



AGENDA MEMORANDUM

Action Item for the City Council Meeting January 28, 2025

DATE: January 9, 2025

TO: Peter Zanoni, City Manager

FROM: Drew Molly P.E, Chief Operations Officer for Corpus Christi Water
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**Joint Funding Agreement with the United States Geological Survey (USGS) for
Automated River Gauging Station Monitoring and Pass-Through Report**

CAPTION:

Motion authorizing a Joint Funding Agreement with the United States Geological Survey (USGS), United States Department of the Interior to maintain automated river gauging stations that record stream flows and water quality parameters associated with the Frio and Nueces Rivers and associated tributaries and to provide the delivery of the Choke Canyon/Lake Corpus Christi Reservoir and Nueces Estuary Pass-Through (or Passthru) Status Report. The data is used by the City daily to manage releases from the City's reservoir system and for water treatment operations, whereby the USGS contributes \$28,950.00 and the City contributes \$265,450.00.

SUMMARY:

The motion authorizes the City to contribute a total of \$265,450.00 (\$175,350.00 for stream flow and \$90,100.00 for Pass-Through Status Report) to maintain automated river gauging stations along the Frio River, Nueces River, and associated tributaries, which the City uses to record stream flows and water quality information as well as to manage daily inflows and releases from the City's reservoir system. Knowledge of the incoming raw water quality allows the City's Water Treatment Plant Operators to optimize the treatment process, and knowledge of the inflows to Lake Corpus Christi and Choke Canyon Reservoir allows the City's Dam Operators to adjust the downstream releases to protect public safety, maintain as much water as possible in the reservoirs, and protect the integrity of the dams. The Daily Pass-Through Status Report provides daily information on the reservoir system and Nueces Delta inflow (Pass-Through) conditions.

BACKGROUND AND FINDINGS:

The City utilizes the USGS automated river gauging stations to record all inflows and releases in the reservoir system to properly manage the diversion of raw water and the health of the reservoir system, in addition to water quality monitoring.

To better manage the treatment of water at O. N. Stevens Water Treatment Plant, the gathering of real-time water quality data from the Nueces River prior to the intake pumps is critical. Streamflow gauges are the primary system used by the City's Dam Operations team at Choke Canyon Reservoir and Lake Corpus Christi to track water levels in and out of the City's reservoirs, which gives the operations essential data to maintain reservoir levels, ensure Dam safety, and provides a means of early flood warning to protect public safety.

The monthly Pass-Through requirement is dependent on several variables: measured inflow into the reservoir system, percent capacity of the system, Month of the Year per regulatory requirements, and salinity level in Nueces Bay. The City hosts water resource data through USGS stream gages and displays the information on our website. This report is also utilized to determine the Drought Stages. This report has been supported by a contract with the Nueces River Authority (NRA) for \$135,000.00 a year.

The contract period is October 1, 2024, through September 30, 2025

ALTERNATIVES:

The alternative would be to eliminate the City's knowledge of inflows and outflows to the reservoir system and lake levels; the City would not know how to plan for raw water diversions and flood mitigation. Knowledge of the incoming raw water quality allows 'the City's Water Treatment Plant Operators to optimize the treatment process, and knowledge of the inflows to Lake Corpus Christi and Choke Canyon Reservoir allows the City's Dam Operators to adjust the downstream releases to protect public safety, maintain as much water as possible in the reservoirs, and protect the integrity of the dams.

FISCAL IMPACT:

The motion authorizes the City to contribute \$265,450.00 in FY 25 to USGS to maintain automated river gauging stations along the Frio and Nueces Rivers and associated tributaries and to provide the City with the Daily Pass-Through Status Report.

Pass-thru Report and Monitoring Stations Cost Break Down				
	FY2024	FY2025	FY2026	FY2027
Nueces River Authority (NRA) Passthru Svs.	\$ 135,000	\$ -	\$ -	\$ -
US Geological Survey (USGS) Passthru Svs.	NA	\$ 90,100	\$ 14,400	\$ 15,100
Annual savings by contracting with USGS	\$ -	\$ 44,900	\$ 120,600	\$ 119,900
USGS Monitoring Stations - City Cost Share	\$ 169,350	\$ 175,350	\$ 180,611	\$ 186,029
Total Contract Amount	\$ 304,350	\$ 265,450	\$ 195,011	\$ 201,129

3% Increase year-to-year

The change in the data management services from NRA (\$135,000.00) to USGS (\$90,100.00) is estimated to result in operational savings of \$44,900.00 in FY 25.

FUNDING DETAIL:

Fund: 4010 Water Fund
Organization/Activity: 30200 Water Wesley Seale Dam
30210 Choke Canyon Dam
Department: 45 Water
Account: 530000 Professional Services

RECOMMENDATION:

Staff recommends approval of the Joint Funding Agreement with the USGS with a City contribution of \$265,450.00.

LIST OF SUPPORTING DOCUMENTS:

Joint Funding Agreement
USGS Reservoir Pass-Through Proposal