



# Western States Water

## Addressing Water Needs and Strategies for a Sustainable Future

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### **ADMINISTRATION/WATER RESOURCES**

#### **Bureau of Reclamation/Drought**

On May 4, the Bureau of Reclamation released a funding opportunity for communities to proactively address drought through projects that increase water supply reliability, improve water management, or provide benefits for fish, wildlife and the environment. Eligible applicants for funding include: states, tribes, irrigation districts, water districts or other organizations with water or power delivery authority located in the western United States, or U.S. territories. This funding opportunity will provide up to \$300,000 per agreement for a project that can be completed within two years and up to \$750,000 per agreement for a project that can be completed within three years. Recipients must match the funding with a minimum 50% non-federal cost-share. Applications are due July 8. See [www.grants.gov](http://www.grants.gov), funding opportunity number BOR-DO-20-F002.

#### **Corps/Natural Features**

On April 27, the Congressional Research Service (CRS) published a review of the Army Corps of Engineers' (Corps) use of natural and nature-based features (NNBFs) as part of their flood control regime, stating; "Whether to adjust – and, if so, how – [the Corps] consideration and use of NNBFs for flood risk reduction is an ongoing policy issue." Congress authorized the use of NNBFs, but examples remain limited. The Corps considers NNBFs to include wetlands, such as salt marshes and certain submerged aquatic vegetation; oyster, mussel, and coral reefs; maritime forests/shrubs; and the combination of these natural features with engineered components. Incorporating these features into flood control projects can potentially provide social and environmental benefits beyond reducing flood risk, such as species habitat, water quality, and recreation.

However, the CRS report mentioned the difficulties in quantifying these additional benefits in the context of the cost-benefit analysis required by the 1983 planning guidance used by the Corps, which prioritizes economic benefits (under the Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies (P&G)). The Reagan administration released this guidance in 1983 pursuant to authority from the Water Resources Planning Act of 1965

(P.L. 89-80)). In 2015, the P&G was replaced by the Principles, Requirements & Guidance (PR&G) for federal water resource investments. The PR&G directs implementing agencies "to strive to maximize public benefits relative to public costs," including benefits provided by "environmental, economic and social goals, monetary and nonmonetary effects, and quantified and unquantified measures." Implementation of the PR&G would provide more guidance for assessing the inclusion of NNBFs and expand the criteria for the cost-benefit analyses of projects. Until FY2020, an annual appropriations restriction has prohibited the Corps from implementing the PR&G, meaning that funding to better understand and develop assessment criteria for incorporating NNBFs into Corps projects has been limited.

The characterization of NNBFs as either structural or nonstructural features affects how the federal government funds their construction, with the federal government covering the remainder of costs for nonstructural projects if the nonfederal costs exceed 35%. If the features are considered structure, the nonfederal cost share (when nonfederal costs exceed 35%) is 50%. The report states; "[The Corps] considers most NNBFs to alter the flood hazard and treats those features as structural measures in its planning processes. Therefore, the cost-sharing requirements for structural measures apply to the use of most NNBFs.... Some stakeholders have expressed interest in having NNBFs be eligible for nonstructural cost sharing."

Congressional interest in nonstructural alternatives, such as floodplains and elevation of structures, dates back to 1974 when it required the Corps to evaluate them (33 U.S.C. §701b-11). Congress amended the definition of nonstructural alternatives in the 2016 Water Infrastructure Improvements for the Nation Act (WIIN Act, P.L. 114-322) to include restoring and protecting natural resources, if those alternatives reduce flood risk. Congress also directed the Corps to evaluate NNBFs in the agency's flood risk reduction and ecosystem restoration planning process, and also required a report on the statute's implementation to the House Transportation & Infrastructure Committee and Senate Committee on Environment and Public Works. In addition, in 2014, Congress required another report from the Corps on the use and performance of the emergency

authority for repairs of nonfederal flood control works, including the review and economic feasibility of incorporating NNBFs into water resources development projects to increase resiliency and long-term cost effectiveness. Currently, neither report has been submitted. See: <https://crsreports.congress.gov/product/pdf/R/R46328>.

## **WATER QUALITY**

### **Washington/Columbia River Basin**

On May 7, the Washington Department of Ecology (DOE) issued a series of letters containing Section 401 Final Water Quality Certifications for eight dams along the Lower Columbia and Lower Snake Rivers in response to the Environmental Protection Agency's (EPA) request to complete the National Pollutant Discharge Elimination System (NPDES) permits for the Corps. These included: the Dalles Lock and Dam; McNary Lock and Dam; Lower Monumental Lock and Dam; Lower Granite Lock and Dam; John Day Project; Ice Harbor Lock and Dam; Little Goose Lock and Dam; and the Bonneville Project.

The letters included orders for each dam that require that EPA incorporate new temperature total maximum daily load (TMDL) requirements that are in development into the NPDES permits once the TMDL is finalized. The letters state; "Doing so provides regulatory certainty and ensures that steps will be taken to manage sources of heat that contribute to increased river temperatures." If EPA does not incorporate the conditions outlined in the orders, the 401 certifications are denied and EPA must request new certifications for the final NPDES permits.

A temperature TMDL for the Columbia River has long been in discussion, and EPA has been required in a recent court case to finalize one (see WSW #2395). According to the letters, on April 10, DOE received notification of EPA's intent to finalize the Temperature TMDL in the Columbia and Lower Snake Rivers after the 60-day certification period ends. After learning about the development of the final TMDL, DOE made the decision to move forward with the certifications.

In addition to incorporating the TMDL into the permits, the orders also require the permits to meet all state water quality standards, develop a Quality Assurance Plan and a Best Management Practices Plan for each dam, and include dam-specific requirements. <https://apps.ecology.wa.gov/aquatics/decisions>

## **WATER RESOURCES/ORGANIZATION**

### **USGS/WestFAST**

On May 14, WestFAST hosted a webinar on U.S. Geological Survey (USGS) Water Resources Program updates, which featured: Don Cline, USGS Associate Director, Water Resources; Chad Wagner, Groundwater

and Streamflow Information Program Coordinator; and Mindi Dalton, Water Availability and Use Science Program Coordinator. Cline stated USGS has been engaged in strategic planning over the past year to better deliver the data and tools necessary for decisionmaking. This includes a central focus on integrating the science of the different USGS mission areas to improve data collection and management; improve model skill and prediction; and be able to identify and fill data gaps to help scale efforts up to the national level.

An example of implementing this integrated strategy is a new initiative called EarthMAP, or Earth Monitoring, Analysis and Prediction. Wagner went into detail on this initiative. EarthMAP has four main goals, with associated programs to implement them: **Assess** (Integrated Water Availability Assessments, IWAA), **Predict** (Integrated Water Prediction, IWP); **Observe** (Next Generation Water Observing System, NGWOS); and **Deliver** (National Water Information System modernization, NWIS). In relation to NGWOS, Wagner discussed efforts in the Delaware River Basin (DRB) around determining the data and analyses that are needed to improve the simulation and prediction skill of models, with the specific purpose to improve stakeholder decision making. DRB is the first pilot watershed for these efforts. The Colorado River Basin will be the second and initial planning has started in this region to identify stakeholders and data needs. He also discussed the need to modernize the NWIS so that USGS has the ability to store, process and deliver next generation data – without that ability, many of the other goals will fail. Wagner finished by highlighting that the federal priority Streamgages network that provides much of the data that feed into the models has had stagnant funding since 2016, meaning many streamgages are at risk of being discontinued. In the next 3 years, nearly 200 streamgages are at risk without federal or other stakeholder funding.

Dalton finished describing efforts to develop IWP and IWAAs. The IWP is focused on improving models by integrating different types of quantitative and qualitative data and optimizing the use of current and future data streams. USGS is figuring out how to best invest in model development to meet the needs of stakeholders. IWAAs are being developed both regionally and nationally to evaluate the current water supply and demand and trends in water availability, and the factors that influence these, to produce integrated regional predictions and forecasts. This approach is also being applied to the National Water Reuse Action Plan, and also to develop indices of water quantity, quality and use, and to be able to operationally deliver IWAAs that evaluate the potential suitable uses of available water for the eight categories of water use defined by USGS. See webinar recordings: [www.westernstateswater.org/westfast/westfast-webinars](http://www.westernstateswater.org/westfast/westfast-webinars).

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