

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: Larry Walker & Associates

Contract: Countywide Water Pollution Prevention Program Technical Support

Task Order No.: LWA-07

Task Order Name: Municipal Stormwater NPDES Permit Compliance Assistance

Scope of Work: Green Infrastructure, Modeling, and Mercury & PCBs (see attached scope)

Deliverables: See attached scope of work

Budgeted Cost: Per attached Fiscal Year 2021-22 scope of work.

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 start date 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

LWA

Sandy Wong, Executive Director Date

Date

Draft Scope of Services

Fiscal Year 2021-2022

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Scope of Services

Services described in this document are those that will be conducted in Fiscal Year (FY) 2021-2022. The cost estimate for the services is provided in Table 1.

Task 5. Green Infrastructure (GI) Planning

Sub-Task 5.9 Support for implementation of GI plans

The following describes tasks supporting planning and implementation of GI to meet MRP requirements, and adaptive management processes that consider potential changes to MRP requirements and parallel GI planning efforts, which can be considered for updates to jurisdictional GI Plans.

Sub-Task 5.9.a Analyses of the impacts of alternative GI planning scenarios

Paradigm will support SMCWPPP and jurisdictions in analyses of the impacts of alternative GI planning initiatives and MRP requirements, including changes to C.3 requirements for LID, considerations for managing runoff from industrial areas, and updates to GI plans with additional regional projects or refinements of regional project conceptual designs. Paradigm will utilize the regional RAA model to evaluate multiple GI implementation scenarios and quantify the impacts in terms of altering the level of effort needed to implement GI plans to meet MRP pollutant reduction goals. Results of these analyses will inform SMPWPPP on the implications of alternative new requirements of MRP 3.0, and support the adaptive management of GI plans to meet these requirements. Paradigm will coordinate with SMCWPPP to determine which scenario will be considered for this task to investigate implications of the tentative MRP 3.0, and the technical assumptions to be used to complete the analyses. The following are examples of potential scenarios that may be considered for this task.

The Water Board’s proposed changes to the definition of C.3 regulated projects focuses on lowering the new or replaced impervious surface area threshold to 5,000 square feet and removing the exemption for street and single family residential projects. The Water Board is also considering new requirements for permittees to manage runoff from industrial areas (e.g., 10% of industrial area) through the implementation of GI. SMCWPPP is interested in understanding the implications of these proposed changes on the mix of private and public projects that are needed for

jurisdictions to satisfy their targets for impervious area treated and stormwater runoff managed. This would be done by performing an analysis of how the proposed C.3 regulated project changes and management of industrial area runoff would affect the extent of GI in two (2) example local jurisdictions in San Mateo County.

Based on previous methodologies used to identify areas subject to future new and redevelopment, The LWA Team will perform an analysis of areas subject to C.3 based on the potential alternative area threshold of 5,000 square feet. Results of this analysis will be GIS files and associated maps to allow comparison to previous C.3 requirements, and summaries of the changes or area addressed by C.3 within each jurisdiction. To accomplish this work, the LWA team will add Will Lewis Consulting, as a subcontractor.¹ The RAA model will be used to quantify the amount of additional runoff volume and LID capacity associated with the alternative area threshold, and the impact on the estimates of additional GI capacities needed countywide to meet MRP pollutant reduction goals by 2040.

Municipalities are also considering adoption of progressive policies requiring developers to include GI retrofits within road rights-of-way adjacent to developed parcels. To help inform decision-making for these policies, Paradigm will evaluate a scenario that builds upon the above scenario, and considers methods for expanding the treated area (i.e., “green acreage”) based on typical distances around developed parcels where right-of-way retrofits can occur. Paradigm will work closely with the SMCWPPP to identify appropriate assumptions for the typical buffer areas around the developed parcels. Based on the expanded area addressed by development, similar to the analysis above, the RAA model will be used to quantify the runoff volume and LID capacity associated with the scenario.

An additional scenario will be evaluated that assumes runoff from 10% of old industrial areas managed through implementation of GI. Paradigm will quantify the amount of GI needed to manage runoff from these industrial areas, and the resulting impact on additional GI needed to meet MRP pollutant reduction goals by 2040.

SMCWPPP is presently working with cities to develop/refine five (5) regional project concepts. Two regional projects in Belmont and Redwood City were included in the RAA, but the concepts have changed or are likely changed since the modeling was performed. Paradigm will review the modeling approaches used in the development of the project concepts and will incorporate in the RAA model to determine volume capture for each jurisdiction, and the amount of stormwater volume that will otherwise no longer require management using other GI practices considered by the RAA. Results of the analysis will include new countywide estimates of the amount of GI needed (beyond the regional projects) to meet MRP pollutant reduction goals by 2040.

Paradigm will prepare a draft memorandum for review by SMCWPPP staff and local jurisdiction staff describing the methodologies and results of the above scenarios. Results of the analysis will provide comparison of GI projects (needed to meet 2040 goals) for the original RAA and changes based on the new considerations for C.3, old industrial areas, and regional projects. The purpose of this memorandum is to inform SMCWPPP staff and jurisdictions on decision-making for GI planning and implementation, and ongoing discussions with MRP staff on changes to Provision C.3 and C.11/C.12 requirements.

Meetings and Deliverables

- Draft and final memorandum summarizing results of each scenario.
- GIS dataset representing new areas addressed by changes to C.3 requirements.

¹ Will Lewis assisted with the initial analysis and now is a sole proprietorship. LWA will add WLC as a subconsultant to serve in an advisory role on revision of the analysis.

Sub-Task 5.9.b Support for web-based GIS viewer of GI planning datasets

Through Paradigm's support to SMCWPPP for multiple efforts, including development of the Countywide Stormwater Resource Plan and Sustainable Streets Master Plan (SSMP), a public domain, web-based GIS viewer has been maintained to allow SMCWPPP and jurisdictional staff the ability to view GIS datasets used to develop the plans. This tool has provided ongoing support to SMCWPPP and jurisdictions in the planning and implementation of GI. To allow SMCWPPP staff to take ownership, maintain, and perform future updates of the web-based viewer for it to remain a viable tool, Paradigm will support the transition of all data files and control of the viewer from Paradigm to SMCWPPP staff.

Meetings and Deliverables

- GIS dataset included in the web-based viewer.
- Complete transition of the web-based viewer to SMCWPPP staff.

Task 9. Mercury and PCBs Load Reduction

Sub-Task 9.6 Support adaptive management for mercury and PCB reduction

With the completion of the original RAA and GI plans, jurisdictions are tasked with implementing GI and annually reporting progress to the Water Board. Through development of the Countywide SSMP, C/CAG developed a GI Tracking Tool to support jurisdictions in the compiling of information on implemented GI projects, and reporting of benefits in terms of impervious area treated or stormwater volumes managed. To help support jurisdictions with the continued adaptive management process for GI implementation, the following subtasks will be performed:

Sub-Task 9.6.a Technical support for annual reporting

Paradigm will coordinate with SMCWPPP and EOA to upload information on implemented GI projects into the GI Tracking Tool, quantify metrics demonstrating GI project benefits, and prepare sections of the FY20-21 Annual Report. Paradigm will also prepare a summary of C/CAG's efforts to develop the SSMP and GI Tracking Tool. EOA has made a head start compiling information on implemented GI projects and updating a spreadsheet template used to upload projects to the GI Tracking Tool. Paradigm will review information for completeness and support the data upload. For jurisdictions that are directly uploading GI projects to the GI Tracking Tool, Paradigm will provide as-needed technical support to municipal staff. Paradigm will also provide basic maintenance to the GI Tracking Tool should any technical issues arise.

Deliverables

- Updated GI Tracking Tool with current list of implemented GI projects.
- Written text and associated graphics/tables for FY20-21 Annual Report.

Sub-Task 9.6.b Establish watershed-based framework for quantifying systemwide GI effectiveness

The GI Tracking Tool supports countywide or jurisdictional-specific tracking and reporting of GI implementation progress but does not account for watershed load reductions in stormflows or pollutant loads. Modeling of systemwide GI performance at the individual watershed scale can support multiple efforts, including comparison with monitoring data for validation of GI progress towards improving instream water quality or reducing stormflows, and watershed-based planning efforts that encourage collaboration of jurisdictions to address local improvements to instream conditions or cumulative watershed loads to San Francisco Bay. Paradigm will perform

modifications to the GI Tracking Tool to quantify the runoff and pollutant loads from each watershed/creek and the benefits of GI in terms of reducing volumes/loads for each watershed. The updated GI Tracking Tool will provide modeling, consistent with the RAA, to simulate watershed flows and pollutant loads and GI processes representing storage, infiltration, and treatment of stormwater. The GI Tracking Tool dashboard will also be modified to display watershed-specific hydrologic and pollutant loading results and GI benefits. Modifications to the tool will also consider future potential updates to provide real-time simulation of hydrology and pollutant loads, which can be combined with monitoring data to provide assessment of pollutant loading conditions for future individual storm events or all events occurring each year.

Deliverables

- Updated GI Tracking Tool and documentation of new utilities included.

Sub-Task 9.9 C/CAG, BAMS Collaborative, and Team Coordination; and Project Management

The LWA Team will coordinate with C/CAG and the Bay Area Municipal Stormwater Collaborative (BAMS Collaborative) , attending meetings and participating in regional workgroups focused on MRP compliance efforts and other related information that may be developed through C/CAG and BAMS Collaborative activities during this fiscal year, including updates to requirements of the MRP. At the request of C/CAG, the LWA Team will prepare and provide presentations summarizing approaches and results of RAAs performed for San Mateo County.

Deliverables

- Participate in team coordination calls and prepare progress reports.
- Participate in cross consultant team coordination calls.
- As needed, participate and present at C/CAG and BAMS Collaborative workgroup meetings.

Table 1. Cost Estimate for Each Task

Task	Scope of Work Fiscal Year 2021-2022	LWA Sub-Total	WLC Sub-Total	Paradigm Sub-Total	CD+A Sub-Total	Sub-Contractor Markup	Task Cost (incl 10% sub markup)
5	Green Infrastructure Planning						
5.9.a	Analyses of the impacts of alternative GI planning scenarios	\$ 13,000	\$ 3,000	\$ 51,000	\$ 3,000	\$ 5,700	\$ 75,700
5.9.b	Support for web-based GIS viewer of GI planning datasets			\$ 5,000		\$ 500	\$ 5,500
9	Mercury and PCBs Load Reduction						
9.6.a	Technical support for annual reporting			\$ 17,000		\$ 1,700	\$ 18,700
9.6.b	Establish watershed-based framework for quantifying systemwide GI effectiveness			\$ 135,000		\$ 13,500	\$ 148,500
9.9	C/CAG, BASMAA, and team coordination	\$ 500		\$ 1,000		\$ 100	\$ 1,600
		\$ 13,500	\$ 3,000	\$ 209,000	\$ 3,000	\$ 21,500	\$ 250,000