



City of Sacramento City Council

915 I Street, Sacramento, CA, 95814
www.CityofSacramento.org

Meeting Date: 2/26/2013

Report Type: Consent

Title: Supplemental Agreement: Combined Sewer Improvement Plan Update Phase 2 (X14010000)

Report ID: 2013-00066

Location: Districts 3, 4, 5 and 6

Recommendation: Pass 1) a Resolution authorizing budget transfers to the Combined Sewer Improvement Plan Update Project (X14010000), in the amount of \$129,036, and 2) a Motion authorizing the City Manager or City Manager's designee to execute Supplemental Agreement No. 2 to City Agreement No. 2010-0738 with AECOM Technical Services Inc., to provide additional services for an amount not to exceed \$129,036.

Contact: Bill Busath, Engineering Manager, (916) 808-1434; Brett Grant, Supervising Engineer, (916) 808-1413, Department of Utilities

Presenter: None

Department: Department Of Utilities

Division: Cip Engineering

Dept ID: 14001321

Attachments:

1-Description/Analysis

2-Background

3-Location Map

4-Resolution

5-Supplemental Agreement

City Attorney Review

Approved as to Form
Joe Robinson
2/11/2013 5:07:24 PM

City Treasurer Review

Reviewed for Impact on Cash and Debt
Russell Fehr
1/22/2013 10:29:52 AM

Approvals/Acknowledgements

Department Director or Designee: Dave Brent - 2/6/2013 12:04:35 PM

James Sanchez, City Attorney

Shirley Concolino, City Clerk
John F. Shirey, City Manager

Russell Fehr, City Treasurer

Description/Analysis

Issue: The National Pollutant Discharge Elimination System (NPDES) Permit for the operation of the City's Combined Sewer System (CSS) requires the City to complete a Long Term Control Plan (LTCP) update and a comprehensive Water Quality Assessment. AECOM Technical Service, Inc. (AECOM) developed the computer model for the CSS and is utilizing it to update the City's Combined Sewer Improvement Plan. The purpose of the proposed supplemental agreement is to obtain additional computer modeling needed for the Water Quality Assessment and incorporate the Improvement Plan Update projects into an update of the LTCP. This will ensure that the City remains in compliance with any LTCP-related provisions of its NPDES permit.

Policy Considerations: NPDES Permit CA0079111 requires implementation of specific activities and programs. Completion of the Water Quality Assessment and reporting activities supports the following goals and policies of the City's 2030 General Plan:

1. The City shall continue to rehabilitate the CSS to provide adequate wastewater collection, treatment, and disposal in areas served by this system.
2. Protect local watersheds, water bodies and groundwater resources, including creeks, reservoirs, the Sacramento and American rivers, and their shorelines.
3. Protect life and property from flooding.
4. The City shall continue to identify, construct, and maintain infrastructure systems and facilities required to promote and sustain a positive economic climate

Economic Impacts: None

Environmental Considerations: The Community Development Department, Environmental Planning Manager has reviewed the proposed supplemental agreement and has determined that approval of the supplemental agreement is exempt from the California Environmental Quality Act (CEQA), under CEQA Guidelines Section 15061(b)(3). The activity is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

Sustainability: Completion of the Water Quality Assessment and required reporting activities will provide the data needed to develop pollution reduction programs and inform the selection of projects to reduce flooding in the CSS area and, as such, is consistent with the City Sustainability Master Plan.

Commission/Committee Action: Not applicable

Rationale for Recommendation: AECOM was selected to provide professional services for Phase 2 of the Combined Sewer Improvement Plan Update following issuance of a Request for Qualifications in 2010. Approval of the proposed supplemental agreement

with AECOM is recommended to obtain the additional professional services needed to comply with the NPDES Permit issued for the City's CSS.

Financial Considerations: The cost for the proposed supplemental agreement is \$129,036. Appropriations for the cost of this supplemental agreement will be funded by transfers from the following base reserves to the Combined Sewer Improvement Plan Update Phase 2 Project (X14010000):

X14000500	Waste Water Base Reserve (Fund 6006)	\$42,276.00
W14000200	Drainage Base Reserve (Fund 6011)	\$86,760.00

Upon the completion of transfers, there will be sufficient funds for the supplemental agreement for the CSS Improvement Plan Update Project (X14010065).

Emerging Small Business Development (ESBD): AECOM is not certified as an Emerging or Small Business Enterprise.

Background

In June 1990, the Regional Water Quality Control Board (RWQCB) issued a Cease and Desist Order (CDO) requiring the City to eliminate Combined Sewer Outflows (CSOs) from the Combined Sewer System (CSS) into City streets and properties. After exhaustive studies and rigorous benefit/cost analysis, the City Council adopted a Combined Sewer System Improvement Plan (CSSIP) in 1995. The CSSIP met the requirements of the CDO, the EPA's Combined Sewer Overflow Control Policy, and the City's adopted goals for the storm drainage system. That same year, the RWQCB approved the Improvement Plan, rescinded the CDO, and issued a National Pollutant Discharge Elimination System (NPDES) permit that mandated implementation of the Improvement Plan and protection of water quality in the Sacramento River.

The CSS infrastructure dates back to the late 1800s and is one of only two such systems in the State. The area of the City served by the CSS comprises approximately 7,000 acres including downtown, midtown, East Sacramento, and Land Park as shown on the location map for this report. Unlike more common systems that carry sanitary sewage and storm drainage in separate pipes, the CSS collects sanitary sewage from residents and businesses as well as runoff from city streets and urban land uses in the same pipe. During large storm events, those pipes can overflow causing combined sewage to back up onto streets, yards, and, in some cases, even buildings.

Since 1995, in accordance with the CSSIP, the City has constructed over \$132 million in improvements to the CSS. Major projects included upgrades to Sump 2 and Pioneer Reservoir to significantly improve the performance of the CSS and to provide primary treatment for higher volumes of CSS discharges to the river. These improvements have reduced street and structure flooding and have resulted in fewer untreated discharges to the Sacramento River. However, the CSS currently still does not meet the mandated goals of minimizing street flooding during the 10-year storm and preventing structure flooding during the 100-year storm (10 and 100 year levels of service). The remaining projects in the City's existing CSSIP consist of 6 projects that are programmed for construction over the next 7 to 8 years. These projects are a mix of large regional storage vaults and large diameter pipes which serve as both conveyance and inline storage.

Phase 1 of the Combined Sewer System Improvement Plan Update Project converted the CSS Storm Water Management Model (SWMM) from EPA Version 3 SWMM modeling software to the Version 10.0 Wallingford InfoWorks CS software. The comprehensive effort to advance the City's modeling capabilities was completed recently by extending the physical network representation, updating dry- and wet-weather flow inputs, reviewing and refining model assumptions and techniques, and

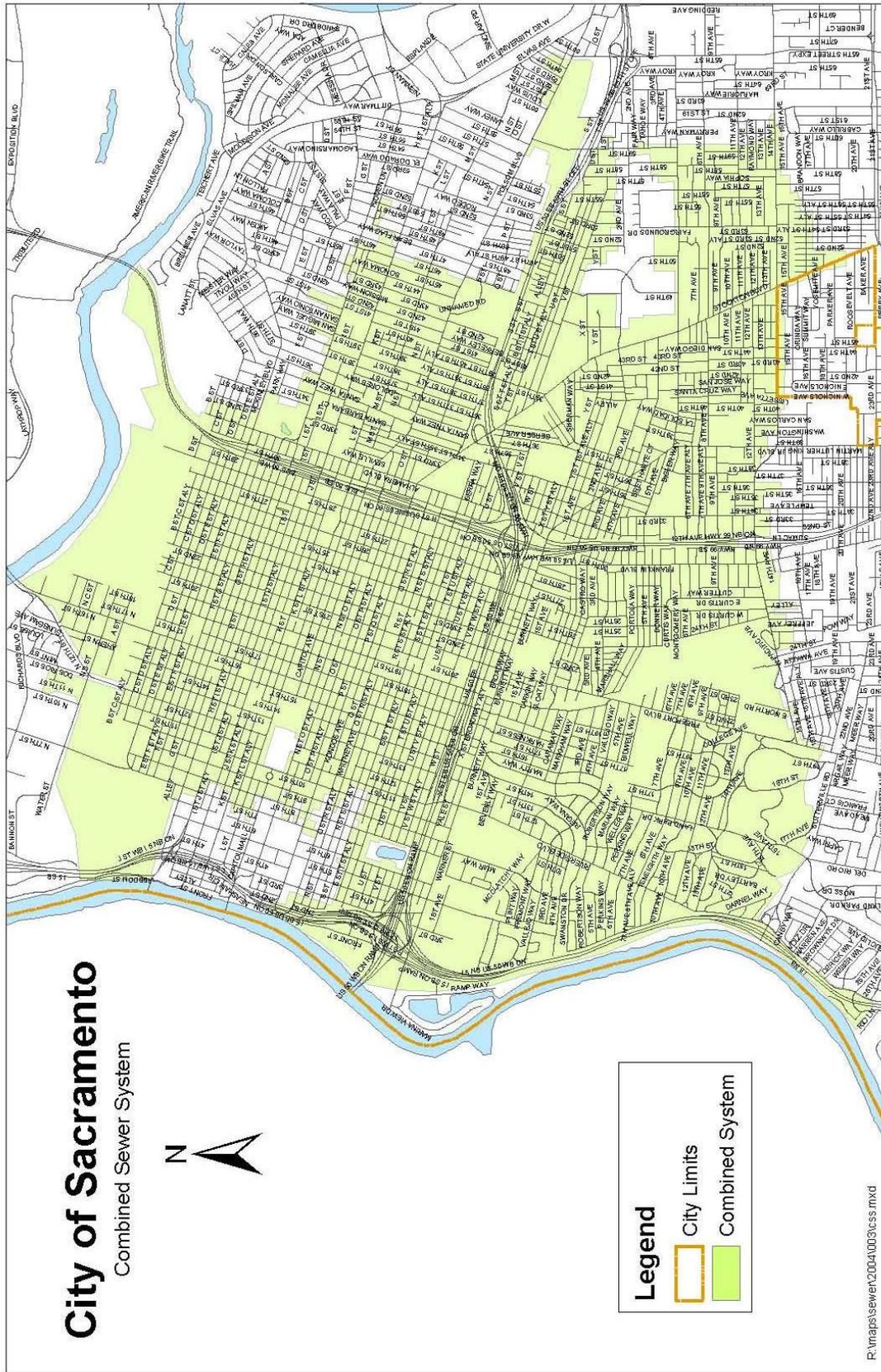
validating the model against existing data and those obtained as part of a flow monitoring program conducted over the period of January 9 – March 10, 2009. AECOM Technical Services, Inc. successfully completed Phase 1 of the CSSIP update.

On January 28, 2010, the California Regional Water Quality Control Board issued a revised NPDES permit that requires the City to continue the implementation of the Long-Term Control Plan (LTCP) with interim goals to be met as progress is made towards the final goal of meeting the 10 and 100 year levels of service. The goal of Phase 2 of the CSSIP Update is to develop a comprehensive plan for eliminating nearly all CSS outflows, meeting the 10 and 100 year levels of service, accommodating build-out (2030), and meeting the Regional Water Quality Control Board's requirements in the most cost effective manner feasible.

A Request for Qualifications (RFQ) was advertised on May 19, 2010, for firms to provide professional services needed for Phase 2 of the Combined Sewer System Improvement Plan Update project. Only one firm, AECOM Technical Services, Inc., submitted a Statement of Qualifications (SOQ). City staff evaluated the SOQ and recommended approval of a professional services agreement with AECOM Technical Services, Inc. The City Council authorized Agreement No. 2010-0738 on September 7, 2010.

Agreement No. 2010-0738 included work to develop a CSSIP that meets the goals of the LTCP and the City's adopted goals to minimize street flooding during a 10-year storm event and to prevent structure flooding during a 100-year storm event, for a not to exceed amount of \$284,000. Supplemental Agreement 1 added tasks to add detail to the model for wet area 1 and augment staff as needed, for a not to exceed amount of \$25,970.

Supplemental Agreement 2 adds tasks to perform modeling support to the Water Quality Assessment Project and incorporate the CSSIP projects into an update of the City's LTCP, for a not to exceed amount of \$129,036. This will ensure that the City remains in compliance with any LTCP-related provisions of its NPDES permit.



RESOLUTION NO.

Adopted by the Sacramento City Council

AUTHORIZING BUDGET TRANSFERS TO THE COMBINED SEWER IMPROVEMENT PLAN UPDATE PHASE 2 PROJECT (X14010000)

BACKGROUND

- A. The City of Sacramento, Department of Utilities (DOU), operates and maintains a combined Sewer System (CSS). The CSS collects and conveys both wastewater and storm drainage in the same pipe. In 1995 DOU completed the Combined Sewer Improvement Plan (CSSIP). This plan is to be updated periodically in compliance with regulatory requirements.
- B. AECOM was selected to provide professional services for Phase 2 of the Combined Sewer Improvement Plan Update following issuance of a Request for Qualifications in 2010.
- C. Additional computer modeling is needed to complete a Water Quality Assessment of the outflows from the CSS and to incorporate Improvement Plan Update projects into an update of the Long Term Control Plan (LTCP). A budget transfer of \$129,036 is needed to fund the proposed additional services.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVES AS FOLLOWS:

- Section 1. The City Manager or City Manager's designee is authorized to transfer funds to the Combined Sewer Improvement Plan Update Phase 2 (X14010000) from the Waste Water Base Reserve Project and the Drainage Base Reserve Project as follows:

Waste Water Base Reserve Project (X14000500 - Fund 6006) in the amount of amount of \$42,276 and Drainage Base Reserve Project (W14000200 - Fund 6011) in the amount of \$86,760.

Project Title and Job Number: Combined Sewer Improvement Plan Update Phase 2 - X14010065

Date: December, 17, 2012

Purchase Order #:

Supplemental Agreement No.:2

The City of Sacramento ("City") and AECOM Technical Services, Inc. ("Contractor"), as parties to that certain Professional Services Agreement designated as Agreement Number 2010-0738, including any and all prior supplemental agreements modifying the agreement (the agreement and supplemental agreements are hereafter collectively referred to as the "Agreement"), hereby supplement and modify the Agreement as follows:

- 1. The scope of Services specified in Exhibit A of the Agreement is amended to add additional service as follows:

See attached Exhibit A, incorporated herein by this reference.

- 2. In consideration of the additional and/or revised services described in section 1, above, the maximum not-to-exceed amount that is specified in Exhibit B of the Agreement for payment of Contractor's fees and expenses, is **increased** by \$129,036.00, and the Agreement's maximum not-to-exceed amount is amended as follows:

Agreement's original not-to-exceed amount:	<u>\$284,000.00</u>
Net change by previous supplemental agreements:	<u>\$25,970.00</u>
Not-to-exceed amount prior to this supplemental agreement:	<u>\$309,970.00</u>
Increase/decrease by this supplemental agreement:	<u>\$129,036.00</u>
New not-to exceed amount including all supplemental agreements:	<u>\$439,006.00</u>

- 3. Contractor agrees that the amount of increase or decrease in the not-to-exceed amount specified in section 2, above, shall constitute full compensation for the additional and/or revised services specified in section 1, above, and shall fully compensate Contractor for any and all direct and indirect costs that may be incurred by Contractor in connection with such additional and/or revised services, including costs associated with any changes and/or delays in work schedules or in the performance of other services or work by Contractor.
- 4. Contractor warrants and represents that the person or persons executing this supplemental agreement on behalf of Contractor has or have been duly authorized by Contractor to sign this supplemental agreement and bind Contractor to the terms hereof.
- 5. Except as specifically revised herein, all terms and conditions of the Agreement shall remain in full force and effect, and Contractor shall perform all of the services, duties, obligations, and conditions required under the Agreement, as supplemented and modified by this supplemental agreement.

Approval Recommended By:

Approved As To Form By:

Project Manager
 Approved By:

 City Attorney

Contractor
 Approved By:

Attested To By:

 City of Sacramento

 City Clerk

EXHIBIT A

The City of Sacramento Department of Utilities (DOU) has engaged AECOM to assist with its Combined Sewer System (CSS) Improvement Plan Update (Plan Update), the purpose is to reduce outflows to City streets and ensure compliance with the City's National Pollution Discharge Elimination System (NPDES) permit. This Plan Update consists of two phases. The first phase, which has been completed, included updating and calibrating the computer model that the DOU uses to evaluate CSS improvement projects. The second phase is underway and involves developing, evaluating, and optimizing future projects to meet DOU objectives and NPDES permit requirements.

This task order relates to the second phase of the Plan Update. The purpose is to perform modeling support to the Water Quality Assessment Project (by others) and incorporate the Plan Update projects into an update of the City's Long Term Control Plan (LTCP). This will ensure that the City is and remains in compliance with any LTCP-related provisions of its NPDES permit.

Current Long Term Control Plan

The DOU developed and implemented a LTCP in 1995 as a result of the adoption of the CSO Control Policy and a 1990 Cease and Desist Order (CDO) issued by the Central Valley Regional Water Quality Control Board (Regional Water Board). The CSO Control Policy, adopted in 1994, requires development and implementation of a LTCP to ensure that combined sewer overflows (CSOs) are not causing violations of water quality standards. The CDO addressed both CSO impacts and outflows to City streets, requiring elimination of both. The 1995 LTCP was intended to address both of these issues. It articulates the City's goals of (1) obtaining relief from the CDO by reducing CSOs and complying with the CSO Control Policy, (2) rehabilitating all critical infrastructure, and (3) reducing or eliminating outflows/flooding in storms of specified return frequencies.

The City's NPDES permit requires continued implementation of the LTCP to achieve the outflow/flood control goals identified in the LTCP. The permit also requires submittal of annual reports documenting the City's progress towards achieving these goals, a schedule for achieving them, and a description of ongoing and planned improvement and rehabilitation projects. The permit notes, however, that "there are several issues with the [City's] development and implementation of its LTCP that also need to be addressed." It identifies these issues as the slow pace of CSS rehabilitation and replacement, the need to evaluate whether the LTCP goals of flooding/outflow reduction have been attained, and the need to determine whether the completed LTCP projects resulted in actual compliance with water quality standards as required by the CSO Control Policy.

Task 1 – Modeling Support to Water Quality Assessment

The DOU, with support from another consultant, is currently performing monitoring and analysis related to the Water Quality Assessment requirements of the NPDES permit. This task will provide modeling support to that effort.

Subtask 1a – Setup and run the DOU hydrologic and hydraulic CSS system model for up to ten (10) discrete wet-weather events that resulted in CSS discharge to the Sacramento River through permitted discharge outfalls 002-007. Provide comprehensive summary of model simulation results including flows, maximum hydraulic grade, and combined sewage volumes at key locations. Model setup requires understanding of operational actions during the specific event.

Subtask 1b – Setup and run the DOU hydrologic and hydraulic CSS system model for the following scenarios developed in conjunction with the Plan Update. Model simulations to include the 2-, 5-, and 10-year recurrence interval design events (with sensitivity analysis to antecedent moisture conditions) and typical rainfall year.

- Baseline – Existing conditions that will be the basis for comparing Plan Update performance benefits
- Project Scenario I – Planned projects through 2015
- Project Scenario II – Projects necessary to protect (eliminate outflows) to the 5-year recurrence
- Project Scenario III – Projects necessary to protect (eliminate outflows) to the 10-year recurrence

Task 2 – Permit Review Workshop

The 1995 CSS Improvement Program and the current NPDES permit focus on achieving design storm protection in the six wet areas. The purpose of this task will be to prepare for, convene, implement, and document a workshop to assess the current CSS Improvement Plan Update relative to the NPDES permit and establish clear objectives for the LTCP update.

Task 3 – Establish Basis for LTCP Update

The current Plan Update involves three key tasks that relate to permit goals:

- Task 4 – Reevaluate Wet Areas
- Task 5 – Performance/Cost Benefit
- Task 6 – CSS Improvement Plan

This task will coordinate and synchronize the LTCP update to be consistent with the objectives and performance achievement goals of the Plan Update.

Task 4 – Coordinate with CSS Water Quality Assessment

The current City NPDES permit requires a water quality assessment with report due to the Regional Water Board by June 2013. The DOU has retained a consultant to conduct relevant analyses and prepare the report. This Task will coordinate with this consultant and DOU staff. If the Water Quality Assessment finds that additional CSO control is necessary to meet water quality objectives then additional measures and projects will be evaluated in conjunction with Plan Update projects. These projects will be described along with Plan Update projects in the LTCP Update.

Task 5 – Develop LTCP Update Document

Based on the outcomes of Tasks 1-3 described above, AECOM will develop a draft LTCP Update Document for DOU review. The draft will include the recommended Plan Update project information and will outline the process for future revisions to the LTCP as well as the format for LTCP annual reporting.

Proposed Cost Estimate

	Labor Hours						Total Cost		
	Project Manager	Wet Weather Expert	Regulatory Specialist	Senior Engineer	Project Engineer	Junior Engineer	ODCs	Total Cost By Task	Total Cost
	David Wood \$230/hr	Dan Donahue \$250/hr	Amy Chastain \$225/hr	Eric Onderak \$170/hr	Mira Chokshi \$135/hr	Courtney Hicks \$112/hr	\$	\$	\$
Task 1 -Modeling Support to Water Quality Assessment	-			-	-	-	\$1,000	-	\$39,000
1a Historic event simulation	8			16	80	40		\$19,840	
1b Scenario simulation	8			12	80	40		\$19,160	
Task 2 - Permit Review Workshop	8	16	32	2	8	12	\$500	\$16,304	\$16,304
Task 3 - Establish Basis for LTCP Update	12	16	40	2	8	12	\$500	\$19,024	\$19,024
Task 4 - Coordinate with CSS Water Quality Assessment	8	8	40	2	8	12	\$1,000	\$16,604	\$16,604
Task 5 - Develop LTCP Update Document	8	24	120	2	8	12	\$500	\$38,104	\$38,104
Total Hours	52	64	232	36	192	128			
Total Labor Cost	\$11,960	\$16,000	\$52,200	\$6,120	\$25,920	\$14,336	\$3,500	\$129,036	\$129,036