Biden-Harris Administration invests $26 million to improve NOAA forecasts of droughts and floods through public-private partnership

ipartisan Infrastructure Law will support NOAA's efforts o improve monitoring of soil moisture and snow levels hroughout the Upper Missouri River Basin

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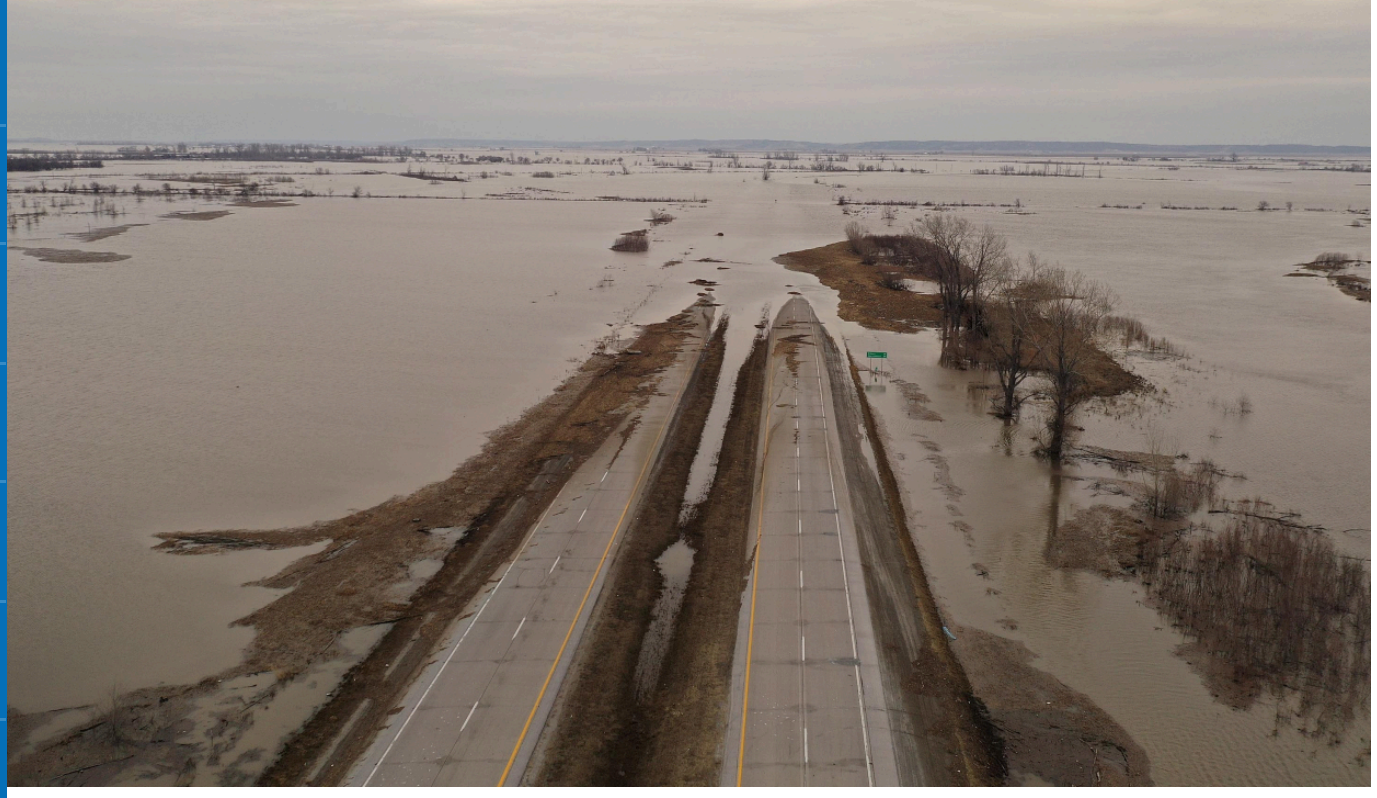

oodwater covers Highway 2 near the town of Sidney in western Iowa, one of numerous communities ong the upper Missouri River devastated by rain and snowmelt from a late-winter "bomb cyclone" in arch 2019. NOAA and the U.S. Army Corps of Engineers are teaming up on a new pilot project to prove drought and flood forecasts. (Image credit: Getty)

oday, the Department of Commerce and NOAA announced that $26 million in nding will be invested over four years in the National Weather Service (NWS) ational Mesonet Program and the National Integrated Drought Information System IDIS) to support the development of a transformative federal-state-private artnership to provide improved early warning for drought, flooding, fire and other atural hazards as part of President Biden's Investing in America agenda under the partisan Infrastructure Law.

he U.S. Army Corps of Engineers (USACE) will partner with NOAA on this pilot ogram. The funds will enable NOAA and USACE to help communities build silience to natural hazards that can be influenced by climate change in the five Upper issouri River Basin states of Montana, Wyoming, the Dakotas and Nebraska, and timately across the nation.

s the impact of climate change on our weather becomes clearer and more costly, proving early warning for droughts and floods is critical to saving lives and operty," said U.S. Secretary of Commerce Gina Raimondo. "Making smart vestments is a key pillar of Bidenomics, and this initiative — which brings together e expertise of NOAA, the Army Corps of Engineers and experienced state partners - is just one example of how the Biden Administration is investing in the nation's mate resilience."

nce 2010, the Upper Missouri River Basin has experienced a series of extreme drological events that were not well-forecasted, including t

011 and 2019, as well as the equally historic flash drought of 2017. After-action
ports pointed to the need for more and better observational data of soil moisture
d snowpack measurements on lowland plains landscapes to improve drought and
ood risk outlooks and forecasts.

he Upper Missouri River Basin has been struck by severe flooding and drought
ents," said Michael Morgan, Ph.D., the Assistant Secretary of Commerce for
nvironmental Observation and Prediction. "This program will dramatically increase
e quantity and quality of soil and snowpack moisture observations in the region —
ndamentally transforming our ability to understand how wet or dry this nationally
gnificant watershed is. It will help our models — and meteorologists — identify
otentially extreme weather risks earlier and pass that life-saving information on to
ecision makers and the public."

ongress responded to this need by funding a set of three complementary projects in
e Upper Missouri River Basin for improved monitoring, data acquisition and data
plication. These projects were previously authorized and directed by the Water
esources Development Act of 2020 (Pub. Law 116-260).

- The U.S. Army Corps of Engineers was previously appropriated $55 million to fund and install more than 500 soil moisture and snow monitoring stations in the five upper basin plains states to provide more accurate estimates of the total amount of water in the basin. These stations will collect high-quality total water monitoring data, including precipitation, wind speed and direction, solar radiation, air temperature, relative humidity, snow depth and soil moisture, also with soil characterization at each location. This will provide the most comprehensive set of data to support a wide range of applications.
- NOAA's National Weather Service National Mesonet Program — a network of weather observation networks — was appropriated $25 million from the Bipartisan Infrastructure Law over three years to establish a pilot effort to acquire data from the new soil and snow-monitoring stations and develop a system for user-friendly, public access to quality-checked data.
- NIDIS, the National Integrated Drought Information Service, was provided $1 million over four years in Bipartisan Infrastructure Law funds to organize an interagency study team to evaluate how enhanced soil moisture and snow levels data can improve water resource models, drought and flood risk assessments and other applications. This team, which will include NOAA, the USACE, the Bureau of Reclamation, U.S. Department of Agriculture, U.S. Geological Survey and NASA, will identify, fund and monitor a series of research projects targeted at the various applications, such as NWS river and snow forecasts, USACE reservoir modeling and the U.S. Drought Monitor. These projects will seek to harness the added

regional soil moisture and snowpack data to demonstrate how hundreds of additional observations can improve key drought and flood products.

hile the specific focus of the study is the Upper Missouri River Basin, study findings ave the potential to redefine the state-of-the-art monitoring of drought and flood nditions, as well as other climate and weather applications, across the country — a iority for NOAA's National Weather Service National Mesonet Program and the DIS-led National Coordinated Soil Moisture Monitoring Network.

t the end of the study period, NIDIS will synthesize the individual research projects to a summary report for Congress that will include not only the findings of the study, ut also how to use what was learned to improve weather and climate monitoring ationwide.

ease visit the Bipartisan Infrastructure Law website to learn about other current and ture funding opportunities.

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