

**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.

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# WestFAST News

January 2016

## WestFAST and WSWC Schedule March Principals and WSWC Committee Meetings in DC

The WestFAST Spring Principals Meeting with WSWC leadership will be held March 24th 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 21-24) in Washington, DC at the Grand Hyatt Washington Hotel.

The 2016 WestFAST Spring Principals Meeting will be hosted by the U.S. Geological Survey (USGS) at the Department of the Interior Building in Washington, DC. The purpose of this meeting is to update WestFAST principals on the activities, plans, and directions of WestFAST and the WSWC, and to give the principals an opportunity to discuss emerging issues. Look for further information on the times and agendas for these meetings on the [WestFAST webpage](#).

The WSWC will hold Council Committee meetings on Tuesday, March 22nd and then will meet jointly with the ICWP in the annual Washington Round Table. The Roundtable will feature extended, informal discussion of water program priorities and policy opportunities with Administration leadership from the principal water resources agencies, and Congressional committee experts. Information and preliminary agendas for WSWC and ICWP meetings can be found on the WSWC webpage.

## WestFAST Welcomes USGS' Sonya Jones to the Team

WestFAST welcomes Sonya Jones, USGS Hydrologist, as its newest member. Sonya has served in science program leadership positions including in the USGS Texas Water Science Center and in the USGS Southeastern Region. In 2010, Sonya helped to establish the USGS National Climate Change and Wildlife Science Center Program and was chosen to serve as the Interim Director for the newly established DOI Southeast Climate Science Center located at North Carolina State University. In these roles, Sonya has established strong ties with

the other DOI Bureaus and federal and state agency water programs. In October 2014, Sonya returned to the USGS Water Mission Area and began working as the National Water Census Coordinator and is now the Coordinator of the USGS Water Availability and Use Science Program.

Sonya takes the USGS WestFAST member position vacated by Pixie Hamilton who has recently retired from the USGS. Pixie was the USGS Ground Water Streamflow Information Program Coordinator and had served as the USGS WestFAST member since 2011. WestFAST members

thank Pixie for her great service with the team and wish her the best in her new endeavors.



Sonya Jones - new USGS WestFAST member

## NOAA's Weather and Climate Supercomputer Upgrades Enhance Nation's Forecast Capabilities (NOAA, 1/11)

NOAA's Weather and Climate Operational Supercomputer System is now running at record speed, with the capacity to process and analyze earth observations at quadrillions of calculations per second to support weather, water and climate forecast models. This investment to advance the field of meteorology and improve global forecasts secures the United States' reputation as a world leader in atmospheric and water prediction sciences and services.

The computers — called Luna and Surge — are located at computing centers in Reston, Virginia and Orlando, Florida. They are now running at 2.89 petaflops each for a new total of 5.78 petaflops of operational computing capacity, up from 776 teraflops of processing power last year. "This significant investment in our operational supercomputers equips us to handle the tidal wave of data that new observing platforms will generate and allows us to push our science and operations into exciting new territory," said Kathryn Sullivan, Ph.D., NOAA's Administrator. "The faster runs and



better spatial and temporal resolution that Luna and Surge provide will allow NOAA to improve our environmental intelligence dramatically, giving the public faster and better predictions of weather, water and climate change. This enhanced environmental intelligence is vital to supporting the nation's physical safety and economic security."

Sullivan said the ultimate goal of investment in operational and research supercomputing capacity is to build resilient communities in the United States by arming people with reliable environmental intelligence to make good decisions, as NOAA works to build a Weather-Ready Nation.

The increase in supercomputing strength will allow NOAA to roll out a series operational model upgrades throughout 2016. For example:

Upgrades to the High Resolution Rapid Refresh Model (HRRR) will help meteorologists predict the amount, timing and type of precipitation in winter storms and the timing location and structure severe thunderstorms.

Implementation of the Weather Research and Forecasting Hydrologic Modeling System (WRF-Hydro) will expand the National Weather Service's current water quantity forecasts at 3,600 locations to forecasts of flow, soil moisture, snow water equivalent, evapotranspiration, runoff and other parameters for 2.67 million river and stream locations across the country, representing a 700-fold increase in spatial density. This new information, provided nationally at the neighborhood scale, will enable forecasters to more accurately predict droughts and floods, and better support water resources decisions.

The increase in supercomputing capacity comes via a \$44.5 million investment using NOAA's operational high performance computing contract with IBM, \$25 million of which was provided through the Disaster Relief Appropriations Act of 2013 related to the consequences of Hurricane Sandy. Cray Inc., headquartered in Seattle, serves as a subcontractor for IBM providing the new systems to NOAA.

## U.S. Forest Service Releases Findings on the Effects of Drought for Forests and Rangelands (USFS, 2/1)

The U.S. Forest Service has a new report, Effects of Drought on Forests and Rangelands in the United States: A Comprehensive Science Synthesis, that provides a national assessment of peer-reviewed scientific research on the impacts of drought on United States forests and rangelands. This report will help the Forest Service better manage forests and grasslands impacted by climate change.

"Our forests and rangelands are national treasures, and because they are threatened, we are threatened," said Agriculture Secretary Tom Vilsack. "This report confirms what we are seeing, that every region of the country is impacted by the direct and indirect effects of drought conditions and volatile weather patterns. Sixty million Americans rely on drinking water that originates on our 193 million acres of national forest and grasslands. They support 200,000 jobs

and contribute over \$13 billion to local economies every year."

The report establishes a comprehensive baseline of available data that land managers can use to test how well their efforts to improve drought resilience and adaptation practices are working nationwide. Major findings from the report include:

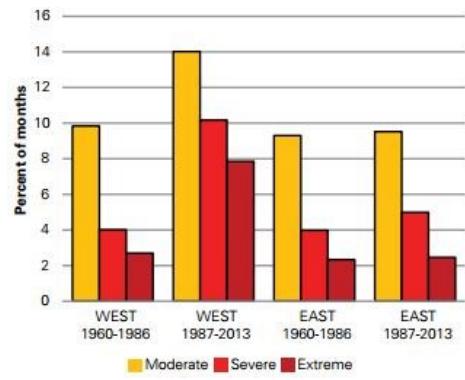
- Drought projections suggest that some regions of the United States will become drier and that most will have more extreme variations in precipitation. Even if current drought patterns remained unchanged, warmer temperatures will amplify drought effects.
- Drought and warmer temperatures may increase risks of large-scale insect outbreaks and larger wildfires, especially in the western United States.
- Drought and warmer temperature may accelerate tree and shrub death, changing habitats and ecosystems in favor of drought-tolerant species.
- Forest-based products and values – such as timber, water, habitat and recreation opportunities – may be negatively impacted.
- Forest and rangeland managers can mitigate some of these impacts and build resiliency in forests through appropriate management actions.

"Since 2000, fire seasons have grown longer and the frequency, size and severity of wildland fires have increased," said Vilsack. "Among the many benefits of having this solid baseline data is the improved ability to identify where restoration work can help forests adapt and prosper while minimizing the threat and impact of future wildfires."

The assessment, a broad review of existing drought research, provides input to the reauthorized National Integrated Drought Information System (NIDIS), established by Congress in 2006, and the National Climate Assessment (NCA), produced every four years to project major trends and evaluate the effects of global cli-

mate change on forests, agriculture, rangelands, land and water resources, human health and welfare, and biological diversity.

Edited by Forest Service scientists in partnership with Duke University, the document provides a valuable new tool to inform discussion, planning and implementation of adaptation strategies for land managers and policy makers. The collaborative effort, authored by 77 scientists from the Forest Service, other Federal agencies, research institutions and universities across the United States,



Graph from USFS report showing percent of months in drought for forested land. Click on the figure to view the report.



**Photo from USFS report showing mortality of Ashe's juniper (*Juniperus ashei*) at Colorado Bend State Park, TX, after the 2011 drought. (photo by Rob Jackson, Stanford University)**. Click on the photo to view the report.

increases and precipitation patterns change, drought—and associated disturbances such as insect outbreaks and wildfires—will only get worse across many areas of the United States.

## EPA Survey Shows \$271 Billion Needed for Nation's Wastewater Infrastructure

(EPA, 1/13)

The U.S. Environmental Protection Agency (EPA) on January 13 released a survey showing that \$271 billion is needed to maintain and improve the nation's wastewater infrastructure, including the pipes that carry wastewater to treatment plants, the technology that treats the water, and methods for managing storm-water runoff.

The survey is a collaboration between EPA, states, the District of Columbia, Puerto Rico, and other U.S. territories. To be included in the survey, projects must include a description and location of a water quality-related public health problem, a site-specific solution, and detailed information on project cost.

"The only way to have clean and reliable water is to have infrastructure that is up to the task," said Joel Beauvais, EPA's Acting Deputy Assistant Administrator for Water. "Our nation has made tremendous progress in modernizing our treatment plants and pipes in recent decades, but this survey tells us that a great deal of work remains."

EPA launched the Water Infrastructure and Resiliency Finance Center in January 2015 to work with states and communities to identify innovative financing strategies for drinking water, wastewater, and stormwater infrastructure. The center recently selected regional Environmental Finance Centers to help communities across the country develop sustainable "how-to-pay" solutions to meet environmental goals. This financial expertise and technical assistance helps communities make informed funding decisions for resilient infrastructure projects that best meet local needs.

In addition, EPA offers financial assistance to address the types of infrastructure needs covered in the survey. The Clean Water State Revolving Fund has provided more than \$111 billion in low-interest

examines ways to understand and mitigate the effects of drought on forests and rangeland including the 193 million acres of National Forest System lands.

The implications of the findings of this report are likely to have far-reaching effects on the environment for the foreseeable future. As climate change drives temperatures

loans since its inception in 1987, with \$5.8 billion in FY 2015 alone. Grant funding is available through the Alaska Native Villages and Rural Communities program, the Clean Water Indian Set-Aside, and the U.S.-Mexico Border Water Infrastructure program.

The \$271 billion is primarily for projects needed within five years. The survey reported the following infrastructure needs:

- Secondary wastewater treatment: \$52.4 billion to meet secondary treatment standards. Secondary treatment uses biological processes to meet the minimum level of treatment required by law.
- Advanced wastewater treatment: \$49.6 billion to provide upgrades so treatment plants can attain a level of treatment more protective than secondary treatment. Advanced treatment may also treat nonconventional or toxic pollutants such as nitrogen, phosphorus, ammonia or metals.
- Conveyance system repair: \$51.2 billion to rehabilitate and repair conveyance systems.
- New conveyance systems: \$44.5 billion to install new sewer collection systems, interceptor sewers and pumping stations.
- Combined sewer overflow correction: \$48 billion to prevent periodic discharges of mixed stormwater and untreated wastewater during wet-weather events.
- Stormwater management programs: \$19.2 billion to plan and implement structural and nonstructural measures to control polluted runoff from storm events.
- Recycled water distribution: \$6.1 billion for conveyance and further treatment of wastewater for reuse.

Visit [here](#) for more information on the report.

## U.S. Forest Service Publishes Final Directive on Long-Term Viability of Ski Areas Operating on National Forests

(USFS, 12/30)

The U.S. Forest Service published notice on December 30 of a final directive that provides for the long-term sustainability of ski areas on lands managed by the agency.

"Long-term, viable recreational opportunities are an important part of the public benefits derived from national forests," said Leslie Weldon, Deputy Chief of the Forest Service's National Forest System. "Ensuring water is available for snowmaking at ski areas operating on our nation's forests provides for world class winter recreation, which support jobs and strengthen communities."

There are 122 ski areas that encompass about 180,000 acres of lands managed by the Forest Service. Ski areas see roughly 23 million visitors annually; contribute \$3 billion yearly to economies; and support approximately 64,000 full- and part-time jobs in communities

The final directive modifies the Forest Service's approach to ad-



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dressing sustainability of ski areas on federal lands. Rather than focusing on ownership of ski area water rights, the agency's final directive addresses sufficiency of water for ski area operations before a permit is issued, during the permit term and upon permit termination.

The ski industry has generally commended the change in approach. "We support the new clause. The agency is dedicated to preserving the permit area for ski area operations. That [water] sufficiency requirement protects their interest and our interest at the same time. We have had a longstanding partnership with the Forest Service over decades. ... The directive published today strengthens that partnership. It also provides benefits to the public," said Geraldine Link, Policy Director for the National Ski Areas Association. "It's an enlightened approach, and it's practical and workable for us" ([as reported by the Salt Lake Tribune, 12/30](#)).

The final directive is available in the Federal Register and on the [Forest Service website](#).

## Federal News

[1/4: USGS Measures Historic Flooding Across the Nation](#)

[1/5: Truckee River Operating Agreement Implementation to Provide Multiple Benefits for California and Nevada](#)

[1/8: Interior Proposes Adaptive Management Framework for Glen Canyon Dam](#)

[1/12: Record of Decision Signed for the Coordinated Long-term Operation of the Central Valley Project and State Water Project](#)

[1/14: Corps of Engineers Approves Flood Control Plan for San Francisco Bay](#)

[1/21: USGS Science for an El Niño Winter](#)

[1/22: Bureau of Reclamation Outlines Water Year 2016 Central Valley Project Water Supply Conditions](#)

[1/25: NOAA: Wind, Sun Could Eclipse Fossil Fuels for Electric Power by 2030](#)

[1/26: U.S. EPA to Announce Millions to Improve Local Water Infrastructure, Water Quality Statewide \(CA\)](#)

[1/27: NPS: Upcoming Events at Lake Mead National Recreation Area, January 30 to February 28](#)

[1/27: U.S. EPA Announces More than \\$182 Million for Drinking Water and Wastewater Infrastructure Projects in California \(CA\)](#)

[1/29: Reclamation Releases Draft Environmental Document for Salmon Conservation and Research Facility Water Supply Infrastructure Project](#)

## State News

[1/5: Drought Update: California Hits Above Average Snow-Pack but has Nearly a Billion Stressed Trees](#)

[1/12: Western Governors Deliver 2016 State of the State Addresses](#)

## 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:

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