

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@wswc.utah.gov



WestFAST News

February 2016

WestFAST Principals to Meet in DC with WSWC on Collaboration Opportunities

The WestFAST Spring Principals Meeting with WSWC leadership will be held March 24, 2016 in Washington, DC. The meeting will focus on priorities for proactive Federal/State collaboration in water-resource issues and on enhancing use of the WestFAST tool.

The Principals meeting will take place at the end of a busy "water" week in Washington DC. The WSWC Spring (180th) Council Meetings and Roundtable cosponsored with the [Interstate Council on Water Policy](#) (ICWP) will be held the same week (March 21-23) at the Grand Hyatt Washington Hotel. Also, on March 22, in conjunction with the [United Nations World Water Day](#), the Administration will host a White House Water Summit to raise awareness of water issues and to catalyze ideas and actions to help build a sustainable and secure water future through innovative science and technology.

WestFAST agencies will participate in the March 22nd WSWC Committee meetings including briefings on water-resources activities from: the Environmental Protection Agency (EPA); the National Oceanic and Atmospheric Association (NOAA); the National Aeronautics and Space Administration (NASA); the Natural Resources Conservation Service (NRCS); the U.S. Forest Service (USFS); the U.S. Geological Survey (USGS); the Department of Defense (DOD); and the Department of Energy (DOE).

For more information on meeting times and agendas visit the [WSWC website](#).

NOAA Launches Unprecedented Effort to Discover How El Niño Affects Weather

(NOAA, 2/5)

NOAA scientists and partners have embarked on a land, sea, and air campaign in the tropical Pacific to study the current El Niño and gather data in an effort to improve weather forecasts thousands of miles away.

The El Niño Rapid Response Field Campaign will deploy NOAA's Gulfstream IV

research plane and NOAA Ship Ronald H. Brown, NASA's Global Hawk unmanned aircraft equipped with specialized sensors, and researchers stationed on Kiritimati (Christmas)



NOAA Ship *Ronald H. Brown* to assist in data collection in eastern tropical Pacific to help study the current El Niño. (Credit: NOAA)

Island in the Republic of Kiribati, approximately 1,340 miles south of Honolulu. Together, scientists will collect atmospheric data from this vast and remote expanse of the tropical Pacific

where El Niño-driven weather systems are spawned.

"The rapid response field campaign will give us an unprecedented look at how the warm ocean is influencing the atmosphere at the heart of this very strong El Niño," said Craig McLean, Assistant NOAA Administrator for NOAA Research. "This research will help us understand the first link in the chain that produces, among many other weather impacts, extreme precipitation events on the West Coast."

El Niño is a recurring climate phenomenon, characterized by unusually warm ocean temperatures in the equatorial Pacific, that increases the odds for warm and dry winters across the northern United States and cool, wet winters across the south. El Niño is the warm phase of the ocean cycle known as El Niño-Southern Oscillation, or ENSO for short. La Niña is the cool phase.

The pattern can shift back and forth every two to seven years, disrupting weather patterns across the globe.

During the two strongest El Niños before this, California has been soaked by intense rainstorms causing flooding, landslides and other property damage. NOAA scientists say this event is among the strongest El Niños on record, comparable to the last major event in 1997-98. How much precipitation this El



NASA's *Global Hawk* unmanned aircraft to gather weather information over the Pacific as part of the NOAA and partner campaign. (Credit: Gijis de Boer, CIRES)



Niño will deliver to California is a subject of intense interest to a region struggling to manage the effects of an historic drought.

NOAA researchers anticipate that the data gathered by weather balloons and instruments dropped from aircraft will help improve the models that are used to support weather forecasts. The data will also provide insights that researchers hope will improve year-to-year ENSO forecasts, as well as the accuracy of models predicting longer-term effects of climate change.

Parties Agree to New Path to Advance Klamath Agreement *(DOI, 2/2)*

On March 2nd, the States of Oregon and California, PacifiCorp and the federal government – through the U.S. Departments of the Interior and Commerce – announced an agreement-in-principle to move forward with amending the Klamath Hydroelectric Settlement Agreement (KHSA).

Under the agreement-in-principle, the parties to the KHSA will pursue its implementation through the administrative process governed by the Federal Energy Regulatory Commission (FERC), using existing funding and on the same timeline. Members of the California and Oregon delegations introduced legislation in the past two Congresses to advance the hard-fought KHSA and two related Klamath agreements; however, the U.S. Congress adjourned last year without acting on legislation to authorize them.

Though the agreement-in-principle focuses primarily on the dam removal portion of the broader pact, it states that the move is an important and necessary first step toward maintaining the broader Klamath settlements. The states and the U.S. are actively working with all Klamath Basin stakeholders – Members of Congress, tribes, farmers and others – on a comprehensive resolution to restore the basin, advance the recovery of its fisheries, uphold trust responsibilities to the Tribes, and sustain the region’s farming and ranching heritage.

The agreement-in-principle states the four parties intend to work with each other and the more than 40 signatories to the KHSA in the coming weeks to develop terms of an amendment to the KHSA to implement its key provisions, including providing for facilities removal.

The KHSA as amended would then be submitted for consideration through FERC’s established processes, which involve public comment. If approved, PacifiCorp would transfer title of the Klamath River dams to a non-federal entity that would assume liability and take the appropriate steps to decommission and remove the dams in 2020.

“The Klamath agreements were the culmination of years of hard work and collaboration across a diverse and committed coalition of parties – and we can’t let that local vision go unfulfilled,” said U.S. Secretary of the Interior Sally Jewell. “This agreement-in-principle is an important initial step as we work toward a comprehensive set of actions to advance the long term progress and sustainability for Tribes, fisheries and water users across the Klamath Basin.”

“The Agreement in Principle continues the momentum built by

those who crafted the original Klamath Agreements,” said Kathryn Sullivan, Ph.D., Assistant Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator. “NOAA considers this the first step along a new path to secure the future of irrigated agriculture and tribal communities, and the fishery. We’ll continue to work in close coordination with all the KBRA parties on a comprehensive plan. Too many people have worked too long to let this historical opportunity slip away.”

“Oregon is moving forward in the Klamath Basin. We can’t afford to sit back and wait for another crisis to batter these communities,” said Oregon Governor Kate Brown. “Congressman Walden took a step forward by drafting legislation late last year, and today’s action is part of a broader movement to work with him and others to get the Klamath Basin agreements back on track.”

The agreement-in-principle is available [here](#).

Reclamation Releases Truckee Basin Study, Providing Tools for Water Managers in California and Nevada to Help Meet Future Water Demands *(USBR, 2/2)*

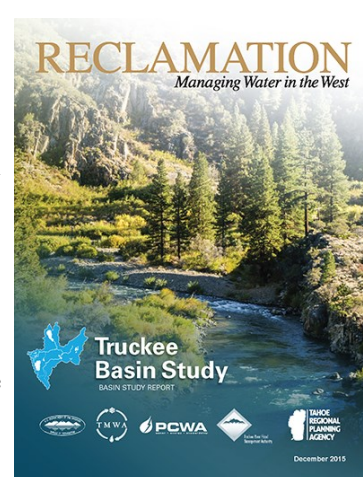
The Bureau of Reclamation has released its study of the Truckee Basin in California and Nevada, projecting that climate change may impact water supplies in the 21st century. Now available online, this study provides water managers with information to better understand the basin’s water supply and demand from now until 2099, and also identifies potential options to help them meet future demands.

“The Truckee Basin is an important source of water for eastern California and western Nevada and includes the iconic Lake Tahoe,” Reclamation Commissioner Estevan López said. “Reclamation and its partners now have the necessary information to develop options to ensure a sustainable water supply into the future.”

Reclamation developed the study in partnership with the Truckee Meadows Water Authority, Tahoe Regional Planning Agency, Truckee River Flood Management Authority and Placer County Water Agency.

The Truckee Basin headwaters begin around Lake Tahoe. The basin includes the Truckee and Carson Rivers and Pyramid Lake and encompasses the cities of Carson City, Reno and Sparks, as well as Reclamation’s Newlands Project, all in Nevada.

According to the basin study, the Truckee Basin is heavily dependent on the Sierra Nevada’s snowpack and available supply is dependent on the availability to capture, store and manage water.





Precipitation within the basin can vary greatly from the high elevations in the Sierra Nevada to the desert regions around Pyramid Lake. Year-to-year precipitation can also vary greatly, with several years of below- average precipitation being common.

The mean average annual temperature in the basin is anticipated to increase by up to five degrees Fahrenheit by the end of the twenty-first century, while annual precipitation within the basin may decrease slightly. The increase in temperature will change the timing and intensity of runoff, with more precipitation falling as rain instead of snow. Runoff will begin earlier, thus impacting the amount of water that can be stored in Truckee reservoirs because of current flood management requirements.



Truckee River near Mystic California

Also, limited storage within the basin will impact water supplies. For example, because of the earlier runoff, the ability to meet full storage after April will be reduced. Due to warming, basin reservoirs are also projected to have higher rates of evaporation, and will be less resilient during future droughts. Lake Tahoe's surface is projected to drop below its natural rim more frequently, causing flows into the Truckee River at Tahoe Dam to cease; making Truckee supplies dependent on smaller reservoirs with limited capacity.

The study also found that the frequency and magnitude of flood events may increase within the basin. The likelihood of the basin experiencing more floods like the one in 1997 that heavily impacted downtown Reno and Sparks, as well as floods of lesser intensity, will increase 10 to 20 percent by 2050 and 30 to 50 percent by 2099.

Finally, the basin study identified structural and non-structural options to balance water supply benefits with flood risks, including working with the U.S. Army Corps of Engineers to allow flexibility in managing reservoir flood space, among other options.

The Truckee Basin Study is a part of WaterSMART. The report is available [here](#).

NASA, University Study Shows Rising Seas Slowed by Increasing Water on Land *(NASA/ 2/7)*

New measurements from a NASA satellite have allowed researchers to identify and quantify, for the first time, how climate-driven increases of liquid water storage on land have affected the rate of sea level rise.

A new study by scientists at NASA's Jet Propulsion Laboratory (JPL) in Pasadena, California, and the University of California, Irvine, shows that while ice sheets and glaciers continue to melt,

changes in weather and climate over the past decade have caused Earth's continents to soak up and store an extra 3.2 trillion tons of water in soils, lakes and underground aquifers, temporarily slowing the rate of sea level rise by about 20 percent.

The water gains over land were spread globally, but taken together they equal the volume of Lake Huron, the world's seventh largest lake. The study was published in the Feb. 12 issue of the journal *Science*.

Each year, a large amount of water evaporates from the oceans, falls over land as rain or snow, and returns to the oceans through runoff and river flows. This is known as the global hydrologic, or water, cycle. Scientists have long known small changes in the hydrologic cycle -- by persistent regional changes in soil moisture or lake levels, for instance -- could change the rate of sea level rise from what we would expect based on ice sheet and glacier melt rates. However, they did not know how large the land storage effect would be because there were no instruments that could accurately measure global changes in liquid water on land.

"We always assumed that people's increased reliance on groundwater for irrigation and consumption was resulting in a net transfer of water from the land to the ocean," said lead author J.T. Reager of JPL, who began work on the study as a graduate student at UC Irvine. "What we didn't realize until now is that over the past decade, changes in the global water cycle more than offset the losses that occurred from groundwater pumping, causing the land to act like a sponge -- at least temporarily. These new data are vital for understanding decadal variations in sea level change. The information will be a critical complement to future long-term projections of sea level rise, which depend on melting ice and warming oceans."

The 2002 launch of NASA's Gravity Recovery and Climate Experiment (GRACE) twin satellites provided the first tool capable of quantifying land liquid water storage trends. By measuring the distance between the two GRACE satellites to within the width of a strand of human hair as they orbit Earth, researchers can detect changes in Earth's gravitational pull that result from regional changes in the amount of water across Earth's surface. With careful analysis of these data, JPL scientists were able to measure the change in liquid water storage on the continents, as well as the changes in ice sheets and glaciers.

"These results will lead to a refinement of global sea level budgets, such as those presented in the Intergovernmental Panel on Climate Change (IPCC) reports, which acknowledge the importance of climate-driven changes in hydrology, but have been unable to include any reliable estimate of their contribution to sea level changes," said JPL Senior Water Scientist Jay Famiglietti, senior author of the paper and a professor at the University of California, Irvine.

Famiglietti also noted the study is the first to observe global patterns of changes in land water storage, with wet regions getting more wet and dry areas getting drier.

"These patterns are consistent with earlier observations of changing precipitation over both land and oceans, and with IPCC projections of changing precipitation under a warming climate," he said.



“But we’ll need a much longer data record to fully understand the underlying cause of the patterns and whether they will persist.”

Find more information on NASA’s sea level rise research [here](#). For more information on the GRACE mission click [here](#).

WestFAST Webinar Series Continues in March With Briefing on Status of WSWC Water Date Exchange (WaDE)

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 of WestFAST federal agency water-resource activities with the objective of improving awareness of and collaboration in water programs.

In January WestFAST received an overview of the U.S. Fish and Wildlife Service Agency and discussed the relevance of water to the USFW Mission. Andrew Hautzinger, USFW Chief, Division of Water Resources and WestFAST member, and Mike Higgins, USFW National Wildlife refuge System, Water Resource Coordinator briefed WestFAST members on structure and priority water-resource related issues including (1) Fisheries and Aquatic Conservation, (2) Ecological Services/Endangered Species, (3) Wildlife & Sport Fish Restoration Program, and (4) the National Wildlife Refuge System.

On April 7th WestFAST will be briefed on progress in the development of the WSWC Water Date Exchange (WaDE). WaDE is a framework developed to allow various groups better ability to share state water data including information on water allocation, supply, and water demand data. WaDE is a cooperative effort between the WSWC, the Western Governors’ Association (WGA), the Department of Energy (DOE), and WestFAST. To view presentation material from past WestFAST webinars and to find information on future webinars click [here](#).

Federal News

2/2: [NOAA: Understanding El Nino](#)

2/9: [USGS Increases Public Access to Scientific Research](#)

2/9: [President’s 2017 Budget Proposes \\$1.2 Billion for the USGS](#)

2/9: [President Proposes \\$1.3 Billion Budget for BLM in Fiscal Year 2017](#)

2/9: [President’s FY 2017 Budget Request of \\$1.6 Billion for U.S. Fish and Wildlife Service Highlights National Conservation](#)

[Priorities, Agency’s Role in Preserving America’s Wildlife Heritage](#)

2/9: [President Obama Proposes \\$13.4 Billion Budget for Interior Department](#)

2/10: [Funding Opportunities for Drought Contingency Planning and Resiliency Projects Available from Bureau of Reclamation](#)

2/12: [Sacramento River Spawning Habitat Restoration Underway](#)

2/16: [Climate.gov Launches New El Nino Page](#)

2/17: [USGS: Algal Toxins Detected in One-Third of Streams Assessed in Southeastern United States](#)

2/17: [The Fate of Sediment When Freshwater Meets Saltwater](#)

2/18: [New Satellite Instruments to Provide a Step Up in Detecting Low Clouds](#)

2/18: [Interior Department Announces Framework to Safeguard the Nation’s Lands and Waters from Invasive Species](#)

2/18: [Bureau of Reclamation Funding Opportunity for Water Reclamation Research Under Title XVI Water Reclamation and Reuse Program](#)

2/26: [U.S. Fish and Wildlife Service Announces Over \\$20 Million in Grants to Conserve Coastal Wetlands](#)

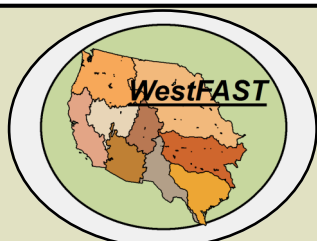
State News

2/10: [Drought Update: California Extends Water Conservation Rules Despite Deep Snowpack](#)

2/15: [Western Governors Urge EPA to Recognize State Authority on Water Quality Issues](#)

Upcoming WSWC Meetings & Events

- March 21-24, WSWC 180th (Spring) Council Meeting, Washington, DC.
- March 24, WSWC/WestFAST Principals Meeting, Washington, DC.



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>