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TASK ORDER FORM

(Amendment No. 1 – June 10, 2021)

(Amendments ~~Strikethrough~~ and Underlined)

Date/Start Date: July 1, 2020
Consultant Name: EOA, Inc.
Contract: Countywide Water Pollution Prevention Program Technical Support – On-Call Contracts
Task Order No.: EOA-12
Task Order Name: Municipal Stormwater NPDES Permit Compliance Assistance
Scope of Work: Water Year 2021 monitoring activities
Deliverables: See attached scope of work
Budgeted Cost: Per attached scope of work, not to exceed \$345,393 for Fiscal Year 2020-21. ~~The additional \$155,534 for work in Fiscal Year 2021-22 is subject to sufficient funds being included in C/CAG's approved 2021-22 budget and a new or amended contract with EOA, Inc. Consultant shall not proceed to perform any work in Fiscal Year 2021-22 under this Task Order without written direction from C/CAG staff. The Task Order is issued through June 30, 2022 to account for end of Water Year 2021 water monitoring reporting needs.~~

Amendment No. 1: EOA's contract was extended through September 30, 2022 and additional funds in the amount of \$155,534 are included in the 2021-22 C/CAG Budget. Authorization is hereby provided to execute 2021-22 portions of the scope of work and deliverables.

Completion Date: June 30, 2022

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 2021 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.



FINAL May 15, 2020

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 is 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 2021 (WY 2021) water quality monitoring and 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 2021 water quality monitoring activities is \$500,926. We understand that C/CAG will authorize expenditure during FY 2020/21 of \$345,393 of this total budget and will likely authorize expenditure during FY 2021/22 of the remaining \$155,534. Please note that the estimated FY 2020/21 budget includes about \$85K in subcontractor/laboratory costs that must be contracted for in FY 2020/21 but are not invoiced until FY 2021/22.¹

TASK SM27 – 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 2021 (i.e., October 1, 2020 – September 30, 2021, abbreviated as WY 2021) are documented in reports submitted by March 31, 2022. Because the typical municipal fiscal year (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 activities associated with WY 2021 water quality monitoring, including fieldwork, data Quality Assurance / Quality Control (QA/QC), and reporting. However, Subtasks SM27.01 (Regional Coordination) and SM27.02 (Regional Monitoring Program Participation) are ongoing activities that are not tied to a particular water year. The budgets for Subtasks SM27.01 and SM27.02 are generally based on the estimated amount of EOA staff time needed each month or for each of a certain number of periodic meetings. For these three subtasks, this scope and budget covers the 12-month FY 2020/21 period of time (i.e., July 1, 2020 – June 30, 2021).

The structure of this scope and budget assumes that, similar to previous water years, C/CAG will issue an annual WY 2021 water quality monitoring task order that is effective July 1 and covers all monitoring and reporting activities associated with WY 2021 (i.e., the WY 2021 task order would be effective July 1,

¹ EOA will commit to paying subcontractors for this work at the time samples are collected in FY 2020/21, but subcontractors will not invoice EOA until FY 2021/22.

2020 and cover activities through June 30, 2022, the date that the final WY 2021 reporting is expected to be complete², and thus cover a 2 year time period).

Under this task EOA will continue to work closely with the San Francisco Estuary Institute (SFEI), which manages the San Francisco Estuary Regional Monitoring Program (RMP). EOA staff participates on the RMP Steering Committee, Technical Review Committee (TRC) and selected RMP workgroups and strategy teams. This participation helps to ensure that RMP monitoring effectively addresses the management questions of interest to SMCWPPP and all of the BASMAA regional partners, and assists with associated permit compliance.

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

SUBTASK SM27.01: 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. During FY 2020/21 these groups will continue to assist with interpretation of MRP monitoring and reporting requirements and help provide planning for any BASMAA regional projects and projects of mutual benefit that address current (MRP 2.0) and future (MRP 3.0) requirements associated with provisions C.8 and C.11/12. This subtask will also include 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, 2021 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 RMC Workgroup will continue to meet quarterly. The meeting frequency for the BASMAA MPC Committee was recently reduced from monthly to bimonthly. It is assumed that the new bimonthly schedule will continue through FY 2020/21, but that additional communications will be required during the months without meetings to maintain coordination and collaboration.

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 and maintained 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

² Prior years' experience has shown that reporting tasks generally extend into the months following the deadline for the Urban Creeks Monitoring Report. This is especially true for electronic data submittals to the Regional Data Center (see Subtask SM27.07).

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.

In FY 2020/21, EOA, on behalf of SMCWPPP, 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 bimonthly meetings of BASMAA’s MPC Committee and four quarterly meetings of BASMAA’s RMC Workgroup 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.

Note: The above deliverables are for the 12-month FY 2020/21 time period (i.e., July 1, 2020 – June 30, 2021).

Budget: \$25,356

SUBTASK SM27.02: REGIONAL MONITORING PROGRAM PARTICIPATION

Provision C.8.c requires that Permittees “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 financial contributions to the RMP, but does include participation in various RMP Workgroups and Strategy Teams to 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, EOA will participate in the RMP’s Sources, Pathways, and Loadings Workgroup (SPLWG) which ensures 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 plans, and oversight of regional modeling efforts. EOA will make every effort to ensure that STLS monitoring and modeling 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 and mercury) data are collected by the RMP. The data are being used to identify watersheds where PCBs and mercury control actions are likely to have the highest load reduction benefit. In future years, monitoring may shift to addressing management questions related to long-term trends and/or other pollutants of concern.

During FY 2020/21, EOA will also continue to participate in the RMP's PCBs workgroup, which oversees studies specifically designed to address the PCBs in the San Francisco Bay 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., Long-Term Trends Modeling Implementation Plan, Advanced Data Analysis reports, monitoring reports, special study proposals). In addition, EOA will represent San Mateo County Permittees or the BASMAA RMC 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 RMP's annual SPLWG Workgroup meeting, the RMP's overall 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 and/or BASMAA.
- 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 2020/21 time period (i.e., July 1, 2020 – June 30, 2021).

Budget: \$24,372

SUBTASK SM27.03: CREEK STATUS MONITORING

During WY 2021, 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 list³ to randomly identify sample stations (i.e., the sample draw) for bioassessment monitoring. The random nature of the sampling design allows for

³ EOA has housed and managed the master list since it was developed in 2009 and will continue to do so throughout the current permit term.

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, the master list was exhausted in WY 2020. Therefore, EOA will select all WY 2021 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 2020 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 will also receive training in first aid and safety procedures.

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 diatom algae. Nutrient samples will be sent to Caltest in Napa, CA for chemical analysis. EOA has worked with these laboratories for many years. 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.

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 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 Dublin, CA (or 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 currently managed and maintained by EOA.

WY 2021 Creek Status Monitoring results will be described in the Urban Creeks Monitoring Report (UCMR) due March 31, 2022. See the description below of Subtask SM27.07 (Reporting) for more information.

Deliverables:

- WY 2021 site evaluation data associated with all monitoring sites.
- WY 2021 participation in pre-season bioassessment training session, bioassessment monitoring at ten sites, chlorine monitoring, and completed bioassessment monitoring field forms.
- WY 2021 spring and late-summer deployment (each for two weeks) and retrieval of continuous monitoring sondes at two sites.
- WY 2021 deployment, mid-season calibration check, and retrieval of five temperature loggers.
- WY 2021 collection of five pathogen indicator samples.
- WY 2021 creek status monitoring data that have undergone QA/QC review for all parameters required by Provision C.8.d.
- Populated database with all WY 2021 data.

Budget: \$241,366

SUBTASK SM27.04: 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 the MRP. 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 BASMAA RMC is also required to submit unified, regional SSID reports annually to the Regional Water Board. On behalf of SMCWPPP, EOA will continue to work with the BASMAA RMC Workgroup 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, 2022.

Deliverables:

- Continue working with RMC partners to maintain the list of candidate SSID projects and to develop the annual regional SSID report submitted with the UCMR by March 31, 2022.

Budget: \$2,304

SUBTASK SM27.05: 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 2021 POC monitoring deliverables and budgets. Please note that the first item in Table 1 (participation in the FY 2019/20 BASMAA MPC meetings by EOA staff focusing on PCBs and mercury controls) is for the 12-month FY 2019/20 time period (i.e., July 1, 2019 – June 30, 2020). Also note that MRP requirements related to emerging contaminants will continue to be addressed via

SMCWPPP’s participation in the RMP (see Subtask SM17.02: Regional Monitoring Program Participation).

Table 1. WY 2021 POC Monitoring Deliverables and Budgets

Deliverable	WY 2020 Budget
1. Participation in the FY 2020/21 BASMAA MPC activities (meetings and coordination between meetings) by EOA staff focusing on PCBs and mercury controls	\$13,620
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)	\$18,476
4. POC monitoring report due October 15, 2021 that details what was accomplished in WY 2021 and what activities are anticipated in WY 2022	\$12,000
5. WY 2021 POC monitoring data that has undergone QC review for all parameters required by Provision C.8.f.	\$5,250
6. WY 2021 POC interpretive monitoring report due with the WY 2021 UCMR by March 31, 2022	\$16,800
7. GI/LID inventory, PCBs load reduction accounting, source investigation follow-up, referrals, WMA prioritization update, Annual Report update (supplements SM25.01)	\$65,000
Total POC Monitoring Budget	\$136,396

SUBTASK SM27.06: PESTICIDES AND TOXICITY MONITORING

EOA will perform the WY 2021 Pesticides and Toxicity (P&T) monitoring specified in MRP 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, matrix spikes). EOA will conduct planning for WY 2021 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). The 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 this 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 is managed and maintained by EOA.

WY 2021 P&T monitoring results will be included with the UCMR due March 31, 2022. See the below description of Subtask SM27.07 (Reporting) for more information.

Deliverables:

- Telephone and email communications and planning in preparation for WY 2021 P&T sample collection.
- WY 2021 dry weather P&T monitoring at one station.
- WY 2021 P&T monitoring data that have undergone QA/QC review for all parameters required in Provision C.8.g.

Budget: \$31,183

SUBTASK SM27.07: REPORTING

Provision C.8.h requires annual and comprehensive reporting of data collected pursuant to MRP 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 all required reporting materials for review and comment by San Mateo County Permittees prior to Regional Water Board submittal.

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.

The UCMR is submitted annually (by March 31) to the Regional Water Board. 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 P&T data are compared to the “triggers” listed in the MRP.

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 2021/22, following data validation and data review, EOA will develop the WY 2021 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 2021 Electronic Monitoring Data Report (due March 31, 2022).
- WY 2021 UCMR (due March 31, 2022).

Budget: \$39,949

EXHIBIT A EOA WY 2021 Water Quality Monitoring Municipal Stormwater Permit Compliance Assistance to C-CAG

EOA Hourly Rate for SMCWPPP:	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 2021 Budget
	\$242	\$227	\$225	\$222	\$204	\$181	\$162	\$154	\$151	\$123	\$112	\$99	\$74		

Water Quality Monitoring															
SM27.01	Regional Coordination (FY 2020/21)	0	0	104	0	0	0	8	0	0	0	0	0	\$660	\$25,356
SM27.02	Regional Monitoring Program Participation (FY 2020/21)	0	12	94	0	0	0	0	0	0	0	0	0	\$498	\$24,372
SM27.03	Creek Status Monitoring (WY 2021)	0	32	222	0	162	0	84	183	200	234	0	28	\$47,560	\$241,366
SM27.04	Stressor/Source Identification Projects (WY 2021)	0	2	8	0	0	0	0	0	0	0	0	0	\$50	\$2,304
SM27.05	Pollutants of Concern Monitoring (WY 2021)	0	180	0	40	240	0	60	0	40	60	0	4	\$14,260	\$136,396
SM27.06	Pesticides and Toxicity Monitoring (WY 2021)	0	2	14	0	6	0	4	0	10	0	2	0	\$23,999	\$31,183
SM27.07	Reporting (on WY 2021 activities)	4	16	40	0	40	0	20	0	40	40	0	4	\$3,693	\$39,949
		4	244	482	40	448	0	176	183	290	334	0	30	\$90,720	\$500,926

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 SM27.01 (Regional Coordination) and SM27.02 (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 2020/21 period of time (i.e., July 1, 2020 – June 30, 2021).
 Expenses/subcontractors budgets shown include 10% overhead.