



AGENDA MEMORANDUM
for the City Council Meeting of July 31, 2012

DATE: July 5, 2012
TO: Ronald L. Olson, City Manager
FROM: Gustavo Gonzalez, Director of Water Operations
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361-826-1874

Approval of the Source Water Contaminant Event Detection System on Nueces River

CAPTION:

Motion authorizing the City Manager or his designee to execute documents to purchase the Source Water Contaminant Event Detection System for the Nueces River below Lake Corpus Christi from Hach Company in the amount of \$243,429.59.

BACKGROUND AND FINDINGS:

Texas Commission on Environmental Quality performed a susceptibility test and identified Corpus Christi's source water as a high risk for potential contamination. Recently, with increased hydraulic fracturing activities within the Eagle Ford Shale formation, much of which is in the Nueces River Basin, the potential for an accidental or intentional spill in Nueces River has increased. The City of Corpus Christi Water Department has developed an implementation plan for the Source Water Contaminant Event Detection System that provides an event detection system for Nueces River. This system will allow the Water Department to possess an early warning detection system for threats against our water, whether that is of accidental or malicious intent.

The Source Water Panel utilizes an event monitor to detect source water contamination including industrial discharge, chemical spills, sewage spills, and other natural or man-made contamination. Parameters that will be utilized within the panel include turbidity, oil in water, phosphate, ammonia, nitrate, conductivity, organics, and pH. The instruments can be programmed to create a fingerprint for each contamination event during the lifetime of the panel. Controlled experiments can be set up to create fingerprints for specific contaminants that the City of Corpus Christi feels would be a threat to the system. When an event does transpire, a sampler will begin to collect water samples at programmed intervals for quality assurance. Those samples can then be taken to a laboratory to verify the results of the event monitor. The data collected will be used for internal purposes only and may be available for assisting other entities. The information will not be provided to the public unless an actual contamination event does transpire.

Two Source Water Panels will be placed along key points in Nueces River, including one location in San Patricio where detection will provide the City with approximately 18 hours to respond, and one location closer to the raw water intake pumps in Calallen. The equipment to be purchased includes two Hach Homeland Security Technologies Source Water Panels with 8 water quality sensors on each panel, where water will continuously pass through a trough attached to the panel. The raw water will be delivered to the panel via a submersible pump then discharged back into Nueces River. In addition to the Source Water Panels, a Hach All-Weather Sampler will be located at each site as mentioned in the previous paragraph. The equipment will be housed within a climate-controlled secured storage facility. Hach CityGuard Virtual Command Center will be used as a network portal to provide monitoring and control of the Source Water Panels enabling detection of contamination events.

In all cases of an event potentially affecting Nueces River, and consequentially, Corpus Christi, the Source Water Panel can aid in detection, drastically reducing response times and thus protecting public health. The system relays information to a centrally located computer system within minutes of the contaminant detection, giving water treatment plant operators time to react. The recognizable benefits gained by implementing this project include safety and protection of the water customers of Corpus Christi.

The Source Water Contaminant Event Detection System cost is paid in full by the City of Corpus Christi Water Department in the amount of \$243,429.59. Funding is acquired through the Source Water Protection activity (4010-30283-550040) of the Water Fund.

ALTERNATIVES:

This is a sole source item.

OTHER CONSIDERATIONS:

None are available for source water event detection monitoring.

CONFORMITY TO CITY POLICY:

Council approval required for appropriation of funds.

EMERGENCY / NON-EMERGENCY:

Non-Emergency

DEPARTMENTAL CLEARANCES:

None

FINANCIAL IMPACT:

Not Applicable Operating Expense Revenue CIP

Fiscal Year: 2011-2012	Project to Date Expenditures (CIP)	Current Year	Future Years	TOTALS
Budget				
Encumbered / Expended Amount				
This item		\$243,429.59		\$243,429.59
BALANCE		\$243,429.59		\$243,429.59

Fund(s): Water Fund

Comments:

None

RECOMMENDATION:

City staff recommends the Source Water Contaminant Event Detection System in the amount of \$243,429.59 be approved.

LIST OF SUPPORTING DOCUMENTS:

- Contract – Signed Addendum
- Sole Source Letter
- Certification of Fund
- Service and Product Information
- Hach Company Insurance Certificate
- Hach Quote 312180840

