

Western States Federal Agency Support Team (WestFAST) is a collaboration between 13 Federal agencies with water management responsibilities in the West. WestFAST was established to support the Western States Water Council (WSWC) and the Western Governors' Association (WGA) in coordinating Federal efforts regarding water issues.

Membership:

Roger Gorke, (Chair), EPA
Gorke.roger@epa.gov

Kevin Werner, (Vice Chair), NOAA,
kevin.werner@noaa.gov

Becky Fulkerson, Reclamation
rfulkerson@usbr.gov

Jean Thomas, Forest Service
jathomas@fs.fed.us

Dionne Thompson, Reclamation
dethompson@usbr.gov

John D'Antonio, USACE
John.R.D'Antonio@usace.army.mil

Sonya Jones, USGS
sajones@usgs.gov

Ronald McCormick, BLM
rmccormi@blm.gov

Andrew Hautzinger, FWS
Andrew.Hautzinger@fws.gov

Mike Strobel, NRCS
michael.strobel@por.usda.gov

Roger Pulwarty, NOAA
roger.pulwarty@noaa.gov

Brad Doorn, NASA
bradley.doorn@nasa.gov

Craig Zamuda, DOE
Craig.Zamuda@Hq.Doe.Gov

Marc Kodack, DOD
marc.d.kodack.civ@mail.mil

Ed Harvey, NPS
forrest_harvey@nps.gov

Patrick Lambert, Federal Liaison
patlambert@swc.utah.gov



WestFAST News

June 2016

WestFAST to Participate in WSWC July Meetings in Bismarck North Dakota

The 181st meeting of the Western States Water Council (WSWC) will be held July 13-15, 2016, in Bismarck, North Dakota Radisson Hotel. WestFAST agencies have worked with the WSWC to schedule briefings on a range of water-resource topics from new science program to policy making.

Federal agency presentation will include a report from WestFAST Vice Chairman Kevin Werner (NOAA) summarizing 2016 NOAA/WSWC collaborative workshops on Sub-seasonal to Seasonal Precipitation Forecasting. Joel Galloway, Acting Director of the U.S. Geological Survey (USGS) North Dakota Water Science Center, will discuss USGS Federal/State cooperative water-resource activities in North Dakota and the surrounding region.

Environmental Protection Agency (EPA) staff is preparing briefings for the WSWC Water Quality Committee meeting including results of recent and ongoing studies of the effects of hydraulic fracturing on water supply quality. EPA will also join USGS staff in a discussion of WSWC comments on their joint draft report, "Protecting Aquatic Life from Effects of Hydrologic Alteration."

Click [here](#) to view a complete schedule of WSWC meetings and planned WestFAST agency presentations.

WSWC/WestFAST Sponsor Workshop on Federal Water Rights.

On July 13, WestFAST and the WSWC will hold a Workshop on Non-Tribal Federal Water Rights focusing on groundwater and meeting federal water needs in conjunction with the WSWC July meetings in Bismarck North Dakota.

In 2014, the WSWC and WestFAST formed a Federal Non-Tribal Reserved Water Rights Workgroup in an effort to understand the roles and responsibilities of state and federal actors in water allocation and management. The purpose of the workshop is to increase awareness of the options and tools available to develop cooperative relationships and reach effective agreements that avoid the need for protracted litigation. Workshop participants will also explore post-agreement implementation lessons learned in selected cases.

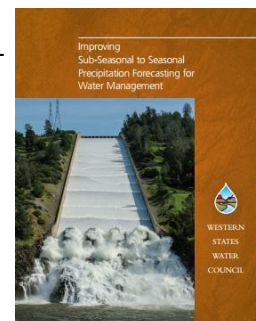
WSWC Resumes Discussion on S2S Forecasting - Reviews Standup of NASA Western Water Applications Office

The fourth in a series of workshops developed by the California Department of Water Resources (CDWR), WSWC, NOAA and other WestFAST agencies on seasonal to sub-seasonal precipitation forecasting was held June 6-9 in San Diego, California.

The WSWC believes that the current accuracy of forecasts (generally referred to as forecast skill) for the sub-seasonal to seasonal (S2S) timeframe is not adequate to support water management decision-making. S2S forecasts are defined as predictions with forecast ranges from 2 weeks to 12 months.

The WSWC has asked that the federal government prioritize additional resources to move forward with more research, observations, and operational weather modeling to provide necessary support for near-term improvement in S2S precipitation forecasting for water management. The WSWC, the CDWR, and NOAA have cosponsored a series of workshops to explore this issue and possible pathways toward improvement in S2S precipitation forecasting.

The July workshop began with a review of water-resource research tools for improving forecasting and management being developed by NASA's Jet Propulsion Laboratory (JPL) at the California Institute of Technology. JPL briefings included reports on remote sensing for water quality monitoring in the Bay Delta California and to monitor land subsidence related to groundwater withdrawal (presentation slides for these and other JPL workshop reports can be viewed [here](#)). Stephanie Granger, Research Scientist at JPL, briefed workshop participants on the planned stand up of a NASA Western Water Applications Office (WWAO). WWAO would be a new NASA-wide program office located at JPL and sponsored by NASA Applied Sciences of the Earth Science Division. The principal purpose of WWAO would be to accelerate the application of NASA observations and scientific analysis



WSWC Fact Sheet on Improving Sub-Seasonal to Seasonal Precipitation Forecasting for Water Management. (click on the graphic above to



techniques to tangible, important, and timely water management problems. Ms. Granger said that programs and projects undertaken within the planned new structure would “address concerns and decision processes related to water availability, water forecast and water quality. Ms. Granger also noted that “a Western local office at JPL will increase access to NASA capabilities for a broad class of Western stakeholders. WWAO is advancing through the formulation stage and will be fully open in late 2016. WestFAST will work with JPL leadership as the WWAO stand up to help engage WSWC and the WestFAST agencies to identify needs that the new NASA/JPL Office might begin to fill.



Dr. Marty Ralph, Director of the Center for Western Weather & Water Extremes, Scripps Int. of Oceanography discusses “Atmospheric River” Observations

The remainder of the meeting focused on NOAA research activities and strategies toward improved seasonal precipitation forecasting. Attendees were briefed on new developments in high-resolution global and regional climate models, and considerations of the effect of “atmospheric rivers” on precipitation forecasting.

Dr. Dave Dewitt, Director of the NOAA’s Climate Prediction Center discussed a strategy and framework for

establishing a seasonal precipitation forecast improvement project. Dr. DeWitt noted that “there are no silver bullets, no single action that will lead to a revolutionary leap forward in S2S predictions.” He stated however that “incremental increases in S2S forecasting quality are to be expected as the building blocks of forecasts are improved and we increase knowledge of sources of predictability. Realizing significant improvement in S2S forecasting will require a substantial and sustained commitment of resources and need to leverage all members of the short-term climate prediction community including operational centers, federal labs, and academic partners.”

Dr. DeWitt’s presentation and other workshop presentations can be viewed [here](#). The WSWC is preparing a report summarizing the results of these workshops, which will be posted on the [WSWC webpage](#).

Western Governors Applaud EPA Decision to Not Add Regulations for Storm-Water Discharges from Forest Roads

(WGA, 6/29)

Western Governors strongly support a recent decision by the EPA that no additional regulations are needed to address storm water discharges from forest roads under the Clean Water Act (CWA).

Western Governors sent comments on Feb. 12, 2016, to EPA in response to the agency’s request for Information on existing programs that protect water quality from forest road discharges. The comments, which highlighted the federally-recognized authority of states to manage and allocate water within their boundaries, asserted that “EPA should leave the management of stormwater discharges from forest roads to the states, unless otherwise determined by a specific state.”

In announcing the decision on its website, EPA wrote: “State, federal, regional, tribal government, and private sector programs already exist nationwide to address water quality problems caused by discharges from forest roads ... Program implementation rates are gen-

erally high and have been shown to be effective in protecting water quality when properly implemented.”

“EPA has concluded that efforts to help strengthen existing programs would be more effective in further addressing forest road discharges than superimposing an additional federal regulatory layer over them.”

The agency anticipates the final notice will be published in the Federal Register in early July 2016.

NOAA Invests \$4.5 Million to Improve Ocean Observations for Weather and Climate

(NOAA, 6/8)

NOAA’s Climate Program Office announced on July 8th that it is investing \$4.5 million in four projects to test technology designed to improve the Tropical Pacific Observing System, an array of buoys in the tropical Pacific used to better understand El Niño Southern Oscillation (ENSO), how it develops, and how it affects Earth’s weather.

Understanding ENSO has been a major focus of multiple agencies and countries across the globe for decades. In 1979, a global network of scientists began a project to create an array of buoys in the tropical Pacific to improve the detection and prediction of ENSO called the Tropical Atmosphere Ocean (TAO) Project. In the three decades since the initial launch, scientists have used new technology to improve this observing system, including satellites, autonomous surface vehicles and Argo ocean floats.

The four new projects are:

Enhanced ocean boundary layer observations:

NOAA’s Pacific Marine Environmental Lab (PMEL) and National Data Buoy Center (NDBC) will lead a project to add new sensors to the existing TAO moorings to measure ocean currents in the upper 40 meters of the water column, where direct wind forcing of ocean currents occurs.

New rainfall, wind speed, and biogeochemical sensors:

The University of Washington will lead a project to outfit Argo floats with sensors to measure near-surface temperature and salinity, dissolved oxygen, pH, and chlorophyll in the upper 2000 meters of the water column. These sensors will also measure wind speed and rainfall.

Autonomous surface vessels as low-cost observing platforms:

PMEL will lead a project to equip Sailerons, a type of wind-powered autonomous boat that resembles a windsurfer, with sensors to estimate wind stress and the air-sea exchanges of heat and carbon dioxide in the tropical Pacific. These Sailerons will be completely controlled from land at PMEL in Seattle and Sailerone, Inc. in California.

New sensors to measure wind stress:

NOAA’s PMEL and Earth System Research Lab join with the Woods Hole Oceanographic Institution and University of Connecticut to add a self-contained instrument to existing NDBC TAO buoys to make direct measurements of wind stress and surface waves in order to explain wind forcing and the exchange of heat from the ocean in the tropical Pacific.



These investments contribute to NOAA's advancement of the Tropical Pacific Observing System (TPOS 2020) Project and are critical to NOAA's mission to predict weather and climate.

USDA, Interior Announce More Than \$47 Million in Investments for Water Conservation, Energy Efficiency, Drought Response & Agriculture Operations Across the West *(NRCS, 6/23)*

The U.S. Departments of Agriculture (USDA) and the U.S. Department of the Interior announced on June 23rd more than \$47 million in investments to help water districts and producers on private working lands better conserve water resources. The funds include \$15 million in USDA funds and \$32.6 million from the BOR for local projects to improve water and energy efficiency and provide a strengthened federal response to ongoing and potential drought across 13 states in the West.

Agriculture Secretary Tom Vilsack and Reclamation Commissioner Estevan Lopez announced the funding in Brighton, Colorado. The BOR funding will support 76 local projects through the DOI's WaterSMART program. Funding from USDA's Natural Resource Conservation Service (NRCS) will support on-farm water delivery system improvements through its Environmental Quality Incentives Program (EQIP), in tandem with the 76 Interior-funded projects.

DOI's funding is made available through competitive grant programs, which are part of the WaterSMART sustainable water initiative. Of the 76 new projects announced today, BOR has selected 53 projects in 11 states to receive a total of \$25.6 million in WaterSMART Water and Energy Efficiency Grants which, when leveraged with local and other funding sources, will complete more than \$128 million in efficiency improvements. In addition to the new grants announced today, BOR will provide \$2.1 million to support previously selected WaterSMART projects. Together, these projects are expected to enable water savings of more than 123,000 acre-feet. More details on the program and projects announced today can be found on the WaterSMART Water and [Energy Efficiency Grants website](#).

Alongside the 53 water and energy efficiency grants, BOR also selected 23 additional cost share grants through its WaterSMART Drought Response Program, totaling \$4.9 million, which when leveraged with cost-share funding will provide a total of \$23.5 million in efforts associated with the program. More detail on the program and the projects announced today can be found on the [Drought Response Program website](#).

Through its EQIP program, NRCS is investing \$5.2 million in on-farm assistance to complement several projects that have been funded previously by BOR, and will provide an additional \$10 million in

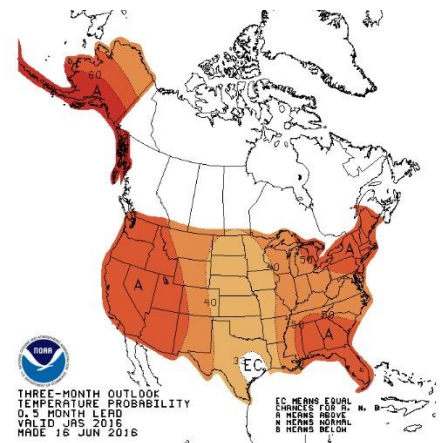
2017 to support some of the BOR projects announced today. NRCS is able to complement WaterSMART investments by targeting assistance in areas where WaterSMART sponsors indicated that water delivery system improvements might facilitate future on-farm improvements. For information on USDA's drought mitigation efforts, visit USDA Drought Programs and Assistance. To learn more about how NRCS is helping private landowners adapt to changing climate conditions including drought, visit the [NRCS' drought resources link](#).

This partnership is a priority action identified in the President's Memorandum Building National Capabilities for Long-Term Drought Resilience and accompanying the Federal Drought Action Plan. USDA, as permanent co-chair, is working with DOI and other members of the National Drought Resilience Partnership to better coordinate drought-related programs and policies, help communities reduce the impact of current drought events and prepare for future droughts.

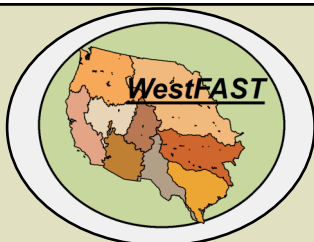
Summer Roars in With a Vengeance Over U.S. Southwest *(NOAA, 6/20)*

June 20th marked the first day of astronomical summer, and the U.S. Southwest was feeling the heat. Heat advisories or excessive heat warnings were in effect for about 30 million people in California, Nevada, Arizona and Utah. NOAA's National Weather Service is predicting above-average temperatures across virtually all of the United States for the next three months.

The hot temperatures, combined with low humidity and high winds, are leading to a high risk of wildfires in southern California, particularly the mountains of Los Angeles and Ventura Counties.



NOAA, Climate Prediction Center Three-Month Outlook forecast for July-August-September. [Click the image above to view the CPC Outlooks webpage](#)



WestFAST News is published monthly. To get an Agency Announcement published or to get added to the WestFAST News distribution list contact:

Patrick M. Lambert, WestFAST Federal Liaison

Email: patlambert@wswc.utah.gov

Phone: 801-685-2555

Check out the WestFAST Web Site: <http://www.westernstateswater.org/westfast>



WestFAST Special Topics Webinar Series Briefs on Agencies' Finance and Investment Centers

WestFAST representatives collaborate among themselves to improve efficiency in carrying out their agencies' water-related missions. In this role, WestFAST initiated a "Special Topics" Webinar Series to present, and allow discussion on a range water-resource activities with the objective of improving awareness of and collaboration in water programs.

On July 28th, WestFAST and the WSWC will be briefed on agency "Finance and Investment" Centers that can be used to increase non-federal and private investment in projects that increase drought resilience.

In March, 2016, a Presidential Memorandum: Building National Capabilities for Long-Term Drought Resilience was released. The Presidential Memorandum directs the expansion of efforts to reduce the vulnerability of communities to the impacts of drought. A new Federal Action Plan for the National Drought Resilience Program (NDRP) was also released in accordance with the Presidential Memorandum. The Action Plan lays out a series of activities to fulfill the President's drought resilience goals.

One of the plan's goals deals with market-based approaches for infrastructure and efficiency and sets forth that agencies shall "support the advancement of innovative investment models and market-based approaches to increase resilience, flexibility, and efficiency of water use and water-supply systems." This activity includes leveraging EPA State Revolving Loan Fund program funds to support efficient irrigation infrastructure; seeking contributed funds to increase investment in DOI-BOR assets; leveraging USDA rural water loans to generate new opportunities for private sector investment in rural water infrastructure that would provide co-benefits such as improved water supply, water quality and flood management; and working with municipalities and agricultural sectors to establish partnerships for conservation. The objective of the WestFAST webinar is to introduce and increase familiarity of these EPA, DOI, and USDA Finance and Investment Centers to our Western States water management partners.

Look to the [WestFAST Special Topics Webinar webpage](#) for information on this webinar as it becomes available.

Federal News

6/1: [Army Corps of Engineers Seeks Public Comments on Proposal to Renew and Revise Nationwide Permits](#)

6/3: [Clouds and Sea Ice: What Satellites Show About Arctic Climate Change](#)

6/8: [USGS Climate Change and Wildlife Program Receives](#)

[Award for Leadership in Climate Adaptation](#)

6/10: [Interior Announces \\$30 Million for Water Reuse and Reclamation Projects in California](#)

6/15: [\\$3.7 Million in Grant and Matching Funds Announced for Klamath River Coho Habitat Restoration Program](#)

6/20: [Thawing Permafrost Spells More than Climate Change for Earth's Underground Layers](#)

6/21: [Assessing Groundwater Over Time in Gaines, Terry and Yoakum Counties, Texas](#)

6/23: [Interior, USDA Announce More Than \\$47 Million in Investments for Water Conservation, Energy Efficiency, Drought Response & Agriculture Operations Across the West](#)

6/24: [Reclamation Announces \\$3 Million in Agricultural Water Conservation and Efficiency Grants](#)

6/26: [Historically speaking, where are the summer "hot spots" for severe weather in the U.S.?](#)

6/27: [Eleven Organizations to Establish or Further Develop Cooperative Watershed Management Groups in the West](#)

6/27: [NASA Maps California Drought Effects on Sierra Trees](#)

6/28: [New Groundwater-Flow Model for Idaho's Wood River Valley](#)

6/28: [Utah Family Land Donation Establishes Bear River Watershed Conservation Area](#)

6/29: [In Hot Water: Climate Change is Affecting North American Fish](#)

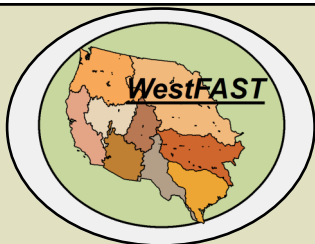
6/28: [UPDATE: Grand Canyon National Park Back to Level 1 Basic Water Conservation Measures](#)

6/30: [Reclamation Announces \\$2.9 Million in Water Use Efficiency Grants](#)

6/30: [Bureau of Reclamation Selects Twenty-one Projects to Receive \\$2.93 Million to Study Water Treatment Technologies](#)

Upcoming WSWC Meetings & Events

- July 13 [WSWC-WestFAST Non-Tribal Federal Water Rights Workgroup Workshop](#), Bismarck, ND
- July 14-15 [Western States Water Council 181st \(Summer\) Council Meeting](#), Bismarck, ND



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