:

Table 12. Results of 2017 Sewer Science Tests

| High School | # of Students | Pre-Test Score | Post-Test Score | Average Improvement |
|-----------------------|---------------|----------------|-----------------|---------------------|
| Monte Vista | 266 | 76% | 85% | 9% |
| Concord | 192 | 52% | 76% | 24% |
| Las Lomas | 130 | 59% | 89% | 30% |
| Ygnacio Valley | 464 | 42% | 66% | 24% |
| Campolindo | 326 | 54% | 90% | 36% |
| Mt. Diablo | 41 | 40% | 68% | 28% |
| San Ramon Valley | 165 | 60% | 89% | 29% |
| Total Students | 1584 | 55% | 80% | 25% |

Teacher evaluations, in Table 13, indicated their satisfaction with the program:

Table 13. Results of Sewer Science Teacher Evaluations

| Question | Average Rating (5 being highest) |
|--|----------------------------------|
| Sewer Science was a valuable addition to my class. | 4.9 |
| The students found the Sewer Science lab engaging. | 4.5 |
| The student workbooks were helpful to the students. | 4.0 |
| The lab instructor was knowledgeable and well received. | 4.7 |
| The design of the treatment models assisted in explaining actual treatment operations. | 4.9 |
| The hands-on lab tests were appropriate and effective. | 4.5 |

3. Delta Discovery Voyage

In 2017, more than 4,000 students participated in the Delta Discovery Voyage Student Education Program, with approximately 1,600 of those students from the Central San service area. This science program took fifth grade students aboard the Marine Science Institute research vessel, the *RV Brownlee*, which provided a safe floating laboratory for students. On this excursion on the Sacramento-San Joaquin Delta, students learned about the water in the Delta, its aquatic life, water conservation, the effects of pollution, and the work of wastewater agencies to prevent pollution. They received the *Delta Discovery Voyage Water Patrol Activity Book*, which included information and learning activities related to the Delta, mercury pollution, the environment, watersheds, and household hazardous waste.

G. Business Outreach

1. 2017 P2 Awards

In 2017, Central San continued its P2 Awards Program partnership with Sustainable Contra Costa, a local non-profit organization whose mission is to educate, connect, and inspire people to create and maintain sustainable communities. Central San held its P2 Awards Program in conjunction with Sustainable Contra Costa's Annual Awards Gala during National P2 Week.

Central San presented its P2 Awards to the following businesses that went beyond compliance and achieved excellence in P2:

- Buddha Gate Monastery, Lafayette
- Michael S. Tobian, DDS, Walnut Creek
- Mrs. Pastures Cookies for Horses, Concord
- The Conco Companies, Martinez

In addition to presenting four P2 Awards, Central San recognized 41 "Water Quality Community Partners" to acknowledge years of compliance with their sewer discharge permit, and two "Recycled Water Champions" for their use and promotion of our recycled water.

2. Environmental Compliance Outreach

Central San routinely provided the regulated businesses in the service area with information on how to achieve and maintain compliance with the Source Control Ordinance and the applicable permit conditions. Central San initiated and maintained the two following programs to enable businesses to receive this information in a constructive, non-enforcement manner:

a. Industrial User Academy

Periodically, Central San offers an IU Academy to permitted IUs to help them understand and comply with their permits. No IU Academy sessions were held in 2017. Sessions are planned for 2018 that will be oriented toward the permitted Class II and Class III IUs.

b. Compliance Consultations

In 2007, Central San's Environmental Compliance staff began offering a new service, Compliance Consultations, to assist regulated businesses and permitted industries understand the changes that were made in 2007 to Central San's Source Control Ordinance (Title 10 of the District Code) and to LDLs. Companies that took advantage of this service by requesting a compliance audit of their business were not subject to citations or penalties if violations were observed during this review, but instead were advised how to correct any deficiencies. The companies are

required to make the necessary corrections to achieve compliance or the non-compliant condition would be subject to citation at a future inspection. This program was part of an overall effort by Central San's Environmental Compliance staff to enhance customer service, and was continued through 2017 to help businesses understand the standards they need to meet to protect water quality.

3. Restaurant Outreach

a. Food Safety Class

Central San's Environmental Compliance staff participated in Contra Costa County's Food Safety Class to teach restaurant staff about the proper disposal of FOG. In 2017, Environmental Compliance Inspectors presented on the proper disposal of FOG and about proper stormwater practices at seven Food Safety Classes.

H. Community Outreach

1. Environmental/Community Events

Central San staff communicated P2 messages to approximately 4,750 people by participating in these community events:

- Rossmoor Earth Day Event, Walnut Creek
- Pleasant Hill Instructional Garden Event, Pleasant Hill
- John Muir Earth Day Festival, Martinez
- Diablo Valley College Earth Day Event, Pleasant Hill
- Wells Fargo Earth Day Event
- Joint Genome Institute Employee Event, Walnut Creek
- John Muir Heath Employee Green Fairs (2), Concord and Walnut Creek
- Sustainable Contra Costa Gala and P2 Awards, Concord
- Dose of Awareness 5K
- Foothill Middle School STEM event

2. Speaking Events

Staff communicated P2 messages to more than 875 people via speaking engagements, and 5,000 during a Closed-Circuit TV (CCTV) broadcast to the community of Rossmoor in Walnut Creek.

3. Treatment Plant Tours

Central San treatment plant tours showed employees, students, and the public the role Central San's plant plays in protecting waterways. During 2017, Central San conducted plant tours for 300 people:

- 59 Quarterly Tours

- 12 New Employee Tour
- 5 New Employee Tour
- 23 Leadership Contra Costa
- 3 High School Project Tour
- 39 Concord High School
- 3 Tesoro
- 5 Girl Scouts
- 32 Central San Academy Participants
- 39 Engineering & Environmental Camp
- 3 Microvi
- 8 Loma Vista Adult Ed
- 12 South Korea group
- 1 Sewer Science Teacher
- 12 HHW event Plant Tours
- 22 SF Bay Area Asset Mgmt. Professionals
- 12 Rossmoor Water Conservation Committee
- 6 Student group
- 4 Clayton Valley Garden Club

4. Internet Communications

a. Central San's Website

The Central San website, CentralSan.org, provided user-friendly information about Central San's services, P2 programs/messages, and job openings. Table 14 shows statistics for 2017:

Table 14. Central San Website Visit Statistics

| | |
|--------------------------------|---------|
| Total Sessions/Visits in 2017 | 80,084 |
| Total Users in 2017 | 51,639 |
| Total Page Views in 2017 | 219,681 |
| Average Pages Viewed Per Visit | 2.74 |

b. Social Media

Central San posted many P2-related messages throughout the year on its Facebook Page (<https://www.facebook.com/CentralSanDist/>), Twitter account (<https://twitter.com/CentralSan>), and YouTube channel (<https://www.youtube.com/CentralSanDist>).

5. Pipeline Customer Newsletter

Central San published and mailed two issues of Central San's *Pipeline* customer newsletter in 2017, which promoted P2 messages to all residents

and businesses within the service area (as well as to Central San employees). A sample issue is located in Appendix A.

6. Videos

Central San's in-house staff produced and/or promoted four P2-related videos in 2017:

- The Overflow Hero! <https://youtu.be/y2r0xD4F0dg>
 - In addition to promoting it on Central San's YouTube channel and on CCTV, The Overflow Hero was selected as an Interactive Knowledge Exchange video at WEF's 2017 Technical Exhibition and Conference.
- HHW 20 Year Statistics https://youtu.be/uDWJ0_3Ruos
 - This video was used to promote HHW's 20th Anniversary Collection Drive week, quickly becoming one of our most popular videos on social media, garnering over 3,000 views across platforms.
- Dropping Off Your Hazardous Waste is Easy! <https://youtu.be/flcdz3JnUhs>
 - This video was used to promote HHW's 20th Anniversary Collection Drive week.
- You Have it? We Take it! <https://youtu.be/Mm-XgrK2Zvg>
 - This video was used to promote HHW's 20th Anniversary Collection Drive week.

I. Employee Outreach

Central San educated employees so they can share P2 information with their family, friends, and the public. New employees were informed about P2 issues during their welcoming orientation and tour, and all employees received P2 information via the *Lateral Connection* monthly employee newsletter. See a sample issue in Appendix A.

J. Cooperative Partnerships

By forming partnerships with other agencies and organizations, Central San maximized the impact of P2 efforts by reaching a wider and more diverse audience. The partnerships that Central San participated in during 2017 (that have not already been discussed in this report) are described here.

1. Bay Area Pollution Prevention Group

BAPPG is the BACWA committee that focuses on regional P2 projects, events, and campaigns to reduce the discharge of targeted pollutants into San Francisco Bay. Central San's staff continued active participation in BAPPG's Committee meetings.

In 2017, the BAPPG continued its focus on addressing pollutants of regional

concern that can be impacted by outreach messages. BAPPG's 2017 achievements were summarized in the BAPPG 2017 Annual Report.

2. The Regional Integrated Pest Management Partnership *Our Water – Our World*

The Regional IPM Partnership between the Bay Area Stormwater Management Agencies Association and BAPPG promotes the use of less-toxic pest management products and other IPM practices through its *Our Water – Our World* campaign – a campaign that Central San helped create in the late 1990s. Activities for 2017 were summarized in the BAPPG 2017 Annual Report, included in Appendix A.

3. Contra Costa Green Business Program

Central San has participated in and financially supported the CCGBP since the program began in 1998. The purpose of the CCGBP is to strengthen and sustain the quality of the environment in Contra Costa County through a collaborative partnership of public and private organizations that encourage, enable, and recognize businesses taking action to prevent pollution and conserve resources. Since the program began, 597 businesses have been certified green, with 335 in Central San's service area.

The CCGBP partnership is comprised of public agencies in Contra Costa County with responsibility for wastewater, stormwater, hazardous materials, transportation, reduction of solid waste, and conservation of water and energy. CCGBP partners developed and updated P2 and resource conservation checklists, and conduct inspections and audits of businesses. Central San staff helped establish and serves on the CCGBP Steering Committee.

As shown in Table 15, the CCGBP has certified 335 Green Businesses within Central San's service area since 1998, with two new businesses certified in 2017.

Table 15. Businesses in Central San's Service Area Certified by the GBP

| Type of Business | Certified in 2017 | Certified since 1998 |
|-------------------------------------|-------------------|----------------------|
| Alternative Energy | 0 | 6 |
| Airplane Maintenance | 0 | 1 |
| Auto Repair and Car Parts | 0 | 58 |
| Cleaning Services | 1 | 2 |
| Dentists | 0 | 1 |
| Dry Cleaner | 0 | 1 |
| Grocery Stores | 0 | 5 |
| Hardware Stores | 0 | 5 |
| Hauling | 0 | 4 |
| Healthcare | 0 | 1 |
| Home Remodel | 0 | 1 |
| Landscapers | 0 | 11 |
| Manufacturing | 0 | 2 |
| Museums and Theaters | 0 | 2 |
| Office/Retail | 0 | 135 |
| Organizations | 1 | 1 |
| Printers/Newspapers | 0 | 5 |
| Public Offices | 0 | 10 |
| Public: Parks and Printers | 0 | 4 |
| Public: Utilities | 0 | 4 |
| Public Fleet Maintenance Operations | 0 | 8 |
| Restaurants/Hotels | 0 | 24 |
| Retail Stores | 0 | 13 |
| University and Other Schools | 0 | 3 |
| Solar Electric | 0 | 1 |
| Miscellaneous | 0 | 27 |
| Total | 2 | 335 |

Central San maintained green business certification for the entire spectrum of current operations. Maintaining certifications is an important achievement for Central San as a partner in the CCGBP.

APPENDIX A

Contents:

- Spring and Fall 2017 *Pipeline* Community Newsletters
- September 2017 Lateral Connection Employee Newsletters
- BAPPG 2017 Annual Report

SPRING 2017 Vol.21 No.1

PIPELINE

THE CENTRAL CONTRA COSTA SANITARY DISTRICT
CUSTOMER NEWSLETTER



We are
CENTRAL
SAN



70 YEARS AND BEYOND:

PROTECTING OUR COMMUNITY AND THE ENVIRONMENT

Every day at Central San, we strive to fulfill our mission of protecting public health and the environment in a way that is both efficient and effective while providing exceptional service for our customers.

Since 1946, our dedicated and highly trained staff has been providing safe and reliable wastewater collection and treatment for central Contra Costa County. Today, we serve more than 481,600 residents and 3,000 businesses. Whatever goes down your toilets and into the drains travels through our vast sewer system to our treatment plant in Martinez. Our treatment plant cleans an average of 32 million gallons of wastewater every day, which is safely released into Suisun Bay. Additionally, we produce 1-2 million gallons of recycled water each day for landscape irrigation, industrial use, and our treatment plant processes. We also operate a Household Hazardous Waste Collection Facility and sponsor 13 pharmaceutical collection sites within the communities we serve.

Central San proactively maintains our infrastructure, which has extended the design life of many facilities and equipment. Although we have invested heavily over the last 10 years in replacing parts of our large and complex infrastructure, we need additional investments to maintain its reliability. Through an extensive, long-term planning process, Central San has determined what will be needed to keep our system working properly in the future, as well as a timeline for accomplishing such improvements. All of these developments are driven by four major factors:

- ▶ 1. Replace aging infrastructure
- ▶ 2. Prepare for future growth in our community and associated capacity increases
- ▶ 3. Meet emerging regulatory requirements
- ▶ 4. Ensure economic stability and sustainability for our operations

We have identified several key infrastructure projects over the next two years for both the treatment plant and the collection system to ensure they continue to function properly, now and into the future. These include more than 14 miles of sewer pipe replacement and upgrades to five critical pump stations. In addition, major renovations at our

treatment plant will include replacement and upgrades of solids handling facilities and odor control equipment; and energy generation and security improvements. Please see the map on the opposite page for project locations.

Proposed Rate Increase

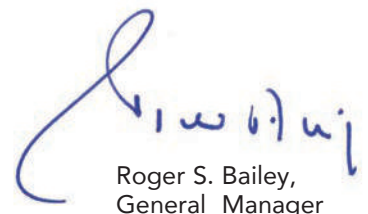
In order to fund these critical improvements and cover operations and maintenance costs (including labor), we are proposing to increase customer rates by up to 7% each year for the next two years (this would mean an increase of approximately 3 dollars per month for a residential customer).

Central San's Board of Directors will consider the proposed rate increases at a public hearing on April 20, 2017 at 1:30 p.m. at the Central San Board Room, 5019 Imhoff Place, Martinez, CA 94553.

Notices have been mailed to property owners with detailed information about the proposed rates. Information is also available at CentralSan.org.

As we work hard to complete these necessary upgrades, we remain committed to our customers with these promises:

- 1. To make **fiscally sound investments** to upgrade infrastructure that has exceeded its useful lifespan and ensure operational reliability.
- 2. To ensure our system and facilities will continue to comply with all **environmental and regulatory requirements**.
- 3. To maintain ongoing **community outreach and transparency** about progress on projects.



Roger S. Bailey,
General Manager

YOUR DOLLARS AT WORK: A FOCUS ON CRITICAL INFRASTRUCTURE

● PUMP STATIONS



2017-2019: Central San will upgrade five of our 19 pump stations, which are critical for conveying wastewater to the treatment plant from areas where the terrain requires it to be pumped over hills, sometimes at a rate as high as 33,000 gallons per minute. The five pump stations set for replacement and renovation are nearly 50 years or older. They will be upgraded with new-technology equipment that is more reliable and reduces energy costs, such as sophisticated variable-frequency drives to more efficiently match the power demand to the flow.

▼ TREATMENT PLANT

2017-2019: Upgrades at the treatment plant will include renovations of the solids handling facilities and odor control equipment, improved energy efficiency, enhanced security, and development of innovative bioenergy projects.



COLLECTION SYSTEMS/ STREET PIPE REPLACEMENT



2017-2019: Central San will replace 14 miles of sewer pipe in Walnut Creek, Lafayette, Martinez, and Orinda to maintain collection system reliability.

CENTRAL SAN SERVICE AREA

- WASTEWATER COLLECTION & TREATMENT & HOUSEHOLD HAZARDOUS WASTE (HHW) SERVICES PROVIDED
- WASTEWATER TREATMENT & HHW SERVICES BY CONTRACT
- HHW SERVICES ONLY
- ▼ CENTRAL SAN HEADQUARTERS BUILDING, TREATMENT PLANT & HHW FACILITY
- ▼ COLLECTION SYSTEMS OPERATIONS FACILITY

PAST PROJECTS

2014-2016: Central San has performed work and has ongoing projects in the following communities:

- Danville
- Diablo
- Lafayette
- Martinez
- Moraga
- Orinda
- Pleasant Hill
- San Ramon
- Walnut Creek

4



THE OUTRAGEOUS TRUTH ABOUT WHAT WE DO

(NUMBER 5 WILL SHOCK YOU!)



any people do not know what happens after they flush. But human waste isn't zapped into nonexistence by magical wizards or eaten by gnarly underground gnomes. It flows through miles of sewers from homes and businesses to our wastewater treatment plant, and we deal with it in various ways:

1. We Find Weird Stuff



Sometimes the sewers send more than wastewater our way. Foreign objects such as wood, rags, and debris are caught at our pumping stations or treatment plant bar screens each day. Weird items we've found include football-shaped bricks, golf balls, jewelry, flashlights, hardhats, a plastic horse pill with a tiny camera in it, a live snake (no alligators yet), and a motorcycle frame!

2. We Grapple with Globbs of Grease

When people pour grease down a sink, it cools, solidifies, and sticks to the inside of the pipe. If that happens within your drain, you'll need a plumber. Things get worse when grease from thousands of sinks builds up inside sewers. Those gross globbs of grease can grow until they completely clog pipes! Our crews work tirelessly to find and destroy them before they cause overflows.



3. We Wrestle Wads of Wipes

Our system has no problem handling human waste and toilet paper. But "flushable" products are a different story. Disposable wipes and paper towels are designed to NOT dissolve quickly when wet. They accumulate into nasty wads that clog our machinery. We remove them by hand. We love gloves!



4. We Scoop Poop

Technically, what we scoop is wastewater. Samples are drawn before, during, and after the treatment process to ensure we're



meeting all water quality standards and it's safe to release the water into Suisun Bay.

5. We Rely on You

We can't control what enters the sewers. You can. If you flush only human waste and toilet paper, and don't pour grease down the drain, you'll be helping to make our jobs easier as we protect public health and the environment. And the world will be a better place!



OUR SCIENTISTS: WATER QUALITY DETECTIVES

When it comes to protecting public health and the environment, some serious detective work is involved. If pollutants in wastewater slip through our treatment processes undetected, it could have serious impacts on local waterways and aquatic life.

Fortunately, we have highly skilled and knowledgeable scientists at Central San who are also excellent detectives! They perform hundreds of tests each day at our award-winning Environmental Laboratory to ensure the cleaned wastewater we release into Suisun Bay is environmentally safe and complies with all regional, state, and federal requirements for water quality.

Even tiny trace amounts of some pollutants, such as mercury and toxic pesticides, can harm sensitive marine organisms in Suisun Bay and affect the food chain. Our scientists use a variety of chemical tests and advanced instrumentation to detect pollutants in the wastewater at extremely low levels – including at the parts-per-quadrillion range. That's like trying to find a single bacterium in the distance from the earth to the moon!

Analyses are performed on wastewater before it enters the treatment plant, at every stage of the treatment process, and after the treatment process is complete. They also test samples collected from Suisun Bay.

Our scientists' important work touches more than just the waters of Suisun Bay. In addition to the regular analyses to detect known pollutants, they conduct cutting-edge research at the laboratory to constantly identify and improve on the techniques used to monitor and reduce pollutants. They share their discoveries with others in the environmental field around the country.

At Central San, we're helping to protect not just our local water resources, but the water environment as a whole.





WE'RE TEACHING KIDS HOW TO PROTECT THE PLANET

Water is the most precious resource on our planet; it must be protected. To help kids learn this important lesson, we developed in-classroom educational programs that teach them about pollution prevention and wastewater treatment. We want them to understand how actions at home can affect the world around us, and what they can do to help keep our environment clean and safe.

- **Water Wizards** (for students in grades 3 - 5). This hour-long program offers a variety of fun, interactive activities to help young students learn about water pollution and what they can do to protect our limited water resources and delicate environment. The program is free in Central San's service area.

- **Sewer Science** (for high school science students). This week-long program integrates biology, chemistry, physics and math, and it includes hands-on laboratory experiments that simulate the treatment process. The program is free in Central San's service area.

- **Treatment Plant Tour** (age 10 and up). This tour provides an opportunity for students (and adults!) to "follow the flow" and see the processes we use to remove pollutants and recover resources from millions of gallons of wastewater each day. The tour is free but reservations are required.

For more information on these award-winning programs, please contact Kit Ohlman at (925) 229-7329 or KOhlman@centralsan.org.



HOW TO GET RECYCLED WATER FOR YOUR GARDEN

As a Central San customer, you can use our recycled water to hand-water your home's garden and landscaping. **Here's how:**

- Please check our website CentralSan.org/RecycledWater for current hours.
- Come to the Residential Recycled Water Fill Station behind our Household Hazardous Waste Collection Facility, 4797 Imhoff Place, Martinez.
- If you haven't used the station before, you'll need to complete an Application/Agreement form. You can download it from CentralSan.org/RecycledWater or obtain one at the station.
- After turning in your form at the station, you'll receive brief training (less than 10 minutes) on the proper use of recycled water, and can then fill your containers. You will not have to pay a fee.
- Bring your own containers. They must be made specifically to hold liquids, be a minimum size of one gallon, have water-tight lids, and be secured for safe transport.
- The maximum fill per trip is 300 gallons. There is no limit on the number of trips.
- **Please Note: Water is heavy!** Ten gallons weigh more than 80 pounds; 100 gallons weigh more than 800 pounds. When driving vehicles with such heavy loads, expect less stability and be sure to allow for additional stopping distance.

Recycled water should not be consumed or allowed to run off into storm drains.

For more information, please call 1-800-646-1431 or visit CentralSan.org/RecycledWater.

Rainy Weather? Call for Current Hours!

During rainy weather, the Fill Station will have fluctuating hours. Please call ahead to find out if it is open: (925) 335-7717.



SEE YOU ON EARTH DAY?

At Central San, where we work to prevent pollution and protect the environment 24/7, every day is "Earth Day." But we also participate in community celebrations of the actual Earth Day, including the John Muir Earth Day Festival in Martinez. If you're planning to attend, please stop by our exhibit and say hi to our friendly staff! In addition to receiving a free giveaway (while supplies last), you can get helpful information about our recycled water fill station, household hazardous waste facility, and other services. The Festival will be on Saturday, April 22, at the John Muir National Historic Site, 4202 Alhambra Avenue in Martinez. See you there!



CENTRAL SAN CHOSEN FOR INNOVATIVE WASTE-TO-ENERGY PILOT PROJECT

Central San was selected as the host site for a pilot project that will test an emerging technology to produce renewable fuels from wastewater solids.

A consortium led by the Water Environment and Reuse Foundation was recently chosen by the Department of Energy (DOE) to design and plan a waste-to-energy pilot project. The consortium includes Central San, DOE's Pacific Northwest National Laboratory, Genifuel Corp., Tesoro, and other partners.

The technology, called hydrothermal processing, converts wastewater solids into biocrude oil and methane biogas. The biocrude can be refined as a green alternative to petroleum-based crude oil. The biogas can be treated to renewable natural gas standards and used on site to produce power similar to fossil-fuel based natural gas. Another possible byproduct includes liquid fertilizer that could compete with commercial fertilizers which rely on the world's diminishing supply of mined phosphorus.

DOE is providing a \$1.2 million grant for Phase 1, the planning and design for a pilot hydrothermal processing plant.

Our furnaces and waste heat recovery system continue to serve Central San well. While we continue to rely on the remaining life of those systems, we will be exploring new, innovative solids handling and resource recovery alternatives that could provide long-term cost savings, and minimize greenhouse gas emissions and dependence on imported fossil fuels.

After successful completion of Phase 1, DOE will consider Phase 2, which would include construction and operation of the pilot. If the project is successful and the process is fully implemented in wastewater treatment facilities across the U.S., the technology could produce more than two billion gallons of gasoline and reduce greenhouse gas emissions by 17 million tons per year!



If the process is fully implemented in wastewater treatment facilities across the U.S., the technology could produce more than two billion gallons of gasoline and reduce greenhouse gas emissions by 17 million tons per year!



FREE TOURS AND PRESENTATIONS

Would you or your group like to know more about how we protect the environment? We offer speakers for your group and terrific tours of our treatment plant – FREE!

Quarterly 90-minute walking tours are available on these dates (reservations are required):

- April 26, 2017, 9 - 10:30 a.m.
- July 26, 2017, 9 - 10:30 a.m.
- October 18, 2017, 9 - 10:30 a.m.

Please contact Kit Ohlman at (925) 229-7329 or kohlman@centralsan.org, or go to this link to sign up for a free tour: CentralSanPlantTours.eventbrite.com.

Custom tours and presentations for groups can also be arranged.

HELPING BUSINESSES TO PREVENT POLLUTION AND SAVE MONEY!

When it comes to your health, prevention is always better than trying to fix a problem. Likewise, preventing pollutants from entering the sewer system is better than trying to remove them during the wastewater treatment process.

Restaurants often produce a lot of grease. If not properly disposed of, that grease can accumulate in sewers and create blockages that cause overflows into businesses or homes.

Some businesses use chemicals and produce wastes which are flammable, corrosive, reactive, or toxic, and if allowed to enter the sewer system, could corrode pipes or even cause fires and explosions.

Even the most advanced treatment processes cannot entirely remove these types of pollutants, and it only takes a small amount to harm the environment.

That's why the Federal Clean Water Act and other laws and ordinances regulate what businesses can discharge into sewer and storm drain systems – and also require that we ensure compliance through periodic inspections.

Our Environmental Compliance team looks at facilities (both inside and out), noting production equipment

and processes, housekeeping practices, sewer inlets, wastewater and stormwater discharges, pretreatment equipment, chemicals, materials, waste storage, vehicle and equipment storage, wash areas, etc. They review their findings with facility managers and work with them to correct deficiencies.

Our team often identifies activities that can significantly reduce the risk of pollution and can even save the business money. These activities are good for the environment, the business, and its customers.

We also offer recognition programs such as the Green Business Program and Pollution Prevention Awards which publicize businesses that go above and beyond minimum compliance standards. Such recognition can be used in marketing materials to show customers that a business really cares about protecting the environment.

Free Consultations Available

Our Environmental Compliance team offers free consultations to help business owners understand what's required in order to comply with regulations, how best to navigate those efforts, and what else they can do to protect the environment.

For more information, please contact them at (925) 229-7288.



10 PLEASANT HILL SEWER IMPROVEMENTS UPDATE

As first reported in our Spring 2016 issue, Central San's Pleasant Hill Grayson Creek Trunk Sewer project will provide needed renovations for the collection system servicing portions of Pleasant Hill and Martinez, resulting in reduced backups and less potential for overflows. Additionally, the trunk sewer will provide a new backbone sewer enabling future renovations of the 60-plus-year-old residential sewers in the Gregory Gardens neighborhood, further increasing reliability of service.

It's a large, important project.

A typical sewer renovation project consists of replacing six-inch-diameter pipes at an average of six to seven feet deep. The Pleasant Hill project is installing almost 9,700 feet of 18-to-24-inch-diameter sewer pipes to a depth of up to 25 feet!

How can we do that without impacting residents? The answer is that we can't. We can, however, minimize those impacts by using different construction methods. Central San engineers are doing just that.

Most of the pipes are being installed using a tunneling method. This allows the new sewer to be constructed without exposing or disrupting existing utilities along the alignment. Throughout the project there are buried water, gas, communication, sewer, and storm drain utilities. Additionally, the sewer must cross two creeks and the Contra Costa Canal. Tunneling allows the new pipes to be installed under these utilities, creeks, and canal. It also allows for better control of traffic and other construction impacts. There are also some lengths of the alignment that require traditional excavation due to the hardness of the bedrock.

We appreciate the understanding, cooperation, and patience of residents impacted by the construction work during these necessary infrastructure improvements. We expect to complete the project before the end of summer.



SERVICE IMPROVEMENTS

We regularly maintain, repair, or replace sewer lines and other elements of our wastewater collection system to decrease the likelihood of failures and to ensure continuous, trouble-free service for our customers. Our projects may cause short-term inconveniences, but they provide long-term benefits for you and your neighbors. We appreciate your understanding! Here is a brief summary of our current and upcoming major construction projects:

PLEASANT HILL: The Pleasant Hill - Grayson Creek Trunk Sewer Project is installing sewers in the Westover Drive and Pleasant Hill Road neighborhood. Expected completion: August 2017.

WALNUT CREEK: The Walnut Creek Sewer Renovation Project, Phase 11 will be installing sewers in the Hawthorne Drive and Boulevard Way neighborhoods. Expected completion: Nov. 2017.

LAFAYETTE: The Lafayette Sewer Renovation Project, Phase 11 will be installing sewers in the Mountain View Drive, Brook Street and Via Media neighborhoods. Expected completion: Dec. 2017.

MARTINEZ: The Martinez Sewer Renovation Project, Phase 5 will be installing sewers in the Gilger Avenue and Ulfian Way neighborhoods, as well as various other throughout northern Martinez. Expected completion: Jan. 2018.

For more info...

For more information about these or other construction projects, please contact Community Affairs Representative Chris Carpenter at (925) 229-7200 or ccarp@centralsan.org, or visit CentralSan.org/Construction.

ONLINE:

Detailed project maps are posted on our website, CentralSan.org (check the "Construction Zone" on the right of the home page).

20 YEARS, 36 MILLION POUNDS OF HAZARDOUS WASTES

When our Household Hazardous Waste Collection Facility opened in October 1997, it was the first permanent facility in the county to provide a safe and convenient method for residents and small businesses to dispose of leftover paint, pesticides, used motor oil, batteries, and other hazardous materials.

That first year, people brought in nearly 745,000 pounds of household hazardous waste. Today, the annual amount is more than 2.1 million pounds – an increase of 182%!

During its 20 years of operation, our award-winning facility will have received – and kept out of the environment – more than 36 million pounds of household hazardous waste! That's roughly equivalent to the weight of 450 fully loaded 18-wheelers!

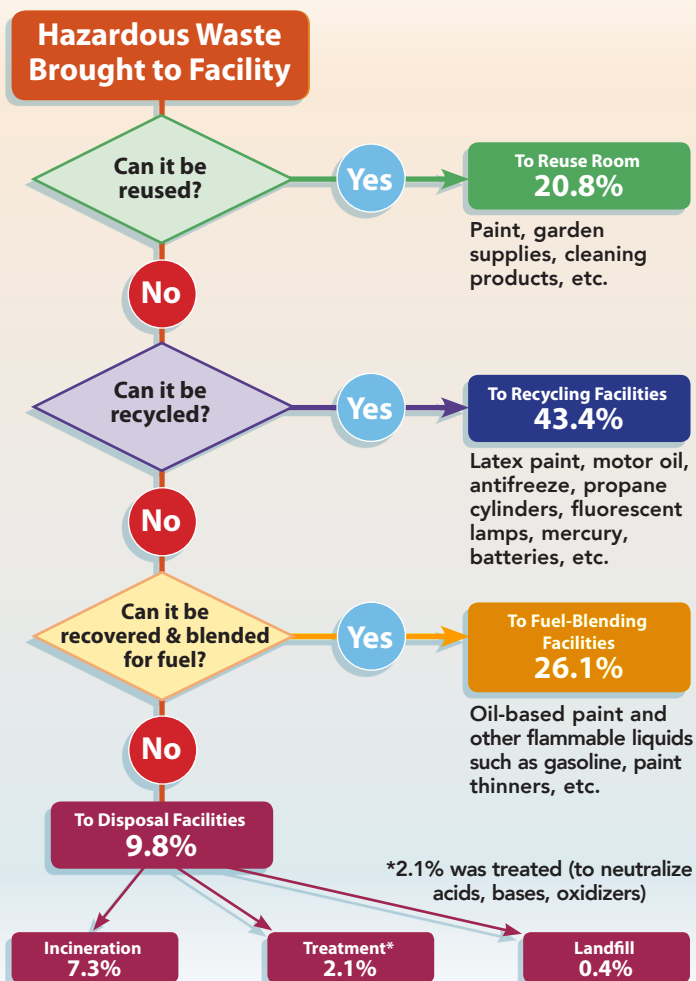
More than 90% (30.7 million pounds) of those wastes were recycled, recovered as a resource-conserving fuel, or reused. The rest were disposed of safely.

Those wastes include:

- More than 2,600 pounds of mercury (thermometers, thermostats, elemental)
- Nearly 635 miles of fluorescent lamps
- More than 1,612,000 quarts of used motor oil
- More than 1,072,200 gallons of latex paint
- More than 41,000 car batteries and 337 tons of household batteries

Because so many of you bring your household hazardous wastes to the facility, we are able to keep thousands of tons of pollution from contaminating the environment. Thank you for your support!

Where Did It All Go?



HOUSEHOLD HAZARDOUS WASTE COLLECTION FACILITY

4797 Imhoff Place, Martinez, CA 94553-4392

HOURS

Residents: Monday – Saturday, 9 a.m. - 4 p.m.
(Reuse Room closes at 3:30 p.m.)

Businesses: Monday – Saturday, by appointment only

Holiday Closures: May 29, July 4, Sept. 4, Nov. 11, 23 & 24

1-800-646-1431



Household Hazardous Waste Collection Facility
& Residential Recycled Water Filling Station



How to Safely Dispose of Unwanted Drugs



Please bring unwanted medications to a free drop-off site for safe disposal instead of putting them down a toilet or drain, which can pollute local waters. Transfer pills to a sealable plastic bag before depositing them in the bin. Leave liquids in their bottles, but seal them in a bag to prevent leaks.

Please do not put sharps or anything other than medications in the container!

A list of sharps disposal locations is online: CentralSan.org/documents/Alternative_HHW_Locations.pdf

For more information, visit CentralSan.org/HHW or call 1-800-646-1431.

County Passes Safe Drug Disposal Ordinance

Kudos to the Contra Costa County Board of Supervisors! On Dec. 20, 2016, they passed a Safe Drug Disposal Ordinance requiring medication manufacturers to offer convenient drop-off locations throughout unincorporated areas of the county for safe disposal of unwanted and expired medications. Those locations will include pharmacies and hospitals.

The ordinance is the eighth Safe Drug Disposal Ordinance adopted in the Bay Area and the 13th in the nation. Central San and six other wastewater agencies in the county provided strong support of the ordinance.

Key Elements of Ordinance

1. It places responsibility on medication manufacturers to be a solution in helping reduce medications entering local waterways.
2. Drop-off bins will accept all medications, including over-the-counter drugs.
3. Medication manufacturers are subject to penalties if they fail to comply with the ordinance.

Pharmaceutical Drop-Off Sites

Alamo Sheriff's Substation
150 Alamo Plaza,
Suite C

Clayton Police Dept.
6000 Heritage Trail

Concord Police Dept.
1350 Galindo St.

Danville Police Dept.
510 La Gonda Way

Lafayette Police Dept.
3675 Mt. Diablo Blvd.,
Suite 130

MARTINEZ:

- **Police Dept.**
525 Henrietta St.
- **Sheriff's Field Ops Bldg.**
1980 Muir Rd.
- **Contra Costa Regional Medical Center**
2500 Alhambra Ave.

Moraga Police Dept.
329 Rheem Blvd.

Orinda Police Dept.
22 Orinda Way

Pleasant Hill Police Dept.
330 Civic Dr.

San Ramon Police Dept.
2401 Crow Canyon Rd.

Walnut Creek City Hall
1666 North Main St.

Walgreens now has a collection kiosk for unwanted medications at their store in Walnut Creek (2900 Main Street).





EVEN SUPERHEROES NEED PROTECTION FROM OVERFLOWS!
 Watch our latest video to see how a movie superhero hears a mysterious voice and shares a valuable lesson!
[YouTube.com/CentralSanDist](https://www.youtube.com/CentralSanDist)

DO YOU NEED AN OVERFLOW PROTECTION DEVICE?

Thanks to the diligent efforts of our employees, Central San has one of the lowest sewer overflow rates in the Bay Area. But with 1,500 miles of sewers serving more than 480,000 customers, we can never totally eliminate overflows; there are too many things beyond our control.

Stuff happens. But it needn't happen to you.

Installing an Overflow Protection Device on the cleanout of your home's private side-sewer/lateral will prevent sewage from backing up into your home from a clogged sewer main. The device works by directing the overflow to happen in your yard, rather than through drains inside your home.

Note: The device will not help if a clog occurs between it and the house drains, so keep your pipe free of grease, disposable wipes, and anything else that might cause a clog!

Overflow Protection Devices typically cost \$20 - \$40, depending on the model, and are available at plumbing supply stores. We recommend installation by a licensed plumber. Be sure to keep the device clear of obstructions that might interfere with its operation, such as dirt or vegetation. For more information, please call our friendly Permit Counter staff at (925) 229-7371.

YOUR TOILET IS NOT A TRASH CAN!

Please don't use your toilet as a trash can. It may be convenient to flush disposable wipes, condoms, feminine hygiene products, dental floss, tissues, and paper towels. But those and many other items (even if labeled "flushable" or "biodegradable") can clog your sewer pipes, cause overflows, damage wastewater treatment plant equipment, and contribute to water pollution.

Flush only human waste and toilet paper. Put everything else in a real trash can.



14

THE BEST WEAPON TO FIGHT FLEAS MAY BE YOUR VACUUM!



In our Spring 2016 issue*, we explained how some spot-on flea-control treatments (such as Frontline, Advantage, K9 Advantix and many others) will spread toxic chemicals throughout your home, the environment, and local waters.

Their active ingredients (including fipronil and imidacloprid) can be as toxic to honey bees, birds, fish, and other aquatic organisms as they are to fleas and ticks!

Consider Oral Medications

If you have a flea problem, talk to your veterinarian about using oral medications for your pet rather than spot-on products or flea collars.

- Oral medications are typically more effective.
- They reduce your family's exposure to toxic pesticides.
- They reduce the risk of harming the environment.
- Never flush pet waste, as it may contain chemical residue from flea medications that can pollute local waters.
- Always bag pet waste and dispose of it in the trash.

Treating Only Your Pet Will Not Eliminate the Problem

Here's what you need to know about flea infestations: the adult fleas you find on your pet or in your house account for only 5% of total the flea population; the remaining 95% are eggs, larvae, and pupae that are hidden in carpets, furniture, pet bedding, and your yard, waiting to mature and jump onto your pet! Spot-on flea-control treatments, flea collars, and oral medications do nothing to control that hidden 95%.

The best way to avoid flea problems is to clean your home regularly and thoroughly to remove fleas, eggs, larvae and pupae.

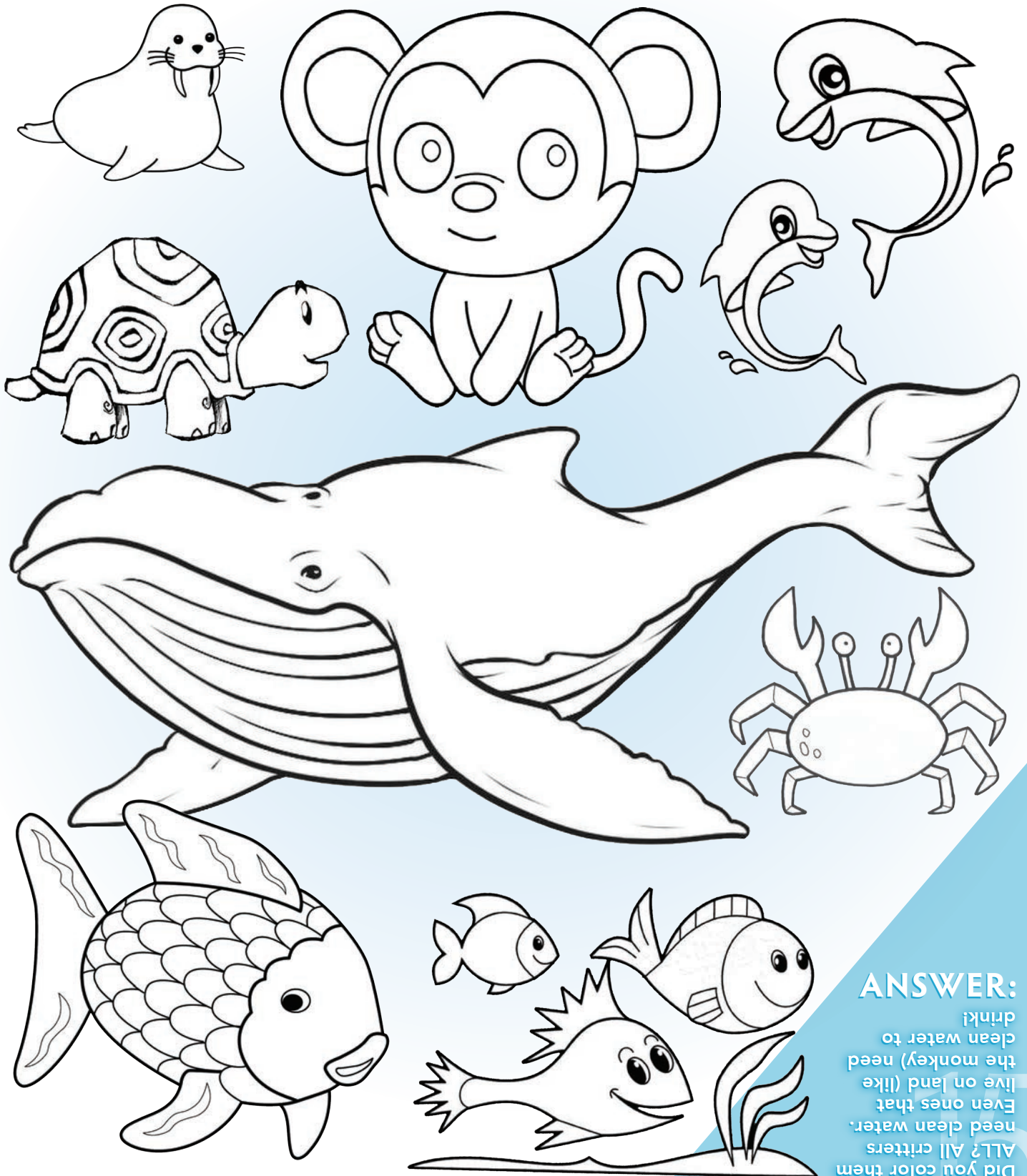
- Keep floors, carpets and upholstered furniture clean by using a high-power vacuum, or get them professionally cleaned periodically.
- Wash pet beds and blankets in hot water and dry on high heat.
- When moving into a new location, make sure it has been thoroughly cleaned and disinfected.

To safely dispose of flea-control products (as well as all other forms of pesticides), please bring them to our Household Hazardous Waste Collection Facility at 4797 Imhoff Place in Martinez.

*You can find all issues at CentralSan.org.

Water pollution is bad. It can harm the environment and living things.
That's why we must all do our part to prevent water pollution.

COLOR THE CRITTERS THAT NEED CLEAN WATER...



ANSWER:
Did you color them
ALL? All critters
need clean water.
Even ones that
live on land (like
the monkey) need
clean water to
drink!

WE ARE HERE TO HELP...

| | |
|--|--|
| General information | (925) 228-9500 or CentralSan.org |
| Sewer overflows | (925) 933-0955 or 933-0990 |
| Recycled Water Fill Station InfoLine | (925) 335-7717 |
| Treatment Plant InfoLine (Report Odors) | (925) 335-7703 |
| Household Hazardous Waste InfoLine | (800) 646-1431 or CentralSan.org/HHW |
| Sewer connection permits/Permit Counter | (925) 229-7371 |
| To report illegal discharges into sewer system | (925) 229-7288 (during business hours) (925) 229-7214 (after hours) |
| Environmental Compliance | (925) 229-7288 |
| Job Hotline | (925) 229-7109 or CentralSan.org |
| Student Education Programs | (925) 229-7310 or CentralSan.org |
| Community Information Line | (925) 335-7702 |



Central San serves 481,600 customers within its 145-square-mile service area.

- Wastewater collection & treatment; Household Hazardous Waste (HHW) disposal for 340,700 people.
- Wastewater treatment & HHW disposal for 140,900 people in Concord & Clayton by contract.
- HHW disposal only.
- Central San headquarters, treatment plant, HHW Facility & Residential Recycled Water Fill Station.

CENTRAL SAN

Board of Directors

Paul H. Causey, President

James A. Nejedly, President Pro Tem

Michael R. McGill, Director

Tad J. Pilecki, Director

David R. Williams, Director

Board meetings are open to the public and usually held on the 1st and 3rd Thursday of each month at 1:30 p.m. in the Central San Board Room, 5019 Imhoff Place, Martinez.

Roger S. Bailey, General Manager

The Central Contra Costa Sanitary District PIPELINE

Written and designed by Central San staff to communicate pollution prevention messages to the people and communities we serve.

Bonnie Lowe, Editor, Writer

Charles Waltmire, Graphic Designer

View archived issues online at CentralSan.org



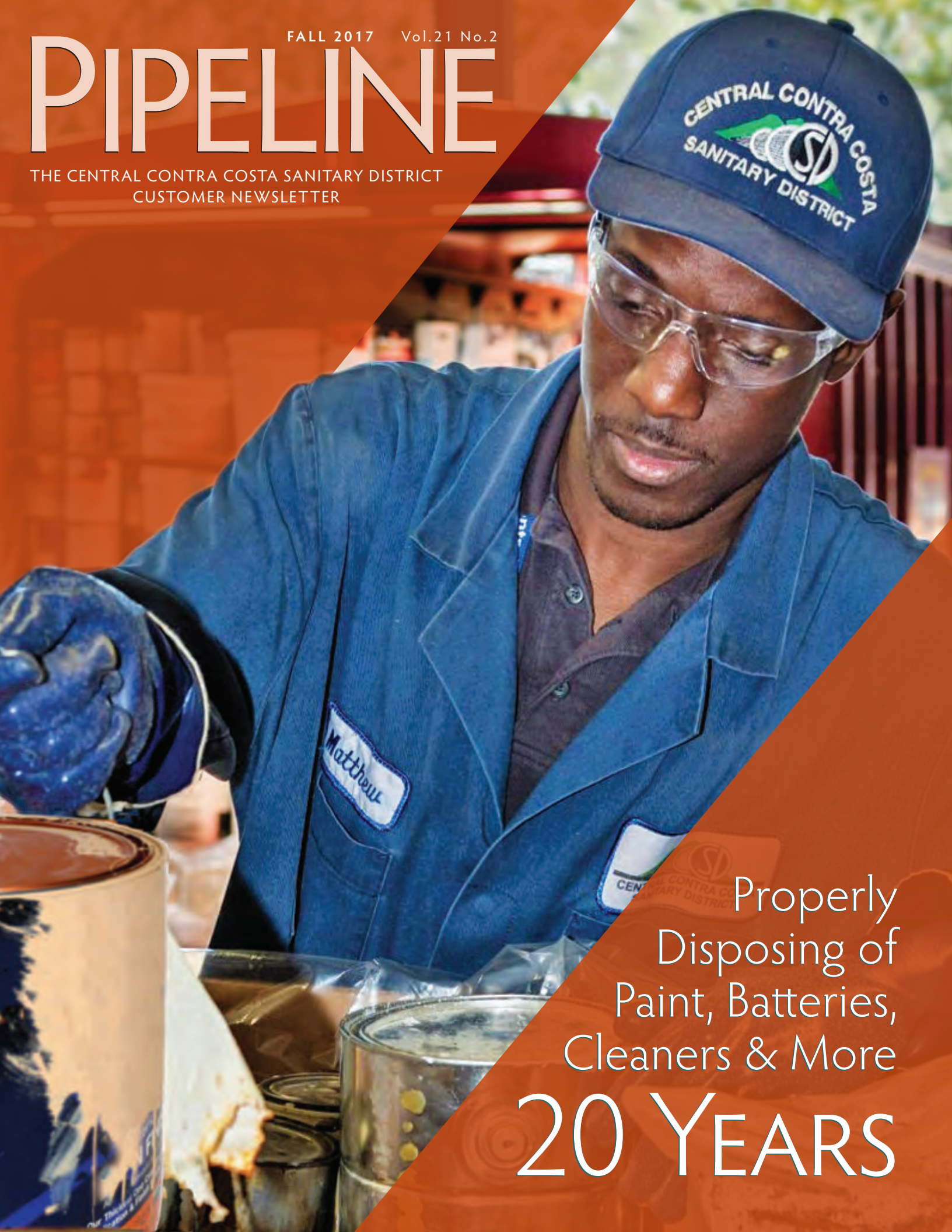
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FALL 2017 Vol.21 No.2

PIPELINE

THE CENTRAL CONTRA COSTA SANITARY DISTRICT
CUSTOMER NEWSLETTER



Properly
Disposing of
Paint, Batteries,
Cleaners & More
20 YEARS



CELEBRATING OUR HISTORY, PLANNING FOR OUR FUTURE

WE'RE HOSTING
A WEEK-LONG
COLLECTION
DRIVE TO
CELEBRATE
THE 20TH
ANNIVERSARY
OF THE
HHW!

LEARN MORE ON PAGE 8.

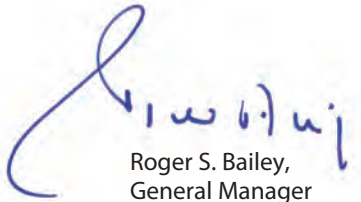
For more than 70 years, Central San has provided safe and reliable wastewater collection and treatment for residents in central Contra Costa County. In 1946, when Central San was formed, the population of Central Contra Costa County was less than 40,000. Today, we serve over 484,200 residents and over 3,000 businesses.

As our region continues to grow and develop, we remain committed to our mission to protect public health and the environment, and provide cost-effective and exceptional service for our customers. Fulfilling this mission requires highly trained staff, diverse expertise, and a commitment to a future that embraces both prudence and innovation.

This was the mindset in 1997, when our Board established the first permanent Household Hazardous Waste Collection Facility (HHW) in Contra Costa County. This facility provides our customers with a convenient and environmentally safe place to dispose of household items that can

threaten public health and the environment. With more than 36 million pounds collected, we are proud of the role this facility plays in reducing pollution.

Just as we did 20 years ago with the opening of the HHW, Central San continues to strive to meet the needs of our growing community while anticipating emerging regulations and opportunities for increased sustainability. Through projects like our recently adopted Comprehensive Wastewater Master Plan, a 20-year vision for replacements and upgrades to our infrastructure, we are taking a long-term planning approach that will allow us to maintain vital services and reliable operations well into the future.



Roger S. Bailey,
General Manager

THE COMPREHENSIVE WASTEWATER MASTER PLAN



The Comprehensive Wastewater Master Plan was recently accepted by the Central San Board of Directors. This planning document provides a roadmap to address aging infrastructure, emerging regulations, optimize and strive for sustainable operations, and improve the resiliency of Central San's facilities. Included in the Comprehensive Wastewater

Master Plan is a two-decade-long capital improvement program for the collection system and treatment plant. "The Comprehensive Wastewater Master Plan is a tool to help coordinate upcoming decisions and improvements with Central San's long-term needs and vision," said Senior Engineer Dan Frost. By utilizing a master plan approach Central San will be optimally positioned to address our emerging needs in the most effective and fiscally responsible way.

THE COMPREHENSIVE WASTEWATER MASTER PLAN IN ACTION: YOUR DOLLARS AT WORK



ENHANCED PERFORMANCE: Headworks Improvements

As part of Central San's infrastructure investment, we recently began installation of new mechanical bar screens at our Headworks Facility. This new facility uses several mechanical processes to remove large debris from incoming wastewater prior to treatment, protecting downstream equipment and processes. The new screens are expected to capture three times more material than their predecessors, effectively reducing the maintenance challenges in the downstream treatment process. Enhancing the performance of the mechanical bar screens will also increase Central San's energy efficiency and limit odors.

APPLIED RESEARCH:

Wet Scrubber Pilot and Bioenergy Projects

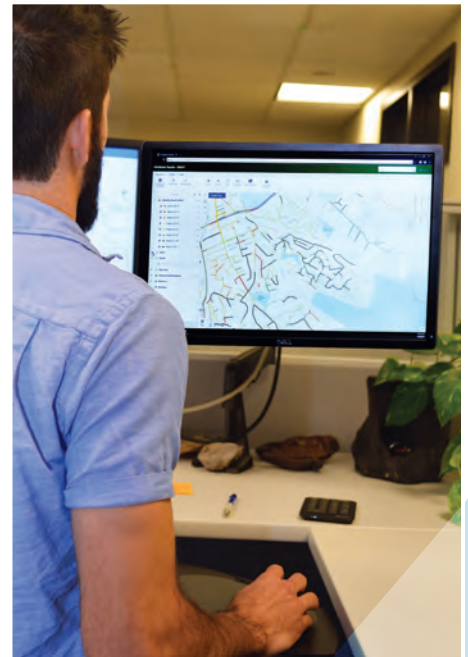
Wet Scrubber Pilot – This pilot project gives Central San the opportunity to test innovative technology and its potential benefits to public health. The wet scrubber pilot is a collection of air pollution control devices that help clean the exhaust air from our incinerator. Central San is piloting a new wet scrubber system that uses a

sophisticated six-step process to clean the exhaust and will support Central San's effort to meet emerging regulatory requirements. Results from the pilot project will help establish design criteria and operating strategies for a new, full-scale wet scrubber system.



MODERN TECHNOLOGY: Mapping Infrastructure Replacement

The Comprehensive Wastewater Master Plan used InfoMaster®, a state-of-the-art software tool, to assist Central San with asset management and long-term planning. InfoMaster® uses an array of data and Central San's new mapping software to assess when pipes throughout our 1,500-mile collection system should be replaced. The replacement cost for Central San's entire sewer system is over \$2.5B. This sophisticated system will allow us to plan ahead using a more strategic long-term sewer renovation program.



Bioenergy Projects – Central San is exploring bioenergy technologies that convert the energy embedded in wastewater solids into valuable renewable resources such as biofuels. These bioenergy technologies may offer an innovative way to maximize resource recovery, provide long-term cost savings, and reduce greenhouse gas emissions.

WE LOVE THESE BUSINESSES POLLUTION PREVENTION AWARDS

*Congratulations to this year's winners of our annual Pollution Prevention Awards!
These local businesses are leaders in pollution prevention and environmental protection!*



▶ Buddha Gate Monastery

They are conserving water by watering their gardens with rain water collected in rain barrels, saving vegetable wash water from the kitchen to water plants, and installing automatic faucets and low-flow toilets. They also prevent pollutants from entering the sanitary sewer and storm drain systems by making their own environmentally-friendly detergent out of recycled citrus peels and placing strainers over sink drains.

▶ Dr. Michael S. Tobian, DDS

They reduce their water consumption by using a dry vacuum system. The facility also uses an amalgam separator and the amalgam is properly disposed of. All their staff are trained in Best Management Practices (BMPs) and Pollution Prevention.



▶ Mrs. Pastures Cookies for Horses

They purchase their ingredients in bulk to reduce packaging waste, and their dough scraps are remixed or composted. Their facility only has one household-sized garbage can sent to the landfill each week! They also minimize their water use and screen their wastewater for solids before disposal.



▶ The Conco Companies

They use recycled water to wash their trucks, and their wash water flows through an innovative pretreatment system and a Sand-Oil Interceptor to remove pollutants before they enter the sanitary sewer. They also installed new sawdust collectors that prevent sawdust from entering the storm drain system and solar panels and LED lights to reduce electrical usage.



Central San conducts the Pollution Prevention Awards program each year in conjunction with National Pollution Prevention Week. The winners are presented with their awards at Sustainable Contra Costa's annual Leadership in Sustainability Awards Gala.

ACHIEVING OPERATIONAL EXCELLENCE

TREATMENT PLANT OF THE YEAR



The California Water Environment Association (CWEA), a leader in wastewater education and certification, recently honored Central San with nine CWEA Awards. Central San and our staff were recognized in a broad array of categories, including the overarching achievement of Plant of the Year. The Plant of the Year award recognizes accomplishments in plant performance, compliance, innovative practices, and cost effectiveness.

19 YEARS OF PEAK PERFORMANCE

At Central San, we work hard to ensure that the local waters into which we discharge cleaned wastewater (in our case, Suisun Bay) are protected. We perform more than 15,000 laboratory tests annually to confirm that we meet or surpass all federal, state and regional water quality standards.

As a result, Central San was recently honored by the National Association of Clean Water Agencies with our 19th consecutive Platinum Peak Performance Award. "This award reaffirms, to us and our customers, our commitment to excellence and recognizes the dedication and tenacity of our staff," said Plant Operations Division Manager, Alan Weer.

This prestigious award is bestowed upon wastewater treatment agencies that have achieved 100% compliance with their permits over a consecutive five-year period. We're one of very few agencies in the nation to attain this level of continued success.

Platinum 19



WE COULDN'T DO IT WITHOUT YOU!

You help make these achievements possible. When you properly dispose of household hazardous wastes and pharmaceuticals, and take other actions to keep pollutants out of our wastewater, you are helping us to protect Suisun Bay and the environment. Thank you for your continued support!



EDUCATION CONTINUES FOR CENTRAL SAN SUMMER STUDENTS

Students from across California joined Central San this summer to gain hands-on experience and learn about the real-life applications of their chosen studies. The Central San Summer Student program offers full-time summer positions for youth interested in administration, engineering, laboratory sciences, facilities and collection system maintenance, computers, and graphic design.

"It's hard work," said Tyler Jarreau-Legarda, who attends community college during the school year, "but it's rewarding and the people are really nice." Tyler spent his summer assisting the Collection System Operations crew and learning to clean sewer pipes using power rodding and hydro jetting. Taylor Gay, a student at Los Medanos College, spent her summer supporting the permit counter. "Before this, I did not realize you needed a permit to build on property. I've learned a lot," said Gay.

Central San also offers a longer, more immersive Co-op Program for college students who are currently enrolled in an undergraduate or graduate

degree program. The Co-op Program is a six-month term and provides students with the opportunity to apply their academic preparation to practical work experience in a wastewater utility.

"I enjoy going out to the project sites and being in the field," reflected Capital Projects Co-op student, Derrick Lewald, a Lafayette resident and Mechanical Engineering student at UC Davis, "it's great to see [something you've worked on] actually get built."

The Co-op program also gives students the opportunity to engage in more specialized learning or explore topics they're passionate about. Marilyn Sun, a chemical engineering student at UC San Diego, came to Central San to work on recycled water projects. "It's such an important resource," she said.

"At Central San, we support STEM education both inside and outside of the classroom. Our Summer Students and Co-ops get to apply their education to real projects and initiatives," said Teji O'Malley, Human Resources Manager. "As a public agency, we also know how important it is to expose our future leaders to opportunities in the public sector."

"I enjoy going out to the project sites and being in the field. It's great to see [something you've worked on] actually get built."

– Capital Projects Co-op student, Derrick Lewald

DIY: GREEN CLEANERS YOU CAN MAKE AT HOME

Pollution is often portrayed as large oil spills and garbage strewn along beaches, which is why it may surprise you that the major source of water pollution in the Bay Area is residents. Commonly used products like pesticides and cleansers can contain chemicals which, when poured down drains, pass through wastewater treatment plants and end up in local waters, harming fish and wildlife. Treatment plants are designed to treat biological wastes and cannot remove all the metals, solvents, and chemicals contained in many household products. That's why it's so important that residents bring their old cleaners and pesticides to the Household Hazardous Waste Collection Facility.

Thankfully, some of the best non-toxic alternatives can be made from items you may already own!

ALL-PURPOSE CLEANER

½ cup white vinegar
¼ cup baking soda
½ gallon (2 liters) water

GLASS CLEANER

2 cups water
1 cup white vinegar
1 teaspoon liquid soap

Combine in a spray bottle for easy application to windows and mirrors.

WOOD POLISH

1 ½ cup olive oil
1 cup lemon juice

Combine in a spray bottle for easy application.

CARPET CLEANER

½ cup white vinegar
½ cup water
2 tablespoons salt

GREASE REMOVER

Spray or douse the grease with lemon juice or vinegar. Let it sit a few minutes, then scrub.

MINERAL DEPOSIT REMOVER

Mineral deposits around faucets can be softened for easy removal by covering the deposits with vinegar-soaked paper towels. Leave paper towels on for one hour before cleaning.

OVEN CLEANER

Use baking soda and very fine steel wool. Sprinkle water followed by a layer of baking soda. Let stand overnight. Rub gently with a very fine steel wool pad. Wipe off scum with dry paper towels or sponge. Rinse well and wipe dry.



HOUSEHOLD HAZARDOUS WASTE COLLECTION FACILITY 20TH ANNIVERSARY

20 YEARS OF POLLUTION PREVENTION PARTNERSHIP

Twenty years ago, Central San spearheaded the effort to provide a sound solution to keep hazardous waste out of sanitary sewers, storm drains, and solid waste landfills. This solution, the Household Hazardous Waste Collection Facility (HHW), was the first permanent facility of its kind in Contra Costa County. *During its twenty years of operation, our award-winning facility has received – and kept out of the environment – more than 36 million pounds of household hazardous waste!* This includes more than 2,600 pounds of mercury, 41,000 car batteries and 1 million gallons of latex paint.

This facility is successful because of you and other Central San customers, who share in our commitment to pollution prevention. In 2016, more than 32,000 customers visited the HHW to properly dispose of their household waste!



CELEBRATE WITH US!

To commemorate the 20th Anniversary of the Household Hazardous Waste Collection Facility, Central San will be holding a weeklong collection drive from October 16th through October 21st. We're celebrating this milestone with awesome giveaways and a daily raffle featuring prizes from sustainability leaders in our local community.

Bring your household hazardous waste to the HHW from October 16th-October 21st for a chance to win!

NEW USER GUIDE

Using the HHW in 3 Easy Steps:

- 1 Look around your home for household hazardous waste. That light bulb you changed months ago? Those old cleaners your mom "passed down" years ago? The batteries in your antique CD player? We'll take them!
- 2 Place your household hazardous waste in the trunk of your car and visit the HHW at **4797 Imhoff Place in Martinez (near the 680 & HWY 4 interchange)**. We'll unload it for you!
Bonus: If you visit between October 16th-21st you'll leave with a special first-time user prize!
- 3 Drive away knowing you've helped your community and the environment. By visiting the HHW, you are reducing pollution to our sewers, storm drains, and landfills and protecting our local waters.

FROM TRASH TO TREASURES

Creative Uses for the Central San Reuse Room

The HHW is a great place to leave things behind, but did you know many of our customers actually visit to pick things up? The HHW also has a **Reuse Room**, stocked with items brought in for disposal that are still in useable condition. The inventory often includes paint, wood stain, garden products and a wide variety of cleansers—and they're all **free** to facility users!

Here are some of the amazing creations our customers have made using free products from the HHW Reuse Room:



From Left: Props for an Italian-themed school fundraiser; painted eggs; a pergola planter stained with free stain from the Reuse Room.

Cut out and bring to the HHW

RAFFLE TICKET

Bring your household hazardous waste and this ticket to the HHW between October 16th-21st for a chance to win!!

NAME: _____

ADDRESS: _____

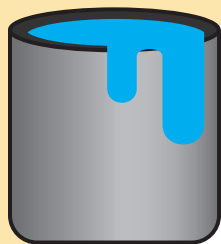
PHONE NUMBER: _____

A winner will be chosen every day!
Prizes provided by local sustainability leaders.

10

WHAT HAPPENS NEXT?

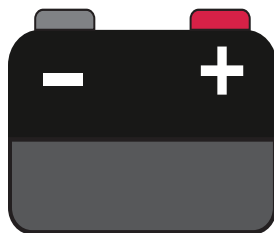
Have you ever wondered what happens to Household Hazardous Waste after you drop it off? 90% of the waste collected at our facility is recycled, recovered as a resource-conserving fuel, or reused.

**LATEX PAINT**

Is taken to a paint recycling center where unspoiled paint is reclaimed and made into recycled paint. If it is spoiled, the paint is used in a cement mixture to produce concrete blocks for retaining walls and construction barriers.

**MOTOR OIL**

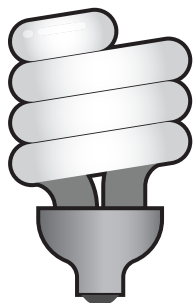
Is sent to a company that re-refines the oil and uses it as base-stock to make new oil.

**CAR BATTERIES**

Are taken to a smelter/lead recycler. The acid is neutralized and the lead is smelted for use in making new batteries or other lead-containing products.

**COOKING OIL**

Is sent to a company that converts the oil to a biofuel that is used for fueling diesel school buses and fleet vehicles.

**FLUORESCENT LAMPS**

Are given to a company that sends them through a closed loop system that crushes the lamps and separates the phosphor powder, mercury, glass, and metal ends. These four components are then reclaimed to be reused for lamps or other products.

**PERFUME**

Is sent to a waste facility where it is blended with other flammable liquid to increase the flammability. It then supplements natural gas or coal to feed the flame of a cement kiln.

HOUSEHOLD HAZARDOUS WASTE COLLECTION FACILITY

4797 Imhoff Place, Martinez, CA 94553-4392

Household Hazardous Waste Collection Facility
& Residential Recycled Water Filling Station

**Eligible Communities**

Alamo, Blackhawk, Clayton, Clyde, Concord, Danville, Lafayette, Martinez, Moraga, Orinda, Pacheco, Pleasant Hill, San Ramon, Walnut Creek, and unincorporated Central County areas.

- From Hwy. 4 take the Solano Way exit.
- From I-680 take Hwy. 4 East to Solano Way exit.

HOURS

1-800-646-1431

Residents: Monday – Saturday, 9 a.m. – 4 p.m.
(Reuse Room closes at 3:30 p.m.)

Businesses: Monday – Saturday, by appointment only

Holiday Closures: Nov. 11, 23 & 24, Dec. 25 & 26, Jan. 1 & 2, Feb. 12 & 19






Many of the pipes installed in the 1950s and 1960s (like those shown above) may need to be replaced.

GRAVITY UNDERGROUND

The journey from your home to our treatment plant is complex

 Our treatment plant cleans an average of 34 million gallons of wastewater each day and returns that cleaned water to the environment. Cleaning wastewater, or reusing it for other beneficial purposes, is at the core of Central San's mission; however, we cannot accomplish this without first collecting all that wastewater from across our 145-square-mile service area.


Over 1,540 miles of sewer pipes make up Central San's collection system, and unlike other utilities, our system relies on gravity. Most utilities are pressurized, which provides flexibility when choosing where and how to install pipes. In our collection system, there are 19 pumping stations with only 22.8 miles of pressurized pipes that are used to push wastewater up and over hills. This means that 98.5% of our system depends on gravity. Our pipes must be strategically engineered to keep flows at the right pace as they head toward our treatment plant.

Currently, more than 530 miles of our system are over 50 years old. As an increasing number of sewer pipes age they require replacement. During these projects old clay and concrete sewers are replaced with modern plastic pipes, which are expected to last 80 to 100 years or more.

Central San uses information from system inspections, maintenance schedules, and other data maintained within the InfoMaster® system (*see Page 3*) to determine the right time for each section of our collection system to be replaced to ensure optimal service.



NEIGHBORHOOD UPGRADES

 e regularly maintain, repair, or replace sewer lines and other elements of our wastewater collection system to decrease the likelihood of failures and to ensure continuous, trouble-free service for our customers. Our projects may cause short-term inconveniences, but they provide long-term benefits for you and your neighbors. We appreciate your understanding! Here is a brief summary of our current and upcoming major construction projects:

LAFAYETTE: The Lafayette Sewer Renovation Project, Phase 11 will be installing sewers in the Mountain View Drive, Brook Street and Via Media neighborhoods. Expected completion: Dec. 2017.

MARTINEZ: The Martinez Sewer Renovation Project, Phase 5 will be installing sewers in the in the Gilger Avenue and Ulfian Way neighborhoods, as well as various others throughout northern Martinez. Expected completion: Jan. 2018.

For more info...

For more information about these or other construction projects, please contact Community Affairs Representative Chris Carpenter at (925) 229-7200 or ccarp@centralsan.org, or visit CentralSan.org/Construction.

ONLINE:

Detailed project maps are posted on our website, CentralSan.org (check the "Construction Zone" on the right of the home page).



WHERE TO DISPOSE OF UNWANTED DRUGS

The best way to dispose of your unwanted medications is to bring them to a free drop-off site (like those listed to the right). These sites provide safe disposal and keep unwanted drugs out of your toilet or drain, which can pollute local waters. Transfer pills to a sealable plastic bag before depositing.

Please do not put sharps or anything other than medications in the container!

A list of sharps disposal locations is online: CentralSan.org/documents/Sharps_Disposal_Quick_Reference.pdf

For more information, visit CentralSan.org/HHW or call 1-800-646-1431.

KUDOS TO A CUSTOMER

"I was prescribed a prescription pain reliever after a tooth extraction and was surprised to also receive a flyer accompanying the drug that recommended flushing down the toilet any unused pills. I contacted our Central Contra Costa Sanitary District who confirmed this is not a safe way to dispose of unwanted drugs. I plan to share this with the hospitals and pharmacies I use."

– Elaine J., Martinez

Please never flush unwanted drugs down the toilet!

LOCAL PHARMACEUTICAL DROP-OFF SITES

Alamo Sheriff's Substation
150 Alamo Plaza,
Suite C

Clayton Police Dept.
6000 Heritage Trail

Concord Police Dept.
1350 Galindo St.

Danville Police Dept.
510 La Gonda Way

Lafayette Police Dept.
3675 Mt. Diablo Blvd.,
Suite 130

MARTINEZ:

- **Police Dept.**
525 Henrietta St.
- **Sheriff's Field Ops Bldg.**
1980 Muir Rd.
- **Contra Costa Regional Medical Center**
2500 Alhambra Ave.

Moraga Police Dept.
329 Rheem Blvd.

Orinda Police Dept.
22 Orinda Way

Pleasant Hill Police Dept.
330 Civic Dr.

San Ramon Police Dept.
2401 Crow Canyon Rd.

Walnut Creek City Hall
1666 North Main St.

Walgreens now has a collection kiosk for unwanted medications at their store in Walnut Creek (2900 Main Street).



HOLIDAY COOKING

DON'T LET A PLUMBING EMERGENCY RUIN YOUR HOLIDAY

Do you know what the busiest time of year is for plumbers? The holiday season! During this time of year, people tend to prepare elaborate meals, **deep-fry turkeys**, and invite more people into their homes to feast. As a result, the amount of grease, oil and fat going down kitchen sinks increases dramatically.

Grease is a major cause of sewer clogs and overflows.

Prevent clogged pipes and sewage overflows from ruining your holidays by doing the following:

- ▶ Keep all grease, oil, fats and fatty foods from going into the sink, garbage disposal, drains, and sewers.
- ▶ To dispose of grease, oil and fats, put into a lidded container, mix in an absorbent material, seal the container and put it in the trash.
- ▶ Bring **large quantities of used cooking oil (such as from a turkey fryer)** to our Household Hazardous Waste Collection Facility for recycling into biofuels.



WE NEED YOUR EYES (AND NOSE)!

PLEASE LET US KNOW IF YOU SEE AN OVERFLOW

If you see, smell, or suspect a sewage overflow or spill, please call us right away at (925) 933-0955 or 933-0990 so we can take appropriate action as quickly as possible.



WANT TO KNOW MORE?

Would you or your group like to know more about how we protect the environment? We offer speakers for your group and terrific tours of our treatment plant – FREE!

Please contact Kit Ohlman at (925) 229-7329 or kohlman@centralsan.org, or go to this link to sign up for a free tour: [CentralSanPlantTours.eventbrite.com](https://www.eventbrite.com/central-san-plant-tours).

Custom tours and presentations for groups can also be arranged.

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ANIMAL SPOTLIGHT: WESTERN POND TURTLE

Hi kids! I am Shelly and protecting our local waters is my #1 job. Central San can remove pee, poo and toilet paper but anything else you flush could end up in our water where animals (like me) live.

Our local waterways are home to hundreds of animals, including the Western Pond Turtle. These California native turtles live in marshes, creeks and ponds throughout Contra Costa County. They prefer to live in areas with logs and rocks, where they can lay out and enjoy the sun. Like humans, Western Pond Turtles can eat plants and animals. These turtles, like all turtles, are reptiles.

Western Pond Turtles rely on you to keep their water clean and healthy. By only putting pee, poo and toilet paper in the toilet, you are helping to protect these turtles and their home.

Spot the Difference: There are five differences between the two turtle pictures below. Can you find them all?

Answers on next page →



What do Western Pond Turtles eat?

- ☐ Only Animals
- ☐ Only Plants
- ☐ Both Animals and Plants
- ☐ Peanut Butter Milkshakes

What are Western Pond Turtles?

- ☐ Monkeys
- ☐ Reptiles
- ☐ Fish
- ☐ Cartoon Characters

Where do Western Pond Turtles live?

- ☐ The Jungle
- ☐ The Ocean
- ☐ Marshes, Creeks and Ponds
- ☐ On the Moon

Q: What kind of photos does a turtle take?

A: Shellfies!

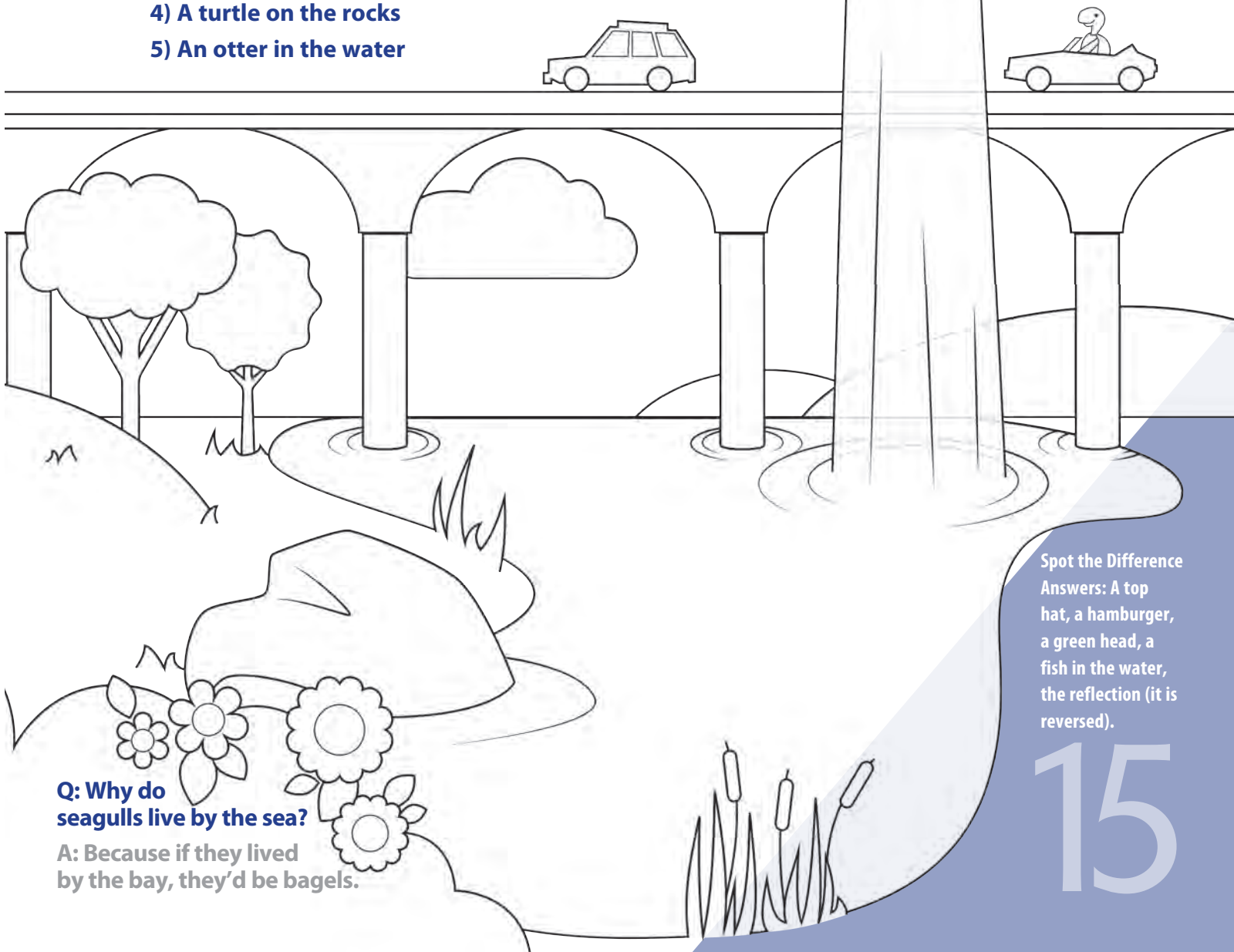
THE "BAY" AREA

Our area is often called the "Bay Area" in part because we live near the famous San Francisco Bay. A bay is a large body of water, often connected to the ocean, that has land surrounding it. While the San Francisco Bay is the most famous, there are actually three bays in our area; the San Francisco Bay, the San Pablo Bay and the Suisun Bay.

Central San cleans wastewater and returns the cleaned water to the bay closest to our treatment plant – the Suisun Bay.

Draw the following creatures living in and around the Suisun Bay:

- 1) A fish swimming in the bay
- 2) A bird flying in the sky
- 3) A butterfly by the flowers
- 4) A turtle on the rocks
- 5) An otter in the water



Spot the Difference
Answers: A top hat, a hamburger, a green head, a fish in the water, the reflection (it is reversed).

Q: Why do seagulls live by the sea?

A: Because if they lived by the bay, they'd be bagels.

WE ARE HERE TO HELP...

| | |
|--|--|
| General information | (925) 228-9500 or CentralSan.org |
| Sewer overflows | (925) 933-0955 or 933-0990 |
| Recycled Water Fill Station InfoLine | (925) 335-7717 |
| Treatment Plant InfoLine (Report Odors) | (925) 335-7703 |
| Household Hazardous Waste InfoLine | (800) 646-1431 or CentralSan.org/HHW |
| Sewer connection permits/Permit Counter | (925) 229-7371 |
| To report illegal discharges into sewer system | (925) 229-7288 (during business hours) (925) 229-7214 (after hours) |
| Environmental Compliance | (925) 229-7288 |
| Employment Opportunities | CentralSan.org |
| Student Education Programs | (925) 229-7310 or CentralSan.org |
| Community Information Line | (925) 335-7702 |



Central San serves 484,200 customers within its 145-square-mile service area.

- Wastewater collection & treatment; Household Hazardous Waste (HHW) disposal for 344,600 people.
- Wastewater treatment & HHW disposal for 139,600 people in Concord & Clayton by contract.
- HHW disposal only.
- Central San headquarters, treatment plant, HHW Facility & Residential Recycled Water Fill Station.

CENTRAL SAN

Board of Directors

Paul H. Causey, President

James A. Nejedly, President Pro Tem

Michael R. McGill, Director

Tad J. Pilecki, Director

David R. Williams, Director

Board meetings are open to the public and are usually held on the 1st and 3rd Thursday of each month at 1:30 p.m. in the Central San Board Room, 5019 Imhoff Place, Martinez.

Roger S. Bailey, General Manager

The Central Contra Costa Sanitary District PIPELINE

Written and designed by Central San staff to communicate pollution prevention messages to the people and communities we serve.

Lindy Lavender, Editor, Writer

Charles Waltmire, Graphic Designer

View archived issues online at CentralSan.org



**PIPELINE is printed with
soy-based inks on Recycled Paper**

Please **share or recycle** this newsletter.

2017 EMPLOYEE
APPRECIATION
PICNIC & CAR SHOW

GRILLS & GRILLES



P2 WEEK: SEPTEMBER 18-24



Pollution Prevention (P2) Week is a national initiative that highlights efforts to curb pollution through innovation and prevention.

Celebrated on the third week of September, P2 Week brings awareness to the importance of reducing or eliminating pollution at the source. But what is the source? Unfortunately, we are!



Households are the main source of water pollution today.

But, that also means we can do the most to help. By choosing nontoxic cleaners, reusing and recycling materials, and properly disposing of your household hazardous waste you are helping to reduce pollution and protect our local waters.



WHAT IS YOUR P2 IQ?

1 How much of the water on earth is available to drink?

- a. 10% c. 25%
b. 1% d. 3.14%



3 In what year did Congress pass the Pollution Prevention Act? a. 2010 b. 1980 c. 1990 d. 3000

2 Which of the following is a household hazardous waste that should not be poured down a drain?

- (Circle all that apply)
a. Latex paint
b. Fingernail polish
c. Brake fluid
d. Beer



ANSWERS: 1) b, 2) a, b, c 3) c

3 WAYS TO CELEBRATE P2 WEEK AT WORK

1 Use the Household Hazardous Waste Collection Facility (HHWCF). Pollution Prevention Week is a perfect time to clean out those forgotten cabinets or venture into the shed to look for waste. As a Central San employee, the HHWCF is free for you to use and conveniently located.



2 Bring a reusable water bottle. Reusable bottles are better for the environment and may even keep your water colder.

Pro Tip: Don't forget to use the Water Bottle Fill Stations in the POD and MRC buildings.

3 Think before you print. It takes 24 trees and 84,000 gallons of water to produce 1 ton (200,000 sheets) of paper. Only printing when necessary and printing double-sided will reduce waste and save water.



WE LOVE THESE BUSINESSES

POLLUTION PREVENTION AWARDS

***Congratulations to this year's winners of our annual Pollution Prevention Awards!
These local businesses are leaders in pollution prevention and environmental protection!***

Central San conducts the Pollution Prevention Awards program each year in conjunction with National Pollution Prevention Week. The winners are presented with their awards at Sustainable Contra Costa's annual Leadership in Sustainability Awards Gala.



◀ Buddha Gate Monastery

They are conserving water by watering their gardens with rain water collected in rain barrels, saving vegetable wash water from the kitchen to water plants, and installing automatic faucets and low-flow toilets. They also prevent pollutants from entering the sanitary sewer and storm drain systems by making their own environmentally-friendly detergent out of recycled citrus peels and placing strainers over sink drains.

Michael S. Tobian, DDS ▶

They reduce their water consumption by using a dry vacuum system. The facility also uses an amalgam separator and the amalgam is properly disposed of. All their staff are trained in Best Management Practices (BMPs) and Pollution Prevention.



◀ Mrs. Pastures Cookies for Horses

They purchase their ingredients in bulk to reduce packaging waste, and their dough scraps are remixed or composted. Their facility only has one household-sized garbage can sent to the landfill each week! They also minimize their water use and screen their wastewater for solids before disposal.

The Conco Companies ▶

They use recycled water to wash their trucks, and their wash water flows through an innovative pretreatment system and a Sand-Oil Interceptor to remove pollutants before they enter the sanitary sewer. They also installed new sawdust collectors that prevent sawdust from entering the storm drain system and solar panels and LED lights to reduce electrical usage.



LET THE GOOD TIMES ROLL

EMPLOYEES GATHER FOR WICKED CARS AND DELICIOUS LUNCH

Central San staff showcased their classic and unique cars at the Employee Appreciation Picnic and Car Show on August 16th. Members of the executive management team cooked and served burgers, hot dogs, potato salad, watermelon, and cookies to the more than 200 attendees.

Thank you to everyone who helped make this year's Employee Appreciation Picnic a success!



▲ The Boogie Van was quick to attract spectators, though less for its restoration and more for its unique engine placement – between the front seats. Owner **Rob Cleland** has been working on the van and its many modifications for more than three years. The Boogie Van, technically a 1969 Chevy, now has a nearly 850 horsepower engine. It's an attention grabber and has even been featured in two magazines, including Street Muscle Magazine.



▲ **Brian Walters** brought his 1968 California Special Ford Mustang, a car his mom drove daily for more than 20 years. "She has the original bill of sale," he explained, "[it was sold] for \$3,500!" The Mustang is one of only 1,500 and was built in Fremont.





“Everyone calls it Christine now,” said **Dwight Williams**, laughing as he explains how his Chevrolet Bel Air nearly killed him. He’s referencing a 1983 horror film about a possessed Plymouth that turns violent. “It wouldn’t start, so I left it in gear and hopped out to jump start it with a screwdriver. It snowplowed me about 60 feet; it broke four ribs and three vertebrae.” The Bel Air is beautiful, the bright blue paint sparkling in the sunshine, “I did it all myself,” Dwight explained, referring to the impressive restoration. It’s clear he and Christine are back on good terms.





Kit Ohlman and Jon Abdon teach the finer points of microscopes to a rapt audience.

Photos by Kelsey Lansang

SLUDGE, MICROORGANISMS & KIDS

By *Kit Ohlman*

Is there a better way to spend an afternoon? On Thursday, August 3rd, six brave and curious middle schoolers descended upon Central San's multipurpose room to help us test out a proposed new educational program.

The program - Microbes in Sewage - is a microscope lab program designed to introduce middle school students to the wonders of wastewater treatment, especially the biological process. It also helps students learn and hone their microscope skills.

After learning about Central San and the differences between water, storm water and wastewater, the students donned their purple gloves and safety glasses and were ready to get to work. With the assistance of laboratory summer student Jon Albon, the students used eyedroppers to get their samples from a container of activated sludge collected from the plant that morning. They then carefully put their samples on the slides to view under the microscope.

Thanks to Jon, we had software linking the computer and

microscope; this allowed us all to see on the big screen what each student was viewing under the microscope. There were many collective "oohs and aahhs" when students saw the microorganisms - usually stalked ciliates - moving around on the big screen.

The students seemed intrigued to learn that these tiny microscopic organisms do such a big job in the wastewater treatment process. After rigorous handwashing, thorough clean up and some more discussion, it was finally time for pizza!

Special thanks to the Central San staffers who "loaned us" their curious kids for a couple of hours, and to Jon Albon, who has since left Central San to begin classes at UC Berkeley.



IT TIPS

By *Jose Vega*

HOW TO SPOT A FAKE EMAIL

Hundreds of fraudulent email messages are blocked everyday by the Central San email server, but occasionally some manage to get through. These tips will help you identify a fraudulent email:

- **Look at the From Address.** While you may recognize the name in the From portion of the email, often the email address is incorrect and has nothing to do with the person or company that appears to have sent the message.

- **Look but Don't Click.** Hover (don't click) your mouse over a link in the email message to display the link's true destination. If it appears suspicious, don't commit to clicking on the link.

- **Analyze the Salutation.** Be cautious of emails that use a vague greeting such as "Valued Customer." Legitimate emails will often use a personal salutation and include your first and last name. ...Continued on next page

No SMOKING...UNLESS YOU'RE ON FIRE!

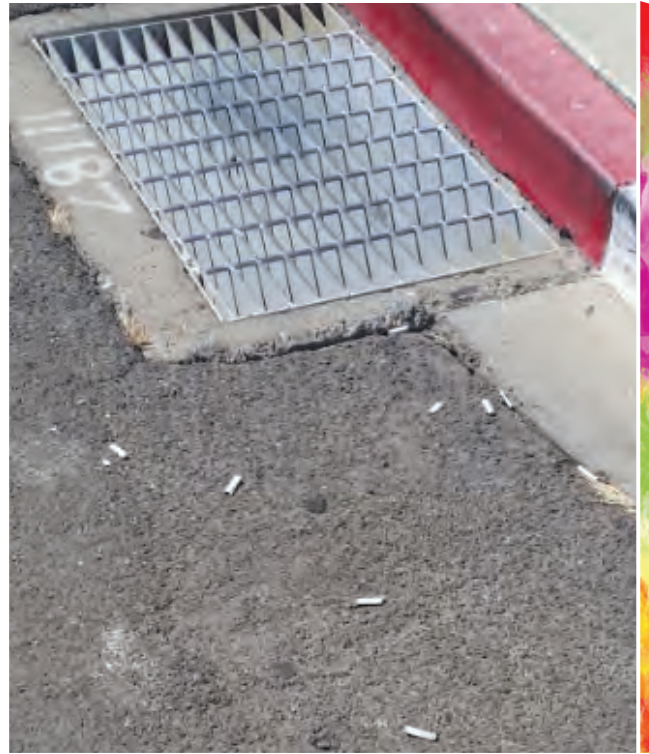
All jokes a side, the District established its No Smoking Policy back in 1985 to comply with the California Indoor Clean Air Act. This Act is what first established smoking areas in restaurants, designated smoking and non-smoking hotel rooms, and prohibited smoking on trains, buses, and airplanes. The concern identified by the Act was the potential health implications of second hand smoke.

Since then, we have seen other governing bodies pass smoking regulations. Here in Contra Costa County, people are prohibited from smoking within 20 feet of any enclosed worksite's doorways, windows, or air intakes. Additionally, these regulations prohibit the use of smoke on public trails and in public parks; in service areas (such as ATM's, bus stops, taxi stops and ticket counters); and public event venues (such as stadiums, fairs, and farmer's markets). The City of Walnut Creek has even more stringent regulations. Walnut Creek extended the prohibited smoking distance to 25 feet and banned smoking in the downtown "Pedestrian Retail District" and in Multi-Unit Residences (including the common areas). California has also placed restrictions on smoking in private vehicles with children under the age of 18.

The District's No Smoking Policy complies with the Contra Costa County Ordinance by not allowing smoking within 20 feet (25 feet in Walnut Creek) of enclosed worksite's doorways, windows, or air intakes and only in designated outdoor areas. Additionally, it prohibits smoking in district vehicles or when working with hazardous or combustible materials. The policy also adheres to Cal/OSHA regulations CCR T8, §5148, "Prohibition of Smoking in the Workplace" which states that no employer shall knowingly or intentionally permit, and no person shall engage in, the smoking of tobacco products in an enclosed space at a place of employment. It's also important to properly dispose of cigarette butts. Throwing them into storm drains (as shown on the right) pollutes our waterways.

If you would like to quit smoking, contact your health insurance provider for smoking cessation or call 1-800-QUIT-NOW (1-800-784-8669).

Photos by Jerry Ledbetter



FAKE EMAIL (continued)

IT TIPS

- **Beware of Urgent or Threatening Language.**

Urgent language such as "your account has been suspended" or an "unauthorized login attempt occurred" is often used in fraudulent emails.

- **Don't Give Personal Information.** Legitimate emails won't ask for passwords, social security numbers, or other personal information.

- **Don't Click on Attachments.** Attachments can

contain viruses or types of malware. Don't open any attachments you weren't expecting.

- **Check for Spelling and Grammar Mistakes.**

Legitimate messages usually don't have major spelling mistakes or contain poor grammar.

- **Contact IT for Assistance.** If you aren't sure if an email is legitimate, please contact the IT Department. IT staff would be happy to assist!

PROMOTIONS

Congratulations to **Jared Mangini** on his personnel advancement to Maintenance Crew Leader.

CONDOLENCES

To the family and friends of retiree Bhupinder Dhaliwal, who passed away on Saturday, August 5, 2017. Please accept our deepest sympathies.

BABIES

Congratulations to **Will Grant** and his wife Sara who welcomed their son, Vincent Frances Grant, on August 18, 2017. He joins a sister, Julia.

WELCOME ABOARD

To **Justin Mercer**, Instrument Technician. Justin came to the District from the Newtron Group where he worked as an Electrical Instrumentation Foreman.



GOING DIGITAL? PLAN YOUR SCAN

By **Chris Carpenter**

Going paperless is good, but it's not always as easy as "scan it." There has been an increase in requests for scanning at the RSC and other resources from IT, that indicates a growing interest in going digital at Central San; however, scanning in the documents shouldn't be your first step in the process.



Jimmie Castillo at the scanner in the Reprographic Services Center (RSC).

Let's go back in time and take a trip to the library. You want to research something but all the books are randomly stacked on the shelves. Good luck finding what you're looking for. To help you out, the library staff organized the books by topic; however, there is no catalog available to look at. This is similar to scanning your files and organizing them in a folder structure on a network drive. You have some order, but it's unlikely anyone else can find what they are looking for if they're not already familiar with your structure.

For your scanned documents to be truly useful, they should be properly filed, indexed, and searchable. This is the foundation existing tools such as LaserFiche are built upon. If you are looking to go digital, please contact **John Huie** or **Dennis Chebotarev** in IT for assistance. They will work with you to determine the resources required for your project.

For small quantity scanning the RSC and Xerox copiers can be helpful. The walk-up copiers are able to scan documents in full color up to 11 x 17, and in the RSC you can scan color documents up to 36-inches wide; however, these scanners produce images and not text searchable files.

OTHER OFFERINGS FROM MHN

I like to visit the websites of our benefit providers in my spare time and was amazed at the amount of "help tools" available on the Managed Health Network's (MHN) website. MHN is the provider for our main Employee Assistance Program, available to active employees and anyone living in their household.



Twila's Tips

The MHN website contains multiple help topics and tools for a variety of life issues.

These topics fall under several broad categories; Parenting, Aging, Balancing, Thriving, Working, Living, and International.

Some of my unique finds were Errands Online, where I found a link to the National Center for Health Statistics' Website which provides state-by-state links for information on obtaining records about births, deaths, divorces, and marriages in the 50 states and Puerto Rico. Under the Pets topic, I found a Pet Sitter Locator which allowed me to filter by zip code, type of pet(s), special needs, etc. Another tool I found was a Camp Locator under Parenting, which took me to the American Camp Association's (ACA) website with searchable data from over 2,400 ACA-accredited camps nationwide.

Sure, most employees know that our EAP provides counseling sessions and legal advice, but a visit to the MHN website is well worth your time to explore all the other resources it offers. Just go to www.members.mhn.com, Click on Log-in on the MHN EAP section, enter our Company Code: cccsd, and you're in!

Please contact me at tmullen@centralsan.org or (925) 229-7357 with all benefits-related questions.

LATERAL CONNECTION



Published monthly for employees and retirees of the Central Contra Costa Sanitary District.

Editor: **Lindy Lavender**

Printing: **Central San RSC**

Designer: **Charles Waltmire**

Photography: **Kit Ohlman**

To contact us, please call **Lindy Lavender** at (925) 335-7721

Please
recycle this
newsletter.





BAY AREA POLLUTION PREVENTION GROUP

A Committee of Bay Area Clean Water Agencies

2017 Annual Report

Covering reporting period of 1/1/17 – 12/31/17



BAPPG Chair: Doug Dattawalker
BAPPG Co-Chair: Debbie Phan
BAPPG Vice Chairs: Joanne Le and Simret Yigzaw

Prepared by: Joanne Le
Submitted to: Bay Area Clean Water Agencies
Date: 01/16/2018

EXECUTIVE SUMMARY

The Bay Area Pollution Prevention Group (BAPPG), a subcommittee of Bay Area Clean Water Agencies (BACWA), is comprised of 43 Bay Area wastewater agencies that work together to coordinate pollution prevention activities and leverage resources for smaller agencies to reduce the amount of toxic pollutants discharged into the San Francisco Bay and local waterways. Wastewater agency representatives meet monthly to share information, leverage resources, and develop regional activities that help member agencies meet regulatory outreach requirements and BAPPG goals.

2017 COMMITTEE UPDATES

All files pertaining to BAPPG are now being added to the BACWA BAPPG webpage. This includes meeting agendas, meeting minutes, reports, presentations, and information on pollutants of concern.

2017-2018 BAPPG officers were selected:

- Chair – Doug Dattawalker, Union Sanitary District
- Co-Chair – Debbie Phan, Regional Water Quality Control Board
- Co-Vice Chair – Joanne Le, City of Richmond
- Co-Vice Chair – Simret Yigzaw, City of San Jose

CURRENT PROJECT UPDATES

This report serves as an update to BACWA and member agencies for all BAPPG projects, by pollutant, which took place from January 1, 2017, through December 31, 2017.

1. COPPER
2. FATS OILS AND GREASE (FOG)
3. MERCURY AND SILVER
4. PESTICIDES
5. PHARMACEUTICALS
6. TRICLOSAN
7. TRASH AND WIPES

1. POLLUTANT: COPPER

Pollutant Description

Copper pipe corrosion has been a major concern to the wastewater community for more than a decade. For many years, the messages have focused on proper installation, including the use of a water-based flushable flux. In California, there are also alternatives to copper pipe for potable and non-potable installations, such as PEX. Further, copper is a pesticide used in swimming pools and spas and incorporated into fabrics.

Key Messages

1. Select only ASTM B813 water-flushable flux rather than petroleum-based flux (which is not flushable and increases pipe corrosion rates).
2. Incorporate additional BMPs during design, reaming, cleaning, and building commissioning that will reduce pipe corrosion rate.
3. Seek mitigation options for copper products that are used in swimming pools, spas, and fountain treatments (often drained to sanitary sewer) as well as copper-treated fabrics that are subsequently laundered.

| Project | Description | Timeline | Budget |
|--|--|--------------------|----------|
| Outreach to Plumbers, Apprentices, and Building Inspectors | Be available to provide presentations to plumbing unions and building inspector associations about plumbing installation BMPs. | Calendar Year 2017 | \$500 |
| EPA Review of Copper Based Pesticides | Review and comment upon EPA registration reviews | October 2016 | Prior FY |

| Results |
|---|
| <ul style="list-style-type: none">• Supported one presentation at Laney Community College, Oakland (15 students) about our flux and flushing BMPs.• During the public comment period for the U.S. EPA Copper Registration Review risk assessment in 2016, it was asked that U.S. EPA require users to contact local agencies and follow their instructions for draining copper-treated swimming pools, spas, and fountains to avoid copper pollution and collection system backup. EPA agreed and in 2017, it proposed such instructions be placed on all swimming pool and spa products. (Our stormwater agency partners are currently asking for this to be extended to fountain products too.) Although EPA was also asked to examine discharges from |

washing treated fabrics, it declined to do so, saying that it has insufficient data to support a detailed assessment, and that it guessed that fabrics are unlikely to be a large wastewater copper discharge source. Based on these outcomes, did not provide comments on EPA's 2017 proposed copper pesticides review decision.

Next Steps

BAPPG has been delivering the copper plumbing BMP messages for more than a decade, yet BAPPG learned in 2013 that the “best practice” of selecting water-flushable flux (“Key Message #1, and consistent with the Universal Plumbing Code standard) is being virtually ignored throughout the plumbing sector. In addition, in 2014 Stephanie Hughes completed an analysis of copper versus PEX from life cycle and worker safety perspectives that included information to support the use of PEX installations. These findings initiated discussions within BAPPG regarding whether to update plumbing messages.

Prior to continuing or developing outreach actions, it may be appropriate to update the copper source analysis for wastewater. The copper source analysis often cited within BAPPG is a 1996 document incorporating an assumption from a 1994 document. At the August 2015 IAPMO meeting, participants questioned the date of the analysis and suggested that there may be new or different sources at this time.

2. POLLUTANT: FATS, OILS AND GREASE (FOG)

Pollutant Description

FOG is a top priority due to the associated regulatory and financial impacts to member agencies. FOG is a major problem for sewer systems, causing sewer back-ups, sewer overflows onto streets, and foul sewer odors. Because of this, cities often spend millions of dollars a year responding to grease-related sewer blockages and in infrastructure improvements.

Key Messages

1. Don't pour grease down the drain – collect and recycle used cooking oil.

| Project | Description | Timeline | Budget |
|--------------------------|--|---|----------|
| Spanish Holiday Outreach | Through Univision Hispanic Radio, KBRG 100.3 FM, BAPPG promoted messages of proper grease disposal to the South Bay, East Bay, and North Bay. Outreach included: <ul style="list-style-type: none">• Three weeks of radio spots on KBRG• Calls-to-action to visit Baywise.org | November 20 – 26 and December 18 – 31, 2017 | \$7,000* |

*Cost excludes the cost of online streaming radio spots, which were not streamed due to Univision's mistake. Instead, O'Rourke will work with Univision to run these spots and other make good parameters in the Spring of 2018 targeting Toilets are not Trash Cans campaign.

Results

- 91 :30 Spanish radio spots
- 28 :15 BONUS Spanish radio spots
- 119 total campaign spots

Next Steps

In addition to continuing BAPPG's FOG campaign with Univision, BAPPG plans to host a joint BAPPG / BACWA Pretreatment Committee meeting to present on mobile food trucks and discuss opportunities surrounding regional best management practice (BMP) and collateral development.

3. POLLUTANT: MERCURY AND SILVER

Pollutant Description

Outreach regarding best management practices for dental amalgam and silver fixer waste is essential to ensure member agencies continue to meet regulatory standards and prevent pollution of receiving waters.

Key Messages

1. Dental amalgam and silver fixer wastes are hazardous and shall not be disposed in dental office sinks.
2. Incorporate BMPs for dental amalgam, silver fixer, and other hazardous wastes within a dental office.
3. The mandated use of BMPs and amalgam separators has significantly decreased the mercury loads into the sewer.
4. As of July 2017, the US EPA is mandating the installation of amalgam separators and the use of several key BMPs.

| Project | Description | Timeline | Budget |
|--|---|-----------------------|---------|
| Dental Assistant/ Hygienist Outreach | Stephanie Hughes served as a guest speaker in dental assistant / hygienist classes in local colleges throughout the Bay Area. | Calendar Year 2017 | \$4,000 |

Results

Reached a total of 150 students and instructors from January 1, 2017 – December 31, 2017 at the following site visits:

- San Jose City College (one class)
- College of Marin, Novato (one class)
- Foothill College, Los Altos (two classes)
- Mt Diablo Adult Ed, Concord (three classes)

The annual presentation at Santa Rosa Jr. College (which typically reaches 48-50 students) was canceled due to the fall fires that closed the school for two weeks, reducing the time available for instructors to complete their course.

Next Steps

Continue to provide the guest speaker to local colleges. The instructors have come to rely on these annual visits and have incorporated BAPPG's program into their instructional calendar. Further, this is a very relevant audience for other messages, such as wipes, microbeads, and triclosan. BAPPG will be updating the Baywise.org documents for line flushing chemicals to better align with EPA regulations.

4. POLLUTANT: PESTICIDES

Pollutant Description

Improper indoor and outdoor application of pesticides can result in chemical runoff into the sewer systems and receiving waters, leading to lower pollutant removal efficiencies at treatment plants, potential biosolids management limitations, as well as aquatic ecosystem degradation.

Key Messages

1. Promote integrated pest management and less-toxic products as alternatives to pesticides
2. Seek alternatives to fipronil and other topical (collar and spot-on) pet treatments (conducted alternative analysis and currently drafting messages)

| Project | Description | Timeline | Budget |
|---------|--|--------------------|----------|
| OWOW | Our Water Our World (OWOW) is a Bay Area-wide outreach program that promotes the use of less-toxic pest control methods and products in the home and garden through local retailers. | Calendar Year 2017 | \$10,000 |

| Results |
|--|
| <ul style="list-style-type: none">• Continued the makeover of the look and content of the <i>Our Water, Our World</i> materials from the previous fiscal year with relatively minor content changes to the <i>Pest or Pal Activity Guide for Kids</i> and an alternative shelf tag that uses the word "effective" rather than "less-toxic" for use on select products, particularly fertilizers.• Coordinated program implementation with major chains Home Depot, Orchard Supply Hardware (OSH), and Ace Hardware National. Corporate office of OSH (San Jose) and Home Depot (Atlanta) directed support of the program with their stores.• Maintained an inventory of the following: fact sheets, shelf tags, literature rack display signage, <i>10 Most Wanted</i> brochures, <i>Pest or Pal Activity Guide for Kids</i>, custom-designed product guide dispensers, and three versions of product guides (OSH, Home Depot, and generic), from which participating agencies could purchase materials.• Updated less-toxic Product Lists: 4 versions – generic product-by-pesticide-fertilizer, generic product-by-pest, OSH product-by-pest, and Home Depot product-by-pest.• Conducted employee trainings and tabling events at <i>Our Water, Our World</i> stores.• Compiled information and provided outreach specific to current issues: |

- Mosquito control and the Zika virus.
- Asian Citrus Psyllid and Huanglongbing bacterium.
- Maintained [Our Water, Our World website](#).
- Provided [Ask-the-Expert](#) service—which provides 24-hour turnaround on answers to pest management questions.
- Provided and staffed exhibitor booths and made presentations to attendees.
- NorCal trade show, San Mateo (February 2017).
- Provided on-call assistance (e.g., display set-up, training, IPM materials review) to specific stores (e.g., OSH, Home Depot).
- Participated in UCIPM Continuing Education for IPM Advocates.

Although effectiveness information need only be provided in the 2019 annual reports (C.9.g), below are some outputs and outcomes for FY 16-17:

- 124 *Our Water, Our World* store trainings.
- 1,017 employees trained at *Our Water, Our World* stores.
- 107 tabling events at *Our Water, Our World* stores.
- 6,577 customers contacted by Advocates at tabling events at stores.
- Increases over last year in trainings by 11%, trainees by 16%, and customers reached at tablings by 30%.
- Home Depot reported that Scott's Miracle Gro increased the sales of their less toxic pesticide product line Nature's Care by 49%.

| Project | Description | Timeline | Budget |
|----------------------------|---|--------------------|---------|
| Flea & Tick Talking Points | Evaluate flea products with regards to pathways to sewers. Develop and communicate recommendations for pet owners and veterinarians to reduce impact to sewers. | Calendar Year 2017 | \$3,000 |

| Results |
|--|
| <ul style="list-style-type: none"> ● Continued the development of outreach messages regarding alternatives to fipronil and other topical pet treatments. ● Continued a dialogue regarding fipronil and alternative flea management strategies with the California Veterinary Medical Association. ● Drafted a strategy to initiate dialogue with Bay Area veterinary professional groups in 2018. ● Communicated with the California Department of Pesticide Regulation (DPR) and the San Francisco Estuary Institute (SFEI) to understand the latest insights regarding transport to sewer and fipronil toxicity. |

| Project | Description | Timeline | Budget |
|---------|-------------|----------|--------|
|---------|-------------|----------|--------|

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|--|--|--------------------|----------|
| Regulatory Tracking and Communications | Identify pesticide regulatory actions at federal and state level. Communicate with regulators to ensure that wastewater issues are included in the analyses. | Calendar Year 2017 | \$30,000 |
|--|--|--------------------|----------|

Results

- Coordinated with BAPPG to update the list of highest priorities pesticides for BACWA's attention. Created an updated pesticides watch list for tracking purposes.
- Provided a "crystal ball" schedule of anticipated pesticide regulatory activities on these pesticides. Prepared a detailed tracking spreadsheet for EPA activities, with docket numbers and EPA contact emails, and a near-term priorities tracking summary, updated monthly or bimonthly.
- Tracked pesticide-related regulatory activities by EPA and DPR and new scientific information that have significant potential to affect BACWA member agencies. Notified BAPPG of such items as they arose. On the basis of regulatory documents, relevant scientific information, and the regulatory context, made recommendations regarding regulatory participation or other follow-up steps on multiple EPA and DPR actions relating to pesticides including copper, pyrethroids, imidacloprid, several swimming pool chemicals, and root control chemicals. When so directed, provided key points for comments and reviewed draft comment letters by BACWA and its allies.
- Supported preparation the following BACWA letters to EPA on pesticides:
 - Pyrethroids – comments on EPA's risk assessment and recommendations for EPA's consideration in development of risk mitigation. This letter focused on shortcomings in EPA's POTW modeling, including EPA's omission of on-pet flea/tick treatments and options for risk mitigation for pet treatments, impregnated fabrics, discharges from lice and scabies treatments, and bifenthrin-specific measures due to its persistence. A second letter with the same themes addressed the pyrethroid Flumethrin, which had a different comment period.
 - Imidacloprid – comments on EPA's risk assessment and recommendations for EPA's consideration in development of risk mitigation. This letter focused on EPA's omission of on-pet flea/tick treatments and options for risk mitigation for pet treatments.
 - Indoxacarb – comments on EPA's risk assessment and recommendations for EPA's consideration in development of risk mitigation. This letter focused on EPA's omission of on-pet flea/tick treatments and options for risk mitigation for pet treatments.
 - Swimming pool chemicals – proposed decisions on Boric Acids & Salts (BACWA) and Hypochlorites (NACWA only). These letters continued BACWA's work to ensure that EPA requires applicable products to carry new swimming pool, spa, and fountain product label language to direct owners to contact their local sanitation agency prior to discharging treated water.

- Diquat dibromide – comments on EPA’s proposed Registration Review decision, focusing on revisions to EPA’s proposed instruction for pre-application POTW notification.
- Dichlobenil – comments on EPA’s risk assessment and recommendations for EPA’s consideration in development of risk mitigation. This letter focused on scientific errors in EPA’s POTW discharge modeling, omission of collection system workers from the health risk assessment, and a request that EPA require pre-application POTW notification.
- EPA Pesticides regulatory reform – in a response to EPA’s request for input on reducing regulatory burden, commented on changes that EPA could make in its pesticides regulatory program to reduce pesticide-related burdens on POTWs while maintaining environmental protections. Suggestions included improving EPA pesticide scientific review procedures addressing POTW discharges, eliminating the “treated article exemption” from pesticide regulation (which allows treated fabrics and similar products to be sold without EPA scientific analysis or state controls), and removing barriers to availability of POTW-related pesticide scientific and regulatory information.

Coordinated with and provided technical support for NACWA and Water Board, which also sent letters on almost all of these items:

- Coordinated City of Palo Alto and Water Board emailed requests to DPR responding to DPR’s public notice on receipt of the registration application for the first copper/silver drinking water treatment product, requesting that DPR’s Surface Water Protection Program carefully evaluate implications of the copper and silver discharges from this potential product.
- Based on existing open lines of communication with pesticide regulators, pesticide manufacturers, and scientists researching pesticides in wastewater, notified BAPPG of important information obtained through these contacts.
- Provided technical information to support BACWA’s coordination with NACWA on Federal pollution prevention topics, including pesticides and Toxic Substances Control Act (TSCA) reform.
- Tracked TSCA reform implementation, reviewed draft regulations on chemical prioritization and risk assessments from POTW perspective, and provided key points and other technical support for BACWA’s coordination with NACWA on providing comments on these two regulations. Analyzed outcome of final regulations and developed and worked with NACWA to implement science-focused strategy toward improving integration of POTW discharges into the EPA TSCA review process.
- Coordinated and provided scientific support for communications with EPA and DPR about wastewater pesticides discharges, wastewater pesticides monitoring, and improving wastewater pesticides predictive modeling to support registration decisions. Arranged multiple teleconference meetings with EPA and DPR to discuss wastewater modeling and monitoring. Continued semi-annual informal information-sharing teleconference meetings between BACWA’s pesticide workgroup and DPR’s wastewater experts.
- Continued scientific and management conversations with both EPA and DPR around the new scientific evidence linking pet flea control treatments and fipronil and

imidacloprid in POTW effluent, and changing EPA standard procedures that currently ignore the contribution of these products to wastewater.

- Continued follow-up work to ensure that EPA requires applicable products to carry new swimming pool, spa, and fountain product label language to direct owners to contact their local sanitation agency prior to discharging treated water.
- Prepared and gave presentation on pet flea control product transport to wastewater effluent “San Francisco Bay area wastewater monitoring reveals previously unidentified pathway for pet spot-on flea treatments to reach estuaries” in an SFEI-organized session, “Contaminants in Urban & Coastal Estuarine Ecosystems” at the 2017 Spring American Chemical Society meeting in San Francisco in April. Participated in this and other pesticides/wastewater sessions.
- Evaluated outcomes of BACWA input to EPA and DPR and briefed BAPPG/BACWA pesticides leads on these outcomes to assess effectiveness of BACWA’s work.
- Developed an agenda and materials for a monthly BACWA Pesticides Workgroup teleconference meeting to determine appropriate actions and to coordinate actions with NACWA and San Francisco Bay Regional Water Board staff. Provided staff support during the meetings and an action item list after each meeting.

Next Steps

BAPPG plans to continue funding OWOW to conduct regional IPM and less-toxic product outreach and education. BAPPG will continue working with Dr. Kelly Moran to track opportunities to comment on pesticide registration and evaluation activities by U.S. EPA and the California Department of Pesticide Regulation, with consideration of water quality impacts via the POTW pathway. BAPPG will continue to work with O’Rorke and Stephanie Hughes to develop a regional pitch to accompany the anticipated California Department of Pesticide Regulation findings on the toxicity of fipronil in flea and tick treatment products using the newly developed talking points. BAPPG will coordinate such messages and materials with the OWOW campaign and with veterinary professionals.

Materials



Chinook Book mobile ads

5. POLLUTANT: PHARMACEUTICALS

Pollutant Description

Pharmaceuticals can enter water resources and the San Francisco Bay through improper disposal into wastewater streams (e.g., flushing pharmaceuticals down the toilet). Pharmaceuticals have endocrine disrupting properties, and unintended exposure of pharmaceuticals to aquatic life and humans can lead to adverse health effects. Outreach surrounding safe disposal of pharmaceuticals is essential to ensure member agencies meet regulatory standards and prevent pollution of receiving waters. There is potential to combine water quality messaging with broader messaging surrounding health and safety to target wider audiences while still ensuring that safe disposal is the key take-away.

Key Messages

1. No Drugs Down the Drain
2. Don't Rush to Flush – Meds in the Bin, We All Win!
3. Prevent Accidental Poisoning, Drug Abuse and Water Pollution by disposing medicines properly

| Project | Description | Timeline | Budget |
|--------------------------------------|--|--------------------|--------|
| Dental Assistant/ Hygienist Outreach | Insights about proper pharmaceutical disposal included as part of dental waste discussion. | Calendar Year 2017 | N/A* |

**Included above with mercury*

| Results |
|---|
| Reached 150 dental trainees and instructors (per Mercury section) |

6. POLLUTANT: TRICLOSAN

Pollutant Description

Triclosan is found in various consumer products and has been linked to a range of adverse health and environmental effects. Although the US Food and Drug Association (FDA) has now banned triclosan from hand soaps (effective September 2017), triclosan is allowed in numerous other consumer products.

Key Messages

1. Targeted towards mothers and primary household purchasers

| Project | Description | Timeline | Budget |
|---------------------------------------|--|--------------------|--------|
| Dental Assistant / Hygienist Outreach | Stephanie Hughes includes insights on triclosan during pharmaceutical and dental waste disposal discussions. | Calendar Year 2017 | N/A* |

**Included above with mercury and pharmaceuticals*

| Results |
|---------|
|---------|

- Reached 150 dental trainees and instructors (per Mercury section)

7. POLLUTANT: TRASH AND WIPES

Pollutant Description

Trash is a top priority due to the improper disposal of non-woven wipes and other non-flushable trash items such as hair, ear swabs and all products claiming to be biodegradable or flushable. Most consumer wipes products (labeled flushable or not) take much more time to disperse in water than toilet paper, which has caused issues for many POTWs in the Bay Area, including damage to pumping station equipment, grinders and other infrastructure, stoppages, and sanitary sewer overflows. Wipes and other non-dispersibles are also a safety issue for pump station employees that have suffered needle sticks from “deragging” pumps clogged with wipes.

Key Messages

1. Wipes Clog Pipes!
2. Toilets Aren’t Trashcans

| Project | Description | Timeline | Budget |
|--|--|-----------------------|--------|
| Dental Assistant/ Hygienist Outreach | As part of the dental waste discussion, speaker includes insights about microbeads and “flushable” wipes. This audience is very receptive to all BAPPG messages. More than 95% female, they are typically the primary purchaser for their families, and as medical professionals are concerned about health and water quality. | Calendar Year 2017 | N/A* |

*Included above with mercury

| Results |
|--|
| <ul style="list-style-type: none"> • Reached 150 dental trainees and instructors (same audience reached as “Mercury” results above) |

| Project | Description | Timeline | Budget |
|---|---|----------------------|--------|
| Toilet’s Aren’t Trashcans | <p>O’Rorke ran a regional online advertising campaign to educate residents about the importance of never flushing wipes down the Toilet.</p> <ul style="list-style-type: none"> • Facebook ads | June 9 – 23, 2017 | \$974 |
| Results | | | |
| <ul style="list-style-type: none"> • 167,492 impressions | | | |

- 242 clicks
- .14% CTR
- 184 visits to Baywise.org

Materials



Image from Toilets Aren't Trashcans Facebook Ads

| Project | Description | Timeline | Budget |
|-------------------------------|---|-------------------------|---------|
| Wipes outreach during P2 week | <p>O'Rorke implemented a regional online and mobile advertising campaign to educate residents about the importance of never flushing wipes. The campaign coincided with P2 week in September, and ads will run again in the Spring to coincide with Earth Day activities. O'Rorke utilized online ad artwork developed by CCCSD in 2016.</p> <ul style="list-style-type: none"> • Division D Online and Mobile ads • Facebook ads | September 11 – 24, 2016 | \$2,700 |

| Results | |
|---|---|
| <p>Division D online and mobile ads</p> <ul style="list-style-type: none"> • 1,114,105 impressions • 1,814 clicks • .16% CTR | <p>Facebook ads</p> <ul style="list-style-type: none"> • 304,252 impressions • 540 clicks • .18% CTR |
| <ul style="list-style-type: none"> • There were 2,381 visits to Baywise.org during the month of September, with 90% of those visits occurring between September 18 - 24 • For comparison, the site received only 285 visits during the previous month | |

Materials



Online ads from CCCSD

Next Steps

BAPPG will continue to include messages about trash and wipes when meeting with medical, hospice, and dental professionals and trainees. BAPPG will also distribute collateral during professional presentations and regional outreach events and continue outreach campaigns in conjunction with National P2 Week to continue stressing “Wipes Clog Pipes!” message. BAPPG will run additional “Wipes Clog Pipes” online and mobile ads with Facebook and Division D in April of 2018 to coincide with Earth Day.