

The U.S. Drought Monitor



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Climate & Weather Information for New England Water Utilities & Stormwater Managers

July 16, 2020

Google Meet

Monitoring

Detecting rapidly developing drought

The Quick Drought Response Index provides a “flash drought” alarm by integrating satellite, climate and biophysical data in map form.

Provides the foundation

Planning

Guidebook helps communities prepare for drought

Drought goes beyond a lack of water, affecting human health, ecosystems and economics, too. The Drought-Ready Communities guidebook steps communities through the planning process.

Increases ability to cope

Education & Outreach

Drought tournaments boost drought discussion, problem-solving

With a limited budget and a list of conservation ideas, teams made up of people from divergent fields compete to use their resources in the wisest, most effective way.

Translates science

Help build drought resilience by providing usable, actionable, and policy informing tools and products.

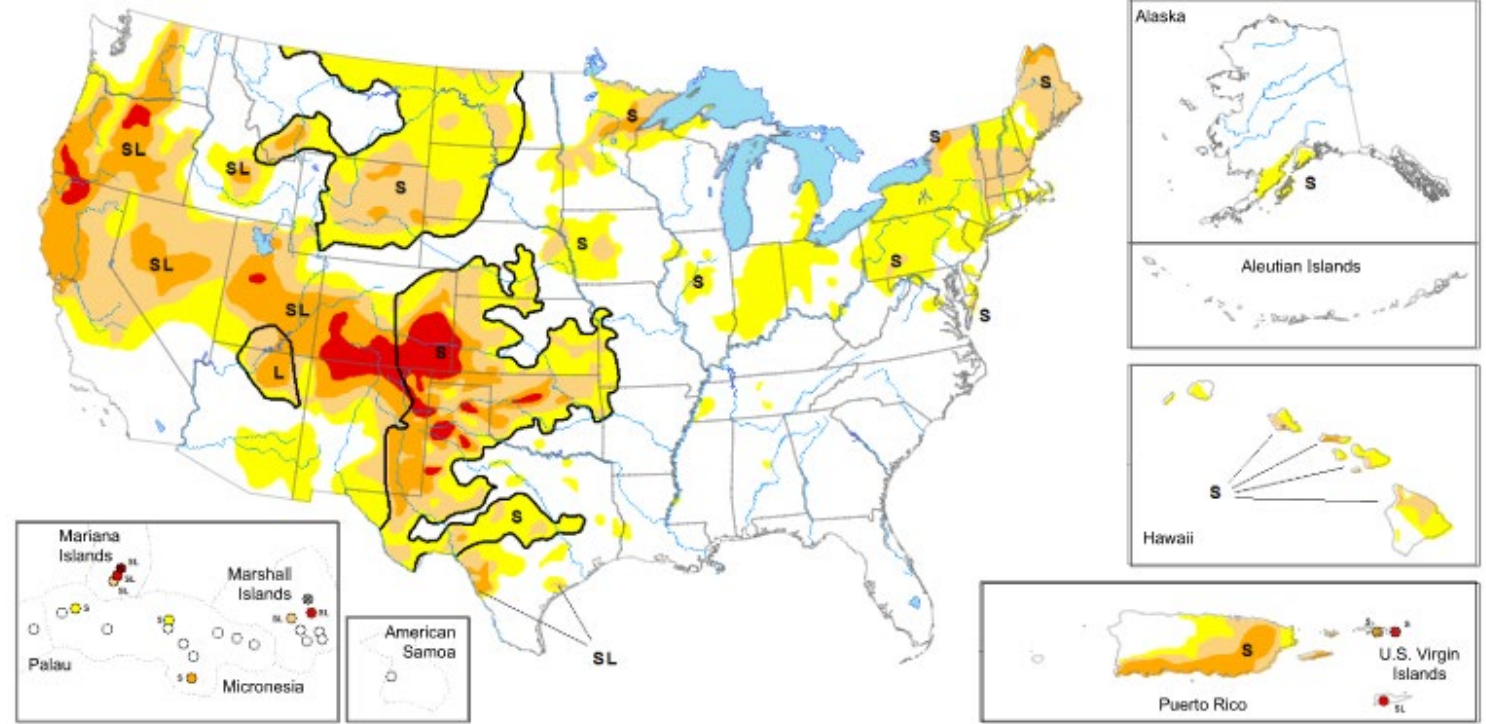
Map released: July 9, 2020

Data valid: July 7, 2020

droughtmonitor.unl.edu

Takeaway #1

The map synthesizes a lot of information.



United States and Puerto Rico Author(s):
David Miskus, NOAA/NWS/NCEP/CPC

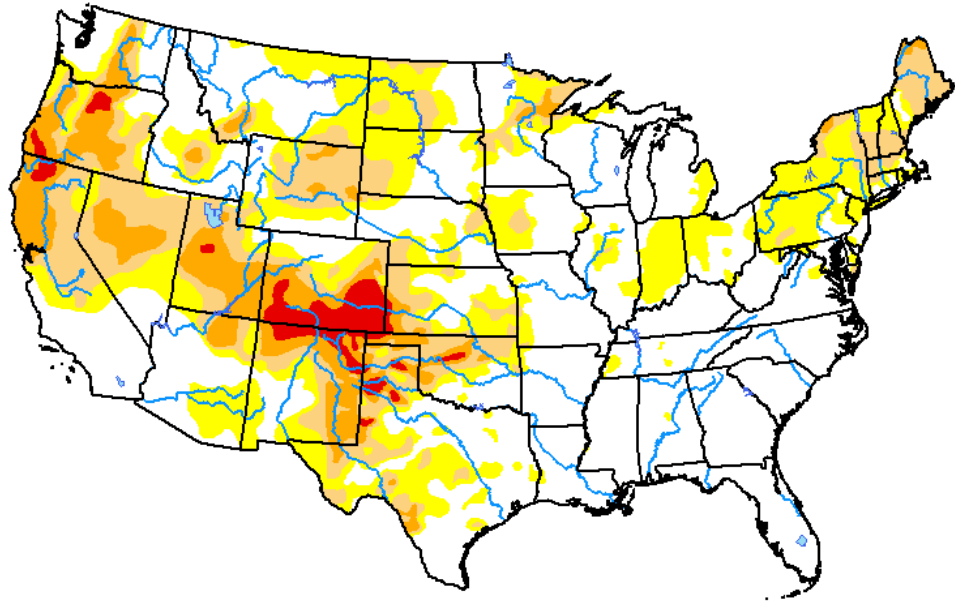
U.S. Affiliated Pacific Islands and Virgin Islands Author(s):
Denise Gutzmer, National Drought Mitigation Center

The data cutoff for Drought Monitor maps is each Tuesday at 8 a.m. EDT. The maps, which are based on analysis of the data, are released each Thursday at 8:30 a.m. Eastern Time.

Intensity and Impacts

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

- ~ - 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)



Not
Drought

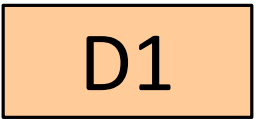


None



D0

Abnormally Dry



D1

Moderate Drought



D2

Severe Drought



D3

Extreme Drought



D4

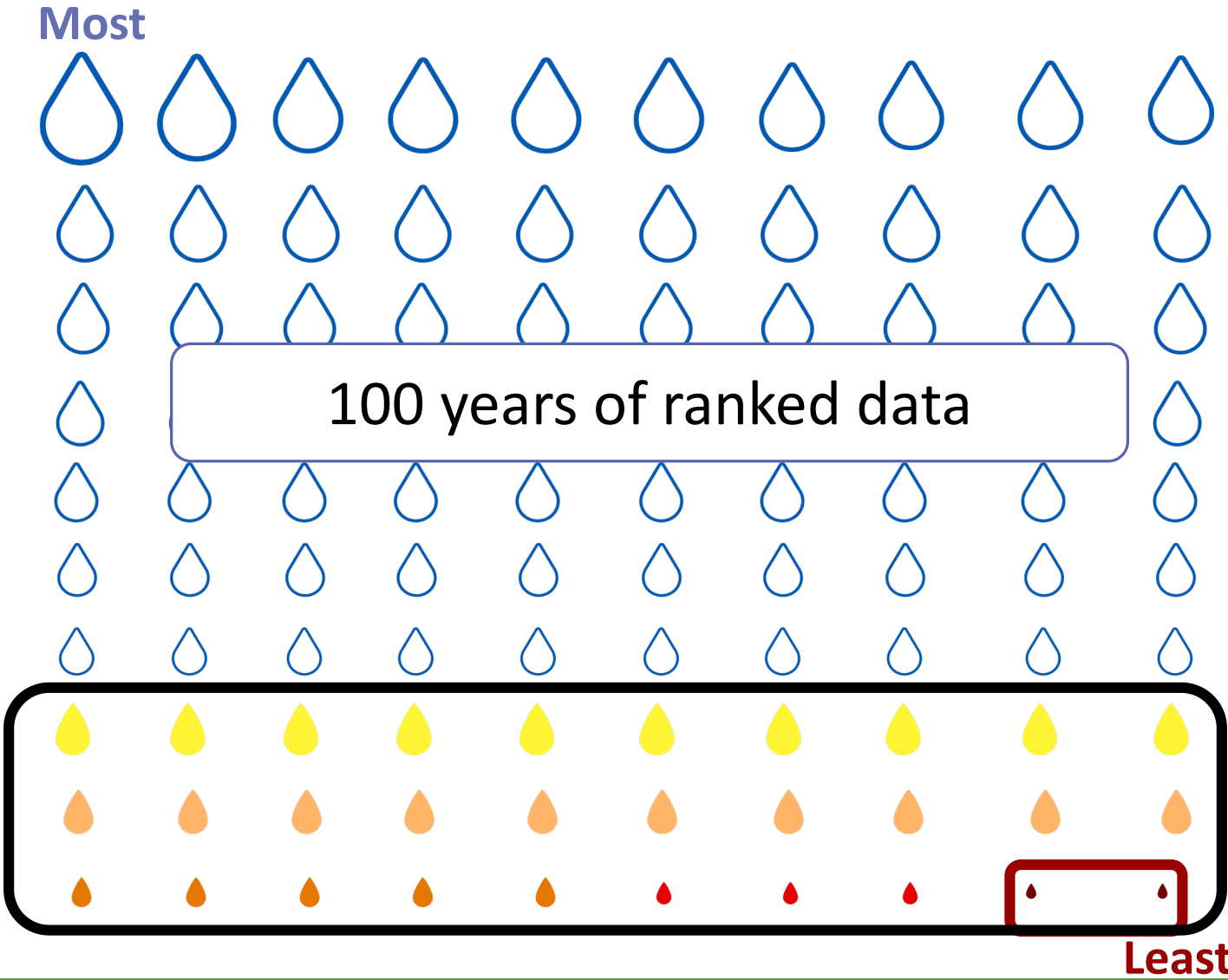
Exceptional Drought

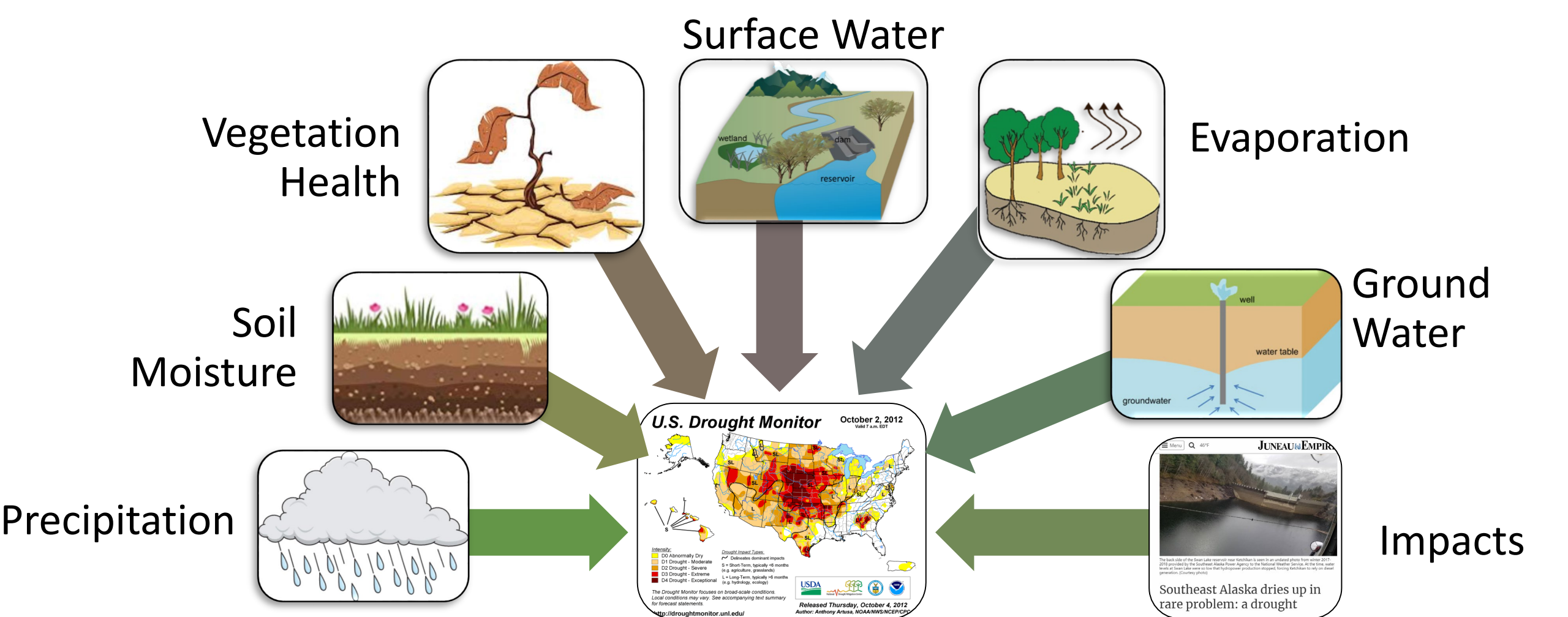
Drought

Map colors indicate drought intensity

Intensity is based on historical likelihood

		Percentile
	None	31-100
D0	Abnormally dry	21-30
D1	Moderate drought	11 - 20
D2	Severe drought	6 - 10
D3	Extreme drought	3 - 5
D4	Exceptional drought	1 - 2





Map incorporates multiple types of data



Monthly

Seasonal

Inter-annual

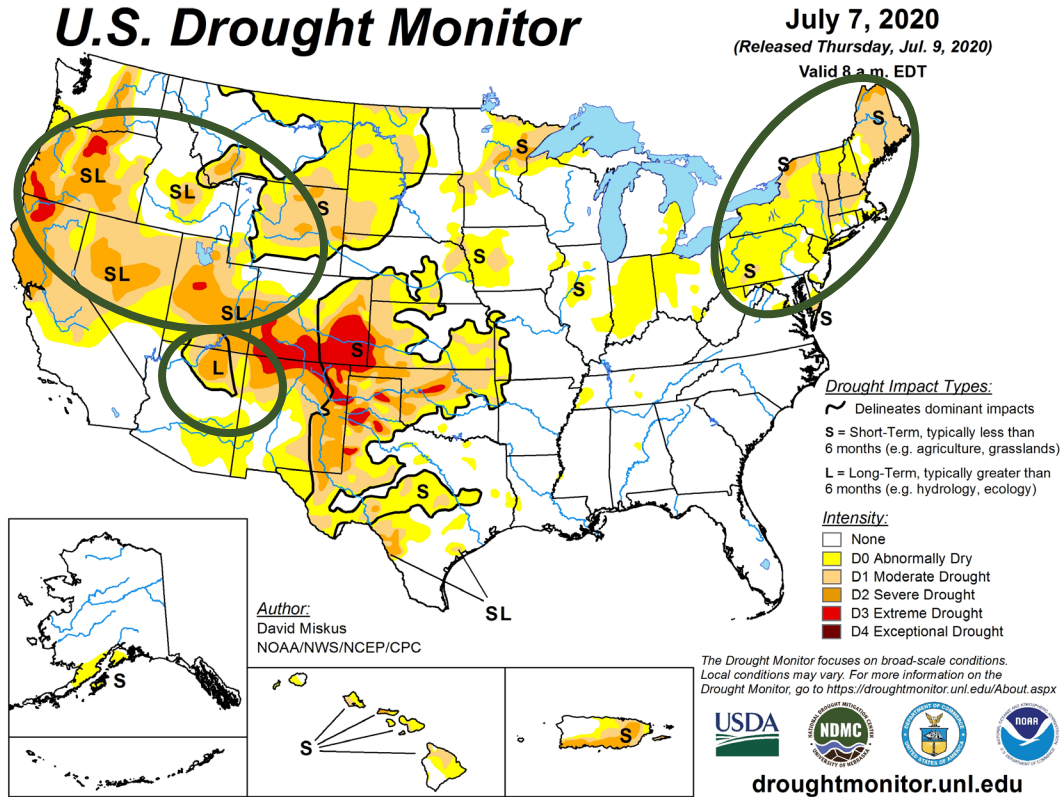
Category	Description	Possible Impacts
D0	Abnormally	Going into drought; short-term dryness slowing planting, growth of crops or pastures. Coming out of drought; some lingering water deficits; slowly recovered
D3	Extreme Drought	Major crop/pasture losses; widespread water shortages or restrictions
D4	Exceptional Drought	Exceptional and widespread crop/pasture losses; shortages of water in reservoirs, streams, and wells creating water emergencies

Length evaluated by examining a range of timescales

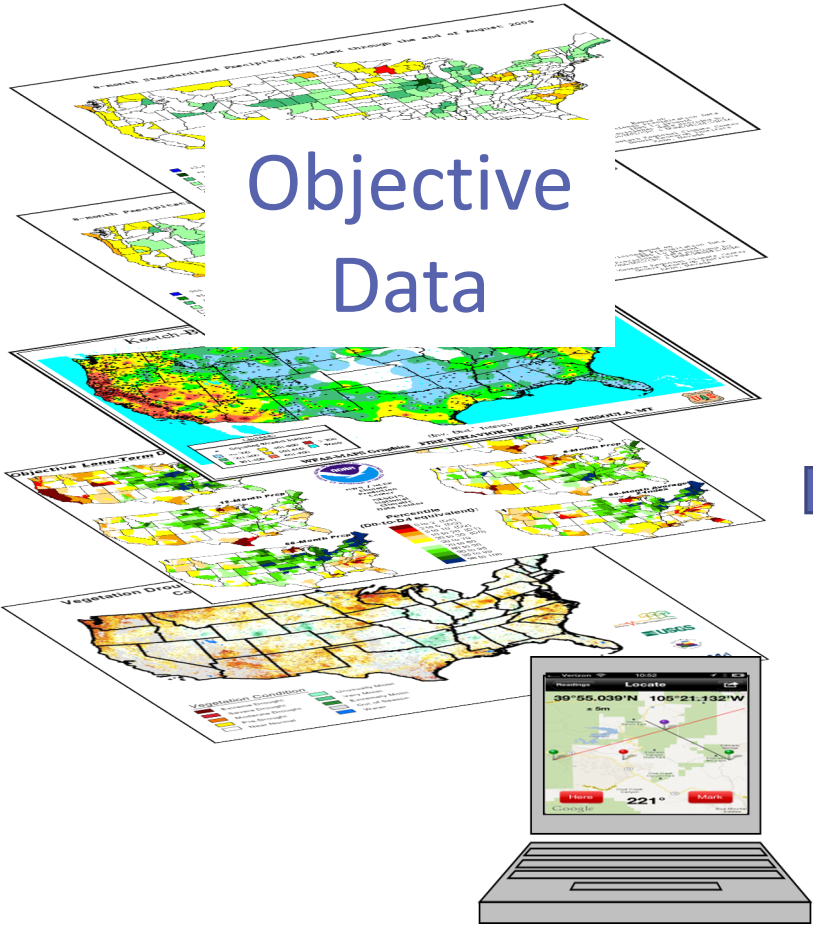
S = short term
typically < 6 months

separates
drought
timescales

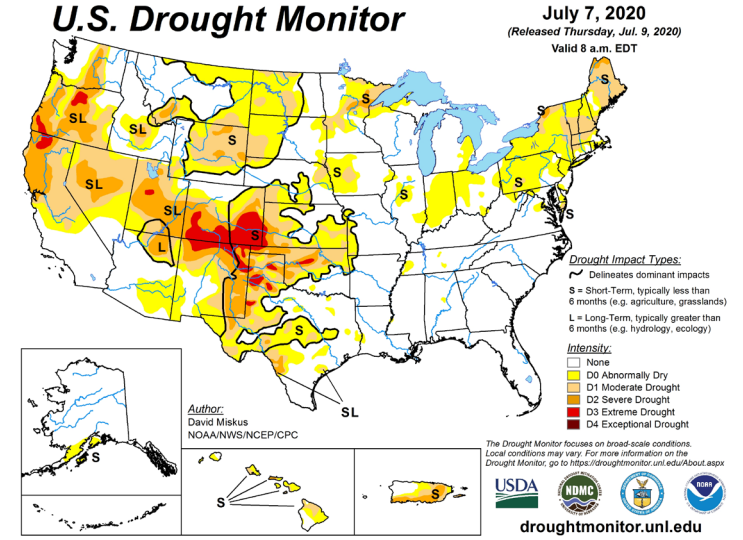
L = long term,
typically > 6 months



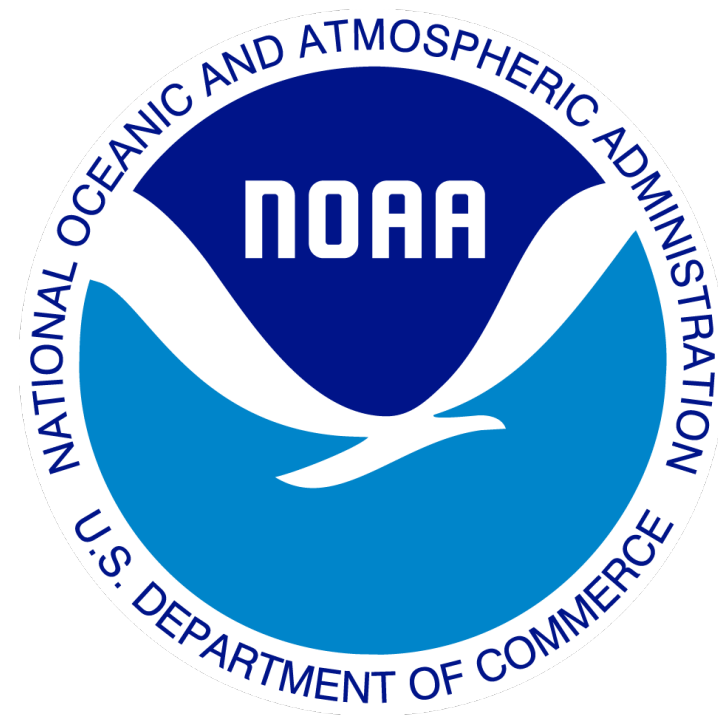
Map depicts short- and long-term conditions



Subjective Expertise

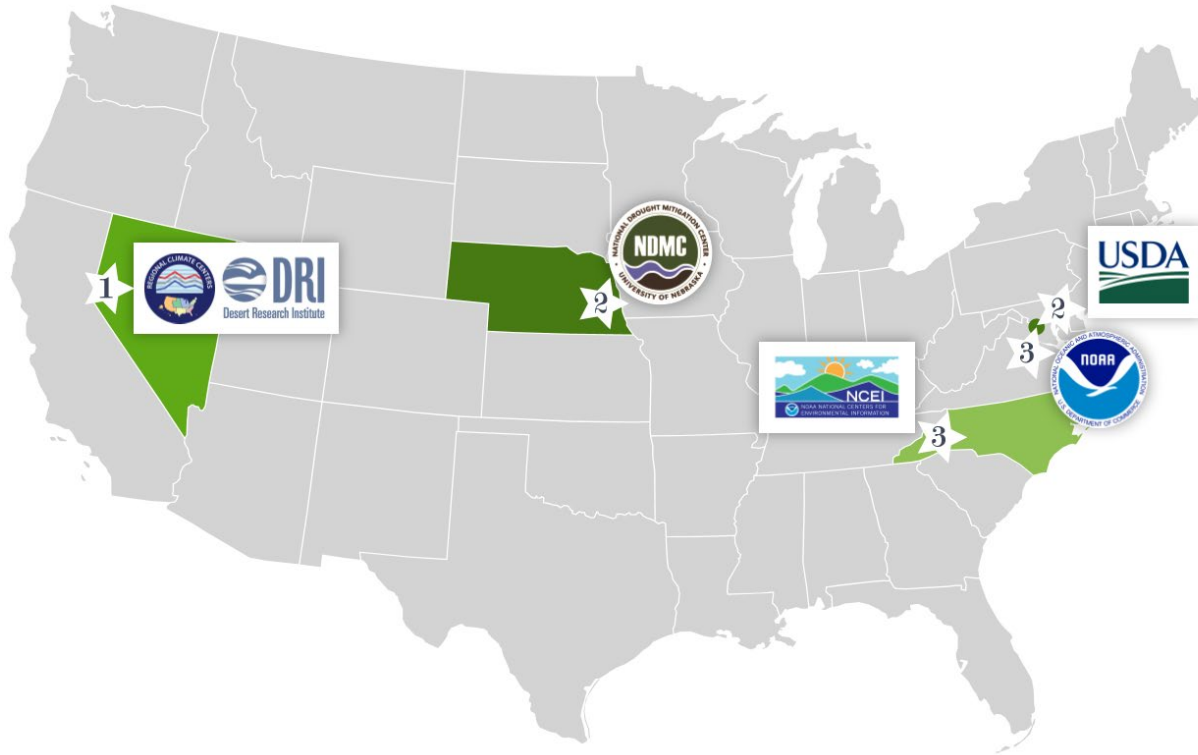


Map results from a convergence of evidence

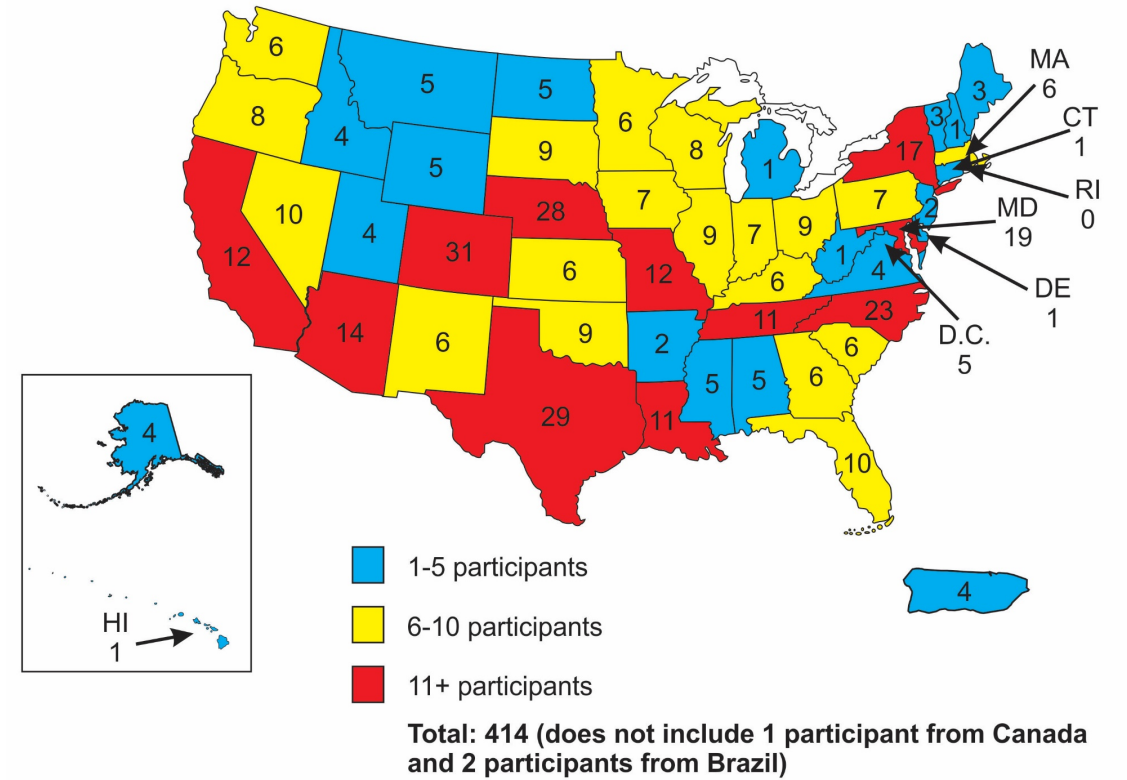


Takeaway #2: The map is a partnership.

USDM Authors



Local Experts

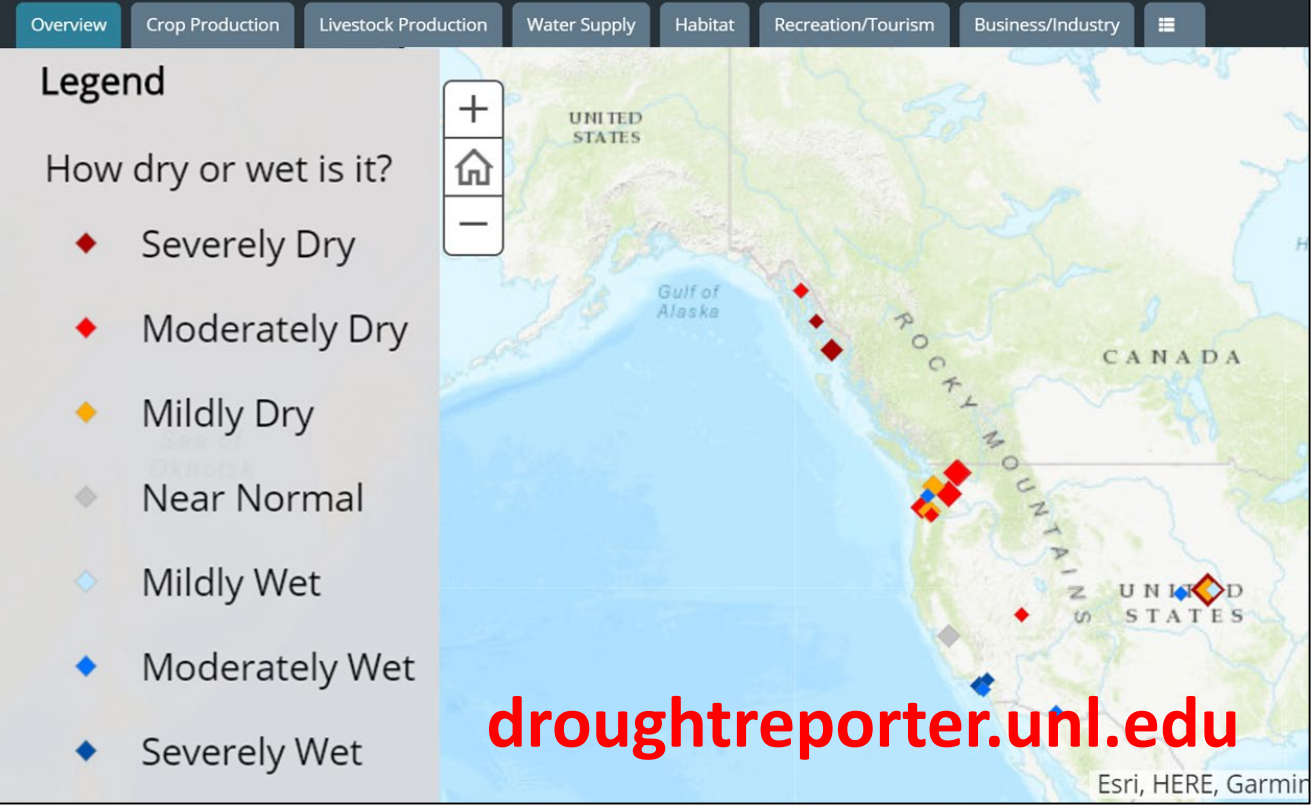


Authors interpret data & involve local experts in discussion

Condition Monitoring



2019 Survey

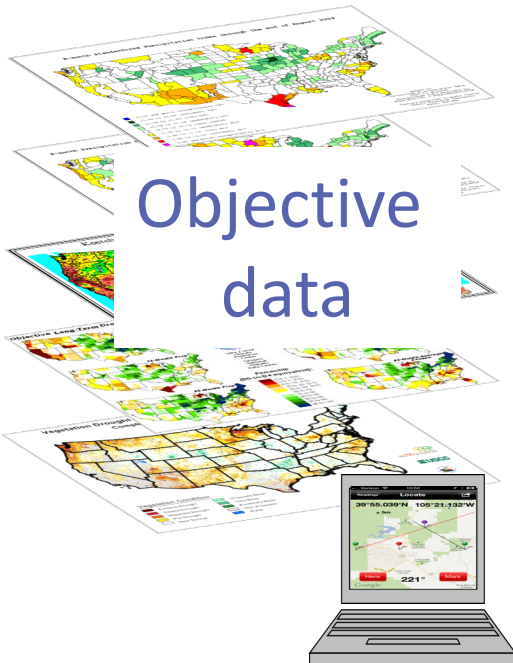


The public reports impacts to provide information on the effects of drought

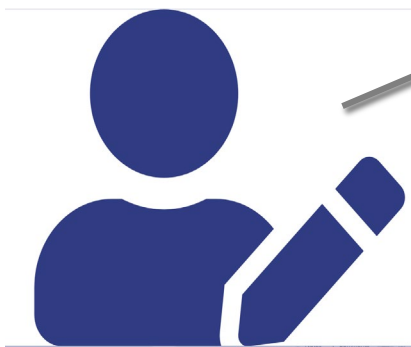
USDM

Convergence of Evidence

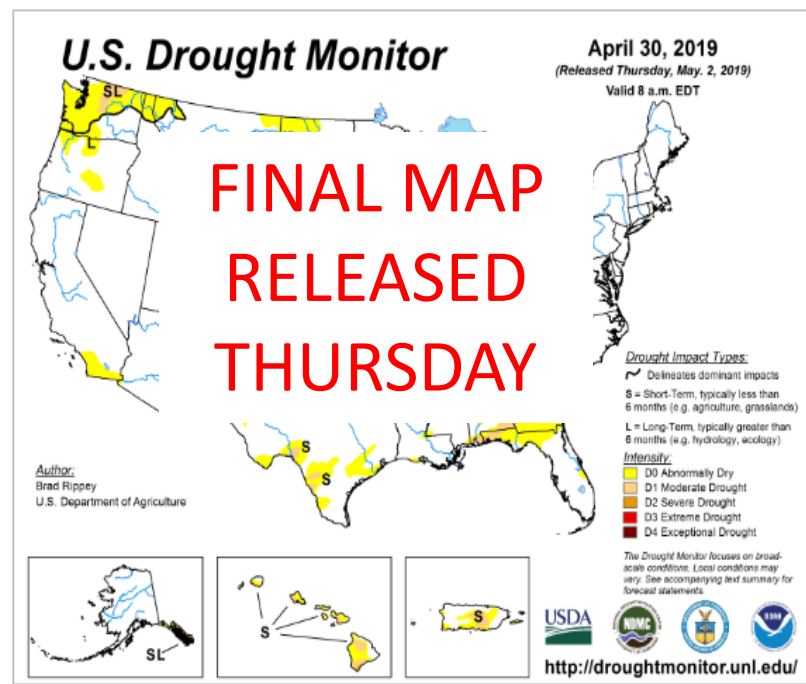
Objective data



Author



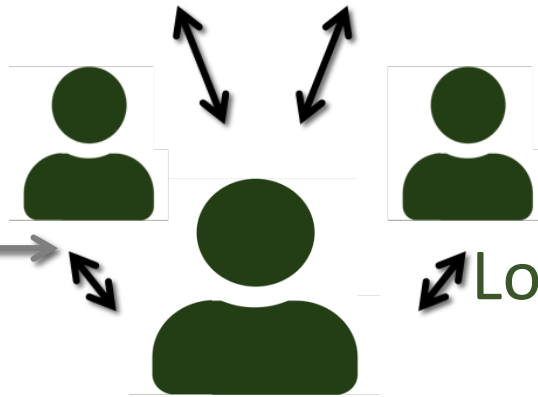
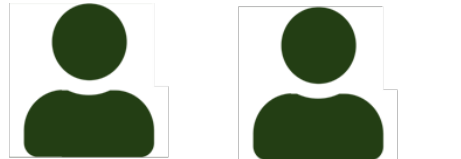
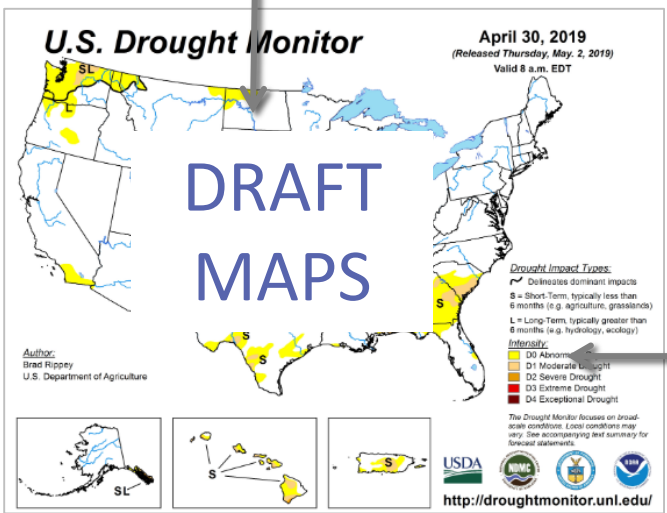
FINAL MAP
RELEASED
THURSDAY



Impact reports



DRAFT
MAPS



Local experts

Providing Input into the USDM

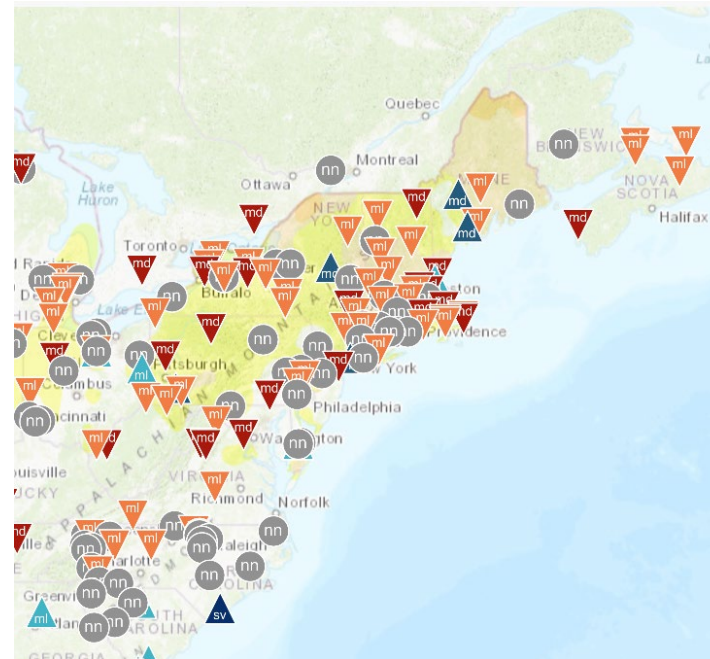
LOCAL CONTACTS

- Join the USDM listserv
- Contact the NERCC

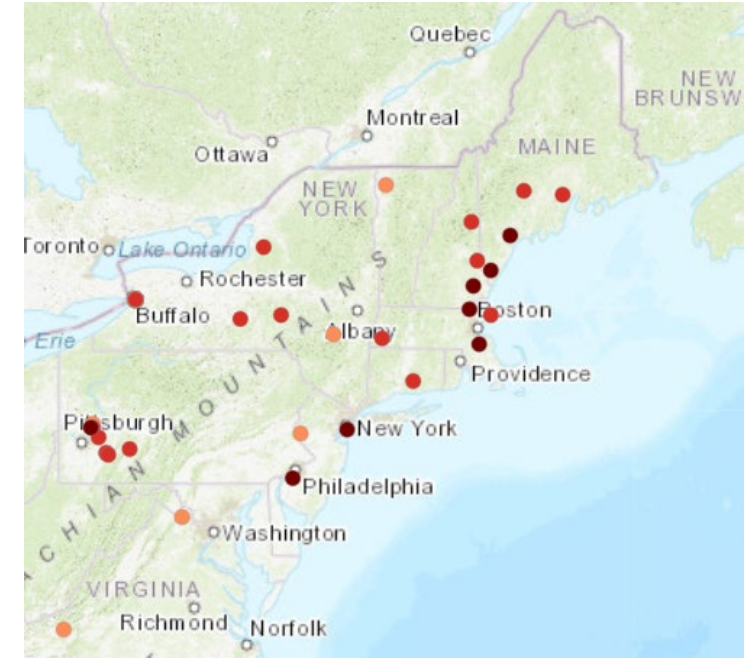
NATIONAL DROUGHT MITIGATION CENTER



cocorahs.org



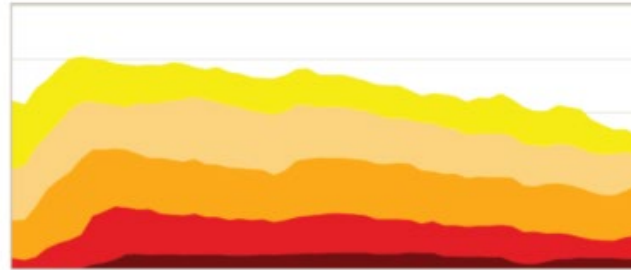
Droughtimpacts.unl.edu



Takeway #3

It's more than just a map

<https://droughtmonitor.unl.edu>



Time Series

View a graph of the U.S. Drought Monitor statistics for a chosen area.

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2017-06-06	83.04	16.96	7.80	1.23	0.00	0.00
2017-05-30	81.89	18.31	5.28	1.12	0.28	0.00
2017-05-23	85.73	14.27	4.52	1.22	0.41	0.00
2017-05-16	83.42	16.58	5.61	1.38	0.43	0.00
2017-05-09	84.06	15.11	5.21	1.30	0.38	0.00
2017-05-02	85.04	14.31	4.90	1.30	0.13	0.00
2017-04-25	78.33	21.67	6.11	1.07	0.03	0.00
2017-04-18	73.04	26.96	8.20	1.44	0.00	0.00
2017-04-11	73.01	26.99	8.17	1.44	0.00	0.00
2017-04-04	70.27	29.73	8.83	1.50	0.10	0.00
2017-03-28	64.41	35.59	14.20	2.82	0.21	0.00
2017-03-21	63.78	36.22	15.97	3.74	0.43	0.00

Tabular Data Archive

View the U.S. Drought Monitor data in tabular format for a selected area.



GIS Data Files

Get GIS data files for each week including shapefiles, kmz, wms and more.

2017-05-02	85.04	14.31	4.90	1.30	0.13	0.00
2017-04-25	78.33	21.67	6.11	1.07	0.03	0.00
2017-04-18	73.04	26.96	8.20	1.44	0.00	0.00
2017-04-11	73.01	26.99	8.17	1.44	0.00	0.00
2017-04-04	70.27	29.73	8.83	1.50	0.10	0.00
2017-03-28	64.41	35.59	14.20	2.82	0.21	0.00
2017-03-21	63.78	36.22	15.97	3.74	0.43	0.00

Data Download

Download U.S. Drought Monitor statistics.



Metadata

Information about the GIS data and other U.S. Drought Monitor data file formats.



FSA Eligibility Tool

Tool to determine if an area qualifies for disaster payments from the Farm Service Agency.



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