

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 Selects NOAA Scientist as New Vice-Chair

WestFAST has selected Kevin Werner, NOAA, as their Vice Chair to serve a two year term through June 2017.

Kevin Werner is the NOAA National Climate Data Center Western Regional Climate Services Director (RCSD). Kevin is located in Seattle, Washington, and as NOAA RCSD provides climate science and information services to Arizona, California, Idaho, Montana, Nevada, Oregon, Utah, and Washington. Kevin has also served in NOAA as the Service Coordination Hydrologist at the Colorado Basin River Forecast Center and a Regional Hydrologic Science Program Manager at the National Weather Service Western Region Headquarters.



Kevin Werner, NOAA, is new WestFAST Vice Chair

Kevin has served as a WestFAST NOAA representative since 2014 and will now serve a two-year term as Vice-Chairman under Chairperson Roger Gorke of EPA.

Kevin has a wealth of experience in both NOAA and the western United States. Kevin has worked in the field of hydrologic prediction on daily and seasonal timescales for the past decade, contributing to forecast verifications and assessments, advancing forecast skill through transitioning products from research to operations, and applying forecasts and science to decision making on water resources, emergency management, and drought.

Kevin was the lead author of the recently published [NOAA 2014 California Drought Service Assessment](#) and has played a significant role in WestFAST's work to facilitate enhanced federal agency support to western states to improve the utility of climate predictions and increase drought resiliency.

Both the WestFAST Chair and Vice Chairperson serve two year terms, with the Vice Chair assuming the Chair role at the end of the second year.

Multiple Federal and State Organizations Involved in Response to Gold King Mine Release

On August 5th, 2015, EPA was conducting an investigation of the Gold King Mine near Silverton, Colorado, to assess the on-going water releases from the mine, to treat mine water, and to assess the feasibility of further mine remediation. While excavating above the old adit, pressurized water began leaking above the mine tunnel, spilling about three million gallons of water stored behind the collapsed material into Cement Creek, a tributary of the Animas River. The wastewater contained high levels of heavy metals, including aluminum, arsenic, cadmium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel and zinc.

EPA activated its Emergency Operations Center to coordinate response efforts internally and with officials in Colorado, New Mexico, Utah, the Navajo Nation and the Southern Ute tribe. EPA currently has deployed more than 200 employees and contractors for the response, which includes incident management teams and community involvement coordinators. These agency staff provided support services as the discharge reached communities along the Animas and San Juan Rivers. EPA crews have also established monitoring networks for water and sediment chemistry along the Animas River corridor, the San Juan River, and Lake Powell (click [here](#) to view a map of EPA monitoring location and to access data by site).



The Gold King Mine entrance area is shown on August 14, 2015. (Credit: Eric Vance/EPA)

But many others are engaged in the response. EPA reports that there are currently at least 20 different federal, state and local agencies involved in the response, working to help ensure



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the health and safety of the public.

The USGS measured increased flows in their stream-gage network and provided provisional calculations of the volume of the discharge. Additionally, USGS scientists are studying various environmental effects of the release. Water and sediment samples are being collected along Cement Creek upstream from Silverton, downstream along the Animas River from Silverton to the confluence with the San Juan River, and downstream along the San Juan River in neighboring New Mexico and Utah.



The USGS streamgage on Cement Creek at Silverton, Colorado, measures continuous stream stage and discharge.

Click [here](#) to read more about USGS Gold King Mine release response.

The EPA is working with the U.S. Agency for Toxic Substances and Disease Registry, to coordinate response to public health concerns and questions associated with the mine waste plume. EPA continues to work with the assistance of Navajo Nation and the Bureau of Indian Affairs to assess well fields and drinking and irrigation water intake systems. Environment Departments from Colorado, New Mexico and Utah have been working with EPA to evaluate possible impacts in their respective states.

The results of all EPA monitoring and sample analyses have been delivered to state, local and tribal officials and are available on [EPA's Gold King Mine Emergency Response Web Page](#). On August 28th, the EPA reported that based on the comparison of pre-event data with data collected through August 15, concentrations for all 24 metals in surface water have trended to pre-event conditions, well below Recreational Screening Levels. The EPA also reported that the metal concentrations of recent samples were also below soil / sediment recreational



EPA team monitor water in the Animas River to assure water quality is remaining at pre-event levels. ([epa.gov](#))

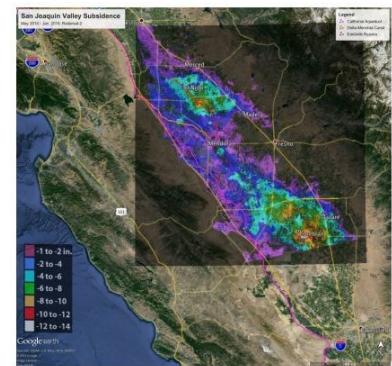
screening levels and that sediment sample concentrations were trending toward pre-event conditions as well.

As the visible evidence fades from the August 5 release, the EPA will continue working with partners including the USGS to fully understand the immediate and lasting effects across the Animas River watershed and downstream waters.

The EPA also announced on August 18th that the U.S. Department of the Interior (DOI) will lead an independent assessment of the factors that led to the August 5th, Gold King Mine incident. It is anticipated that DOI will provide the assessment report to EPA and the public within 60 days. The goal of DOI's independent review is to provide EPA with an analysis of the incident that took place at Gold King Mine, including the contributing causes. In addition to the independent review, EPA is conducting its own internal technical examination of the incident. Both reviews will help inform ongoing and planned site assessments, investigations, and construction or removal projects.

NASA and California DWR Report on Drought and Pumping Impacts on Land Subsidence (California DWR, August 21)

On April 19th, the California Department of Water Resources (CDWR) released a report on Subsidence in the Central Valley prepared at DWR's request by the National Aeronautics and Space Administration's (NASA's) Jet Propulsion Laboratory. The findings show accelerating sinking, nearly two inches per month in some locations in the San Joaquin Valley due to groundwater pumping in response to the historic drought. NASA obtained the subsidence data by comparing satellite images of the Earth's surface over time. Land near Corcoran in the Tulare basin sank 13 inches in just eight months, about 1.6 inches per month. One area in the Sacramento Valley was sinking approximately .5 inches per month, faster than previous measurements. NASA also found areas near the California Aqueduct sank up to 12.5 inches, with eight inches of that occurring in just four months of 2014.



NASA report product indicating total subsidence in California's San Joaquin Valley during May 3, 2014 to Jan. 22, 2015. Two large subsidence bowls are evident with total subsidence during the period ranging to 14 inches. Click on the figure above to view a larger version and access the NASA report.

"Because of increased pumping, groundwater levels are reaching record lows-up to 100 feet lower than previous records," said DWR Director Mark Cowin. "As extensive groundwater pumping continues, the land is sinking more rapidly and this puts nearby infrastructure at greater risk of costly damage.... Groundwater acts as a savings account to provide supplies during drought, but the NASA report shows the consequences of excessive withdraw-



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als as we head into the fifth year of historic drought. We will work together with counties, local water districts, and affected communities to identify ways to slow the rate of subsidence and protect vital infrastructure such as canals, pumping stations, bridges, and wells.” Subsidence has destroyed public and private well casings in the San Joaquin Valley, and over time subsidence can permanently impair the storage capacity of aquifers. Other affected infrastructure include roads, bridges and flood control structures.

Last year’s statewide water bond approval will provide \$10M to assist counties with stressed groundwater basins, and this year’s budget bill provides for streamlined environmental reviews for any county ordinance that reduces groundwater pumping. DWR will work with affected communities to develop near-term and long-term recommendations to reduce the rate of sinking and address risks to infrastructure.

DWR completed a recent land survey along the Aqueduct which found 70-plus miles in Fresno, Kings, and Kern counties sank more than 1.25 feet in two years, and DWR will now conduct a system-wide evaluation of subsidence along the California Aqueduct and the condition of State Water Project facilities. The evaluation will help the department develop a capital improvement program to repair damage from subsidence. Past evaluations have found that segments of the Aqueduct from Los Banos to Lost Hills sank more than five feet since construction. Click [here](#) for more information.

Celebrating a Century of Partnerships in Parks: USGS, NPS, and 100 Years of Science (USGS, 8/25)

From the grand waterfalls in Yosemite to past presidents sculpted into stone at Mount Rushmore, American history is continuously preserved throughout our national parks. On August 25th, 2016 the National Park Service will enjoy a well-deserved slice from their 100th birthday cake! In fact, the whole Department of the Interior will be helping the NPS celebrate all year, starting today, August 25th, 2015.

USGS Science in the Parks: The U.S. Geological Survey has been contributing to research and monitoring efforts in the parks since before each agency officially existed. The precursor to the USGS, the U.S. Geological and Geographical Survey of the Territories, explored parts of Yellowstone National Park in 1876, predating both the USGS (founded in 1879) and the NPS (founded in 1916). The types of science the USGS conducts in the parks spans from pollinators all the way to natural hazards. To kick-off the year-long celebration with the National Park Service, the USGS will highlight its science in the parks in a new, on-going series 100 Years, 100 Science Stories. Keep reading for an insight into upcoming posts.

Natural Hazards: Fires, volcanoes and floods are just some of the hazards that the USGS studies in the parks. The Hawaiian Volcano Observatory, which is not only located within the Hawaii Volcanoes National Park, it's also right on the edge of an active volcano and is a real-time, ongoing USGS science and research project.

Pollinators: Numerous pollinator initiatives are in motion across the

country. The Indiana Dunes National Lakeshore used to be home to the Karner blue butterfly, a native pollinator that was listed as an endangered species in 1992. Scientists at the USGS surveyed federal parks along Lake Michigan in the late 1990s, finding more than 1,000 butterflies. Those numbers have been reduced to the point that only two were spotted last year. USGS scientists are at the forefront in aiding the rehabilitation of the Karner blue in the United States, providing key information and science to decision makers.



A 16 1/2-foot python, being removed from the wild by USGS and NPS personnel, captured in a thicket in Everglades National Park in May 2012.

Invasive Species: Scientists are hard at work, monitoring the spread of invasive species in parks across the nation. One particular invasive species, the Burmese python, is unfortunately making Everglades National Park its new home. Weighing in at upwards of 200 pounds and 20 feet in length, these large constricting snakes are now found throughout much of southern Florida. Tools, technology and information is gathered by researchers with the USGS Invasive Species Program in order to help decision makers assess, prevent, contain, control and manage invasive species throughout the nation.

The USGS will also be using Twitter and Facebook as platforms to celebrate science in the parks. Search for the hashtag #NPSCentennial to learn more about these efforts.

Bureau of Reclamation Meets With States, Other Stake Holders on Infrastructure

The Bureau of Reclamation held a workshop on its Infrastructure Investment Strategy (released last May) at the Denver Federal Center on August 20th. The Strategy is intended to improve the data used to support and inform asset management decisions, while addressing a range of emerging issues including the demands of a growing population in the West, new design standards and regulatory requirements, and the effects of a changing climate and associated hydrologic conditions. The strategy notes that Reclamation is responsible for nearly 69% of all real property assets constructed



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by the Department of Interior.

Senator John Barrasso (R-WY) and Rep. Paul Gosar (R-AZ) have introduced the Bureau of Reclamation Transparency Act (S. 593/H.R. 1107), which mandates an annual assessment of major repair and rehabilitation needs for reserved works with an estimate of appropriations needed to complete each item and an assignment of a categorical rating to inform the annual budget process. The bills would also direct Interior to coordinate with the non-federal entities responsible for transferred works to develop reporting requirements and a categorical rating system. Reclamation notes that for the past six years, it has been collecting and analyzing data on Major Rehabilitation and Replacement (MR&R) activities. However, improvements in data collection and reporting processes are necessary as different approaches to maintenance programs have developed for determining the amount and priority for funding necessary to support expenditures on reserved works.

The Denver meeting provided partners and stakeholders with an overview of current asset management practices, as well as future project plans for strategy development and implementation. It also provided a forum for discussion and feedback on elements of the strategy, as well as financial issues. A video recording of the meeting is available [here](#).

WestFAST Webinar Series Continues in September With a Look at the National Water Census and USGS Water Resources Programs

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 August 2015, Dr. Bradley Doorn and Forrest Melton from the NASA Applied Sciences program provided an overview of NASA satellite and airborne missions relevant to water resources monitoring and management in the western US. They also discussed highlights from NASA's portfolio of applied science activities that are focused on applying NASA's remote sensing capabilities to support advances in water resources management. Click [here](#) to find webinar presentation materials.

The September WestFAST Webinar is scheduled for the 24th when WestFast will review USGS Water Resources Programs with focus on the [National Water Census](#) at 11:30 AM (Eastern). Pixie Hamili-

ton, USGS Cooperative Water Program National Coordinator will lead the discussion. Find information for this webinar at the [WestFAST webpage](#).

Federal News

8/3: [Obama Administration Takes Historic Action on Climate Change](#)

8/3: [Yakima Basin Water Supply – August Forecast](#)

8/4: [Secretary Jewell Statement on Obama Administration Clean Power Plan](#)

8/7: [Reclamation Increasing Releases from Navajo Reservoir in Response to the Gold King Mine Spill in Animas River](#)

8/10: [Global Vulnerability of Forests to Climate Change-Related Tree Mortality is Widely Underestimated](#)

8/10: [Service Announces \\$3 Million in Grants To Conserve Native Fish Species and Their Habitats](#)

8/12: [Reclamation Selects 23 Projects Totaling \\$5.2 Million to Build Drought Resiliency in Nine States](#)

8/18: [Insecticides Similar to Nicotine Found in about Half of Sampled Streams across the United States](#)

8/19: [Mercury and Selenium are Accumulating in the Colorado River Food Web of the Grand Canyon](#)

8/24: [Yakima Project “Flip-Flop” Operations Underway](#)

8/27: [New Sea-Level Rise Handbook Highlights Science and Models for Non-Scientists](#)

8/31: [EPA Update on Gold King Mine Response: Additional Data Results and Public Records \(HQ, CO\)](#)

Upcoming WSWC Meetings & Events

- October 7-8th, WSWC Water Quality/Water Quantity Nexus Workshop, Manhattan, Kansas
- [October 8-9th, WSWC 179th Council Meeting](#), Manhattan Kansas

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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