



## AGENDA MEMORANDUM

Future item for the City Council Meeting of April 21, 2015  
Action item for the City Council Meeting of April 28, 2015

**DATE:** April 6, 2015

**TO:** Ronald L. Olson, City Manager

**THRU:** Gustavo Gonzalez, P.E., Assistant City Manager, Public Works and Utilities  
GustavoGo@cctexas.com  
(361) 826-3897

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

Mark Van Vleck, P.E., Interim Director, Environmental and Strategic Initiatives  
MarkVV@cctexas.com  
(361) 826-1874

**Interlocal Agreement with Texas A&M University Kingsville**

Choke Canyon Reservoir Region of the Nueces River Basin

**CAPTION:**

Resolution authorizing the City Manager or designee to execute an Interlocal Agreement with Texas A&M University Kingsville in the amount of \$59,697 for a decision support modeling system for modeling the water resources around the Choke Canyon Reservoir Region of the Nueces River Basin.

**PURPOSE:**

The purpose of this agenda item is to obtain authority to execute a decision support modeling system for modeling the water resources around the Choke Canyon Reservoir Region of the Nueces River Basin.

**BACKGROUND AND FINDINGS:**

Lake Corpus Christi (LCC) and Choke Canyon Reservoir (CCR) System is located within the Nueces River Basin and provides major drinking water supply for the City of Corpus Christi and other South Texas regions. The Nueces River Basin traditionally has complex water management issues related to combined domestic and industrial water supply and demand, prolonged drought conditions, climate-induced water management factors, and coastal freshwater inflow management. In recent years, the booming of unconventional shale oil and gas industry has introduced new challenges to the Nueces River Basin, especially in the CCR area, such as an increase in groundwater pumping. It has increased the complexity of water management in the Nueces River Basin. These challenges make it necessary and important to adopt a solid science-based water resources management approach to proactively manage the complex water system in the Nueces River Basin.

This agreement authorizes the Department of Environmental Engineering in cooperation with the Texas A & M University- Kingsville to develop a decision support modeling system for managing the water resources around the CCR region of the Nueces River Basin. This modeling system will provide the following functionalities to the regional decision makers:

1. Simulating and predicting the interaction of ground water and surface water around the CCR region of the Nueces River Basin;
2. Estimating groundwater recharge/ discharge or channel gain/loss under various hydrological and climate conditions;
3. Simulating and predicting the impact of regional groundwater pumping on the channel loss.

The final deliverables of this project include a decision support modeling tool for routine water resources management and planning and a final project report. This project is anticipated to complete in May 2017.

**ALTERNATIVES:**

1. Authorize the execution of the agreement.
2. Do not authorize the execution of the agreement. (Not Recommended)

**OTHER CONSIDERATIONS:**

Not applicable

**CONFORMITY TO CITY POLICY:**

Conforms to City Fiscal Policy

**EMERGENCY / NON-EMERGENCY:**

Non-Emergency

**DEPARTMENTAL CLEARANCES:**

Environmental and Strategic Initiatives Department

**FINANCIAL IMPACT:**

Operating       Revenue       Capital       Not applicable

<b>Fiscal Year 2014-2015</b>	<b>Project to Date Expenditures</b>	<b>Current Year</b>	<b>Future Years</b>	<b>TOTALS</b>
Line Item Budget		\$31,340.00	\$31,340.00	\$62,680.00
Encumbered / Expended Amount				
This Item		\$30,000.00	\$29,697.00	\$59,697.00
Future Anticipated Expenditures This Project		\$1,340.00	\$1,643.00	\$2,983.00
BALANCE		\$0.00	\$0.00	\$0.00

Fund(s): Environmental and Strategic Initiatives Operating

**Comments:** This project requires approximately two years with anticipated completion in May 2017. The agreement will result in the expenditure of an amount not to exceed \$59,697.

**RECOMMENDATION:**

City Staff recommends approval of the agreement.

**LIST OF SUPPORTING DOCUMENTS:**

Project Budget  
Location Map  
Interlocal Agreement  
Resolution  
Presentation