P.O. Box 13231, 1700 N. Congress Ave.
Austin, TX 78711-3231, www.twdb.texas.gov
Phone (512) 463-7847, Fax (512) 475-2053

AGENDA ITEM MEMO

BOARD MEETING DATE: July 23, 2024

TO: Board Members

THROUGH: Bryan McMath, Interim 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 for the Little, Middle, and Lower Brazos Basins

ACTION REQUESTED

Consider authorizing the Executive Administrator to execute multiple contracts with a total Texas Water Development Board (TWDB) contributed amount not to exceed $3,250,000 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 TWDB, is managing this project to collect new lidar data.

Little, Middle, and Lower Brazos Basins Texas Lidar Project:

> This project will potentially capture over approximately 22,668 square miles of watersheds across central Texas. Coverage extends across portions of 44 counties and overlaps with the Little, Middle Brazos-Bosque, Middle Brazos-Clear Fork, and Lower Brazos watershed basins in Texas. The majority of the existing lidar datasets in this geographic area range from four to eight years old and will not meet current federal quality specifications due to age of data by 2025. This project will complete full coverage of four river basins over the area, establishing a new strategy to collect lidar by Hydrologic Unit Code 6 water basins moving forward for Texas. This will eliminate future patchwork collections based on political boundaries and remove discrepencies between datasets when modeling watersheds for various applications.

The Texas Commission on Environmental Quality (TCEQ)plans to commit funding to cover the cost for portions of the project. totaling $500,000.

Participating partners:	Texas Water Development Board Texas Commision on Environmental Quality
Total cost for TWDB:	Not to exceed $3,250,000
Total project cost:	Pending competetive bids; estimated not to exceed $3,750,000

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.

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 the remaining portions of the $4,000,000 Strategic Mapping funds in Fiscal Year 2024, and TxGIO has requested an additional $5,000,000 for Strategic Mapping projects from the Texas Infrastructure Resiliency Fund (TIRF) for Fiscal Year 2025 projects.

TCEQ has committed $500,000 to the project.

RECOMMENDATION

The Executive Administrator recommends approval to execute multiple contracts in a total amount not to exceed a total contribution of $3,250,000 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.