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AGENDA ITEM MEMO

BOARD MEETING DATE: September 18, 2025

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
Joey L. Thomas, Manager, Strategic Mapping, Texas
Geographic Information Office

SUBJECT: Acquisition of Lidar Data for the River Basins in East and South-Central Texas

ACTION REQUESTED

Consider authorizing the Executive Administrator to execute multiple contracts with a total Texas Water Development Board (TWDB) contributed amount not to exceed \$5,500,000 for lidar data collection and quality control in Texas, using the Strategic Mapping Program and its associated contracts with the Texas Department of Information Resources.

BACKGROUND

Lidar is a remote sensing technology that uses aircraft to collect three-dimensional data of the earth's surface. Lidar data provides an engineering-grade level of accuracy and serves 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
- Watershed modeling
- Facility siting

The Texas Geographic Information Office (TxGIO), a division of TWDB, is managing this project to collect new lidar data.

[Our Mission](#)

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

[Board Members](#)

L'Oreal Stepney, P.E., Chairwoman | Tonya R. Miller, Board Member
Bryan McMath, Executive Administrator

East and South-Central River Basins Texas Lidar Projects

These two projects will capture over 40,000 square miles of river basin watersheds across east and south-central Texas. Coverage extends across portions of 75 counties and overlaps with the Guadalupe, Lavaca, Lower Colorado, Lower Trinity, Neches, Sabine, and San Antonio watershed basins in Texas. The majority of the existing lidar datasets in this geographic area range 4-9 years old and will not meet current federal quality specifications due to the age of data by 2026. This project will complete full coverage of the seven river basins over the area, continuing the strategy to collect lidar by Hydraulic Unit Codes level six (HUC-6) for basins across Texas. The HUC data acquisition model will eliminate future patchwork lidar data collections based on political boundaries and remove discrepancies between datasets when modeling watersheds for various applications, especially flood.

Current partnerships for cost share are being negotiated with the Texas Parks and Wildlife Department, the San Antonio River Authority, and the Louisiana Department of Transportation and Development.

Total cost for TWDB: Not to exceed \$5,500,000

Total project cost: Pending competitive bids; estimated not to exceed \$6,000,000

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, and habitat identification/modeling for endangered species, support TWDB statewide building creation initiatives, and elevation derived hydrography efforts in Texas. Data from these projects will become publicly available and free to download through the TxGIO Datahub.

KEY ISSUES

TxGIO is currently awaiting final decisions from additional state and local partners on their ability to participate on this project.

This project will obligate \$5,500,000 of TxGIO's Fiscal Year 2026 Texas Infrastructure Resiliency Fund (TIRF) appropriations to this project.

RECOMMENDATION

The Executive Administrator recommends approval to execute multiple contracts in a total amount not to exceed a total contribution of \$5,500,000 for lidar data collection and quality assurance and quality control in Texas, using the Strategic Mapping Program and their associated contracts with the Texas Department of Information Resources.