

# C/CAG

## CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY

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### TASK ORDER FORM

**Date/Start Date:** July 1, 2021  
**Consultant Name:** EOA, Inc.  
**Contract:** Countywide Water Pollution Prevention Program Technical Support – On-Call Contracts  
**Task Order No.:** EOA-14  
**Task Order Name:** Municipal Stormwater NPDES Permit Compliance Assistance  
**Scope of Work:** Water Year 2022 monitoring activities  
**Deliverables:** See attached scope of work  
**Budgeted Cost:** Per attached scope of work, not to exceed \$367,414 for Fiscal Year 2021-22. The additional \$143,534 for work in Fiscal Year 2022-23 is subject to sufficient funds being included in C/CAG's approved 2022-23 budget and a new or amended contract with EOA, Inc. Consultant shall not proceed to perform any work in Fiscal Year 2022-23 under this Task Order without written direction from C/CAG staff. The Task Order is issued through June 30, 2023 to account for end of Water Year 2022 water monitoring reporting needs.  
**Completion Date:** June 30, 2023

*The parties indicated herein agree to execute this Task Order per the scope indicated above. No payment will be made for any work performed prior to the execution of this Task Order. Unless otherwise indicated, receipt of this executed Task Order is your Notice to Proceed with the work specified herein.*

C/CAG

EOA, Inc.

\_\_\_\_\_  
Sandy Wong  
Executive Director

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

**Municipal Stormwater NPDES Permit  
Compliance Assistance**

**WY 2022 Water Quality Monitoring**

**Scope of Work and Budget**

**Prepared for the  
San Mateo Countywide  
Water Pollution Prevention Program  
(a C/CAG program)**



**Prepared by EOA, Inc.**



**June 1, 2021**

## INTRODUCTION

EOA, Inc. (EOA) prepared this scope-of-work and budget for providing water quality monitoring services to the San Mateo Countywide Water Pollution Prevention Program (Countywide Program or SMCWPPP). SMCWPPP is a program of the City/County Association of Governments of San Mateo County (C/CAG). The scope and budget are for EOA to assist SMCWPPP to help San Mateo County Permittees to comply with certain requirements found in the reissued municipal stormwater permit, NPDES Permit No. CAS612008, which is commonly referred to as the Municipal Regional Permit (MRP). The following sections describe EOA's tasks, budgets, and deliverables for Water Year 2022 (WY 2022) water quality monitoring and associated reporting activities. Exhibit A summarizes the tasks and budgets, including subtasks, estimated labor hours and hourly rates for EOA staff, and planning-level subcontractor and expense budgets. It should be noted that the actual distribution of hours and subcontractors/expenses within and among subtasks may vary. EOA will conduct all work on a time and materials basis in accordance with the Agreement for Services between EOA, Inc. and C/CAG dated August 13, 2015. The total budget will not be exceeded without C/CAG's authorization.

The total budget for WY 2022 water quality monitoring activities is \$510,948. We understand that C/CAG will authorize expenditure during FY 2021/22 of \$367,414 of this total budget and may authorize expenditure during FY 2022/23 of the remaining \$143,534. Please note that the estimated FY 2021/22 budget includes about \$90K in subcontractor/laboratory costs that must be contracted for in FY 2021/22 but are not invoiced until FY 2022/23.<sup>1</sup>

Please note that for the purpose of developing this scope and budget, we assumed all WY 2022 water quality monitoring tasks will be conducted consistent with current (MRP 2.0) requirements. However, the permit reissuance could result in changes to WY 2022 requirements and therefore lead to the need to revise this scope and budget, depending on how the MRP 3.0 requirements compare to MRP 2.0, the timing of adoption, and the effective date.

## TASK SMC317 – WATER QUALITY MONITORING

In accordance with the MRP, water quality monitoring is conducted on a water year basis. Sampling is conducted each water year (October 1 through September 30), and reports presenting that water year's data are submitted to the Regional Water Board by the end of the following March. For example, the results of sampling during Water Year 2022 (i.e., October 1, 2021 – September 30, 2022, abbreviated as WY 2022) are documented in reports submitted by March 31, 2023. Because the typical municipal fiscal year (FY, July 1 – June 30) and the water year are not aligned, field sampling and reporting associated with a particular water year are conducted during two adjacent fiscal years.

This scope and budget are for all tasks associated with WY 2022 water quality monitoring, including fieldwork, data compilation and Quality Assurance / Quality Control (QA/QC), and reporting. Similar to previous water years, these tasks span a 2-year time period (i.e., WY 2022 tasks will be conducted during FYs 2021/22 and 2022/23, or from July 1, 2021 through June 30, 2023, the date by which the final WY 2022 reporting is expected to be completed<sup>2</sup>).

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<sup>1</sup> EOA will commit to paying subcontractors for this work at the time samples are collected in FY 2021/22, but subcontractors will not invoice EOA until FY 2022/23.

<sup>2</sup> Prior years' experience has shown that reporting tasks generally extend into the months following the March 31 deadline for the Urban Creeks Monitoring Report. This is especially true for electronic data submittals to the Regional Data Center (see Subtask SMC317.07).

However, below Subtasks SMC317.01 (Regional Coordination) and SMC317.02 (Regional Monitoring Program Participation) are ongoing activities that are conducted on a fiscal year basis. For these two subtasks, this scope and budget cover the 12-month FY 2021/22 period of time (i.e., July 1, 2021 – June 30, 2022). The budgets for Subtasks SMC317.01 and SMC317.02 are generally based on the estimated amount of EOA staff time needed each month or for each of a certain number of periodic meetings.

Please note that the budget for below Subtask SMC317.08 (As-needed Regional Collaboration Assistance) is a placeholder. Additional budget details will be developed as part of any authorization from the Program Manager to expend budget under this subtask. For the purpose of this scope of work, it is assumed this budget would be expended during the 12-month FY 2021/22 time period (i.e., July 1, 2021 – June 30, 2022)).

Bonnie de Berry will continue as the water quality monitoring task leader. Similar to recent years, Kinetic Laboratories, Inc. (KLI) will provide technical fieldwork support. Analytical laboratories will include Caltest, BioAssessment Services, EcoAnalysts, Pacific EcoRisk, Alpha Analytical, and Eurofins, or qualified alternatives.

#### **SUBTASK SMC317.01: REGIONAL COORDINATION**

Regional collaboration has been an essential part of SMCWPPP's water quality monitoring approach, is encouraged by MRP provision C.8.a.i., and creates opportunities for cost sharing, information exchange, and more effective planning. EOA will continue to assist SMCWPPP to collaborate and coordinate with other Bay Area municipal stormwater management agencies on all water quality monitoring tasks. This will include representing SMCWPPP on BASMAA's Monitoring and Pollutants of Concern Committee (MPC) and the Regional Monitoring Coalition (RMC) Workgroup, or equivalent committees and workgroups that remain following the dissolution of BASMAA as a 501(c)(3) non-profit organization. During FY 2021/22, these groups may continue to assist with interpretation of MRP monitoring and reporting requirements and help provide planning for any regional collaborative efforts that address current (MRP 2.0) and future (MRP 3.0) requirements associated with provisions C.8 and C.11/12.

If needed and sufficient budget is available, this subtask may also include participation in regional planning and coordination efforts in preparation for transition to the re-issued Permit (i.e., MRP 3.0) which is anticipated to become effective on July 1, 2022 and will likely include modified monitoring and reporting requirements. This subtask may also include occasionally attending relevant policy meetings (e.g., biointegrity & biostimulatory objectives development, Strategy to Optimize Resource Management of Stormwater (STORMS), bacteria objectives, wetland/riparian policy, Caltrans workplans) and/or commenting on related documents. It is assumed that the BASMAA MPC Committee (or equivalent) will continue to meet every other month. It is also assumed that additional communications related to the BASMAA MPC Committee and RMC Workgroup (or equivalent) will be required during the months without meetings to maintain coordination and collaboration as the Permittees prepare for MRP 3.0.

In accordance with Provision C.8.b., all monitoring data must be State of California Surface Water Ambient Monitoring Program (SWAMP) comparable, data quality must be consistent with the SWAMP Quality Assurance Program Plan (QAPrP), and data collection and analytical methods must follow the SWAMP Standard Operating Procedures (SOPs). These requirements are included in the BASMAA Quality Assurance Project Plan (QAPP) and SOPs that were developed during the previous permit term. The BASMAA QAPP and SOPs were updated in FY 2015/16 to capture new MRP 2.0 requirements for creek status and pesticides and toxicity monitoring and in FY 2019/20 to capture new SWAMP protocols.

It is assumed that BASMAA RMC participants will continue to work together to maintain these documents throughout this permit term. EOA will assist with ongoing updates on behalf of SMCWPPP and San Mateo County Permittees.

On behalf of SMCWPPP, in FY 2021/22 EOA will continue to provide technical database assistance to RMC programs, annual compilation of RMC program creek status monitoring data into one database, serving as the link between the RMC and the California Environmental Data Exchange Network (CEDEN) regional data node (i.e., Moss Landing Marine Laboratory (MLML)), and management of the creek status probabilistic monitoring design and site evaluation process.

**Deliverables:**

- Participation in six meetings (every other month) of BASMAA’s MPC Committee (or equivalent) on behalf of SMCWPPP and San Mateo County Permittees, with additional communications as needed during the months without meetings.
- Telephone and email communications and comments on pertinent regional documents and participation in related meetings.
- Technical database assistance to RMC programs, annual compilation of RMC program Creek Status data into one database, serving as the link between the RMC and the CEDEN regional data node (i.e., MLML), and management of the creek status probabilistic monitoring design and site evaluation process.
- If needed and sufficient budget is available, participation in regional planning and coordination efforts in preparation for transition to the re-issued permit (i.e., MRP 3.0).

Note: The above deliverables are for the 12-month FY 2021/22 time period (i.e., July 1, 2021 – June 30, 2022).

**Budget: \$25,356**

**SUBTASK SMC317.02: REGIONAL MONITORING PROGRAM PARTICIPATION**

Under this subtask EOA will assist SMCWPPP to continue to work closely with the San Francisco Estuary Institute (SFEI), which manages the San Francisco Estuary Regional Monitoring Program (RMP), via participation on selected RMP committees, workgroups, and strategy teams. This participation helps to ensure that RMP monitoring effectively addresses management questions of relevance to SMCWPPP and provides data that inform associated permit compliance tasks.

Provision C.8.c. requires Permittees to “*participate in implementing an Estuary receiving water monitoring program, at a minimum equivalent to the San Francisco Estuary Regional Monitoring Program by contributing their fair-share financially on an annual basis.*” The budget for this subtask does not include direct financial contributions to the RMP but does include participation in various RMP committees, workgroups, and strategy teams to help provide input and leadership to the RMP and identify opportunities to direct RMP funds and monitoring activities towards meeting both short- and long-term MRP requirements.

On behalf of SMCWPPP and San Mateo County Permittees, during FY 2021/22 EOA will also continue to participate in the RMP’s Sources, Pathways, and Loadings Workgroup (SPLWG) to ensure that RMP

projects and products are relevant and help answer management questions in the context of TMDLs and attainment of water quality standards. The SPLWG meets yearly. EOA will also participate in strategy teams that inform the SPLWG such as the Small Tributary Loading Strategy Team (STLS) that meets monthly. STLS participation includes selection of stations where monitoring may take place, review of monitoring methods and plans, and oversight of regional modeling efforts and advanced data interpretation efforts. EOA will encourage STLS monitoring and modeling approaches that assist compliance with and address management questions related to Provisions C.8.f. (Pollutants of Concern Monitoring) and C.11/12 (mercury/PCBs). In recent years this has included assisting with the selection, mapping, and logistical facilitation of wet weather monitoring stations in San Mateo County where pollutants of concern (e.g., PCBs, mercury, constituents of emerging concern (CECs)) data are collected by the RMP. Some of the data are being used to help characterize pollutant levels (especially PCBs and mercury) in urban catchments. Other data are informing development of a regional CEC model. In future years, monitoring may shift to addressing management questions related to long-term trends and/or other pollutants of concern.

During FY 2021/22, EOA will also continue to participate in the RMP's PCBs workgroup, which oversees studies specifically designed to address the San Francisco Bay PCBs TMDL. The workgroup is continuing to implement a multi-year study plan that includes monitoring and modeling of high priority Bay margin areas.

This subtask includes email and telephone communications and review of and comment on documents and RMP work products (e.g., regional modeling reports, Advanced Data Analysis reports, monitoring reports, special study proposals). In addition, as feasible within with the budget for this subtask, EOA will represent San Mateo County Permittees in other RMP workgroups, strategy teams, and Supplemental Environmental Project (SEP) meetings as needed (e.g., RMP's Microplastics Workgroup, SEP Stream Flow & Sediment Gaging Project, Nutrient Technical Workgroup, Emerging Contaminants Workgroup).

**Deliverables:**

- Participation in the annual SPLWG Workgroup meeting, the RMP Annual Meeting, 12 monthly meetings of the STLS Team, and up to six additional meetings (e.g., PCBs workgroup) on behalf of San Mateo County Permittees.
- Maps and tables describing recommended STLS sampling stations.
- Comments on pertinent RMP-related documents and work products.
- Telephone and email communications.

Note: The above deliverables are for the 12-month FY 2021/22 time period (i.e., July 1, 2021 – June 30, 2022).

**Budget: \$24,372**

**SUBTASK SMC317.03: CREEK STATUS MONITORING**

During WY 2022, EOA will continue to perform all aspects of the countywide creek status monitoring program, in accordance with MRP Provision C.8.d. The primary objectives of creek status monitoring are to gather information on whether numeric and narrative water quality objectives are being met in creeks and whether creek conditions are supportive of designated beneficial uses (e.g., aquatic habitat,

recreational uses). Creek status monitoring will continue to be conducted in accordance with the monitoring designs that were developed by the BASMAA RMC during the previous permit term and are now specified in the current MRP.

### **Bioassessment Monitoring**

The probabilistic design involves use of a master list<sup>3</sup> to randomly identify sample stations (i.e., the sample draw) for bioassessment monitoring. The random nature of the sampling design allows for statistically significant evaluation of ambient creek conditions within San Mateo County, region-wide, and state-wide. Potential probabilistic stations from the “sample draw” are evaluated using a defined process that addresses site permissions, logistical considerations, and sampleability as described in the BASMAA RMC Creek Status and Long-Term Trends Monitoring Plan. SMCWPPP is required to conduct bioassessment monitoring at ten sites per year. The MRP requires that 80% of the required bioassessment sites are selected using the probabilistic design; however, barring a wet year that results in higher-than-average spring stream flow, the master list is essentially exhausted. Therefore, EOA will likely select all WY 2022 sites on a targeted basis (e.g., to evaluate temporal trends, creek response to management/restoration actions, and/or to address other impacts to aquatic life condition). As in recent years, in WY 2022 EOA will conduct site evaluations to develop a list of ten sampleable sites. Site evaluations will include development of maps, communications with creek-side landowners to obtain permissions, acquisition of any permits needed from agencies, and site reconnaissance visits in the fall and winter to determine access and safety and to check for obstructions (e.g., culverts, grade controls) that would affect bioassessment results.

EOA will collect the types of screening-level biological, physical, and chemical water quality data required by Provision C.8.d.i. at the ten bioassessment sites. Field activities will include biological community sampling (benthic macroinvertebrate and algae bioassessments), characterization of physical habitat, sonde measurements of general water quality parameters, and collection of water samples for laboratory analysis of nutrients. All sampling will be conducted by EOA’s SWAMP-trained field crew under our Scientific Collection Permit from the California Department of Fish and Wildlife. Bioassessments will be conducted during the index period (April 15 – June 30) according to the most recent version of SWAMP SOPs for bioassessment. Based on our past experience, the budget assumes that EOA’s four-person field crew will complete an average of 1.5 bioassessments per day. EOA’s field crew will conduct an annual pre-season field practice session. Members of the field crew also receive training in first aid and safety procedures, including protocols related to working safely during the COVID-19 pandemic, as needed.

Benthic macroinvertebrate samples will be sent to BioAssessment Services in Folsom, CA for SAFIT Level 1 analysis. Algae samples will be sent to EcoAnalysts in Moscow, ID for species-level identification of soft-bodied algae and diatoms. Nutrient samples will be sent to Caltest in Napa, CA for chemical analysis. EOA has worked with these laboratories for many years to have samples analyzed per MRP 2.0 requirements. They report data in a SWAMP-comparable format and with quality controls required by the CEDEN in accordance with MRP Provision C.8.h.ii.

Chlorine monitoring required by Provision C.8.d.ii. will be conducted with a field spectrometer at the bioassessment sites concurrent with bioassessment monitoring.

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<sup>3</sup> EOA has housed, managed, and maintained the master list since it was developed in 2009.



### Other Creek Status Parameters

Provision C.8.d. requires continuous water quality monitoring using multi-parameter probe measurements (i.e., pH, temperature, specific conductance, and dissolved oxygen) and temperature loggers, as well as grab samples for pathogen indicators. Monitoring can be conducted along any creek where gathering new data is deemed valuable. The focus will be on collecting general water quality and temperature data in creeks that currently support or historically supported cold water fisheries. Pathogen indicator sampling will occur in creeks where recreational uses are plausible and/or where the data have multiple uses (e.g., TMDLs, Stressor/Source Identification studies). During the site selection process maps are developed, permissions are obtained (if needed), and a site reconnaissance visit is conducted to confirm safe access. Continuous monitoring with the multi-parameter probes must be conducted at two stations per year during two two-week deployments (spring and late summer). Temperature logging must be conducted at four stations per year from April through September (five loggers are typically deployed to mitigate for potential loss of these small devices). Pathogen indicator sampling must be conducted at five stations per year during the dry season, typically in July. Pathogen indicator samples will be delivered to Alpha Analytical Laboratory in Livermore, CA (or an equivalently certified microbiology lab) for *E. coli* and enterococcus enumeration.

### Data Quality Objectives

In accordance with Provision C.8.b., all monitoring data collected will be SWAMP comparable, consistent with the SWAMP QAPrP and the BASMAA QAPP, and data collection and analytical methods will follow the SWAMP and BASMAA SOPs. EOA keeps abreast of SWAMP procedures which are continually reviewed and updated at the state level. We will confirm that all participating analytical laboratories are using the most current requirements.

Quality assurance and quality control (QA/QC) review (i.e., data validation) of Creek Status Monitoring data will be conducted according to the BASMAA QAPP which specifies quantitative and qualitative data quality objectives (DQOs) for accuracy, precision, and completeness. Data not meeting the defined DQOs will be corrected if possible and flagged, as necessary. The data validation process takes several months to complete and typically occurs between July and December as field data sheets are entered, laboratory reports are received, and the online SWAMP and CEDEN data checkers are accessed. The resulting validated spreadsheets tabulating all creek status monitoring data will be uploaded to the BASMAA RMC Database which is housed, managed, and maintained by EOA.

WY 2022 Creek Status Monitoring results will be described in the Urban Creeks Monitoring Report (UCMR) due March 31, 2023. See the description below of Subtask SMC317.07 (Reporting) for more information.

### Deliverables:

- WY 2022 site evaluation data associated with all monitoring sites.
- WY 2022 participation in pre-season bioassessment training session, bioassessment monitoring at ten sites, chlorine monitoring, and completed bioassessment monitoring field forms.
- WY 2022 spring and late-summer deployment (each for two weeks) and retrieval of continuous monitoring sondes at two sites.
- WY 2022 deployment, mid-season calibration check, and retrieval of five temperature loggers.



- WY 2022 collection of five pathogen indicator samples.
- WY 2022 creek status monitoring data that have undergone QA/QC review for all parameters required by Provision C.8.d.
- Populated database with all WY 2022 data.

**Budget: \$242,572**

#### **SUBTASK SMC317.04: STRESSOR/SOURCE IDENTIFICATION PROJECTS**

Provision C.8.e. requires that Permittees develop and maintain a list of candidate Stressor/Source Identification (SSID) studies based on creek status and pesticides and toxicity monitoring data that exceed “triggers” identified in MRP 2.0. SSID Projects must follow the stepwise process described in Provision C.8.e. As a first step, a work plan describing the problem and how it will be investigated is developed. Step two includes implementation of the work plan which may include field (e.g., sample collection) and desktop (e.g., mapping, modeling) studies. Step three includes follow-up actions, as appropriate (e.g., implementation of new BMPs). Specific details of the SSID Projects will depend on what type of stressor investigated (e.g., dissolved oxygen, pathogen indicators, temperature, toxicity).

As a participant in the BASMAA RMC, SMCWPPP and its regional partners are required to initiate a combined total of eight new SSID Projects during this permit term. In WY 2018, the RMC partners agreed on an equitable allocation of effort which includes SMCWPPP responsibility for one SSID Project. Consistent with this approach, on behalf of SMCWPPP, EOA developed and implemented the Pillar Point Harbor Watershed Bacteria SSID Project Work Plan. The Final Pillar Point Harbor Watershed Bacteria SSID Project Report was submitted to the Regional Water Board in October 2019 and was revised in May 2020 in response to Regional Water Board staff comments.

To reach the goal of eight new SSID Projects during the permit term, the RMC partners also agreed to conduct a regional SSID Project that addresses electrical utility sources of PCBs. Development and implementation of the Regional Electrical Utilities SSID Project was conducted as a BASMAA Regional Project during FY 2018/19 and FY 2019/20. The Regional SSID Project Report was submitted to the Regional Water Board in October 2020 and written comments were not received as of December 2020.

Provision C.8.e. requires annual submittal of a unified, regional SSID report to the Regional Water Board. On behalf of SMCWPPP, EOA will continue to work with the BASMAA RMC Workgroup (or equivalent) to develop the regional SSID report. It is assumed that the regional SSID report will continue to consist primarily of a large-format table describing the status and conclusions (as available) of all SSID Projects completed, underway, and planned. It will be submitted to the Regional Water Board concurrent with the UCMR by March 31, 2023.

#### **Deliverables:**

- Continue working with RMC partners to maintain the list of candidate SSID projects and to develop the annual regional SSID report that will be submitted with the UCMR by March 31, 2023.

**Budget: \$2,304**

**SUBTASK SMC317.05: POLLUTANTS OF CONCERN MONITORING**

Provision C.8.f. requires Pollutants of Concern (POC) monitoring for PCBs, mercury, copper, emerging contaminants, and nutrients. The MRP defines yearly (i.e., water year) and total (i.e., permit term) minimum numbers of samples for each POC. Five priority POC management information needs are identified including Source Identification, Contributions to Bay Impairment, Management Action Effectiveness, Loads and Status, and Trends. The MRP specifies the minimum number of samples for each POC that must be collected each year (i.e., eight PCBs samples, eight mercury samples, two copper samples, two nutrient samples) and the information need(s) that must be addressed by the monitoring.

Table 1 summarizes the WY 2022 POC monitoring deliverables and budgets. Please note that the first item in Table 1 (participation in the FY 2021/22 BASMAA MPC (or equivalent) meetings by EOA staff focusing on PCBs and mercury controls) is for the 12-month FY 2021/22 time period (i.e., July 1, 2021 – June 30, 2022). Also please note that MRP requirements related to emerging contaminants will continue to be addressed via SMCWPPP’s participation in the RMP (see Subtask SMC317.02: Regional Monitoring Program Participation).

**Table 1. WY 2022 POC Monitoring Deliverables and Budgets**

Deliverable	WY 2022 Budget
1. Participation in the FY 2021/22 BASMAA MPC (or equivalent) activities (meetings and coordination between meetings) by EOA staff focusing on PCBs and mercury controls	\$10,896
2. Copper and nutrients sampling (two samples of each to meet annual minimum requirements)	\$5,250
3. Sediment sampling for PCBs and mercury (eight samples to meet annual minimum requirements)	\$19,032
4. WY 2022 POC monitoring data that has undergone QC review for all parameters required by Provision C.8.f.	\$5,250
5. WY 2022 POC interpretive monitoring report due with the WY 2022 UCMR by March 31, 2023	\$16,800
6. PCBs related activities as needed (supplements SMC315.01): GI/LID inventory, PCBs load reduction accounting, source investigation follow-up, referrals, WMA prioritization update, Annual Report update	\$65,000
<b>Total POC Monitoring Budget</b>	<b>\$122,228</b>

**SUBTASK SMC317.06: PESTICIDES AND TOXICITY MONITORING**

EOA will perform the WY 2022 Pesticides and Toxicity (P&T) monitoring specified in MRP 2.0 Provision C.8.g., which requires that Permittees conduct dry weather and wet weather monitoring of pesticides and toxicity in urban creeks.

**Dry Weather.** San Mateo County Permittees are required to sample one dry weather station per year for water column toxicity (five test organisms), sediment toxicity (two test organisms), and sediment chemistry (pesticides, PAHs, metals, total organic carbon, grain size). EOA, on behalf of SMCWPPP and San Mateo County Permittees, coordinates dry weather sampling with its RMC partners to realize cost savings on QA/QC samples (e.g., field duplicates<sup>4</sup>, matrix spikes). EOA will conduct planning for WY 2022 dry weather P&T monitoring and samples will likely be collected in July 2022 in coordination with the RMC partners. EOA will continue to subcontract with KLI to conduct the sampling and KLI will contract with the analytical laboratories (Pacific EcoRisk and Caltest, or equivalent).

**Wet Weather.** The MRP provides the incentive that if wet weather P&T samples are collected on a regional basis, fewer samples are required overall. Under this regional option, a total of ten wet weather samples must be collected over the permit term, with a minimum of six samples collected by the end of the third water year (WY 2018). Wet weather samples must be analyzed for water toxicity (five test organisms) and water chemistry (pesticides). Wet weather P&T monitoring by SMCWPPP was implemented during a winter rain event in WY 2018. No additional wet weather P&T samples are required during the MRP 2.0 permit term.

In accordance with Provision C.8.b., all P&T monitoring data will be SWAMP comparable, data quality will be consistent with the SWAMP QAPrP and the BASMAA QAPP, and data collection and analytical methods will follow the SWAMP and BASMAA SOPs. QA/QC review (i.e., data validation) of P&T monitoring data will be conducted by EOA according to the BASMAA QAPP which specifies quantitative and qualitative DQOs for accuracy, precision, and completeness. Data not meeting the defined DQOs will be corrected if possible and flagged as necessary. The data validation process takes several months to complete and typically occurs between July and December as field data sheets are entered, laboratory reports are received, and the online SWAMP and CEDEN data checkers are accessed. The resulting validated spreadsheets tabulating all P&T monitoring data will be uploaded to the BASMAA Regional Monitoring Database which, as mentioned previously, is housed, managed, and maintained by EOA.

WY 2022 P&T monitoring results will be included with the UCMR due March 31, 2023. See the below description of Subtask SMC317.07 (Reporting) for more information.

**Deliverables:**

- Telephone and email communications and planning in preparation for WY 2022 P&T sample collection.
- WY 2022 dry weather P&T monitoring at one station.
- WY 2022 P&T monitoring data that have undergone QA/QC review for all parameters required in Provision C.8.g.

**Budget: \$34,167**

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<sup>4</sup> SMCWPPP is responsible for sediment chemistry field duplicates in WY 2022 (responsibility is rotated among the RMC programs with SMCWPPP last collecting field duplicates in WY 2018).

**SUBTASK SMC317.07: REPORTING**

Provision C.8.h. requires annual and comprehensive reporting of data collected pursuant to MRP 2.0 Provision C.8, in SWAMP-comparable format as appropriate for submittal to the Regional Water Board, and submittal of applicable data to CEDEN. EOA will develop and include all the required reporting materials in the Urban Creeks Monitoring Report (UCMR). San Mateo County Permittees will have the opportunity to review and comment on a draft version of the UCMR. EOA will then revise the draft UCMR as needed and submit to the Regional Water Board by the March 31, 2023 due date.

Per MRP requirements, Electronic Monitoring Data reports will be submitted annually (by March 31) to the Regional Data Center (i.e., Moss Landing Marine Lab) for upload to CEDEN. Each Electronic Monitoring Data report will include monitoring results conducted pursuant to Provisions C.8.d. (Creek Status Monitoring), Provision C.8.e. (SSID Projects), C.8.f. (POCs), and C.8.g. (Pesticides and Toxicity) for the preceding water year. As of March 31, 2020, Regional Data Center review and CEDEN upload services are no longer covered by SWAMP. Therefore, EOA will contract with MLML to review and upload the data.

Each annual UCMR summarizes results and provides interpretations of data collected pursuant to Provisions C.8.d. through C.8.g. for the preceding water year. Bioassessment data are evaluated using the California Stream Condition Index (CSCI). Creek Status and Pesticides & Toxicity data are compared to the “triggers” listed in MRP 2.0. Triggers are numeric thresholds above (or below) which impacts to water quality may occur. The MRP triggers are taken from a variety of sources, including water quality objectives from the Basin Plan, state and federal regulatory guidance, and peer reviewed literature. Data exceeding the triggers are compiled in a list of candidate SSID Projects. Monitoring stations and results are presented in GIS maps and analyzed using spreadsheets and statistical software, as appropriate. The SSID and POC reporting elements are developed as stand-alone reports under their respective subtasks described above and attached to the UCMR as appendices.

During FY 2022/23, following data validation and data review, EOA will develop the WY 2022 Electronic Monitoring Data Report, UCMR, and POC Monitoring and Data Reports. Deliverables related to SSID and POC Monitoring will be developed separately under their subtasks but will be summarized in the UCMR and included as appendices.

**Deliverables:**

- WY 2022 Electronic Monitoring Data Report (due March 31, 2023).
- WY 2022 draft and final UCMR (due March 31, 2023).

**Budget: \$39,949**

**SUBTASK SMC317.08: AS-NEEDED REGIONAL COLLABORATION ASSISTANCE**

From time to time the need has arisen for implementation of water quality monitoring and/or POCs related projects that are more efficiently and/or cost-effectively conducted via a collaboration among MRP Permittees from the various Bay Area counties. However, with the recent dissolution of BASMAA, the mechanism of providing budget directly to BASMAA for funding such regional collaborative efforts is no longer available. As an alternative, SMCWPPP and/or San Mateo County Permittees may wish to

participate in future regional projects by providing in-kind services through EOA staff or subcontractors. This subtask provides the Program Manager with the option to approve, on an as-needed basis, such in-kind participation in any regional collaborative projects related to water quality monitoring and/or POCs that may arise.

For example, based on ongoing discussion with Regional Water Board staff, there will likely be a need for revisions to the regional Source Control Load Reduction Accounting (SCLRA) for Reasonable Assurance Analysis report dated August 31, 2020, which was prepared via a BASMAA regional project. The SCLRA report defines the methods that Permittees will use to calculate mercury and PCBs load reductions from source controls during MRP 3.0. SMCWPPP may also wish to work with other Bay Area stormwater management programs to develop detailed work plans for regional studies or other monitoring-related documents in preparation for adoption of MRP 3.0.

Budget under this subtask will only be expended with prior authorization from the Program Manager.

**Deliverables:**

- To be determined, as needed and authorized by the Program Manager.

**Placeholder Budget: \$20,000** (Additional budget details will be developed as part of any authorization from the Program Manager to expend budget under this subtask. For the purpose of this scope of work, it is assumed this budget would be expended during the 12-month FY 2021/22 time period (i.e., July 1, 2021 – June 30, 2022)).

## EXHIBIT A

## EOA WY 2022 Water Quality Monitoring Municipal Stormwater Permit Compliance Assistance to C/CAG

	Principle	Manager III	Manager II	Manager I	Senior III	Senior II	Senior I	Associate III	Associate II	Associate I	Assistant	Technician	Clerical	Expenses/Subs	WY 2022 Budget
EOA Hourly Rate for SMCWPPP:	\$242	\$227	\$225	\$222	\$204	\$181	\$162	\$154	\$151	\$123	\$112	\$99	\$74		
<b>Water Quality Monitoring</b>															
<b>SMC317.01</b> Regional Coordination (FY 2021/22)	0	0	104	0	0	0	8	0	0	0	0	0	0	\$660	\$25,356
<b>SMC317.02</b> Regional Monitoring Program Participation (FY 2021/22)	0	12	94	0	0	0	0	0	0	0	0	0	0	\$498	\$24,372
<b>SMC317.03</b> Creek Status Monitoring (WY 2022)	0	32	222	0	162	0	84	183	200	234	0	28	0	\$48,766	\$242,572
<b>SMC317.04</b> Stressor/Source Identification Projects (WY 2022)	0	2	8	0	0	0	0	0	0	0	0	0	0	\$50	\$2,304
<b>SMC317.05</b> Pollutants of Concern Monitoring (WY 2022)	0	120	0	60	200	0	60	0	36	40	0	0	8	\$19,658	\$122,228
<b>SMC317.06</b> Pesticides and Toxicity Monitoring (WY 2022)	0	2	14	0	6	0	4	0	10	0	0	2	0	\$26,983	\$34,167
<b>SMC317.07</b> Reporting (on WY 2022 activities)	4	16	40	0	40	0	20	0	40	40	0	0	4	\$3,693	\$39,949
<b>SMC317.08</b> Regional Collaboration Support - Water Quality Monitoring and POCs (FY 2021/22)	0	24	32	0	16	0	0	0	20	0	0	0	4	\$772	\$20,000
	<b>4</b>	<b>208</b>	<b>514</b>	<b>60</b>	<b>424</b>	<b>0</b>	<b>176</b>	<b>183</b>	<b>306</b>	<b>314</b>	<b>0</b>	<b>30</b>	<b>16</b>	<b>\$101,080</b>	<b>\$510,948</b>

**Notes:**

Labor hours are based upon the approximate level of effort for each task.

Subcontractors and expenses are planning-level estimates.

Actual distribution of hours and subcontractors/expenses within and among tasks may vary.

Total budget will not be exceeded without C/CAG's authorization.

Subtasks SMC317.01 (Regional Coordination) and SMC317.02 (Regional Monitoring Program Participation) are ongoing activities that are not tied to a particular water year. For these subtasks, the above budgets cover the 12-month FY 2021/22 period of time (i.e., July 1, 2021 – June 30, 2022).

Subtask SMC317.08 (Regional Collaboration Support - Water Quality Monitoring and POCs) is a placeholder. Additional details will be developed as part of any authorization from the Program Manager to expend budget under this subtask. For the purpose of budgeting, it is assumed this budget would be expended during the 12-month FY 2021/22 time period.

Expenses/subcontractors budgets shown include 10% overhead.