



TO: Board of Contracts and Awards
FROM: Michael P. Slevin III, P.E., Director, Environmental Services
Geoffrey M. Smyth, P.E., Division Manager, Science & Engineering
COPY: City Council, City Manager, City Clerk, SBE Coordinator, LEAP Coordinator, and
Jill Tibbs, Finance/Purchasing, and Rod Rossi, Project Manager
SUBJECT: Central Treatment Plant Wastewater Collection System Model Update and
Capacity Evaluation
Request for Qualifications Specification No. CT12-0001F – September 22, 2015
DATE: September 4, 2015

SUMMARY:

Environmental Services Department recommends a contract be awarded to Carollo Engineers, Inc. Seattle, WA, in the amount of \$299,930, sales tax not applicable, for consultant engineering services associated with the update and calibration of the Central Treatment Plant Wastewater Collection System Model Update and Capacity Evaluation.

STRATEGIC POLICY PRIORITY:

- Strengthen and support a safe city with healthy residents.
- Assure outstanding stewardship of the natural and built environment.

BACKGROUND:

This project will be instrumental in the future planning and upgrade of the wastewater collection system by helping us determine where the sewer system needs to be upsized to accommodate future growth. The model will be an important tool in helping to eliminate sanitary sewer overflows or backups that are a detriment to the citizens as well as the environment.

ISSUE: The City’s Central Treatment Plant (CTP) treats approximately 80 percent of the wastewater from the citizens of Tacoma and adjacent customers. The collection system for CTP includes 32 City-owned pump stations and approximately 500 miles of sewer pipe. The City has an ongoing collection system replacement and rehabilitation program to replace or rehabilitate aging sewer infrastructure. In order to ensure that the new sewer infrastructure is sized to handle future flows, a collection system model is used to make pipe sizing decisions.

The CTP model was last updated in 2006 and has not been re-calibrated since that time. The flow model becomes less accurate over time as the collection system characteristics change due to pipe age, additional flow sources associated with land use changes and/or population growth, service area expansion, and other factors. In order to size future collection system infrastructure appropriately to plan for future growth, the Central Treatment Plant collection system model needs to be updated. The model update will include an analysis of the City’s rainfall and flow metering that has been collected since the model was last updated in 2006.

ALTERNATIVES: If the model is not updated, the City would need to continue using the existing model that was last updated in 2006. This would result in the City using outdated information to make pipe and pump station sizing decisions which could result in new infrastructure being oversized or undersized. Undersized infrastructure could lead to sanitary sewer overflows.



COMPETITIVE ANALYSIS: The City of Tacoma solicited Engineering and Architectural Services under Request for Qualifications Specification No. CT12-0001F which was used to develop the Citywide Architectural and Engineering (A&E) Roster. A review of the listed consultants on the A&E Roster showed several generally qualified consultants. Following a review of the statement of qualifications of the potentially qualified consultants and their experience related to this scope of work, Carollo Engineers, Inc. was determined to be most qualified based on wastewater modeling work performed for various other municipalities.

CONTRACT HISTORY: New Contract

SUSTAINABILITY: This project will help size wastewater infrastructure to plan for future growth. By sizing the pipes to accommodate growth planned over the pipe’s lifetime, life cycle costs for pipe replacement will be minimized since pipes will not need to be replaced prematurely due to capacity issues. This project will also allow for pipes to be sized to reduce the potential for overflow discharge of untreated wastewater into homes, streets and surface water systems that drain into Puget Sound waters.

SBE/LEAP COMPLIANCE: Not Applicable

RECOMMENDATION:

Environmental Services Department recommends a contract be awarded to Carollo Engineers, Inc. Seattle, WA, in the amount of \$299,930, sales tax not applicable, for consultant engineering services associated with the update and calibration of the Central Treatment Plant Wastewater Collection System Model Update and Capacity Evaluation.

FISCAL IMPACT:

EXPENDITURES:

FUND NUMBER & FUND NAME *	COST OBJECT (CC/WBS/ORDER)	COST ELEMENT	TOTAL AMOUNT
4300 – Wastewater Utility	ENV-04020-03-03-01	5310100	\$299,930.00
TOTAL			\$299,930.00

* General Fund: Include Department

REVENUES:

FUNDING SOURCE	COST OBJECT (CC/WBS/ORDER)	COST ELEMENT	TOTAL AMOUNT
4300 – Wastewater Utility	Various Rate Revenues	4343150 and 4343250	\$299,930.00
TOTAL			\$299,930.00



POTENTIAL POSITION IMPACT: No Impact

FISCAL IMPACT TO CURRENT BIENNIAL BUDGET: \$299,300.00

ARE THE EXPENDITURES AND REVENUES PLANNED AND BUDGETED? Yes

IF EXPENSE IS NOT BUDGETED, PLEASE EXPLAIN HOW THEY ARE TO BE COVERED. N/A

