



TO: T.C. Broadnax, City Manager
FROM: Michael P. Slevin III, P.E., Director, Environmental Services
Geoffrey M. Smyth, P.E., Division Manager, Science & Engineering
COPY: City Council and City Clerk
SUBJECT: Resolution - Pierce County Flood Control Zone District Interlocal Agreement relating to capital funding for the Central Treatment Plant's Flood Protection Improvement Project – March 17, 2014
DATE: March 2, 2015

SUMMARY:

Authorizing the execution of an interlocal agreement with the Pierce County Flood Control Zone District, in the amount of \$6,000,000; and accepting and depositing \$1,000,000 annually for six years beginning in 2014 into the ES Wastewater Fund 4300, for the Central Treatment Plant's Flood Protection Improvement Project.

STRATEGIC POLICY PRIORITY:

- Foster neighborhood, community, and economic development vitality and sustainability.

This project will result in significantly increasing the current level of flood protection at the Central Treatment Plant (CTP). Major flooding at this critical facility would have numerous negative sustainability related impacts, including untreated wastewater entering Commencement Bay.

BACKGROUND:

ISSUE:

The CTP is located on the west bank of the Puyallup River in the Tacoma tideflats area, placing it within the Puyallup River floodplain. The floodplain is protected from routine flooding by a series of levees constructed by the U.S. Army Corps of Engineers, including a levee on the northeastern side of the CTP that separates the plant from the Puyallup River. Despite the existing levee system the CTP is still at risk from flooding. This is primarily because the bed of the river has accumulated sediment over the years reducing the capacity of the river to move flood waters downstream, as well as the potential for higher flows due to increased frequency of storm events.

In early January 2009, the Tacoma area experienced severe wet weather conditions, which led to very high water levels in the Puyallup River. These conditions were severe enough to require sandbagging operations at the CTP to be initiated. While in the end, actual flooding at the CTP was avoided, this storm event was a reminder of the vulnerability of the CTP to flooding events. It was also a reminder that it would be nearly impossible to fully protect the CTP from a severe flood event via the use of temporary sandbags. This flooding event was the second close call experienced at the CTP since the mid-1990s.

These circumstances prompted the Environmental Services Department to design and construct a capital project that would provide reasonable protection of the entire CTP from flooding during extreme wet weather events. This project will provide for the construction of a floodwall, varying from approximately four to seven feet in height above ground, around the currently unprotected perimeter of the CTP. In addition, the project would provide reasonable protection from the risk of flooding from the existing 30-inch diameter surface water pipe that is currently beneath the CTP and carries surface water runoff from approximately 200 acres in the immediate vicinity of the plant.



Early in 2014, the City entered into a contract with the low bidder IMCO General Construction, Inc., Ferndale, WA, for construction of the Central Treatment Plant (CTP) Flood Protection Project, in the amount of \$5,050,775, plus a 20 percent contingency, for a cumulative amount of \$6,060,930.00, plus applicable sales tax.

The floodwall improvements are being completed ahead of schedule and will be substantially complete by the end of February 2015.

ALTERNATIVES:

During the predesign phase of the project, Environmental Services carefully evaluated alternatives to provide an increased level of flood protection at the CTP. These alternatives included evaluation of earth berm dikes, cement concrete flood walls, steel sheet pile flood walls, and also a do nothing alternative. Due to the extreme consequences if this facility were to flood and the challenging subsurface geotechnical conditions at this site, the steel sheet pile based flood wall option was deemed to be the best overall solution.

SUSTAINABILITY:

This project will help avoid the potential discharge of hundreds of millions of gallons or more of untreated wastewater that would overflow into Commencement Bay if severe flooding were to occur at the CTP; significantly reduce the risk of loss of extensive infrastructure, and the replacement that would be necessary, in the event of severe flooding; and significantly reduce staff time necessary for implementation of temporary flood protection measures.

RECOMMENDATION:

Authorizing the execution of an interlocal agreement with the Pierce County Flood Control Zone District, in the amount of \$6,000,000; and accepting and depositing \$1,000,000 annually for six years beginning in 2014 into the ES Wastewater Fund 4300, for the CTP's Flood Protection Improvement Project.



FISCAL IMPACT:

EXPENDITURES:

FUND NUMBER & FUND NAME ¹	COST OBJECT (CC/WBS/ORDER)	COST ELEMENT	TOTAL AMOUNT
ES Wastewater Fund 4300	ENV-04015-01	5310100	\$6,000,000.00
TOTAL			\$6,000,000.00

¹ General Fund: Include Department

REVENUES:

FUNDING SOURCE	COST OBJECT (CC/WBS/ORDER)	COST ELEMENT	TOTAL AMOUNT
Pierce County Flood Control Zone District ¹	ENV-04015-FS-AD-05	6371500	\$6,000,000.00
TOTAL			\$6,000,000.00

¹ Non-taxable contribution

FISCAL IMPACT TO CURRENT BIENNIAL BUDGET: \$3,000,000

This amount includes a payment for 2014.

ARE THE EXPENDITURES AND REVENUES PLANNED AND BUDGETED? Yes