STAFF REPORT

TO: SASM Commissioners

FROM: Mark Grushayev, WWT Manager

VIA: Jill Barnes, P.E., Director of Public Works/City Engineer

SUBJECT: Outfall Condition Assessment, Vulnerability Evaluation and Contingency Planning Study with Sanitary District 5 for a Joint Services Agreement

DATE: July 18, 2013

ISSUE:
Study and related cost-sharing with Sanitary District 5 (SD5) to develop a comprehensive memorandum of understanding for shared-use of outfall.

RECOMMENDATION:

Authorize the Director of Public Works to sign a letter committing SASM to share cost with SD5 for the study.

BACKGROUND:
SASM and SD5 started collaborative development of an agreement for shared use of the outfall pipe in Raccoon Strait. SD5 and city staff began this effort prior to expiration of an original agreement entered into 30 years ago when the outfall was constructed. The agreement specified the provisions for cost sharing between the two agencies including operation and maintenance of the interceptor-outfall system, water monitoring costs and dechlorination equipment operation. The agreement also included operation of SASM's facilities housed at the SD5 treatment plant.

DISCUSSION:
A detailed review of the existing agreement led SD5 & City staff to concur that a study of specific operational elements is critical to further this effort. The information obtained from the study would further staff's objective to produce a comprehensive, long-term agreement. The study, if approved, proposes a condition assessment and review of potential vulnerabilities of the existing outfall and dechlorination system, as well as an operational contingency plan for use in

the event that equipment is impaired or inoperative. The agency staff recommends partnering to solicit a proposal for an engineering study and sharing the cost for this study on a 50/50 basis.

To provide further detail, the agencies seek to better understand the peak wet-weather operations and the the adequacy of the existing outfall to meet the agencies' capacity requirements over the next ten years. The agencies also require information to plan for capital improvement expenses that may be needed in future. In preparing for a mutually-beneficial agreement the optimal use of the outfall will be clarified, its physical condition will be evaluated and operational vulnerabilities for each agency will be determined.

Staff recommends that the Board authorize the Director of Public Works to develop and sign a letter stating SASM's commitment to provide 50% of the costs to complete the engineering study described in detail in the Request for Proposal (Attached).

FISCAL IMPACT:
This effort is part of the Master Plan Study for which SASM has a budget in the FY2013-14 of $150,000. Staff recommends expending a portion of the allocated, Master Plan budget to fund the outfall study.

The projected cost for the complete engineering study is $60,000. SASMs 50% share would be approximately $30,000.

Attachments:

1. RFP for Professional Engineering Services – Effluent Conveyance Line and Deep Water Outfall Condition Assessment, Vulnerability Evaluation, and Contingency Planning.

June 19, 2013

ADDRESSEE

SUBJECT: REQUEST FOR PROPOSAL FOR PROFESSIONAL ENGINEERING SERVICES – EFFLUENT CONVEYANCE LINE AND DEEP WATER OUTFALL CONDITION ASSESSMENT, VULNERABILITY EVALUATION, AND CONTINGENCY PLANNING

Dear _____

Sanitary District No. 5 (SD#5) of Marin County and the Sewerage Agency of Southern Marin (SASM) are jointly (Agencies) seeking to retain a professional engineering firm for a study of the Agencies' shared use effluent conveyance line and deep water outfall. Your firm is invited to submit a proposal to provide professional engineering services for the study.

BACKGROUND

In 1983, the Agencies entered into an agreement regarding the shared ownership and use of a 36-inch diameter conveyance line and deep-water outfall pipe, constructed in 1981. The required Outfall capacity entitlements are presented in the table below:

	SASM	SD#5	Total
Average Dry Weather			
Amount, MGD	2.90	0.98	3.88
Share, percentage	74.7%	25.3%	100%
Peak Wet Weather			
Amount, MGD	24.7	6.7	31.4
Share, percentage	78.7%	21.3%	100%

Prior to 1982, SD#5 discharged its treated plant effluent via a 24-inch diameter outfall pipe that terminated on the shoreline of Central San Francisco Bay at Raccoon Strait. In 1982, the plant effluent line was connected to the 36-inch conveyance line. The 1983 agreement designates the remaining, abandoned in place 24-inch outfall pipeline as an emergency use outfall for the Agencies, although it has never been used for this purpose.

The Agencies are negotiating a new ten-year agreement and seek additional information on which to update the joint use outfall agreement, including a condition assessment, potential vulnerabilities, and operational contingency plan.

SASM pumps its treated wastewater effluent to the deep-water conveyance line and outfall while SD#5 relies on plant hydraulic gravity head to convey its treated effluent to the outfall. The flows join in the common 36-inch conveyance line adjacent to the SD#5 plant. The Agencies have agreed to discharge their respective treated wastewaters into the system in such a manner that one party does not cause the other party to violate its discharge requirements. The agreement requires SASM to operate its existing effluent conveyance-outfall facilities so that the maximum pressure at the point where SD#5's

treated effluent enters the outfall pipe does not exceed a maximum head of 28 feet. SD#5 operators report that SASM's pumped effluent has on occasion caused the SD#5 treated plant effluent to back-up in its wastewater treatment plant and, upon notification, SASM was able to reduce its effluent pumping rate to reduce the pressure as requested by SD#5 operators. SASM has completed recent studies of its peak wet weather conveyance and treatment requirements and has expanded its equalization pond storage capacity to help mitigate peak wet weather flow through the plant and interceptor-outfall system. The Agencies seek to better understand the peak wet weather operations of their respective treatment works and the hydraulics of the interceptor-outfall system to assess the adequacy of the existing outfall to meet the required Agencies' capacity requirements over the next ten years and to better plan for any capital improvement expenses that may be required.

In 2012, SASM retained a firm to perform an underwater inspection of the joint deepwater outfall. SASM reports that the outfall diffuser pipes were found to be in good condition. A copy of the inspection report is attached for reference.

Below is a brief outline of the anticipated Consultant Scope of Services.

SCOPE OF SERVICES

1. Conduct a study kick-off meeting with Agency representatives
2. Assess the hydraulic capacity of the conveyance line and deep-water outfall and the peak wet weather flow conveyance requirements of each agency, and compare to the Agency's outfall capacity entitlements as presented in the table above. Review each 'agency's ability to reduce peak wet weather flow through the interceptor-outfall system via storage, as required, to prevent surges and back-up of SD#5's plant effluent flow in order to comply with the requirements of the shared use outfall agreement and to assure the Agencies that peak wet weather flow can be managed and will not result in prolonged back-up of SD#5's plant effluent flow and/or discharge violations.
3. Review the conveyance and outfall line design plans and materials of construction specifications, and the outfall inspection report and other pertinent information to assess the condition of the conveyance line and deep-water outfall and determine its useable service life. Determine whether improvements/repairs are warranted to extend the service life and/or expand capacity. Identify project timing requirements and the cost of repairs replacement and/or upgrade.
4. Assess the most cost effective means of expanding the outfall capacity and prepare a planning level cost estimate for the recommended capital improvement project. Assess regulatory requirements and feasibility for the Agencies' ability to gain approval for additional outfall capacity and/or a redundant outfall pipeline.
5. Conduct a vulnerability assessment of the -conveyance and deep water outfall system, rank the vulnerabilities in terms of high, medium, or low based on the potential likelihood and consequence of a failure or malfunction and develop recommendations on vulnerability mitigation measures to address medium and high ranked vulnerabilities. Develop planning level cost estimates for recommended mitigation measures.

6. Determine the condition and whether the existing 24-inch diameter emergency outfall pipe has utility to the Agencies and identify the improvements that would be required to utilize the outfall in an emergency. Assess and report on regulatory requirements for the agencies' to legally utilize the existing 24-inch outfall pipeline in times of emergency.
7. Develop the life cycle replacement schedule and cost estimate for the deep-water outfall and conveyance line.
8. Identify wastewater industry reliability standards with respect to providing redundant plant outfall pipelines.
9. Conduct a workshop to present findings and recommendations and to answer questions from the Agencies representatives.

PROPOSAL INQUIRIES

Should a FIRM desire additional information prior to submitting a proposal, please contact:

Robert A. Simmons, Temporary Assistant District Manager

Sanitary District No. 5 of Marin County

Office Tel: (415) 302-7198, ext. 102

Cellphone (925) 446-1016

Fax: (415) 435-0221

E-mail: bsimmons@sani5.org

Three copies of your proposal, signed by an authorized representative of the firm, shall be delivered to Samantha Miller District Manager, at Marin Sanitary District No.5, 1120 Mar West Street, Suite E , Tiburon, CA ,94920 on July 10, 2013 or before 4:00 p.m. Three copies of your proposal shall also be delivered to Mark Grushayev, Wastewater Treatment Manager at Sewerage Agency of Southern Marin, 450 Sycamore Ave. Mill Valley, CA 94941 on or before July 10, 2013 at 4:00 p.m.

We look forward to receiving your proposal.

Very truly yours,

[Signed Original on File]

Samantha Miller

District Manager

ATTACHMENT 1 – PROPOSAL CONTENT

SD#5 does not require a specific format for proposals. FIRMS may prepare their proposals in a manner most suited to their particular organization. However, all requirements set forth in the Request for Proposal must be addressed. It is requested that proposals be limited to no more than 25 pages, excluding resumes.

FIRM proposals shall include, at a minimum, the following information:

1) Indication that the FIRM has a clear understanding of the work. This should include your proposed approach to the project and a description of the recommended work tasks and any optional tasks, which you feel may benefit the Agencies.

2) Name, responsibilities, and experience of designated personnel, including subcontractors that will be assigned to Agencies' work and the amount of time each designated staff member can be expected to spend on the project.

4) Resumes of designated personnel and a brief description of projects that they have worked on that are similar in nature to the Agencies' project.

5) References, including contact and telephone number, from two agencies that FIRM provided similar services in the past five years.

6) FIRM shall show a detailed time schedule and milestone completion dates, depicting the number of weeks after receipt of the notice to proceed when project milestones will be completed.

7) Provide a proposed scope of work for the recommended services. Tasks included in this phase of the project are described elsewhere in the RFP. Include an estimate of the required labor hours by task and job title, hourly direct labor cost and the overhead rate as a percentage of direct labor costs. Specify the proposed profit rate as a percentage of direct labor and overhead.

PROPOSAL INQUIRIES

Should a FIRM desire additional information prior to submitting a proposal, please contact:
Robert A. Simmons, Temp. Assistant District Manager Sanitary District No. 5 of Marin
e-mail: bsimmons@sani5.org or (415) 435-1501.

RFP ADDRESSEES

1. Doug Wing, <DWing@carollo.com>
   Carollo Engineers, Inc.
   2700 Ygnacio Valley Road, Suite 300
   Walnut Creek, CA 94598

2. Steve Clary. < SClary@rmcwater.com>
   RMC Water and Environment
   2001 N. Main Street, Suite 400
   Walnut Creek, CA 94596

3. Mark Wilson, <m.wilson@nute-engr.com>
   Nute Engineering
   907 Mission Avenue
   San Rafael, CA 94901