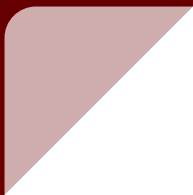


Evaporative Demand Drought Index (EDDI)

Eric Evenson

NWS Burlington, Vermont

Eric.Evenson@noaa.gov

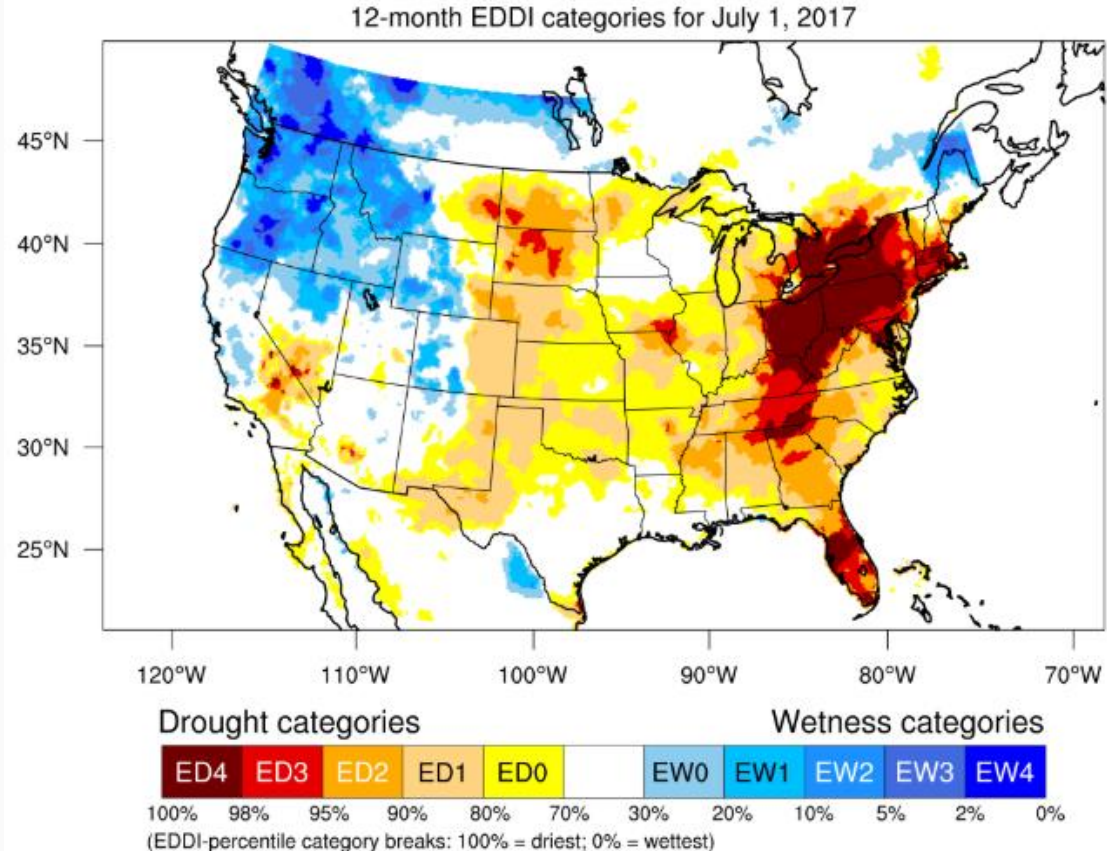


Evaporative Demand Drought Index (EDDI)

The Evaporative Demand Drought Index (EDDI) is an experimental tool that can serve as an indicator of both rapidly evolving “flash” droughts (developing over a few weeks) and sustained droughts (developing over months, but lasting up to years).

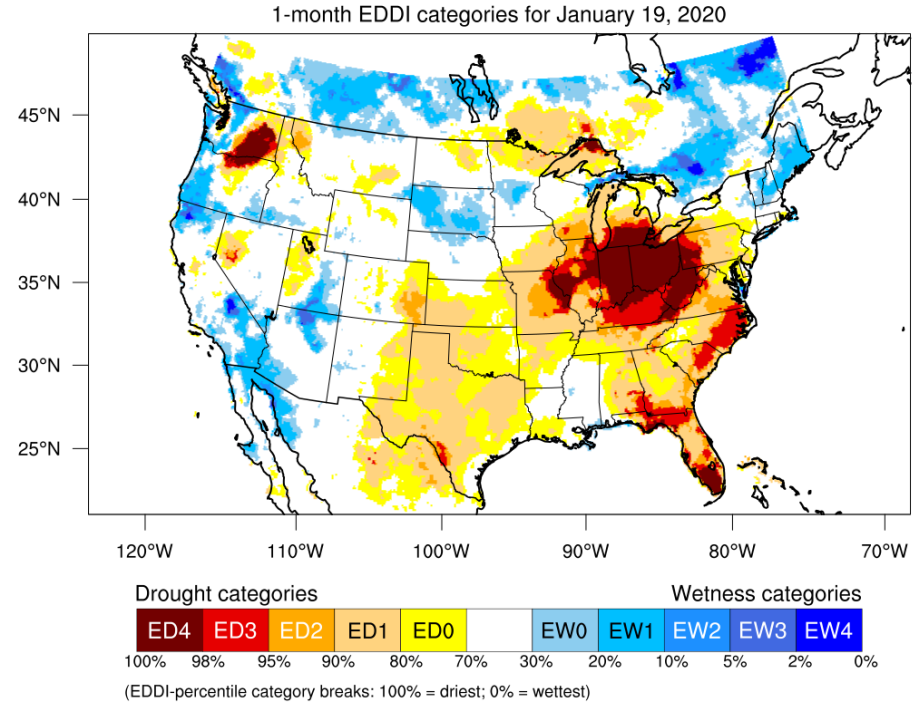
Evaporative Demand Drought Index (EDDI)

EDDI uses the same Drought categories and color scheme as the U.S. Drought Monitor for easy comparison.

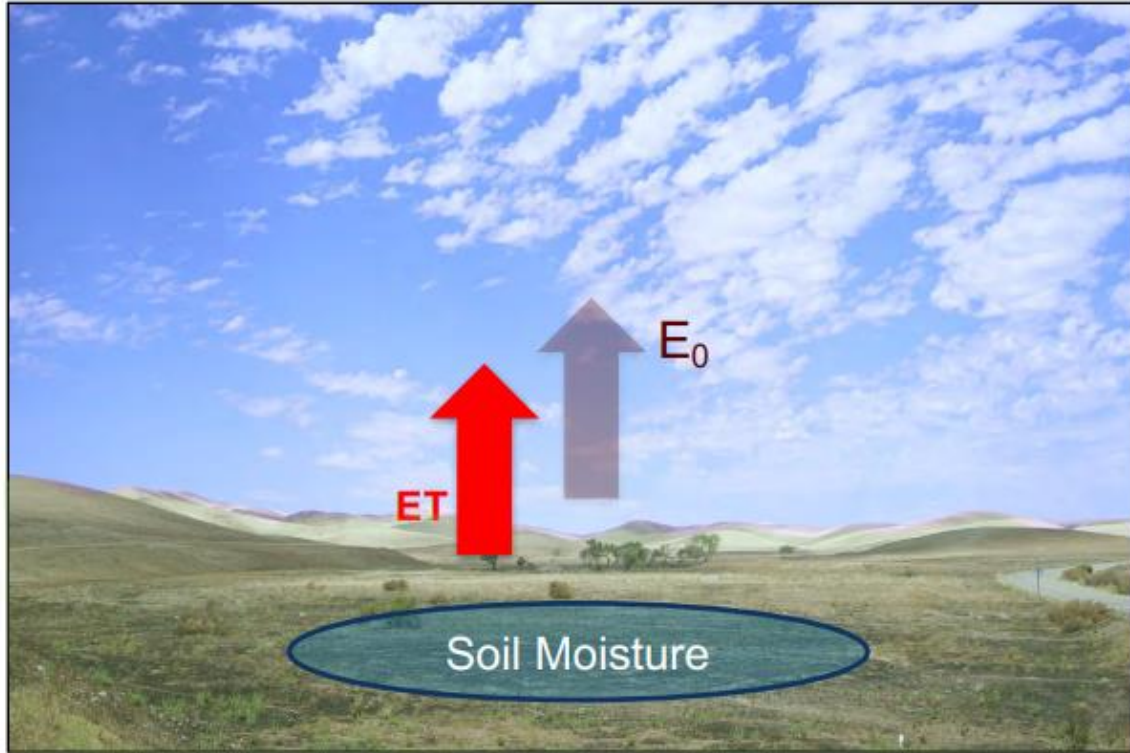


Evaporative Demand Drought Index (EDDI)

EDDI is calculated from observations of the atmosphere near the land surface: Temp, humidity, wind speed, and solar radiation.



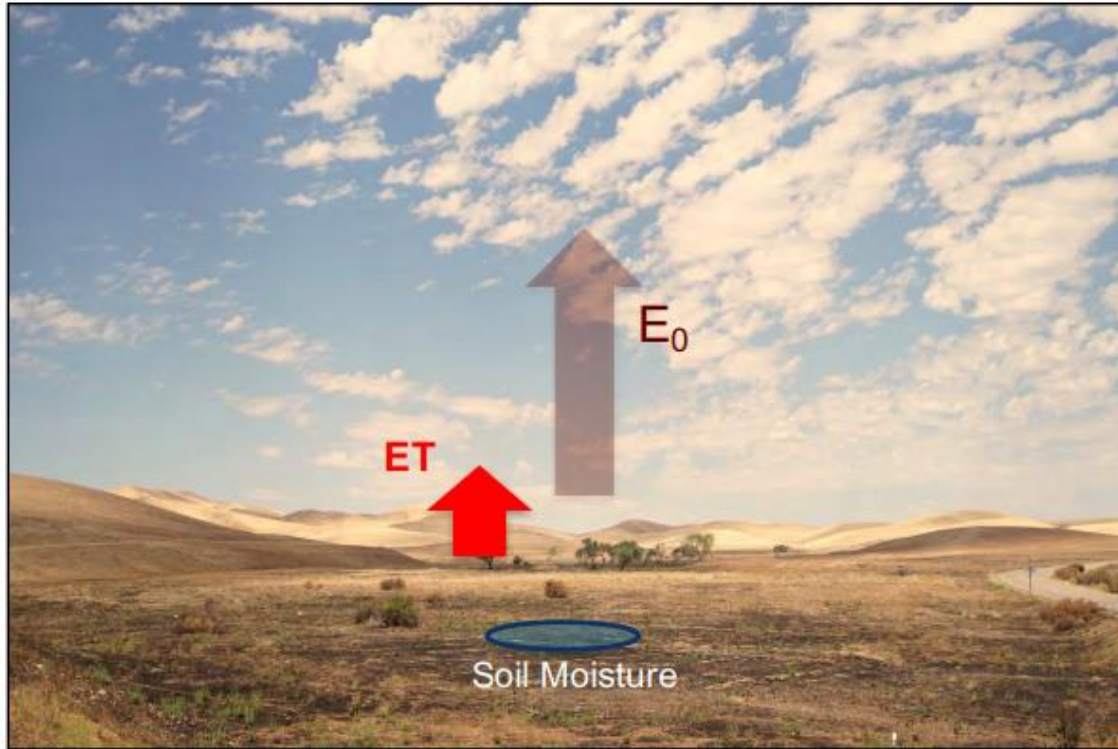
Evaporative Demand Drought Index (EDDI)



“Warmer, drier, windier”

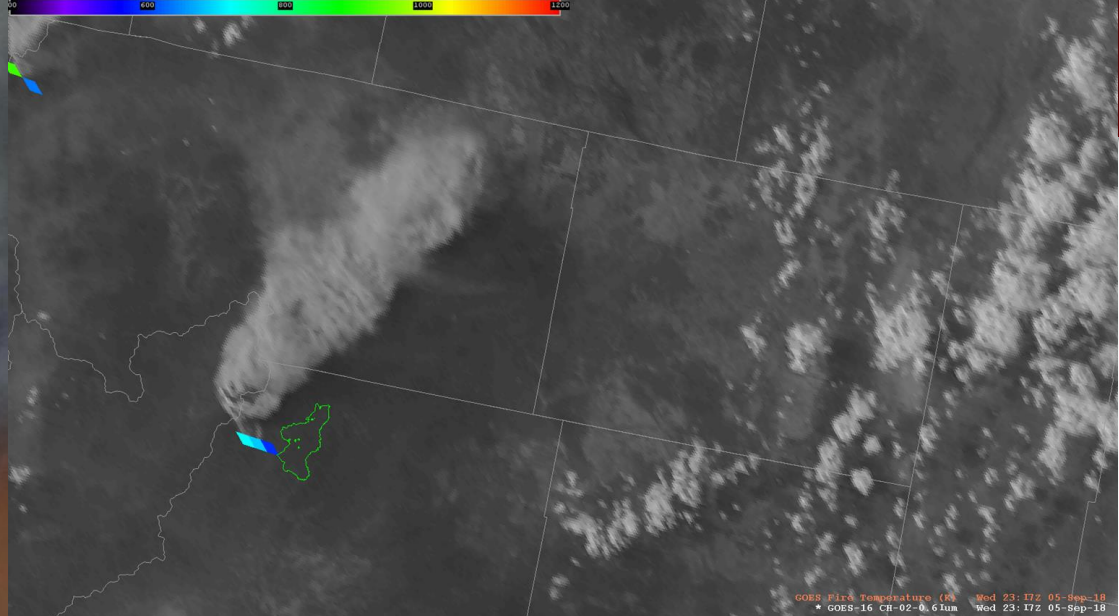
Unusually high evaporative demand (E_0) leads to moisture stress on the land surface (live and dead fuels), and ultimately to drought - even when precipitation has been near normal.

Evaporative Demand Drought Index (EDDI)



“Can quickly impact fire situation”

Once drought has developed, the now dry land surface makes the air above the surface warmer and drier, which further increases evaporative demand.



LAKEHEAD



ANTLERS BRIDGE



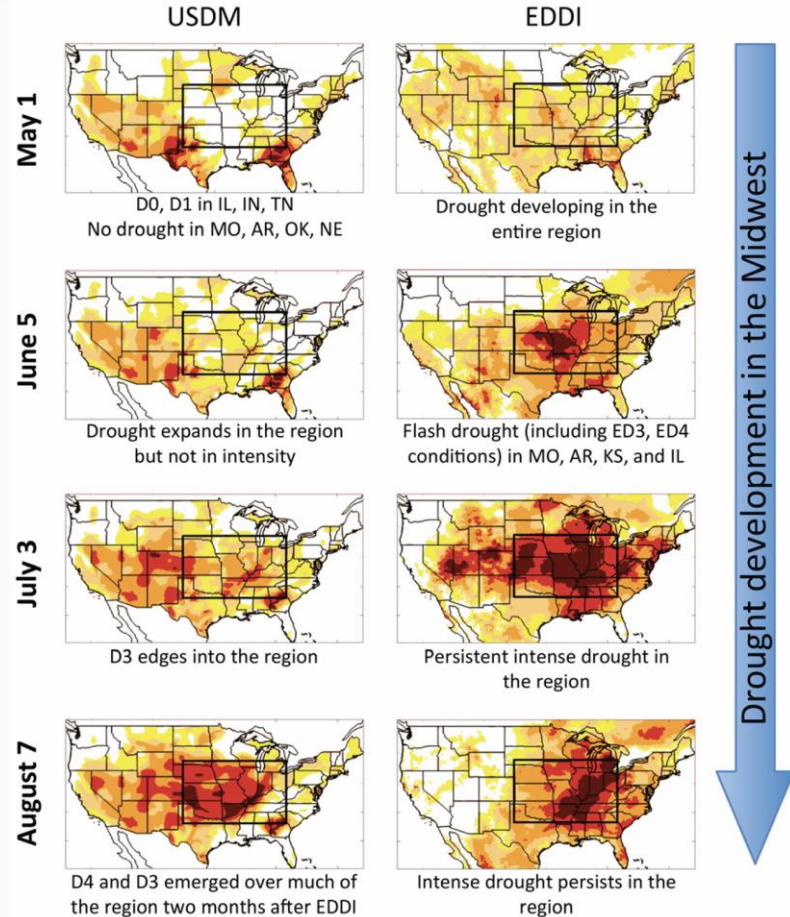
Wednesday, September 05, 2018 14:06:01 PDT

Wednesday, September 05, 2018 14:20:01 PDT

Evaporative Demand Drought Index (EDDI)

EDDI can provide added value to other drought indicators, especially for early warning and flash drought detection as well as fire weather risks.

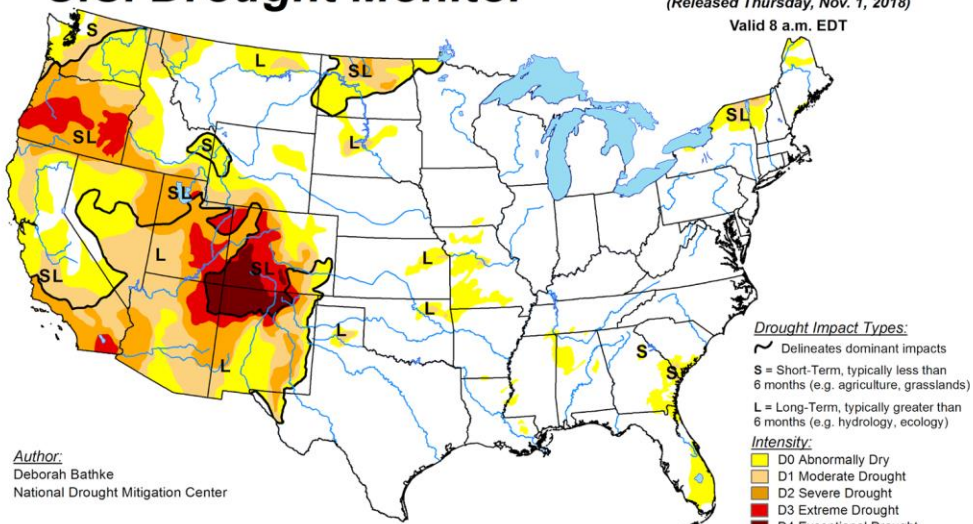
Intensity and Impacts



Evaporative Demand Drought Index (EDDI) – Note EDDI picking up drought faster over northern and central California.

U.S. Drought Monitor

October 30, 2018
(Released Thursday, Nov. 1, 2018)
Valid 8 a.m. EDT



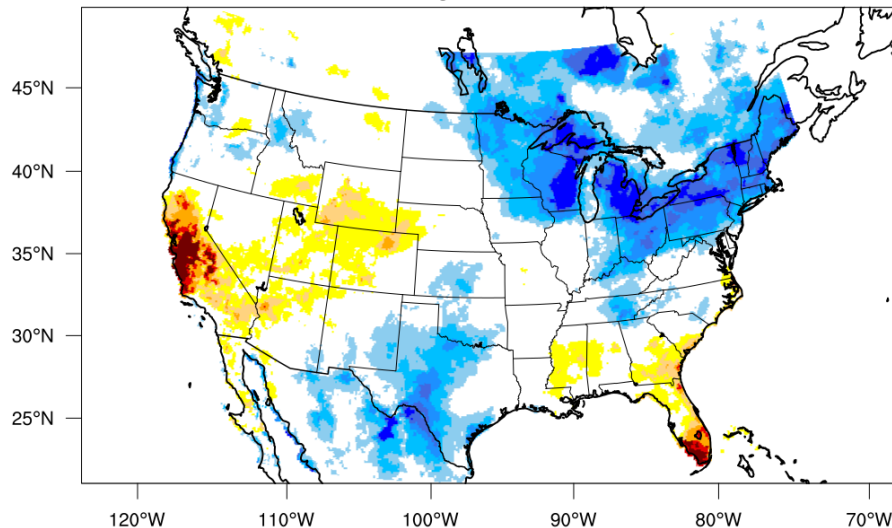
Author:
Deborah Bathke
National Drought Mitigation Center

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



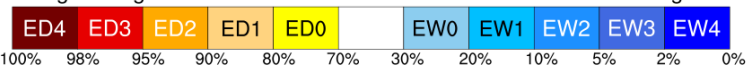
<http://droughtmonitor.unl.edu/>

1-week EDDI categories for November 1, 2018



Drought categories

Wetness categories



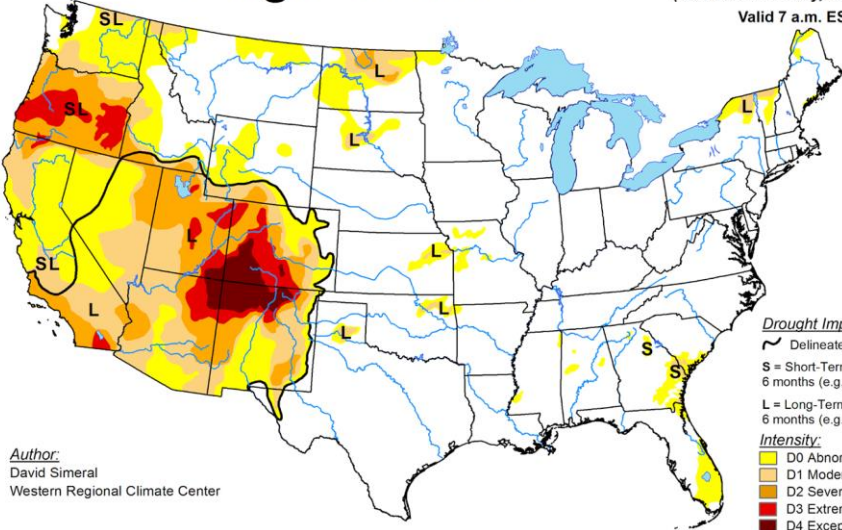
(EDDI-percentile category breaks: 100% = driest; 0% = wettest)

Generated by NOAA/ESRL/Physical Sciences Division

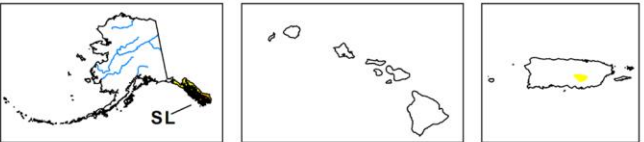
Evaporative Demand Drought Index (EDDI) – EDDI continues showing drought intensifying faster over northern and central California.

U.S. Drought Monitor

November 6, 2018
(Released Thursday, Nov. 8, 2018)
Valid 7 a.m. EST



Author:
David Simeral
Western Regional Climate Center

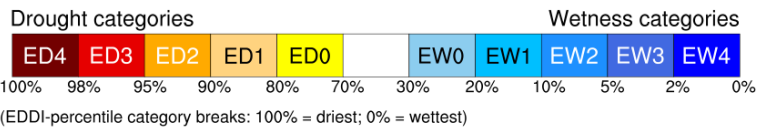
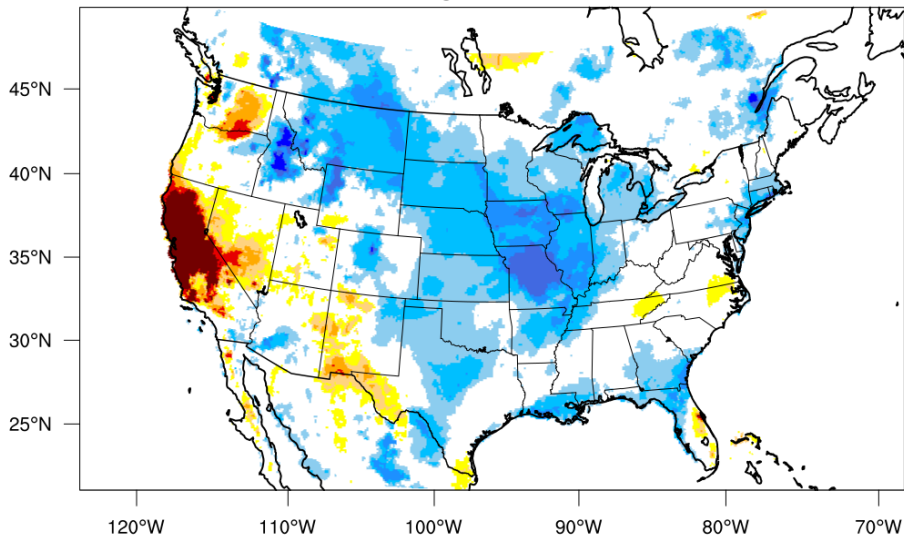


The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

USDA NDMC NOAA

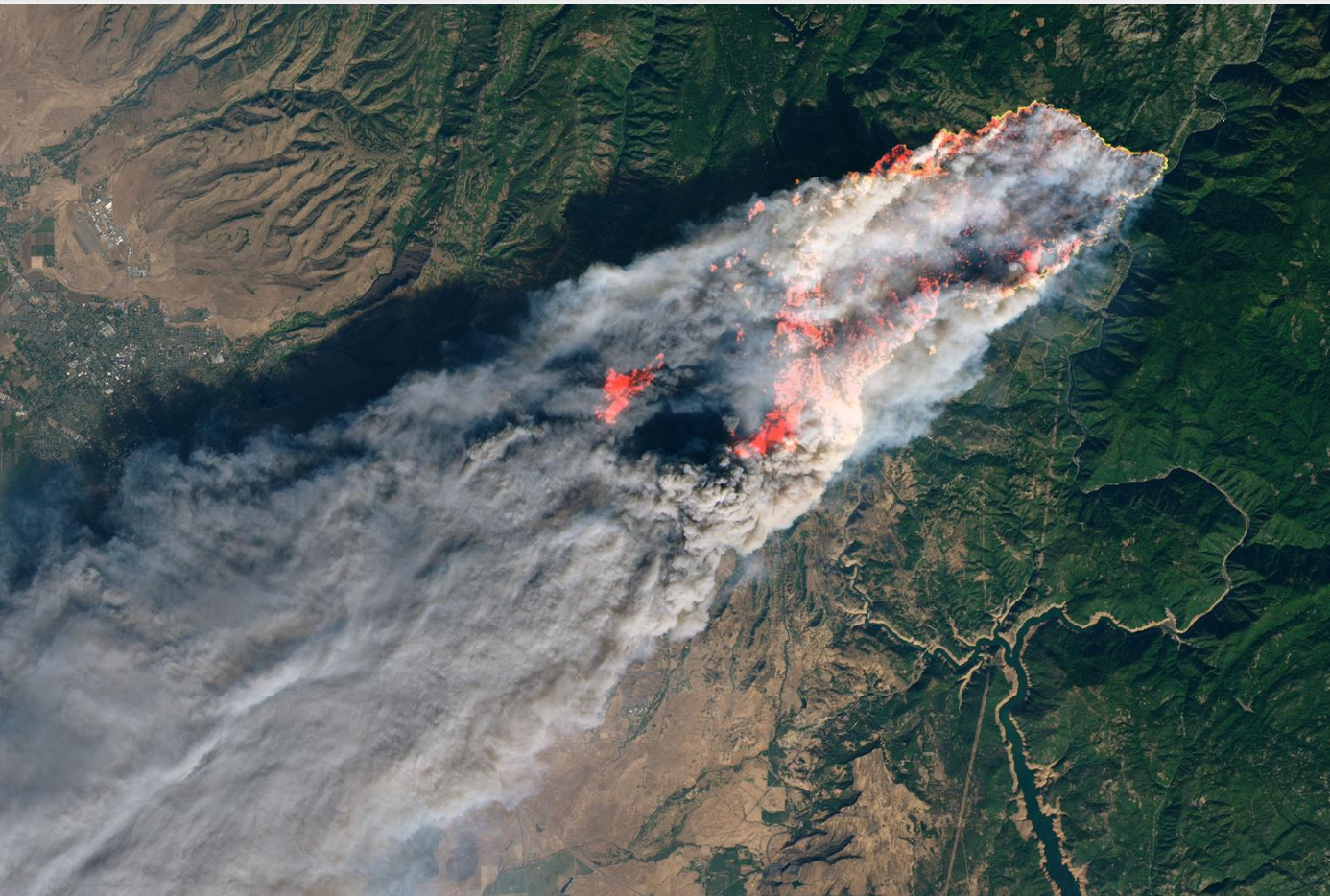
<http://droughtmonitor.unl.edu>

1-week EDDI categories for November 8, 2018



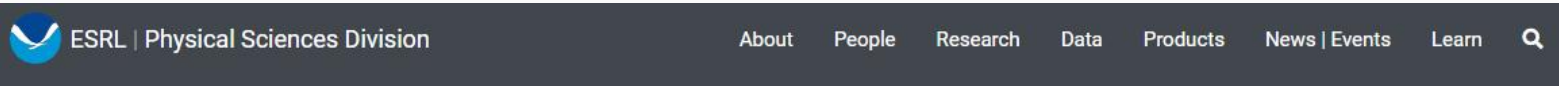
Generated by NOAA/ESRL/Physical Sciences Division

Evaporative Demand Drought Index (EDDI) – Camp Fire on November 8th in northern California where EDDI showed exceptional drought conditions.



Evaporative Demand Drought Index (EDDI)

<https://www.esrl.noaa.gov/psd/eddi/>



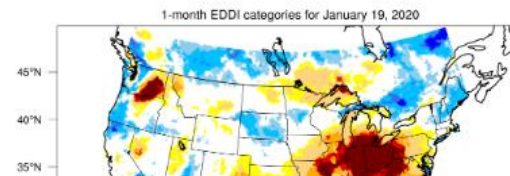
Home » Experimental Products » EDDI



About

What is EDDI?

The Evaporative Demand Drought Index (EDDI) is an experimental drought monitoring and early warning guidance tool. It examines how anomalous the atmospheric evaporative demand (E_0 ; also known as "the thirst of the atmosphere") is for a given location and across a time period of interest.

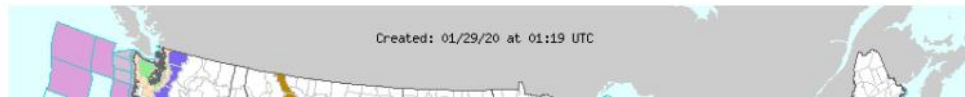


Evaporative Demand Drought Index (EDDI)

<http://www.northeastcompactfwx.org>



Current U.S. Hazards



Evaporative Demand Drought Index (EDDI)

QUESTIONS? COMMENTS?

Eric.Evenson@noaa.gov