

AGENDA ITEM MEMO

BOARD MEETING DATE: September 9, 2021

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., Manager, River Science

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

ACTION REQUESTED

Consider authorizing the Executive Administrator to negotiate and execute a contract in an amount not to exceed \$1,916,519 (including \$1,552,784 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 2022.

BACKGROUND

Water data is the foundation upon which Texas builds its water plans, protects against flood risk, and manages water resources. Adequate data is needed to understand how much water is available for current and future use or how drought, flood, or other factors may affect water use and environmental resources. The State-Federal Cooperative Program for Water Resources Investigations started in 1915 with installation of the first jointly-funded gage. The U.S. Geological Survey and funding partners currently maintain a network of 673 streamflow and 152 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 U.S. Geological Survey to cover the cost of data collection for a portion of the statewide network (Table 1). Gages included in this contract collect data for one of two primary purposes: water resources monitoring and planning or flood forecasting and warning. Each year, the U.S. Geological Survey contributes some funding toward the cost of

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stream and lake level gages for water resources monitoring and planning but does not provide cost share related to gages that are primarily for flood forecasting and warning.

In Fiscal Year 2021, the TWDB partnered with the U.S. Geological Survey to operate and maintain 104 streamflow, 40 lake level, and 45 rain gages and install 4 new gages (Table 1). These totals include 53 streamflow and 35 lake level gages for water resources monitoring and planning, consistent with our support for this purpose for many decades. Totals also include 51 streamflow, 5 lake level, and 45 rain gages for flood forecasting and warning, an aspect of the gaging program that began in Fiscal Year 2016. Installation of the remaining 4 streamflow gages, ongoing now, will complete the planned statewide network of 60 gages (55 stream and 5 lake level) for flood forecasting and warning. Total cost for these activities in Fiscal Year 2021 was \$2,081,819, with the U.S. Geological Survey contributing \$363,735 and the TWDB contributing \$1,460,084 from General Revenue funds and \$258,000 from the Floodplain Management Account within the Texas Infrastructure Resiliency Fund.

KEY ISSUES

The Executive Administrator proposes to continue the Water Resources Investigations contract with the U.S. Geological Survey for Fiscal Year 2022. A portion of that contract will cover operation and maintenance for 53 streamflow and 35 lake level gages that provide data for water resources monitoring and planning (Table 1). Total costs associated with this objective will be \$1,019,749. The U.S. Geological Survey will contribute \$363,735, and the TWDB will contribute the remaining \$656,014 from General Revenue.

A second portion of the contract will support flood warning and forecasting. The TWDB will provide \$896,770 for full year operation and maintenance costs for 55 existing streamflow, 5 lake level, and 45 rain gages (Table 1). These funds will be provided from General Revenue (\$638,770) and the Floodplain Management Account within the Texas Infrastructure Resiliency Fund (\$258,000).

The total cost of the Fiscal Year 2022 Water Resources Investigations contract will be \$1,916,519, with \$363,735 provided by the U.S. Geological Survey and the remaining \$1,552,784 provided by the TWDB.

RECOMMENDATION

The Executive Administrator recommends approval to authorize negotiating and executing a contract with the U.S. Geological Survey for Water Resources Investigations to further 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.

Attachment: Table 1. Summary of Water Resources Investigation program for Fiscal Years 2021 and 2022.

Table 1. Summary of Water Resources Investigation program for Fiscal Years 2021 and 2022.

Fiscal year	Objective	Service	Number of gages			Funding			Total by objective
			Stream-flow	Lake level	Rain	USGS cost share	TWDB		
							General revenue	Floodplain mgmt. fund	
2021	Water resources data	Operation and Maintenance	53	35		\$363,735	\$656,014		\$1,019,749
	Flood forecasting and warning	Installation	4				\$225,000		
		Operation and Maintenance	51	5	45		\$579,070	\$258,000	\$1,062,070
Total								\$2,081,819	
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		\$638,770	\$258,000	\$896,770
	Total								\$1,916,519