

Fire Danger Eases Slightly Following Rapid Growth of Multiple Northern California Fires Last Week

Author: Josh Strongin, *Regional Analyst – North America*

Contact: Josh.Strongin@everbridge.com

EXECUTIVE SUMMARY

Life-threatening wildfire activity continues to impact parts of northern California. According to the National Interagency Fire Center (NIFC), 11 large fires are currently burning over 776,000 acres in the state. The most significant of these is the Dixie Fire, which is now the second-largest fire in state history, after having burned more than 489,000 acres and doubling in size over the past week. The fire destroyed the town of Greenville, where at least four people remain unaccounted for. Several other fires in the region also experienced rapid growth over the past week, notably the McFarland, Monument, and River fires. In addition to the worsening fire conditions, the intensifying drought conditions impacting much of the western U.S. have led to the lowest recorded water level at Lake Oroville, prompting the first-ever shutdown of the Hyatt Power Plant. Due to active fire activity, California residents and businesses should prepare for potential wildfire impacts, including evacuations, power outages, road closures, supply-chain disruptions, production stoppages, degraded air quality, and other potential developments.

KEY JUDGEMENTS

- Weather conditions favorable to wildfires, including high winds, low humidity, and hot temperatures, spurred on the rapid growth of the Dixie Fire over the past week, and to a lesser extent the McFarland, Monument, and River fires.
 - The rapid spread of the Dixie Fire, which had been 35 percent contained prior to last week's expansion, also highlighted the significant role the ongoing drought has played in creating ideal conditions for wildfires to spread quickly with significantly dried out vegetation across much of California and the western United States.

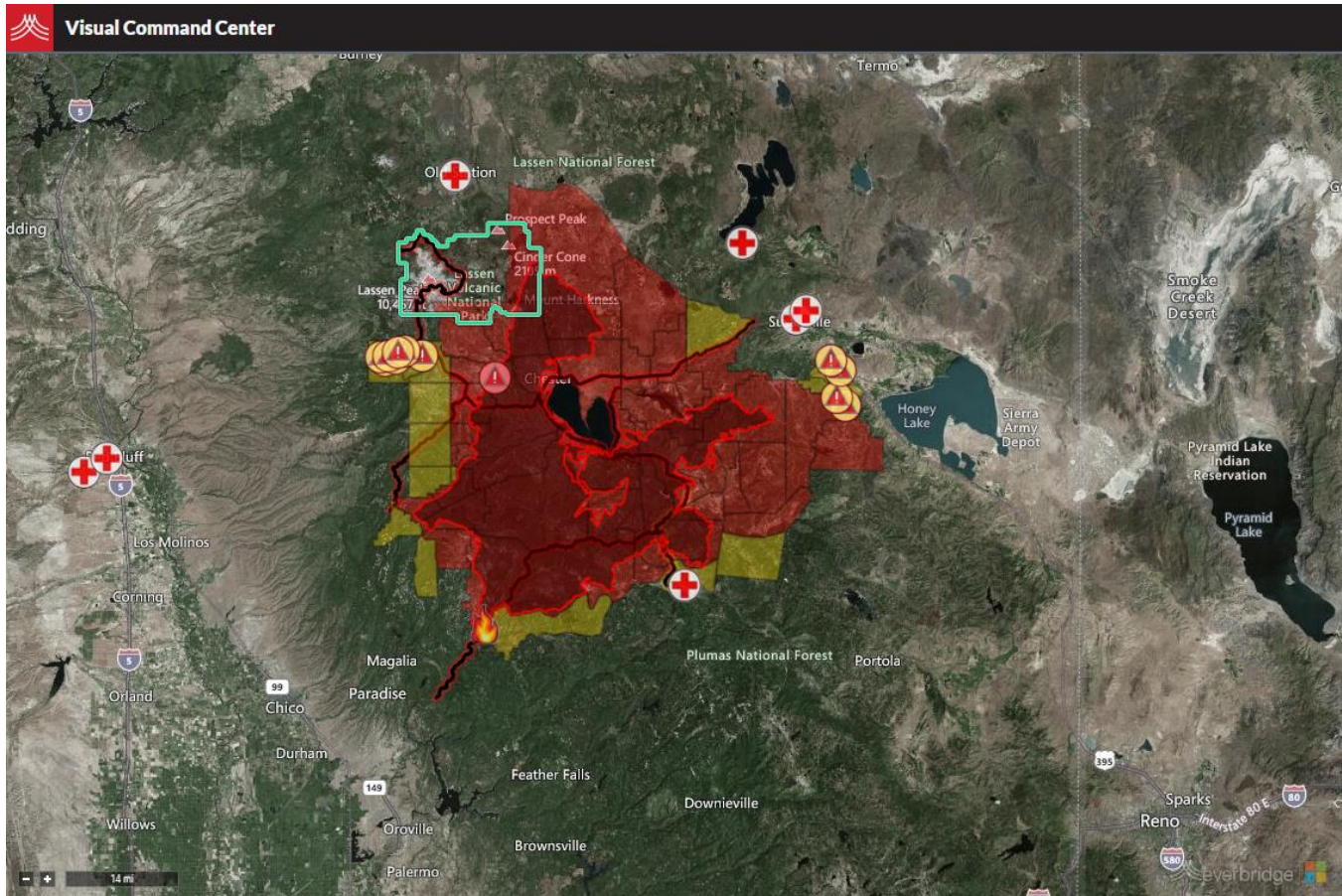
- Recent trends of rising, nighttime temperatures and low humidity have further complicated firefighting efforts during periods when containment efforts have historically been most effective.
 - The Dixie Fire grew over 100,000 acres in a 24-hour period, including a significant portion at night, destroying the town of Greenville.
 - Active fires at nighttime pose an enhanced risk to nearby residents as the majority will be asleep when evacuations or sheltering could be needed as fires spread.
- There are not expected to be any short-term disruptions to power or water supply due to the Hyatt Power Plant shutdown and lower water level in Lake Oroville.
 - Officials have warned that the situation is not expected to improve anytime soon and there could be long-term strain on the California power grid that could be exacerbated by future heatwaves.
- Businesses and residents in potentially affected areas are advised to review and/or create emergency plans for responding to wildfire events and associated impacts, such as power outages or evacuations, which could interrupt business operations and require contingency planning.

DIXIE FIRE

The Dixie Fire began burning in Feather River Canyon, located approximately 23 miles northeast of Oroville in Butte County on July 14. Initial investigations suggested the blaze may have started after a tree fell onto a Pacific Gas and Electric (PG&E) power line. The fire steadily grew before rapidly expanding beginning July 20. By July 22, the fire had grown to over 100,000 acres and had destroyed eight structures. On July 25, the Dixie Fire merged with the Fly Fire, which had been burning in the same area and may have also been sparked by PG&E equipment. The fire continued to steadily grow in four counties – Butte, Lassen, Plumas, and Tehama – and last week had burned an estimated 250,000 acres and was 35 percent contained.

On Wednesday, August 4, officials warned of potentially worrisome fire behavior, as the National Weather Service (NWS) issued Red Flag Warnings for the region due to increased winds, continued low humidity, dry conditions, and high temperatures. Over a 24-hour period between August 4-5, the blaze broke containment lines in the eastern zone of the fire and grew over 100,000 acres. During this new surge in fire activity, the town of Greenville, located on the eastern area of the fire in Plumas County, was completely destroyed. At least four people from Greenville remain unaccounted for as of this writing. The flare-up continued into the weekend, and by Saturday, August 7, the Dixie Fire had burned over 446,000 acres and the containment percentage dropped to 21 percent. As of Monday, August 9, the fire had burned at least 489,281 acres and remained 21 percent contained. In addition to the unaccounted persons in Greenville, at least five first responders were injured on Sunday, August 8, due to falling tree branches. At least 627 structures have been destroyed and an additional 42 structures have been damaged. Over 13,800 structures remain threatened by the fire as of this writing.

Dixie Fire Contextual Layers



Contextual layers produced by Everbridge's Tactical Resolution Team conveying fire perimeter information, evacuation zones, and roadway closures as of August 9, 2021. Mandatory evacuations outlined in red, evacuation warnings outlined in yellow. Roadway closures highlighted in red.

In addition to the structural damage, numerous road closures and evacuations have been issued across the four affected counties. An estimated 10,000 residents across parts of northeastern Butte, southern Lassen, Plumas, and eastern Tehama counties remain evacuated due to the Dixie Fire. ZIP codes impacted by evacuation orders include: 95983, 95947, 95923, 96020, 95984, 95915, 95942, 95954, 95965, 95971, 95978, 95934, 96137, 96020, 96061, 96063, 96130, and 95973.

A map of Butte, Plumas, and Tehama county evacuation orders can be viewed at the following link: <https://buttecountygis.maps.arcgis.com/apps/webappviewer/index.html?id=9c92e0a2d2e0415fa5248d70cd644a82>.

A map of Lassen County evacuation orders can be viewed at the following link: <https://community.zonehaven.com/?latlon=37.14793215221735,-122.140782130393&z=10.990071558290719>.

At the time of this writing, the following road closures were in place:

Plumas County:

- SR70 at SR89 (Greenville "Y")-No WB SR70
- SR89 at Stampfli-No NB SR89
- North Valley Rd NB at Genesee Rd.
- SR70 at Spanish Creek Bridge (Pilot Car Operations)

Butte County

- SR70 at Deadwood Rd – No EB SR70
- SR32 at Humboldt Rd.-No EB Humboldt Rd.- No NB SR32 Traffic
- Skyway at Humbug Summit Rd.-No NB Skyway-No EB Humbug Summit Rd.

Tehama County:

- SR36 at SR89 No EB SR36 – No NB SR89

Lassen County

- SR36 WB at SR44. No WB on SR36
- County Hwy A21 SB at SR44 No SB on A21

OTHER CALIFORNIA FIRES

The Dixie Fire remains the most significant fire burning in California; however, numerous others are also continuing to impact the state, most notably the McFarland Fire, the Monument Fire, and the River Fire. The River Fire is burning southwest of Colfax in Nevada and Placer counties. The fire started on the afternoon of August 4 and expanded to over 2,400 acres in a matter of hours. The fire damaged or destroyed nearly 50 homes on the first night alone, and over 5,000 people were forced to evacuate. Over the weekend, firefighters were able to gain control over the fire, and as of Monday, the fire had burned at least 2,619 acres and was 68 percent contained. At least 88 structures have been destroyed and at least 20 structures have been damaged. Over 2,300 structures remain threatened. As of this writing, at least 800 people remain evacuated in southeastern Nevada County and northwestern Placer County. ZIP codes impacted by evacuation orders include 95949, 95713, and 95945.

A map of Placer County evacuation orders can be viewed at the following link:

https://pcsogis.maps.arcgis.com/apps/webappviewer/index.html?id=34e6172213b540c8b8b064d8a7da4f76&fbclid=IwAR2aQGq20uLZ40BZeosnR_6-w_-bzCqzchv8hIBs-8oqUrykRcPbgrr_gpw.

A map of Nevada County evacuation orders can be viewed at the following link:

<https://community.zonehaven.com/?latlon=39.12217624161798,-120.99051263022704&z=11.28341812955093>.

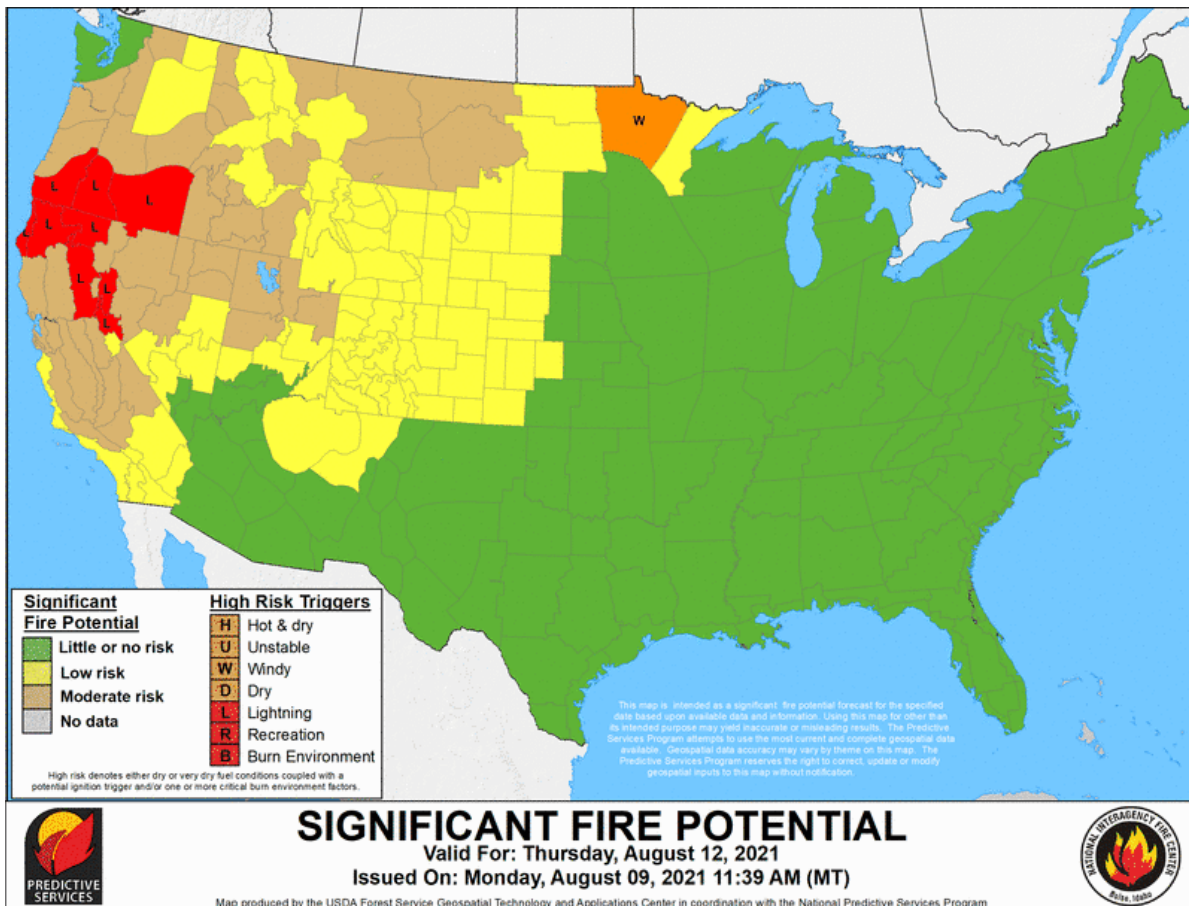
The McFarland Fire and the Monument Fire are both burning in the Shasta-Trinity National Forest. The McFarland Fire was sparked by a lightning strike on July 30 near the town of Wildwood. The fire saw significant growth beginning August 1, and by August 3 had grown from around 2,100 acres to nearly 18,000 acres. As of this writing, the fire has grown to over 31,750 acres and is 26 percent contained. Officials have estimated the fire will be fully contained around August 21. At least six firefighters have been injured and there have been reports of damaged structures. Portions of Wildwood its environs remain evacuated and affected ZIP codes includes 96041 and 96076.

The Monument Fire was also sparked by lightning on July 30 near Del Loma. The fire grew steadily for a few days before seeing explosive growth on August 4-5 due in part to the same conditions that caused massive growth in the Dixie Fire. The fire has grown from around 15,000 acres on August 4 to over 50,487 acres as of this writing. The fire remains only three percent contained and at least 26 structures have been destroyed; however, no injuries have been reported. Evacuation orders remain in place for multiple communities in the area including parts of Junction City and Del Loma. ZIP codes impacted by evacuation orders include 95527, 96010, and 96048.

INFRASTRUCTURE IMPACTS

On Thursday, August 5, California officials announced that the Hyatt Power Plant, located at Lake Oroville in northern California, would be temporarily taken offline due to low water levels. The water level at the lake is now around 640 feet and is less than a quarter full, the lowest recorded level since the Oroville Dam was completed in 1967. When in full use, the power plant can provide power to approximately 80,000 homes and businesses in the region. California officials had anticipated the potential shutdown of the plant and the low water levels, and as such, there are not expected to be any immediate disruptions to electricity and water supplies for residents that rely on the lake and power plant. There is no current estimate for when the power plant may come back online.

U.S. Wildfire Potential for Thursday, August 12



Source: NIFC

ASSESSMENT

After nearly two weeks of stabilizing wildfire conditions, the situation rapidly deteriorated towards the end of last week. Favorable fire conditions led to massive growth of the Dixie Fire, now the second-largest fire in California history, threatening thousands of structures and leading to thousands of evacuations across parts of northern California. The Dixie Fire, which has doubled in size over the past week, has highlighted the significant role that the record-breaking drought continues to play in California's wildfire season. As the drought continues to worsen and desiccates vegetation, the state will become more vulnerable to fast-spreading wildfire growth or new fires altogether. Strong winds, low humidity, and high temperatures are not uncommon during this time of the year, but the drought conditions make it more likely that current fires will grow, or new fires may ignite.

Conditions in California began improving this weekend, though officials remain concerned that shifting winds towards the southwest could lead to further growth of the Dixie Fire. In addition to the Dixie Fire, firefighters responding to the Monument and McFarland fires have struggled with containment due to remote locations and rugged terrain of the blazes. Aircraft were expected to rejoin the fire-fighting effort on Monday following the dissipation of smoke that had grounded aircraft. Firefighting efforts have been further complicated in recent years thanks to overall temperature shifts at night. Historically the western U.S. sees lower temperatures and higher humidity during the nighttime hours, allowing firefighters to make progress on wildfire containment and to rest and reset. However, nighttime temperatures have been rising and humidity has remained low in recent years. This has allowed for significant fire growth at night, highlighted by the Dixie Fire's explosive growth last week, which occurred in the middle of night. Similar to nighttime tornadoes, this also increases the risk to nearby residents who are more vulnerable to fast-moving wildfires at night when most people are sleeping and less likely to be able to quickly evacuate or shelter if needed.

While the Hyatt Power Plant shutdown has been expected for some time and is not expected to cause immediate short-term disruptions, the drought and declining water levels at Lake Oroville could portend longer-term power issues. The situation is expected to worsen further, with state officials estimating that water levels could fall as low as 620 feet by October. The loss of the power plant puts additional strain on other power plants in the state, particularly as California continues to deal with bouts of heatwaves that have significantly pressured the state power grid. In 2020, the state experienced a major heatwave accompanied by a dry lightning outbreak in mid-August that jumpstarted a record-breaking wildfire season. The heatwave also led to the first statewide rolling blackouts since 2001. A comparable heatwave in the coming weeks would likely lead to a similar situation, especially with the power grid already under pressure.

While wildfire conditions may improve somewhat this weekend in California, the overall risk is likely to persist and worsen in the coming months as the state begins to enter its peak wildfire season. Due to the numerous potential impacts from wildfires, individuals and businesses in areas that are or may be threatened by fires should create and review emergency plans and evacuation routes. The U.S. Department of Homeland Security has created guidelines to help individuals and businesses prepare for potential for wildfire impacts, which can be viewed at the following link: <https://www.ready.gov/wildfires>. In addition, the creation of emergency supply kits for those residents who live in areas at risk of wildfires is highly encouraged and could include the following items:

- A three-day supply of non-perishable food and three gallons of water per person
- A map of the surrounding area with at least two evacuation routes designated
- Prescriptions or special medications
- A change of clothing
- Extra eyeglasses or contact lenses
- Extra car keys, credit cards, cash, or traveler's checks
- A first-aid kit
- A flashlight
- Battery-powered radio with extra batteries
- Sanitation supplies
- Copies of important documents
- Pets and their supplies of food and water
- Face coverings to protect from smoke inhalation

The public is reminded to use extreme caution near active fires and heed all evacuation orders and instructions from local authorities. When evacuation orders are lifted, returning evacuees should avoid hot ash, charred trees, and smoldering debris.

ABOUT THE AUTHOR

Josh Strongin is the Risk Intelligence Monitoring Center's (RIMC) Regional Analyst for North America. Josh holds a BA in Political Science from The George Washington University, with a concentration in Intelligence and National Security. Josh also has comprehensive experience as a real-time domestic and international analyst.

He can be reached at: Josh.Strongin@everbridge.com.

About "Tactical Resolution"

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