



# BAY AREA POLLUTION PREVENTION GROUP

A Committee of Bay Area Clean Water Agencies

## 2014 Annual Report

Covering reporting period of 1/1/14 – 12/31/14



**BAPPG Chair:** Mike Auer  
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**Submitted to:** Bay Area Clean Water Agencies  
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## **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.

## **2014 COMMITTEE UPDATES**

1. BAPPG created an Integrated Social Marketing Plan with the help of O’Rorke Inc. to build cohesiveness in messages between projects and target audiences as well as improve upon campaign metric tracking and internal communication, all while leveraging the committee’s available resources.
2. BAPPG hosted a joint meeting with the BACWA Biosolids Committee, providing an opportunity for the committees to better understand each group’s goals, learn more about the connection between pollution prevention and biosolids quality and explore working collaboratively to support common goals.

## **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 through December 31, 2014. Moving forward, semi-annual reports will be sent out regularly in January and July of each year to provide consistent updates and progress on BAPPG programs.

1. COPPER
2. DIOXIN
3. FATS OILS AND GREASE (FOG)
4. MERCURY AND SILVER
5. PCBS AND HAZARDOUS DEMOLITION WASTE
6. PESTICIDES
7. PHARMACEUTICALS
8. TRICLOSAN
9. TRASH AND WIPES

**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.

**Key Messages:**

1. Select only ASTM B813 water-flushable flux rather than petrolatum-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

Project	Description	Timeline	Budget
Outreach to Plumbers and Building Inspectors	Offered to provide presentations to plumbing unions and building inspector associations about plumbing installation BMPs.	Calendar Year 2014	\$2,000
Comparison of PEX and Copper for Potable Water Piping	Stephanie Hughes conducted research comparing the benefits and impacts of installing copper versus PEX pipe. Analysis included life cycle analyses, water quality, and worker safety.	September 2013 - June 2014	\$2,000

<b>Results</b>	No plumbing presentations were provided in Calendar Year 2014, in part due to staff changes at key outreach sites, and in part due to message saturation at those sites. In addition, in 2013 Stephanie Hughes learned that the best practices of water-flushable flux selection (consistent with the Universal Plumbing Code standard) are being virtually ignored throughout the plumbing sector. This conclusion was based on observations at multiple plumbing retail sites where recommended flux was not always readily available, as well as through discussions with trainers, staff, and over 80 trainees at two union apprentice shops and one local community college. In addition, Stephanie Hughes completed an <a href="#">analysis of copper versus PEX from life cycle and worker safety perspectives</a> which included information to support the use of PEX installations. These findings initiated discussions within BAPPG regarding whether to update plumbing messages.
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**Next Steps:** Continue to reach out to plumbing unions and community colleges regarding available presentation on plumbing BMPs. Consider reaching out to city building inspectors with a message supporting the use of PEX in plumbing installations and remodels.

**Pollutant: Dioxin**

**Pollutant Description:** When combustibles are burned, many pollutants, including dioxins, are emitted into the air, disperse over the land and ultimately get transported in runoff when it rains. These pollutants can then get into the wastewater stream via inflow/infiltration, so controlling burning ultimately helps reduce these pollutants in stormwater and wastewater. Since a previous BACWA study found that dioxins are uncontrollable in wastewater, BAPPG’s approach to reducing this pollutant at its source is to discourage the burning of wood and to partner with the Bay Area Air Quality Management District (BAAQMD) to support their “Spare the Air” campaign.

**Key Messages:**

1. Don’t burn wood, especially during “Spare the Air” days

Project	Description	Timeline	Budget
P2 Week	Worked with O’Rorke, Inc. to develop an online Facebook ad campaign to support the BAAQMD’s “Spare the Air” campaign, which was also managed by O’Rorke. Outreach included: <ul style="list-style-type: none"> <li>• Development of online Facebook banner ads</li> <li>• New copy for Baywise.org to support the banner ads</li> <li>• Banner ads appeared on Bay Area Facebook accounts for approximately 3 weeks</li> </ul>	February 26 – mid-March 2014	\$1,500

<b>Results</b>	<ul style="list-style-type: none"> <li>• 9,146,676 impressions</li> <li>• 2,776 clicks</li> <li>• 0.030% click-through rate</li> <li>• \$0.000219 cost per impression</li> </ul>
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**Next Steps:** BAPPG plans to conduct this campaign again next year.

**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. In addition, cities can spend millions of dollars a year in infrastructure improvements and responding to grease-related sewer blockages.

**Key Messages:**

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

Project	Description	Timeline	Budget
Spanish Holiday Outreach	<p>Through Univision Hispanic Radio (KSOL 98.9 FM, KSQL 99.1 FM and KBRG 100.3 FM), BAPPG promoted messages of proper grease disposal to the South Bay, East Bay and North Bay. Outreach included:</p> <ul style="list-style-type: none"> <li>• PSA and collateral distribution at events</li> <li>• Educational flyers</li> <li>• Online digital banner for audio streaming spots</li> <li>• Baywise.org promotion</li> </ul>	November – December 2014	\$8,000

<b>Results</b>	<ul style="list-style-type: none"> <li>• 73.3 weekly spots</li> <li>• 220 total campaign spots</li> <li>• 580,766 weekly gross impressions</li> <li>• 1,742,300 total campaign gross impressions</li> <li>• \$0.0042 cost per impression</li> </ul>
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Project	Description	Timeline	Budget
Food Truck Regional Outreach	Conducted research to gain a deeper understanding of the food truck industry and associated impacts to sewer infrastructure.	December 2014 - present	TBD

<b>Results</b>	Ongoing project
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**Next Steps:** Host joint BAPPG / BACWA Pretreatment Committee meeting to present on mobile food trucks and discuss opportunities surrounding regional best management practice (BMP) and collateral development.

<b>Pollutant: Mercury and Silver</b>
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**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 defined as 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.

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 2014	\$4,000

<b>Results</b>	<p>Reached a total of 272 students and instructors. This is a very relevant audience for other messages, such as wipes, microbeads, and triclosan. The 2014 college site visits:</p> <ul style="list-style-type: none"> <li>• Foothill College, Los Altos (2 classes)</li> <li>• Mt Diablo Adult Ed, Concord (3 classes)</li> <li>• San Jose City College (2 classes)</li> <li>• Santa Rosa Jr. College (1 class)</li> <li>• Carrington College, Pleasanton (4 classes)</li> <li>• San Francisco City College (1 class)</li> <li>• College of Marin, Novato (1 class)</li> </ul>
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**Next Steps:** Continue to provide the guest speaker to local colleges. The instructors have come to rely on these annual visits and have interwoven our program into their instructional calendar.

**Pollutant: Nutrients**

**Pollutant Description:** While San Francisco Bay is a nutrient-enriched estuary, the Bay has not been adversely impacted as of yet. A regional nutrients watershed permit came into effect on July 1, 2014, requiring dischargers to seek nutrient reduction strategies.

**Key Messages:**

BAPPG is currently evaluating possible source reduction messages and audiences.

Project	Description	Timeline	Budget
Nutrient Source Reduction Strategies	Reviewed source reduction programs conducted in the Chesapeake Bay watershed and other regions to determine what, if any, source reduction messages would be applicable and relevant to the Bay Area.	September – December, 2014	\$2,824

<b>Results</b>	Stephanie Hughes provided a draft memorandum to the BAPPG project managers regarding source reduction activities in other jurisdictions. Her draft report concluded that “while there may be very little measureable impact of POTW source reduction efforts, it may provide an avenue for public education that will be valuable when support and funding are sought for treatment and reuse projects. Further, there may be partnership opportunities to further explore, such as with BAAQMD to reduce atmospheric sources and with the energy and agricultural sectors to identify cross-sector benefits of nutrient recycling.”
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**Next Steps:** Communications between the BAPPG project managers and the consultant will be conducted in early 2015 to determine next steps.

**Pollutant: PCBs and other Hazardous Demolition Waste**

**Pollutant Description:** PCBs were components of external caulk and sealants prior to 1980. The EPA has developed messages about proper identification and management during building demolition and remodeling. BAPPG also identified a need to assemble information about hazardous material identification and management prior to building demolition, because the materials and regulations are numerous. Recent outreach efforts build on a brochure and web site created by BAPPG in 2012-2013.

**Key Messages:**

1. Identify PCB and other hazardous materials prior to demolition.
2. Inspect buildings remodeled prior to 1980 for PCB-containing exterior caulk and sealants.

3. During removal of PCBs and other hazardous materials, protecting building residents and demolition staff and disposing of wastes according to state and federal disposal laws.
4. Utilize the BAPPG brochure and companion web site for more information:  
[www.baywise.org/demolition](http://www.baywise.org/demolition).

Project	Description	Timeline	Budget
PCB and Demolition Outreach	Stephanie Hughes provided presentations to professional associations to reach building inspectors and contractors.	Calendar Year 2014	\$2,000

<b>Results</b>	<p>Three presentations to professional associations reached a total of 80 contractors and inspectors:</p> <ul style="list-style-type: none"> <li>• California Building Inspection Group (CALBIG), San Mateo</li> <li>• Peninsula chapter of the International Code Council</li> <li>• Napa-Solano chapter of the International Code Council</li> </ul>		
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**Next Steps:** Continue to educate building inspectors and contractors. Reach out to the California State Licensing Board to request that they link their web site to the BAPPG web site. Continue to request that BAPPG members and local jurisdictions link their inspection web sites to the BAPPG web site.

**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 as well as aquatic ecosystem degradation.

**Key Messages:**

1. Promote integrated pest management and less-toxic products as alternatives to pesticides
2. Fipronil – await better alternatives prior to developing messaging

Project	Description	Timeline	Budget
OWOW	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 2014	\$10,000



<b>Results</b>	<p>In 2014, OWOW developed partnerships with Home Depot and Orchard Supply Hardware and developed store-specific labels to inform and educate customers on less toxic pest control products and integrated pest management (IPM) practices.</p> <p>In addition, OWOW piloted an enhanced program in 10 Home Depots in the greater Bay Area and Sacramento, and worked with Scott-Miracle Gro to set up eco-friendly displays of less-toxic products in 50 Home Depots region-wide. The enhanced program is being implemented by regional IPM Advocates with financial support of local agencies and BAPPG.</p>
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**Next Steps:** BAPPG plans to continue funding OWOW to conduct regional IMP and less-toxic product outreach and education. In addition, BAPPG will be working with Dr. Kelly Moran in 2015 to track opportunities to comment on pesticide registration/evaluation activities by US EPA and CA Department of Pesticide Regulation, in consideration of water quality impacts via the POTW pathway.

**Pollutant: Pharmaceuticals**

**Pollutant Description:** 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
Hospice Outreach	Presented to hospice professionals regarding pharmaceutical disposal. In 2012, BAPPG presentation received accreditation from the Board of Registered Nursing, providing an opportunity to reach out to hospice professionals. Two-year accreditation was renewed in 2014.	Calendar Year 2014	\$2,000
Dental Assistant/ Hygienist Outreach	Insights about proper pharmaceutical disposal included as part of dental waste discussion.	Calendar Year 2014	N/A (included above with mercury)

<b>Results</b>	<p>40 hospice and wastewater professionals participated in an October 2014 webinar funded by BAPPG and Sac Regional (approximately ¼ of participants were hospice and ¼ were wastewater). Stephanie Hughes conducted the one-hour state-wide training event through the California Hospice and Palliative Care Association (CHAPCA). A second CHAPCA webinar was scheduled for January 2015.</p> <p>In addition, 272 dental students and instructors were reached.</p>
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Project	Description	Timeline	Budget
No Drugs Down the Drain	Online regional campaign encouraging proper disposal of pharmaceuticals	October, 2014 – January, 2015	\$4,952

<b>Results</b>	<p>Results were gathered prior to close of campaign for reporting purposes. The below results are as of January 12, 2015:</p> <ul style="list-style-type: none"> <li>• 2,292,671 impressions</li> <li>• 2,922 clicks</li> <li>• 0.127 click-through rate on advertisement</li> </ul>
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Project	Description	Timeline	Budget
Safe Disposal of Pharmaceuticals Grant	San Jose submitted grand proposals to the Santa Clara Valley Water District to establish 50 pharmaceutical take back sites in the South-Bay region and to develop public education regarding current threat of chemicals to the Bay	February, 2014 – April, 2014	N/A

<b>Results</b>	Grant awarded to establish 50 take-back sites, but not to develop public education and outreach on the impact of chemicals to the Bay.
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**Next Steps:** Continue to reach out to hospice professionals. Consider reaching out to other health care professionals or perhaps through nursing or physician-assistant training programs (parallel to our dental outreach program). Coordinate and build upon messaging associated with pharmacy medicine collection bin placement projects in member agency areas. Investigate options for printing proper disposal messaging on privacy bags distributed at pharmacies throughout the region.

**Pollutant: Triclosan**

**Pollutant Description:** Triclosan is found in various consumer products and has been linked to a range of adverse health and environmental effects. Though currently an unregulated pollutant, member agencies recognize that if triclosan outreach is effective, residents may begin to recognize other constituents of emerging concern such as microbeads.

**Key Messages:**

1. Targeted towards mothers and/or primary household purchasers

Project	Description	Timeline	Budget
Hospice Outreach and Dental Assistant / Hygienist Outreach	Stephanie Hughes includes insights on triclosan during pharmaceutical and dental waste disposal discussions.	Calendar Year 2014	\$2,000

<b>Results</b>	<ul style="list-style-type: none"> <li>• Reached 30 hospice professionals (same audience reached as “trash” results below)</li> <li>• Reached 272 dental trainees and instructors (same audience reached as “trash” results below)</li> </ul>
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**Next Steps:** Develop social marketing campaign and tailored collateral targeting outreach toward specific products and consumer groups

**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 even sanitary sewer overflows. Wipes and other nondispersibles 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
Hospice Outreach	As part of the pharma disposal discussion, speaker includes insights about “flushable” <u>wipes</u> .	Calendar Year 2014	\$2,000

Project	Description	Timeline	Budget
Dental Assistant/ Hygienist Outreach	As part of the dental waste discussion, speaker includes insights about <u>microbeads</u> and “flushable” <u>wipes</u> . 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 2014	\$2,000

<b>Results</b>	<ul style="list-style-type: none"> <li>Reached 30 hospice professionals</li> <li>Reached 272 dental trainees and instructors</li> </ul>
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Project	Description	Timeline	Budget
“Toilet’s Aren’t Trashcans” Collateral	Develop, print and distribute a regional flyer for all member agencies to promote the “Toilet’s Aren’t Trashcans” message.	November 2014 - Present	\$3,000

<b>Results</b>	<ul style="list-style-type: none"> <li>Flyer developed with uniform messaging for all member agencies</li> <li>To be printed by June, 2015</li> </ul>
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Project	Description	Timeline	Budget
“Wipes Clog Pipes!” P2 Week Campaign	Held in conjunction with National P2 Week, this project provided media relations by O’Rorke, Inc. to develop an online Facebook ad campaign “Wipes Clog Pipes!” Outreach included: <ul style="list-style-type: none"> <li>Development of online Facebook banner ads.</li> </ul>	During National P2 Week September 15 – 21, 2014	\$5,000

Project	Description	Timeline	Budget
	<ul style="list-style-type: none"> <li>• New copy for Baywise.org to support the banner ads.</li> <li>• Banner ads appeared on Bay Area Facebook accounts for approximately three weeks.</li> </ul>		
<b>Results</b>	<ul style="list-style-type: none"> <li>• 430,793 impressions</li> <li>• 600 clicks</li> <li>• 0.139% CTR</li> </ul>		

**Next Steps:** Continue to include messages about triclosan and wipes when meeting with medical, hospice, and dental professionals and trainees. Distribute collateral during professional presentations and regional outreach events. Continue outreach campaigns in conjunction with National P2 Week to continue stressing “Wipes Clog Pipes!” message.

**Next Meeting Date:** 02/04/2015

**Next Report to be Delivered:** Mid July, 2015