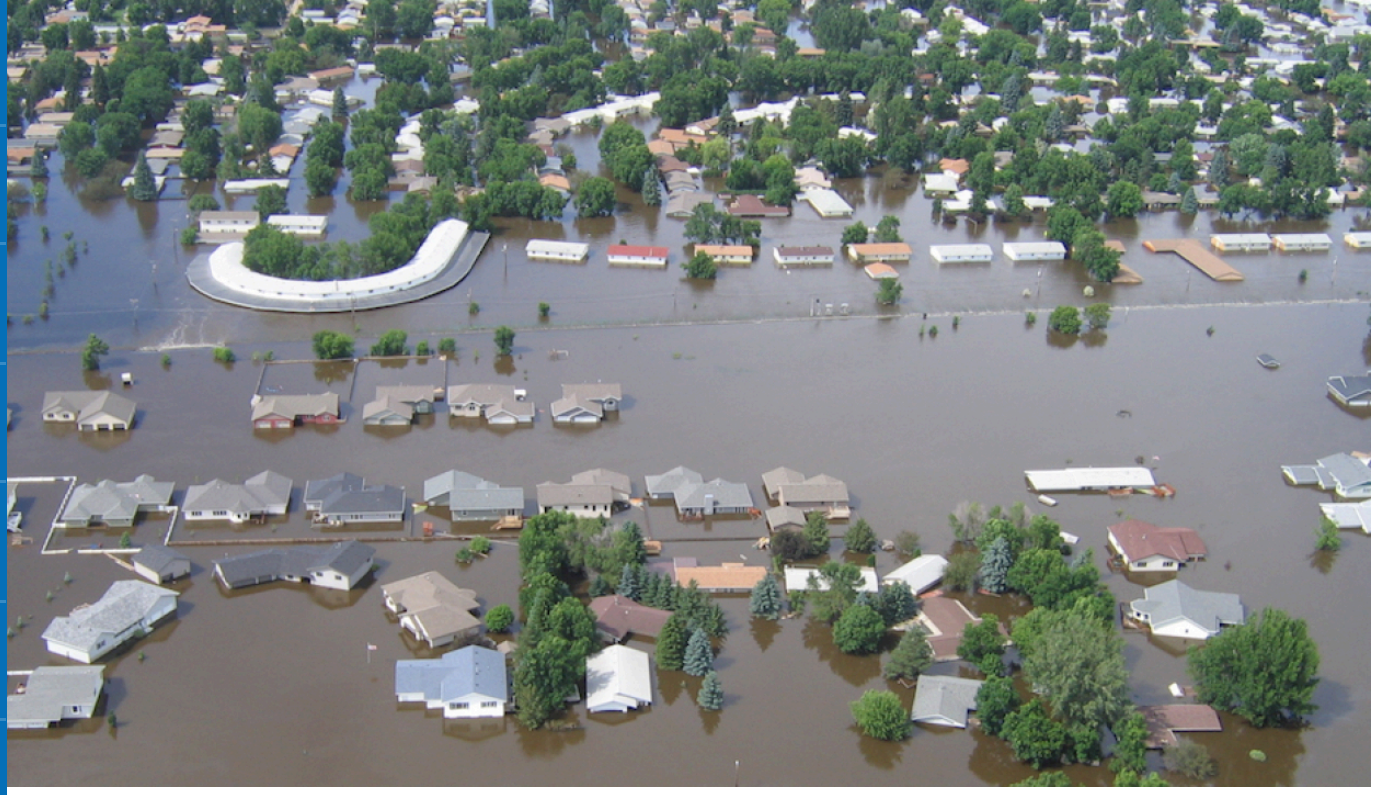
# Biden-Harris Administration, NOAA funds over $22.78 M to advance research of water-related climate impacts

**cus areas:** Research
**pics:**
partisan Infrastructure Law, climate, water, flooding,
imate-Ready Nation

Share:

ctober 2, 2024



ajor flooding occurred in the spring of 2011 near Minot, North Dakota, along the Souris River. (Image edit: Courtesy of the North Dakota State Water Commission)

oday, the Department of Commerce and NOAA announced $22.78 million in funding NOAA labs, programs, cooperative institutes and other research partners to dvance research on a wide range of water-driven climate impacts. Research topics clude coastal and inland flood and inundation mapping and forecasting, and next- eneration water modeling activities, including modernized precipitation frequency udies.

Thanks to President Biden's historic Bipartisan Infrastructure Law, this investment will elp boost NOAA's efforts to address the rising threat of climate change — putting us n the path to becoming more climate resilient and giving future generations the formation and resources needed to tackle the climate crisis," said U.S. Secretary of ommerce Gina Raimondo.

recent years, the increasing frequency and severity of coastal and inland flooding, treme precipitation and other weather events have highlighted the urgent need for etter prediction and resilience strategies. Rising sea levels, driven by climate change, e exacerbating these challenges and putting coastal communities at greater risk.

hese funds from the Bipartisan Infrastructure Law will help communities prepare for range of climate impacts and will directly benefit policymakers, emergency sponders, researchers and the general public. Today's announcement is part of more an $6 billion being invested by NOAA in habitat restoration, weather forecasting, d community resilience to weather and climate events through the Bipartisan frastructure Law and Inflation Reduction Act.

By integrating cutting-edge science and technology into prediction tools, we are working to equip communities to prepare for and respond to water-driven climate impacts on our path to becoming a climate-ready nation," said NOAA Administrator Rick Spinrad, Ph.D. "These efforts enhance our nation's resilience and underscore NOAA's commitment to supporting sustainable and informed decision-making in the face of climate variability and change."

Investigating the complex interactions between the ocean, atmosphere and land systems is key to creating more accurate forecasts. Funded projects range from refining long-term water level predictions to better understanding natural climate patterns like the El Nino–Southern Oscillation to developing real-time flood risk prediction systems. Others focus on updating climate risk information to inform resilience strategies for communities as well as our nation's infrastructure, including major bridges, power plants and ports.

Research funding will go to the following NOAA labs, programs, cooperative institutes and other external partners:

- NOAA Climate Program Office, $3.8 million for six innovative projects to advance prediction of sea level change near coastlines, including along rivers, the Atlantic and Pacific Ocean basins and Gulf of Mexico, to foster greater preparedness and resilience for coastal communities.
- NOAA's National Sea Grant and Weather Program Office, $1.5 million for the Maryland and Puerto Rico Sea Grant programs to hire community flooding social science liaisons who will use social, economic and behavioral research with the community-based capabilities of the Sea Grant network to produce flood inundation mapping services for Maryland and Puerto Rico emergency responders, water managers and the public.
- NOAA Geophysical Fluid Dynamics Lab (GFDL), $810,000 awarded to NOAA's Cooperative Institute for Modeling the Earth System at Princeton University (CIMES) to advance NOAA's Earth system models to improve understanding and prediction of subseasonal to annual climate and multi-decadal climate projections.
- NOAA GFDL, $492,000 for CIMES to advance the understanding and prediction of regional weather processes occurring where the air and sea meet, using combined oceanic and atmospheric models. Improving this prediction will help advance severe weather and climate forecasts.
- NOAA GFDL, $468,000 for Science Applications International Corporation (SAIC) to develop software and computation infrastructure to support modeling coastal sea level extremes.
- NOAA National Severe Storms Lab, (NSSL), $4.5 million awarded to NOAA's Cooperative Institute for Severe and High-Impact Weathe

Operations at the University of Oklahoma (CIWRO) to advance NOAA's next-generation water modeling of precipitation frequency as well as water availabilty.

- NOAA NSSL, $1.125 million to purchase additional cloud computing capacity to support research to advance water prediction including precipitation, flooding and drought.
- NOAA Physical Sciences Lab (PSL), $2 million awarded to NOAA's Cooperative Institute for Research in Environmental Sciences at the University of Colorado (CIRES) to advance subseasonal to annual coastal flooding risks.
- NOAA PSL, $2 million awarded to CIRES to modernize probable maximum precipitation (PMP) estimates. These estimates are necessary to help decision-makers better manage the risk of precipitation that may cause severe damage or catastrophic destruction of major bridges, dams, power plants and other infrastructure. This research will help bring estimates more in line with the projected impacts from a changing climate.
- NOAA PSL, $265,000, awarded to NOAA's Cooperative Institute for Satellite Earth System Studies at the City University of New York, (CISESS-CUNY) to advance PMP estimates for the Greater New York City region that will give decision-makers information to manage and prepare for future risks to infrastructure and public safety from heavy rainfall.
- NOAA PSL, $1.25 million awarded to CIRES for research to advance NOAA next-generation water prediction using a system that integrates artificial intelligence and machine learning.
- NOAA PSL, $30,000 for NOAA to purchase additional high performance computing disk storage for weather and climate datasets essential to research that advances weather and climate prediction.
- NOAA Global Systems Lab, $1.975 million awarded to CIRES and $1.973 million to NOAA's Cooperative Institute for Research in the Atmosphere at Colorado State University (CIRA) to advance research to modernize PMP estimates.
- NOAA Pacific Marine Environmental Lab, $450,000 to improve the modeling of subseasonal to annual extreme water levels at the coast, advancing a new numerical model that brings together prediction of long waves, tsunamis, tides, sea-level rise, coastal inundation and sediment transport.
- NOAA Atlantic Oceanographic and Meteorological Lab, $141,850 awarded to NOAA's Cooperative Institute for Marine and Atmospheric Studies at the University of Miami (CIMAS) to advance prediction of subseasonal to annual sea levels driven by currents in the subtropical North Atlantic Ocean.

sit NOAA's Bipartisan Infrastructure Law and Inflation Reduction Act websites to arn about funding opportunities and additional resources.

imate, weather, and water affect all life on our ocean planet. NOAA's mission is to nderstand and predict our changing environment, from the deep sea to outer space, d to manage and conserve America's coastal and marine resources.

edia contact

onica Allen, monica.allen@noaa.gov, (202) 379-6693

ELATED FEATURES //

New NOAA system ushers in next generation of hurricane modeling, forecasting

New NOAA study offers pathway to improved Arctic outbreak forecasts

st updated October 2, 2024

Have a comment on this page? Let us know.

*Science. Service. Stewardship.*

News | Tools | About

Resources for Tribal & Indigenous Communities | Bipartisan Infrastructure Law (BIL) | Inflation eduction Act (IRA) | Protecting Your Privacy | FOIA | Information Quality | Accessibility | Guidance | Budget & Performance | Disclaimer | EEO | No-Fear Act | USA.gov | Ready.gov | Employee Check-In | Staff Directory | Contact Us | Need Help? | COVID-19 hub for NOAA personnel | Vote.gov

*Stay connected to NOAA*

Help improve this site