



# WaterSMART Applied Science Grants

Through WaterSMART Applied Science Grants, Reclamation provides cost-shared financial assistance for projects to develop hydrologic information and water management tools and improve modeling and forecasting capabilities. Increased access to information and improved modeling and forecasting capabilities will meet a variety of water management objectives, including: support for water supply reliability, management of water deliveries, water marketing activities, drought management activities, conjunctive use of ground and surface water, water rights administration, ability to meet endangered species requirements, watershed health, conservation and efficiency, and other water management objectives.

Applied Science Tools activity includes an internal component to build the technical capacity of Reclamation staff that support improved water management and operations. Eligibility includes projects that demonstrate, apply, or improve applied science tools needed to inform specific water management decisions, including improved modeling, forecasting, and water measurement tools, projects to support the use of Geographic Information Systems (GIS), and projects to increase access to water resources data.

Results from these projects will be used to increase water supply reliability, provide flexibility in water operations, and improve water management. Reclamation funding is also provided for projects that improve use of forecasts to inform water availability and the use of technology to increase water reliability.



WSR-88D Doppler radar at New Underwood, SD. Courtesy NASA.

Eligible applicants include States, Indian tribes, irrigation districts, water districts, universities, nonprofit research institutions, and nonprofit organizations, or other organizations with water or power delivery authority.

## Funding Levels

Program funding is allocated through a competitive processes. Applicants for Applied Science Grants may request federal funding up to \$150,000 for projects to be completed within two years; or up to \$300,000 for projects to be completed within three years with a non-Federal cost share of 50% or more of the total project cost.

## Applied Science Projects

Eligible project types include:

- Improved Hydrologic Modeling
- Reservoir Operations Alternatives
- Improved Forecasting Tools
- Improved GIS and Data Management

## Featured Projects

In 2017 Utah State University received approximately \$100,000 in funding to develop a dashboard to predict decadal water storage in Utah. This will enable users to quantify and define drought characteristics in Utah by combining predictions for water-cycle processes, mapping the mountain snowpack, prolonging the streamflow, determining evapotranspiration, and predicting soil moisture. The University developed a prediction system based on an Earth system model (known as CESMv1) to reconstruct and forecast the annual water storages in Utah. Based on this system, the University successfully conducted a dynamical forecast for Utah water storage. As of December 2019, Utah State University has finished automating the snow water equivalent data to initiate the downloading, reformatting, and mapping process; this automation allows for real-time and reliable updates as new yearly data becomes available. In 2020, the University will begin coordinating with water managers, resources providers, Utah Division of Water Resources, NOAA River Forecasting Center, and Reclamation personnel to meet in a stakeholder workshop for result dissemination and feedback.

**For more information:** Please visit [www.usbr.gov/watersmart/appliedscience/index.html](http://www.usbr.gov/watersmart/appliedscience/index.html) or contact Ms. Avra Morgan at (303) 445-2906 or [aomorgan@usbr.gov](mailto:aomorgan@usbr.gov).

For more information on selected projects, visit [www.usbr.gov/watersmart](http://www.usbr.gov/watersmart).