

**AMENDMENT NO. 5 TO THE AGREEMENT
BETWEEN THE CITY OF SAN MATEO AND
CH2M HILL FOR
PROGRAM MANAGEMENT SERVICES**

WHEREAS, the City of San Mateo (“City”), a municipal corporation of the State of California, and CH2M HILL (“CONSULTANT”), entered into an Agreement for Program Management Services (“Agreement”) on October 27, 2014; and

WHEREAS, City CONSULTANT wish to amend the Agreement to extend and amend program management services as described below.

NOW, THEREFORE, the parties agree as follows:

1. Section 1, “Scope of Project,” of the Agreement is amended to add services as described in Exhibit A to Amendment No. 5 and made a part hereof.
2. Section 5, “Duties of Consultant,” of the Agreement is amended to add services as described in Exhibit A to Amendment No. 5 and made a part hereof.
3. Section 7, “Term, Progress, and Completion,” of the Agreement is amended as follows:

The services to be performed under this Agreement shall commence and be completed as set forth in Exhibit B, Project Schedule. Two Project Schedules are provided: 1. 1st Year Program Management Services Schedule; and, 2. Clean Water Program’s Master Plan’s IAPs and CIPs Projects Schedule (draft) for 2014 – 2034. The latter will be revised and updated with each year’s Program Management Services Agreement and Schedule.

It is understood and agreed that time is of the essence of this Agreement. CONSULTANT agrees to perform the services within the time limits set forth in Exhibit B. The term of this Agreement shall be a period of ten years, commencing on the effective date of the Agreement and ending on October 31, 2024. The City with reasonable notice to the CONSULTANT reserves the right to commence, close, reduce, or extend the CONSULTANT’s services at any time in response to changing needs.

CITY agrees to exercise due diligence in performing its tasks to implement the CONSULTANT'S timetable.

4. Section 8, "Payment," of the Agreement is amended to add services as described in Exhibit A to Amendment No. 5 and made a part hereof.
5. Section 8, "Payment," of the Agreement is amended to provide the updated cost schedule set forth in Exhibit C to Amendment No. 5 and made a part hereof.

The remaining terms of the Agreement remain in full force and effect.

CITY OF SAN MATEO

CONSULTANT

Brad B. Underwood
Public Works Director

Thomas J. Price
Senior Vice President

Date: _____

Date: _____

ATTEST:

Patrice Olds, City Clerk

Date: _____

Approved as to Form:

Caio Arellano, City Attorney

Date: _____

Attachments:

- Exhibit A – CH2M HILL Year 6 Scope of Services
- Exhibit B – Not Applicable
- Exhibit C – Rate and Cost Schedule

EXHIBIT A

CH2M Year 6 SCOPE OF SERVICES

Task 01. Program Administration

Task 1 includes activities related to the general administration of the overall Clean Water Program (Program). This task will provide services to keep the Program moving forward on schedule, and communicate and mitigate any team or quality, concerns.

Task 01.01. Program Management

The CH2M Program Manager Advisor (PMA) and Deputy Program Manager Advisor (DPMA), the City Program Executive and Program Manager, the CH2M Project Delivery Lead, the City Project Delivery Lead, and the Construction Management Lead, referred to as Program Management Team (PMT), together, will be responsible for the day-to-day management of the Program Management Office (PMO) team, including work assignments, performance monitoring, mentoring, and career development. They will work together to adjudicate competing operational requirements, communicate a common plan, and enable overall Program schedule flow. They will also facilitate Program-level decision making and accurate root-cause problem identification for early and decisive corrective actions needed to deliver the Program within budget and on schedule. The CH2M PMA is also responsible for Program risk management and quality assurance.

Risk management will focus on the continuous forecasting and evaluation of program and project schedule, financial risks, and opportunities, together with the identification of procedures to mitigate, avoid, or minimize impacts. The CH2M PMT will provide leadership for risk management at the Program and project level to support the mission of the Program at the lowest possible cost and per the defined schedule. The DPMA will coordinate with the PMT and project managers to facilitate risk updates and identify mitigation strategies. At the project level, project managers are expected to update and communicate individual risks to the DPMA. The DPMA will be responsible for holding the project managers accountable and coordinating risk updates with the Program Controls Team. All risk concerns will be brought to the attention of the City and PMT on an as needed basis and discussed in detail at risk management meetings or PMT meetings.

The DPMA will serve as a “Quality Manager” who will be responsible for implementing the quality management plan developed in Year 1 and updated in Years 2 through 5 of the Program. The DPMA will provide quality assurance (not quality control) and work with the Program team to ensure that proper quality measures are taken to prevent additional risk to the Program and the City. Project Managers and all Program staff will be accountable for quality of their own work and assurance of the work they are managing.

Key responsibilities of the CH2M Program Manager Advisor and Deputy Program Manager Advisor include, but are not limited to the following:

- Ensure a safe working environment, strong communications & inclusion, and forward strategic thinking and planning for successful Program implementation

- Ensure high team performance, assign appropriate staff for delivery, and proactively track delivery, cost, scope, and schedule changes at a Program level
- Manage & retain key staff, flex to fill gaps, and complete Program succession planning
- Provide timely problem-solving for unforeseen events or issues
- Support Program’s political, Council, Commissions, and public outreach strategy and needs
- Manage, track and report Program monthly performance and progress, including
 - Earned value, cost performance index (CPI), and schedule performance index (SPI)
 - Key milestones and successes
 - Critical path activities – programmatic, delivery, environmental, public outreach, procurement, funding, construction
 - CH2M and subconsultants invoices
 - Quarterly Economic Summits
- Provide coordination for and track WIFIA loan invoices and supporting details
- Support planning and Program transition into construction phase with focus on Construction Management (CM) services and staffing needs, and management of additional work sites (construction sites at WWTP and Collection System in addition to the PMO)
- React quickly and provide assistance to solve critical issues, such as: significant construction delays, large variation orders, unforeseen events that can impact scope, schedule and costs, regulatory permit non-compliance, any safety concerns, key staff losses and retention needs.
- Ensure safety training and equipment is provided for construction and field work for all Program staff
- Conduct a mid-year contract progress status and lessons learned summit with the City

The following roles will be provided under this task:

- **Program Manager Consultant:** Provides senior leadership and oversight of the CH2M Program Manager Advisor and senior consultation to the City Program Manager, if required.
- **Program Manager Advisor:** Program lead from CH2M and Advisor to the City's Program Manager.
- **Deputy Program Manager Advisor:** Supports the Program Manager Advisor in the day-to-day management of the PMO and the Program administration, ensures appropriate and adequate staffing from the CH2M team, and manages the following functional teams, Environmental & Permitting, Public Outreach and Program Controls and supports the PMA in managing program Quality and Risk.
- **Principal-in-Charge:** CH2M’s executive representative to ensure the Program Manager Advisor and Deputy Program Manager Advisor have adequate resources to deliver the Program and are delivering to the satisfaction of the City.
- **Administrative Assistant:** Provides administrative support to all Program staff and works with City Public Works administrative staff to ensure coordination and alignment with City and PMO needs.
- **Program Support:** accounting, publications, graphic design, technical editing, document processing, and other services to support the Program team.

Deliverables and Regular Meetings

1. Monthly progress report on CH2M’s activities (accompanies invoice).

2. Monthly invoice.
3. Weekly PMT coordination meetings.
4. Quarterly risk management updates to PMT, and as-needed for individual projects.
5. Program risk register maintenance.
6. Incorporation of project-specific risk registers into the Program risk register.
7. Mid-year contract progress status and lessons learned summit (held in April/May).

Assumptions

1. City will provide the following roles to support this task and the Program:
 - a. Program Manager
 - b. Program Executive
2. City will provide accommodations for Program staff and all Program related meetings.
3. Activities related to the Regional Service Customers will be led by City with support from CH2M staff.
4. Individual Project Managers will work directly with designers and contractors to develop and update project-specific risk register.
5. Partner agency coordination/support will be handled via contingency.

Roles and Level of Effort Summary – Program Administration

Program Role	Level of Effort (as FTE)
Program Manager Advisor Consultant	0.05
Program Manager Advisor	0.75
Deputy Program Manager Advisor	0.50
Principal-in-Charge	0.025
Administrative Assistant	0.95
Program Support (Accounting, publications, & editors)	0.5
Task 01. Program Administration, Total	2.775

Task 02. Program Controls

Program controls is the management of scope, schedule, cost, risk, change, performance, and reporting in a coordinated way to support efficient Program delivery. A system of integrated tools and processes are used to support these efforts, particularly cost, schedule, risk, and change management. This system contains the baseline information against which Program performance is monitored and reported, allowing Program management to assess the information and take appropriate action.

Task 02.01. Program Controls Management

Program controls will maintain accurate and timely data to analyze and report on the status of the Program and all its individual projects, revealing areas of potential risk or opportunity and highlighting any recurring problems or best practices that can be addressed at both project and Program level. The team will continue to use the system of integrated tools and processes to support the monitoring and reporting on true progress of projects considering the work physically completed, the time taken, and

the actual costs incurred to complete that work. Program Controls will coordinate between the PMT, different project managers, team members, and department to get the most updated cost, schedule, and change management data.

The Program Controls responsibilities are categorized into two separate focus areas, Program-level and project-level as described below, and the following roles will be provided under this task:

- **Program Controls Lead.** Provides the following key responsibilities:
 - General Program Controls function and team management
 - General Program reporting
 - Monthly Program report
 - Stakeholder reporting and preparation for stakeholder meetings
 - Document and Portal management including training
 - Quarterly (and as-needed) Cash flow analysis, in support of economic summits
 - Annual cash flow analysis in support of City's Fiscal Year budgeting process including project charters
 - Support program-level risk and change management
 - Coordination with functional leads
 - Provide information in support of loan and grant applications
 - Quality control of program controls deliverables
- **Project Controls Specialists (Cost, Schedule, and Reporting).** Provides the following key responsibilities:
 - Project baseline budgets and schedules, cost and schedule management, and day-to-day controls support for project managers
 - Monthly cost and schedule update meetings with project managers
 - Project cost and schedule scenario analysis
 - Support project-level risk and change management
 - Provide support to project managers on schedule and delivery needs
 - Support Program Controls Lead with monthly reporting
 - Update the Program Performance Dashboards monthly

The Project Controls team will continue to use the standard program work breakdown structure (WBS) for all projects, and a set of cost-loaded, critical path schedules will be maintained for the overall Program. The cost-loaded, critical path schedules will allow the Program team to monitor performance using earned value (EV) metrics, schedule analysis, float analysis, and cash flow analysis. This information will be used to develop monthly reports which will be issued by the 15th of each month for performance through the prior month.

The Program Controls team will maintain the Program SharePoint Portal (hosted on the City's servers) and performance dashboards (hosted on the CH2M servers). This includes coordination between the Program team and the City to provide updates as requested, useful tools and programs, and troubleshooting for Portal and Performance Dashboard users.

Deliverables and Regular Meetings

1. Monthly Program Performance Report: issued on or before the 15th of each month (electronic submittal).
2. Program cash flow: provided quarterly at minimum, in support of Economic Summits.

3. Training for relevant City staff and Program staff on Project Management tools and performance monitoring.
4. Responses to performance and stakeholder report requests associated with Program related projects. Special requests will be managed via contingency.

Assumptions

1. City will provide the Program Controls Team with access to EDEN to download actual costs monthly. These costs are imported to Primavera P6. Invoices in EDEN can be delayed by up to three months, therefore, project accruals will be tracked, and actual costs will be confirmed when available in EDEN.

Roles and Level of Effort Summary – Program Controls Management

Program Role	Level of Effort (as FTE)
Program Controls Lead	0.85
Project Controls Specialist – Cost and reporting	0.95
Project Controls Specialist – Program scheduling	0.4
Program Controls Support – Reporting	0.25
Task 02.01. Program Controls Management, Total	2.45

Task 02.02. Economic Management

The Economic Management Team will provide the necessary revenue requirement projections to support the City’s decisions in project scheduling to determine optimum timing for bond sales, drawdowns, contingency management, and any necessary changes in rates. The financial modeling will be performed using CH2M’s proprietary tool, TACT. Results of the modeling scenarios will be provided quarterly to the City in a memorandum or presentation format, but the actual model will not be provided to the City and all components will remain the property of CH2M. TACT is updated quarterly with new P6 information and financial data as available and relevant

The Economic Management Team will lead economic summits quarterly with City finance, Public Works leadership, Foster City, the City’s financial advisors, and the City’s rate consultant to discuss the following items:

- Financing scenarios
- Cost and schedule
- Cash flow
- Rates, rate structure, and rate implementation
- Financial plan
- Bonding and funding plan
- Strategic funding

The following roles will be provided under this task:

- **Economic Advisor:** Manages economic summits and oversees modeling (using TACT) and team that runs modeling scenarios to determine revenue requirements and schedule alternatives for Program implementation. This effort includes providing similar services to Foster City.
- **Economic Support – TACT Modeling:** Provide economic modeling (using TACT) updates, data analysis, coordination with the City, and technical memorandum or presentation development associated with the TACT modeling.

Roles and Level of Effort Summary – Economic Management

Program Role	Level of Effort (as FTE)
Economic Advisor	0.1
Economic Support – TACT Modeling	0.2
Task 02.02. Economic Management, Total	0.3

Deliverables and Regular Meetings

1. Economic and sensitivity modeling results in a memorandum or presentation format for decision making purposes.
2. Economic summits (preparation, agenda development, facilitation, and meeting minutes).

Assumptions

1. TACT model will remain the property of CH2M and will not be provided to the City. Results will be provided in memorandum or presentation format.
2. Rate setting will be conducted by the City’s rate consultant based on City directions. The City will contract with and manage their own rate consultant and financial advisor. Foster City will do the same.

Task 02.03. Document Management

The Program Management Team will use the SharePoint Portal to manage all project-related documentation outside of construction management related documents. This will allow the team to collaborate on documents in progress and provide a repository for all project records. All construction related documents will be stored and managed in Procore. As part of project close out procedures, construction related documents will be archived onto the SharePoint Portal.

The following roles will be provided under this task:

- **Document Controls Lead**
- **Document Controls Technical Support**

Roles and Level of Effort Summary – Document Management

Program Role	Level of Effort (as FTE)
Document Controls Lead	0.7
Document Controls Technical Support	0.05
Task 02.03. Document Management, Total	0.75

Deliverables and Regular Meetings

1. Document management training for the Program team.
2. Archiving of Program documents, including metadata, into records library on the SharePoint Portal.
3. City and CH2M staff will use the Portal/SharePoint for General Program related document storage.

Assumptions

1. City will provide Document Controls support to perform the necessary City processes for document management, including coordination with the City Clerk's Office.
2. City will provide SharePoint administrative support as needed for maintaining the Program SharePoint Portal environment.
3. Procore will be used for document management of construction related records.

Task 02.04. State and Federal Funding Coordination

The State and Federal Funding Team will be primarily responsible for supporting the Program's State Revolving Fund (SRF) financing and Water Infrastructure Financing and Innovation Act (WIFIA) loan efforts. The WWTP Upgrade and Expansion Project was invited to apply for a low-interest WIFIA loan in Year 5 of the Program and the City will be negotiating and closing the loan into Year 6. The WWTP project was also placed on the fundable list for SRF during Year 5, and efforts to enter a financing agreement with the state will continue into Year 6.

Activities will include review of City-prepared payment and invoicing forms and formats ensuring that they are acceptable to State and Federal agencies and support of initiation of inter-PFA invoicing process; coordination with State and Federal agencies and City Finance Department; coordination between the San Mateo-Foster City Public Financing Authority (PFA) and the State and Federal agencies; preparation for State and Federal audits; and coordination with CWP Program Controls and Economic Management team to update cash flow projections.

The following roles will be provided under this task:

- ***State and Federal Funding Support***

Deliverables and Regular Meetings

1. Completion of WIFIA Full Loan negotiation.
2. Entry into financing agreement with SRF.
3. Facilitation of no more than four (4) meetings with City Finance Department/PFA and WIFIA and SRF organizations.

Assumptions

1. City will support coordination efforts with State and Federal Agencies and provide input on processes needed to satisfy loan requirements.
2. City Management Analyst team will lead development and review of invoicing forms and formats, CH2M to provide oversight and support.

Roles and Level of Effort Summary – State and Federal Funding Coordination

Program Role	Level of Effort (as FTE)
State and Federal Funding Support	0.3
Task 02.04. State and Federal Funding Team, Total	0.3

Task 03. Engineering and Project Management

This task will consist of project management and engineering activities to meet the goals of the Program, provide the best and most efficient solutions, and keep the Program on schedule and within budget.

Task 03.01. Project Delivery Management

In collaboration with the City, CH2M will provide overall coordination of projects under the Clean Water Program. The Project Delivery Lead (PDL) will oversee all activities related to wastewater treatment plant and collection system projects. Responsibilities will include coordination with project managers, bundling of projects (as needed) and scheduling start dates, identifying project managers for upcoming projects in coordination with the PMT, providing project updates to the PMT, leading meetings to make key decisions related to project coordination, change, and risk, and prioritize support services and resources for projects. The PDL will hold project managers accountable for using proper tools, updating the P6 schedule, holding consultants and contractors accountable, and managing cost and schedule in coordination with the Project Controls Manager. The PDL will provide a wholistic perspective of how each project impacts the overall Program and is intended to drive consistency across all projects.

A formal change management process is essential to minimize scope creep, reduce project and Program cost increases, obtain required approvals, and provide documentation of changes to the Program schedule, scope, and budget. Given the long timeframe and investment for this Program, tracking and documenting change are important elements in maintaining Program accountability and communicating Program progress with stakeholders. Change management will be led by the PDL and accomplished in close coordination with a Change Management Board. At the project level, potential changes will be brought to the attention of the PDL team by the individual project managers and the Program team. Potential change items will be compiled and discussed at the regularly occurring change management meetings.

The following roles will be provided under this task:

- Project Delivery Advisor: Provides guidance and advise to the PDL. Monitors and reviews PDL deliverables as appropriate.
- **Project Delivery Lead:** Provides leadership and management of all wastewater treatment plant and collection system projects and project activities. Provides support and oversight of the Project Managers, coordinates city procurement support, reviews deliverables prepared by the PMs and or project teams, reviews monthly progress updates including schedule and EAC updates, supports the change and risk management process, and holds monthly meetings with assigned PMs.

Deliverables and Regular Meetings

1. Coordinate and lead project deep dives with project managers at least monthly for all projects.
2. Deep dive project meetings and reports (1-pager) to cover upcoming milestones, issues, or items needing direct input from PMT or City leadership.
3. Coordinate with Program Controls to ensure the latest project information is on the SharePoint Portal and Performance Dashboards. Update project descriptions and scope of work to include approved changes on the SharePoint Portal.
4. Training for relevant City staff and Program staff on Project Management tools and performance monitoring.
5. Weekly change management board meetings, if required.
6. Support tracking and management of all Change Orders; coordinate with Project Managers to review and approve Level 4 Change Orders; and coordinate with Project Managers to prepare Level 3 Change Orders for Change Board approval.

Assumptions

1. City to provide one senior staff part-time to serve as Deputy PDL to work directly with the PDL in all activities listed above for collection system projects.
2. City Program Manager, Deputy Public Works Director (Program Executive), and Public Works Director attend change management meetings and provide timely input so that change do not negatively impact the Program costs, schedule, or reputation.
3. Change Management Board will consist of CH2M’s Program Manager Advisor, City Program Manager, Public Works Director, and Deputy Public Works Director (Program Executive).

Roles and Level of Effort Summary – Project Delivery Management

Program Role	Level of Effort (as FTE)
Project Delivery Advisor	0.1
Project Delivery Lead	0.75
Task 03.01. Project Delivery Management, Total	0.85

Task 03.02/03. Project Management

In addition to the Project Delivery Advisor and Lead, CH2M will provide project managers to deliver the Program projects for the collection system and the wastewater treatment plant. Project managers will be responsible for efficient delivery of projects by managing consultants and contractors, managing project scope, cost, schedule and quality, and communication with the PDL team.

Primary **Project Management responsibilities during the design phase of the project** are detailed below:

- Scope, budget, schedule management and reporting
 - Review, manage and monitor Consultant scope of work; monitor and track progress against scope of work and report progress monthly
 - Review, manage and monitor Consultant budgets; monitor and track project budgets and costs using Program tools; status Project level earned value progress and prepare

- Estimate-At-Complete (EAC) monthly; coordinate and facilitate value engineering reviews if needed
 - Develop and coordinate project level schedule; review, manage and monitor Consultant schedules; report status against schedule and provide monthly progress report
 - Coordinate with PDL team and Program Controls to ensure the latest project information is reported on the Performance Dashboard
- Risk management
 - Identify, develop, and maintain project level risks, risk definitions and assessments
 - Develop risk mitigation strategies
 - Coordinate with Deputy Program Manager Advisor to provide risk updates to PMT, as needed
- Change management
 - Oversight and communication of project Decision Log
 - Negotiate and process consultant and contractor amendment requests; preparation of Change Request Form (CRF)
 - Control Scope by identifying and managing changes during design
 - Support development of materials for and presentation of CRFs to Change Board
- Procurement, task order and contract management
 - Review of Consultant proposed scope and fee
 - Develop procurement documents for Consultant Agreements
 - Preparation of Administrative Reports for City Council action
 - Administer and manage Consultant (professional services) agreements
 - Administer and manage task orders and purchase orders request forms/POARS associated with project needs, such as right of way acquisition, PG&E services, etc.
 - Preparation of contract amendments and change orders
 - Manage and approve Consultant invoices/payments
 - Resolution of Consultant contract issues/disputes
- Team leadership and management
 - Coordinate project involvement of Functional Leads and Technical Advisors as appropriate
 - Coordination and oversight of Consultant(s) or other third parties during all phases
 - Monthly reporting to Project Delivery Team
 - Inform PMT of progress and issues
 - Coordinate with other projects as needed
- Quality assurance
 - Verify Consultant implements quality control process
 - Assure that Consultant has addressed review comments in subsequent deliverables
 - Coordinate and facilitate constructability and O&M review workshops
 - Coordinate input/reviews by Program Technical Advisors
 - Review and verify that Consultant deliverables meet scope and contract requirements
 - Coordinate and facilitate deep dive reviews
- Coordination and management of stakeholder engagement
 - Coordinate and facilitate City Staff/O&M review workshops/meetings

- Coordinate and facilitate engagement with utility companies, such as PG&E, Calwater, Comcast, AT&T, etc.
- Coordinate and facilitate engagement with City, San Mateo Planning, or other City Departments
- Coordinate and support project related public outreach activities
- Coordinate and participate in easement negotiations with property owners, if applicable
- Coordinate and support public, Commission, and City Council meetings
- Support content development for community meeting presentations and related materials (posters, handouts, etc.); attend community meetings
- Coordination and management of communications and meetings
 - Coordinate and facilitate regular Consultant coordination/project status meetings
 - Prepare and distribute meeting notes for managed meetings
 - Inform project team of City and Program activities and decisions
 - Coordinate and facilitate responses to information requests from all parties including public
 - Participate in regular PM/PDL review meetings
 - Respond to Program’s communication hotline comments and questions related to project
- Document and records management
 - Project level document management
 - Consultant deliverable management – Quality assurance, distribution and storage
 - Submit project or program documents to Document Controls Lead for review and record storage

During the construction phase of the project, the project’s CM team takes over the primary responsibilities for construction delivery and these services are detailed under Task 05.

The **Project Management responsibilities during the construction phase of the project, primarily in a supporting role to Construction Management**, are as follows:

- Internal Coordination
 - Serve as point of contact with the PMO as well as with operations staff
 - Support coordination with Program and project team regarding progress and issues
 - Support coordination with Collection System O&M staff, Wastewater Treatment Plant O&M staff, and other City departments for existing facility shut downs and/or tie ins.
 - Backup to CM to receive and file monthly labor compliance reports
- Meetings
 - Support preconstruction meeting which also represents the official project hand-off from PM to CM
 - Participate in monthly project progress meetings
 - Support regular project meetings including schedule updates, risk management, progress payment, Change Board, and public outreach
- Scope, Cost, Schedule Management and Reporting
 - Support review, approval, and maintenance of Schedule of Values; progress payment reviews and approvals; maintain contract financial data and summaries

- Support baseline schedule review and acceptance; monthly schedule update reviews; review and approval of schedule changes and schedule recovery plans
- Support monthly reporting, and SRF/WIFIA reporting, if applicable
- Change Management
 - Support tracking and management of all communications to assure response compliance
 - Support CM to prepare and issue Field Orders (FO)/Work Change Directives (WCD); prepare and issue Requests for Proposals (RFP); review Change Order Requests for Entitlement and Merit; review and negotiate change order Pricing; review and analyze change order schedule impacts
 - Support tracking and management of all Change Orders; coordinate with the PDL team to review and approve Level 4 Change Orders; and coordinate with the PDL team to prepare Level 3 Change Orders for Change Board approval.
- Quality Management
 - Support preparation of Submittals and Deliverables Inventory
 - Support updates to the Submittals and Deliverables Inventory
- Safety Management
 - Support safety culture and CM Team with monitoring Contractor's safety program and implementation thereof
 - Support review of Safety Incidents & Reporting Requirements
- Dispute Resolution
 - Lead review of Conformed Bid Documents before Award
 - Support CM to review issues for Entitlement and Merit
 - Support CM to prepare responses to correspondence
 - Support CM to conduct resolution meetings and negotiations
- Testing, Startup, and Commissioning
 - Support coordination of review and acceptance of Testing, Commissioning, and Startup Plans
- Project Closeout
 - Support CM in conducting Substantial and Final Completion Inspections
 - Support CM in recommendation of final acceptance of work by the City
 - Prepare and submit a project close out memo (summary of actual costs, and project highlights, challenges, and lessons learned), and presentation (when requested), to the PMT for review
 - Coordinate submittal of as-builts to the City and Hydraulic Modeling Lead for updates to the City's GIS and Hydraulic Model

The following roles will be provided under this task:

Task 03.02 Wastewater Treatment Plant

- ***IAP 2 & 3 Project Manager***
- ***IAP 2 & 3 Deputy Project Manager***
- ***WWTP Upgrade and Expansion Project Manager***
- ***WWTP Upgrade and Expansion Deputy Project Manager***

- **WWTP Upgrade and Expansion Support**
- **Annual Major Components (AMC) Project Support**

Task 03.03 Collection System

- **El Camino Real Annual Rehab Project Manager**
- **D Basin Annual Rehab Project Manager**
- **Basin 1a Project Manager**
- **Basin 1b Project Manager**
- **Basins 2 & 3 Project Manager**
- **Basins 2 & 3 Deputy Project Managers**
- **Basin 4 Project Manager**
- **East San Mateo Lift Station Package 2 Project Manager**
- **General Collection System Support**

Deliverables and Regular Meetings

1. Management of design consultants and contractors.
2. Coordinate regularly with project consultants and contractors to review project progress.
3. Provide cost and schedule information to the Project Controls team for monthly project performance and status updates.
4. Coordinate review of consultant deliverables.
5. Coordinate with Construction Management Lead to obtain construction management support.
6. Coordinate with Project Delivery Lead for project deep dive meetings, risk register updates, change requests, and quality management reviews.

Assumptions

1. City will provide project manager(s) for the following projects:
 - a. **WWTP AMC**
 - b. **Annual CCTV Inspections**
 - c. **Basin A Annual Rehab**
 - d. **Basin C Annual Rehab**
 - e. **East San Mateo Lift Station Package 1, Laurie Meadows and Woodbridge**
 - f. **Biennial Lift Station Rehab Project**
2. All staff managing projects will use Program management tools provided by the Project Controls Lead and manage projects on an earned value basis.
3. Project change will be reported to the PDL for all projects and by all project managers (CH2M and City).
4. Project and Program Risk will be reported to the PDL for all projects and by all project managers (CH2M and City).

Roles and Level of Effort Summary – Project Management

Project	Project Role(s)	Level of Effort (as FTE)
WWTP Task 03.02		

WWTP Upgrade and Expansion	PM	0.65
	Deputy PM	0.85
IAP 2	PM	0.2
	Deputy PM	0.3
IAP 3	PM	0.2
	Deputy PM	0.2
Annual Major Components (AMC)	PM Support	0.1
WWTP Total		2.5
Collection Task 03.03		
Basin D Annual Rehab	PM	0.2
East San Mateo Lift Station, Package 2	PM	0.25
Basin 1a	PM	0.03
Basin 1b	PM	0.2
Basins 2 & 3	PM	0.9
Basins 2 & 3	Deputy PM	0.40
Basin 4	PM	0.45
El Camino Real Annual Rehab	PM	0.2
General CS Support	Support	0.25
Collection Total		2.88
Task 03.02 Project Management, Total		5.38

Task 03.04. Technical Support

CH2M will provide engineering support to facilitate consistency in design, support project managers, and provide technical guidance to the City on Program related projects, activities, and planning. The base scope includes review of remaining design deliverables for conformance with the Program objectives and criteria.

The following roles will be provided under this task:

- **Technical Advisors:** Technical experts who provide guidance, recommendations, and review for Program activities.

Deliverables and Regular Meetings

1. Provide review comments for design submittals.

Assumptions

1. Ad hoc or special investigations will be assumed out of scope and will be handled with change proposals.

Roles and Level of Effort Summary – Technical Support

<i>Project/Task</i>	<i>CH2M FTE</i>
Technical Advisors –	0.5
Task 03.04. Technical Support, Total	0.5

Task 03.05. Hydraulic Modeling

CH2M will provide hydraulic modeling support so that the City can keep collection system modeling in-house throughout Program implementation. This will provide efficient use of the model to analyze project alternatives and impacts and help with coordination amongst multiple designers.

In Year 2 of the Program, the ownership of the Arcadis InfoWorks CS model was transferred to the PMO and converted to the latest version of InfoWorks. During Year 5, the model was kept up to date and used for alternatives assessment, minor partner flow determinations, and scheduling and sequencing of projects. In Year 6, CH2M will complete the following:

- Implement permanent rain gauge equipment.
- Temporary ADS flow monitoring – 6 monitors to characterize El Cerrito trunk weir, plus potential I/I near 16th Ave Canal
- Update the existing hydraulic model to include Foster City and the Mariner Island area.
- Implement flow predictive model and prepare summary report discussing the regression analysis.
- Keep model current as project alternatives are selected and as-builts are submitted from completed projects.
- Assist City GIS technologists in maintaining GIS for completed projects and missing data

The following roles will be provided under this task:

- **Hydraulic Modeling Lead:** Manages hydraulic model and provides Program support

Deliverables and Regular Meetings

1. Modeling scenarios and results in a technical memorandum or presentation format twice per year. .
2. Summary Report for flow prediction regression analysis.

Assumptions

1. City staff will provide coordination with and data from Thunderbird Communications where necessary to support Program related modeling efforts.

Level of Effort Summary – Hydraulic Modeling

Program Role	Level of Effort (as FTE)
Hydraulic Modeling Lead	0.5
Task 03.05. Hydraulic Modeling, Total	0.5

Task 03.06. Odor Control Support

Odor control is a critical component of all Clean Water Program projects. CH2M will continue to provide odor modeling, support, and recommendations throughout Year 6 of implementation. Odor support will be provided for both the wastewater treatment plant and collection system to facilitate integrated solutions.

Task 03.06.01. Collection System Odor Support

CH2M will provide the resources to perform any of the following odor support activities related to the collection system up to the included level of effort:

- **Design Support:** perform minor updates to the INTERCEPTOR Powered by WATS odor model as necessary and run model to assess odor impacts of upgraded collection system. Identify odor issues and communicate with design teams, provide H2S estimates, and review proposed odor mitigation options recommended by designers, as needed. Final review of Basin 2 & 3 and Basin 4 remain.
- **UFES Project Support:** Provide Outreach Team with technical support to address odor issues related to the UFES project. Provide technical support during construction, if required.

The following roles will be provided under this task:

- **Collection System Odor Support Lead:** Manages all odor support activities and provide appropriate and adequate staff to perform work.

Deliverables and Regular Meetings

1. Updated INTERCEPTOR Powered by WATS odor model TM.

Task 03.06.02. Wastewater Treatment Plant Odor Support

CH2M will provide the resources to perform any of the following odor support activities related to the wastewater treatment plant up to the included level of effort:

- **Design Support:** provide input to City on designer’s odor control design. Review odor control design drawings and specifications WWTP GMP 3 90% submittal.
-
- **Assess Interim Improvements to the Existing Biofilters:** Rerun the air dispersion modeling for the new WWTP layout and update recommendations to improve the existing biofilters to reduce odor complaints. Summarize modeling and results in a TM.

The following roles will be provided under this task:

- **Wastewater Treatment Plant Odor Support Lead:** Manages all odor support activities and provide appropriate and adequate staff to perform work.

Deliverables and Regular Meetings

1. Dispersion Modeling Results and Recommendations.

Assumptions

1. None.

Level of Effort Summary – Odor Control Support

<i>Project/Task</i>	<i>CH2M FTE</i>
Odor Control Lead	0.05
Task 03.06. Odor Control Support, Total	0.05

Task 03.07. SCADA Support

The SCADA scope of work for Years 2 through 5 was developed as a result of the SCADA workshop with the City and the initial gap analysis performed by CH2M. SCADA work for Year 6 will focus on providing support for the ongoing projects and existing facilities, and completion of the framework for sustainable system-wide SCADA. SCADA tasks to be performed by CH2M will be coordinated with the City's Information Technology Department.

Specific CH2M tasks will include the following:

- **Develop Human Machine Interface (HMI) screen standards (first draft performed in Year 2):**
The HMI standards will be updated to incorporate the requirements for the Collection Systems facilities.
- **Develop alarming and reporting standards (first draft started in Year 2):** Develop Alarming and reporting standards based on the work done in the IAP1 project and incorporate the alarms and reports needed for the Collection System.

- Deliverables:

- Updated alarm and reporting standards document

- **Develop overall network communications and operations strategy:**

Develop an overall philosophy and strategy for the development of the network within and external to the WWTP. CH2M will expand on the system architecture provided by the PCS project to encompass the expansion of the WWTP and the collection system facilities.

CH2M will conduct meetings with all the necessary stakeholders to create the parameters of the operational strategy. Following these workshops, CH2M will prepare an assessment of the alternatives for the operational strategies. A workshop will be conducted to define the final strategy to develop an integrated communication network for the entire San Mateo Wastewater system. A technical memorandum will be developed based on the decisions of this workshop.

- Deliverables:

- Operational and communications alternatives assessment workshop material and agenda
- Four two-hour operational alternatives assessment workshops
- Operational and communications alternatives assessment workshop minutes
- Draft and final communications and operational strategy technical memorandum

- **Develop a contracting plan for future PCS projects:**

Provide support to the City as the Contracting Plans for the Control System and IT network are enhanced.

- **Develop a SCADA security plan:** Finalize the Cyber Security Policies and Procedures based on the improvements to the Overall Systems Network.

- Deliverables:

- Final Cyber Security Policies and Procedures
- **Provide Program Management Support for the SCADA System Merge Project:**
Develop a Request for Proposal (RFP) for the SCADA System Merge Project, to provide assistance to the City to select a System Integrator (SI) firm and to provide oversight assistance to the City during the project installation.
 - Deliverables:
 - Draft and final Request for Proposal for the SCADA System Merge Project
 - Program Management review of the RFP responses
 - Submittal Review and Project Coordination during the Project Installation
- **SCADA Master Plan Preparation:**
Gather all the recommendations from the other tasks and those determined under this task and create an integrated SCADA Master Plan.
 - Deliverables:
 - Update and maintain SCADA Decision Log
 - Provide SCADA Coordination for CWP Projects
 - Draft and final SCADA Master Plan

The following roles will be provided under this task:

- **SCADA Support:** Manages and provides support for SCADA activities.

Deliverables and Regular Meetings

1. Workshops, as noted above.
2. Deliverables as noted above for the specific activities.

Assumptions

1. All draft and final technical memorandums and deliverables will be provided to the City in pdf and Microsoft Word formats.
2. All meeting minutes and notes will be provided within one week of the workshop or meeting date.
3. The City will be responsible for inviting the appropriate participants and stakeholders for all of the project meetings. The Consultant will provide guidance on the proposed meeting attendees prior to each meeting.
4. No hardware or software will be purchased for this project.
5. No hardware or software configuration or programming work will be performed under this scope of work.
6. A physical radio network survey is not included in this fee estimate.

Level of Effort Summary – SCADA Support

<i>Project/Task</i>	<i>CH2M FTE</i>
SCADA Lead	0.6
Task 03.07. SCADA Support, Total	0.6

Task 04. Procurement

The City will provide overall procurement management and City procurement support services to support the Program. CH2M will provide procurement coordination for all Program related projects and activities, including maintaining the 6-month look ahead schedule.

The following roles will be provided under this task:

- **Procurement Coordinator:** Provides coordination of program related procurement activities and maintains 6-month look ahead schedule.

Deliverables and Regular Meetings

1. 6 Month Look Ahead Schedule.
2. Regular coordination meeting with the City's Public Works Business Management group.

Level of Effort Summary - Procurement

<i>Project/Task</i>	<i>CH2M FTE</i>
Procurement Coordination	0.10
Task 04. Procurement, Total	0.10

Task 05. Construction Management

In coordination with the City staff, Program staff, and City operations and maintenance staff, CH2M will provide a Construction Management (CM) Lead, Site Construction Managers, Inspectors, Field Office Engineers, and construction support services to support the construction delivery of Clean Water Program projects. In addition to providing construction management services, CH2M will manage 3rd party CM subconsultants as an integrated part of the CM team. Construction management and inspection services for the wastewater treatment plant projects will be performed by CH2M; collection system projects will be managed by the 3rd party CM subconsultants to CH2M.

Task 05.01. Construction Management

The construction management team will perform construction management services for the active projects listed below. A portion of the work will be performed solely by CH2M staff, and portions will be provided by 3rd party subconsultants.

The table below provides a summary of the roles provided under this task and the expected FTEs required for each of the projects under construction during Year 6.

Program level CM services will include:

- Program Construction Management Lead
- Wastewater Treatment Plant Construction Management Lead
- Collection System Construction Management Lead
- Construction Project Scheduling
- Construction Cost Estimating
- Construction Document Controls & Systems Administration

- Construction Administrative Support & Reporting
- Sub-consultant Management and Procurement, including 3rd party CMS, materials testing, and specialty inspection; and labor compliance monitoring on behalf of the City.

Whether services are provided by CH2M or a subconsultant, the following general activities will be provided, at a minimum for each project during the construction phase:

- Weekly progress meetings
- Actual vs. planned progress schedule management
- Prepare and respond to Time Impact Analysis (TIA)
- Coordination with Contractor, Program Manager, City, O&M and Design Engineer
- Review of Contractor's performance for contract compliance
- Review Contractor submittals for compliance with contract documents
- Review Contractor Request for Information (RFI) and coordinate with Design Engineer for resolution and response
- Log all RFI's and associated responses
- Review Contractor monthly invoices and recommend payment requests
- Provide Contractor with acceptability or deficiencies in work and required actions for contract compliance
- Review and coordinate system outage requests
- Maintain project documents files and utilize document management in Procore Construction Management System
- Inspect and observe Contractor's work
- Maintain daily inspection reports
- Review of material and equipment delivery
- Coordinate material testing and specialty inspections
- Review of Contractor's compliance with health and safety standards
- Monthly monitoring of Contractor's record/as-built documents
- Evaluate potential change orders and cost estimates/quotations
- Recommend course of action for contract change order requests
- Inspection and evaluation of site conditions
- Review, gather, and evaluate information for resolution of potential claims
- Site inspection to determine if facilities are complete and in compliance with contract documents
- Develop punch lists
- Recommendation of retention release to Contractor
- Preparation of substantial completion certificate
- Verification of all O&M Manual submittals
- Coordination of final submittal and obtain/review complete record drawings from Contractor
- Verification that Contractor has made all payments
- Preparation and submittal of final construction report

Deliverables and Regular Meetings

1. Monthly construction progress reporting (provided as part of the Clean Water Program monthly report) to include the following: construction progress reporting, schedule management, change management, potential claims analysis, non-compliance reporting, environmental compliance reporting, health & safety reporting, Request for Information statistics, and submittal processing statistics.
2. Meeting minutes for construction progress meetings.
3. Change order tracking and documentation.
4. Progresspayment review and recommendations.
5. Daily inspection reports
6. Review of contractor’s proposed post-bid changes to the design and advising on their justification, viability, and achievable cost reductions and impact on the schedule, and negotiating changes or extra work on behalf of City.
7. Close-out documentation.
8. Shutdown Outage Requests
9. Coordination with the Project Manager to prepare and submit a project close out memo (summary of actual costs, and project highlights, challenges, and lessons learned), and presentation (when requested), to the PMT for review

Assumptions

1. 3rd party construction management subconsultants will be procured by CH2M as a subconsultant to CH2M, under this Program Management contract.
2. Program construction managers and inspectors will oversee 3rd party subconsultants to ensure proper implementation of the Program Management Plan.
3. Upon City approval, CH2M will augment the 3rd party subconsultants in event they are unable to provide timely resources.
4. CH2M will not be responsible for overall site safety for construction projects under the Clean Water Program.

CH2M Roles and Level of Effort Summary

<i>Project/Task</i>	<i>CH2M FTE</i>
Program Construction Management (CM) Functional Lead	1.0
Program Construction Management General Support <ul style="list-style-type: none"> • Quality Assurance & Compliance • Construction Cost Estimating • Document Controls & Systems Administration • Construction Program Reporting • Labor Compliance Contract Management • 3rd Party Subconsultant Management • Health & Safety Reporting • Construction Project Scheduling 	3.5
IAP2 - Project CM	0.2
IAP2 - Inspection	1.0

IAP2 - Field Office Engineer	1.0
WWTP Upgrade/Expansion - Project CM	0.6875
WWTP Upgrade/Expansion - Inspection	2.2
WWTP Upgrade/Expansion - Field Office Engineer	1.83
AMC - Project CM	0.05
AMC - Inspection	0.05
Task 05. Construction Management, Total	11.5175

3rd Party CM Roles and Level of Effort Summary

<i>Project/Task</i>	<i>3rd Party FTE</i>
Basin 1b Rehab CM	.250
Basin 1b Rehab FOE	.250
Basin 1b Rehab Inspection	.500
Basin 2 & 3 Pipelines CM	.3125
Basin 2 & 3 Pipelines FOE	.1875
Basin 2 & 3 Pipelines Inspection	.250
Basin 2 & 3 Pump Stations – DAPS - CM	.4375
Basin 2 & 3 Pump Stations – DAPS - FOE	.375
Basin 2 & 3 Pump Stations – DAPS - Inspection	.6875
Basin 2 & 3 UFES CM	.250
Basin 2 & 3 UFES FOE	.125
Basin 2 & 3 UFES Inspection	.375
East San Mateo Lift Station CM	.250
East San Mateo Lift Station FOE	.250
East San Mateo Lift Station Inspection	.500
Basin A Rehab CM	0
Basin A Rehab FOE	0
Basin A Rehab Inspection	0
Basin C Rehab CM	.1875
Basin C Rehab FOE	.375
Basin C Rehab Inspection	.750
Basin D Rehab CM	.250
Basin D Rehab FOE	.500
Basin D Rehab Inspection	1.00

El Camino Rehab CM	0
El Camino Rehab FOE	0
El Camino Rehab Inspection	0
Totals	8.0625

Task 06. Environmental and Permitting

CH2M will provide oversight of project permitting and continue to lead the CEQA process for the Program.

Task 06.01. Environmental and Permitting Lead

CH2M will provide a lead to oversee environmental documentation, permitting activities, sustainability, and agency coordination related to the Clean Water Program.

The following role will be provided under this task:

- **Environmental and Permitting Lead (0.5 FTE):** Management of environmental and permitting activities and team.

Task 06.02. Permitting Tracking

CH2M will provide a Permitting Tracking Lead and a permit tracking tool to offer the following benefits to the Program:

- Rapid and visible access to the status of all permits
- Consistency and integration of project and Program level permitting strategies
- Support and streamlining of Project Manager responsibilities
- Program related reference permitting documents, standard approaches, templates, and contacts
- Instant access to all permitting documents by project

The Permit Tracking Lead will work with individual Project Managers and their consultants to confirm and track the required permits, associated permit requirements, and timeline. A permitting schedule will be maintained for each project. The permit tracking lead will coordinate with the Project Controls Manager on permitting schedules from the consultant teams so critical path items can be flagged for the Program Management Team. All permits will be tracked in the Permit Tracking Tool on the Portal.

CH2M will also provide an API (All Permits Issued) Development Lead to ensure that all Clean Water Program projects have an API document on-site during construction activities. This document will provide access to permits by City staff, Program staff, or regulators when visiting construction sites. It is expected that all construction activities will be completed under the permit requirements.

The environmental and permitting function team will continue to provide construction permit support to assist with coordination between the designer/consultant and construction contractors, on behalf of the City. This includes coordination between the contractor(s) and City to determine which City permits are required and which are exempt from City permitting for the various Program projects.

The following roles will be provided under this task:

- **Permit Tracking Lead:** Oversight of permitting activities related to the Program projects and critical path schedule for permitting. Consultants and contractors will obtain permits and permitting lead will help obtain necessary City signatures for submitting to agencies.
- **Construction Permit Support:** Provide permitting support and guidance for Program specific construction projects.
- **API Development Lead:** Leads development of API document for construction projects under the Clean Water Program.

Deliverables and Regular Meetings

1. Individual project permitting schedules submitted to Project Controls Manager.
2. Up to date Permit Tracking Tool.
3. Regular meetings with Project Managers and PDL for ongoing projects.
4. APIs for construction projects under the Clean Water Program.

Assumptions

1. Project Managers will keep the Permit Tracking Lead up to date on permitting progress, will hold consultants accountable on the permitting schedule, and will raise any concerns with the Program team.
2. All permits will be obtained by project specific consultants. The consultant will serve as the agency point of contact with communications requiring approval of the Program.
3. City will manage any regular reporting requirements by permitting agencies. The Program team will provide information and assistance related to Program permitting.

Roles and Level of Effort Summary – Permitting Tracking

<i>Project/Task</i>	<i>CH2M FTE</i>
Permit Tracking Lead	0.25
Construction Permit Support	0.25
API Development Lead	0.3
Task 06.02. Permitting Tracking, Total	0.8

Task 06.03. CEQA

CH2M will provide CEQA support up to the level of effort that is established under this amendment. Items may include:

- Evaluate the need for subsequent CEQA documentation for the UFES project and update API.
- Prepare Addenda for projects not requiring subsequent review.
- Prepare CEQA documents, including Initial Study/Mitigated Negative Declarations (IS/MND), focused Environmental Impact Reports (EIR), response to comments received, and final EIR for UFES.
- Review of categorical exemptions or other CEQA documentation for immediate action projects.
- Support in development and implementation of mitigation monitoring plan for UFES.

The following roles will be provided under this task:

- **CEQA Lead (0.2 FTE):** Lead development of CEQA documentation and completion of the CEQA process.

Deliverables and Regular Meetings

1. UFES final IS/MND focused EIR, response to comments, and final EIR.
2. One Administrative Report for City Council.
3. CEQA review for the API process documentation.

Assumptions

1. City will provide legal support for CEQA decisions and documentation as well as coordination between various City departments on the level of documentation and requirements of the CEQA process.

Task 06.04. Agency Coordination

CH2M will coordinate with City staff to maintain ongoing dialogue with the Regional Water Quality Control Board (RWQCB) on all aspects of the Program.

The following roles will be provided under this task:

- **RWQCB Support (0.05 FTE):** Supports communications with RWQCB.

Deliverables and Regular Meetings

1. Meetings with RWQCB, as-needed.

Assumptions

1. City will produce the annual reporting to the RWQCB and Program staff will provide information and assistance as needed.
2. City will provide a Regulation/Compliance Liaison to support the Regional Board, CEQA, and permitting activities.

Task 06.05. Sustainability Support

CH2M Sustainability support will not be provided in year 6.

Task 06.06. Site Support

Task 06.06.01. Air Quality Support

City of San Mateo submitted a permit application to Bay Area Air Quality Management District (BAAQMD) in November 2017 requesting an authority-to-construct (ATC) permit for its Wastewater Treatment Plant Upgrade Project. BAAQMD issued the ATC permit in May 2018. Due to the design changes in the project, the information presented in the ATC permit will need to be updated. In addition, the City wants to resolve the following two issues associated with the ATC permit issued:

1. The authority-to-construct (ATC) permit addresses the four emergency generators, flow equalization basin, and headworks component of the WWTP upgrade, but the construction of the remaining components of the WWTP upgrade (e.g. S-120 primaries, S-130 secondary treatment, S-140 secondary clarification, S-160 disinfection) are not addressed in the ATC. Instead, they are addressed through a change of permit condition. The City wants confirmation

from BAAQMD that the ATC permit issued provides authorization for construction of the WWTP Upgrade Project elements associated with S-120, S-130, S-140, and S-160.

2. The permit establishes an organic carbon emission limit of 1.6 parts per million by volume (ppmv) based on limited WWTP liquid-phase sampling of Clean Water Act Priority Pollutants. The emission limit does not take into account emissions of non-priority pollutant organic carbon emissions. The City wants BAAQMD to reconsider the organic carbon emission limit as well as the monitoring method and monitoring frequency.

Specific support to accomplish these goals will be provided under this task. Items may include:

- CH2M will coordinate a kickoff meeting with City staff to review and confirm the WWTP Upgrade Project ATC Revision issues, objectives, and schedule.
- CH2M will work with City staff to coordinate a meeting with the BAAQMD permit engineer either at the BAAQMD office or via a conference call.
- CH2M will prepare the ATC Permit revision request submittal based on BAAQMD direction obtained in the meeting with BAAQMD.
- CH2M will coordinate status communications with the BAAQMD permit engineer following submittal of the ATC Permit revision request.
- CH2M will summarize the revised ATC and associated permit conditions. Jacobs will summarize required and recommended actions to be taken during the ATC permit (e.g. request to renew the ATC permit for an additional two-year period no later than two years after issuance).

Specific support will also be provided for air quality assessments and compliance associated with CWP related projects.

The following roles will be provided under this task:

- ***Air Quality Support Lead (0.15 FTE)***: Provides support to City related to air quality compliance and regulation and leads revision to the ATC Permit.

Deliverables and Regular Meetings

1. Kickoff meeting, including agenda, presentation materials, a proposed approach to resolving the organic carbon emission limit and monitoring method contained in the ATC permit for City review and comment, and meeting minutes.
2. Meeting with BAAQMD permit engineer including agenda, and meeting minutes.
3. ATC Permit revision request including: an information needs request for the design team to clarify design changes from the original ATC application; preparation of the draft ATC Permit revision request submittal including cover letter, forms, calculations, and other supporting information for City review; coordinating a meeting with City Staff to review the draft submittal; incorporating one round of City review comments into the revised submittal; coordinating with the City for submittal of the ATC Permit revision request to BAAQMD.
4. Communications with BAAQMD permit engineer following submittal of the ATC Permit revision request including: initial call to confirm receipt and solicit issues or concerns and anticipated schedule for BAAQMD issuance of the revised ATC; no more than three follow up call as agreed to with BAAQMD, including one to request a draft of the revised ATC.

5. Meeting with the City for review of revised ATC to discuss comments and concerns. Jacobs will prepare a proposed response to BAAQMD based on review comments and concerns and will coordinate submittal of the response with City staff.
6. TM documenting a summary of the revised ATC and associated permit conditions.

Assumptions

1. The hydrogen sulfide mass emission rate does not increase. The hydrogen sulfide mass emission rate is based on a hydrogen sulfide concentration-based emission limit of 1.5 parts per million by volume (ppmv) and a maximum scrubber exhaust flow rate of 29,800 dry standard cubic feet per minute (dscfm).
2. The location and configuration of the scrubber exhaust point does not change substantially (UTM coordinates, release height, vertical orientation, stack diameter).
3. The permitted wastewater treatment plant flow does not increase. The permitted wastewater treatment flow is 15.7 million gallons per day (MGD) averaged over there consecutive months over the period 5/1 to 10/31, 78 MGD peak daily flow, and 5,730.5 million gallons per rolling 12-month period.
4. The primary treatment units and primary clarifiers are covered and vented to the control device consisting of a biofilter followed by an in-series vapor-phase carbon unit.
5. No field work, water or vapor sampling, or sample analysis is included in the scope of work.
6. One round of consolidated comments is included in final deliverables.

Task 06.06.02. Compliance Site Inspection

CH2M will provide support to the City's compliance staff related to Stormwater Pollution Prevention Plans (SWPPP), waste management (HAZMAT) and other site permit items. Services will be provided for Clean Water Program projects.

The following role will be provided under this task:

- **Compliance Site Inspection (0.5 FTE):** Coordinates permit compliance inspections at Program construction sites, including coordination with subconsultants performing site tests.

Deliverables and Regular Meetings

1. To be defined on as needed basis.

Assumptions

1. CH2M will provide on-call HAZMAT technical experts as needed to support contractor decisions regarding hazardous materials disposal. City will provide direction on any specific Hazardous waste generator issues or compliance. City will be listed as the owner/generator on all Hazardous Waste manifests or compliance forms.
2. CH2M Compliance Site Inspection lead(s) will be available to supplement the City's SWPPP compliance team. The City will provide oversight for the construction SWPPP as is done for other construction projects within the City.
3. It is assumed that the CMAR will control all activities related to construction dewatering at the Detroit Drive parcel and CH2M will support City and Program as needed with technical expertise and oversight. Neither CH2M or the Program will be directly responsible for SWPPP, dewatering permitting, or compliance reports.

4. CH2M will support City with Program issues related to the existing Industrial SWPPP at the existing wastewater treatment plant site but will not perform inspection on the existing site. CH2M will continue to coordinate with City inspection staff on the existing site to address SWPPP issues for the Industrial SWPPP.
5. CH2M will utilize Program staff to support and monitor the Construction SWPPP on the construction site (Detroit Drive parcel).

Task 07. Public Outreach

Task 07.01. Public Outreach

CH2M will provide overall management of the Clean Water Program public outreach campaign and provide technical and environmental data and information related to the Program and projects to support outreach activities. CH2M will also provide outreach support at the project level for project managers and design consultants/contractors.

Public outreach activities will include:

- Planning, staffing, and executing community and neighborhood meetings.
- Supporting, attending, and presenting at City Council and Commission meetings.
- Developing mailings to announce community and neighborhood meetings, construction milestones, right-of-entry forms, and construction notices.
- Managing the 24-hour Program communication hotline.
- Coordinating and approving signage, door hangers, and other collateral for construction projects.
- Conducting media and social media outreach.
- Coordinating and developing CEQA-related and other legally required notifications for projects.
- Other standard deliverables, including meeting agendas, handouts, responses to public questions, etc.
- Maintain the public facing website and provide adequate staffing to manage and develop content.

The following roles will be provided under this task:

- **Public Outreach Lead (Program and WWTP):** Lead the Program public outreach campaign at both the Program and project level. Lead and implement the outreach campaign related to the WWTP Upgrade and Expansion Project, the largest project in the Program.
- **WWTP and UFES Public Outreach Support:** Support implementation of the outreach campaign related to the WWTP and Underground Flow Equalization System (UFES) project, the two largest projects in the Program.
- **General Public Outreach Support:** Support the public outreach activities at both the Program- and project-level including all WWTP and collection system projects. Support development of stakeholders reporting material. Manage, maintain, and develop the Program website content, including GIS related updates.

Level of Effort Summary – Public Outreach

Program Role	Level of Effort (as FTE)
Public Outreach Lead	0.7
WWTP and UFES Public Outreach Support	0.95
General Public Outreach Support	0.35
Task 07.01. Public Outreach, Total	2.0

Deliverables and Regular Meetings

1. Weekly public outreach team coordination meetings.
2. Outreach documentation as needed, including meeting agendas and handouts, meeting summaries, and a summary of public questions and responses.
3. Website updates and content.

Assumptions

1. CH2M will subcontract directly with City's requested public outreach consultant, Apex Strategies.
2. City to provide support to Public Outreach Lead to ensure consistency with City processes.

Contingency

CH2M can provide additional services under this scope of work through a contingency budget. Activities under contingency may include, but are not limited to:

- Additional outreach expenses and staffing.
- Chartering meetings and a chartering manager.
- Additional partner agency coordination/support.
- Economic support and/or WIFIA loan application for Basins 2 & 3.
- General project management beyond that budgeted and/or identified in the amendment.
- Additional odor control support such as providing further definition to operational changes to improve existing odor control systems and assessing impact of collection system odor control upgrades on WWTP odor control.
- Additional effort to assist City GIS technologists in maintaining GIS for completed projects and missing data and performing model updates/reviews for adhoc developer requests.
- General operations and maintenance support at the wastewater treatment plant.
- Additional CEQA support, permit acquisition and compliance site inspection for other City projects.
- Additional construction management staff.
- Additional 3rd party construction management or materials testing requirements.
- Effort associated with solids facilities condition assessment and improvement roadmap.
- Effort associated with development of a Unified (Integrated) Operations Plan
- Effort associated with implementation of the AMC projects including PM/CM support.
- Effort associated with applying for a WIFIA loan for the Basins 2 and 3 Collection System Project, including coordinating the full loan application for submittal to the EPA.

- Effort associated with odor study after the future collection system design configuration is completed. Prepare TM to summarize Study Results. Also, any additional effort associated with regulatory or permitting support, public outreach or complaint response, and other misc. odor topics.
- Effort associated with performing a complete staffing plan review for operations and maintenance of all new and modified WWTP and collection facilities.

Contingency activities will be identified as-needed and scope and fee will be developed and agreed upon by both CH2M and the City. Budget will be allocated from the contingency task.

Deliverables and Regular Meetings

1. Deliverables and meetings shall be defined for each contingency scope activity agreed.

Assumptions

1. Use of the contingency budget will be prioritized by the Program Manager and the Program Manager Advisor.

Exhibit C - Cost Schedule - City of San Mateo
 Program Management Services for Clean Water Program - Year 6

	CH2M HILL Labor Hours	CH2M HILL Direct Wages	CH2M HILL Fringe Benefits (-407)	CH2M HILL Overhead (1.372)	CH2M HILL Profit (-10)	CH2M HILL Labor Cost	Subconsultant Cost	Program Communication and Computer Charge (PCCC)	Markup on all Subconsultant Costs	Total Cost	Funding Source
Task 01. Program Administration											
Task 01 - Program Management	1,664	\$174,990	\$71,221	\$240,086	\$48,630	\$534,926		\$14,144		\$549,070	Program
Task 01 - Deputy Program Management	1,040	\$96,692	\$39,354	\$132,662	\$26,871	\$295,578		\$8,840		\$304,418	Program
Task 01 - Principal In Charge	52	\$6,316	\$2,571	\$8,665	\$1,755	\$19,307		\$442		\$19,749	Program
Task 01 - Administrative Assistant	1,976	\$66,050	\$26,882	\$90,620	\$18,355	\$201,908		\$16,796		\$218,704	Program
Task 01 - Program Support - Accounting, Publication and editing	1040	\$44,366	\$18,057	\$60,870	\$12,329	\$135,621		\$8,840		\$144,461	Program
Task 01. Subtotal	5,772	\$388,413	\$158,084	\$532,903	\$107,940	\$1,187,340	\$0	\$49,062	\$0	\$1,236,402	
Task 02. Program Controls											
Task 02 - Program Controls Lead	1768	\$160,340	\$65,258	\$219,986	\$44,558	\$490,143		\$15,028		\$505,171	Program
Task 02 - Project Controls Specialist	2808	\$214,031	\$87,111	\$293,651	\$59,479	\$654,273		\$23,868		\$678,141	Program
Task 02 - Program Controls Support	520	\$16,114	\$6,558	\$22,109	\$4,478	\$49,260		\$4,420		\$53,680	Program
Task 02 - Document Controls	1560	\$47,869	\$19,483	\$65,677	\$13,303	\$146,332		\$13,260		\$159,592	Program
Task 02 - Economic Management	624	\$36,262	\$14,758	\$49,751	\$10,077	\$110,848		\$5,304		\$116,152	Program
Task 02 - State and Federal Funding Coordination	624	\$28,916	\$11,769	\$39,673	\$8,036	\$88,393		\$5,304		\$93,697	Program
Task 02. Subtotal	7904	\$503,532	\$204,938	\$690,846	\$139,932	\$1,539,248	\$0	\$67,184	\$0	\$1,606,432	
Task 03. Engineering and Project Management											
Task 03 - Project Delivery Lead	1768	\$117,451	\$47,802	\$161,142	\$32,640	\$359,035		\$15,028		\$374,063	Program
Task 03 - WWTP Project Management	5200	\$363,398	\$147,903	\$498,582	\$100,988	\$1,110,872		\$44,200		\$1,155,072	Project
Task 03 - CS Project Management	5990	\$364,647	\$148,411	\$500,296	\$101,335	\$1,114,689		\$50,915		\$1,165,604	Project
Task 03 - Hydraulic Modeling	1040	\$74,759	\$30,427	\$102,569	\$20,775	\$228,530		\$8,840		\$237,370	Program
Task 03 - Technical Advisor's Program	208	\$21,219	\$8,636	\$29,112	\$5,897	\$64,863		\$1,768		\$66,631	Program
Task 03 - Technical Advisor's WWTP	416	\$42,437	\$17,272	\$58,224	\$11,793	\$129,727		\$3,536		\$133,263	Project
Task 03 - Technical Advisor's CS	416	\$34,428	\$14,012	\$47,235	\$9,568	\$105,243		\$3,536		\$108,779	Project
Task 03 - Odor Control Support WWTP	104	\$7,129	\$2,902	\$9,781	\$1,981	\$21,793		\$884		\$22,677	Program
Task 03 - SCADA Support	1248	\$117,594	\$47,861	\$161,339	\$32,679	\$359,474		\$10,608		\$370,082	Program
Task 03. Subtotal	16390	\$1,143,062	\$465,226	\$1,568,281	\$317,657	\$3,494,226	0	\$139,315	0	\$3,633,541	
Task 04. Procurement Support											
Task 04 - Procurement Coordination	208	\$7,417	\$3,019	\$10,176	\$2,061	\$22,673		\$1,768		\$24,441	Program
Task 04. Subtotal	208	\$7,417	\$3,019	\$10,176	\$2,061	\$22,673	\$0	\$1,768	\$0	\$24,441	
Task 05. Construction Management and Operations Support											
Task 05 - Construction Management Lead	2080	\$212,804	\$86,611	\$291,967	\$59,138	\$650,520		\$17,680		\$668,200	Program
Task 05 - Construction Management General Support	7280	\$536,043	\$218,170	\$735,452	\$148,966	\$1,638,631		\$61,880		\$1,700,511	Program
Task 05 - Construction Management	7836	\$475,985	\$193,726	\$653,052	\$132,276	\$1,455,040		\$66,606		\$1,521,646	Project
Task 05 - Inspectors	6760	\$461,979	\$188,026	\$633,835	\$128,384	\$1,412,224		\$57,460		\$1,469,684	Project
Task 05. Subtotal	23956	\$1,686,812	\$686,532	\$2,314,306	\$468,765	\$5,156,415	\$0	\$203,626	\$0	\$5,360,041	
Task 06. Environmental and Permitting											
Task 06 - Environmental and Permitting Function Lead	1040	\$82,373	\$33,526	\$113,015	\$22,891	\$251,805		\$8,840		\$260,645	Program
Task 06 - Permit Tracking Lead	520	\$17,553	\$7,144	\$24,083	\$4,878	\$53,659		\$4,420		\$58,079	Program
Task 06 - Construction Permit Support	520	\$17,553	\$7,144	\$24,083	\$4,878	\$53,659		\$4,420		\$58,079	Program
Task 06 - API Development	624	\$27,810	\$11,319	\$38,156	\$7,729	\$85,014		\$5,304		\$90,318	Program
Task 06 - CEOA	416	\$34,650	\$14,102	\$47,539	\$9,629	\$105,920		\$3,536		\$109,456	Program
Task 06 - RWQCB Liaison	104	\$8,237	\$3,353	\$11,302	\$2,289	\$25,180		\$884		\$26,064	Program
Task 06 - Air Quality Support	312	\$27,440	\$11,168	\$37,648	\$7,626	\$83,881		\$2,652		\$86,533	Program
Task 06 - Compliance Site Inspection	1040	\$42,033	\$17,107	\$57,669	\$11,681	\$128,490		\$8,840		\$137,330	Program
Task 06. Subtotal	4576	\$257,649	\$104,863	\$353,495	\$71,601	\$787,609	\$0	\$38,896	\$0	\$826,505	

Exhibit C - Cost Schedule - City of San Mateo
 Program Management Services for Clean Water Program - Year 6

	CH2M HILL Labor Hours	CH2M HILL Direct Wages	CH2M HILL Fringe Benefits (.407)	CH2M HILL Overhead (1.372)	CH2M HILL Profit (-.10)	CH2M HILL Labor Cost	Subconsultant Cost	Program Communication and Computer Charge (PCCC)	Markup on all Subconsultant Costs	Total Cost	Funding Source
Task 07 - Public Outreach											
Task 07 - Public Outreach Functional Lead	1456	\$65,700	\$26,740	\$90,140	\$18,258	\$200,837		\$12,376		\$213,213	Program
Task 07 - Public Outreach Support	1976	\$95,249	\$38,766	\$130,682	\$26,470	\$291,167		\$16,796		\$307,963	Program
Task 07 - General Project Outreach Support	728	\$36,253	\$14,755	\$49,739	\$10,075	\$110,822		\$6,188		\$117,010	Project
Task 07 Subtotal	4160	\$197,202	\$80,261	\$270,561	\$54,802	\$602,826	0	\$35,360	0	\$638,186	
Subcontractors											
3rd Party CM - Kennedy/Jenks							\$1,800,000		\$90,000	\$1,890,000	Projects
3rd Party CM - The Hanna Group							\$1,000,000		\$50,000	\$1,050,000	Projects
Signet							\$175,000		\$8,750	\$183,750	Program
Apex Strategies							\$60,000		\$3,000	\$63,000	Program
Smith/Emery							\$175,000		\$8,750	\$183,750	Program
Subtotal	0	\$0	\$0	\$0	\$0	\$0	\$3,210,000	\$0	\$160,500	\$3,370,500	
Subtotals	62,966	\$4,184,088	\$1,702,924	\$5,740,568	\$1,162,758	\$12,790,337	\$3,210,000	\$535,211	\$160,500	\$16,696,048	Program\Projects
CH2M HILL Expenses										\$775,000	Program
24 Hour Call Service										\$5,000	Program
ADS - Flow Monitoring and SLICER										\$30,000	Program
Procore										\$31,000	Program
PMA Housing Allowance										\$61,000	Program
Total										\$902,000	
Total										\$17,600,000	Program\Projects
Contingency										\$900,000	Program\Projects
Total with Contingency										\$18,500,000	