



AGENDA MEMORANDUM

Action Item for the City Council Meeting of May 14, 2024

DATE: May 14, 2024

TO: Peter Zaroni, City Manager

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Interlocal Agreements
**Texas Water Development Board Volumetric Survey - Choke Canyon and Lake
Corpus Christi**

CAPTION:

Motion authorizing two Interlocal Cooperation Agreements (ILA) with Texas Water Development Board (TWDB) in the amount of \$88,758.00 for the volumetric survey of Choke Canyon Reservoir and \$77,606.00 for a volumetric survey of Lake Corpus Christi Reservoir for a total not to exceed amount of \$166,364.00, both located outside the City limits with FY 2024 funding available from the Water Capital Fund.

SUMMARY:

This item authorizes an ILA with City of Corpus Christi (City) and TWDB for a total not to exceed amount of \$166,364.00 for a volumetric survey of Choke Canyon Reservoir and Lake Corpus Christi Reservoir.

BACKGROUND AND FINDINGS:

The Texas Water Development Board (TWDB) created the Hydrographic Survey Program which began in 1991 when the Texas Legislature authorized the TWDB to develop a non-profit, self-supporting, reservoir volumetric survey program. The Texas Water Code authorizes TWDB to perform surveys to determine reservoir storage capacity, sedimentation levels, rates of sedimentation, and projected water supply availability. Over time, reservoirs lose capacity due to sedimentation. With population and statewide water use increasing, current estimates of reservoir capacity for statewide water planning purposes are essential.

Volumetric surveys are also necessary to ensure the quantity of water available for purposes such as long-term planning, drought management, and environmental flows operations. The TWDB recommends a volumetric and sedimentation survey within a 10-year timeframe or after a major flood event to assess changes in lake capacity and to further improve estimates of sediment

accumulation rates.

The City, in conjunction with the Bureau of Reclamation, own and operate the Choke Canyon Reservoir. Choke Canyon Reservoir was completed in 1982 and filled for the first time in 1987. Choke Canyon is the largest of the two city dams; when full, the lake level is at 220.5 feet above sea level and can hold up to 662,821 acre-ft based on the 2012 volumetric survey.

Lake Corpus Christi was completed in 1958 with the construction of the Wesley Seale Dam. When full, Lake Corpus Christi's water level is 94 feet above sea level and can hold up to 256,339 acre-feet of water. The last volumetric survey was conducted in 2016.

The results of the surveys are expected to show a slight decrease in reservoir storage capacity due to sedimentation. The sedimentation occurs with natural water inflows, but can be accelerated during heavy storm events, such as hurricanes.

The previous surveys showed a reduction of storage capacity as described below:

- 1) Lake Corpus Christi
 - a) The last survey completed by TWDB was in 2015
 - i) TWDB 2002 survey re-calculated – 262,564 acre-feet
 - ii) TWDB 2016 volumetric survey – 256,339 acre-feet (or a 2.3% reduction of capacity due to sedimentation)
- 2) Choke Canyon Reservoir
 - a) The last survey completed by TWDB was in 2012
 - i) TWDB pre-2012 estimate – 696,239 acre-feet
 - ii) TWDB 2012 volumetric survey – 662,821 acre-feet (or a 5% reduction of capacity due to sedimentation)

The results of the new surveys will be compared to previous surveys. The project timeline is between four to seven months for the TWDB to complete the work and submit the report to the City.

ALTERNATIVES:

City Council could reject the ILA which would result in outdated public and regulatory information for planning.

FISCAL IMPACT:

If approved by Council, the fiscal impact in FY 2024 is an amount of \$166,364.00 with funding available from the Water Capital Fund.

FUNDING DETAIL:

Choke Canyon Reservoir

Fund: Water Fund 4010 (Fund 4010)
Department: Water (45)
Organization: Choke Canyon Dam (30210)
Project: Interlocal Agreements – Texas Water Development Board (NCAP24003)

Account: Professional Services (530000)
Activity: n/a
Amount: \$88,758.00

Lake Corpus Christi Reservoir (Wesley Seale Dam)

Fund: Water Fund 4010 (Fund 4010)
Department: Water (45)
Organization: Wesley Seale Dam (30200)
Project: Interlocal Agreements – Texas Water Development Board (NCAP24004)
Account: Professional Services (530000)
Activity: n/a
Amount: \$77,606.00

Total \$166,364.00

RECOMMENDATION:

Staff recommends approval of ILA with Texas Water Development Board (TWDB) in the amount of \$166,364.00 for a volumetric survey of Choke Canyon Reservoir and Lake Corpus Christi Reservoir.

LIST OF SUPPORTING DOCUMENTS:

Location and Vicinity Map
Interlocal Cooperation Agreements