

COUNCIL ACTION FORM

SUBJECT: CONSTRUCTION OF ULTRAVIOLET DISINFECTION SYSTEM FOR WATER POLLUTION CONTROL FACILITY

BACKGROUND:

As part of the City's new National Pollution Discharge Elimination System (NPDES) permit for the Water Pollution Control (WPC) Facility, the effluent must now meet seasonal (March 15-November 15) in-stream water quality standards for *E. Coli*, a bacteria used as an indicator of human waste contamination. The new NPDES permit includes a compliance schedule to construct a disinfection system, with the system required to be operational by the spring of 2014.

On March 22, 2011, Council awarded an engineering services contract for the final design of an ultraviolet (UV) disinfection system for the WPC Facility. Staff has been working with the consulting team to develop the design of the system. It was determined that the best approach to finalize the design is to determine the specific type of equipment to be installed and then finish the construction documents. On January 10, 2012, Council approved the purchase of UV equipment. The consultants have now completed the design of the system, and the construction plans and specifications are complete.

The engineer's estimate of probable cost for the construction is \$2,010,000 which includes the UV disinfection equipment cost of \$371,800. The anticipated project expense and approved CIP budget are as follows:

Engineering Cost

Conceptual Study Phase	\$	63,076	
Preliminary Design Phase		43,481	
Final Design Phase		233,900	
Construction Phase		<u>50,000</u>	
Engineering Total			\$ 390,457

Estimated Construction Cost

Building and Substructure	\$	428,000	
Building Electrical		124,000	
Building Mechanical Systems		100,000	
Process Mechanical		583,000	
Sitework, Utilities, Yard Piping		<u>775,000</u>	
Estimated Construction Cost Total			2,010,000

Construction Contingency (10%)		<u>210,000</u>
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Total Estimated Project Cost**\$2,601,457**

The approved 2012-17 Capital Improvements Plan shows a project budget of \$2,635,557. Funding for the project will be through a low-interest loan from the Clean Water State Revolving Fund, with repayment of the loan coming from the Sanitary Sewer Fund.

ALTERNATIVES:

1. Approve project plans and specifications, and issue a Notice to Bidders for construction of a UV disinfection system for the City's WPC Facility, setting August 8, 2012 as the bid due date and August 14, 2012 as the date of public hearing and award of contract.
2. Do not proceed with this project at this time.

MANAGER'S RECOMMENDED ACTION:

With the reclassification of the South Skunk River in 2007 to a Class A1 stream segment, disinfection became a mandatory requirement of the Water Pollution Control Facility under the NPDES permit issued in August 2010. The NPDES permit also includes a compliance schedule for completion of a disinfection system. The project is listed on the SRF intended use plan, which indicates the City's intention to use the loan program for construction costs.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, thereby approving plans and specifications and issuing a Notice to Bidders for construction of an ultraviolet disinfection system for the WPC Facility, setting August 8, 2012 as the bid due date and August 14, 2012 as the date of public hearing and award of contract.