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AGENDA ITEM MEMO

BOARD MEETING DATE: October 1, 2026

TO: Board Members

THROUGH: Bryan McMath, Executive Administrator
Ashley Harden, General Counsel
Georgia Sanchez, Chief Financial Officer

FROM: Richard A. Wade, Deputy Executive Administrator, Texas Geographic Information Office

SUBJECT: Acquisition of Lidar Data for Two Middle Colorado River Basin Watersheds

ACTION REQUESTED

Consider authorizing the Executive Administrator to execute two contracts in a total Texas Water Development Board (TWDB) contributed amount not to exceed \$1,925,000 for lidar data acquisition and quality assurance / quality control (QA/QC) for two Middle Colorado River Basin watersheds, using the Texas Strategic Mapping Program and their associated Geographic Information Systems (GIS) vendor cooperative contracts at the Texas Department of Information Resources (DIR).

BACKGROUND

Lidar is a remote sensing technology that uses aircraft to collect three-dimensional data of the earth's surface. Lidar datasets provide an engineering-grade level of accuracy and serve the needs of most economic development and emergency planning activities.

Example uses include:

- Coastal area flood and hurricane storm surge modeling
- Flood inundation modeling
- Pipeline, transmission, and transportation corridor planning
- Urban and regional economic development

Our Mission

Leading the state's efforts
in ensuring a secure
water future for Texas

Board Members

L'Oreal Stepney, P.E., Chairwoman | W. Brady Franks, Board Member | Ashley Morgan, Board Member
Bryan McMath, Executive Administrator

- Watershed modeling
- Facility siting

This lidar acquisition project will capture over 24,199 square miles of river basin watersheds across central and west Texas. Coverage extends across portions of 39 counties and overlaps with the Middle Colorado-Concho and Middle Colorado-Llano watersheds in the Colorado River basins. The majority of the existing lidar datasets in this geographic area range from three to nine years old and will not meet current USGS 3D Elevation Program quality specifications due to the age of data by late 2027- early 2028 when the dataset will be delivered. This project will complete full coverage of the two watersheds over the area, continuing the strategy to collect lidar by Hydraulic Unit Codes-level six (HUC-6) for watersheds across Texas. This region is currently split across seven different older lidar collections with different specifications and dates of acquisition. The HUC-6 data acquisition method will eliminate past patchwork lidar data acquisitions that were based on political boundaries and remove discrepancies between datasets when modeling watersheds for various applications, especially flood and base level engineering.

Lidar data processed from this project will be used to further support floodplain management and planning, feature extraction, water quality modeling, stream restoration potential analysis, change detection, Next Generation 9-1-1, wildfire mitigation, vegetation and forest analysis, hurricane recovery and planning efforts, habitat identification/modeling for endangered species, statewide buildings data creation initiatives, and elevation derived hydrography efforts in Texas. The final lidar data from this project will become publicly available and free to download through the Texas Geographic Information Office (TxGIO) DataHub.

TWDB's TxGIO will procure the new lidar data and QA/QC through the TxGIO Texas Strategic Mapping Program and the associated Geographic Information Systems (GIS) vendor cooperative contracts at the Texas Department of Information Resources (DIR). TxGIO submitted two draft Statements of Work (SOW) to DIR for review and approval to utilize the contracts from the pool of vendors available to acquire, deliver, and perform quality control and quality assurance verification on lidar in the Middle Colorado River Basin watersheds.

After DIR review and approval, TxGIO/TWDB solicited and evaluated proposals for each SOW. For SOW 1 for acquisition and delivery of lidar, NV5 is recommended for selection to provide the new lidar dataset for a final cost of \$1,745,473.87. For SOW 2, Dewberry is recommended for selection to provide QA/QC reports and checkpoint surveys at a cost of \$157,031.

TxGIO is currently negotiating cost share partnerships for this project with the Texas Commission of Environmental Quality and the City of Austin.

The total cost for TWDB will not exceed \$1,925,000.

The Total project cost pending partnership participation of optional areas is estimated not to exceed \$2,100,000.

KEY ISSUES

TxGIO is currently awaiting final decisions from additional state and local partners on the ability to participate in the cost share of this project.

This project will obligate a total amount not to exceed \$1,925,000 Fiscal Year 2027 Texas Infrastructure Resiliency Fund (TIRF) appropriation:

SOW 1 for a new lidar dataset of the Middle Colorado watershed basins at \$1,745,473.87.

SOW 2 for QA/QC of the newly acquired Middle Colorado watershed basins at \$157,031.

RECOMMENDATION

The Executive Administrator recommends approval to execute two contracts with a TWDB contribution not to exceed \$1,925,000 for lidar data acquisition and QA/QC, using the Texas Strategic Mapping Program and their associated GIS vendor cooperative contracts at DIR.