



AGENDA MEMORANDUM

First Reading Item for the City Council Meeting of July 19, 2016
Second Reading Item for the City Council Meeting of July 26, 2016

DATE: July 11, 2016

TO: Margie C. Rose, City Manager

THRU: Mark Van Vleck, Assistant City Manager
MarkVanVleck@cctexas.com
(361) 826-3082

Valerie H. Gray, P.E., Executive Director, Public Works
ValerieG@cctexas.com
(361) 826-3729

FROM: Dan Grimsbo, Interim Director of Water and Utilities
DanG@cctexas.com
(361) 826-1718

Jeffrey H. Edmonds, P.E., Director, Engineering Services
JeffreyE@cctexas.com
(361) 826-3851

Engineering Contract

Corpus Christi Aquifer Storage and Recovery (ASR)
Feasibility Study

CAPTION

Ordinance amending the FY 2016 Capital Improvement Budget adopted by Ordinance No. 030621 to add Project No. E16265 Corpus Christi Aquifer Storage and Recovery (ASR) Feasibility Study; accepting a Texas Water Development Board grant in the amount of \$433,388; appropriating \$1,099,320 from Raw Water Supply Development Fund No. 4041; and authorizing the City Manager or designee to execute a Professional Services Contract with HDR Engineering, Inc. of Austin, Texas in the amount of \$601,980 for an ASR Feasibility Study.

PURPOSE:

This agenda item will award a professional engineering services contract with HDR Engineering, Inc. (HDR) on behalf of the Corpus Christi Aquifer Storage and Recovery Conservation District (District) to complete the Corpus Christi ASR Feasibility Study. It will also accept and appropriate a Texas Water Development Board (TWDB) grant contribution and appropriate city funds. The TWDB grant funding (\$433,388) requires a contract agreement between TWDB and the District with a local funding match. This is a City/District joint initiative in which the District will lead the study effort through the TWDB contract. HDR will serve as the City/District contract technical representative for this TWDB contract.

BACKGROUND AND FINDINGS:

Aquifer storage and recovery (ASR) is a long-term water supply strategy to effectively integrate the City's regional water supply system to achieve long-range water planning goals.

In 2005, the District was established to protect the groundwater resources within the City limits that represent the District service area. One of the goals of the District is to investigate the feasibility of and potentially develop an aquifer storage and recovery project for the service area. The City actively participates with the District through an Interlocal Agreement to manage and protect the groundwater resources of the District.

In 2009, the District completed a proposed five-year plan that identified studies needed to identify potential operational issues and gain confidence in developing a successful ASR program. Project No. E16265 Corpus Christi Aquifer Storage and Recovery (ASR) Feasibility Study is aligned with tasks identified in the District's five-year plan and recent findings from a District study completed in January 2016.

The City and District have received a TWDB grant in the amount of \$433,388 to conduct an ASR Feasibility Study within the District service area.

The investigation of ASR feasibility within the District is a sound investment and important for the following reasons:

- Promoting diversification of regional water supplies;
- Providing cost-effective regional water supplies to meet competing demands; and
- Improving system operations and reduce annual operating costs.

The scope of investigation and analysis for this ASR feasibility study includes the following work elements:

- Conduct an exploratory test drilling program (up to 3 exploratory boreholes) to collect hydrogeological and geochemical parameters that can be used to characterize a potential ASR system at the selected sites;
- Perform geochemical analysis to determine the compatibility of treated, source water for storing within the native aquifer setting;
- Develop a field scale groundwater model to simulate storage and recovery operations;
- Evaluate ASR operating policy considerations; and
- Prepare and submit a technical report and electronic presentation to the TWDB summarizing the findings of District feasibility study.

All of the work elements listed above are included in the contract between the District and TWDB. HDR was selected for this study through Request for Qualifications (RFQ) No. 2016-01 Transportation and Utilities. HDR will deliver the final technical report of District feasibility study to the City and TWDB in July/August 2019, in advance of the TWDB contract deadline of August 30, 2019.

ALTERNATIVES:

1. Authorize the execution of the consultant services contract and allow the District to subsequently enter into the ASR Feasibility Study contract with the TWDB. (Recommended in support of District's Grant application)
2. Do not authorize the execution of the contract and therefore, not enter into ASR Feasibility Study with the TWDB. (Not Recommended)

OTHER CONSIDERATIONS:

Not applicable

CONFORMITY TO CITY POLICY:

Conforms to City Fiscal Policy

EMERGENCY / NON-EMERGENCY:

Non-Emergency

DEPARTMENTAL CLEARANCES:

Utilities Department

FINANCIAL IMPACT:

☒ Operating ☐ Revenue ☒ Capital ☐ Not applicable

Fiscal Year 2015-2016	Project to Date Budget & Expenditures	Current Year
Line Item Budget (Water Supply Operating)		\$325,000
Line Item Budget (Raw Water Supply Development Fund #4041)		\$1,099,320
Texas Water Development Board Grant		433,388
Total Funds Available		\$1,857,708
Encumbered / Expended Amount		
This Item		\$601,980
Future Anticipated Expenditures This Project**		\$1,241,136
BALANCE		\$14,592

Current Year Funding: Water Supply Operating Water Capital Reserves, and TWDB Demonstration Projects for Alternative Water Supplies (TWDB Grant Application 00004151). These Current Year fund resources will be used to establish FY 2015-2016 Water Supply Capital Improvement Project (WS 08 – Corpus Christi Aquifer Storage and Recovery (ASR) Feasibility Study.

**Early in Fiscal Year 2016-2017, City staff will bring a contract procurement to the City Council for the exploratory test drilling program of the study's field services investigation required by the TWDB Grant contract. Future procurement of the three test water wells will provide primary data used to analyze and complete the ASR Feasibility Study. Funding for well drilling services and reimbursements are from Raw Water Supply Development Fund No. 4041.

Conduct of the field investigation will take twelve to eighteen months to complete.

Comments: This project requires approximately 1,110 calendar days with anticipated completion in August 2019.

RECOMMENDATION:

City Staff recommends approval of the Ordinance as proposed, award of the engineering services contract to HDR, and consent for District acceptance of the TWDB Grant award through contract with the TWDB.

LIST OF SUPPORTING DOCUMENTS:

Ordinance
Project Budget
Location Map
Contract
Interlocal Agreement (March 11, 2008)
Presentation
Form 1295
TWDB Grant Award Notice