

TO: Board Members

THROUGH: Jeff Walker, Executive Administrator
Robert E. Mace, Ph.D., P.G., Deputy Executive Administrator, Water Science and Conservation
Les Trobman, General Counsel
Chris Hayden, Director, Budget

FROM: Mark W. Wentzel, Ph.D., Manager, Instream Flows

DATE: August 11, 2016

SUBJECT: Fiscal Year 2017 Joint Funding Agreement with the U.S. Geological Survey for Water Resources Investigations

ACTION REQUESTED

Authorize the Executive Administrator to: (a) negotiate and execute a payable contract in an amount not to exceed \$2,191,015 (\$1,827,280 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 2017; and (b) amend the contract in an amount not to exceed \$100,000 if needed and additional funds are available.

BACKGROUND

Water data is the foundation upon which Texas builds its water plans and manages its water resources. Adequate water data is necessary to knowing how much water is available for use or how drought, flood, or additional use may affect current users and environmental resources. The first U.S. Geological Survey streamgage in Texas was installed 127 years ago on the Rio Grande near El Paso. The State-Federal Cooperative Program for Water Resources Investigations started shortly thereafter with the first jointly funded gage being installed in 1915. The U.S. Geological Survey currently maintains a network of 555 stream and 145 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). The cost of the program is split between the U.S. Geological Survey and the TWDB, each paying for a negotiated portion of the total. In Fiscal Year 2015, the TWDB partnered with the U.S. Geological Survey to cover the costs of 53 streamflow and 35 lake level gages. Total cost of the contract was \$991,605, with the U.S. Geological Survey contributing

\$363,735 and the TWDB contributing the remaining \$627,870 from General Revenue funds. Gages funded in Fiscal Year 2015 contribute directly to the TWDB objective of providing data for water resources monitoring and planning. Because the costs of gaging did not increase from the previous year, a nearly identical contract was negotiated in Fiscal Year 2016. This contract continued to support 53 stream and 35 lake level gages that contribute to the TWDB objective of providing data for water resources monitoring and planning.

In December 2015, a memorandum of understanding was executed between the Office of the Governor and the TWDB “...for purposes of preparing for a disaster, including installing a network of stream gages to enhance flood notification systems...” Subsequently, the TWDB added \$558,645 to the contract for the installation, operation, and maintenance of 12 stream and one lake level gage with the objective of improving flood forecasting and warning (Table 1). The source of the additional funds was the Disaster Contingency Fund No. 453. The locations of new gages were selected in consultation with stakeholders including the City of Wimberley, Guadalupe-Blanco River Authority, and the National Weather Service. Cost-share funding from the U.S. Geological Survey was not available for these new gages.

KEY ISSUES

The Executive Administrator is proposing a Water Resources Investigations contract with the U.S. Geological Survey for Fiscal Year 2017 that will support gages that meet two objectives, one focused on water resources monitoring and planning and the other on flood warning and forecasting. A portion of the contract will cover Fiscal Year 2017 costs of operation and maintenance for 53 stream and 35 lake gages that provide data for water resources monitoring and planning (Table 1). The total costs associated with this objective will be \$991,605, the same amount as in Fiscal Years 2015 and 2016. The U.S. Geological Survey will contribute \$363,735 in cost-share funds to this amount and the TWDB will contribute the remaining \$627,870 from General Revenue funds.

A second portion of the contract is related to supporting flood warning and forecasting. Included in this objective are the costs of installation for 19 new gages to be installed in Fiscal Year 2017 and operation and maintenance costs associated with 25 gages during Fiscal Year 2017 (Table 1). New gages installed in Fiscal Year 2017 will complete the list of gages required to improve flood warning in the Guadalupe River Basin and the highest priority gages identified by the National Weather Service for improving flood forecasting across the state. The U.S. Geological Survey does not have cost-share funds to contribute to these gages. TWDB will provide the entire \$1,199,410 associated with these gages with funds from the Disaster Contingency Fund No. 453.

The total cost of the Water Resources Investigations contract will be \$2,191,015 with \$363,735 provided by the U.S. Geological Survey and the remaining \$1,827,280 provided by the TWDB.

The U.S. Geological Survey has estimated the cost of installation of new stream gages for flood forecasting and warning to be \$50,000 per location. Yearly operation and maintenance costs are approximately \$17,000 per year. However, these costs are very site specific, and the exact costs

for individual gages will not be known prior to installation. In the event the costs of the 19 new gages are more than expected, it may become necessary to provide additional funding to this contract. Alternatively, if costs are less than expected, it may be possible to install an additional gage or two. Therefore, the Executive Administrator also seeks authorization to amend the contract in an amount not to exceed \$100,000.

RECOMMENDATION

The Executive Administrator seeks approval to (a) negotiate and execute a payable contract in an amount not to exceed \$2,191,015 (\$1,827,280 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 2017, no later than 60 days from Board approval; and (b) amend the contract in an amount not to exceed \$100,000 if needed and additional funds are available.

This recommendation has been reviewed by legal counsel and is in compliance with applicable statutes and Board rules.

Table 1. Summary of Water Resources Investigation program for Fiscal Years 2015, 2016, and 2017.

Fiscal Year 2015 Contract			Number of Gages		Funding			Total by Objective
Objective	Service	Fiscal Year	Stream	Lake	USGS Cost Share	TWDB		
						General Revenue	*DCF No. 453	
Water resources monitoring and planning	Operation and Maintenance	2015	53	35	\$363,735	\$627,870		\$991,605
							Total	\$991,605

Fiscal Year 2016 Contract			Number of Gages		Funding			Total by Objective
Objective	Service	Fiscal Year	Stream	Lake	USGS Cost Share	TWDB		
						General Revenue	*DCF No. 453	
Water resources monitoring and planning	Operation and Maintenance	2016	53	35	\$363,735	\$627,870		\$991,605
Flood forecasting and warning	Installation	2016	12	1			\$538,400	\$558,645
	Operation and Maintenance	2016	5				\$20,245	
							Total	\$1,550,250

Proposed Fiscal Year 2017 Contract			Number of Gages		Funding			Total by Objective
Objective	Service	Fiscal Year	Stream	Lake	USGS Cost Share	TWDB		
						General Revenue	*DCF No. 453	
Water resources monitoring and planning	Operation and Maintenance	2017	53	35	\$363,735	\$627,870		\$991,605
Flood forecasting and warning	Installation	2017	16	3			\$920,000	\$1,199,410
	Operation and Maintenance	2017	24	1			\$279,410	
							Total	\$2,191,015

*Disaster Contingency Fund Number 453