

AGENDA ITEM MEMO

BOARD MEETING DATE: June 9, 2022

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 Natural Resources Information System

SUBJECT: Contract for Processing the Classification of Existing Lidar Data

ACTION REQUESTED

Consider authorizing the Executive Administrator to execute multiple contracts in a total amount not to exceed \$500,000 for lidar data classification 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 Natural Resources Information System (TNRIS), a division of the Texas Water Development Board (TWDB), is managing this project to add additional classifications to existing lidar point clouds.

[Our Mission](#)

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

[Board Members](#)

Brooke T. Paup, Chairwoman | Kathleen Jackson, Board Member

Jeff Walker, Executive Administrator

Current lidar produced by federal agencies do not attribute separate classifications to vegetation, buildings, or large culverts. This project would further enhance these datasets covering over 20,000 square miles of Texas by giving unclassified points classifications of low vegetation, medium vegetation, high vegetation, buildings, and large culverts.

This project would continue TWDB's efforts to standardize the lidar data classification schema across the state. These classifications would save substantial state and local government resources and time by enabling immediate processing of lidar data for creation of datasets pertaining to buildings, vegetation analysis, and flood modeling.

Participating partner: Texas Water Development Board

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

Total project cost: Pending competitive bids; not to exceed \$500,000 by information acquired from previously awarded contract

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

TNRIS/TWDB is seeking to maximize the number of priority geographic areas of existing lidar data to be classified. The areas will be assigned each to multiple vendors to accomplish the data processing and delivery in accordance with the budget and required schedule within the current biennium.

RECOMMENDATION

The Executive Administrator recommends authorizing the execution of multiple contracts in a total amount not to exceed \$500,000 for lidar data classification in Texas, using the Strategic Mapping Program and their associated contracts at the Texas Department of Information Resources.