

TO: Board Members

THROUGH: Kevin Patteson, Executive Administrator

FROM: Robert E. Mace, Ph.D., P.G., Deputy Executive Administrator
Water Science & Conservation
Richard Wade, Deputy Executive Administrator
Texas Natural Resources Information System

DATE: January 19, 2016

SUBJECT: Activities related to flood preparation and floodplain management

The purpose of this memo is to provide an update on staff activities related to the Memorandum of Understanding with the Office of the Governor related to flood preparation and floodplain management. Here is a timeline of key events thus far:

- November 17, 2015: The U.S. Geological Survey and the TWDB executed an amendment to add two stream gages to the Wimberley area.
- December 10, 2015: Memorandum of understanding executed between the Office of the Governor and TWDB "...for the purposes of preparing for a disaster, including installing a network of stream gages to enhance existing flood notification systems and making funds available to state and local entities for floodplain management."
- December 14, 2015: The Board authorized the Executive Administrator to amend the Fiscal Year 2016 Joint Funding Agreement with the U.S. Geological Survey for the Water Resources Investigations data collection program to include up to \$1,000,000 of additional funding for new streamflow gages and/or modification of existing gages.
- December 14, 2015: The Board held a work session to receive public comment on the administration and use of emergency appropriations provided through a Memorandum of Understanding with the Office of the Governor.
- January 14, 2016: Close of the formal comment period on the administration and use of emergency appropriations provided through a Memorandum of Understanding with the Office of the Governor. [Note that staff will continue to receive additional comments outside of the formal comment period.]

We received comments covering a broad range of topics, including the need for

- more stream gaging, particularly upstream;
- more rainfall measurements;
- better on-line information;
- real-time data;
- early warning systems;
- planning;
- preventive measures;
- flood modeling (and the accuracy thereof);
- infrastructure;
- floodplain management;
- statewide education;
- flood risk studies;
- better local, state, and federal communication;
- flood-hardened stream flow gages;
- alternative measuring techniques; and
- bringing together disparate sources of data to one location on the internet.

Based on these comments and meetings with the National Weather Service and the U.S. Geological Survey as well as other key stakeholders, staff has undertaken the following activities:

- The U.S. Geological Survey is currently installing two gages in the Wimberley area.
- Staff is proceeding on plans to install about 30 additional stream-flow gages recommended by the National Weather Service and other stakeholders.
- Staff is increasing outreach on flood programs and flood information by hiring two additional employees, doubling our current outreach activities.
- Staff is developing a flood information web page that will provide key information to Texans preparing for, responding to, and recovering from floods.
- Staff is modifying Water Data for Texas web application to include reservoir flood storage capacity.
- Staff is seeking to increase funding for Flood Protection Planning Grants.
- Staff is seeking to provide modeling assistance to the National Weather Service to develop more flood prediction points.
- Staff is seeking to install weather stations in key parts of the state where data is lacking.
- Texas Natural Resources Information System (TNRIS) is developing an application that integrates key flood information into a common online viewer. An inventory of flood and weather related information is being compiled from multiple entities across the state that can be made accessible to the public and decision makers during flood events. TNRIS will also be focusing on infrastructure development and attention to data standards to assure reliability of a public application.

Staff will continue to advance the items above and to keep the Board briefed on agency activities. We consider the work listed above a start; additional products or expanded products may appear in future updates.