



CITY OF SANTA BARBARA

COUNCIL AGENDA REPORT

AGENDA DATE: January 11, 2011

TO: Mayor and Councilmembers

FROM: Water Resources Division, Public Works Department

SUBJECT: Contract For Development Of Wastewater Collection System Strategic Management Program

RECOMMENDATION:

That Council authorize the Public Works Director to execute a contract, in a form of contract approved by the City Attorney, in the amount of \$282,892 with Brown and Caldwell to develop the framework and systems to effectively direct collection system maintenance, and authorize the Public Works Director to approve expenditures of up to \$28,289 for extra services of Brown and Caldwell that may result from necessary changes in the scope of work, for a total not-to-exceed amount of \$311,181.

DISCUSSION:

Background

The City of Santa Barbara owns and operates 266 miles of wastewater collection system pipes and nine lift stations. Annual operating expenditures for the Collection System Section are approximately \$3 million. Capital expenditures for the collection system pipes and lift stations average \$1.5 million per year, for an annual average expenditure of approximately \$4.5 million. Historically, the City had reported a low number of spills from the system; however, since the year 2000, the number of spills from the collection system has begun to rise, and has continued to increase through 2009. Changes in spill thresholds for reporting have occurred during this period; however, regulatory agencies gauge how well collection systems are being maintained by the number of spills per hundred miles. Collection systems, with 2–4 spills per 100 miles, are considered well maintained systems. The City had a spill occurrence of 15 spills per 100 miles in 2009.

To reduce the number of spills, staff has taken a number of easily implemented steps to increase the amount and effectiveness of pipe cleaning, including:

- Technical training for Collection System staff in pipe cleaning techniques;

- Installation of GPS units on vehicles to verify cleaning practices;
- Rental of a pipeline cleaning vehicle to backfill for equipment unavailable due to breakdown; and
- Contracting for pipeline cleaning to increase number of miles cleaned.

These actions have been effective in reducing the number of spills in the second half of 2010.

In order to continue to improve system performance and achieve better regulatory compliance, staff seeks to contract with Brown & Caldwell to develop and implement a comprehensive system to manage the prioritization of pipeline cleaning and replacement. This project will proceed in two phases:

- Development of a Comprehensive Maintenance Management Program; and
- Development of a needs-based Capital Improvement Program prioritization schedule for pipe replacement or rehabilitation.

The proposed approach to improving collection system maintenance management has been successfully implemented by other agencies and has resulted in increased regulatory compliance and system performance.

Phase I – Maintenance Management

Brown and Caldwell, working closely with City staff, will develop standardized procedures and reporting criteria for assessing pipe maintenance condition; develop the data tables and reports necessary to record and report information; and enter the information into the City's existing Cartegraph database. The result of this effort will develop the ability to generate needs based work orders for maintenance using the Cartegraph system. The Cartegraph system is not currently being used by the Wastewater Section for work order generation. Staff has attempted to implement Cartegraph using existing in-house staff. This approach has been hindered by a lack of technical expertise and insufficient resources allocated for support. As a result, work orders continue to be manually generated, but this approach is administratively burdensome. Transitioning to Cartegraph for work order generation will provide the opportunity to eliminate a currently vacant Wastewater Collection System Supervisor at a savings of approximately \$130,000 per year.

Brown and Caldwell will also review the City's response to, and documentation of spills, and make recommendations for improved procedures related to response, data collection and management. It is anticipated that it will take approximately six months to complete the first phase of work. The cost for Phase I is \$311,181.

Phase II - Collection System Capital Planning and Sewer System Management Plan Update:

As with the cleaning program, the current approach to identifying pipes for CIP repair or replacement is based on staff knowledge. Staff desires to use Cartegraph as a tool to

develop a repair/replacement planning process based on pipe condition. Information on age, pipe material, structural condition, criticality, and maintenance requirements will be used to prioritize CIP planning. Developing a comprehensive database for CIP planning will allow staff to project long-term needs, rather than the two- or three-year plan currently available. Brown and Caldwell will also evaluate the wastewater lift stations for rehabilitation needs in order to identify and prioritize future capital needs.

Other Phase II work includes developing a workload management system to prioritize restaurant inspections; evaluating priority and need for future flow monitoring programs; and updating the City's Sewer System Management Plan. All of these work items are requirements of the City's permit for the wastewater collection system. Phase II work is anticipated to take six months and will cost \$159,302.

Staff issued a Request for Proposal (RFP) to more than a dozen firms. Staff received three proposals, and Brown and Caldwell was unanimously selected by a panel of staff and a member of the Water Commission as having the most complete response to the RFP. Brown and Caldwell also had the lowest cost proposal. At the meeting of November 8, 2010, the Water Commission voted 5/0 to concur with staff's recommendation.

BUDGET/FINANCIAL INFORMATION:

The first phase of work will develop the systems and practices needed to document pipe condition and prioritize maintenance schedules. The cost for this phase is \$311,181. A second phase of work will develop the system for assessing capital replacement needs and prioritization. The cost for the second phase of work is \$159,302. Staff seeks authorization to have the Public Works Director execute the first phase contract. Staff anticipates returning in approximately five months for authorization to execute the second contract.

The funding for this first phase study will come from budgeted funds established for the Wastewater Fund's Sanitary Sewer Overflow Compliance Program, which was included in the Fiscal Year 2011 originally adopted budget in the amount for \$2.5 million.

SUSTAINABILITY IMPACT:

Improving collection system performance and prioritizing CIP projects will result in a decrease in spills and the resulting discharges of wastewater to the environment.

PREPARED BY: Christopher Toth, Wastewater System Manager/mh

SUBMITTED BY: Christine F. Andersen, Public Works Director

APPROVED BY: City Administrator's Office