



# Western States Water

## Addressing Water Needs and Strategies for a Sustainable Future

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### **CONGRESS/ENVIRONMENT** **House Climate/Weather Forecasting**

On May 16, the House Science, Space and Technology Committee, Environment Subcommittee, held a hearing on the future of weather forecasting. Subcommittee Chair Rep. Lizzie Fletcher (D-TX) opened the hearing on the U.S. Weather Enterprise and leveraging partnerships between sectors to improve forecasting and modeling capabilities. She observed: "The U.S. Weather Enterprise is one of the most robust globally, with NOAA estimating the value of weather data across all industries in the U.S. at approximately \$13 Billion in 2012. This Enterprise is built upon open communication and collaboration between its public, private, and academic sectors."

Fletcher added: "Americans across the country rely on the data and services [The National Oceanic and Atmospheric Association] NOAA and the National Weather Service provide every single day. This freely available data serves as the basis of many of the consumer-facing weather products we regularly interact with, ranging from weather apps on our phones to the local forecasts on our TV news. This is a prime example of the strong existing partnerships between the public and private sectors...[and] is also the foundation of much of the research conducted in the academic sector that feeds into operations at the Weather Service.... NOAA has found that, since 1980, the U.S. has experienced almost 250 weather and climate disasters in which the overall cost and damages have reached or exceeded \$1 billion.... However, NOAA's budget request does not reflect this critical need, with a more than 40% reduction in funding for the Office of Oceanic and Atmospheric Research where much of NOAA's internal research is conducted, and extramural research is funded."

Committee Chair Rep. Eddie Bernice Johnson (D-TX) stated, "Despite the strength and unique nature of our Weather Enterprise, our country is falling behind in weather forecasting." The Weather Research and Forecasting Innovation Act, two years ago, included, among other things..."a focus on regaining U.S. leadership in weather modeling and forecasting. I hope our panel will touch upon the extent to which this legislation has moved the Weather Enterprise towards

achieving this goal, and what remains to be done." She added: "The challenge of how to improve our weather models and forecasts will not be solved by the federal government alone. NOAA and the Weather Service must find ways to capitalize on the rapid development of new science, technology, observational capabilities, and high-performance computing both internally and within the private and academic sectors.... Today's hearing will be a good starting point to understand the best path forward."

Dr. Neil Jacobs, Assistant Secretary of Commerce for Environmental Observation and Prediction, together with Dr. Louis Uccellini, Director of the National Weather Service (NWS), provided testimony for the Administration. NOAA's work spans observations and research to the delivery of critical forecasting products and services. NWS works with NOAA's other line offices to realize its mission and implement the Weather Research and Forecasting Innovation Act of 2017 (P.L.115-25, reauthorized in part by P. L. 115-423 late last year). NOAA provides environmental information and forecasts to the public, businesses, and governments to enable informed decisions on a range of issues and scales – local to global and short-term to long-term. NWS provides a suite of public products and services, including the reliable and timely delivery of public weather and water forecasts and warnings. "To do so, we work closely with the larger community of federal, state, local, tribal, and territorial emergency management officials, other federal agencies, the larger academic and research communities, and the commercial weather sector to deliver the best possible information. Put simply, NWS provides critical information that saves lives and property and enhances our national economy."

They continued: "The Department, NOAA, and NWS are strongly committed to ensuring that the United States is a Weather-Ready Nation (WRN) in the face of threats related to extreme events.... NWS restructured its budget and headquarters to better align resources to function, enhance transparency, and link programmatic management...performance outcomes. This portfolio-based structure now reflects our core competencies – observations; central processing; analytics, forecast and support; dissemination; science and technology infusion; and facilities...." NWS

Impact-based Decision Support Services (IDSS), codified in the Weather Act, has also generated findings and ideas to implement NWS strategic vision.

“The NWS is excited about the ideas and actions generated...that will inform our Evolve [NWS] initiatives, implement the directives within the Weather Act, and improve the NWS as we connect our forecasts and warnings to decision makers at every government level and work with our partners.... The new NWS Strategic Plan, issued in April 2019, continues to focus on ensuring...and enabling the NWS to provide IDSS for extreme weather events.... [T]he NWS is committed to ensuring the NWS keeps pace with stakeholder and societal needs for forecasting that protects life and property and enhances the national economy.” See <https://science.house.gov/hearings/the-future-of-forecasting-building-a-stronger-us-weather-enterprise>.

## **CONGRESS/WATER RESOURCES**

### **House/Bureau of Reclamation**

On May 16, Brenda Burman, U.S. Bureau of Reclamation Commissioner testified on the President's FY2020 budget request before the House Natural Resources Committee, Subcommittee on Water, Oceans and Wildlife. Reclamation's request is \$1.1B in discretionary appropriations, "...to be supplemented by over \$1B in other Federal and non-Federal funds in FY2020. Of the total discretionary appropriations, \$962M is for the Water and Related Resources account, Reclamation's largest account; \$60M is for the Policy and Administration account; and \$33M is for the California Bay-Delta Restoration account. A total of \$54.8M is requested for the Central Valley Project Restoration Fund, to be offset by expected discretionary receipts in the same amount. We will continue to seek to optimize non-Federal contributions to accomplish more with limited federal dollars.”

The FY2020 Budget provides funding for Water and Energy Management (\$249.8M), Land Management (\$43M), Fish and Wildlife Management (\$141.9M), Facility Operations (\$297.3M), and Facility Maintenance and Rehabilitation (\$230M). Reclamation has identified 363 high and significant hazard dams, and the request includes \$92.8M for Dam Safety. The budget includes \$114.1M for Extraordinary Maintenance (XM) related activity, while other XM items are directly funded by revenues, customers, or other Federal agencies (e.g., Bonneville Power Administration).

The FY2020 budget includes \$132.9M for Indian water rights settlements, including third-year funding for the Blackfeet Water Rights Settlement, which by statute requires full funding by January 21, 2025. It also continues funding to keep implementation of other water settlements on track for completion consistent with

legislated schedules. These include the Navajo-Gallup Water Supply Project, part of the Navajo San Juan Settlement, the Aamodt Settlement, and Crow Tribe Settlement. Funding is also included for the Ak-Chin, San Carlos Apache, Colorado Ute (through the Animas-La Plata Project), and Nez Perce (through the Columbia/Snake River Salmon Recovery Program).

## **WATER RESOURCES**

### **California/Forecast Informed Reservoir Operations**

On April 29, the Yuba Water Agency launched an initiative with the California Department of Water Resources (DWR) and University of California San Diego's Scripps Institution of Oceanography to improve storm and runoff forecasting and significantly reduce flood risk through enhanced operations of New Bullards Bar and Oroville Dams and Reservoirs. Yuba Water owns and operates New Bullards Bar Dam and DWR owns and operates Oroville Dam. Yuba already partners with DWR, the Army Corps of Engineers and NWS, under the Forecast-Coordinated Operations Program, to minimize regional flood risk. The agencies all work together to coordinate flood releases during major storms. Forecast informed reservoir operations will elevate that work to the next level, significantly reducing flood risk. In dry and drought years, there is also the potential to improve water supply reliability.

This research initiative will supply information for the U.S. Army Corps of Engineers to update the 1970's-era water control manuals, which dictate storm-season operations of both reservoirs. Yuba Water's goal is to have a new water control manual approved about the same time as completion of construction of a new, planned secondary spillway at New Bullards Bar Dam, estimated for completion in 2024.

“The updated manuals, combined with the planned secondary spillway at New Bullards Bar, will help us maximize the value of that critical infrastructure improvement, enabling us to respond to changing climate conditions,” said Yuba Water General Manager Curt Aikens. “This will significantly improve our ability to operate the project in extreme events and help us more efficiently manage water for local farmers, ranchers and fisheries, as well as the 80% of Yuba County's population that relies on groundwater for their primary water supply.”

DWR Director Karla Nemeth said, “We're excited to partner with Yuba Water Agency to modernize how our facilities are operated in this new reality under climate change. It's important we collaborate as our infrastructure is part of a larger system and cannot operate in isolation. As California continues to adapt to the impacts of climate change, preparing our water system for intense storms and periods of drought is more critical than ever.”

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