

AGENDA ITEM MEMO

BOARD MEETING DATE: October 5, 2022

TO: Board Members

THROUGH: Jeff Walker, Executive Administrator
Ashley Harden, General Counsel
Rebecca Trevino, Chief Financial Officer
John T. Dupnik, P.G., Deputy Executive Administrator, Water Science and Conservation

FROM: Mark W. Wentzel, Ph.D., Hydrologist, River Science and Hydrosurvey

SUBJECT: Water Resources Investigations with the U.S. Geological Survey

ACTION REQUESTED

Consider authorizing the Executive Administrator to: (a) negotiate and execute a contract in an amount not to exceed \$2,091,375 (including \$1,727,640 from the Texas Water Development Board) for continuation of the Water Resources Investigations data collection program with the U.S. Geological Survey in Fiscal Year (FY) 2023; and (b) amend the contract in an amount not to exceed \$100,000 if additional funds become available.

BACKGROUND

Water data is the foundation upon which Texas builds its water plans, protects against flood risk, and manages water resources. The first U.S. Geological Survey (USGS) streamflow gage in Texas was installed 133 years ago on the Rio Grande near El Paso. The USGS and funding partners currently maintain a network of 761 streamflow and 158 lake level gages providing near real-time data across the state. Each year, the Texas Water Development Board (TWDB) enters into a contractual agreement with the USGS to cover the cost of gaging for a portion of the statewide network. Gages included in the agreement collect data for one of two primary purposes: water resources monitoring and planning, or flood forecasting and warning. The USGS contributes funding toward the cost of gages included in the agreement.

In FY 2022, the TWDB partnered with the USGS to operate and maintain 53 streamflow and 35 lake level gages for water resources monitoring and planning and 55 streamflow, 5 lake level, and 45 rain gages for flood forecasting and warning, as shown in the attachment.

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Brooke T. Paup, Chairwoman | George B. Peyton V, Board Member
Jeff Walker, Executive Administrator

Total cost of the agreement in FY 2022 was \$1,929,519, with the USGS contributing \$363,735 and the TWDB contributing \$1,307,784 from general revenue funds and \$258,000 from the Floodplain Management Account within the Texas Infrastructure Resiliency Fund.

KEY ISSUES

For FY 2023, the USGS has increased operation and maintenance costs for gaging by approximately \$162,000 or roughly three percent, the first cost increase since FY 2019. Funds available from the USGS for cost share will remain constant. General revenue funds from the TWDB budgeted for FY 2023 for water resources gages are not sufficient to cover the additional cost for the 88 water resources gages. Funds budgeted by the TWDB for flood forecasting and warning gages and for rain gages are sufficient to handle the cost increase for all flood-related gages plus a few additional gages. To prevent loss of gaging capabilities in FY 2023, one lake level and two streamflow gages will be transferred from water resources funding to flood warning and forecasting funding. Gages to be transferred were selected in consultation with the USGS and will be flood hardened to increase their ability to collect and transmit data during flood events. The transferred gages will provide data useful to both water resources monitoring and planning and flood forecasting and warning.

The Executive Administrator proposes to continue the gaging contract with the USGS for FY 2023. An allocation of the costs is illustrated in the attachment. A portion of the contract will cover operations and maintenance for 51 streamflow and 34 lake level gages that provide data for water resources monitoring and planning. A second portion of the contract will support flood warning and forecasting. Services will include one-time flood hardening costs for one existing lake level and two streamflow gages and operation and maintenance costs for 57 existing streamflow, 6 lake level, and 45 rain gages.

The total cost of the FY 2023 gaging contract will be \$2,091,375, with \$363,735 provided by the USGS and the remaining \$1,727,640 provided by the TWDB. In addition, the contract could be amended to add up to \$100,000 to support one-time opportunities to advance water resources or flood data collection in Texas that may arise during the fiscal year. Please see the attachment for a detailed breakdown of costs.

RECOMMENDATION

The Executive Administrator concludes that the Water Resources Investigations data collection program for gaging furthers the objectives of Texas Water Code §16.012 for statewide water resources data collection and dissemination and §16.453 for collection of flood related information and recommends approval of this request.

Attachment: Summary of Water Resources Investigations Program for FY 2022 and FY 2023.

Summary of Water Resources Investigations Program for FY 2022 and FY 2023.

| Fiscal Year (FY) | Objective | Service | Number of gages | | | Funding | | | |
|------------------|-------------------------------|---------------------------|-----------------|------------|------|-----------------|-----------------|-----------------------|--------------------|
| | | | Stream-flow | Lake level | Rain | USGS cost share | TWDB | | Total by objective |
| | | | | | | | General Revenue | Floodplain Mgmt. Fund | |
| 2022 | Water resources data | Operation and Maintenance | 53 | 35 | | \$363,735 | \$656,014 | | \$1,019,749 |
| | Flood forecasting and warning | Operation and Maintenance | 55 | 5 | 45 | | \$651,770 | \$258,000 | \$909,770 |
| | | | | | | | | Total | \$1,929,519 |
| 2023 | Water resources data | Operation and Maintenance | 51 | 34 | | \$347,735 | \$660,100 | | \$1,007,835 |
| | Flood forecasting and warning | Flood Hardening | 2 | 1 | | | \$119,580 | | \$119,580 |
| | | Operation and Maintenance | 57 | 6 | 45 | \$16,000 | \$689,960 | \$258,000 | \$963,960 |
| | | | | | | | | Total | \$2,091,375 |