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## South Dakota Ag News Headlines

### Big Sioux River Flood Information System Now Online

By: Dennis Daugaard, Governor - 11/05/2018

During my time as governor, I have always tried to learn from experience, and to improve systems and processes to lead to better performance. Recently, a new flood information system came online that will help with future flooding events on the Big Sioux River.

In June 2014, after several days of heavy rains, residents prepared for a Big Sioux River flood. The rising water threatened homes, farms, and businesses in South Dakota, especially in the lower basin. Based on the flood prediction models in use at that time, significant resources were deployed to protect people and property. A section of Interstate 29 and part of a railroad line were both closed. Fortunately, flood waters were not as severe as predicted and those transportation routes and most homes were ultimately unharmed.

Although I was happy that the flooding was less than predicted, the 2014 event made it clear the existing flood prediction models were not accurate. Forty percent of South Dakota's population lives in the Big Sioux River basin, and our state needed better information to react to flooding events in this area.

I asked Lieutenant Governor Matt Michels to convene a flood task force to evaluate what could be done. The task force included staff from the Departments of Environment and Natural Resources (DENR), Transportation, Public Safety, and the Bureau of Information and Telecommunications. The aim was to develop an accurate hydrologic computer model linked to real-time, river-height measuring gages to better predict inundated areas during high flow events.

After reviewing the findings of the Task Force and seeing the need, DENR's Board of Water and Natural Resources recommended funding for the model in the 2016 State Water Plan. Their recommendation was to appropriate funds from the state Water and Environment Fund. The 2016 Legislature agreed and passed the bill.

Using the dedicated water funding, DENR produced two online, flood information systems with mapping tools. The first system contains 8,500 possible flood scenarios that can be accessed by the general public to evaluate risks to their families and property. The second system is for use by local, state, and federal officials as it can use real time data to assess immediate flood conditions and determine appropriate response actions to protect communities and critical infrastructure such as drinking water and wastewater systems.

To ensure the model would meet the needs of local officials in the basin, DENR asked for review and input throughout the development process. Several local government entities responded by contributing financial support to install new stream gages to help monitor real-time river stages and predict maximum water levels during a flood. Ultimately, the new flood model coupled with the additional stream gages will also help the National Weather Service make more accurate river stage predictions. All this information will lead to more effective and efficient flood response, enhanced protection for threatened communities, and better planning for future development near the flood plain.

I am pleased to announce DENR and its contractor have completed the modeling effort on-time and on-budget. Best of all, it works! While maintenance of the system will be on-going, it has been verified and calibrated several times this spring and summer during high-flow events in the Big Sioux River. To view the new online flood information system visit [www.bigsiouxfis.org](http://www.bigsiouxfis.org).

This is a landmark project that uses the latest technology to produce information that will better protect human life and property for years to come. That is what government is supposed to do, and the Big Sioux River Flood Information System does the job.

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