

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

July 2018

Fire and Drought News for July

(WestFAST 07/31/18)

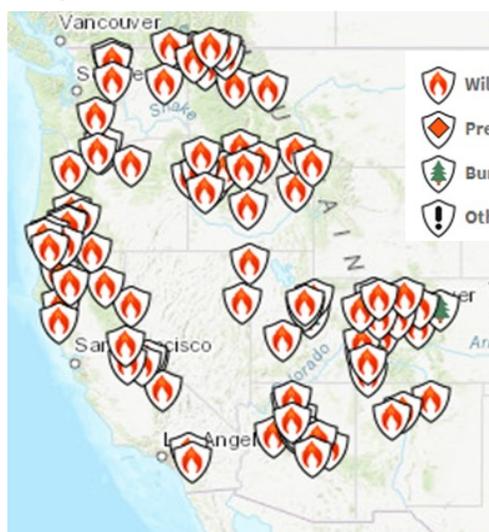
Western States Water Council (WSWC) Summer meeting started on July 31, 2018 with Waters Of The United States (WOTUS) discussions, but the fires and drought were on attendees' minds for the 3-day meetings (More on the summer meeting in a supplemental newsletter later this month and August edition). The smoke from multiple wild fires was first noted by many while flying into the airports but was also covered by the news while the meetings continued. These fires are being exacerbated by the very dry to drought conditions impacting a much of the southwest and intermountain west. Here are details of WestFAST agencies support:

FIRE:

Where are all the fires located in the West? The National Wildfire Coordinating Group made up of many WestFAST agencies and others that work in the wild fire community keep an updated website where all of this information may be found: (*ctrl click*)

[InciWeb- Incident Information System](#)

August 1, 2018 Western fires



Another view of this is available from: <https://www.fs.fed.us/science-technology/fire/information>

The site also includes Alaska data.



InciWeb is an interagency all-risk incident information management system. The web-based program provides information for wildland fire emergencies and prescribed fires, but can also be used for other natural disasters and emergency incidents such as earthquakes, floods, hurricanes, tornadoes, etc.

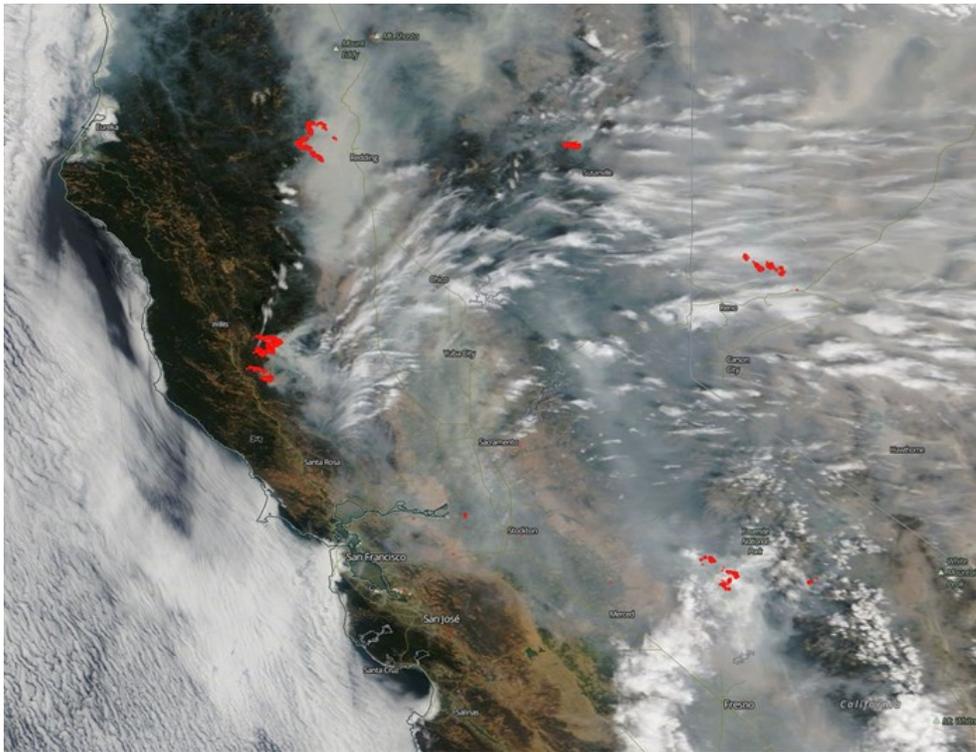
The system was developed with two primary missions:

- Provide the public a single source of incident related information; and
- Provide a standardized reporting tool for the public affairs community

Official announcements include evacuations, road closures, news releases, maps, photographs, and basic information and current situation about the incident.

Additional Fire Detection - NASA

Many of the available imagery (next page) layers are updated within three hours of observation, essentially showing the entire Earth as it looks "right now". This natural-color satellite image was collected by the Aqua satellite on July 30, 2018. Actively burning areas, detected by thermal bands,



All of these fires are causing huge amounts of destruction, but they are also creating health hazards with the amount of smoke that is being pumped into the atmosphere. A study from Georgia Tech found that particle pollution from wildfires, long known for containing soot and other fine particles known to be dangerous to human health, is much worse than previously thought. Naturally burning timber and brush from wildfires release dangerous particles into the air at a rate three times as high as levels known by the Environmental Protection Agency (EPA), researchers at Georgia Tech found. The study also found wildfires spew methanol, benzene, ozone and other noxious chemicals. (Journal reference: <https://www.nature.com/articles/ngeo2960>)

Fighting Fire

NASA's [EOSDIS](#) provides the capability to interactively browse over 600 global, full-resolution satellite imagery layers and then download the underlying data. (image centered over California)

are outlined in red. NASA image courtesy NASA/Goddard Space Flight Center Earth Science Data and Information System (ESDIS) project. Caption: Lynn Jenner with information from CAL fire and Inciweb.

Hundreds of thousands of Acres have burned and more than 200 commercial and residential buildings have burned in California alone this year. These numbers do not even reflect structures damaged by the fire, only those destroyed. This fire has proven to be extremely difficult to contain due to both weather conditions and terrain conditions. [CAL fire](#) notes that changing winds paired with steep terrain have challenged firefighting efforts. There are still over 3,000 structures being threatened by existing fires and the extended dry, hot and windy conditions that contributed to the start of the fire have yet to abate.

Many different firefighting techniques have been used, including "Tactical Firing" which Inciweb describes as "an effective way to reduce fuel loads while simultaneously widening or extending containment lines. It can reduce the duration and intensity of wildfires, particularly by decreasing available fuels and weakening the fire as it approaches containment lines." So basically firefighters set fires and burn the fuels in a controlled manner ahead of the actual fire in an effort to contain fire growth.

More than 73,000 wildfires burn an average of about 7 million acres of private, state and federal land in the U.S. each year. Forest Service firefighters respond to a significant number of those, either because they are burning on National Forest System land or because they are providing assistance to another federal, tribal, state or local partner.

We need to be prepared with highly trained people, well designed tools and high performing equipment to respond safely and effectively to forest and grassland fires. Responding to fires often requires a mix of ground firefighters and aerial firefighting aircraft.

[Learn more about people in fire](#)

[Learn more about firefighting equipment and tools](#)

Fire Forecasting

[Predictive Services](#)(link is external) provides information about fire weather, fire danger/fuels, and intelligence/resource status information that fire managers need to anticipate significant wildfire activity and determine where to position firefighters, engines, aircraft and other wildfire suppression assets.

National Predictive Services products include weekly and monthly [significant wildland fire potential out-](#)



[looks](#)(link is external), [intelligence reports](#)(link is external) that are produced daily or weekly depending on wildfire activity, and [annual reports](#)(link is external).

[Learn more about fire forecasting](#)



www.nifc.gov
National Interagency Fire Center
 3833 Development Avenue
 Boise, ID 83705-5354
 (208) 387-5512

US Army Corps of Engineers (USACE) supports the fire suppression and fight efforts with communications - Fire-risk conditions can quickly increase with changing temperature and winds -- visitors should check for current fire-restriction notices on information kiosks at all outdoor recreation areas. Visitors are also encouraged to take extra precautions with other sources of ignition, such as cigarettes, vehicle exhaust systems and, where allowed, even charcoal briquettes. Fireworks, including sparklers, are not allowed on any Corps lands at any time.

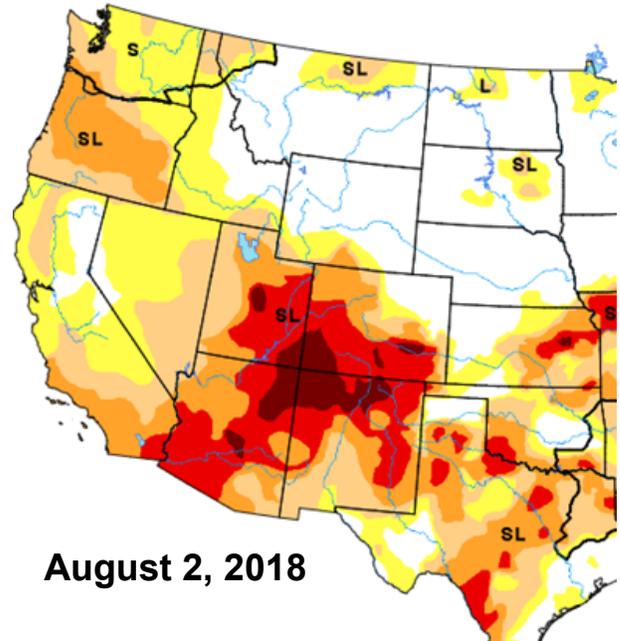
National Park Service (NPS): in addition to fire fighting efforts some parks have experienced periods of closure such as Yosemite NP. [full article](#)



Highway 41 closure (AP Photo/Noah Berger)

Drought:

Dry to drought conditions persist across much of the west. Even areas where near average to average snowfall have occurred the very hot and dry conditions are starting to stress vegetation and impact agricultural interests. **The latest Drought Monitor (top right)** shows the extent of dry conditions in the West.



August 2, 2018



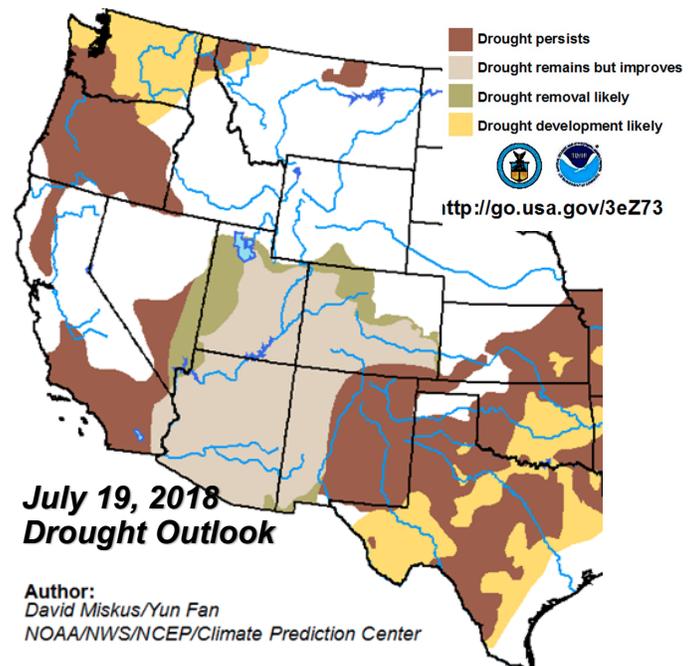
Intensity and Impacts

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)

~ - Delineates dominant impacts

S - Short-Term impacts, typically less than 6 months (e.g. agriculture, grasslands)

L - Long-Term impacts, typically greater than 6 months (e.g. hydrology, ecology)



July 19, 2018
Drought Outlook

Author:
David Miskus/Yun Fan
NOAA/NWS/NCEP/Climate Prediction Center

<http://go.usa.gov/3eZ73>



From the previous page, the image of the seasonal drought outlook, additional Southwestern Monsoon rain and thunderstorms are expected to persist into the fall and will help with some drought conditions in the desert southwest. However long term dry and drought conditions will impact the long term hydrology of the southwest into the winter months. The outlook going into the winter is for El Nino that favors the Southwest and Southern Plains for precipitation.

Collaborative Species Conservation *(USGS/USFWS July 2018)*

What do gray wolves, manatees and bears have in common? They are just a few of the species that are part of an important USGS research priority that informs U.S. Fish and Wildlife Service (USFWS) decisions for [endangered and threatened](#) species under the Endangered Species Act (ESA). The [ESA](#) provides federal protections for at-risk species and addresses the threats they face. Cooperative conservation efforts supported by USGS science can help stabilize a species to a point where federal listing can be avoided, inform the decision to downlist a species from endangered to threatened, or can lead to the delisting of a recovered species.

Downlisting is the reclassification of a species from endangered to threatened. [Delisting](#) is the removal of species from the Federal Lists of Endangered and Threatened Wildlife and Plants, also known as the endangered species list. Species showing signs of improvement and successful recovery efforts can result in downlisting or [delisting actions](#).



USGS scientists collaborate with federal, state, tribal, and non-governmental partners to provide the science needed for conservation management decisions on many species and their habitat before listing is necessary. Get to know a bit about a few of the species where USGS science has aided in collaborative species conservation across the Nation.

The **Gray Wolf** is an ecologically important carnivore found in varied habitats such as forests, grasslands, and mountainous areas throughout the northern hemisphere. Direct impacts of human settlement

on wolves and their habitat led to greatly reduced populations by the 1930s, and in 1978 the gray wolf was listed as endangered across the contiguous U.S. and

Mexico and threatened in Minnesota. In the 1990s, gray wolves were reintroduced to Yellowstone National Park in an effort to recover the population.



(Gray Wolf by Arthur Middleton, Univ. of WY, USGS)

USGS research on wolf ecology and population dynamics was fundamental to the 2011 decision to delist this population. Due to a reduction of threats and collaborative management and conservation, the species has recovered throughout much of its range.

The **Okaloosa Darter** is about two inches long, weighs mere ounces and is part of a small group of fishes most often found in clear, fast-flowing streams. Its range is limited, only being found in a small portion of northwestern Florida. This played a role in the darter being vulnerable to extinction and its ESA listing in 1973. Most of the species' range is



Male Okaloosa Darter (Public domain.)

within Eglin Air Force Base, which led to a partnership between the USGS and the Department of Defense (DOD) to find ways for compatible management of darter habitat, land use and base operations. USGS science documented population increases

and improved habitat conditions, leading to the 2011 decision to downlist the Okaloosa darter from endangered to threatened. The USGS cooperative efforts with the DOD on population and habitat restoration continue in support of the management goal of delisting.

In the U.S., the **West Indian manatee** is found along the Atlantic coast from Florida to North Carolina, though a few individuals have been known to go as far north as a New England. The species is also found in the Gulf of Mexico from Florida to Texas,



and in the Caribbean along the coasts of Puerto Rico, Central America, and northern and eastern South America. Manatees feed on aquatic vegetation and use brackish, freshwater, and marine habitats, and loss of any of these environments can negatively affect their populations. Manatees have a low birth rate, which makes

population recovery a challenge, and the species has been protected since 1967.



USGS researcher collects data on manatee in Florida spring. (Credit: Bob Bonde, USGS.)

Over four decades of USGS collaborative research on manatee habitat and movements, populations, health and genetics were considered in a 2017 decision to down-list them from endangered to threatened. USGS scientists will continue to monitor and analyze manatee population dynamics to inform management needs toward the ultimate goal, recovery of the species.

National Levee Database

(USACE July 2018)

Welcome to the [National Levee Database \(NLD\)](#). The NLD is a congressionally authorized database that documents levees in the United States. The NLD is maintained and published by the USACE. It recently underwent a refresh making more tools available to data managers to keep information updated and provides an improved dashboard that makes finding and understanding levee information easier than ever. NLD information includes the location, general condition, and risks associated with the levees.

The NLD contains information about the condition and risk information for approximately 2,000 levee systems (approximately 15,000 miles/mostly levees affiliated with USACE programs. An additional 6,000 levee systems--approximately 15,000 miles--have location information, but little to no information about condition and risk. One of the goals for the NLD is to include data about levees owned and operated by all other federal agencies, tribes, states, municipalities, levee boards, and private entities. This information will be added when available.



The database includes attributes of levees and flood-walls relevant to flood fighting, design, construction, operation, maintenance, repair and inspection. Because the location and characteristics of levee systems can be viewed on a map with real-time data from other sources, such as stream gauges and weather radar, it is a useful tool for a variety of public agencies and individuals including flood plain managers, emergency management agencies, levee system sponsors and citizens who live or work behind a levee.

The NLD information is presented in a convenient dashboard and includes the ability to search on specific areas of interest or geographically.

Happy Birthday NASA!

(07/31/18)



60 Years and Counting: President Eisenhower Signs NASA into Existence
President Dwight D. Eisenhower (center) appoints T. Keith Glennan (right) NASA's first administrator and Hugh L. Dryden its first deputy administrator. Image Credit: NASA

Full article: [NASA 60 Years and Counting](#)



Lake on Mars? [NASA https://www.nasa.gov/feature/jpl/nasa-statement-on-possible-subsurface-lake-near-martian-south-pole](https://www.nasa.gov/feature/jpl/nasa-statement-on-possible-subsurface-lake-near-martian-south-pole)

USACE: Hurricane Seasonal Preparedness Digital Toolkit

(USACE/SW Division July 2018)

For the membership prone to hurricanes, such as Texas, here is a link to the USACE SW Division [Hurricane Prep Digital Tool Kit](#)

Upcoming Meetings:

The WSWC Fall (188th) Meeting will be held in Coeur d'Alene, Idaho on October 23-26, 2018. For further information, please see:

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

Federal News (Control click to articles)

6/22: [Nature's Good Neighbors: Grazing Operation at Refuge](#)

6/25: [Models warn of dustier summers SW and South Plains](#)

6/26: [Bureau of Reclamation awards \\$8.3 Million to 15 drought resiliency projects](#)

6/27: [EPA Plans to Award up to \\$9.3 Million in Beach Water Quality Monitoring Grants](#)

6/29: [EPA and Army Seek Additional Public Comment on 'Waters of the U.S.' Repeal](#)

6/29: [Proactive Fuel Breaks Protect Nearly \\$1 Billion in Homes, Infrastructure During Colorado Wildfire](#)

6/29: [Cooperative Forestry Act Celebrates 40 Years of Helping Private Forest Owners](#)

7/3: [Update: Public meetings scheduled for Denver Urban Waterways Feasibility Study Environmental Impact Statement; Comment period extended](#)

7/5: [U.S. Army Corps of Engineers Identifies Long-Term Disaster Recovery Projects and Additional Short-Term Repairs to be Accomplished with 2018 Supplemental Funding](#)

7/9: [Sacramento District projects get \\$2.1 billion in supplemental appropriation](#)

7/10: [Cover Crops Solution After Crop Failure from Weather](#)

7/10: [BOR provides 27 projects \\$2.6 million in WaterSMART Cooperative Watershed Management Program grants](#)

7/10: [USACE and Friends of the Wild Whoopers agree to](#)

[assist in the recovery of endangered whooping cranes](#)

7/12: [SD NRCS Announces Aid for Land/Crops Damaged](#)

7/12: [July 2018 ENSO Update: Dog days](#)

7/13: [Tracking Lightning from Space: How Satellites Keep You Safe During Thunderstorms](#)

7/13: [EPA Prepares for 2018 Hurricane Season, from Lessons Learned in Emergency Responses in 2017](#)

7/13: [Sustained Emergency Responses Guide EPA Preparations for 2018 Hurricane Season](#)

7/16: [Scientist's Final Paper Looks at Earth's Future Climate](#)

7/17: [Wyoming Partnerships Help Land from Dust to Lush](#)

7/18: [Study of World's Beaches- Threat to Protected Areas](#)

7/19: [NOAA Starts Nationwide Listening Session](#)

7/19: [USFS and NOAA Seek Public Input on Proposed Reforms to Improve & Modernized Endangered Species Act](#)

7/19: [USDA Extends Its Landmark Water Quality Initiatives Through 2023](#)

7/19: [Service and NOAA Fisheries Seek Public Input on Proposed Reforms to Improve & Modernize Implementation of the Endangered Species Act](#)

7/24: [Flood Detection a Surprising Capability of Microsatellites Mission](#)

7/24: [Kansas NRCS Encourages Producers to Assess Contingency Plans During Drought](#)

7/24: [Kansas NRCS Provides Assistance to Producers in Drought Areas](#)

7/24: [EPA awards \\$1.2 million grant to Idaho Department of Environmental Quality to Protect Drinking Water Systems](#)

7/24: [EPA awards \\$1.6 million grant to the Oregon Health Authority to Protect Public Drinking Water Systems](#)

7/24: [EPA awards \\$2.6 million grant to Alaska DEC to protect public drinking water systems](#)

7/24: [Report Assesses the Economic, Environmental and Social Benefits of Harvesting Non-timber Forest Products](#)

7/25: [Fires, Floods and Satellite Views: Modeling the Boreal Forest's Future](#)

7/26: [USDA Invests in 22 New Projects to Spur Innovation in Grazing Lands, Organic Systems and Soil Health](#)

7/26: [BLM Winnemucca District Battles Multiple Wildfires](#)

7/26: [Bureau of Reclamation Environmental Engineer shines in American Water Works Association Journal](#)

7/27: [Snowy Plover Chicks Fledge at Popular Beach in California for First Time in Decades](#)

7/30: [Experts Moving Closer to Resolving Troubles with NOAA's GOES-17 ABI](#)

7/30: [USFWS Help the Monarch Butterfly: Join the 2018 International Monarch Monitoring Blitz](#)

7/30: [EPA provides \\$699 million for San Francisco wastewater infrastructure upgrades](#)

7/31: [U.S. EPA, Orange County WD announce multi-million dollar WIFIA loan to expand groundwater replenishment](#)

7/31: [Raging Fires in California Creating Havoc for the State](#)

7/31: [Planetary Defense Has New Tool in Weather Satellite Lightning Detector](#)



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