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San José-Santa Clara Regional Wastewater Facility


Annual Pollution Prevention Report 2024

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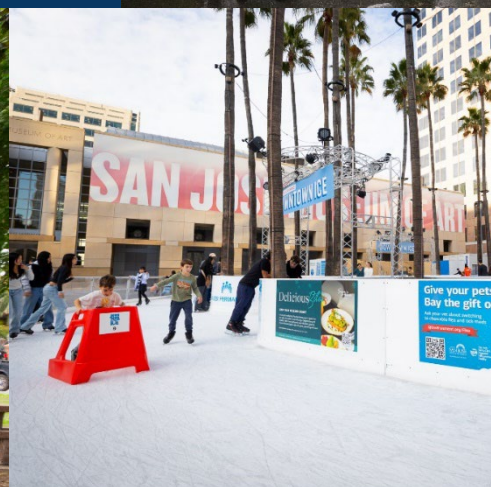
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San José-Santa Clara Regional Wastewater Facility

2024 Pollution Prevention Annual Report

San José-Santa Clara Regional Wastewater Facility Annual Reports are posted on the City of San José website at: <http://www.sanjoseca.gov/regulatoryreports>

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Executive Summary

This report summarizes the past year of Pollution Prevention (P2) activities within the San José – Santa Clara Regional Wastewater Facility (SJ-SC RWF) service area. A description of the facility, its service area, and the process for selecting pollutants of concern is provided. Subsequent sections summarize activities, accomplishments, and outreach efforts over the past year that were aimed at minimizing those pollutants. Pollutants of concern include mercury, polychlorinated biphenyls (PCBs), copper, cyanide, pesticides, fats, oils, & grease (FOG), and emerging contaminants.

Throughout 2024, City of San José (City) staff conducted various forms of in-person outreach and engagement, as well as physical and digital advertising efforts to promote P2 messages. Following the cease and subsequent reintroduction of outreach campaigns due to the COVID-19 pandemic, the City has seen a return to pre-COVID outreach activity in 2024.



FIGURE 1. POLLUTION PREVENTION INFOGRAPHIC

In 2024, the SJ-SC RWF continued to see reductions or no significant change in wastewater loads for pollutants of concern and continued to treat 100% of wastewater received and met 100% of effluent water quality requirements. Outreach efforts continue to expand, increase, and adapt to SJ-SC RWF employees and the public. The SJ-SC RWF continues to participate in several regional partnerships and activities, allowing staff to monitor and evaluate the risks of emerging contaminants at this facility.

Regulatory Requirement

The Annual Pollutant Minimization Report (P2 Report) for the SJ-SC RWF is prepared in accordance with National Pollutant Discharge Elimination System (NPDES) Permit Number CA0037842, Order Number R2-2020-0001.

Permit provision VI.C.3.b. establishes requirements for an annual report that shall be submitted by February 28th each year:

- I. **Brief description of treatment plant**, including service area and treatment process.
- II. **Discussion of current pollutants of concern** and reasons for choosing the pollutants.
- III. **Identification of sources for pollutants of concern** including methods for identifying and estimating sources to include sources not within discharger's control, such as pollutants in potable water supply and air deposition.
- IV. **Identification of tasks to reduce the sources of pollutants of concern.** The discussion shall prioritize tasks and provide implementation timelines. Participation in group, regional, or national tasks that address pollutants of concern is encouraged.
- V. **Outreach to employees.** Discharger shall inform employees about pollutants of concern, potential sources, & how they might help reduce discharge to the facility.
- VI. **Continuation of Public Outreach Program.** Discharger shall prepare a pollution prevention public outreach program for its service area. Outreach may include participation in community events, school outreach, plant tours, news articles, newsletters, radio or television stories, advertisements, utility bill inserts, or web sites.
- VII. **Discussion of criteria used to measure Pollutant Minimization Program task effectiveness.** Discharger shall establish criteria to evaluate the effectiveness of the Pollution Minimization Program. Discussion shall identify criteria used to measure effectiveness of tasks in items iii. iv. v. and vi above.
- VIII. **Documentation of efforts and progress.** Discussion of all Pollutant Minimization Program activities during the year.
- IX. **Evaluation of Pollutant Minimization Program & task effectiveness** based on criteria developed in vii above.
- X. **Identification of specific tasks and timelines for future efforts.** Discharger shall explain how it intends to continue or change tasks to more effectively reduce the amount of pollutants flowing to the facility and into effluent.

This report summarizes pollution prevention activities during the period from January 1, 2024, to December 31, 2024.

Description of treatment plant

Service Area Description

The SJ-SC RWF services a 300-square mile area (Figure 2) encompassing the cities of San José and Santa Clara, along with the territories of eight cities and unincorporated areas (referred to as Tributary Agencies). The SJ-SC RWF is permitted to clean up to 167 million gallons per day in the dry season and has a permitted wet weather peak capacity of 261 million gallons per day. Of the total wastewater flow to the SJ-SC RWF, 77 percent is estimated to come from the residential sector, 5 percent from the industrial sector, and 18 percent from commercial businesses.

SJ-SC RWF

The SJ-SC RWF is located at 700 Los Esteros Road, in San José. In 2024, an average of approximately 111 million gallons per day of sewage flowed in and received 8 to 10 hours of advanced treatment. Some treated wastewater is recycled. The majority flows out into Artesian Slough and Lower Coyote Creek.

The SJ-SC RWF began service to the cities of San José and Santa Clara in 1956. Through the 1960s and 1970s, additional cities and county sanitation districts connected to the SJ-SC RWF, and the service area population grew. The original facility provided no more than screening, grit removal, and primary sedimentation. In 1964, secondary Return Activated Sludge aeration basins were added to remove a substantial amount of organic material. A disinfection system became operational in March 1971. Nitrification basins and a filtration facility went into service in 1979 to remove ammonia and particulate matter. Starting in 1997, secondary and nitrification aeration basins were reconfigured to perform Biological Nutrient Removal (BNR) that reduced discharged loads of nitrogen, phosphorus, and copper.

Today, the facility stands as the largest and most advanced wastewater treatment plant in the San Francisco Bay area. Recent and ongoing studies of fish, phytoplankton, and invertebrates indicate that the waters immediately downstream of the SJ-SC RWF support abundant, highly diverse communities of fish and estuarine invertebrates. The SJ-SC RWF receives wastewater from roughly 1.4 million residents and more than 17,000 commercial and industrial facilities, including 189 permitted industrial users (IUs) in the following cities and districts:

- San José,
- Santa Clara,
- Milpitas,
- Cupertino Sanitary District,
- County Sanitation Districts 2-3,
- Burbank Sanitary District, and
- West Valley Sanitation District (Campbell, Los Gatos, Monte Sereno, and Saratoga).

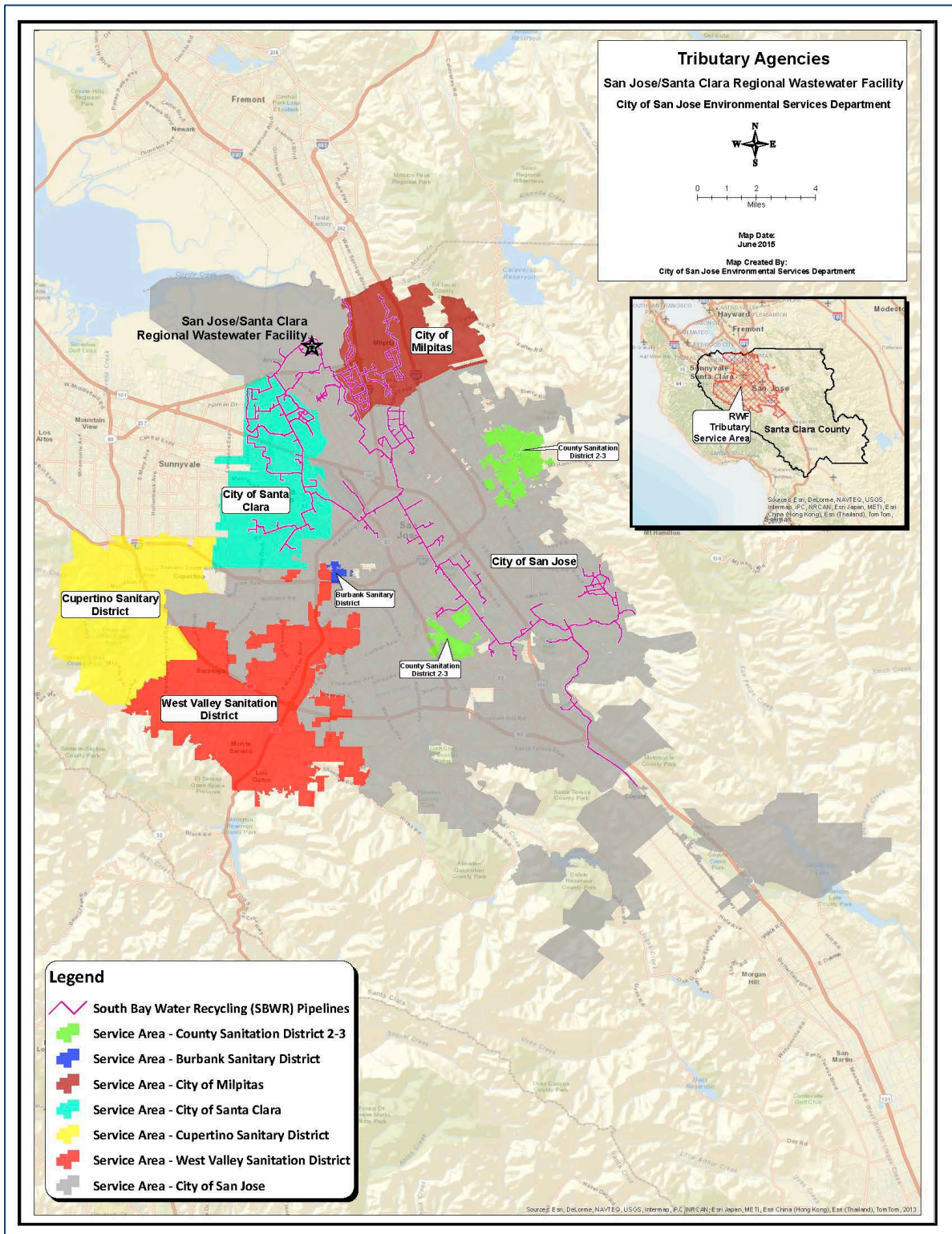


FIGURE 2. SJ-SC RWF SERVICE AREA AND TRIBUTARY AGENCIES

Pollutants of concern

Table 1 below, details SJ-SC RWF pollutants of concern and the reasons for choosing those pollutants.

Reasons for Choosing Pollutants

A pollutant of concern is any toxic or undesirable substance that passes through the SJ-SC RWF or otherwise imposes an undesirable operational cost.

Tier 1: Any discharged substance that exceeds an NPDES permit limit is a pollutant of concern. Fortunately, the SC-SJ RWF has not discharged any pollutant from treated wastewater at a concentration that poses a threat of permit violation for over a decade.

Tier 2: A secondary level of concern is for substances that, even though treated and discharged at concentrations that meet permit limits, still exceed, or threaten to exceed, water quality objectives in the Bay. Pollutants in this category generally include those for which a Total Maximum Daily Load (TMDL) has been published. Water quality objectives are established in the San Francisco Bay Regional Basin Plan for U.S. EPA listed priority pollutants (e.g., mercury, copper, cyanide, some pesticides, and PCBs).

Tier 3: A third tier of pollutants are those that add cost, difficulty, or could potentially upset facility or collection system operations. These include FOG and wipes, both of which clog pipes and fill bar screens.

Tier 4: The last category is "Emerging Contaminants": pollutants not listed by Basin Plan or as EPA priority pollutants but are present in wastewater. These include microplastics, pesticides without water quality objectives, per- and polyfluoroalkyl substances (PFAS), and pharmaceuticals that are detected at concentrations that merit research and control strategies because harm to aquatic organisms is possible or uncertain.

TABLE 1. POLLUTANTS OF CONCERN AND RATIONALE FOR SELECTION

Pollutant	Tier	Rationale
<i>Mercury</i>	Tier 2	TMDL
<i>PCBs</i>	Tier 2	TMDL
<i>Copper</i>	Tier 2	Permit Action Plan
<i>Cyanide</i>	Tier 2	Permit Action Plan
<i>Pesticides</i>	Tier 2, Tier 4	TMDL & Emerging Contaminants
<i>FOG</i>	Tier 3	Operational Impact – collection system
<i>Wipes</i>	Tier 3	Operational Impact – RWF & collection system
<i>Pharmaceuticals</i>	Tier 4	Emerging Contaminants
<i>Microplastics</i>	Tier 4	Emerging Contaminants
<i>PFAS</i>	Tier 4	Emerging Contaminants

Additional details on rationale for selecting pollutants can be found in Section "Pollutants of Concern Discussion".

Identification of Pollutant Sources

Table 2, below, details SJ-SC RWF pollutants of concern and their sources.

TABLE 2. POLLUTANTS AND THEIR SOURCES.

Pollutant	Source, or potential source
	Dental amalgam waste, thermometers, thermostats, compact fluorescent light bulbs
	Dielectric fluid in transformers built prior to 1978; Building caulking and some roofing materials from pre-1980s construction
	Copper plumbing; pool and spa maintenance; vehicle service facilities
	Industrial users; a very small concentration as a byproduct of chlorine disinfection
	Residential ant and spider control; potentially professional pesticide operators; residential flea and tick topical treatments, especially fipronil and imidacloprid
	Kitchen waste from restaurants and residents
	Residential disposal in the toilet
	Residential or hospice disposal in the toilet; some pharmaceuticals, such as albuterol, ofloxacin, fluoxetine (Prozac), carbamazepine, and some antibiotics excreted by human users at low concentrations that still pass through the treatment facility and into the Bay
	Beads in facial scrubs; toothpastes and personal care products; fibers from clothing
	Very broad use including fire-fighting foams; waterproof textiles and paper; non-stick coatings; industrial applications for semi-conductor, automotive, aerospace, photographic imaging, construction, aviation, and electronics

Sector Load Studies and Trunkline Monitoring

Sector Load Studies are periodically performed to characterize wastewater arriving to the SJ-SC RWF from industrial, commercial, and residential sources. The last sector load study was completed in 2014.

When a specific source of pollutants is suspected, a Source Control Team, under the SJ-SC RWF Pretreatment Program, performs collection system surveillance monitoring to investigate sources of specific pollutants detected in facility influent or in trunklines. Sewer source investigations are expensive and labor intensive. In practice, these efforts have usually focused on metals, such as copper, nickel, and mercury. However, any persistent pollutant detected at a high enough concentration could be tracked in this manner.

Influent, Effluent, and Sludge Monitoring

Environmental Protection Agency (EPA) priority pollutants are monitored in facility influent, effluent, and biosolids sludge. Detailed results of these sampling events are published in Annual and Semi-annual Industrial User Pretreatment Compliance Reports which are posted on the City of San José, Environmental Services Department (ESD)

website. The *San José-Santa Clara Regional Wastewater Facility Annual Self-Monitoring Reports*, which summarize the same information, are also found on the [website](#)¹.

FOG and Sewer Investigations

The City maintains a team of four Environmental Inspectors / Assistant Inspectors who investigate FOG-related collection system problems in non-residential portions of San José. In addition, the City of Santa Clara has two staff dedicated to the FOG program (Code Enforcement Officer and Code Enforcement Technician), as well as clerical support. These teams perform routine inspections of grease control devices (GCDs) at food service establishments to ensure the devices are maintained, and FOG-controlling best management practices (BMPs) are implemented (Figure 3). The teams also investigate sewer blockages in commercial areas, whether caused by FOG or other materials and recommend corrective actions.



FIGURE 3. ENVIRONMENTAL INSPECTOR
OPENING A GREASE TRAP

Special Studies

The SJ-SC RWF serves the largest population and one of the most economically diverse service areas in the San Francisco Bay Area. For this reason, the facility has historically conducted or supported numerous scientific studies to identify potential pollutants and their sources. The SJ-SC RWF currently supports research and provides samples to projects coordinated by the San Francisco Estuary Institute (SFEI) and Regional Monitoring Program (RMP). The goal is to identify pollutants that may pass through the wastewater facility and into the Bay, ideally before they result in ecological problems.

Additional details on identification of specific pollutants can be found in Section "Pollutants of Concern Discussion".

¹ <http://www.sanjoseca.gov/regulatoryreports>

Identification of Tasks to Reduce Sources of Pollutants

Monitoring

Sample results from influent and effluent monitoring and collection system sampling are the first indication that a pollutant is present and the extent to which the treatment process can adequately treat it. Monitoring can also provide some clues that indicate pollutant sources and in-turn likely tasks to reduce it at the source.

Regional Collaboration

Pollutants of concern to the SJ-SC RWF are common to many wastewater treatment agencies. The SJ-SC RWF is a founding member and one of five principal members of the Bay Area Clean Water Agencies (BACWA). The facility also participates in leadership roles with the RMP. Ideas for reducing pollutants are often generated by collaborating with other facilities through those venues. Feasibility of specific pollutant reduction efforts in the SJ-SC RWF service area are determined by surveying residents, commercial and industrial businesses, hospitals, government agencies, and retail stores, as appropriate.

BMPs

Very often, industry guidelines in the form of BMPs have already been generated by industrial trade groups or agencies under the EPA. Local collaboration through Bay Area Pollution Prevention Group (BAPPG - a BACWA committee) develops and/or vets BMPs to determine those best suited for Bay Area needs.

Outreach

Outreach to business leaders and members of the public usually inform them of practices that reduce pollutants at the source. BMPs and guidelines are usually developed or refined by reviewing and testing them at the source of the pollutant.

Additional details on specific tasks for pollutants can be found in Section "Pollutants of Concern Discussion".

Outreach to employees

Many SJ-SC RWF employees are also residents in the area and receive public outreach messages related to pollution prevention. In addition, pesticides are a primary pollutant of concern that come from residents and have the potential for environmental release or operational upset at the SJ-SC RWF. Therefore, the City provides pesticide training to employees. In 2024, 200 City staff were trained on the City's Integrated Pest Management (IPM) policy, standard operating procedures (SOPs), and BMPs during the Annual Worker Safety Training and special team-specific outreach training sessions, representing 100% coverage for applicable employees. The City updated the IPM SOP in June 2023 to reflect current practices of pesticide toxicity control consistent with the City's Municipal Regional Stormwater NPDES permit (Figure 4).

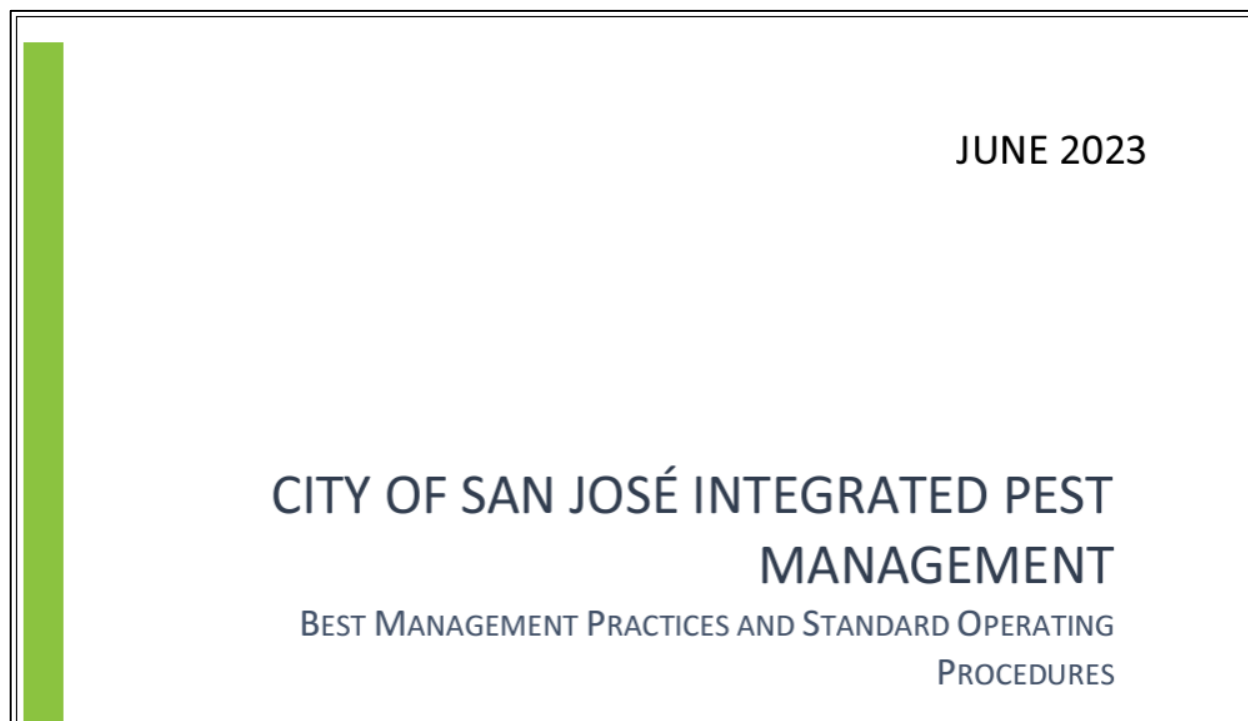


FIGURE 4. SCREENSHOT FROM FIRST PAGE OF THE CITY'S IPM SOP

Additional details and information on this training and outreach can be found in the "Pollutants of Concern Discussion" section of this report.

Public outreach

The City participates in various strategies and activities to educate and encourage general pollution prevention behavior.

Permanent HHW Facilities

Santa Clara County has two permanent household hazardous waste (HHW) facilities: one facility in San Martin and the other in San José. On May 27, 2021, the City signed another cooperative agreement with the County of Santa Clara to continue funding and participating in the Countywide HHW Program for a three-year term from July 1, 2021, through June 30, 2024. The County established a Countywide AB939 HHW Fee of \$2.60 per ton of any waste disposed to landfill or incinerated within the County to fund HHW operations.



FIGURE 5. SJ EIC, LOCATION OF ONE OF SANTA CLARA'S HHW FACILITIES

Santa Clara County residents may make no-cost appointments at www.HHW.org or by calling (408) 299-7300 to drop off HHW on select Wednesdays, Thursdays, Fridays, and Saturdays at San José Environmental Innovation Center (SJ EIC; Figure 5) located at 1608 Las Plumas Ave, San José, and monthly at the San Martin HHW Facility. Drop-off is free for residents and proof of residency is required. In addition, Very Small Quantity Generators may utilize the HHW facility for a competitive rate. Accepted items include paints, polishes, automotive fluids, poisons, pesticides, solvents, household cleaners, batteries, propane and helium tanks, smoke detectors, and more. Residents may also drop off most hazardous wastes at approved retail take-back locations, a list of which is on the County's HHW website.

The Santa Clara County HHW Program served 44,609 residents, 22,407 of which were San José residents, in FY 23-24. The number of collection events during this fiscal year was 194, with 184 of them held at the two permanent facilities and 10 at temporary sites. The program was able to serve 310 small business drop-offs, including local governments, Goodwill Industries, Hope Services, and The Salvation Army. For more information on hazardous waste drop-off sites in Santa Clara County, residents and Very Small Quantity Generators can visit www.HHW.org or call 408-299-7300. Appointments are required for drop-off events.

BeautifySJ, Junk Pickup, and RAPID cleanup team



FIGURE 6. BEAUTIFYSJ CLEANUP

The Neighborhood Beautification Days (NBD) were first implemented in 2018, along with the residential Junk Pickup programs, to reduce illegal dumping throughout the City and replace the previous Neighborhood Cleanup (NCU) program. The NBD Program transitioned to BeautifySJ during FY 18/19. The program funds neighborhood dumpster days throughout the City of San José with a focus on areas most impacted by illegal dumping. BeautifySJ cleanups are coordinated with Council Districts, neighborhood groups, and associations to encourage residents to dispose of items like furniture, mattresses, tires, carpets, appliances, and packing material appropriately.

TABLE 3. FY 2023-2024 BEAUTIFYSJ CLEANUPS SUMMARY

	Events hosted	Trash collected (tons)	Tons recycled
July 2023	6	43.54	130.9
August 2023	13	155.45	249.6
September 2023	14	88.76	144.32
October 2023	22	193.2	154.71
November 2023	10	61.02	93.94
December 2023	7	75.72	114.98
January 2024	6	62.16	94.66
February 2024	8	114.64	173.96
March 2024	17	175.75	133.05
April 2024	18	192.2	145.49
May 2024	17	164.78	122.74
June 2024	14	129.72	99.8
Total:	152	1461	1658.15

Hazardous materials and pharmaceuticals are not accepted at BeautifySJ Dumpster Day events; however, residents are educated about the County-wide HHW program



FIGURE 7. JUNK PICKUP PROGRAM

where appointments are made for disposal of hazardous materials by calling (408) 299-7300 or visiting www.HHW.org.

ESD offers residents unlimited no-cost curbside Junk Pickups to encourage residents to legally dispose of large items. ESD conducts a comprehensive Junk Pickup education campaign in English, Spanish, and Vietnamese. It is consistently the highest visited

City web page. The most frequently collected items include mattresses/box springs, sofas, and miscellaneous furniture. Large appliances, such as refrigerators, and electronic waste, such as TVs, are also collected. In FY 23-24, a total of 8,523 tons of materials were collected, recycled, and/or properly disposed of through the Junk Pickup program.

Another effort aimed at preventing illegal dumping and improper disposal is the City's Removing and Preventing Illegal Dumping (RAPID) team, which cleans up illegal dumping such as furniture, mattresses, e-waste, appliances, tires, and hazardous waste from city roadway shoulders, park-strips, trails, and sidewalks. Within the 2023-2024 fiscal year, RAPID cleaned approximately 27,380 illegal dump sites and collected approximately 4,775 tons of debris, including 109 gallons of human biological waste (Table 4). These materials could otherwise be disposed of improperly or find their way into storm drains or waterways.

TABLE 4. SELECT ITEMS COLLECTED BY RAPID TEAM IN FY 23-24

Item	Quantity collected
Tires	1,842
Refrigerators	623
Mattresses	4,873
TVs	836
Paint	388 gal
Human biological waste	109 gal

Other Education and Outreach

Youth Education

Outreach to school-age children is implemented through [Santa Clara Valley Urban Runoff Pollution Prevention Program](https://scvurppp.org/)² (SCVURPPP). SCVURPPP partners with the local watershed education group, ZunZun. ZunZun offers bilingual presentations about keeping

² <https://scvurppp.org/>

our ocean, rivers, and streams clean and healthy. Teaching the importance of common water pathways, such as household drains, encourages early engagement in water stewardship. This year, ZunZun provided thirty-two bilingual musical assemblies to local elementary schools. Assemblies, programs, and activities to promote environmental stewardship were also available for both in-person and virtual audiences through the Watershed Watchers program at the Environmental Education Center at the Don Edwards San Francisco Bay Wildlife Refuge in Alviso.

City staff also presented to more than 20 students from Evergreen Valley College in FY 23-24. These presentations taught students about IPM and P2 while training them on the City's Barn Owl nest box monitoring protocols and procedures.

Community Events and In-Person Outreach



FIGURE 8. CITY STAFF PROMOTE P2 MESSAGING AT VIVA CALLE SJ

City staff attended and hosted events throughout the RWF Service Area to present P2 messaging directly to the public. These P2 messages focused on general outreach and education about the RWF and wastewater, proper medicine disposal, hazardous waste disposal, impacts of FOG, flea and tick treatment alternatives, and other water quality concerns. City staff attending community events are often from multiple teams in the Environmental Services Department (ESD), including the Communications Division, Wastewater

Compliance, Integrated Waste Management, Stormwater Management, and others to cross-promote messaging and answer questions from residents relating to all the services offered by ESD (Figure 8). City staff are committed to promoting trilingual (English, Spanish, Vietnamese) P2 messaging.

At the Lunar New Year Festival in February, City staff spoke with 189 members of San José's Vietnamese-speaking community. In April, City staff engaged approximately 400 attendees at the Earth Day event at San José State University (SJSU). In August, City staff spoke with over 330 attendees at Silicon Valley Pride event. In September, City staff engaged 255 attendees at Viva Calle and 315 attendees at the Bark in the Park event. City staff also tabled at El Grito event and spoke with 142 members of San José's Spanish-speaking community. In October, City staff interacted with 157 attendees at the Story Road Night Market (Figure 9). In December, City staff attended Santa Visits Alviso event and engaged an estimated 450 attendees at Alviso Youth Center.



FIGURE 9. CITY STAFF PROMOTE P2 MESSAGING AT THE STORY ROAD NIGHT MARKET

Sports campaign

The P2 team launched an innovative campaign in collaboration with the National Hockey League San José Sharks team throughout October (Figure 10). This initiative, aimed at promoting the safe disposal of medicine, featured the catchy slogan “Meds in the Bin, Win for the Bay”. The campaign featured dynamic in-stadium LED advertisements at multiple Sharks home games, enhancing visibility and engagement with the sports fans.

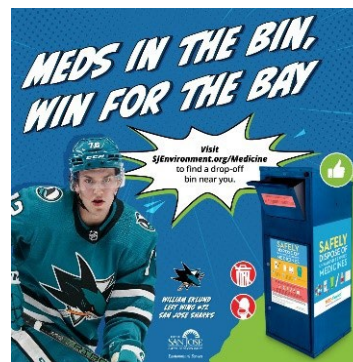


FIGURE 10. SHARKS P2 SEPTEMBER CAMPAIGN AD

A unique aspect of this partnership was the incorporation of “Player of the Game” graphics, which were shared at the end of each winning game, adorned with a prominent P2 graphic. This not only celebrated the players’ achievements but also seamlessly integrated the campaign’s message into the game-day experience.

In addition to the in-stadium exposure, the campaign utilized a variety of external outreach tactics. These included paid Google Display and YouTube ads, Spanish Uforia (Univision network) 30 second radio ads, strategically placed Facebook ads, digital newspaper ads on the Mercury News website, targeted movie theater ads, and visually striking bus shelter posters. All these advertisements were primarily targeted at Santa Clara County residents, ensuring maximum relevance and impact.

The Sharks campaign’s effectiveness in raising community awareness of responsible medication disposal is underscored by the significant increase in visits to www.SJEnvironment.org/Medicine during October (Figure 11). In 2023, two San José Sharks campaigns ran in September and October, while in 2024 only a single SJ Sharks campaign took place in October. When comparing October campaigns, there was nearly a 10% increase in website visits (4,207) from the previous year (3,842).

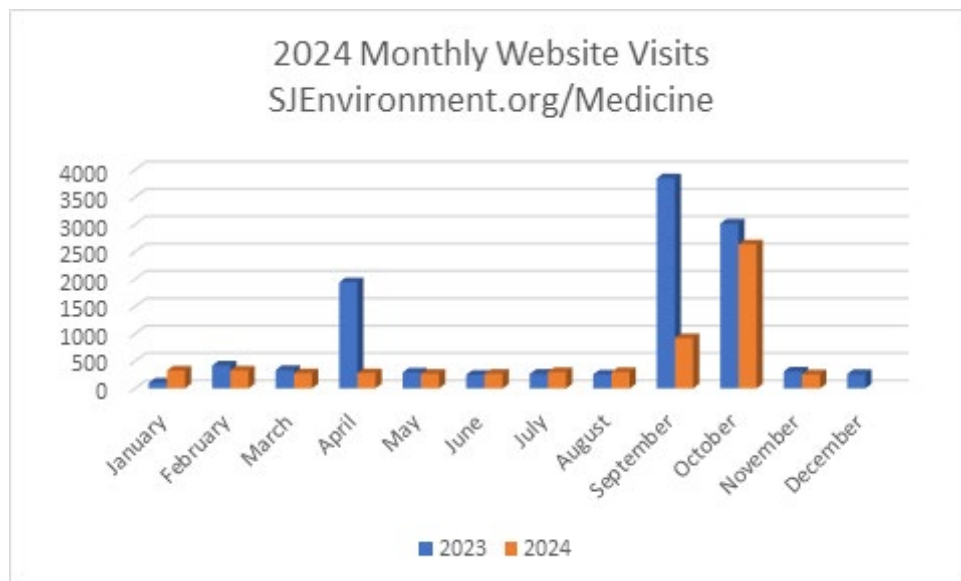


FIGURE 11. VISITS TO SJENVIRONMENT.ORG/MEDICINE IN 2024 AND PREVIOUS YEAR

Downtown Ice

ESD shared environmentally friendly messages at Downtown Ice, one of the South Bay's signature holiday events, located at the Circle of Palms Plaza in downtown San José (Figure 12). The seasonal ice rink is open every day throughout the winter holiday season. ESD sponsored five dashers on the 2024 ice rink, including two promoting P2 messaging: "spread holiday joy, not trash" and "ask your vet about switching to chewable flea and tick meds." While skating in and around 32 twinkling palm trees and enjoying the holiday festivities, visitors will . This annual event attracts over 35,000 skaters and 64,000 visitors across the Bay Area each year.



FIGURE 12. CITY OF SAN JOSÉ 2024 DOWNTOWN ICE MESSAGING

Social Media and Other Outreach

ESD maintains an active presence on multiple social media platforms: Facebook, Instagram, Twitter, YouTube, LinkedIn, and NextDoor. Social media platforms are used to highlight ESD programs and share program messaging, including P2, by creating social media ads, taking into consideration current developments, social media trends, and holidays/seasonal topics like Valentine's Day (Figure 13) or Halloween. Social media was a key method of promoting P2 messaging in 2024 as it allows for flexible, low-cost messaging to reach a wide audience. Ads are often targeted to specific audiences based on language-spoken and key demographics.

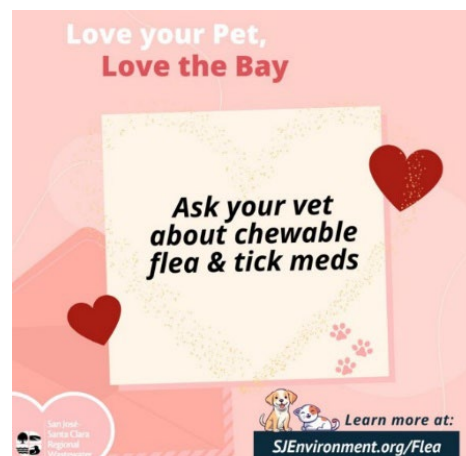


FIGURE 13. P2 SOCIAL MEDIA POST TIMED WITH VALENTINE'S DAY 2024

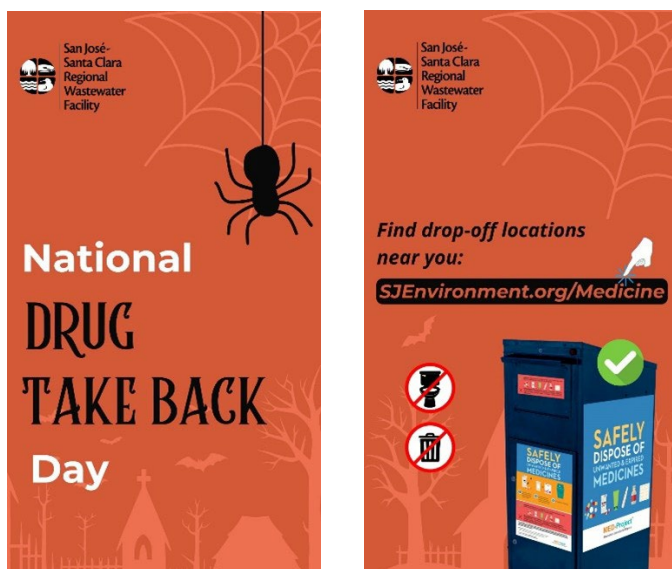


FIGURE 14. SHORT FORM VIDEO PROMOTING PROPER MEDICINES DISPOSAL POSTED ON ESD SOCIAL MEDIA PAGES

City staff are always looking to expand the reach of P2 messaging by capitalizing on current social media trends, like the rise of short form video content (Figure 14). Short form videos, such as those posted on Instagram Reels, often perform very well organically and are relatively inexpensive to make as they only require time and a free online graphic design tool to produce. ESD plans to continue expanding use of short form videos in 2025 and will continue to follow social media trends to find new tactics and techniques.

ESD's Communications Division works diligently to maintain a consistent presence on social media to relay relevant and timely messaging to followers. ESD made several social media posts promoting the "Love your pet, love the Bay, ask your vet about chewable flea and tick meds" message in the spring and International Dog Day. ESD also raised awareness about keeping wipes out of toilets during Pollution Prevention Week in September through social media posts. In addition, ESD published social media posts on Facebook, Instagram, and X for Pollution Prevention Week, National Drug Take Back Day, and World Toilet Day, reminding residents to properly dispose of unwanted or expired medicines and wipes. See Figure 15 for example social media posts.

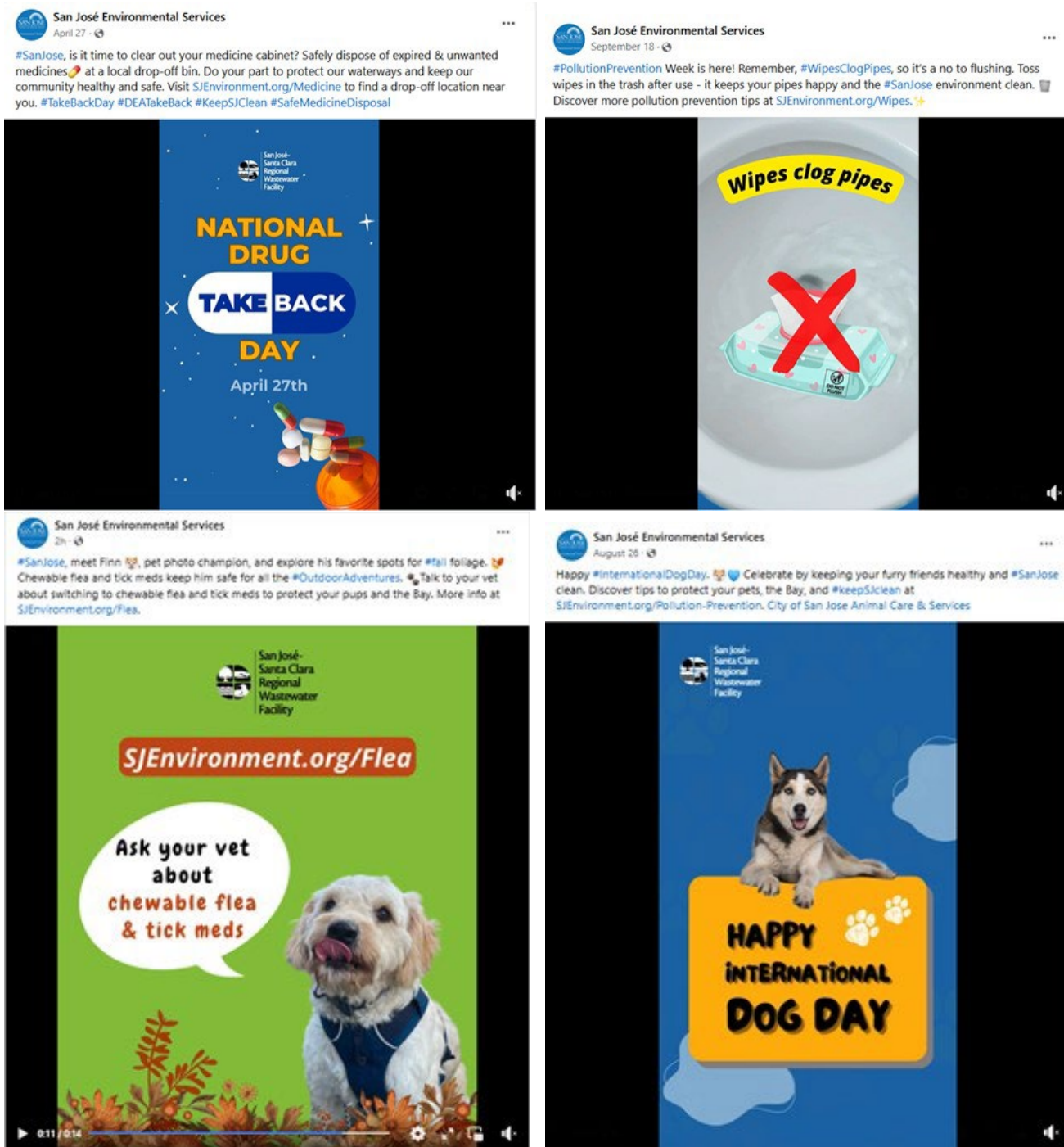


FIGURE 15. SOCIAL MEDIA POSTS OF P2 MESSAGES

City staff also utilized other forms of marketing besides social media, to promote P2 messaging. A 30-second ad promoting safe medicine disposal using the “Meds in the Bin, We all Win” campaign slogan ran at Alma and Santa Teresa Department of Motor Vehicles (DMV) locations in San José during September and October. Additionally, a “Switch to Chewable Flea and Tick Meds Today” ad ran at DMV locations in March, while a “Flushable or Unflushable? Can you guess?” ad was featured in December. Advertising at the DMV reaches a captive and diverse audience by utilizing the greater geographic range and demographics of those who visit the DMV locations. P2 trilingual ads also ran at laundromat locations to raise awareness about chewable flea and tick meds and the proper disposal of medication and wipes during March, September, and December. ESD also ran a Spanish mobile ad promoting safe medicine disposal through the local media vendor, Uforia, in September. In December, ESD partnered with both Uforia and Vien Thao, a local Vietnamese-language radio station, to promote proper wipe disposal. These ads were intended to reach San José’s large Vietnamese and Spanish populations. Total outreach and marketing statistics can be found below in Table 5.

Regional Partnerships

RMP

The RMP³ is a collaborative effort between the SFEI, the San Francisco Bay Regional Water Quality Control Board (Water Board), and the regulated discharger community. The Water Board formed RMP in 1993 to conduct water quality measurements and investigations in the Estuary. In addition to contributing financially to the RMP as required by the NPDES Permit for the SJ-SC RWF, the City is an active collaborator and participant in the RMP. City staff serve in leadership and voting member positions on the steering committee, technical review committee, and several workgroups, including those focused on Emerging Contaminants and Microplastics. The City also provides in-kind staff support for specific RMP pollutant studies, many aimed at understanding risks and sources of emerging contaminants and their pathways into the environment. A more comprehensive discussion of the City’s efforts on emerging contaminants is on page 26 in the Pollutants of Concern Discussion section.

Our Water, Our World

Our Water Our World is a regional IPM partnership between BACWA, SCVURPPP, and other pollution prevention agencies to promote less-toxic pest control. The partnership encourages less-toxic pest prevention and control methods by means of a point-of-sale [Our Water, Our World \(OWOW\)](http://ourwaterourworld.org/)⁴ promotional program. In FY 23-24, one OWOW store training was held in San José.

³ <https://www.sfei.org/programs/rmp>

⁴ <http://ourwaterourworld.org/>

BAPPG

San José participates in the BACWA group, [BAPPG](#)⁵ as well as BAPPG's Pesticides Workgroup. BAPPG member agencies work together to 1) Improve communication, 2) Coordinate regional pollution prevention projects, 3) Encourage and sponsor research and studies on topics related to pollution prevention, and 4) Develop regionally consistent public education messages and programs. BAPPG coordinates Bay Area-wide outreach including the [Baywise website](#)⁶; FOG media advertisements; and presentations at dental training events regarding mercury waste, to hospice and home care providers about proper pharmaceutical disposal, and to building code officials regarding disposal of demolition waste.

BAPPG submits a separate [annual report](#)⁷ that captures the regional collaborative's activities for the year. The 2024 key messages include:

1. Copper
 - a. Select only ASTM B813 water-flushable flux rather than petroleum-based flux (which is not flushable and increases pipe corrosion rates).
 - b. Incorporate additional BMPs during design, reaming, cleaning, and building commissioning that will reduce pipe corrosion rate.
 - c. 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.
2. FOG
 - a. Don't pour grease down the drain – collect and recycle used cooking oil.
3. Mercury and Silver
 - a. Dental amalgam and silver fixer wastes are hazardous and shall not be disposed in dental office sinks.
 - b. Incorporate BMPs for dental amalgam, silver fixer, and other hazardous wastes within a dental office.
 - c. The mandated use of BMPs and amalgam separators has significantly decreased the mercury loads into the sewer.
 - d. As of July 2017, the U.S. EPA is mandating the installation of amalgam separators and the use of several key BMPs that were originally developed and piloted in the Bay Area.
 - e. Provide support for Extended Producer Responsibility (EPR) programs and legislation that limits or bans the sale of products that contain toxic pollutants when safer and effective alternatives are available.
4. Pesticides
 - a. Promote integrated pest management and less-toxic products as alternatives to pesticides.
 - b. Seek alternatives to fipronil and imidacloprid, and other topical (collar and spot-on) pet treatments (conducted alternative analysis, completed talking points for veterinarians, and messages for the general public).

⁵ <https://bacwa.org/committees/bay-area-pollution-prevention-group/>

⁶ <https://baywise.org>

⁷ <https://bacwa.org/wp-content/uploads/2025/02/2024-BAPPG-Annual-Report.pdf>

- c. Work with pesticide regulators to improve their ability to address down-the-drain pathways to wastewater treatment plants during pesticide registration, support their monitoring efforts, and implement mitigation when needed.
- 5. Pharmaceuticals
 - a. No Drugs Down the Drain
 - b. Don't Rush to Flush – Meds in the Bin, We All Win!
 - c. Prevent Accidental Poisoning, Drug Abuse, and Water Pollution by disposing of medicines properly
- 6. Trash and Wipes
 - a. Wipes Clog Pipes!
 - b. Toilets Aren't Trashcans
 - c. Extended Producer Responsibility (EPR) for packaging
- 7. PFAS & Other Contaminants of Concern
 - a. Support legislation banning and/or restricting the use of PFAS substances in household products.
 - b. Support legislation addressing other emerging contaminants of concern.

Stormwater Pollution Prevention

Many pollutants addressed here are also of concern to regional stormwater pollution prevention efforts and are reported separately under the City of San José Stormwater Program or SCVURPPP. The Municipal Regional Stormwater Permit also includes requirements associated with public information and outreach.

Summary

Table 5 summarizes pollution prevention outreach tactics and effectiveness for FY 23-24.

TABLE 5. GENERAL POLLUTION PREVENTION OUTREACH

Program	Description / Status	Evaluation
Beautification Events	Events were hosted within City Council Districts citywide with a focus on areas most impacted by illegal dumping. Additionally, staff provide proactive graffiti removal and illegal dumping sweeps within each community hosting events.	Dumpster Day events in FY 23-24. - 1,461 tons of material collected - 1,658.15 tons of material recycled
Facilitate implementation of school environmental programs (SCVURPPP)	ZunZun interactive bilingual musical assembly program educates K-5 children on watersheds, water pathways, and urban runoff pollution prevention.	ZunZun outreach in FY 23-24: - 32 in-person assemblies, reaching 6,027 students from 16 schools in San José Don Edwards Wildlife Refuge activities in FY 23-24: - 3,271 participants

Program	Description / Status	Evaluation
	<p>The Watershed Watchers program at Don Edwards Wildlife Refuge in Alviso provides an interpretive program to educate children and youth about stormwater pollution prevention, watershed awareness, sustainable gardening, and litter prevention.</p>	
<p>Community Outreach and In-Person Events</p>	<p>City staff attends and hosts events throughout the RWF service area to promote P2 messaging.</p> <p>Events are typically attended by multiple teams to cross-promote P2 messaging to increase reach and provide comprehensive messaging to attendees.</p>	<p>Promoted P2 messaging to over 1,788 attendees at community events in 2024.</p> <ul style="list-style-type: none"> - Tet Festival: 189 - Earth Day: 400 - Silicon Valley Pride: 330 - Viva Calle SJ: 255 - Bark in the Park: 315 - El Grito: 142 - Story Road Night Market: 157 - Santa Visits Alviso: 450
<p>DownTown Ice</p>	<p>DownTown Ice is a signature month-long holiday event for the South Bay located in downtown San José. Environmentally friendly messages were shared with attendees on dashers on the ice rink.</p>	<p>This event usually attracts 35,000 skaters and 64,000 visitors across the Bay Area each year.</p>
<p>Sports advertisements</p>	<p>Following successful campaigns in previous years, outreach campaigns promoting the safe disposal of medicine and the switch to chewable flea medication continued in 2024 with the SJ Sharks (October 2024) team.</p> <p>Ads drove traffic to San José webpage Medicine Disposal page⁸ provide further resources and education on P2 topics in ads.</p>	<p>There was a total of 2,960,979 impressions for the 2024 San José Sharks campaign in October.</p> <ul style="list-style-type: none"> - The October campaign had a budget of \$27,600. The campaign garnered 4,207 web visits, a 9.5% increase compared to the 2023 campaign (3,842) published at the same time last year. Seasonal campaigns such as SJ Sharks “Meds in the Bin” and National Take-Back events continue to be effective messaging. The San José Sharks 2024 season opener in October likely contributed to increased local engagement, driving more traffic from fans and the community.

⁸ <https://www.sjenvironment.org/medicine>

Program	Description / Status	Evaluation
<p>Social Media and Other outreach</p>	<p>ESD maintained a consistent social media presence on many platforms. Posts are boosted to increase awareness or to coincide with specific events, like National Drug Take Back Day in April and October.</p> <p>Social media ads and posts with graphics or videos are created to promote P2 messaging. Other avenues like video ads at the DMV or laundromat locations, expand the reach of campaigns.</p> <p>Radio ads are an important way to increase the reach of P2 messaging to a wider target audience. ESD developed Vietnamese and Spanish language radio ads to be aired on local stations such as Vien Thao and Uforia, promoting safe medicine disposal to reach the target audience.</p>	<p>Social Media boosted (paid) posts:</p> <ul style="list-style-type: none"> - National Drug Take Back Day (April): 2,259 reach, 57 link clicks - National Drug Take Back Day (October): 2,300 reach, 70 link clicks <p>Digital Ads:</p> <ul style="list-style-type: none"> - Meds in Bin ads: <ul style="list-style-type: none"> ▪ English: 28,651 reach, 701 link clicks ▪ Spanish: 30,649 reach, 505 link clicks ▪ Vietnamese: 17,671 reach, 980 link clicks - Trilingual Chewable Flea and Tick Meds ads: 53,838 reach, 1,531 link clicks - Flushable or Unflushable Wipes ad: 25,140 reach, 1,129 link clicks <p>DMV ads run two times every hour at two DMV locations during specific months:</p> <ul style="list-style-type: none"> - "Switch to Flea and Tick meds" ad (March): approximately 740 runs total - "Meds in the Bin, We all Win" ad (September and October): 1,512 runs total - "Don't flush wipes" ad (December): 740 runs total <p>Laundromat Ads ran at ten locations:</p> <ul style="list-style-type: none"> - Trilingual Chewable Flea and Tick Med ad: 2,241 runs - Meds in Bin ads: <ul style="list-style-type: none"> ▪ Bilingual English-Spanish ad: 1,031 runs ▪ Bilingual English-Vietnamese: 687 runs - Flushable or Unflushable ads: <ul style="list-style-type: none"> ▪ English ad: 813 runs ▪ Spanish ad: 774 runs ▪ Vietnamese ad: 791 runs <p>Spanish mobile ad to promote safe medicine disposal campaign: 370,990 impressions</p>

Criteria to Measure P2 Program Task Effectiveness

Measuring actual effectiveness of P2 efforts is challenging. For some very low concentration pollutants, no single metric may work. Measures are listed below from most effective to least.

Influent and Biosolid Monitoring

The SJ-SC RWF, applying secondary BNR and gravity filtration processes, arguably produces the cleanest effluent in Northern California. Comparisons of influent and effluent pollutant concentrations are published in the facility's [Annual Self-Monitoring Reports](#)⁹ and [Industrial User Pretreatment reports](#)¹⁰. The treatment process is effective at keeping effluent pollutant levels low and unaffected by minor changes in influent concentrations. Influent monitoring focuses investigation on waste streams more likely to identify pollutants in need of pollution prevention measures.

Influent monitoring, performed at facility headworks, provides long-term trends to show if a given pollutant concentration is increasing or decreasing. Over the past two decades, considerable reductions in all metals and tributyltin have been measured in influent, for example. Some of these reductions have been the result of industrial source control and product bans on tributyltin and copper sulfate root control agents.

Most pollutants removed in primary, secondary/BNR, or filtration processes end up in biosolids sludge, so this is the other logical place for monitoring. Metals concentrations in biosolids have also dropped in recent decades, particularly for lead, silver, and zinc, as overall loads to the facility have decreased. However, biosolids concentrations cannot be compared to short-term influent and effluent results. The SJ-SC RWF employs a 3-week digestion process and 3-to-5-year lagoon stabilization and dewatering process for biosolids. Thus, biosolids sampled on any given day represent materials from wastewater that passed through the plant years before.

Inspections of commercial and industrial facilities

The number of inspections and percent of facilities in compliance with local discharge regulations is the next measure of P2 program effectiveness. Inspection compliance provides only an indication, and only for those pollutants discharged by the inspected business or industry.

Households utilizing HHW services and quantity of material collected

When pounds or gallons of material of hazardous substances, such as mercury in thermometers, unwanted pharmaceuticals, or kitchen grease, is collected, it is presumed

⁹ <https://www.sanjoseca.gov/your-government/departments-offices/environmental-services/regulatory-reports/-folder-76>

¹⁰ <https://www.sanjoseca.gov/your-government/departments-offices/environmental-services/regulatory-reports/-folder-73>

that this represents material that may have otherwise been disposed down a drain, toilet, or in the garbage. This presumption cannot be verified. On the other hand, HHW collection events highlight and advertise concerns about improper (e.g., toilet or kitchen sink) disposal of these materials.

Numbers of people at outreach events, BMP brochures distributed, radio and television ads

Outreach that communicates P2 messages can be vitally important for the overall pollution prevention effort. The number of people attending outreach events, including outreach to employees, indicates that people were exposed to the message. However, simply counting the number of messages that were broadcast gives a sense of program size, but tells very little about the effectiveness of the program. Whenever possible, the City tracks metrics such as impressions (the number of people exposed to digital ads) or visits (actual clicks on links) to web sites, so the baseline traffic can be compared to changes in number of visitors following a large outreach effort. See Table 5 for outreach and marketing statistics.

Pollutants of Concern Discussion

Mercury

Why selected

Mercury is a legacy pollutant for which TMDLs were developed and a Watershed Permit established limits. The Mercury Watershed Permit was first adopted in 2008. The permit was reissued in 2023 through Regional Board Order No. R2-2022-0038. The Mercury and PCBs Watershed Permit establishes mercury limits and pollution prevention triggers for the SJ-SC RWF.

Sources

Mercury is a legacy pollutant in the Guadalupe River watershed and in the Bay. In the mid-1800s, liquid mercury (quicksilver) was widely used in gold mining operations. The New Almaden Mine located in the South Bay was once the largest producer of mercury in North America that provided quicksilver for gold mines. However, the main identifiable source of mercury discharged to the sanitary sewer system today is from dental amalgam and dental practices. Lesser potential sources include old-style mercury thermometers and fluorescent light bulbs, assuming these items are broken and discharged to a toilet or drain.

In the past, dental procedures were the largest source of mercury to the SJ-SC RWF. More recent sampling shows residential sources are now the largest contributor. This is likely due to installation of amalgam separators at all dental practices that remove and replace amalgam restorations. The most recent sector loading study, completed in 2014, determined the percentage of mercury loads discharged to the SJ-SC RWF collection systems as 49% from residential, 38% from dental practices, 12% from other commercial sources, and 1% from industrial sources.

Reduction efforts and progress

Mercury is one of a small group of heavy elements that is only toxic in a biological setting. The SJ-SC RWF does a very good job removing this pollutant from wastewater down to part-per-trillion concentrations, but there is still room for reduction. In 2024, concentrations of mercury in wastewater facility effluent were far below the mercury concentration limits and triggers set in the Watershed Permit, as detailed in Table 6 below.

TABLE 6. MERCURY WATERSHED PERMIT LIMITS AND RESULTS.

	Annual Load (kg/yr)	Monthly Concentration (µg/L)	Weekly Concentration (µg/L)	Daily Concentration (µg/L)
<i>Average Effluent Limits</i>	0.800	0.025	0.027	NA
<i>Triggers for Advanced Secondary Plants</i>	NA	0.011	NA	0.021
<i>2024 Maximum Results</i>	0.032	0.00093	0.00093	0.00093

Dental Mercury Amalgam Program

Wastewater compliance by dental practices is monitored through the SJ-SC RWF Dental Amalgam Program. Implementation of dental permitting and amalgam separator inspections began in 2009. Dental permits are reissued on a five-year cycle. There are currently 787 permitted dental practices in the program. The program has an extensive discharger identification program, which includes several methods for identifying new dental practices. The Dental Amalgam Program issued 41 new permits to dentists in the Tributary area in 2024.

The Federal Dental Amalgam Rule was published in June 2017, and the City's existing Dental Amalgam Program was updated for consistency with the rule's regulations. The new rule went into effect July 14, 2017, for new dental dischargers and July 14, 2020 for existing dentists, and the updated Sewer Use Ordinance was adopted June 15, 2021. The Dental Amalgam Program is working with dentists to help them comply with new requirements.

TABLE 7. DENTAL AMALGAM PROGRAM PERMITS ISSUED BY YEAR

	2020	2021	2022	2023	
	829	807	798	790	
	18	12	22	19	41

Permit holders are inspected for compliance at least once per five-year permit cycle. Requirements include installation of an amalgam separator, implementation of dental amalgam BMPs, and annual report submission. Certifications of amalgam separator installation and BMP implementation have been received from 99% of dental practices. In 2024, oversight of dentists was primarily focused on outreach and dental annual reports were not required for the 2024 calendar year. Due to staffing turn-over, in-person dental inspections were temporarily halted in June of 2024 and are planned to resume in the first quarter of 2025. Dental Amalgam Program Annual Report Forms, BMPs, and amalgam separator certifications are available for download on the City of San José website¹.

Inspections have verified that amalgam separators were installed at 99% of practices. The remaining 1% represents newly identified dental facilities. No violations were identified or issued during inspections conducted from January through June 2024.

Permanent San José HHW facility

San José's permanent HHW facility began operations in September 2014. San José and several participating tributary area cities renewed three-year funding and participation agreements from July 1, 2021, through June 30, 2024, to participate in the County HHW Program, which serves residents and small businesses. The permanent facility provides pollution prevention outreach and collections year-round and in conjunction with holidays and special events.

The San José facility receives HHW from residential drop-off appointments most Thursdays, Fridays, and Saturdays throughout the year. Mercury containing waste items, like

fluorescent bulbs, thermostats, and thermometers, are an important part of the collected material and outreach efforts performed by the County and participating cities. The facility also provides drop-off appointments for Very Small Quantity Generators at a competitive fee according to quantity and material type. Table 8 details the current mercury prevention plan for the SJ-SC RWF.

TABLE 8. MERCURY PREVENTION PLAN

Program	Implementation & Timeline	Evaluation
Dental Amalgam Program Issue Dental Wastewater Discharge Permits to dental facilities.	Continue to track the following: Number of permits issued. Percent of practices with installed amalgam separators & following BMPs. Percent of offices inspected.	By the end of 2024, a total of 787 permits were active. 41 new permits issued to practices. 99% of practices certified for amalgam separators and are following Dental Amalgam BMPs. Office inspections were put on pause in June 2024. A total of 33 inspections were conducted from January to June 2024.
County of Santa Clara HHW Department of Consumer and Environmental Protection Agency, Household and Small Business Hazardous Waste program.	Continue support of the County Residential and Small Business Hazardous Waste Program. Contract arrangement with County sets the minimum level of service of at least four collection events per month. Amount of material collected over the year.	County hosted 194 permanent residential hazardous waste drop-off events. County program also served 310 small business drop-offs, including local governments, Goodwill Industries, Hope Services, and Salvation Army. In FY 23-24, the HHW program recycled: 180 pounds of mercury containing products (includes thermostats, thermometers, and other products), 74,454 pounds of fluorescent lights, and 172,367 pounds of household batteries.
Dental Practice BMPs maintained on San José web site: Dental Amalgam Program ¹¹ BAPPG approved amalgam separators ¹²		

Evaluation and effectiveness

A source control program in combination with wastewater treatment plant improvements resulted in dramatic reductions in metals loads discharged to the Bay since the 1970s (Figure 16).

¹¹ <http://www.sanjoseca.gov/dental>

¹² <https://www.sanjoseca.gov/home/showdocument?id=390>

The SJ-SC RWF continues to remove 98 to 99 percent of mercury from wastewater. In addition, total mercury load discharged to the sewer collection system continues to decrease (Figure 17). Most of the reduction is believed to be a result of changes in the dental industry.

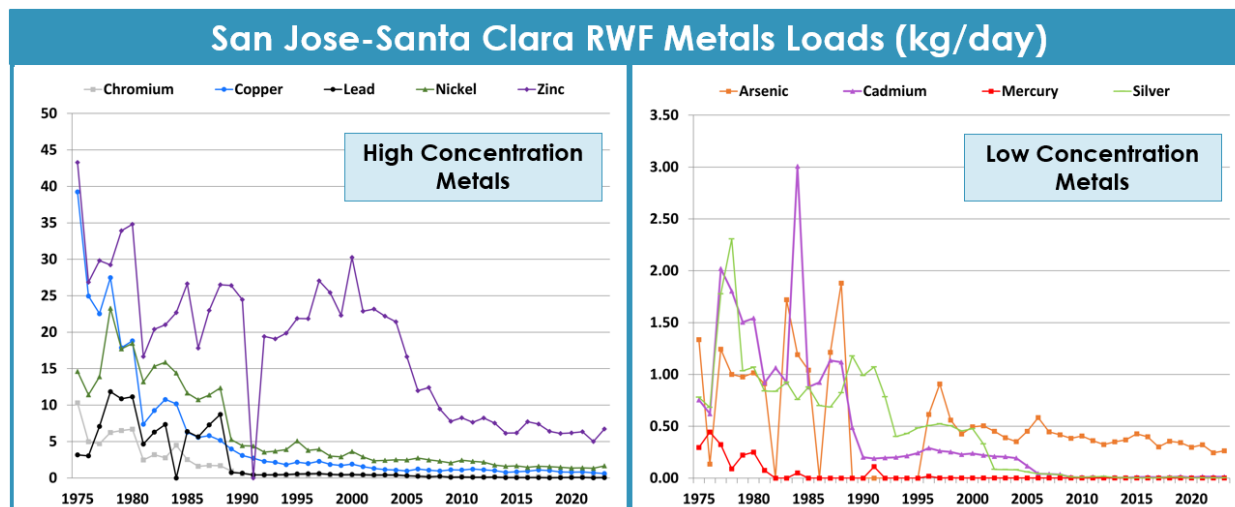


FIGURE 16. METALS LOADS (KG/DAY) FOR SJ-SC RWF

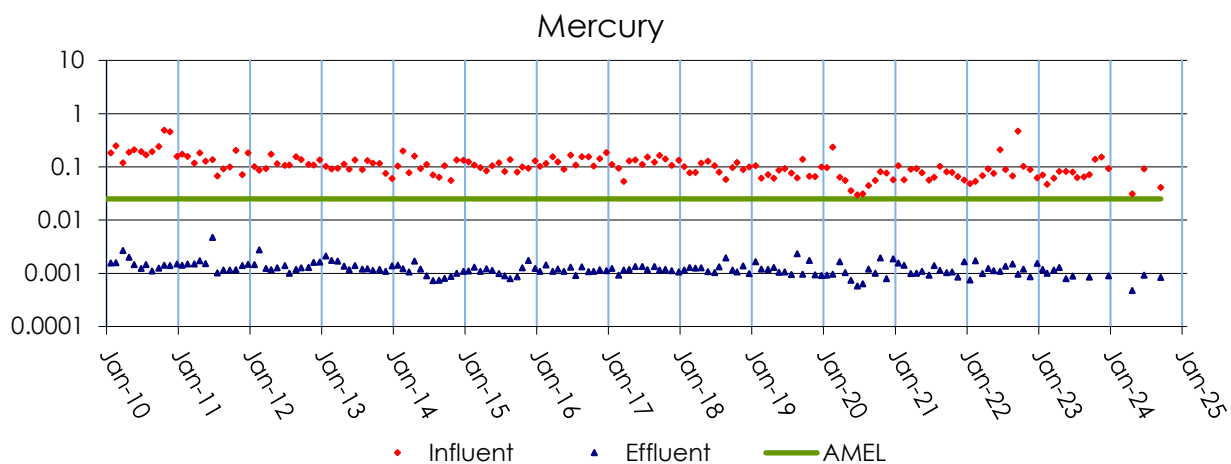


FIGURE 17. MERCURY REMOVAL PERFORMANCE 2010-2024

Polychlorinated Biphenyls (PCBs)

Why selected

PCBs are legacy pollutants for which TMDLs were developed and a Watershed Permit established limits. The Mercury Watershed Permit was first adopted in 2008, with PCBs added in 2011. The permit was reissued in 2023 through Regional Board Order No. R2-2022-0038. The Mercury and PCBs Watershed Permit establishes PCBs limits and pollution prevention triggers for the SJ-SC RWF.

Sources

PCBs belong to a broad family of man-made organic chemicals known as chlorinated hydrocarbons. PCBs were domestically manufactured from 1929 until manufacturing was banned in 1979. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. Due to their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications including:

- Electrical, heat transfer, and hydraulic equipment
- Plasticizers in paints, plastics, and rubber products
- Pigments, dyes, and carbonless copy paper
- Other [industrial applications](#)¹³

Reduction efforts and progress

No PCBs have been detected at industrial facilities for over a decade using detection Method 608.

The Pretreatment Program evaluates IUs every five years as part of the wastewater discharge permitting process and annually during compliance inspections. The permitting process requires IUs to disclose any Total Toxic Organics (TTOs) maintained onsite, including PCBs. The Pretreatment Program samples for TTOs semi-annually, including PCBs, if TTOs are known or suspected at an IU. The Pretreatment Program further requires any known or suspected IUs to either conduct analysis for TTOs or certify that a plan is in place to manage TTOs to prevent discharge to the sanitary sewer.

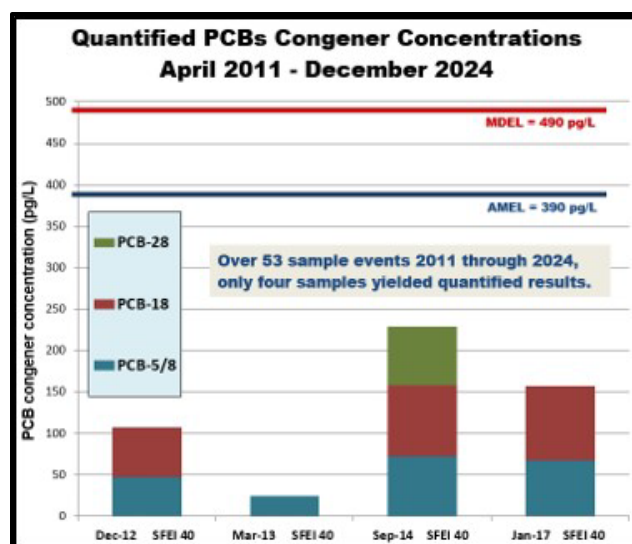


FIGURE 18. PCB DETECTIONS 2011-2024

Evaluation and effectiveness

PCBs are not detected in the SJ-SC RWF influent or effluent using standard detection methods (Method 608).

The SJ-SC RWF is also required to measure total PCBs by congener quarterly, using USEPA Proposed Method 1668c, for information only. Since April 2011, only four of 53 sampling events have quantified any PCBs congeners (Figure 18).

¹³ <https://www.epa.gov/pcbs/learn-about-polychlorinated-biphenyls-pcbs>

Copper

Why selected

Copper is a pollutant for which Basin Plan Amendments (BPAs) for the Bay have been established. A 2009 BPA replaced previous copper and nickel action plans with a Bay-wide Copper Management Strategy (CMS). This strategy removed the requirement that the SJ-SC RWF monitor copper and nickel in the Lower South Bay (LSB). The BPA also removed nickel as a pollutant of concern. The maximum daily and average monthly allowable concentrations of copper that may be discharged from this facility are 16 and 11 µg/L, respectively.

Sources

Until the 1990s, industries contributed a third of the total copper load arriving at the SJ-SC RWF. Between 1993 and 2004, industrial copper fell dramatically from its previous average daily load. The Sector Loading Study in 2014 confirmed that roughly 57% of copper in wastewater originated from residential sectors. Commercial businesses collectively discharge about 33% of the copper load, and industry is responsible for only 10%. Most of the copper load that persists in wastewater today comes from the slow corrosion of copper pipes in homes and businesses, but copper is also used as a pesticide in swimming pools, spas, and incorporated into fabrics.

Reduction efforts and progress

The current copper load to SJ-SC RWF is small and does not pose a threat to receiving waters given the effectiveness of copper removal at the SJ-SC RWF (98%). In the SJ-SC RWF service area, the main water wholesaler is the Santa Clara Valley Water District (SCVWD). SCVWD operates in accordance with EPA's Lead and Copper Rule (LCR) by adding orthophosphate inhibitor to control pipe corrosion. The SJ-SC RWF Source Control Team routinely contacts the Wastewater Compliance team if overall sanitary sewage copper concentrations appear to be rising unexpectedly. The Wastewater Compliance team can monitor this at the SJ-SC RWF and, if necessary, contact SCVWD.

SJ-SC RWF Pretreatment Program inspectors continue to inspect and monitor for high concentration copper discharges from metal finishers & printed circuit board manufacturers. Inspectors also distribute the BMP, "Guidelines for Industrial Wastewater Reuse" and "Guidelines for Efficient Water Use" as opportunities arise. The overall industrial copper loading in 2024 was 2.13 lbs/day which is close to values measured in 2020 to 2021 (Figure 19). As there were fewer copper violations by the industrial users during 2024, this resulted less loading discharge.

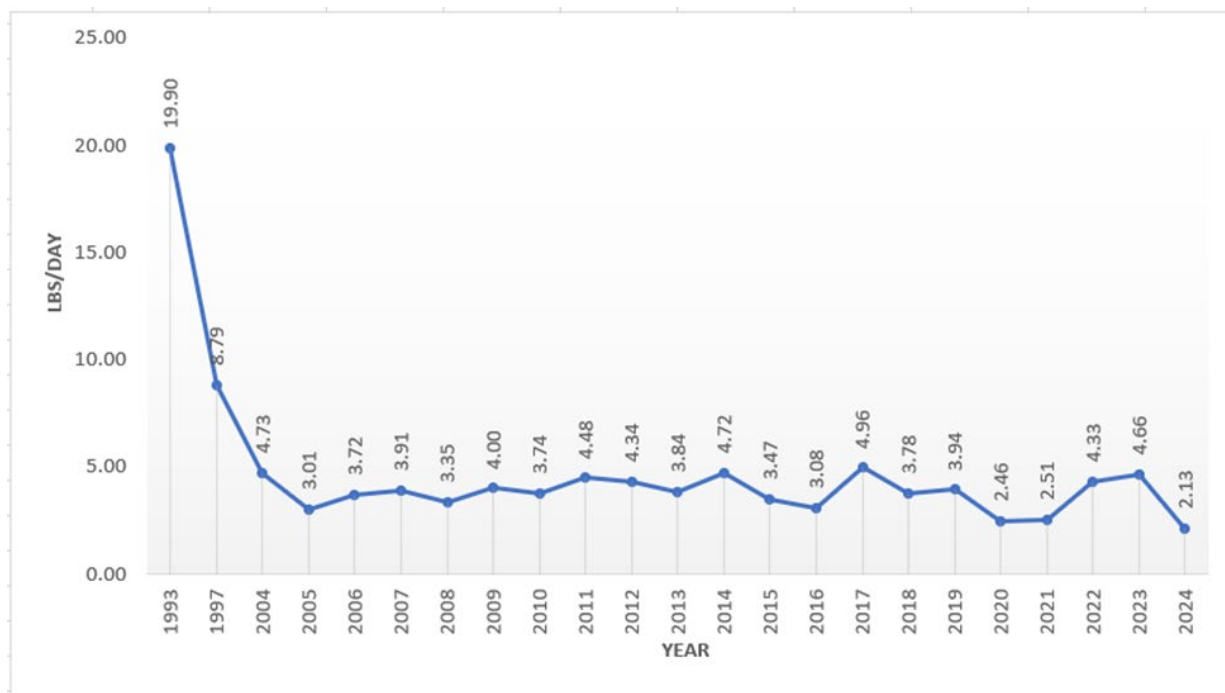


FIGURE 19. AVERAGE COPPER INDUSTRIAL LOADING PER WORKDAY

In addition, the City aligns with regional copper plumbing messaging and resources provided on the BAPPG [Baywise website](https://baywise.org)¹⁴.

Evaluation and effectiveness

SJ-SC RWF removes copper very well. Copper removal was enhanced in 1979, with the addition of the filtration process that removes particulate copper, and enhanced again in 1998 with the conversion of the secondary process to BNR. Today, the facility removes 98 percent of wastewater copper. Figure 20 shows copper removal performance from 2010-2024.

TABLE 9. COPPER REMOVAL PERFORMANCE (IN µG/L) 2022-2024

Year	Low	High	Average	Low	High	Average	
	94	133	112	1.23	4.63	2.68	98%
	33	102	67	1.14	3.11	1.75	
	69	119	91	1.02	2.52	1.48	

¹⁴ <https://baywise.org/business-resources/pollution-prevention-guidance-for-plumbers/>

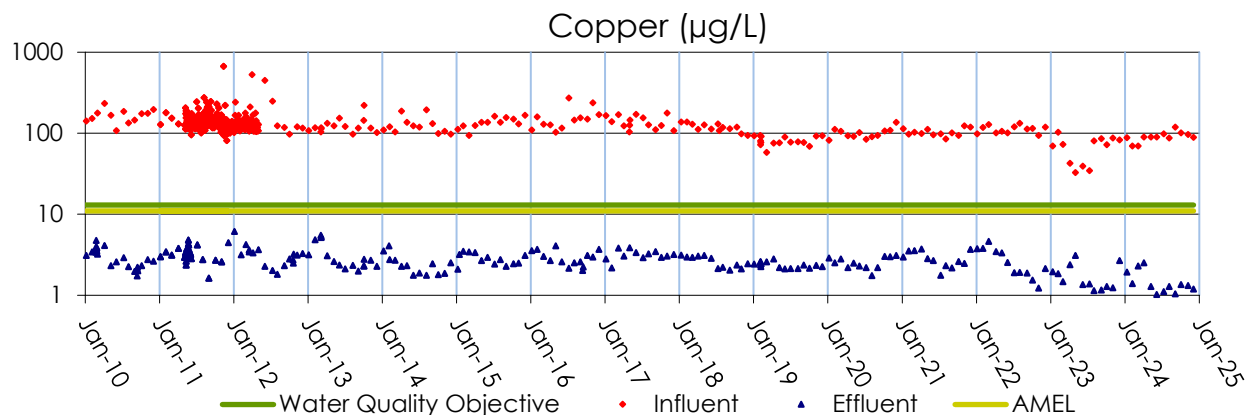


FIGURE 20. COPPER REMOVAL PERFORMANCE 2010-2024

Special provisions – Copper Action Plan

SJ-SC RWF Permit Provision VI.C.5.c. “Copper Action Plan” requires the SJ-SC RWF to implement a copper control program. Table 10 details the current copper action plan for the SJ-SC RWF.

TABLE 10. COPPER ACTION PLAN

1. Review potential sources of copper.
2. Implement Copper Control Program to reduce copper sources identified in Task 1. The plan shall consist, at a minimum, of the following elements:
 - a. Provide education and outreach to the public (e.g., focus on proper pool and spa maintenance and plumbers’ roles in reducing corrosion);
 - b. If corrosion is determined to be a significant copper source, work cooperatively with local water purveyors to reduce and control water corrosivity, as appropriate;
 - c. Educate plumbers, designers, and maintenance contractors for pools and spas to encourage BMPs that minimize copper discharges.

Table 11 details the current SJ-SC RWF copper prevention efforts.

TABLE 11. COPPER PREVENTION PLAN.

Message / Program	Implementation & Timeline	Evaluation
Copper Pipe Educate plumbers, designers, and contractors for pools, spas, HVAC systems, and general plumbing on BMPs to minimize copper pipe corrosion.	Maintain copper pipe factsheet. Baywise/BAPPG to communicate copper pipe corrosion messages to plumbing unions, contractors, building inspectors, and colleges.	Baywise/BAPPG maintained copper pipe fact sheet and has plans to update plumbing messages and copper source analysis in the future.
Industrial Waste Distribute BMPs to industrial metal finishers & printed circuit board manufacturers.	Distribution of Guidelines for Industrial Wastewater Reuse by City website.	Update and maintain Guidelines for Industrial Wastewater Reuse on City website.

Message / Program	Implementation & Timeline	Evaluation
Pools & Fountains Provide outreach to homeowners on pool and spa maintenance and plumbers' roles in reducing corrosion.	Track number of brochures distributed each year.	Eleven brochures were distributed in 2024.
SJ-SC RWF SJ-SC RWF influent and effluent copper.	Monitor copper in wastewater facility influent & effluent monthly.	Copper concentration in facility effluent decreased slightly to 1.75 µg/l.
Copper BMPs maintained on San José web site: Cooling Towers ¹⁵ Roof Runoff Factsheet ¹⁶ Guidelines for Industrial Water Reuse ¹⁷ Draining Pools and Spas brochure ¹⁸ Pools ¹⁹ Car Washing brochure ²⁰		

Cyanide

Why selected

Cyanide is a pollutant for which BPAs for the Bay have been established. In 2008, a Cyanide BPA and implementation strategy for San Francisco Bay was approved. The BPA established a cyanide chronic SSO of 2.9 µg/L (4-day average) for San Francisco Bay and a dilution credit of 3:1 (dilution of 2X) for the SJ-SC RWF. The facility's maximum daily and average monthly cyanide limits are 11 and 5.7 µg/L, respectively.

Sources

The facility disinfection process is the primary source of the small concentration of cyanide that is discharged. SJ-SC RWF, and many other wastewater treatment plants, produce a small amount of cyanide from chloramination disinfection, a standard disinfection byproduct. Cyanide is used in industrial electroplating operations, and this is the only potentially significant source in the service area.

Reduction efforts and progress

Inspection and surveillance efforts are an integrated part of all inspections and monitoring of industrial users that have cyanide in their processes or are potential cyanide contributors, as described in the Cyanide Action Plan. Cyanide concentrations in influent

¹⁵ <https://www.sanjoseca.gov/Home/ShowDocument?id=37053>

¹⁶ <https://www.sanjoseca.gov/home/showdocument?id=37097>

¹⁷ <https://www.sanjoseca.gov/Home/ShowDocument?id=37059>

¹⁸ <https://www.sanjoseca.gov/home/showdocument?id=1228>

¹⁹ <https://www.sanjoseca.gov/your-government/departments-offices/environmental-services/our-creeks-rivers-bay/preventing-water-pollution/pools>

²⁰ <https://www.sanjoseca.gov/home/showdocument?id=37099>

have been consistently below detection levels so additional reduction efforts do not appear to be needed at this time.

Cyanide influent concentration levels have typically remained at or below quantified levels of detection (3 µg/L) since November 2005. In 2024, influent values measured below quantified levels of detection, with exceptions of an influent concentration of 4.0 µg/L in March and 3.6 µg/L in August.

Table 12 details the current SJ-SC RWF efforts to reduce and prevent cyanide.

TABLE 12. CYANIDE PREVENTION PLAN.

Source	Message / Program	Implementation & Timeline	Evaluation
Industrial wastewater discharge	Inspect each potential contributor at least semiannually.	Review business licenses, internet listings, and referrals to update the list of potential cyanide contributors annually.	Inspected 71 facilities at least semiannually that potentially use cyanide.
	Surveillance and monitoring of IUs with cyanide processes.	Surveillance and monitoring of industrial discharges and facility influent to detect cyanide.	2 industrial discharge violations at 1 facility were identified and issued enforcement.
	Distribute educational materials to potential sources.	Cyanide fact sheet is posted on City website and distributed by inspectors as needed.	Update and maintain Cyanide fact sheet and distribute as needed.
SJ-SC RWF effluent	Monitor cyanide in wastewater facility effluent monthly.	SJ-SC RWF effluent below discharge permit limits: 5.7 µg/l AMEL, 13 µg/l MDEL.	During 2024, effluent concentrations were well below the reporting limit of 3 µg/l, with exception of an effluent concentration of 3.9 µg/l in January, 6.2 µg/l in April, and 3.2 µg/l in May.

Evaluation and effectiveness

The cyanide concentration increases from zero to about 0.9 µg/L as a byproduct of the SJ-SC RWF's disinfection process.

TABLE 13. CYANIDE INFLUENT AND EFFLUENT LEVELS (IN µG/L) 2022-2024.

Year	Influent			Effluent			Removal
	Low	High	Average	Low	High	Average	
2022	0.9(ND)	7.5	2.5	0.9(ND)	2.3(DNQ)	1.6	N/A
2023	1.5(ND)	6.8	2.2	1.5(ND)	3.1	1.8	N/A
2024	1.5(ND)	6.8	2.2	1.5(ND)	3.1	1.8	N/A

Special provisions – Cyanide action plan

SJ-SC RWF Permit Provision VI.C.5.d. "Cyanide Action Plan" requires implementation of a cyanide control program.

TABLE 14. CYANIDE ACTION PLAN

1. Review Potential Cyanide Sources.
2. Implement Cyanide Control Program. The Discharger shall continue to implement its program to minimize cyanide discharges consisting, at a minimum, of the following elements:
 - a. Inspect each potential contributor to assess the need to include that contributing source in the control program.
 - b. Inspect contributing sources included in the control program annually. Inspection elements may be based on USEPA guidance, such as Industrial User Inspection and Sampling Manual for POTWs (EPA 831- B-94-01).
 - c. Develop and distribute educational materials to contributing sources and potential contributing sources regarding the need to prevent cyanide discharges.
 - d. Prepare an emergency monitoring and response plan to be implemented if a significant cyanide discharge occurs. A "significant cyanide discharge" is occurring if the Plant's influent cyanide concentration exceeds 10 µg/L)

Pesticides

Why selected

Pesticides by design are toxic chemicals, the vast majority of which adversely affect human health and the environment around the world. Many are considered persistent organic pollutants (POPs), lingering for long periods in the environment while bioaccumulating throughout the food chain. In addition, pesticides that are resistant to biotic/abiotic breakdown can be transported via water, affecting people and wildlife far from where they are released²¹.

Sources

Pesticides can enter SJ-SC RWF influent due to indoor disposal of unused products and cleanup of application equipment via sinks and toilets. Most pesticide applications, however, occur outdoors. Therefore, contributions of pesticides to the Bay stem primarily from urban stormwater runoff and not from sanitary sewer sources. However, while urban stormwater runoff is the primary source, pesticides flowing through the sanitary sewer is still a significant pathway because of flea and tick treatments that rub off from pets, for example. For further discussion on pesticides in the sanitary sewer source, see *Fipronil and Imidacloprid* in the Emerging Contaminants section below.

²¹ <https://www.epa.gov/international-cooperation/persistent-organic-pollutants-global-issue-global-response>

Reduction efforts and progress

Most pesticide P2 efforts are implemented under the Municipal Regional Stormwater NPDES Permit (Stormwater Permit). Program BMPs for pesticide management include significant education and outreach efforts to residents, businesses, pest control professionals, and municipal staff to promote behavior changes relative to pesticide use and less toxic pest control methods. [Annual Stormwater Reports](#)²² are available online at the SCVURPPP website. You can also view San José's [Stormwater Management Annual Report](#)²³ online.

Outreach materials inform residents, businesses, and municipal employees about pesticide safety and reduction. These were developed and distributed through City, County, and Bay-wide pollution prevention programs like BAPPG, SCVURPPP, and other pollution prevention agencies. SCVURPPP leads the County-wide pesticide outreach effort through the Watershed Watch Campaign and the OWOW.

In FY 23-24, the Watershed Watch outreach effort included TV and radio ads, collateral and displays, as well as online digital media. From July 2023 through June 2024, Green Gardener and Pest Control messaging garnered 758,393 impressions through digital ads, 188,315 impressions through social media, and 196,587 listeners through local radio.

Table 15 details the current SJ-SC RWF efforts and progress to reduce and prevent pesticide pollution.



FIGURE 21. SCVURPPP OWOW OUTREACH COLLATERAL - CHOOSING LESS TOXIC PRODUCTS TO MANAGE PESTS

TABLE 15. PESTICIDES PREVENTION PLAN

Message / Program	Implementation & Timeline	Evaluation
Commercial		
Distribute to business audiences, "Hiring a Company that Can Prevent Pest Problems" residential fact sheet.	Distribute to business audiences, "Hiring a Company that Can Prevent Pest Problems" residential fact sheet.	Distribute to business audiences, "Hiring a Company that Can Prevent Pest Problems" residential fact sheet.
Residential – Home Use & Disposal		

²² <https://www.cleancreeks.org/158/Annual-Reports>

²³ <https://www.sanjoseca.gov/home/showpublisheddocument/114797/638630345922600000>

Message / Program	Implementation & Timeline	Evaluation
<p>Advertise means of safe pesticide disposal on the City's website and HHW program public education and outreach.</p>	<p>Advertise means of safe pesticide disposal on the City's website and HHW program public education and outreach.</p>	<p>Santa Clara County HHW Program, FY 23-24:</p> <ul style="list-style-type: none"> - Served 44,609 residents, including 22,407 San José residents. - Collected 152,450 pounds of poisonous liquids and 96,350 pounds of poisonous solids.
<p>Municipal- Pesticides Applied on City Property</p>		
<p>Training of City employees; contractors invited to attend training. Follow City IPM Policy, SOPs, and BMPs. Use less-toxic pest controls.</p>	<p>Hold regular training sessions on relevant IPM topics for all City employees that apply pesticides.</p> <p>The City provides annual training on the City's IPM policy and IPM techniques during the Annual Worker Safety training and additional training.</p>	<p>200 municipal staff were trained, 165 of which could handle or apply pesticides per their job description, on the City's IPM Policy via an in-person seminar. Of the 165 applicators trained, 66 of them applied pesticides to City sites. 100% of applicable employees were trained.</p> <p>Municipal staff received additional training on proactive management and pesticide application equipment calibration, gopher and ground squirrel management options, and chemical and non-chemical alternatives to weed control.</p> <p>Staff removed invasive weeds and plants using cultural and mechanical methods, line trimming, hand pulling, and other non-chemical strategies, including goats and sheep.</p> <p>The City utilized Barn owl nest boxes for small rodent population control in 13 parks, 2 community gardens, and at a public high school.</p>

Evaluation and effectiveness

All SJ-SC RWF effluent sample results for monitored pesticides were below detection limits using standard analytical methods. The facility occasionally monitors effluent using very low detection, non-standard methods. With the notable exceptions of fipronil (used for flea control) and imidacloprid (used for fleas, termites, and insects generally), the SJ-SC RWF reliably removes the small concentrations of pesticides in sanitary sewage.

FOG

Why selected

FOG is produced from food manufacturing as well as residential, commercial, industrial, and institutional food preparation. FOG clings to sewer pipes and causes clogs and sewer backups.

In 2022, the State Water Resources Control Board (SWRCB) issued Order No. 2022-0103-DWQ: Statewide Waste Discharge Requirements General Order for Sanitary Sewer

Systems (General Order), applicable to all California collection systems (with more than one mile of sewer), including the City of San José and the collection systems owned and operated by its neighboring tributary agencies. The General Order prohibited Sanitary Sewer Overflows (SSOs), detailed SSO reporting requirements, and reiterated the requirement to develop and implement a Sewer System Management Plan (SSMP) that included provisions for FOG control. The General Order allows flexibility for collection system agencies to build and implement an effective FOG Control Program that addresses the specific needs of their collection system.

Sources

FOG-laden wastewater is discharged from various residential, commercial, industrial, and institutional sources throughout the SJ-SC RWF service area. FOG is a pollutant of concern due to its impact on the sanitary sewer collection system.

Reduction efforts and progress

FOG source control efforts have been implemented in the commercial, industrial, and institutional sectors to capture and divert much of the FOG away from the collection system and the SJ-SC RWF.

The FOG section of the City's SSMP, which was updated in December 2023, describes seven elements of the City's FOG program.

TABLE 16. SSMP FOG PROGRAM ELEMENTS

a)	An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;
b)	A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area;
c)	The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;
d)	Requirements to install grease removal devices (such as traps or interceptors) design standards for the grease removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;
e)	Authority to inspect grease producing facilities, enforcement authorities, and whether the City has enough staff to inspect and enforce the FOG ordinance;
f)	An identification of sewer system sections subject to FOG blockages and establish a cleaning maintenance schedule for each section; and
g)	Development and implementation of source control measures, for all sources of FOG discharged to the sewer system, for each sewer system section identified in (f) above.

Within the City of San José, the Department of Transportation (DOT) sewer maintenance teams are responsible for maintaining the collection system and clearing sewer blockages. Some blockages in sewer lines may result in SSOs. Since December 2004, the City has been reporting all SSOs into a publicly accessible statewide electronic database

in accordance with applicable Water Board directives. The reports include the location, time, volume, and cause of the overflows, as well as the volume, if any, that was not recovered during the cleanup. A total of 30 SSOs were reported during 2024, marking a decrease from the 32 total SSOs reported in 2023 (Figure 22).

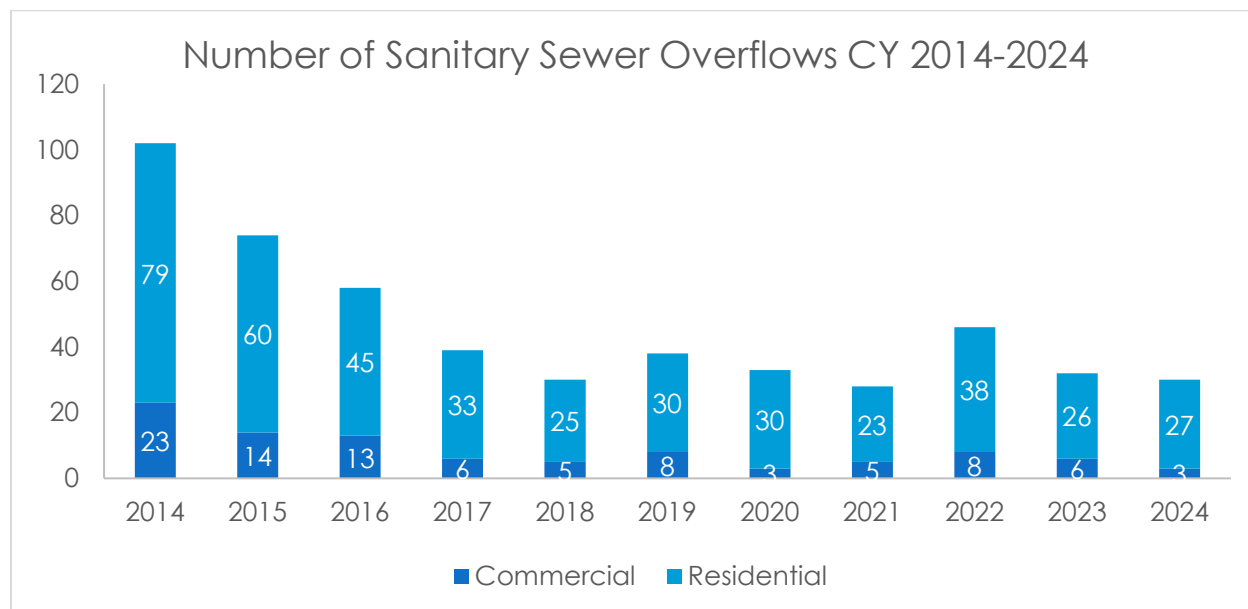


FIGURE 22. NUMBER OF SSOs IN SAN JOSÉ YEARS 2014-2024

Of the 30 SSOs, 27 were in Residential areas and 3 were in Commercial areas (Figure 22). DOT sewer maintenance crews identified 12 (40%) with FOG as the contributing cause: 11 residential and 1 commercial (Figure 22 and Figure 24).

When an overflow or significant blockage occurs in a predominantly residential area, and FOG is determined to be the primary cause, City Sewer crews distribute door hangers in the area (Figure 23), to educate residents about the impacts of grease in the sewer and to inform them of alternative disposal methods. Approximately 2,000 doorhangers were distributed by the City of San José in 2024. City staff also had the opportunity to share tips for proper disposal of FOG at tabling events.



FIGURE 23. EDUCATIONAL GREASE DOORHANGERS

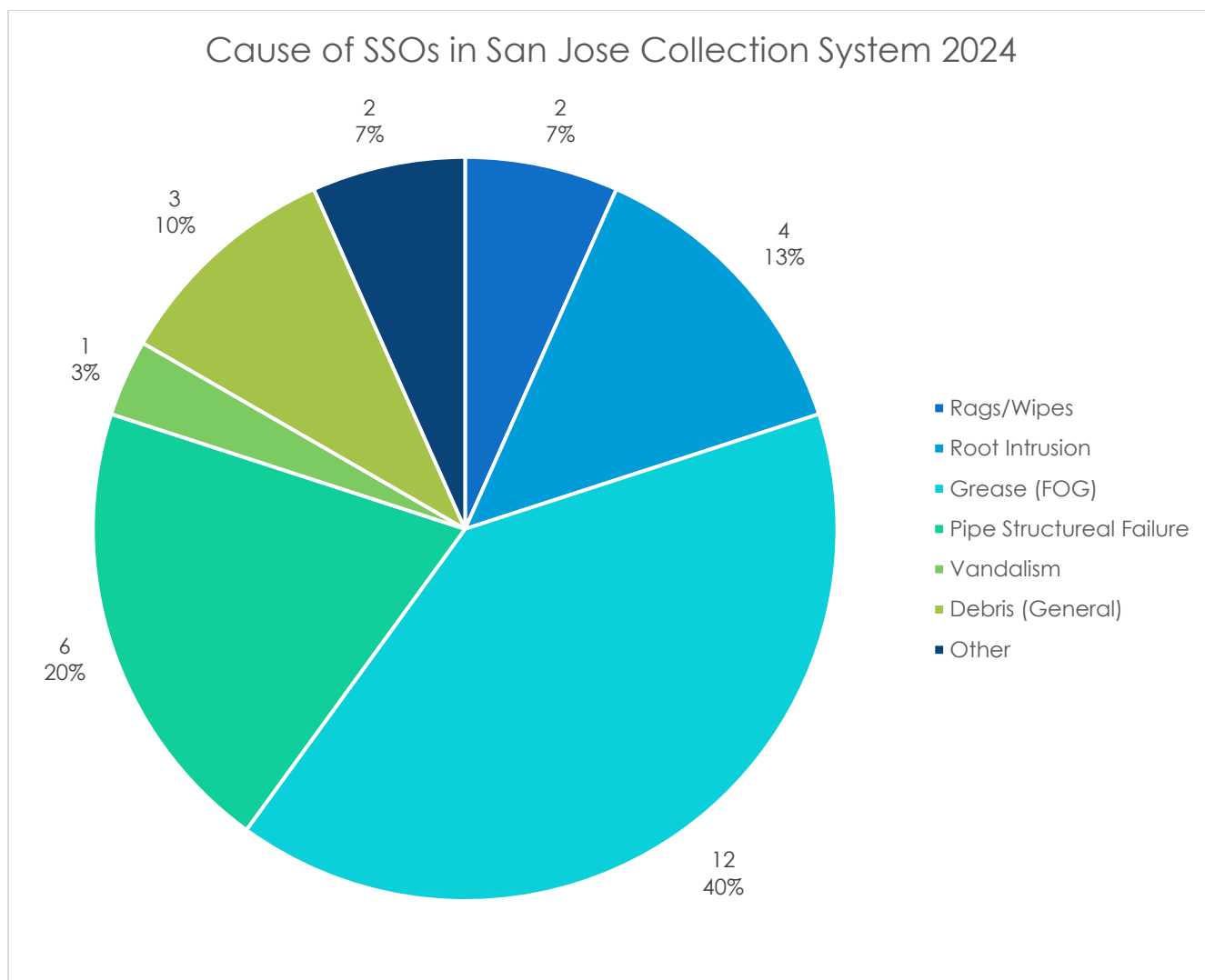


FIGURE 24. NUMBER AND CAUSE OF SSOs IN THE SAN JOSÉ COLLECTION SYSTEM IN 2024

Commercial FOG Control Measures

Plan Check Review

The City's Building Division performs grease control plan check reviews on all new Food Service Establishments (FSEs) as part of opening a business in San José. In 2024, the FOG inspection program determined that 14 FSEs had inadequate grease control measures installed on site and referred them to the PBCE grease control plan check process to determine proper grease control to install. In addition, in the City of Santa Clara, from July 1, 2023, through June 30, 2024, 76 grease control plan check reviews were completed.



FIGURE 25. #FOGWASTE MESSAGING ON CITY MAINTENANCE TRUCKS

FSE Inspections

The Commercial FSE Inspection Program in San José prioritizes FSE inspections based upon whether a site is grease-producing, has adequate pre-treatment, and the likelihood of an SSO to occur in that area. This approach increases inspection frequencies at locations most likely to cause or contribute to blockages and/or SSOs in the San José sanitary sewer collection system.



FIGURE 26. ENVIRONMENTAL INSPECTOR CONDUCTING FOG INSPECTION

FSEs are inspected by San José staff for compliance with applicable Municipal Codes and BMPs related to grease management and grease removal device maintenance. In FY 23-24, 1,403 FOG inspections were conducted at 919 FSEs in San José. FSEs in San José with GCDs installed onsite also receive separate GCD inspections. GCD inspections differ from FSE inspections in that they are wholly focused on the condition and functionality of the GCD. The inspector checks the structural integrity of the GCD and takes a core sample to assess the FOG and solids loading in the device (Figures 26 and). In FY 23-24, 652 GCDs were inspected (up from 63 in FY 22-23 due to the position being filled for the majority of the fiscal year).

Educating FSE owners, managers, and workers on ordinance requirements and grease controlling BMPs is a major component of the FSE Inspection Program. FOG-

related educational materials have been developed and translated into multiple languages to assist with education efforts. In FY 23-24, approximately 786 educational pieces were distributed during FSE inspections to help FSE operators achieve and maintain compliance.

Grease Investigations

Inspection staff from the FOG Inspection Program respond to reports of grease blockages in the sanitary sewer in San José. These grease investigations involve inspecting FSEs near affected sewer lines for compliance with code requirements for GCD installation and maintenance. Corrective actions are taken as needed to bring facilities into compliance and to minimize grease discharges to the collection system. In FY 23-24, the City performed three grease investigations involving 13 facilities, with 37 inspections conducted as part of these grease investigations. Thirteen (13) violations were documented, and three Official Warning Notices were issued. Education is also an important component of grease investigations, with 31 FOG-related educational materials distributed as part of the grease investigations. In addition, the City of Santa Clara performed 78 FOG inspections in FY 23-24. They also completed 18 investigations from five referrals of excessive grease in the sewer from wastewater field maintenance crews.



FIGURE 27. GREASE INTERCEPTOR SAMPLING

Prevent Sewer Overflows

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY
Environmental Services

Enroll your business today:

1. Visit swiftcomply.com/sanjose
2. Complete the short enrollment form and receive an email with your FOG Digital Compliance business profile link
3. Upload grease control device maintenance documents digitally

Enrollment is **free, easy and secure.** Participation is **encouraged and ensures compliance.** Enroll today.

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2. Hoàn thành mẫu đơn ngắn để xin ghi danh và sẽ nhận email có liên kết hồ sơ kinh doanh Tuần Thủ Kỳ Thuật Số FOG của quý vị
3. Hãy cập nhật hóa hồ sơ về việc bảo trì máy móc kiểm soát dầu mỡ

Việc ghi danh là **miễn phí, dễ dàng và bảo mật. Khuyến khích tham gia và đảm bảo hợp lệ.** Hãy ghi danh hôm nay.

Có câu hỏi? Hãy liên hệ nogrease@sanjoseca.gov
Muốn biết thêm chi tiết, xin liên lạc sanjoseca.gov/restaurants

FIGURE 28. ENGLISH, SPANISH, AND VIETNAMESE FOG COLLATERAL

FOG Digital Compliance System

The San José Municipal Code (SJMC) requires FSEs to regularly maintain their GCDs by hiring a State-licensed Inedible Kitchen Grease Hauler and/or self-cleaning their GCD. SJMC also requires FSEs to keep three (3) years of GCD maintenance records on-site and available for inspection. These records demonstrate that their GCD is being maintained and they provide the working status of the device. Proper working status is required to prevent FOG from entering the City's sanitary sewer system.

Records-related violations represent the majority of violations documented by FOG Inspectors. To reduce these violations, the City offers a voluntary online reporting system for GCD maintenance records (Figure 29). Records submitted online can be remotely reviewed to ensure compliance with FOG ordinances. FOG Inspectors conduct outreach tasks as part of FOG inspections to enroll FSEs in the digital compliance system. Upon request, the FOG program staff communicate with Inedible Kitchen Grease Haulers to answer questions about enrolling in the digital compliance system. As of the end of CY 2024, about 1,727 of the approximately 2,500 targeted FSEs have enrolled in the voluntary digital compliance system.



FIGURE 29. SAN JOSÉ'S DIGITAL COMPLIANCE SYSTEM

Evaluation and effectiveness

Table 17 details the current SJ-SC RWF efforts and progress to reduce and prevent FOG pollution.

TABLE 17. FOG SUMMARY

Message / Program	Implementation & Timeline	Evaluation
Commercial Food Preparation		
Implement FOG Food Service Facility inspections as required in SSMP.	Conduct FOG and GCD Inspections at FSEs in San José.	Conducted 1,403 FOG Inspections at 919 FSEs in FY 23-24 <ul style="list-style-type: none"> - 356 violations documented - 41 Official Warning Notices issued - 3 Administrative Citations Referrals (ACR) issued Conducted 652 GCD Inspections in FY 23-24
Distribute grease management information to inspected restaurants and FOG generators.	Educate food service owners/operators on FOG BMPs during inspections.	Distributed 786 educational pieces during FSE inspections in FY 23-24

Message / Program	Implementation & Timeline	Evaluation
Inspect FSEs in response to DOT reports of grease blockages, or unusual build-up of grease in sewer lines	Continue to respond to and investigate grease related overflows, blockages, and spills, as needed.	City of San José in FY 23-24 investigated 3 grease complaints involving 13 facilities: <ul style="list-style-type: none"> - 37 inspections conducted - 13 violations documented - 3 Official Warning Notices issued. - 0 ACR issued - 31 educational materials distributed during investigations City of Santa Clara in FY 23-24 conducted: <ul style="list-style-type: none"> - 78 FOG inspections - 18 grease investigations
Requirement to install GCDs (such as traps or interceptors) at Commercial, Industrial, and Institutional FSEs	Plan checks for new and remodeled food service facilities to GCDs.	City of San José in CY 2024 <ul style="list-style-type: none"> - Building Division review all GCD sizing as part of their overall Plan Check process for opening a FSE within San José. The Building Division no longer tracks the number of plan checks. The FOG program referred 14 sites to the plan check program for potentially inadequate or untreated FOG waste streams in 2024. City of Santa Clara in FY 23-24 <ul style="list-style-type: none"> - 76 FOG plan reviews completed.
Residential		
Educate residents about preventing grease blockages through BAPPG.	Participate in grease message delivery through BACWA and BAPPG.	Digital-only campaigns with proper FOG disposal messaging garnered over 1.5 million impressions and over 20 thousand ad-clicks by Bay Area residents directing to the Baywise FOG landing page ²⁴ .
Respond to grease related sewer overflow complaints (DOT).	Percent of reported blockages attributed to FOG. Notify residents via door hangers when grease-related overflows occur in residential areas.	City of San José in 2024 <ul style="list-style-type: none"> - 30 overflows in 2024, with 27 in residential areas and 3 in Commercial areas. 12 SSOs had FOG as a contributing factor, 11 in residential areas and 1 in a commercial area. - DOT distributed FOG door hangers in neighborhoods where residential grease blockages occurred. A total of at least 2,000 doorhangers were distributed in 2024.
FOG Art	Continue utilizing FOG art education campaign collateral materials.	Vactor trucks continue to display FOG Art messages.

²⁴ <https://baywise.org/learning-center/what-to-do-with-cooking-grease-hint-it-cant-go-down-the-drain/>

Emerging Contaminants

The City continues to engage in activities to increase public awareness regarding impact of emerging contaminants such as pharmaceuticals and other chemicals found in personal care products, cleaning products, and medications. In addition, the City participates in studies aimed at detecting and quantifying specific emerging contaminants in influent, effluent, and biosolids through the RMP and other partnerships.

The breadth and depth of emerging contaminant investigations and studies have grown steadily over recent years. This growth is the outcome of an increase in both regulatory and scientific attention on this broad class of contaminants. Recently, increased and steady funding for emerging contaminant investigations has enabled appropriate levels of response to the increased attention. Bay Area Wastewater Agencies, in partnership with our regulators at the San Francisco Bay Regional Water Quality Control Board (Water Board), formalized increased financial support and participation in emerging contaminant investigations. This was accomplished through a group permit that provides additional funding for RMP studies of emerging contaminants and through a June 2020 white paper that memorializes an agreement for San Francisco Bay publicly owned treatment works (POTWs) to participate in emerging contaminant studies.

The focus on emerging contaminants in the regulatory and scientific communities has also gone beyond simple agreements to participate in more studies. Beginning in late 2019, the RMP formed a small subcommittee to re-design the focus of the RMP's ambient Bay monitoring program that tracks the status and trends of pollutants. The primary goal of the redesign was to reduce efforts on legacy contaminants so that the program can shift resources towards integrating more work to characterize trends in emerging contaminants. City staff served a key role in this redesign subcommittee as the voting representative for the wastewater community.

Emerging Contaminant Investigations in 2024

Recent studies with the RMP focused on contaminants of emerging concern (CECs), including microplastics, bisphenols, pharmaceuticals, per- and poly-fluoroalkyl substances (PFAS), organophosphate esters (OPEs), ethoxylated surfactants, quaternary ammonium compounds (QACs), and sunscreens. In 2024, the SJ-SC RWF, through ongoing collaborations with the RMP, participated and provided effluent samples for plastic additives. SFEI also successfully published an RMP PFAS study that was reviewed and edited by City staff and included samples from SJ-SC RWF and San José permitted dischargers.

RMP Emerging Contaminants workgroup iteratively evaluates the strategy each year by discussing contaminants that have had significant changes to their tiered framework approach since 2018. The most recent update to the strategy, and the summary and discussion of priorities can be found in the *Contaminants of Emerging Concern in San Francisco Bay: A Strategy for Future Investigations 2024 Revision*²⁵. This 2024 revision

²⁵ https://www.sfei.org/sites/default/files/biblio/2025-01/CEC%20strategy%202024_highres.pdf

received extensive input from City staff and the wastewater community. It provides updates to the RMP CECs strategy and expands the previous framework from four to five risk-based tiers, building on the earlier version published in 2020. In 2023, two classes of emerging contaminants were reclassified from Moderate to become the only current high concern classes for the Bay: OPEs and PFAS. Emerging contaminants or classes that remain moderate concern include 6PPD-quinone, bisphenols, carbendazim, fipronil and degradates, imidacloprid, and microplastics. No CECs are currently in a Very High Concern tier. SJ-SC RWF focuses on fipronil, imidacloprid, microplastics, and PFAS as priority pollutants of concern for outreach messaging and special studies. The remainder are proactively tracked through participation in special studies and regional engagement.

Organophosphate esters

Organophosphate esters are synthetic chemicals generally used as flame retardants and plasticizers. They are common throughout the environment due to high global production and widespread use. In 2015, global production of OPEs was estimated at 680,000 metric tons.

The RMP began monitoring for OPEs starting in 2014. In 2022 Ila Shimabuku et. al, from SFEI²⁶, determined that levels of OPEs in the SF Bay are “generally consistent with reported concentrations in other estuarine and marine settings globally”. This study and a previous 2019 study by Sutton et al., SFEI²⁷, found some OPEs in the Bay at levels well above toxicity thresholds, leading the RMP to move OPEs from moderate to high concern within its tiered risk-based framework in 2023²⁸. Observed concentrations of chlorinated OPE, tris(1,3-dichloro-2-propyl) phosphate (TDCIPP), in the Bay exceeding the best available ecotoxicity threshold by over two orders of magnitude contributed to the increase in priority for OPEs. Previous studies have also detected OPEs in municipal wastewater effluent and urban stormwater runoff. OPEs are recognized as regrettable substitutes for polybrominated diphenyl ethers (PBDEs), and policies have reduced their use, however, these chemicals are still widely used in a variety of products. In September and October 2024, SJ-SC RWF provided effluent samples to the RMP to assess OPEs, BPAS, and additional plastic additives in wastewater effluent to better understand the pathways of these contaminants to the Bay. The results from this study will further inform and refine the prioritization of these contaminants in the RMP's tiered risk-based framework.

PFAS, including PFOS, PFOA, and long-chain carboxylates

The RMP has monitored PFAS in a variety of matrices for more than a decade with the SJ-SC RWF supporting this work through periodic review of monitoring approaches, work

²⁶ Shimabuku I, Chen D, Wu Y, Miller E, Sun J, Sutton R. Occurrence and risk assessment of organophosphate esters and bisphenols in San Francisco Bay, California, USA. *Science of the Total Environment* [Internet]. 2022; 813. <https://www.sciencedirect.com/science/article/abs/pii/S0048969721073630?via%3Dihub>

²⁷ Sutton, R., Chen, D., Sun, J., Greig, D. J., & Wu, Y. (2019). Characterization of brominated, chlorinated, and phosphate flame retardants in San Francisco Bay, an urban estuary. *Science of The Total Environment*, 652, 212–223. <https://doi.org/10.1016/j.scitotenv.2018.10.096>

²⁸ San Francisco Estuary Institute (SFEI). 2023. RMP Update 2023. SFEI Contribution #1148. San Francisco Estuary Institute, Richmond, CA. <https://www.sfei.org/rmp/update>

products, and providing wastewater samples when requested. PFAS are widely detected in San Francisco Bay matrices, including water and sediment, and many have little available toxicity data. Recent monitoring suggests decreases in perfluorooctane sulfonic acid (PFOS) concentrations, likely because of changing use patterns that include the nationwide phase-out in 2002. However, concentrations of some of the many other members of the PFAS family of compounds, such as perfluorooctanoic acid (PFOA), have remained relatively constant, albeit at substantially lower levels overall. The recategorization of PFAS to high concern by the RMP in 2023 was driven by SFEI monitoring of PFAS concentrations in Bay fish.

In November 2020, SJ-SC RWF provided the first of a series of influent, effluent, and biosolids samples for analysis in collaboration with the State and Regional Water Quality Control Boards, the San Francisco Estuary Institute, and other BACWA partners on a study characterizing wastewater-associated PFAS levels in the San Francisco Bay Region. From the phase 1 POTW samples, SFEI determined that concentrations of PFAS in wastewater effluent are higher than ambient water but below ecotoxicity thresholds. Phase 2 of the study focused on characterizing residential and industrial dischargers' contributions of PFAS to wastewater. SJ-SC RWF participated in phase 2 and provided samples from 8 San José dischargers in 2022, as well as a second set of influent and effluent samples. In October 2024, after extensive review and input from City staff and the wastewater community, SFEI published the study, *Residential Wastewater as a Major Source of Per- and Polyfluoroalkyl Substances to Municipal Wastewater*²⁹. The study found that the estimated majority of PFAS mass loadings came from residential customers. Industrial laundries were also found to discharge elevated PFAS levels compared to wastewater treatment plant influent.

In October 2023, EPA finalized a rule to require enhanced PFAS reporting to the Toxics Release Inventory, eliminating an exemption that allowed facilities to avoid reporting small concentrations of PFAS released to the environment. EPA added PFAS to its list of chemicals of special concern in the hope that enhanced reporting will provide a more complete picture of PFAS quantities from different waste streams. SJ-SC RWF staff continue to be proactive and, along with BACWA, the RMP, and other organizations, follow the development of EPA guidance to prepare for potential legislation that may follow.

Throughout 2024, SFEI shared messaging focused on PFAS with Bay water agencies. City staff attended the State of the San Francisco Estuary Conference, which returned to in-person capacities in 2024, where SFEI held a session on the ubiquitous presence and potential sources of PFAS in the Bay. In October 2024, SFEI presented updates regarding PFAS in the RMP Annual Meeting's Contaminants of Emerging Concern session.

²⁹ Lin D, Mendez M, Paterson K, Wong A, Yee D, Sutton R, Houtz E, Cousins M, Fono L. 2024. Residential Wastewater as a Major Source of Per- and Polyfluoroalkyl Substances to Municipal Wastewater. *ACS ES&T Water* No. 1146. <https://www.sfei.org/documents/residential-wastewater-major-source-and-polyfluoroalkyl-substances-municipal-wastewater>

Highlighted in the RMP's *The Pulse of the Bay 2024*³⁰, the USEPA agreed to provide a fifty percent match towards funding a \$5.2 million project proposed by SFEI targeting PFAS in the Bay. In the following years, the project aims to inform scientific work, identify priority PFAS product categories, and cooperate with the Department of Toxic Substances Control's Safer Consumer Products Program to increase community, manufacturer, and regulator awareness of the product-water pollution link. The City intends to continue to contribute to the monitoring of PFAS in stormwater, wastewater, and Bay ecosystems as outlined in the project workplan.

6PPD-quinone

N-(1,3-dimethylbutyl)-N'-phenyl-p-phenylenediamine (6PPD) is an anti-degradant present in tires that prevents the cracking of rubber from reactions with atmospheric gases. 6PPD-quinone, formed when 6PPD reacts with ozone, is relatively stable in water and possesses an acute toxicity lethal to salmonids at very low concentrations. Urban stormwater runoff is the primary pathway for 6PPD-quinone to the Bay. An RMP three-year pilot monitoring effort to examine the impacts of storm events on contaminants in stormwater indicates that 6PPD-quinone concentrations rise far above USEPA screening values during storms.

Based in part on RMP investigations of tire particles as a source of 6PPD to the Bay and its tributaries, in 2023, the California Department of Toxic Substances Control (DTSC) designated motor vehicle tires containing 6PPD as a Priority Product. This designation required "domestic and foreign manufacturers of motor vehicle tires that contain 6PPD and are placed into the stream of commerce in California" to submit a Priority Product Notification³¹. In March 2024, manufacturers were required to submit Preliminary Alternatives Analyses with further analyses of promising alternatives due in 2026.

Bisphenols

Bisphenols, a class of synthetic, mobile, endocrine-disrupting chemicals, are widely used in the production of plastics and resins. In 2019, the global production of bisphenol A, the most widely used and well-studied bisphenol, exceeded 8 million metric tons. The RMP began monitoring for bisphenols in 2017.

SFEI, through the RMP, coordinated the collection of effluent samples from six wastewater facilities in the SF Bay, including SJ-SC RWF, in August and September of 2020. In 2022, Ila Shimabuku et. al, from SFEI, determined that levels of bisphenols in the SF Bay are "generally consistent with reported concentrations in other estuarine and marine settings globally." In October 2022, Miguel Mendez et. al, SFEI, published a paper³² that recommended bisphenols remain in the "Moderate Concern" category in the RMP, as they may present a risk to Bay biota. The study also recommended continued monitoring

³⁰ https://www.sfei.org/sites/default/files/biblio/2024-11/ThePulse_2024_CEC%20101624%20high%20res.pdf

³¹ https://dtsc.ca.gov/scp/motor_vehicle_tires_containing_6ppd/

³² Mendez M, Miller E, Liu J, Chen D, Sutton R. Bisphenols in San Francisco Bay: Wastewater, Stormwater, and Margin Sediment Monitoring. Richmond, Ca: San Francisco Estuary Institute; 2022. Report No.: 1093. <https://www.sfei.org/documents/bisphenols-san-francisco-bay-wastewater-stormwater-and-margin-sediment-monitoring>

of wastewater and stormwater, as well as screening of Bay biota to help to understand the fate and potential impacts of bisphenols in the Bay from wastewater and stormwater. Previous studies have detected bisphenols in municipal wastewater effluent and urban stormwater runoff.

Since 2009, many states and the federal government have implemented targeted restrictions on the use of bisphenol A. However, these chemicals are still widely used in a variety of products. In addition, some manufacturers switched to bisphenol A alternatives such as bisphenol F and S, which are not as well studied as bisphenol A, however, "similarities in structure and functionality have indicated similar toxic effects³²." The 2024 study will assess the significance of the wastewater pathway and the associated risks of bisphenol A and its alternatives to the bay.

Carbendazim

Carbendazim is a methyl benzimidazole carbamate fungicide that has a greater presence in the Bay as a preservative in a variety of industries compared to application as a traditional pesticide. In addition to its usage as a broad-spectrum pesticide, carbendazim is also a degradate of the fungicides benomyl and thiophanate-methyl. It is highly toxic to aquatic life and stable in water and sediment, but current data does not suggest bioconcentration/bioaccumulation. However, traditional pesticide application as a source to the Bay is limited. As a preservative, carbendazim inhibits mold and mildew in paint, papermaking, leather, and construction products. Carbendazim leaches out from this broad ranch of products and enters urban runoff to eventually reach the Bay, where it has been observed in 98% of Bay water samples since 2017.

Carbendazim is the newest contaminant added to the RMP's Moderate Concern risk tier. The RMP suggests wastewater screening for carbendazim in the future. While the contaminant has been observed in stormwater, its presence in wastewater has yet to be examined. Compared to Bay water samples, these urban pathways tend to contain higher concentrations of contaminants and are important for early detection. As carbendazim has gained popularity as a preservative in numerous industries, properly characterizing pathways is foundational towards designing future water monitoring strategies and pollution prevention efforts.

Fipronil and Imidacloprid

Fipronil and imidacloprid are chemicals commonly found in flea and tick treatments. The California Department of Pesticide Regulation is currently reviewing the use of these chemicals over potential human health risks. After application of these treatments to pets and homes, many inadvertently enter the wastewater stream after washing of hands, pet beds, and other surfaces that come in contact with a pet. Unlike many other pesticides (see “Pesticides” section above), monitoring at SJ-SC RWF and other POTWs has demonstrated that these chemicals cannot be completely removed at wastewater treatment facilities. This means that these chemicals are discharged into our creeks, rivers, and San Francisco Bay, where they can accumulate at concentrations that are toxic to sensitive aquatic species. Through the City’s partnership with BAPPG, information, messaging, and collateral regarding the use of oral flea and tick preventatives began being developed in 2019.



FIGURE 30. SAN JOSÉ IPM INFOGRAPHIC



FIGURE 31. SAN JOSÉ FLEA AND TICK TREATMENT CAMPAIGN GRAPHIC

In 2024, the City continued to create its own digital and physical collateral with similar messaging focused on educating the public on impacts of topical flea and tick medications and awareness of alternatives, like oral (chewable) medications and Integrated Pest Management (IPM) techniques (Figure 30). For more information on flea and tick outreach to the public performed by the City, see *Other Education and Outreach* section above.

The SJ-SC RWF has been an active collaborator and contributor to BAPPG and the BAPPG Pesticides workgroup, providing input on outreach and comment letters as well as sharing messaging (Figure 31). Along with public outreach campaigns and the *Baywise*³³ website, BAPPG is also working directly with veterinarians through collaboration with the American Veterinary Medical Association (AVMA) and Veterinary Information Network (VIN). BAPPG and VIN distributed a survey to investigate the veterinarian community’s knowledge of fipronil and imidacloprid’s

³³ <https://baywise.org/business-resources/pollution-prevention-guidance-for-veterinarians/>

water quality concerns and the alternatives veterinarians recommend. BAPPG continues to track and provide input to pesticide regulators during pesticide registration through comment letters and direct engagement with regulators.

In 2019, information was added to the City's [Preventing Water Pollution](#)³⁴ page, and additional information can be found on Baywise's [Protect Your Pets, Your Family, and the Bay](#) page³⁵. In late 2020, the City developed a dedicated flea and tick section on the [ESD FAQ page](#)³⁶ to direct residents to answers to common questions. In 2024, due to a high volume of inquiries regarding the City's flea and tick messaging, a separate [Prevent Toxic Pesticides from Entering Our Waterways](#)³⁷ page was published on the City's ESD website to provide in-depth explanations and resources.

[Microplastics](#)

Microplastics are persistent and prevalent throughout SF Bay, and concentrations can build up over time. Previous microplastics monitoring generated significant public attention, which led to the creation of an RMP microplastics workgroup, first convened as a workshop in June 2016 and held annually since then. Microplastics workgroup meetings are hosted by the RMP and attended by various stakeholders, including San José. The SJ-SC RWF has been an active collaborator and contributor to the microplastic workgroup, providing input and advice on study design and scope and reviewing results and reports.

The RMP microplastics workgroup continues to direct research to support the Ocean Protection Council's (OPC) Statewide Microplastics Strategy³⁸, emphasizing the importance of determining potential impacts based on the chemistry of microplastic particles rather than further characterizing and counting particles.

Results from source and pathway tracking of microplastics to the environment indicate that a very large number of particles are transported via stormwater when compared to the numbers transported by wastewater. Most stormwater transported particles are tire wear fragments, which contain chemicals such as the aforementioned 6PPD-quinone.

Additional research has suggested that microplastic fibers may be of concern, as they are the most common type of microplastic observed in the Bay and consumed by wildlife. Wastewater may be a substantial contributor of microfibers to POTW receiving waters. The RMP is working to further investigate and understand the impact of these microplastics. In part to address requirements of the Statewide Microplastics Strategy, in 2023, the OPC began leading a study focused on microplastic transmission through POTWs and removal efficiencies of different wastewater treatment processes. The City

³⁴ <https://www.sanjoseca.gov/your-government/departments-offices/environmental-services/our-creeks-rivers-bay/preventing-water-pollution/>

³⁵ <https://baywise.org/learning-center/protect-your-pets-your-family-and-the-bay/>

³⁶ <https://www.sanjoseca.gov/your-government/departments-offices/environmental-services/frequently-asked-questions>

³⁷ <https://www.sanjoseca.gov/your-government/departments-offices/environmental-services/flea-and-tick-treatments>

³⁸ SB-1263 Ocean Protection Council: Statewide Microplastics Strategy.

https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB1263

will continue to contribute to regional efforts to monitor the flow of microplastics into the Bay.

Other emerging contaminants

Safe Medicine Disposal

The City participated in two types of activities that involve safe medicine disposal:

- Countywide HHW Program: For FY 23-24, 5,911 pounds of medications were collected through this program. Participation in the countywide HHW Program is described in greater detail in the previous Public outreach section.
- The City highlighted the environmental impact of safe medicine disposal on social media during National Drug Take Back Day in April 2024 and National Drug Take Back Day in October 2024. The results are described in greater detail in the previous Public Outreach section.

Santa Clara County's Product Stewardship Plan for unwanted medicine from households is operated by MED-Project, LLC and Inmar Rx Solutions, Inc. In FY 23-24, 98,459 pounds of pharmaceuticals were collected via kiosk drop-off sites and 200 pounds of pharmaceutical waste through mail-back return packages, as reported by MED-Project, LLC³⁹ and Inmar Rx Solutions, Inc.⁴⁰.



FIGURE 32. SAFE MEDICINE DISPOSAL ADVERTISING DEVELOPED BY THE CITY OF SAN JOSÉ

A total of 3,753 pounds of used home generated sharps were managed by the HHW Program. Similar to pharmaceuticals, MED-Project, LLC operates a Product Stewardship Plan for unwanted sharps from households in the County and collected a total of 140,343 pounds of sharps via kiosk drop-off sites and 977 pounds of sharps waste through mail-back return packages during the fifth year of program implementation⁴¹.

Wipes and Quaternary Ammonium Compounds (QACs)

While wipes have been an issue at wastewater facilities for some time now, the onset of the COVID-19 pandemic led to an increase in the number of wipes and wipes-related issues at many wastewater facilities nationwide. This was especially of concern early in

³⁹ MED-Project, LLC Med-Project Medicine Annual Report 2023.

<https://hww.santaclaracounty.gov/recycling-tips/medication-disposal>

⁴⁰ Inmar Rx Solutions Inmar Medicine Annual Report 2023. <https://hww.santaclaracounty.gov/recycling-tips/medication-disposal>

⁴¹ MED-Project, LLC Med-Project Sharps Annual Report 2023. <https://hww.santaclaracounty.gov/recycling-tips/sharps-disposal>

the pandemic when there was a national shortage of toilet paper, and there were concerns of more people turning to wipes as an alternative. SFEI considers QACs a possible concern due to limited data surrounding toxicity thresholds and stormwater pathways.

BAPPG continues to maintain information on wipes and their impacts at Baywise's *Toilets Aren't Trash Cans*⁴² page. BAPPG also developed and promoted a spring 2024 YouTube ad campaign to inform online audiences not to flush wipes or medicine. Additionally, BAPPG educates about the impacts of improper wipes disposal while speaking to Dental Assistant/Hygienist classes at various Bay Area colleges about best management practices related to mercury and silver. BAPPG continues to support the National Stewardship Action Council as they advocate for stricter guidelines on flushable wipes labeling and producer responsibility.

San José also did its own outreach, through social media posts and in-person outreach, urging residents not to flush their wipes, which can significantly impact the collection system performance by causing blockages. In 2024, San José continued to promote the “three P’s” (poop, pee, paper) message for flushing (Figure 33). Graphics were shared on digital platforms such as Nextdoor and Google Display, as well as videos at the DMV and laundromats, where people spend extended periods of time.



FIGURE 33. SCREENSHOT FROM SAN JOSÉ 3 P'S VIDEO

Similar to BAPPG, as the concern over flushed wipes grew, the RMP came to the conclusion that this is a unique opportunity for a study on QACs in wastewater and biosolids. QACs are present in a variety of disinfectant products that were used and over-used during the pandemic. Impacts of QACs may include disruption of wastewater treatment unit operations, proliferation of antibiotic resistance, formation of nitrosamine disinfection byproducts, and impacts on biota in surface waters⁴³. The SJ-SC RWF provided samples of influent, effluent, and biosolids for the third year of the study, of which a summary report is expected to be finalized in 2025. These samples will be compared to “baseline” data from a 2017 study of wastewater, stormwater, and sediment.

⁴² <https://baywise.org/learning-center/toilets-arent-trash-cans/>

⁴³ Arnold, William A.; Blum, Arlene; Branyan, Jennifer; and others. Quaternary Ammonium Compounds: A Chemical Class of Emerging Concern. *Environ. Sci. Technol.* 2023, 57, 7645–7665. Publication Date: May 9, 2023. <https://doi.org/10.1021/acs.est.2c08244>

Emerging Contaminant Investigations planned

Based on past studies conducted from 2008 – 2024 and increasing efforts from the RMP and other collaborators, the SJ-SC RWF plans to conduct or support several investigations focused on increasing our understanding of CECs in 2025. These planned studies include:

- Participation in regional PFAS studies led by SFEI that are informed by Phase 2 regional study results. This follow-up work has received EPA grant funding and will include additional wastewater characterization, as well as characterization of other sources and pathways of PFAS to the environment.
- Review and provide input to the QACs study summary report following approximately 4 years of QACs sampling at wastewater treatment plants.
- Participation in ongoing Microplastic Strategy Workshops through the RMP or other collaborators to develop a sound plan and prioritization of efforts to understand sources, possible control measures, and environmental impacts of microplastics.
- Additional monitoring of other CECs as identified and prioritized through the RMP Emerging Contaminant Workgroup.

TABLE 18. EMERGING CONTAMINANT PLAN

Message / Program	Implementation & Timeline	Evaluation
Flea and tick Switch from spot-on treatments to chewables or tablets.	Participate in BAPPG studies, planning, and outreach activities. Continue to develop and expand Regional and City campaigns and evaluate future enhancements to the campaigns. Maintain the online FAQ page for flea and tick treatment information, updating it as necessary.	San José was an active member of BAPPG and the BAPPG Pesticides Workgroup in 2024 and worked to approve and share outreach collateral for oral flea and tick alternatives. City staff published a separate, in-depth flea and tick treatment page on the ESD website to supplement online and in-person messaging.
Unwanted Medications Do not flush unwanted medicine down the toilet or sink or put in the trash. Bring in unwanted medicine for proper disposal. Support the collection of unwanted and expired pharmaceuticals.	Track pounds of medications collected by HHW and City initiatives. Continue to collect pharmaceuticals at industry managed MED-Project and Inmar Rx Solutions collection programs for the County.	FY 23-24: MED-Project and Inmar Rx Solutions collected 98,459 lbs of pharmaceuticals.
Santa Clara County HHW program	City agreement to participate in countywide HHW Program and for County to operate the	FY 23-24: County HHW facility served 44,609 residents, including 22,407 San José residents, and safely managed 2,765,195 pounds of hazardous waste:

Message / Program	Implementation & Timeline	Evaluation
The City continues to provide ongoing residential outreach to promote HHW program.	San José HHW facility continues through June 2024.	<ul style="list-style-type: none"> - 5,911 pounds of unwanted or expired medications collected. - 3,753 pounds of used sharps managed.
Wipes Wipes clog pipes	<p>Participate in BAPPG studies, planning, and outreach activities.</p> <p>Participate in SFEI-RMP studies of QACs.</p> <p>Develop messaging directing residents to dispose of wipes in the trash can.</p>	Worked with BAPPG and RMP on studies and messaging. Developed social media messaging instructing residents to properly dispose of wipes.
Investigation Work with SFEI-RMP to continue emerging contaminant studies.	Plan for future emerging contaminant studies on pharmaceuticals, microplastics, PFAS, non-targeted analytes, & other prioritized CECs.	<p>2024:</p> <p>Worked with RMP, SFEI, and national scientists to collect samples and/or provide input for studies on plastic additives.</p> <p>Participated in planning workshops for microplastics and PFAS studies.</p>

Attachment A – Acronyms

6PPD	6PPD-quinone, a compound found in tire wear particles
ACR	Administrative Citations Referral
AVMA	American Veterinary Medical Association
BACWA	Bay Area Clean Water Agencies
BAPPG	Bay Area Pollution Prevention Group
BeautifySJ	Name for San José's Blight reduction and encampment management program
BMPs	best management practices
BNR	biological nutrient removal
BPAs	Basin Plan Amendments
CECs	Contaminants of Emerging Concern
City	City of San José
CMS	copper management strategy
COVID-19 pandemic	SARS-Cov-2 virus pandemic
CWSP	Clean Water Summit Partners
DMV	Department of Motor Vehicles
DOT	Department of Transportation
DTSC	Department of Toxic Substances Control
ESD	Environmental Services Department
EPA	Environmental Protection Agency
FOG	fats, oils, and grease
FSEs	food service establishments
GCDs	grease control devices
General Order	Waste Discharge Requirements General Order for Sanitary Sewer Systems
HHW	household hazardous waste
IPM	Integrated Pest Management
IUs	permitted industrial users
LCR	Lead and Copper Rule
LSB	Lower South Bay
NBD	Neighborhood Beautification Days
NCU	Neighborhood Cleanup
NPDES	National Pollutant Discharge Elimination System
OPC	Ocean Protection Council
OPEs	organophosphate esters
OWOW	Our Water, Our World
P2	pollution prevention
P2 Report	Pollutant Minimization Report
PBDEs	Polybrominated diphenyl ethers
PCBs	polychlorinated biphenyls
PFAS	per- and polyfluoroalkyl substances

POPs	persistent organic pollutants
POTWs	Publicly Owned Treatment Works
QACs	quaternary ammonium compounds
quicksilver	Mercury
RAPID	Removing and Preventing Illegal Dumping team
RMP	Regional Monitoring Program
SCVURPPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SCVWD	Santa Clara Valley Water District
SFEI	San Francisco Estuary Institute
Sharks	San José Sharks professional ice hockey team
SJ EIC	San José Environmental Innovation Center
SJMC	San José Municipal Code
SJSU	San José State University
SJ-SC RWF	San José-Santa Clara Regional Wastewater Facility
SOP	standard operating procedure
SSMP	sewer system management plan
SSO	sanitary sewer overflow
Stormwater Permit	Municipal Regional Stormwater NPDES Permit
SWRCB	State Water Resources Control Board
TMDL	total maximum daily load
tributary agency	one of eight cities or unincorporated areas that SJ-SC RWF services
TTOs	total toxic organics
VIN	Veterinary Information Network
Water Board	San Francisco Bay Regional Water Quality Control Board

Attachment B – Santa Clara County Annual HHW Memorandum

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County of Santa Clara

Consumer and Environmental Protection Agency
Household Hazardous Waste Program
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<http://www.HHW.org>

Memorandum

August 9, 2024

To: Storm Water/Urban Runoff P2 Staff

From: Billy Puk, Hazardous Materials Program Manager
Household Hazardous Waste Program
County of Santa Clara

DocuSigned by:
Billy Puk
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Re: Fiscal Year 2023-2024 HHW Program Update

Participation

The HHW Program served 44,609 residents from July 1, 2023, to June 30, 2024, and safely managed 2,765,195 pounds of hazardous waste. There was a total of 194 collection events: 184 at two permanent facilities and 10 at temporary sites strategically located throughout the County. In addition, the program served 310 small business drop-offs including local governments, Goodwill Industries, and The Salvation Army.

Paint

The HHW Program collected and managed a total of 1,377,568 pounds of paint and paint related material. Latex paint accounted for 769,242 pounds, and oil-based paint related material accounted for 608,326 pounds. There were forty-two (42) retail take-back locations within the County, and several one-day take-back events managed by the paint manufacturers. Paint collected at these locations does not contribute to the above quantities.

Pesticides

The HHW Program collected 152,450 pounds of poisonous liquids and 96,350 pounds of poisonous solids during the reporting year.

Household batteries

A total of 172,367 pounds of household batteries were collected and recycled. Of that volume, retail take-back stores accounted for 79,108 pounds. Forty-three (43) stores serve as our network of battery take-back partners. In addition, our battery partners manage their collected rechargeable batteries directly through Call2Recycle, the North American Product Stewardship Organization funded by the producers. Note that some additional take-back batteries sites within the County are not part of our network of partners.

Mercury-containing fluorescent lamps

A total of 75,454 pounds of fluorescent lamps were collected during the reporting period. Of that volume, retail take-back stores accounted for 38,585 pounds. 36,869 pounds lamps were collected at HHW events. Twenty-eight (28) stores served as fluorescent lamp take-back partners. Similar to batteries, some additional lamps take-back locations within the County were not part of our network of partners.

Mercury Containing Products

A total of 180 pounds (includes thermostats, thermometers and other mercury containing products) were collected by the program.

Pharmaceuticals and Sharps

A total of 5,911 pounds of unwanted/expired medications were managed through the HHW Program. Additionally, Santa Clara County's Product Stewardship Plan for unwanted medicine from households is operated by MED-Project, LLC and Inmar Rx Solutions, Inc. During the current reporting cycle, a total of 98,459 pounds of pharmaceuticals were collected via kiosk drop-off sites and 200 pounds of pharmaceutical waste through Mail-back return packages as reported by MED-Project, LLC¹ and Inmar Rx Solutions, Inc².

A total of 3,753 pounds of used home generated sharps were managed by the HHW Program. Similar to pharmaceuticals, MED-Project, LLC operates a Product Stewardship Plan for unwanted sharps from households in the County and collected a total of 140,343 pounds of sharps via kiosk drop-off sites and 977 pounds of sharps waste through Mail-back return packages during the fifth year of program implementation³.

Public Outreach

Staff participated in ten (10) community outreach events.

¹ MED-Project, LLC [Med-Project Medicine Annual Report 2024](#)

² Inmar Rx Solutions [Inmar Medicine Annual Report 2024](#)

³ MED-Project, LLC [Med-Project Sharps Annual Report 2024](#)