Texas Water Development Board

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AGENDA ITEM MEMO

BOARD MEETING DATE: October 5, 2023

TO: Board Members

THROUGH: Jeff Walker, Executive Administrator
Ashley Harden, General Counsel
Rebecca Trevino, Chief Financial Officer

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

SUBJECT: Contract for Acquiring Lidar Data in and Surrounding Archer, Jack, Lampasas, and Smith Counties of Texas

ACTION REQUESTED

Consider authorizing the Executive Administrator to execute multiple contracts in a total amount not to exceed $1,300,000 for lidar data collection and quality control in Texas, using the Strategic Mapping Program and their associated contracts at the Texas Department of Information Resources.

BACKGROUND

Lidar is a remote sensing technology that uses aircraft to collect three-dimensional (3D) 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 the Texas Water Development Board (TWDB), is managing this project to collect new lidar data.

Archer, Jack, Lampasas, and Smith Counties Texas Lidar Project:
This project will potentially capture over approximately 7,000 square miles of watersheds in central, north, and east Texas. Coverage extends mainly across Sabine, Red-Lake Texoma, Upper Trinity, and Little Basins in Texas where existing data collections are at least 8 years old. The existing data in this area will not meet current federal quality specifications with regard to date and accuracy by 2024.

Smith County has planned to commit funding to cover the cost for portions of the project covering Smith County. The United States Geological Survey (USGS) has also committed funds to this project through a 3D Elevation Program (3DEP) grant. The USGS has awarded and issued a 3DEP grant to TWDB totaling $271,687.50 which will be applied to TWDB's share of the project costs.

Participating partner:	Texas Water Development Board
Total cost for TWDB:	Not to exceed $1,300,000
Total project cost:	Pending competetive bids; estimated not to exceed $1,300,000

Lidar 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.

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

RECOMMENDATION
The Executive Administrator recommends approval to execute multiple contracts in a total amount not to exceed $1,300,000 for lidar data collection and quality assurance and quality control in Texas, using the Strategic Mapping Program and their associated contracts at the Texas Department of Information Resources.