

## AGENDA ITEM MEMO

**BOARD MEETING DATE:** December 3, 2020

**TO:** Board Members

**THROUGH:** Jeff Walker, Executive Administrator  
John T. Dupnik, P.G., Deputy Executive Administrator, Water Science  
and Conservation  
Ashley Harden, General Counsel  
Rebecca Trevino, Chief Financial Officer

**FROM:** Mark W. Wentzel, Ph.D., Manager, River Science

**SUBJECT:** Model calibration to improve flood forecasting capabilities

### **ACTION REQUESTED**

Consider authorizing the Executive Administrator to negotiate and execute a contract in a total amount not to exceed \$400,000 from the Floodplain Management Account within the Texas Infrastructure Resiliency Fund to calibrate computer models to improve National Weather Service flood forecasting in Texas.

### **BACKGROUND**

The National Weather Service West Gulf River Forecast Center provides hydrologic forecast services, including flood warnings and notifications, for more than 600 locations in the state of Texas via their Advanced Hydrologic Prediction Service. This service relies on hydrologic models in order to provide forecasts of water levels in rivers and streams during flood conditions. Over time, these models require additional calibration as conditions change in upstream areas and as the National Weather Service receives requests for forecasting at additional locations.

Since Fiscal Year 2017, the TWDB, in coordination with the National Weather Service, has funded contractors to complete model calibrations to improve the accuracy of flood forecasts at 21 locations within the Colorado, Guadalupe, and San Antonio river basins and at 28 locations within the San Jacinto River and Buffalo Bayou watersheds.

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

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Peter M. Lake, Chairman | Kathleen Jackson, Board Member | Brooke T. Paup, Board Member  
Jeff Walker, Executive Administrator

**KEY ISSUES**

In Fiscal Year 2021, the TWDB anticipates using \$400,000 from the Floodplain Management Account within the Texas Infrastructure Resiliency Fund to support additional flood model calibration work. After consultation with National Weather Service staff, TWDB staff selected at least 60 sites in the Brazos and Guadalupe river basins for model calibration and published a request for qualifications (No. 580-21-RFQ-0002) that was open from September 25 to October 15, 2020 and included project-specific selection criteria. TWDB staff evaluated and scored the single response from Lynker Technologies, LLC. Based on demonstrated competence, knowledge, and qualifications as determined by staff, the applicant was found to be qualified to complete the work.

**RECOMMENDATION**

The Executive Administrator recommends approval to negotiate and execute a contract with the selected firm to calibrate computer models to improve National Weather Service flood forecasting. This effort furthers the objectives of Texas Water Code §16.453 for the collection and analysis of flood-related information for flood mitigation and adaptation.