The Oxbow

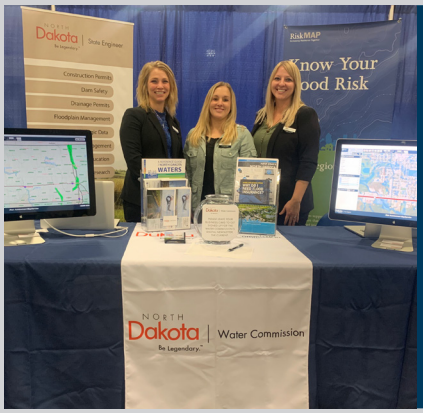
FROM THE NORTH DAKOTA STATE WATER COMMISSION

SWC BRINGS TECHNOLOGY TO FINGERTIPS OF NORTH DAKOTANS

The State Water Commission is proud to announce the upcoming release of its online flood map data viewer called North Dakota Risk Assessment Mapservice (NDRAM). By capitalizing on its well-established working relationship with FEMA Region VIII, the Water Commission has designed a user-friendly format that combines new federal data with the agency's existing IT and GIS capabilities, and makes it available to every North Dakotan. Bearing in mind the state's long history of flood events, the platform will be especially useful to residents and communities seeking information on flood risk and resiliency.

NDRAM was made possible due to FEMA completing a Base Level Engineering (BLE) effort for every county in North Dakota – the first state to do so. BLE is non-regulatory quality flood data that can be enhanced to create engineering models and flood hazard data. The BLE project received over $6 million in federal funding through the Cooperating Technical Partners (CTP) Program, a partnership between FEMA and the State Water Commission.

FEMA was able to complete development of the BLE data in summer 2018 in large part because of North Dakota's past investment in Light Detection and Ranging (LiDAR) surveying, an exhaustive effort that dates back to the early 2000s. According to FEMA Region VIII's Summer 2019 Newsletter, "BLE not only produces large-scale quality flood data, but also increases public awareness in areas with previously unknown flood risk – which leads to collaborative flood risk reduction."



Water Commission staff, Laura Horner (RiskMAP Coordinator), Jessie Wald (Public Information Officer), and Dionne Haynes (NFIP Coordinator) attended Governor Burgum's Main Street Initiative Summit in October. Demonstrations of the flood data viewer, NDRAM, were provided to several community leaders and organizations at the event.

"This innovative map viewer is an incredible asset for residents, emergency managers, and community leaders seeking flood risk information," said State Engineer Garland Erbele. "NDRAM offers an invaluable service that will help generate informed decisions regarding flood preparedness and will increase public awareness."

NDRAM – A TOOL FOR YOU AND YOUR COMMUNITY

Equipped with the BLE data, the Water Commission's uniquely qualified IT and GIS staff were able to build NDRAM without requiring external funding resources or legislative appropriation. By leveraging the agency's robust technology and GIS infrastructure, staff have developed an interactive tool that delivers to the public an ability to access property information, allowing them to become more informed about their potential flood risk.

The graphic below uses the city of Linton as an example, where citizens experienced flooding this summer. While Linton has a regulatory FIRM, it has not been converted to a digital format, and can be difficult to access. NDRAM allows a property owner to enter an address (represented by the small "target" in the graphic), and quickly obtain relevant flood risk data including elevation, flood zone, water surface elevations, and even flood depth during a 1%-chance event.

The BLE data meets FEMA's specifications and guidelines for an approximate study. Where available, NDRAM also displays FEMA's regulatory Flood Insurance Rate Maps (FIRMs). Users will also be able to use NDRAM to download data and print customized maps for a desired property. An additional feature, courtesy of the National Climatic Data Center's Next Generation Weather Radar (NEXRAD), allows NDRAM to display real-time weather warnings across the state.

The Water Commission hopes this new tool will help residents and communities become better informed of flood risk and thus be more prepared and resiliency-focused. Questions regarding NDRAM can be forwarded to Laura Horner, North Dakota's Risk MAP Coordinator, at 701-328-2759 or lmhorner@nd.gov.