

Watershed Monitoring and Assessment Program



Urban Creeks Monitoring Report Executive Summary

Water Year 2023 (October 2022 – September 2023)

Submitted in compliance with Provision C.8.h.iii of NPDES Permit No. CAS612008,
Order No. R2-2022-0018

March 31, 2024

This report is submitted by the agencies participating in the



City of Campbell
City of Cupertino
City of Los Altos
Town of Los Altos Hills
Town of Los Gatos

City of Milpitas
City of Monte Sereno
City of Mountain View
City of Palo Alto
City of San José

City of Santa Clara
City of Saratoga
City of Sunnyvale
County of Santa Clara
Valley Water

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Prepared for:

Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP)

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Executive Summary

This Water Year 2023 *Urban Creeks Monitoring Report* (UCMR) was prepared by the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP or Program), on behalf of its 15 member agencies (13 cities/towns, the County of Santa Clara, and Valley Water). SCVURPPP member agencies are subject to the National Pollutant Discharge Elimination System (NPDES) stormwater permit for Bay Area municipalities referred to as the Municipal Regional Permit (MRP). The MRP was first adopted by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB or Regional Water Board) on October 14, 2009 as Order R2-2009-0074 (SFRWQCB 2009; referred to as MRP 1.0). On November 19, 2015, the Regional Water Board updated and reissued the MRP as Order R2-2015-0049 (SFBRWQCB 2015; referred to as MRP 2.0). The Regional Water Board subsequently updated and revised the MRP as Order R2-2022-0018 (SFBRWQCB 2022; referred to as MRP 3.0), which took effect on July 1, 2022.

This UCMR, including all appendices and attachments, fulfills the requirements of provision C.8.h.iii of MRP 3.0 for reporting all data collected in Water Year 2023 (WY 2023; October 1, 2022 – September 30, 2023) pursuant to provision C.8. Data presented in this report were submitted in electronic California Surface Water Ambient Monitoring Program (SWAMP)-comparable formats by SCVURPPP to the Regional Water Board on behalf of SCVURPPP Permittees and pursuant to provision C.8.h.ii of the MRP and may be obtained via the California Environmental Data Exchange Network (CEDEN). Data collected in prior water years (i.e., WYs 2012 – WY 2022) pursuant to provision C.8 of the MRP are presented in previously submitted annual Urban Creeks Monitoring Reports (SCVURPPP 2015, 2016, 2017, 2018, 2019, 2021, 2022, 2023a) and periodic Integrated Monitoring Reports (SCVURPPP 2014, 2020). The older data are also available on CEDEN.

Water quality monitoring required by provision C.8 of the MRP is intended to evaluate the effectiveness of stormwater control actions; assess the condition of water quality in Bay Area receiving waters (creeks and the Bay); identify and prioritize stormwater runoff associated impacts, stressors, sources, and loads; identify appropriate management actions; and detect trends in water quality over time.

Provision C.8.a (Compliance Options) of the MRP allows Permittees to address monitoring requirements through regional collaboration, their countywide stormwater program, and/or individually. On behalf of Co-permittees, SCVURPPP conducts creek water quality monitoring and monitoring projects in collaboration with the Bay Area Municipal Stormwater Collaborative (BAMSC)¹ Regional Monitoring Coalition (RMC). Furthermore, SCVURPPP actively participates in the Regional Monitoring Program for Water Quality in San Francisco Bay (RMP), which focuses on assessing Bay water quality and associated impacts. In compliance with provision C.8.c of the MRP (San Francisco Estuary Receiving Water Monitoring), SCVURPPP also provides financial contributions towards implementing the RMP.² Provision C.8.a.iii allows Permittees to use third-party data meeting provision C.8.b data quality objectives to satisfy monitoring requirements.

Monitoring data were collected in accordance with the RMC Standard Operating Procedures (SOPs; BASMAA 2016), the RMC Quality Assurance Project Plan (QAPP; BASMAA 2020), and the Clean Watersheds for a Clean Bay QAPP (BASMAA 2013). Where applicable, and in

¹ The BAMSC was formed in 2021 upon dissolution of the Bay Area Stormwater Management Agencies Association (BASMAA) as a 501(c)(3) non-profit organization.

² See <https://www.sfei.org/programs/sf-bay-regional-monitoring-program> for details on the RMP.

compliance with provision C.8.b of the MRP, methods described in the QAPPs and SOP are comparable with methods specified by the California SWAMP Quality Assurance Program Plan (QAPrP).

This UCMR consists of four “Parts” (A-D) that address the major sub-provisions of MRP provision C.8 (Water Quality Monitoring). The following sections of this Executive Summary summarize each UCMR Part:

- Part A: Low Impact Development (LID) Effectiveness Monitoring
- Part B: Trash Monitoring
- Part C: Pesticides and Toxicity Monitoring
- Part D: Pollutants of Concern (POC) Monitoring

Part A: Low Impact Development (LID) Effectiveness Monitoring

Part A of the UCMR reports all LID Effectiveness monitoring activities conducted in WY 2023. Provision C.8.d identifies specific parameters and monitoring frequencies that must be achieved to address management questions related to pollutant removal efficiencies of LID facilities and minimum levels of maintenance necessary to avoid deteriorated conditions. In the Santa Clara Valley, a minimum of 25 water quality sampling events must be conducted during the permit term, with an annual minimum of three events beginning in WY 2024. Each sampling event must consist of paired flow- (or time) weighted composite samples of the LID facility influent and effluent collected with automated samplers.

Permittees are required to submit LID Monitoring Plans that demonstrate how the requirements in provision C.8.d will be met. Permittees must submit their Monitoring Plans to the Regional Water Board Executive Officer (EO) for approval by May 1, 2023 and must begin implementation of their approved or conditionally approved Monitoring Plans by October 1, 2023. To assist development and implementation of scientifically-sound LID Monitoring Plans, provision C.8.d.ii requires Permittees to form and convene a Technical Advisory Group (TAG) which includes impartial science advisors and Regional Water Board staff.

In compliance with Provision C.8.h.iii.(1), Part A of the UCMR includes the LID Monitoring Status Report for WY 2023. Part A describes the outcomes of the two LID Monitoring TAG meetings convened in WY 2023; summarizes the SCVURPPP LID Monitoring Plan (SCVURPPP 2023b) that was submitted to the Regional Water Board on May 1, 2023, including the site selection process and the EO Conditional Approval; documents the permitting and equipment installation accomplishments; and, in compliance with Provision C.8.d.i.(1)(g), provides Program costs to develop and implement the LID Monitoring Plan in Fiscal Year 2022-23.

In WY 2023, two LID facilities that are part of the Top Golf Public Green Street Project located in the City of San José were equipped with automated sampling equipment such that sampling could begin in WY 2024. In WY 2024, SCVURPPP will continue to comply with Provision C.8.d requirements and will collect a minimum of three paired samples at the Top Golf LID facilities.

Part B: Trash Monitoring

Part B of the UCMR contains the Annual Trash Monitoring Progress Report for WY 2023, submitted in compliance with provision C.8.h.iii.(2) of the MRP. The report, prepared collaboratively by members of the BAMSC Trash Monitoring Workgroup, describes provision C.8.e Trash Monitoring requirements and how each BAMSC Program complied with the requirements during WY 2023. Provision C.8.e directs Permittees to conduct trash monitoring at MS4 outfalls and in receiving waters, and prescribes specific monitoring location criteria, methods and frequencies that must be achieved to address the management and monitoring questions listed in the MRP.

B.1 Trash Outfall Monitoring

During WY 2023, the SCVURPPP collaborated with other members of the BAMSC Trash Monitoring Workgroup to convene the Trash Technical Advisory Group (TAG); developed a Regional Trash Outfall Monitoring Plan and QAPP that meet the requirements of provision C.8.e; and initiated key tasks in preparation for the implementation of trash outfall monitoring, scheduled to start in October 2023.

The BAMSC Trash Monitoring Workgroup hosted two Trash TAG meetings on March 15 and May 22, 2023. The primary goal for both meetings was to inform the development of the Trash Outfall Monitoring Plan and QAPP. The BAMSC Trash Monitoring Workgroup submitted a Draft Trash Outfall Monitoring Plan and QAPP for TAG review on May 15, 2023. The documents were updated based on comments received and final versions of the Regional Trash Outfall Monitoring Plan (BAMSC 2023) and QAPP (AMS 2023) were submitted to the RWB for Executive Officer (EO) approval on July 31, 2023. These documents describe the overall monitoring approach, the process used to select monitoring sites, field methods for collecting trash and flow data, trash characterization, data evaluation and reporting procedures. On August 31, 2023, the RWB EO conditionally approved the Regional Trash Outfall Monitoring Plan and QAPP, requiring that an updated version with minor changes be submitted on July 31, 2024.

In Santa Clara County, a minimum of three outfalls must be monitored with nets (or equivalent devices) during a minimum of three wet weather events per year beginning October 1, 2023. During WY 2023 and early WY 2024, SCVURPPP selected three outfalls for monitoring: an outfall to San Francisquito Creek in the City of Palo Alto, an outfall to Stevens Creek in the City of Mountain View, and an outfall to Coyote Creek, in Kelly Park, in the City of San José. SCVURPPP obtained encroachment permits and/or Right-to-Enter agreements from each municipality. In addition, a Streambed Alteration Agreement (SAA) permit was obtained from California Department of Fish and Wildlife (CDFW) to ensure that sensitive species, such as steelhead and red-legged frogs, would not be impacted by the monitoring project. Once all permits were obtained, SCVURPPP procured trash net devices from a contractor. The stainless-steel component of the trash net device was constructed and installed at all three outfalls in September 2023. Due to supply chain issues, the trash nets were not expected to be available until mid-October 2023.

In early WY 2024, SCVURPPP plans to install pressure transducers at each to collect flow data as required under the MRP. Once transducers are installed, SCVURPPP will begin monitoring flow within each outfall pipe at two-minute intervals over the course of the wet season. SCVURPPP will continue to comply with provision C.8.e requirements by collecting a minimum of three trash samples at each location.

B.2 Trash Receiving Water Monitoring

During WY 2023, the City/County Association of Governments, San Mateo County (CCAG) released a Request for Proposals (RFP) for the Watching our Watersheds (WOW) Regional Trash Monitoring Project, which is funded by USEPA grant for the Water Quality Improvement Fund (WQIF). The WOW project will address MRP provision C.8.e requirements for receiving water trash monitoring. The initial tasks that will be completed by the WOW project in WY 2024 will include an assessment of receiving water trash monitoring methods and equipment, and the selection of sites for monitoring that will begin in WY 2025. Work on these tasks began in December 2023 and an updated Trash Monitoring Plan is scheduled for completion in July 2024, consistent with MRP requirements.

Part C: Pesticides and Toxicity Monitoring

Part C of the UCMR presents all data collected in compliance with provision C.8.g (Pesticides and Toxicity Monitoring). Toxicity testing provides a tool for assessing the toxic effects (acute and chronic) of all chemicals in water or sediment collected from receiving waters and allows for assessing the cumulative effect of chemicals present. Because different test organisms are sensitive to different classes or combinations of chemicals, several types of organisms are monitored. Sediment and water chemistry monitoring for a variety of potential pollutants is conducted synoptically with toxicity monitoring to provide preliminary insight into the possible causes of toxicity, should it be observed. Provision C.8.g requires the collection of sediment during two dry season samples per year, and the analysis of those samples for toxicity and sediment chemistry. An additional three water samples must be collected during wet weather and analyzed for toxicity and pesticides if collected as part of a regional RMC effort.

C.1 WY 2023 Results

- **Wet Weather Results.** In WY 2023, SCVURPPP satisfied MRP 3.0 wet weather monitoring requirements by collecting three wet weather water samples (Stevens Creek, San Tomas Aquino Creek, and Guadalupe River) as part of a regionally coordinated monitoring event. The Stevens and San Tomas Aquino Creek sites have been sampled by SCVURPPP for pesticides and toxicity since WY 2016. The Guadalupe River site was selected in coordination with the California Department of Pesticide Regulation (DPR) Surface Water Protection Program (SWPP).
 - Water Toxicity. No toxicity was observed in the wet weather water samples from Stevens and San Tomas Aquino Creeks; however, significant toxicity to *H. azteca* (acute) was observed in the Guadalupe River sample with a Percent Effect greater than 50%. The follow-up sample was also significantly toxic to *H. azteca*, but with a Percent Effect less than 50%.
 - Water Chemistry. Water column samples collected during wet weather sampling at the three sites were tested for pyrethroid, fipronil (including degradates), and imidacloprid pesticide concentrations. Pesticide concentrations were compared against United States Environmental Protection Agency (USEPA) benchmarks for chronic effects to freshwater invertebrates.³ Some pyrethroid concentrations were found to be above the lowest EPA benchmark at all three sites – a possible explanation for the Guadalupe River *H. azteca* toxicity result. All sites had no exceedances of the benchmarks for fipronil, fipronil degradates, and imidacloprid

³ <https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/aquatic-life-benchmarks-and-ecological-risk#aquatic-benchmarks>

pesticides. Many pesticide analytes were found to be below the laboratory's reporting limit (J-flagged) or method detection limit (MDL).

- **Dry Weather Results.** Dry season Pesticides and Toxicity monitoring in WY 2023 was conducted at the same locations on Stevens and San Tomas Aquino Creeks that have been targeted since WY 2016.
 - Water Toxicity. Statistically significant toxicity to *C. dubia* (reproduction), was observed in the San Tomas Aquino Creek dry season water sample, but with a Percent Effect below the follow-up threshold of 50%. Statistically significant toxicity to *C. dubia* (reproduction), was also observed in the Stevens Creek water sample, but with a Percent Effect above the follow-up threshold of 50%. The follow-up Stevens Creek sample had statistically significant toxicity to *C. dubia* (reproduction), also with a Percent Effect above 50%.
 - Sediment Toxicity. Sediment samples in San Tomas Aquino Creek were found to be significantly toxic to both *C. dilutus* and *H. azteca* but with Percent Effects less than the threshold. Toxicity was not observed in the Stevens Creek sediment sample.
 - Sediment Chemistry. Pesticide concentrations in the WY 2023 dry season sediment samples were low, with no total organic carbon (TOC) normalized concentrations of individual pyrethroids found to be over one toxic unit (TU) equivalent. The sum of the TU equivalents calculated for pyrethroid pesticides was 0.3 for the Stevens Creek sample and 0.5 for the San Tomas Aquino Creek sample. Fipronil and its degradates were all below the method detection limit (MDL).

In accordance with MRP requirements, a comprehensive QA/QC program was implemented by SCVURPPP covering all aspects of Pesticides and Toxicity monitoring was conducted during WY 2023. Overall, the results of the QA/QC review suggest that the data generated during WY 2023 Pesticides and Toxicity monitoring were of sufficient quality for the purposes of this program. While some data were flagged in the project database based on the MQOs and DQOs identified in the QAPPs, none of the data were rejected.

C.2 WY 2016 – WY 2023 Data Summary

The results of pesticides and toxicity monitoring conducted in San Tomas Aquino and Stevens Creek during WY 2016 through WY 2023 were analyzed to identify temporal trends. Wet weather results are also summarized from samples collected during WY 2018 and WY 2023. The data provide a reference to inform management decisions regarding water quality improvement in Santa Clara County watersheds and guide the planning of future monitoring in the area.

- Acute toxicity to *H. azteca*, a test organism known to be sensitive to pyrethroid pesticides, was observed for the second consecutive year in the WY 2023 dry season sediment sample for San Tomas Aquino Creek; however, the Percent Effect was below the threshold for resampling. The cause of this toxicity finding is unknown as the sum of pyrethroid TU equivalents was 0.5 in the corresponding sediment chemistry sample.
- Toxicity to *H. azteca* (survival) has been found in six of nine wet weather water samples collected throughout the Santa Clara Valley in WY 2018 and WY 2023. In WY 2023 significant toxicity to *H. azteca* was found in the Guadalupe River sample, with a Percent Effect greater than 50%. The resample at this site was also found to be significantly toxic, but with a Percent Effect less than the threshold.

- Five of the 22 dry (n=16) and wet (n=6) weather water samples were significantly toxic to *C. dilutus*, a test organism known to be sensitive to neonicotinoids (e.g., imidacloprid) and fipronil, including the WY 2023 dry weather sample collected from Stevens Creek. All of the significantly toxic samples were from the dry weather data set; however, none had a Percent Effect greater than 50%.
- Of the 29 dry season samples where significant toxicity was observed, 13 were water samples with *C. dubia* reproduction toxicity. *C. dubia* is a water flea that is sensitive to a broad range of aquatic contaminants. However, the specific cause of the chronic *C. dubia* toxicity in San Tomas Aquino and Stevens Creek is unknown, and not seemingly explained by the synoptic sediment chemistry results. It is possible that the chronic *C. dubia* toxicity observed in water samples are false positives resulting from inconsistencies in laboratory QA procedures. Statewide, there have been other reports of unexplained chronic *C. dubia* toxicity. The Southern California Coastal Water Research Project (SCCWRP) recently examined this issue and recommended guidance for laboratory best practices, accreditation, and training to reduce variability and inconsistency between lab processes (Brent et al. 2023).
- Between WY 2016 and WY 2023, no sediment samples in San Tomas Aquino or Stevens Creek had Probable Effect Concentration (PEC) quotients greater than 1.0 for analytes other than chromium and nickel. When chromium and nickel (present in local native soils) are excluded, seven samples in the WY 2016 through WY 2023 dataset had Threshold Effect Concentration (TEC) quotients ≥ 1.0 , the more conservative of the two sediment chemistry evaluation criteria. These include total PAHs from Stevens Creek in WY 2017 and WY 2018, zinc from Stevens Creek and San Tomas Aquino Creek in WY 2020, and copper from Stevens Creek and San Tomas Aquino Creek in WY 2020 and 2022. Stevens Creek was found to have copper and lead exceeding the TEC threshold during WY 2023.
- Overall, detection frequencies for bifenthrin and fipronil were on par with results from the DPR Northern California study (Ensminger 2021) and *H. azteca* toxicity responses were similar to SWAMP Stream Pollution Trend (SPoT) monitoring program results for Coyote Creek and Guadalupe River (Phillips et al. 2020).

C.3 Recommendations for WY 2024 Pesticides and Toxicity Monitoring

In WY 2024, SCVURPPP will continue to sample San Tomas Aquino and Stevens Creeks for dry weather Pesticides & Toxicity Monitoring requirements. Additionally, SCVURPPP will continue to search for opportunities to share data, monitoring locations, and information with other agencies, similar to WY 2023 wet weather monitoring conducted at the DPR's Guadalupe River site. These efforts for interagency collaboration will assist SCVURPPP with establishing robust and long-term regional datasets that will provide a better assessment of pesticide concentrations and their effects on aquatic environments.

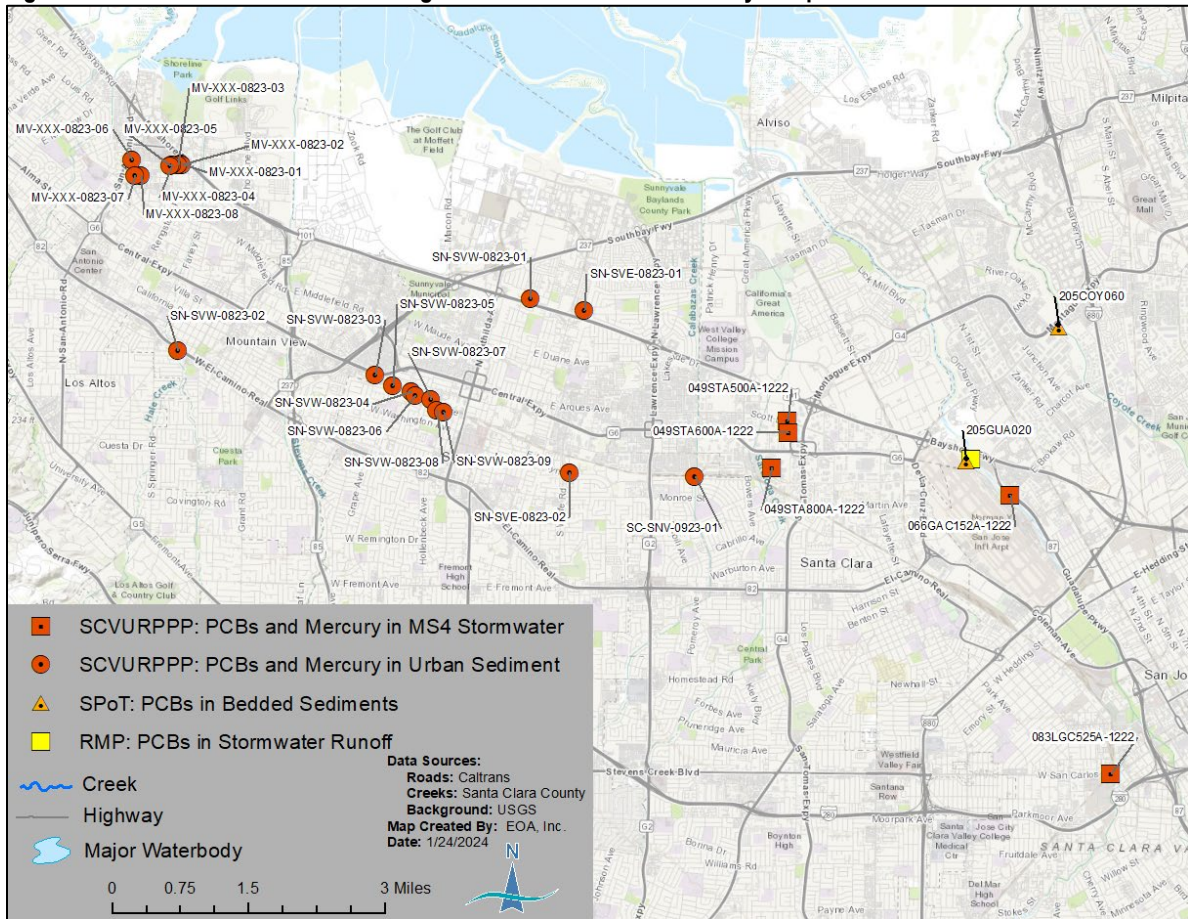
Part D: Pollutants of Concern Monitoring

Part D of the UCMR reports all Pollutants of Concern (POC) monitoring data collected in WY 2023. POC monitoring required by MRP provision C.8.f is intended to assess inputs of POCs to the Bay from local tributaries and urban runoff, provide information to support implementation of Total Maximum Daily Load (TMDL) water quality restoration plans and other pollutant control strategies, assess progress toward achieving wasteload allocations (WLAs) for TMDLs, help resolve uncertainties associated with loading estimates for POCs, and provide information to

assess whether receiving water limitations (RWLs) are achieved. In WY 2023, SCVURPPP conducted POC monitoring for PCBs and mercury in December 2022, August 2023, and September 2023. The MRP-required yearly minimum number of samples was met for all POCs.

POC Monitoring in the Santa Clara Valley is conducted by SCVURPPP and its water quality partners, including the members of the RMC, the RMP, and the SWAMP SPoT monitoring program. Figure E.1 illustrates locations of monitoring stations associated with POC monitoring conducted by SCVURPPP and its water quality partners in compliance with MRP provision C.8.f.

Figure E.1. Locations of POC-monitoring stations in Santa Clara County sampled in WY 2023.



D.1 PCBs and Mercury

In WY 2023, SCVURPPP collected a total of 25 samples for PCBs and mercury analysis.

- Ten MS4 sediment samples (defined as street dirt, surface soil, or sediment collected from streets, gutters, storm drain inlets, and other MS4 structures) were collected to inform identification of source areas where control measures could be implemented, i.e., Management Question #1 (Source Area Identification). A sample is considered highly elevated if it has a PCBs concentration over 0.5 mg/kg, and moderately elevated if it has a concentration from 0.2 to 0.5 mg/kg. Similarly for mercury, an MS4 sediment sample is considered highly elevated if it is over 1.0 mg/kg, and moderately elevated if it has a

concentration from 0.3 to 1.0 mg/kg. For both PCBs and mercury, concentrations above 1 mg/kg are considered confirmation of a source. These thresholds are used by the BAMSC as approximate benchmarks for identifying areas that should be considered for future investigation (e.g., targeted source property investigations that involve records review, additional sampling, etc.), and for identifying source properties. None of the WY 2023 sediment samples exceeded these thresholds.

- Ten MS4 sediment samples were collected to inform Management Question #2 (Contributions to Bay Impairment). These data could also be used to support conceptual models or watershed loading models such as for model calibration and validation or other information needs. In this case, the data could be used to inform land use groups and stormwater contaminant concentrations for each group in the RMPs Watershed Dynamic Model. None of the WY 2023 sediment samples had elevated PCBs or mercury concentrations.
- Five stormwater composite samples were collected to inform Management Question #4 (Loads and Status). These samples were collected within the MS4 at or near the bottom of stormwater catchments to quantify the concentrations of pollutants being discharged during a storm event. The method in which these samples are collected (i.e., a time composite of aliquots collected via grab sampling) approximate an event mean concentration (EMC) for the sampled storm event. Stormwater samples are considered elevated above urban background if the PCBs concentration is above 38 ng/L (i.e., the top 15th percentile for stormwater samples collected across the Bay Area), or if the stormwater particle ratio is above 0.2 mg/kg for PCBs, or 0.3 mg/kg for mercury. None of the WY 2023 stormwater samples had elevated PCBs or mercury concentrations.

In accordance with MRP requirements, a comprehensive QA/QC program was implemented by SCVURPPP covering all aspects of POC monitoring that was conducted during WY 2023. Overall, the results of the QA/QC review suggest that the data generated during WY 2023 POC monitoring were of sufficient quality for the purposes of this program. While some data were flagged in the project database based on the MQOs and DQOs identified in the QAPPs, none of the data were rejected.

D.2 Emerging Contaminants

Emerging contaminants are a diverse group of chemicals and compounds, broadly defined as synthetic or naturally occurring chemicals that are not regulated or commonly monitored in the environment but have the potential to enter the environment and cause adverse ecological or human health impacts. The MRP allows for Permittees to satisfy the emerging contaminant monitoring requirements through augmentation of the RMP's Emerging Contaminants Monitoring Strategy in the amount of \$100,000 per year for all Permittees combined. SCVURPPP and its RMC partners have elected to exercise this option and are working through the RMP to identify emerging contaminant analytes and monitoring strategies to address priority management questions.

D.3 Receiving Water Limitations Monitoring

RWL monitoring required in the MRP must be addressed via the collection of at least four samples during the wet season and one sample during the dry season. Samples must be analyzed for copper, zinc, fecal indicator bacteria (FIB), and any additional analytes identified based on assessment of the potential that discharges may result in receiving waters

approaching or exceeding water quality objectives (WQOs). The RWLs Assessment Report (i.e., Monitoring Plan) required by provision C.8.h.iv.(2) was developed as a regional effort through the RMC and was submitted with the WY 2022 UCMR (SCVURPPP 2023a). It describes the regional approach to RWL monitoring, including the process used to identify the appropriate analytes to include in addition to those listed in Table 1.1 of provision C.8, the locations of regionally representative sampling sites, monitoring methods, and relevant WQOs against which to compare monitoring data. On June 12, 2023, the Regional Water Board Executive Officer issued a letter of Conditional Approval of the RWL Assessment Report (Conditional Approval Letter) expanding the analyte list to include PAHs and requiring demonstration of the representativeness of the selected monitoring locations. In order to satisfy the second condition, MRP Permittees identified and characterized watersheds in Alameda, Contra Costa, San Mateo, and Santa Clara counties that drain to San Francisco Bay and compared them to the selected monitoring locations. The results of the analysis are described in the RWL Assessment Report Addendum which is included with UCMR Part D.

D.4 Recommendations for WY 2024 POC Monitoring

In WY 2024, the Program will continue to collect and analyze POC samples in compliance with MRP provision C.8.f. PCBs and mercury monitoring will focus on management questions related to the identification of watershed source areas contributing to Bay impairments, management action effectiveness, loads, and trends. SCVURPPP will also begin monitoring for RWL analytes at one receiving water station in the Santa Clara Valley. In addition, SCVURPPP will continue to provide financial contributions and participate in RMP workgroups focused on monitoring POCs.

References

- BASMAA (Bay Area Stormwater Management Agency Association) Regional Monitoring Coalition (RMC). 2020. Creek Status and Pesticides & Toxicity Monitoring Quality Assurance Project Plan, Final Version 4. Prepared for BASMAA by EOA, Inc. on behalf of the Santa Clara Urban Runoff Pollution Prevention Program and the San Mateo Countywide Water Pollution Prevention Program, Applied Marine Sciences on behalf of the Alameda Countywide Clean Water Program, and Armand Ruby Consulting on behalf of the Contra Costa Clean Water Program. 79 pp plus appendices.
- BASMAA (Bay Area Stormwater Management Agency Association). 2013. Quality Assurance Project Plan. Clean Watersheds for a Clean Bay – Implementing the San Francisco Bays PCBs and Mercury TMDLs with a Focus on Urban Runoff. EPA San Francisco Bay Water Quality Improvement Fund Grant # CFDA 66.202. Prepared by Applied Marine Sciences (AMS).
- BASMAA (Bay Area Stormwater Management Agency Association). 2016. Creek Status and Pesticides & Toxicity Monitoring Standard Operating Procedures, Final Version 3. Prepared for BASMAA by EOA, Inc. on behalf of the Santa Clara Urban Runoff Pollution Prevention Program and the San Mateo Countywide Water Pollution Prevention Program, Applied Marine Sciences on behalf of the Alameda Countywide Clean Water Program, and Armand Ruby Consulting on behalf of the Contra Costa Clean Water Program. 190 pp.
- Brent, R., Bailey, H., Norberg-King, T., Van der Vliet, L., and Bailer, A.J. 2023. Ceriodaphnia dubia Quality Assurance Guidance Recommendations. Technical Report 1341. Prepared by the Southern California Coastal Water Research Project (SCCWRP) for the State Water Resources Control Board (SWRCB) and the California Association of Sanitation Agencies (CASA). 54 p + appendices.
- Phillips, B.M., Siegler, K., Voorhees, J., McCalla, L., Zamudio, S., Faulkenberry, K., Dunn, A., Fojut, T., and Ogg, B. 2020. Spatial and Temporal Trends in Chemical Contamination and Toxicity Relative to Land Use in California Watersheds: Stream Pollution Trends (SPoT) Monitoring Program. Fifth Report. California State Water Resources Control Board, Sacramento, CA.
- SCVURPPP (Santa Clara Valley Urban Runoff Pollution Prevention Program). 2014. Integrated Monitoring Report. Water Year 2012 through Water Year 2013. March 31, 2014.
- SCVURPPP (Santa Clara Valley Urban Runoff Pollution Prevention Program). 2015. Urban Creeks Monitoring Report. Water Quality Monitoring. Water Year 2014. March 31, 2015.
- SCVURPPP (Santa Clara Valley Urban Runoff Pollution Prevention Program). 2016. Urban Creeks Monitoring Report. Water Quality Monitoring. Water Year 2015. March 31, 2016.
- SCVURPPP (Santa Clara Valley Urban Runoff Pollution Prevention Program). 2017. Urban Creeks Monitoring Report. Water Quality Monitoring. Water Year 2016. March 31, 2017.
- SCVURPPP (Santa Clara Valley Urban Runoff Pollution Prevention Program). 2018. Urban Creeks Monitoring Report. Water Quality Monitoring. Water Year 2017. March 31, 2018.
- SCVURPPP (Santa Clara Valley Urban Runoff Pollution Prevention Program). 2019. Urban Creeks Monitoring Report. Water Quality Monitoring. Water Year 2018. March 31, 2019.
- SCVURPPP (Santa Clara Valley Urban Runoff Pollution Prevention Program). 2020. Integrated Monitoring Report. Part B: Creek Status Monitoring. Water Year 2014 through Water Year 2019. March 31, 2020.
- SCVURPPP (Santa Clara Valley Urban Runoff Pollution Prevention Program). 2021. Urban Creeks Monitoring Report. Part A: Creek Status Monitoring. Water Year 2020. March 31, 2021.
- SCVURPPP (Santa Clara Valley Urban Runoff Pollution Prevention Program). 2022. Urban Creeks Monitoring Report. Part A: Creek Status Monitoring. Water Year 2021. March 31, 2022.

SCVURPPP (Santa Clara Valley Urban Runoff Pollution Prevention Program). 2023a. Urban Creeks Monitoring Report. Part A: Creek Status Monitoring. Water Year 2022. March 31, 2023.

SCVURPPP (Santa Clara Valley Urban Runoff Pollution Prevention Program). 2023b. Low Impact Development (LID) Monitoring Plan for San Mateo County During MRP 3.0. Prepared by EOA, Inc. May 1, 2023.

SFBRWQCB (San Francisco Bay Regional Water Quality Control Board). 2009. Municipal Regional Stormwater NPDES Permit. Order R2-2009-0074, NPDES Permit No. CAS612008. 125 pp plus appendices.

SFBRWQCB (San Francisco Bay Regional Water Quality Control Board). 2015. Municipal Regional Stormwater NPDES Permit. Order R2-2015-0049, NPDES Permit No. CAS612008. 152 pp plus appendices.

SFBRWQCB (San Francisco Bay Regional Water Quality Control Board). 2022. Municipal Regional Stormwater NPDES Permit. Order R2-2022-0018, NPDES Permit No. CAS612008.