

Western States Federal Agency Support Team (WestFAST) is a collaboration between 12 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 2018

Salinity in the Upper Colorado River Have Decreased from 1986-2011 (USGS 01/29/18)

The study, in cooperation with the [Colorado River Basin Salinity Control Program](#), shows the majority of salinity in the Upper Colorado River Basin comes from groundwater that discharges into streams, also known as baseflow. This occurs as snowmelt and precipitation infiltrate into the ground and interact with sedimentary rocks, which causes salts to dissolve and salinity to increase in groundwater.

Salinity has a significant impact on water users in the Colorado River Basin, affecting agricultural, municipal and industrial sectors, and causing almost \$300 million per year in economic damages in the United States.

Findings show that as much as 89 percent of salinity in the upper Colorado River comes from baseflow. The study estimated salinity loads in baseflow at 69 stream sites throughout the basin to better understand where salinity originates and how it is transported through the watershed. The study also examined salinity trends in baseflow from 1986-2011 to learn how conditions have changed over time. USGS scientists developed models and incorporated long-term data from sites throughout the Upper Colorado River Basin to provide estimates of how much salinity moves from groundwater to streams.

"Understanding how salinity moves through the Colorado River basin is critical for resource managers in helping them develop effective mitigation strategies," said Christine Rumsey, a USGS scientist and lead author of the study.

Declines in baseflow salinity loads occurred in 63 percent of streams studied between 1986-2011. This decline suggests that salinity mitigation projects may be reducing loads. Other possible causes for the decreased salinity transport include climate and landscape changes. Notably, the pace and extent of decreases in baseflow salinity declined during the 2000s. The average

rate of decreases during the 2000s was only half of the average rate of decreases in the 1990s.

"While this is a great first step toward understanding how salinity has changed over time, more studies are needed to better understand why salinity loads are



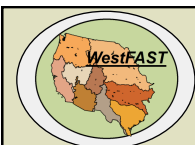
Muddy Creek in the San Rafael Swell with white surface salts. Public domain.

declining in the basin, and why, at many sites, the rate of decline was weaker in more recent years," said Rumsey. Salinity occurs naturally in water due to the weathering and dissolution of minerals in soil and rock. The same process occurs in areas with irrigated agriculture, which produces about double the salinity yield compared to areas without irrigated agriculture. Other factors known to affect salinity loads in streams include geology, land cover, land-use and precipitation.



(Credit: USGS, USGS. Public domain.)

Funding for this study was provided by the Bureau of Reclamation [Colorado River Basin Salinity Control Program](#). In 1974, Congress enacted the Colorado River Basin Salinity Control Act, which directed the Secretary of the Interior to proceed with a program to enhance and protect the quality of water available in the Colorado River in the U. S. and Republic of Mexico.



The Colorado River Basin Salinity Control Program implements and manages projects to reduce salinity loads, investing millions of dollars per year in irrigation upgrades, canal projects and other mitigation strategies.

The new study was published in the [journal Hydrologic Processes](#).

NRCS Assistance Available to Agricultural Producers - Conservation Stewardship Program *(NRCS 01/19/18)*

Agricultural producers wanting to enhance current conservation efforts are encouraged to apply for the [Conservation Stewardship Program](#) (CSP). Through CSP, USDA's Natural Resources Conservation Service (NRCS) helps private landowners build their business while implementing conservation practices that help ensure the sustainability of their entire operation. NRCS plans to enroll up to 10 million acres in 2018. While applications for CSP are accepted year round, applications must be received by March 2, 2018 to be considered for this funding period.

Through CSP, agricultural producers and forest landowners earn payments for actively managing, maintaining, and expanding conservation activities like cover crops, ecologically-based pest management, buffer strips, and pollinator and beneficial insect habitat— all while maintaining active agriculture production on their land. CSP also encourages the adoption of cutting-edge technologies and new management techniques such as precision agriculture applications, on-site carbon storage and planting for high carbon sequestration rate, and new soil amendments to improve water quality.

Some of these benefits of CSP include:

- Improved cattle gains per acre;
- Increased crop yields;
- Decreased inputs;
- Wildlife population improvements; and
- Better resilience to weather extremes.

NRCS recently made several updates to the program to help producers better evaluate their conservation options and the benefits to their operations and natural resources. New methods and software for evaluating applications help producers see up front why they are or are not meeting stewardship thresholds, and allow them to pick practices and enhancements that work for their conservation objectives. These tools also enable producers to see potential payment scenarios for conservation early in the process.

Producers interested in CSP are recommended to contact their [local USDA service center](#) or visit www.nrcs.usda.gov/GetStarted.

USDA Investing Millions in Wildfire Mitigation and Water Quality Projects *(USDA 01/24/18)*

The U.S. Department of Agriculture (USDA) will invest nearly \$32 million this year through the Joint Chiefs' Partnership to mitigate wildfire risk, improve water quality and restore healthy forest ecosystems in 24 states and Puerto Rico.

"Through Joint Chiefs, the Natural Resources Conservation Service (NRCS) works with agricultural producers and forest landowners to improve forest health using available Farm Bill conservation programs, and the Forest Service enhances forest health on public lands -- stitching together a larger footprint of healthy ecosystems in priority areas," said acting State Conservationist Ray Dotson.

More than \$4.2 million of this year's funding will support three ongoing forestry projects in California that focus on wildfire protection and mitigation, improving forest health and enhancing habitat for at-risk species. Project locations include the Los Angeles County area, the front country of the Sierra National Forest east of the San Francisco Bay metro area, and Trinity County near Eureka in northern California.



Reforestation: credit Sustainableblog—Internet images

"Wildfires are a serious and on-going threat to forests and communities alike, as we've seen throughout California this year," Dotson said. "Through these Joint Chiefs' projects, USDA will be working with local partners in high-risk project areas to control invasive species, install fire breaks and implement other targeted forest management practices to help mitigate the risk of wide-spread wildfires."

Private forestland owners in these project areas may be eligible for financial assistance from the NRCS to help them perform forest conservation practices on their land. Contact a local [USDA Service Center](#) to learn more.

Since 2013, USDA has invested \$176 million in 56 Joint Chiefs' Landscape Restoration Partnership (LRP) projects,



which focus on areas where public forests and grasslands intersect with privately-owned lands. Including this year's funding, USDA's LRP investment in California has been \$27.5 million for a total of five projects that are helping to minimize wildfire risk, protect landscapes and communities, improve forest health, and enhance wildlife habitat.

Up to \$3 Million in Funding Available for Locally-Focused Environmental Education Grants

(EPA Regions 01/08/18)

EPA is pleased to announce that up to \$3 million in funding for locally-focused environmental education grants will be available this week under the 2018 EE Local Grant Program. EPA will award three to four grants in each of EPA's ten regions, for no less than \$50,000 and no more than \$100,000 each, for a total of 30-35 grants nationwide.

In addition to other environmental topics, the 2018 EE Local Grant Program includes support for projects that reflect the intersection of environmental issues and agricultural best-practices, conservation of natural resources, food waste management, and natural disaster preparedness.

Funded projects will increase public awareness of those topics and help participants to develop the skills needed to make informed decisions. A Request for Proposals (also called a Solicitation Notice) containing details will be issued by each of the ten EPA Regions.

"By recognizing these locally-based learning and awareness opportunities, the Environmental Protection Agency is taking both a local and national leadership role in promoting sound agricultural conservation practices, environmental disaster preparedness, adequate food waste management, and other important environmental best-practices," said Administrator Scott Pruitt. "Environmental education starts locally in our own backyards, classrooms, and in the fields of farmers who work the land directly, and I'm proud to play a role in enhancing such learning opportunities."

Through this grant program, EPA intends to provide financial support for projects that design, demonstrate, and/or disseminate environmental education practices, methods, or techniques, as described in this notice, that will serve to increase environmental and conservation literacy, and encourage behavior that will benefit the environment in the local communities where they are located.

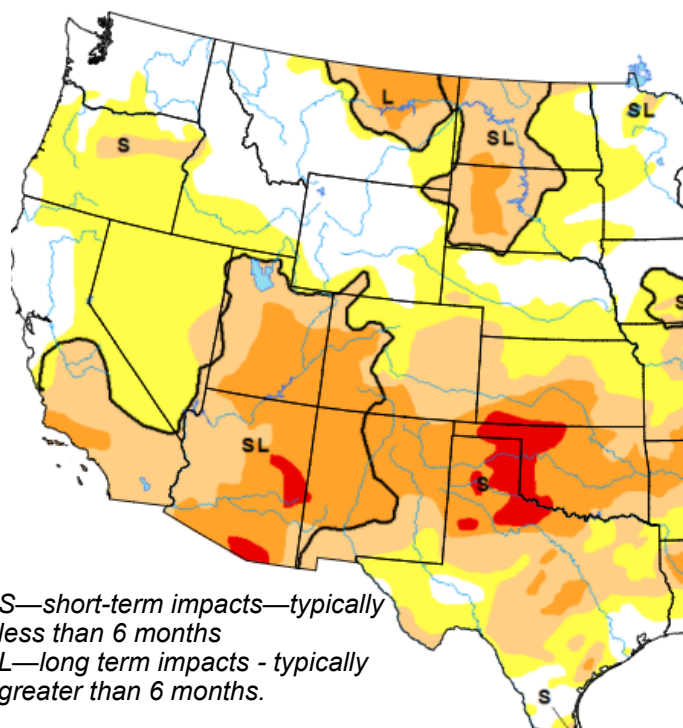
Since 1992, EPA has distributed between \$2 million and \$3.5 million in annual grant funding under this program, supporting more than 3,700 grants. Proposals are due by March 15, 2018. The full solicitation notices will be posted later this week at www.grants.gov and on EPA's website.

Find background information on the EE Grants Program and resources for applicants [online](#).

Use of the "D" Word Increases

(WestFAST—sources NOAA, USGS, NRCS, U.S. Drought Monitor & Regional Climate Centers 01/31/18)

Below is an image of the latest U.S. Drought Monitor from January 30, 2018. The discussion among state climatologists is one of talking about serious impacts on agriculture and water supply especially in the Southern Rockies to the Southern Plains. Especially in the Southern Plains the increasing drought conditions being observed is causing concerns, especially for agriculture as planting of crops and crops such as winter wheat start getting into development phases such that a lack of available moisture is going to start impacting yield. In addition the abnormally warm weather, at times 15 degrees above average for long periods of time is



S—short-term impacts—typically less than 6 months
L—long term impacts - typically greater than 6 months.

Intensity and Impacts



increasing plant development and the evapotranspiration rates in areas where there is very little water available.

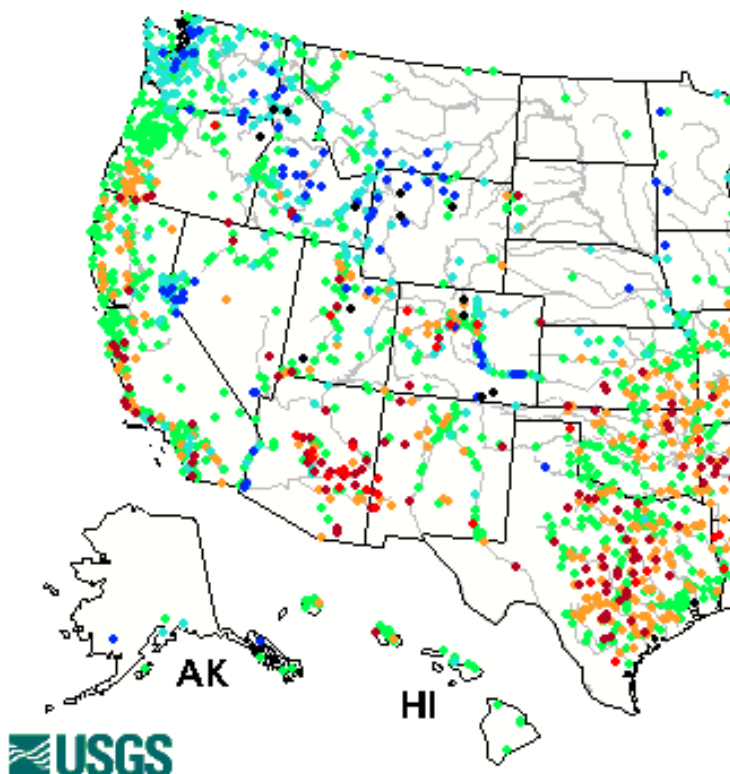
On the next page, the 28 day average stream flow maps as of February 1, 2018, from the USGS show the impacts to streamflow with stream flows in some areas near record lows with others having abnormally high flows for this time of year. In some of those areas with little precipitation the flows are near historic lows for this time of year, while some areas the warming temperatures, particularly in the Sierra and in



WestFAST News

January 2018

Utah, has led to the melting of snow and increasing stream flow at a time of year when things are normally still frozen.



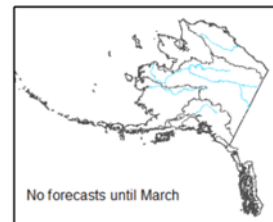
Spring and Summer Streamflow Forecasts as of January 1, 2018

Percent of 1981-2010 Average

- > 180
- 150 - 180
- 130 - 149
- 110 - 129
- 90 - 109
- 70 - 89
- 50 - 69
- 25 - 49
- < 25

50% exceedance probability forecasts shown. For forecasts at other exceedance probabilities, see individual state reports.

Prepared by:
USDA Natural Resources Conservation Service
National Water and Climate Center
Portland, Oregon
<https://www.wcc.nrcs.usda.gov>
Created: 8 Jan 2018 13:16



No forecasts in this area this month

LINK: [NRCS Snow Survey](#)

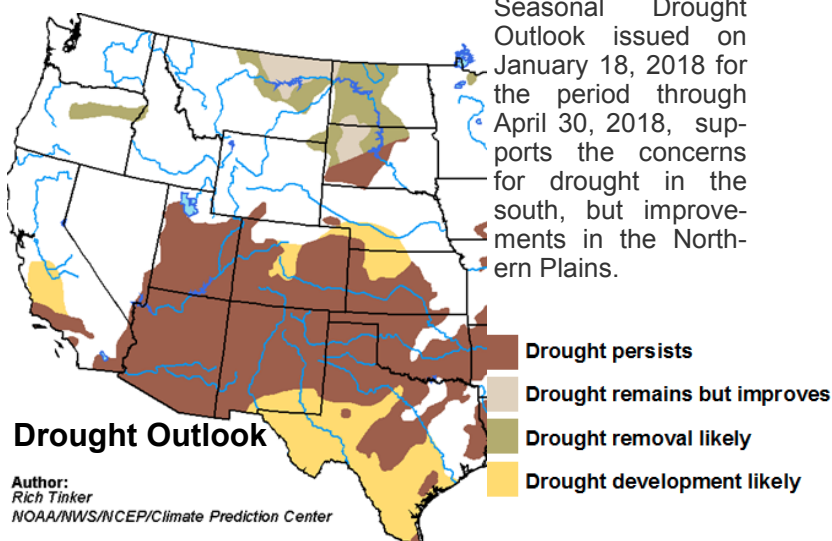
Explanation - Percentile classes						
●	●	●	●	●	●	●
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High

28—Daily Average Streamflow—Link [USGS WaterWatch](#)

The latest National Oceanic and Atmospheric Administration (NOAA), National Weather Service, Climate Prediction Center Seasonal Drought Outlook issued on January 18, 2018 for the period through April 30, 2018, supports the concerns for drought in the south, but improvements in the Northern Plains.

Drought Outlook

Author:
Rich Tinker
NOAA/NWS/NCEP/Climate Prediction Center

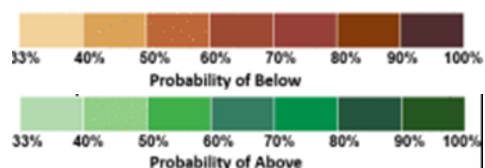
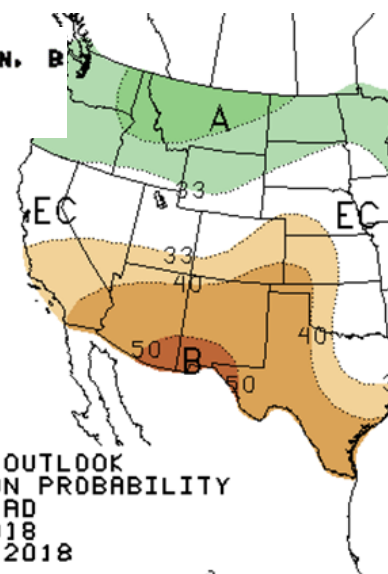


- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely

EC MEANS EQUAL CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW



THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID FMA 2018
MADE 18 JAN 2018





Upcoming Meetings:

The WSWC Spring (186th) Meetings and Washington, DC Roundtable, cosponsored with the Interstate Council on Water Policy will be held in Arlington, Virginia on March 14-15, 2018. A meeting with the WestFAST Principals is scheduled for March 16th at NOAA Headquarters in Washington, DC.

For further information, please see:

<http://www.westernstateswater.org/upcoming-meetings/>.

Instream Flow Council Flow 2018 Conference: Managing Rivers, Reservoirs, and Lakes in the Face of Drought - Practical Tools and Strategies for Sustaining and Protecting Ecological Values of Water Fort Collins, Colorado April 24-26, 2018

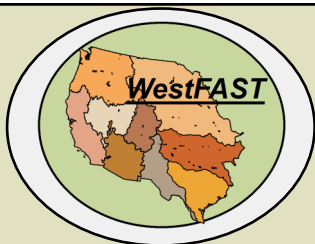
LINK: <https://www.instreamflowcouncil.org/conferences-flow-2018/>

Water Deeply: [Outlook West's Biggest Water Topics for 2018](#)

Federal News (Control click to articles)

01/02: [NASA-led Study Solves a Methane Puzzle](#)
01/03: [Forest Service seeks comment on work to increase efficiency of National Environmental Policy Act compliance](#)
01/03: ["Pruitt Has Made Superfund Clean-Ups a Priority"](#)
01/03: [Reclamation Awards \\$4.9 Million Contract for Control and Data Acquisition for the Colorado River Storage Project](#)
01/04: [NASA Study: First Direct Proof of Ozone Hole Recovery Due to Chemicals Ban](#)
01/08: [Idaho's Water Season is Off to a Slow Start](#)
01/08: [NRCS Delivers Healthier Natural Resources, Greater Public Safety, Better Service in 2017](#)
01/08: [Off to a Good Start this Winter, Montana Snowpack Currently the Best in the Western U.S.](#)
01/08: [Oregon's 2018 water supply outlook: snowpack below average, but there is time to catch up](#)
01/08: [NRCS Nevada Water Supply Outlook Report Available: New Year's 2018 snowpack proves grim](#)
01/08: [Public meeting scheduled for proposed Missouri River Emergent Sandbar Habitat project](#)
01/09: [DOI Names National Park Service Deputy Director](#)
01/09: [Corps update officials on dam construction](#)
01/09: [Precision Navigation: Next-generation solutions](#)
01/09: [USDA Task Force on Agriculture and Rural Prosperity Release Recommendations to Revitalize Rural America](#)
01/09: [EPA awards over \\$8 million to states and tribes to spur redevelopment and boost economies in Northwest and Alaska](#)
1/10: [USFWS: Here's Why All Rivers Matter](#)
01/11: [NASA Calculated Rainfall for California Mudslides](#)
01/11: [USDA Investing Millions in Wildfire Mitigation and Water Quality Projects Through Joint Chiefs' Partnership](#)

01/11: [USDA Offers Assistance to Protect Privately-Owned Wetlands, Agricultural Lands and Grasslands](#)
01/11: [USDA Investing Millions in Wildfire Mitigation and Water Quality Projects Through Joint Chiefs' Partnership](#)
01/11: [Reclamation Continues Water Exchange Negotiation with State of Utah for Lake Powell Pipeline](#)
01/12: [BLM seeks public input in planning process for Bears Ears National Monument](#)
01/12: [BLM seeks public input in planning process for Grand Staircase-Escalante region](#)
01/12: [NASA, NOAA to Announce 2017 Global Temperatures, Climate Conditions](#)
01/15: [NOAA: A Changing Arctic](#)
01/16: ['First Light' Images from CERES FM6 Earth-observing Instrument](#)
01/17: [Eagle Mine Superfund site in Eagle County, Colo. among sites on redevelopment focus list](#)
01/17: [FWS: Inspired to Change the World](#)
01/18: [NOAA: 2017 was the 3rd Warmest Year on Record](#)
01/19: [Does Space Junk Fall from the Sky?](#)
01/19: [Mining Weather Data from Civil War-Era Ship Logs](#)
01/19: [USDA Disaster-Recovery Programs Helping California Producers and Communities](#)
01/19: [USACE commanding general views emergency response to Santa Barbara mudslides](#)
01/23: [Reclamation Tests New Folsom Dam Auxiliary Spillway Ahead of Final Commissioning](#)
01/24: [USDA Funding Available for Colorado Landowners to Help Protect Wetlands and Wildlife Habitat](#)
01/24: [Weather Forecasts, from NOAA's National Centers to Your Neighborhood](#)
01/24: [New NOAA Research Holds Promise of Predicting Snowpack Before the Snow Falls](#)
01/24: [NASA Covers Wildfires from Many Sources](#)
01/24: [Alaska Quake Shakes Water in Devils Hole](#)
01/24: ["I want to do this forever" – FWS student placement](#)
01/25: [Corps signs design agreement with city for LA River Ecosystem Restoration project](#)
01/25: [SWD commander promoted to brigadier general](#)
01/26: [USGS Studies Post Fire and Flood Debris-Flow in Montecito](#)
01/26: [EPA Works with Partners to Bring New Drinking Water Source to North Texas](#)
01/30: [EPA Hurricane Maria Update: Major Milestone Reached in Collection and Disposal of Hazardous Waste](#)
01/31: [EPA's Scott Pruitt Signs Endangered Species Act Memorandum with State Agriculture Commissioners](#)
02/01: [GOES S to Boost Weather Forecasts in the West, Hawaii, and Alaska](#)
02/02: [How the Groundhog Scores Against the Record book](#)
02/02: [Bureau of Reclamation seeks public comment on project use power draft directive and standard](#)



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