PRESS BRIEFING: Drought 2021

Monday, 7 December
11:00 am US Eastern Time

AGU FALL MEETING

SHAPING THE FUTURE OF SCIENCE

AGU FALL MEETING

PANELISTS

- **Kelsey Satalino,** NOAA's National Integrated Drought Information System
- **Mark Svoboda,** National Drought Mitigation Center, University of Nebraska Lincoln

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AGU FALL MEETING

INFORMATION FOR REPORTERS

- Slides from this presentation are available in the Fall Meeting Media Center: https://www.agu.org/Fall-Meeting/Pages/Attend/Media-Center

- A recording of this event will be posted to AGU's YouTube channel: https://www.youtube.com/c/AGUvideos
  - Playlist "Fall Meeting 2020 Press Conferences"

- An informal, 30-minute discussion room via Zoom will follow this event:
  - Link will be posted in this event's chat box
  - Meeting ID: 962 1469 2326
  - Passcode: agupress

- Questions: Email news@agu.org

SHAPING THE FUTURE OF SCIENCE

Drought Briefing 2020: A Look Back and a Look Forward

Mark Svoboda, PhD

Director and Associate Professor

University of Nebraska-Lincoln

NATIONAL DROUGHT MITIGATION CENTER

UNIVERSITY OF NEBRASKA

AGU Virtual Fall Meeting: Drought Briefing

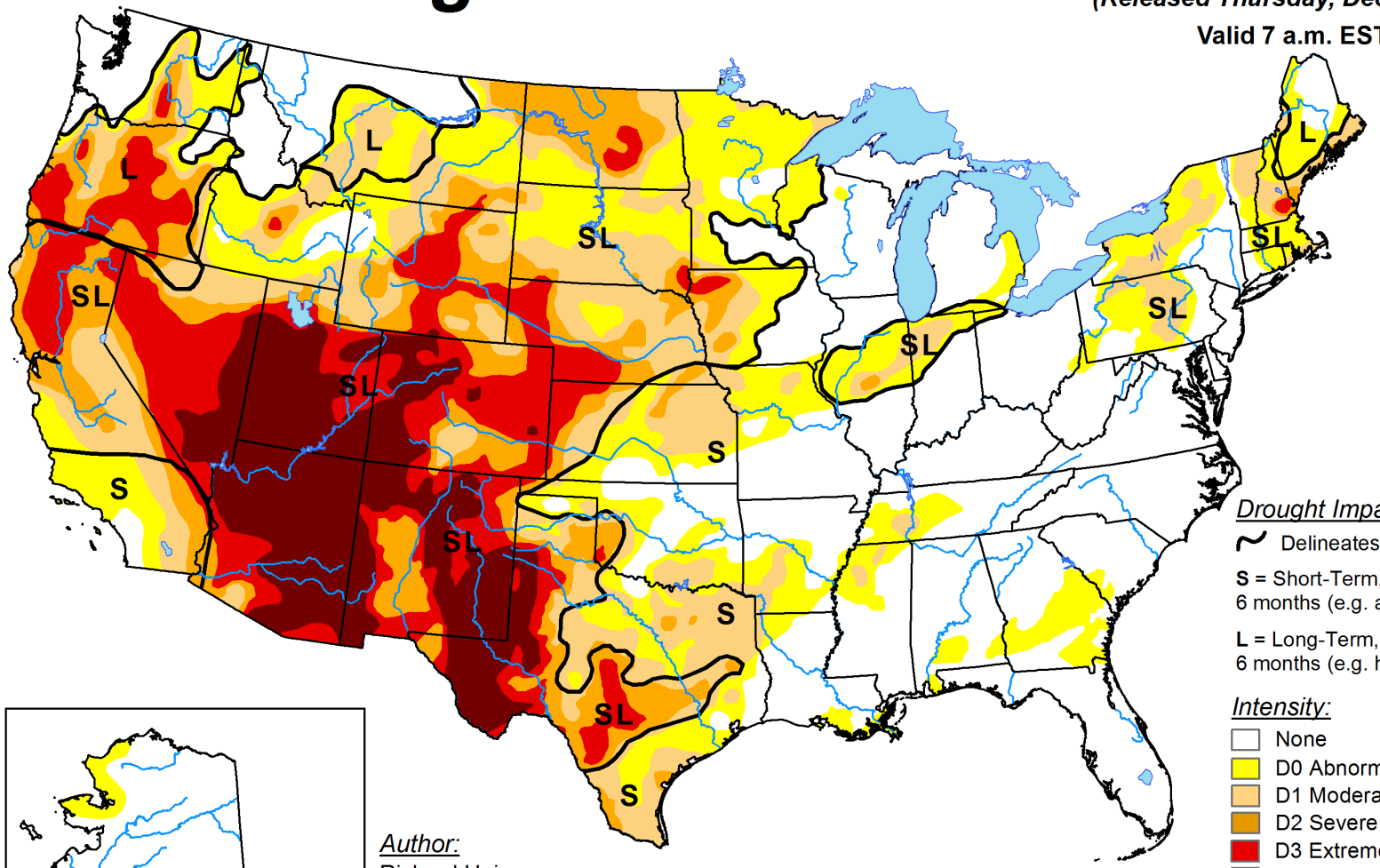
December 7, 2020

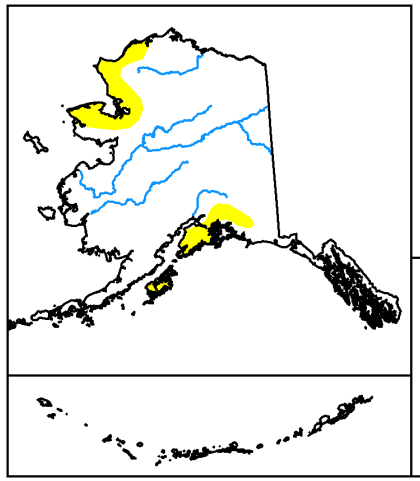
U.S. Drought Monitor

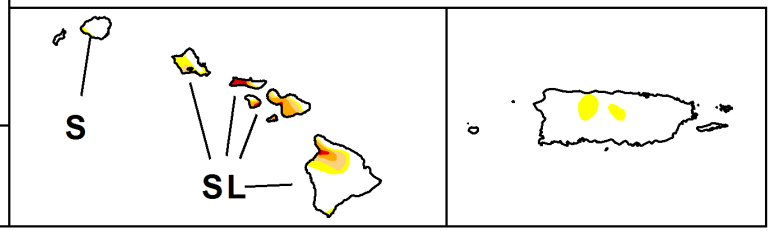
December 1, 2020

(Released Thursday, Dec. 3, 2020)

Valid 7 a.m. EST







Author:
Richard Heim
NCEI/NOAA

Drought Impact Types:

~ Delineates dominant impacts

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

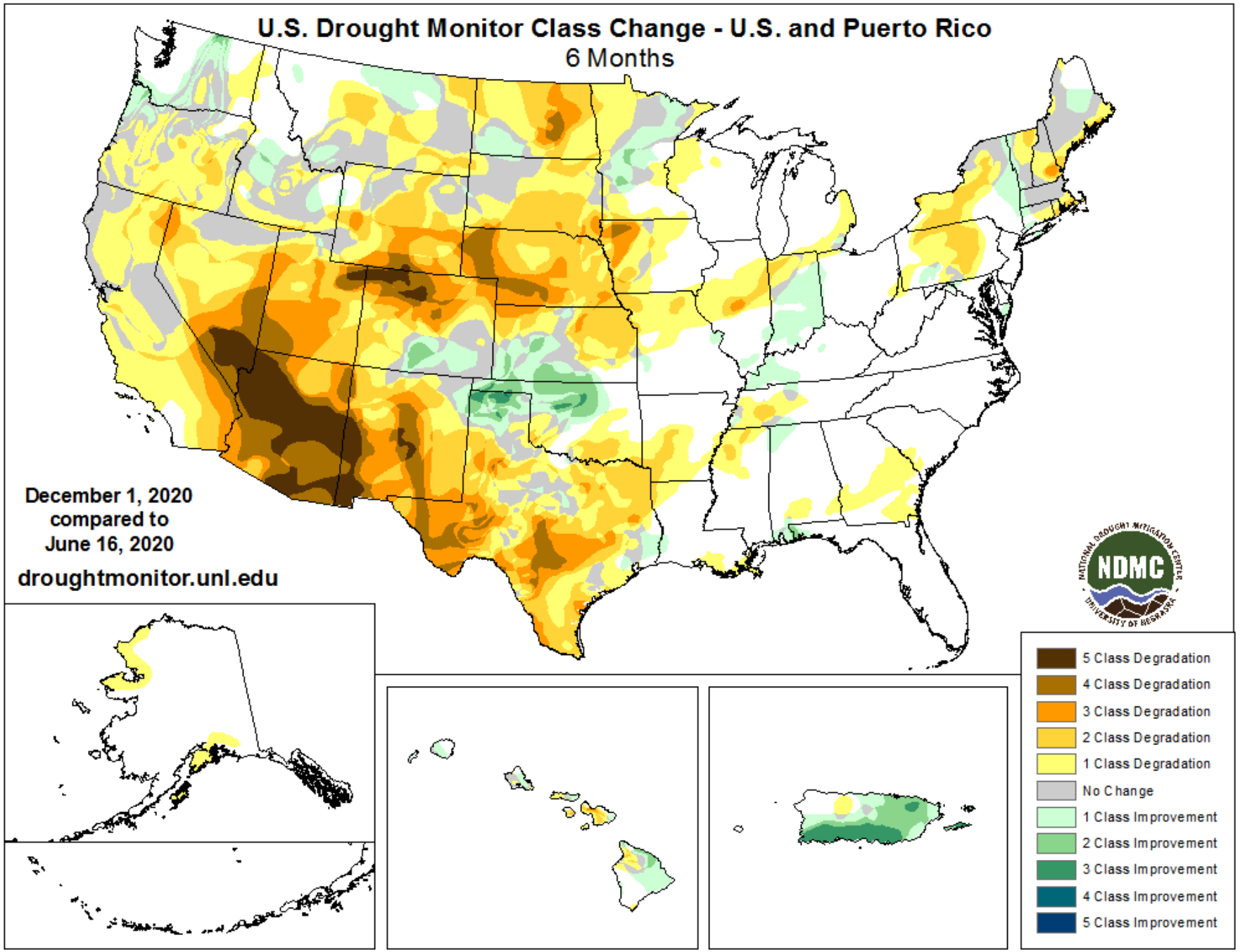
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

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

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

droughtmonitor.unl.edu


U.S. Drought Monitor Class Change - U.S. and Puerto Rico
6 Months
December 1, 2020
compared to
June 16, 2020
droughtmonitor.unl.edu
NDMC
5 Class Degradation
4 Class Degradation
3 Class Degradation
2 Class Degradation
1 Class Degradation
No Change
1 Class Improvement
2 Class Improvement
3 Class Improvement
4 Class Improvement
5 Class Improvement

Statistics

Statistics type: Traditional Percent Area | Display: Statistics | Export table: CSV XLS

Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	2020-12-01	33.15	66.85	48.04	31.89	21.02	9.87	178
Last Week	2020-11-24	32.59	67.41	48.61	32.03	20.38	8.52	177
3 Months Ago	2020-09-01	42.54	57.46	39.41	24.75	8.61	0.10	130
Start of Calendar Year	2019-12-31	75.80	24.20	11.20	3.82	0.06	0.00	39
Start of Water Year	2020-09-29	38.05	61.95	42.59	27.37	14.63	1.20	148
One Year Ago	2019-12-03	68.17	31.83	11.65	4.59	0.10	0.00	48

Estimated Population in Drought Areas: **71,997,941**

View More Statistics

Drought Impact Reporter

How is drought affecting you? Submit drought impact and condition reports via the Drought Impact Reporter.

Submit report

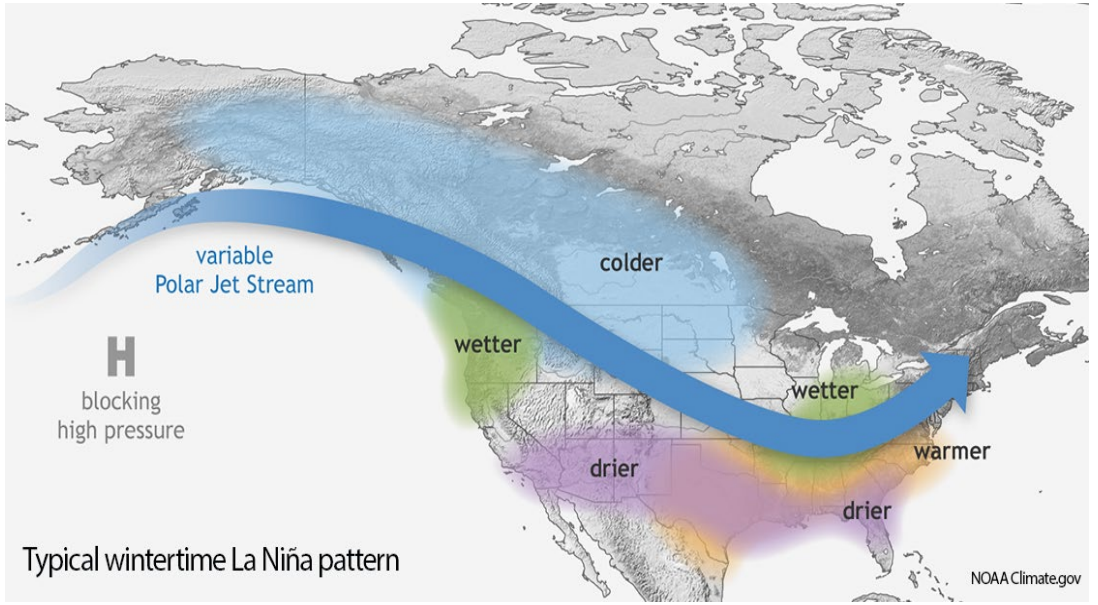
The U.S. Drought Monitor is produced through a partnership between the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration.

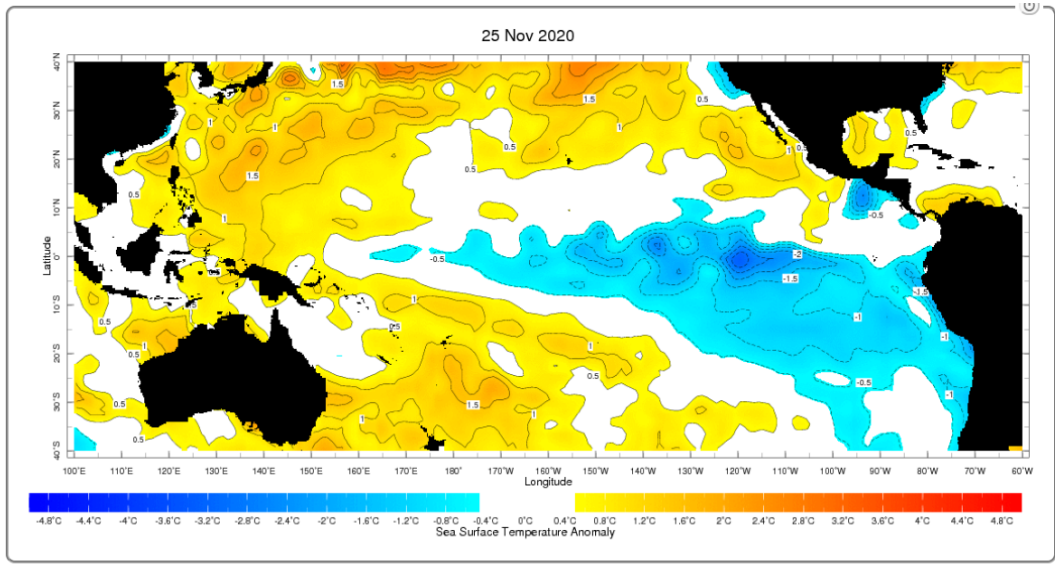
Snow Water Equivalent	SNOTEL SWE POR 12-2-20 Percentile (POR)	December 2, 2020, end of day

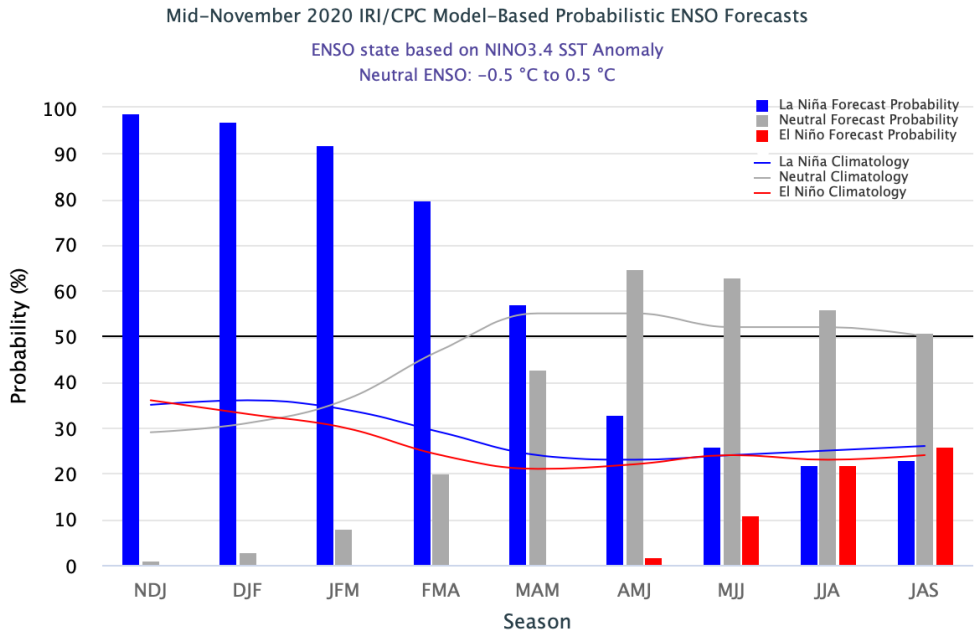
NATIONAL DROUGHT MITIGATION CENTER NDMC UNIVERSITY OF NEBRASKA

University of Nebraska Lincoln

- La Niña conditions are present
- **La Niña is likely to continue** through the Northern Hemisphere winter 2020-21 (~95% chance during January-March) and into spring 2021 (~65% chance during March-May)

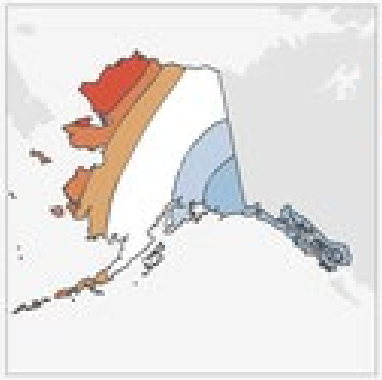




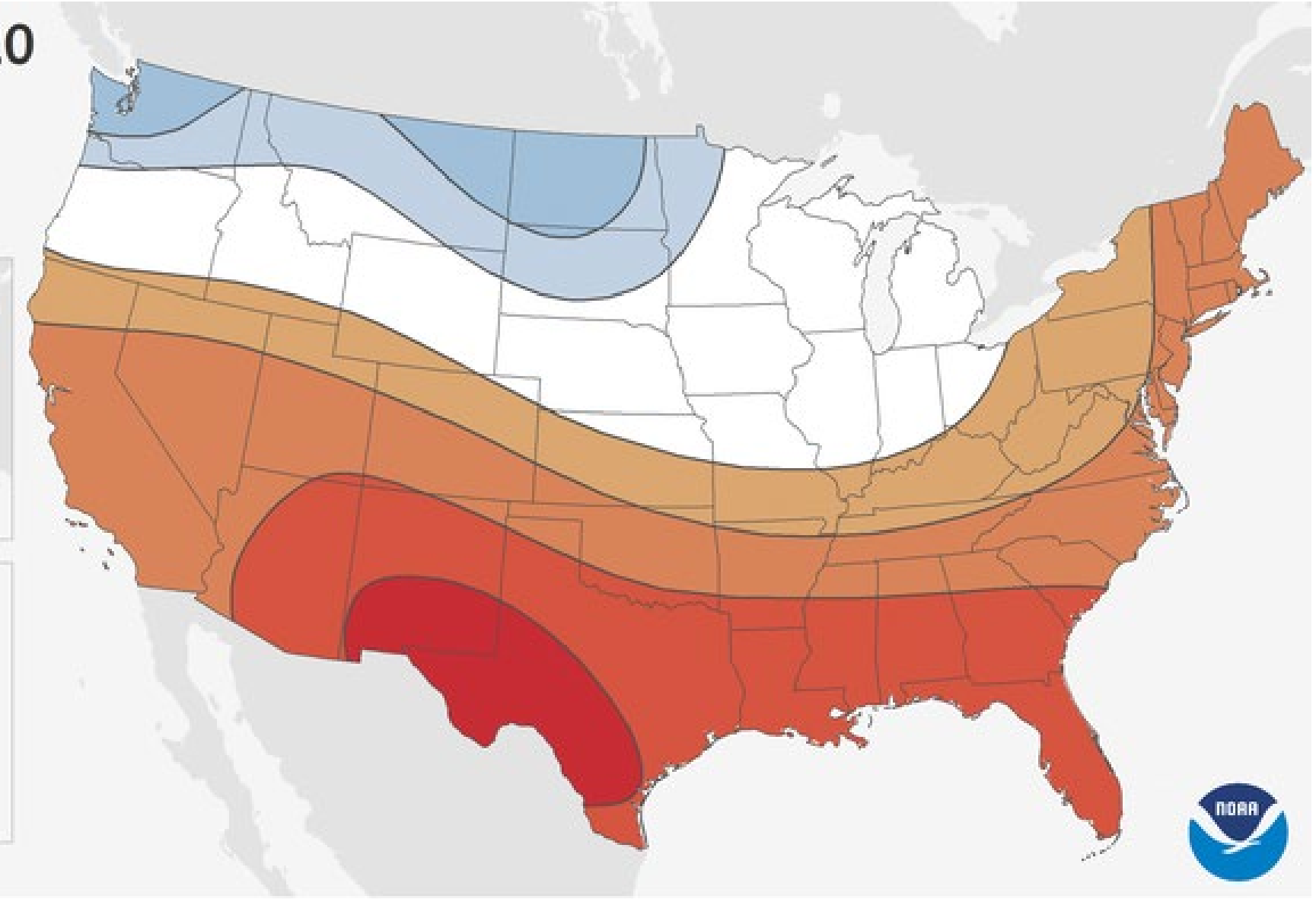


Winter 2020

U.S. Temperature Outlook



AK and HI not to scale



Temperature Outlook
for December 2020 – February 2021
Issued 15 October 2020

Probability (percent chance)

cooler than normal *equal chances* *warmer than normal*

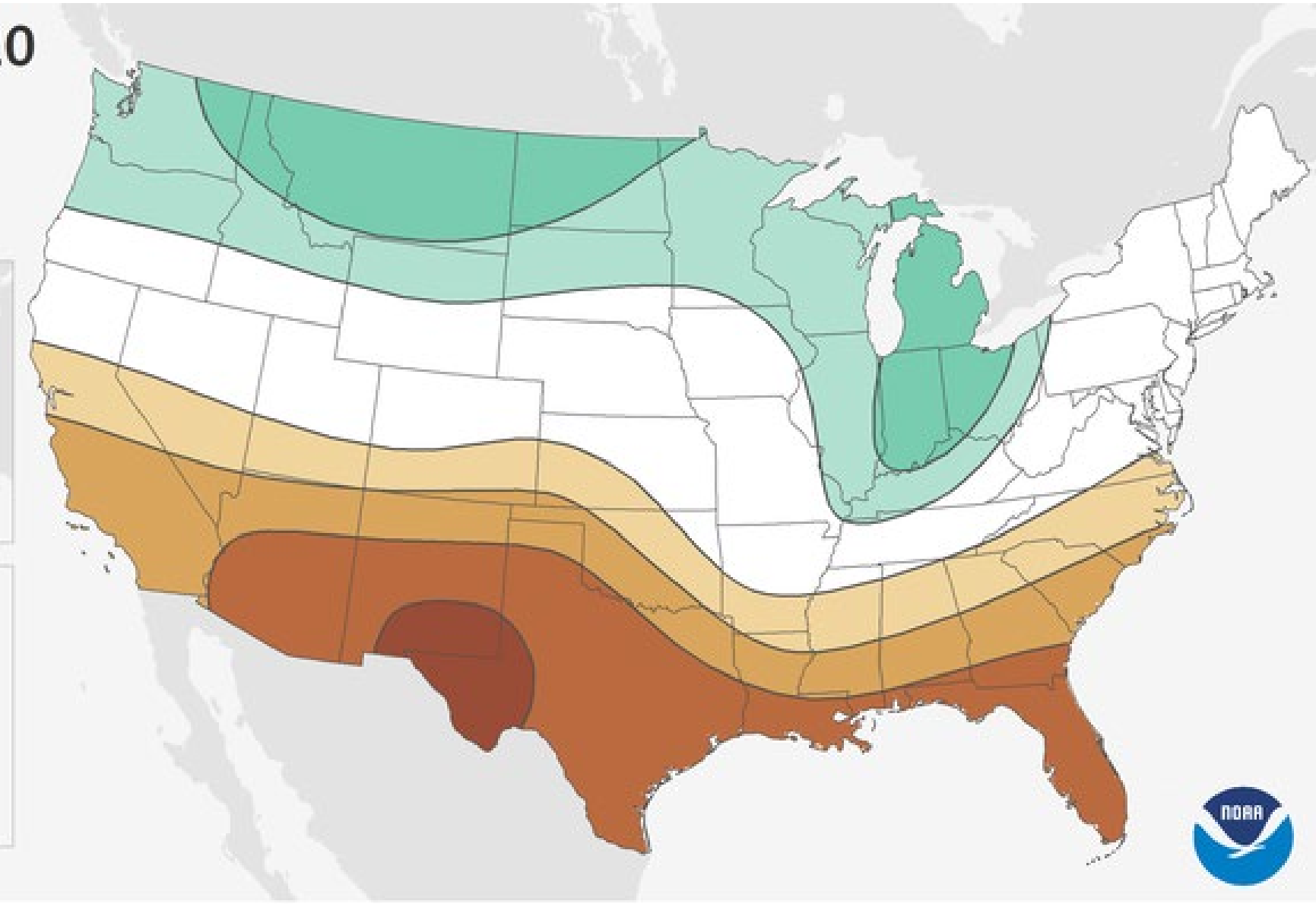
80 70 60 50 40 33 33 40 50 60 70 80

NWS Climate Prediction Center
Map by NOAA Climate.gov

Winter 2020

U.S. Precipitation Outlook

AK and HI not to scale



Precipitation Outlook
for December 2020 – February 2021
Issued 15 October 2020

Probability (percent chance)

drier than normal *equal chances* *wetter than normal*

80 70 60 50 40 33 33 40 50 60 70 80

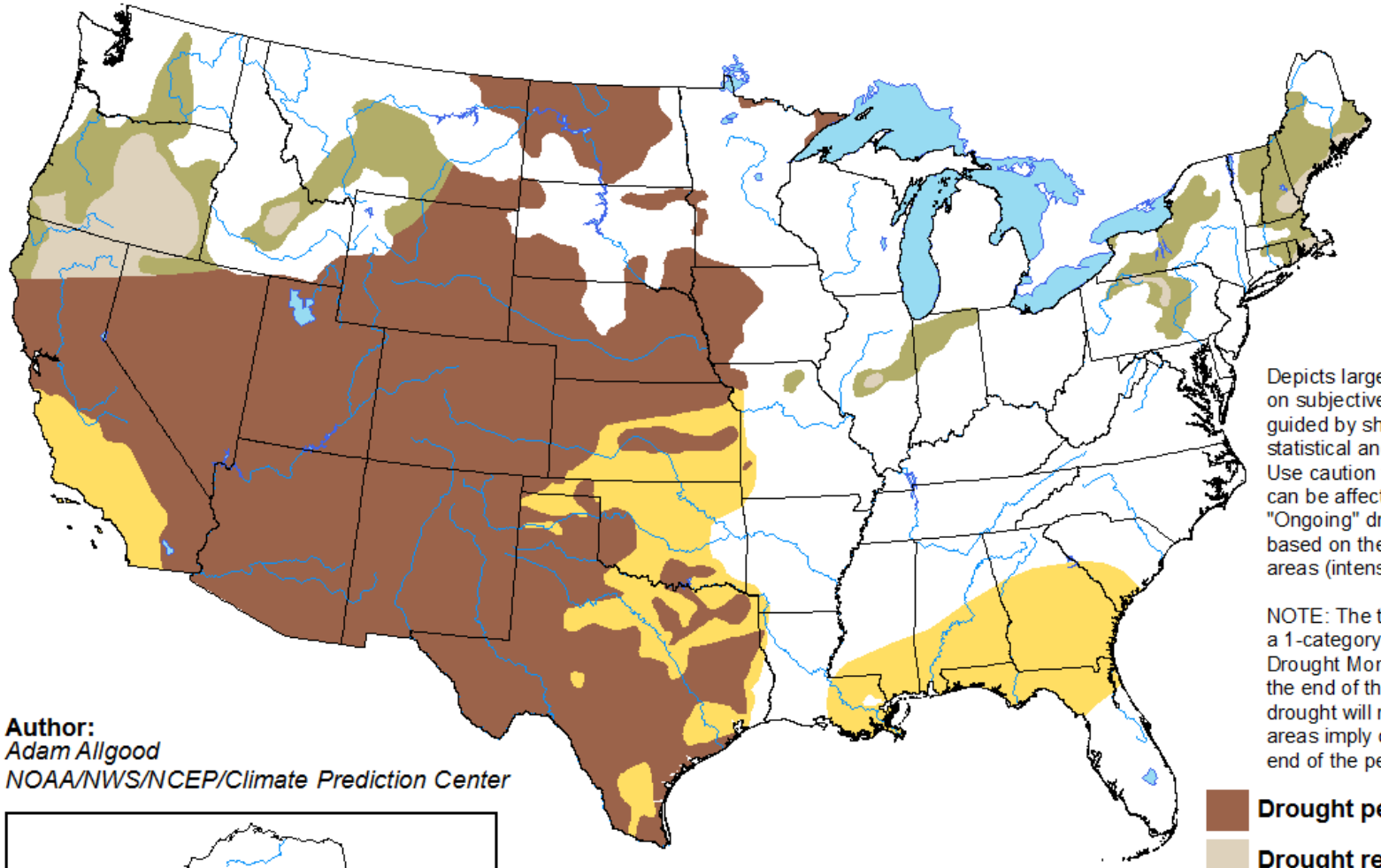
NWS Climate Prediction Center
Map by NOAA Climate.gov

U.S. Seasonal Drought Outlook

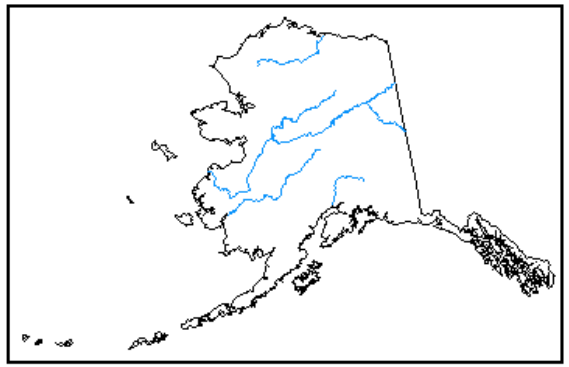
Valid for November 19, 2020 - February 28, 2021

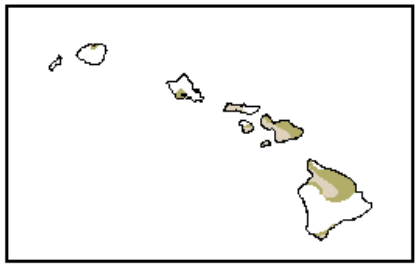
Released November 19, 2020

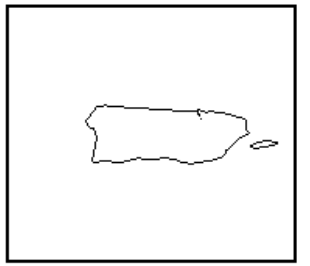
Drought Tendency During the Valid Period



Author:
Adam Allgood
NOAA/NWS/NCEP/Climate Prediction Center







Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

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

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

- **2020** will go down as the **largest wildfire season** recorded in California's modern history (according to the California Department of Forestry and Fire Protection)

- Fire concerns from 2020 will spill over into the new year and **spread across the southern Plains, and coastal regions of the Gulf Coast and Southeast, including the Carolinas**

- La Niña and current fuel conditions remain the principal drivers of **significant fire potential into Spring 2021**

National Significant Wildland Fire Potential Outlook

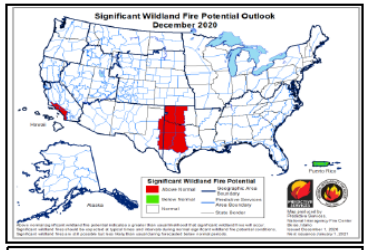
Predictive Services
National Interagency Fire Center

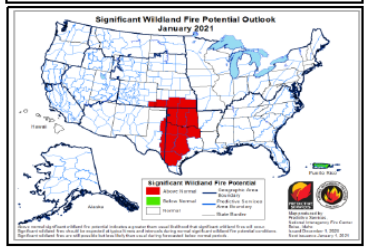
Issued: December 1, 2020
Next Issuance: January 1, 2021

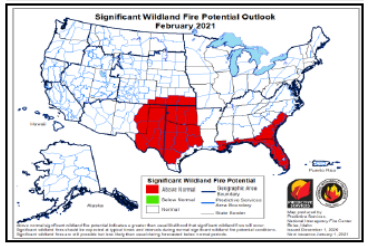
Outlook Period – December 2020 through March 2021

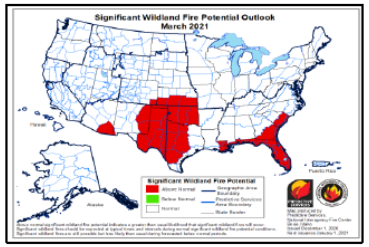
Executive Summary

The significant wildland fire potential forecasts included in this outlook represent the cumulative forecasts of the ten Geographic Area Predictive Services units and the National Predictive Services unit.









Large fire activity diminished over the West in November continuing the trend from late October. Precipitation and colder temperatures spread farther south across the West leading to increasing fuel moisture and greatly reduced large fire potential through mid-month. However, by the end of November, most of the United States (US) experienced below normal precipitation with average to above normal temperatures leading to a decrease in fuel moisture, especially across the southern tier of the US.

During November, several significant wildfires occurred along the Sierra Front and across the Plains. On November 17 during a downslope wind event, three rapidly spreading significant wildfires emerged along the Sierra Front, and a day later, several large wildfires ignited on the central and southern Plains. Multiple offshore wind events developed across California, including Santa Ana winds, with the strongest around Thanksgiving. While initial attack increased, no significant large fires were reported.

La Niña and current fuel conditions remain the principal drivers of significant fire potential into spring. Drought conditions are expected to continue for much of California, the Great Basin, and the Southwest into the winter with drying expected to increase across portions of the southern Plains and Southeast. Offshore wind events will continue to be a concern across southern California in December given the dry fuels and lack of forecast precipitation through early December. Wind events may also drive short duration large fire activity in portions of the Great Basin, Southwest, and northern California, especially at lower elevations.

Warmer and drier than normal conditions are expected across the southern tier of the US this winter and into spring due to La Niña and other large-scale climate forcing. As a result, drought intensification and expansion across portions of the Plains, Southwest, southern California, Texas, and along the Gulf coast into Georgia are likely. Above normal significant fire potential is forecast in portions of the Southwest, southern and central Plains, and the Southern Area, especially near the Gulf and Atlantic coasts this winter into spring due to these warmer and drier conditions. Strong wind and low relative humidity (RH) events could occasionally increase significant fire potential in portions of the Great Basin as well.

Past Weather and Drought

https://www.predictiveservices.nifc.gov/outlooks/outlooks.htm

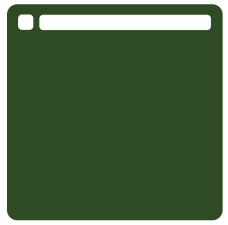
Take Away Points:

- Nearly half **(48%) of the Lower 48 states is in drought (D1-D4)** according to the December 1 U.S. Drought Monitor (USDM)
  - **21%** of the Lower 48 states are in extreme to exceptional drought (D3/D4 on the USDM), **most since 2012/2013**
- Nearly **72 million people** are in drought affected areas
- With the La Niña event evolving, we can **expect the drought to continue expanding and intensifying (via the Climate Prediction Center's Seasonal Drought Outlook)** from the western U.S., along the Gulf Coast and into the Southeast during the winter
- Slow start to West **snowpack/water supply season bears watching** as we head into 2021
- La Niña and current fuel conditions remain the principal drivers of **significant fire potential into Spring 2021**

Thank You!
Questions?

Contact: Mark Svoboda
msvoboda2@unl.edu

ON THE WEB



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QUESTIONS

Please write your questions in the Q&A box and AGU will ask it on your behalf.

Reminder: A 30-minute, informal discussion will commence in Zoom after this event ends.

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