

Climate and drought resources you can use – and how to use them

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ATMOSPHERIC SCIENCE
COLORADO STATE UNIVERSITY



Historical Climate Data

Where can you access temperature and precipitation data?



High Plains RCC
CLIMOD

Product info

Product selection

Single-Station Multi-Station

- Almanac Data for a Day
- Activity Planner for a Day
- Daily Data for a Month

Daily Data Listing

- Daily Degree Days
- Calendar Day Summaries
- Monthly Summarized Data
- Seasonal Ranking
- Frost/Freeze Summaries
- Daily/Monthly Normals
- Temperature Graph
- Accumulation Graph

Options selection

Station/Area selection

Go

Feedback

Daily Data Listing

Daily data listing for any range of dates specified. Replaces previous CLIMOD product - *Daily lister*.

[More information ...](#)



COLORADO
CLIMATE
CENTER

climod.unl.edu

High Plains

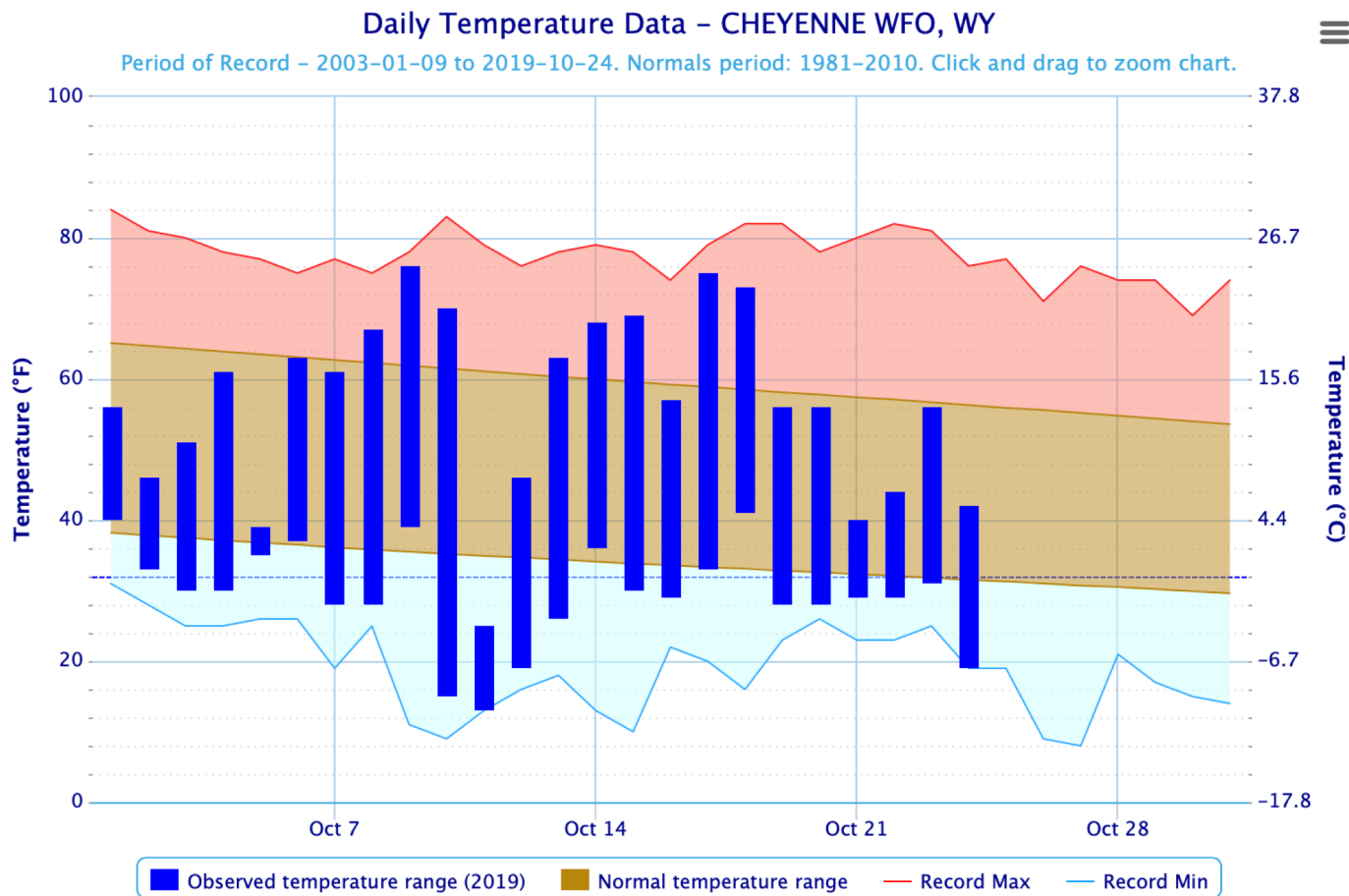
Regional Climate Center

Powered by ACIS

Access temperature and
precipitation data for their entire
historic record!



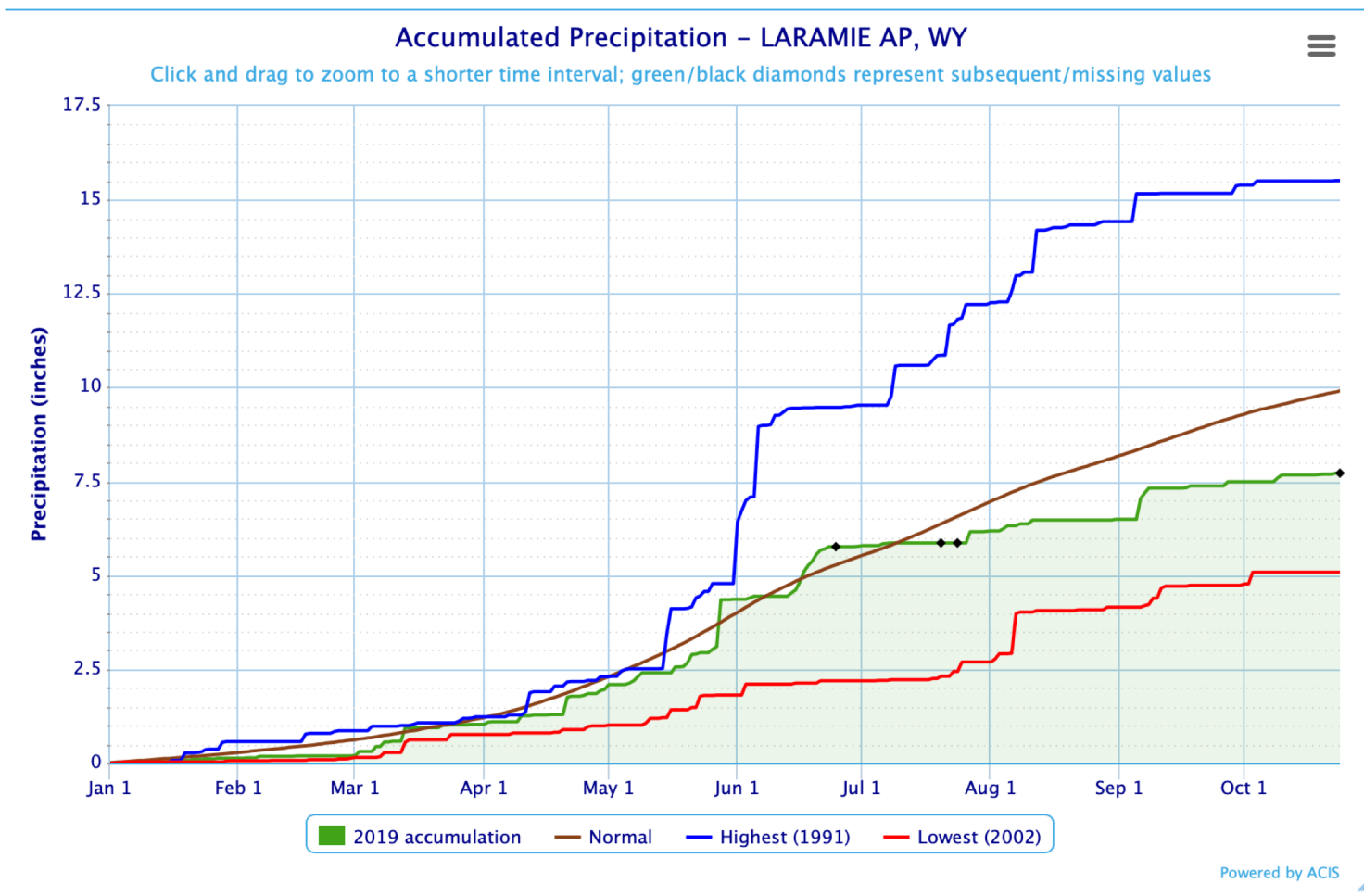
Single Station → Temperature Graph



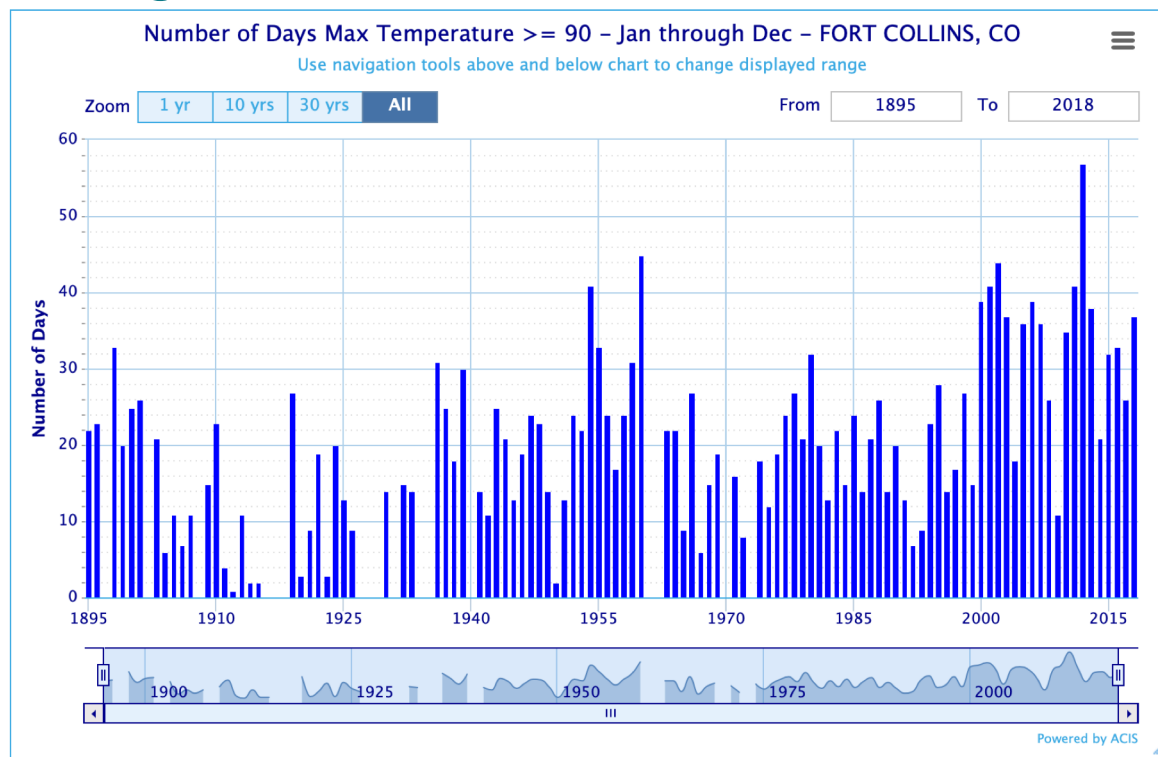
Powered by ACIS



Single Station → Accumulation Graph



Single Station → Seasonal Ranking



Click column heading to sort ascending, click again to sort descending.

Rank	Year	Number of Days Max Temperature ≥ 90	Missing Count
1	2012	57	0
2	1960	45	0
3	2002	44	2
4	2011	41	0
-	2001	41	0
-	1954	41	0
7	2006	39	0

Single Station → Frost/Freeze Summaries

Frost/Freeze Summary for GRAND JUNCTION WALKER FIELD, CO

Each section contains date and year of occurrence and number of missing values.

Click column heading to sort ascending, click again to sort descending.

Year	Last	Missing	First	Missing	Season Length
2019	05-03 (2019)	0	10-10 (2019)	0	159
2018	04-18 (2018)	0	10-14 (2018)	0	178
2017	04-30 (2017)	0	09-25 (2017)	0	147
2016	04-19 (2016)	0	10-04 (2016)	0	167
2015	04-19 (2015)	0	10-28 (2015)	0	191
2014	05-14 (2014)	0	10-13 (2014)	0	151
2013	05-03 (2013)	0	10-03 (2013)	0	152
2012	04-08 (2012)	0	10-07 (2012)	0	181
2011	05-02 (2011)	0	10-07 (2011)	0	157
2010	05-07 (2010)	0	10-25 (2010)	0	170
2009	04-27 (2009)	0	10-01 (2009)	0	156
2008	05-03 (2008)	0	10-12 (2008)	0	161
2007	04-19 (2007)	0	10-07 (2007)	0	170
2006	04-20 (2006)	0	09-17 (2006)	0	149
2005	04-30 (2005)	0	10-05 (2005)	0	157
2004	03-29 (2004)	0	10-31 (2004)	0	215
2003	04-20 (2003)	0	10-14 (2003)	0	176
2002	05-09 (2002)	0	10-14 (2002)	0	157
2001	04-23 (2001)	0	10-24 (2001)	0	183
2000	05-12 (2000)	0	10-14 (2000)	0	154

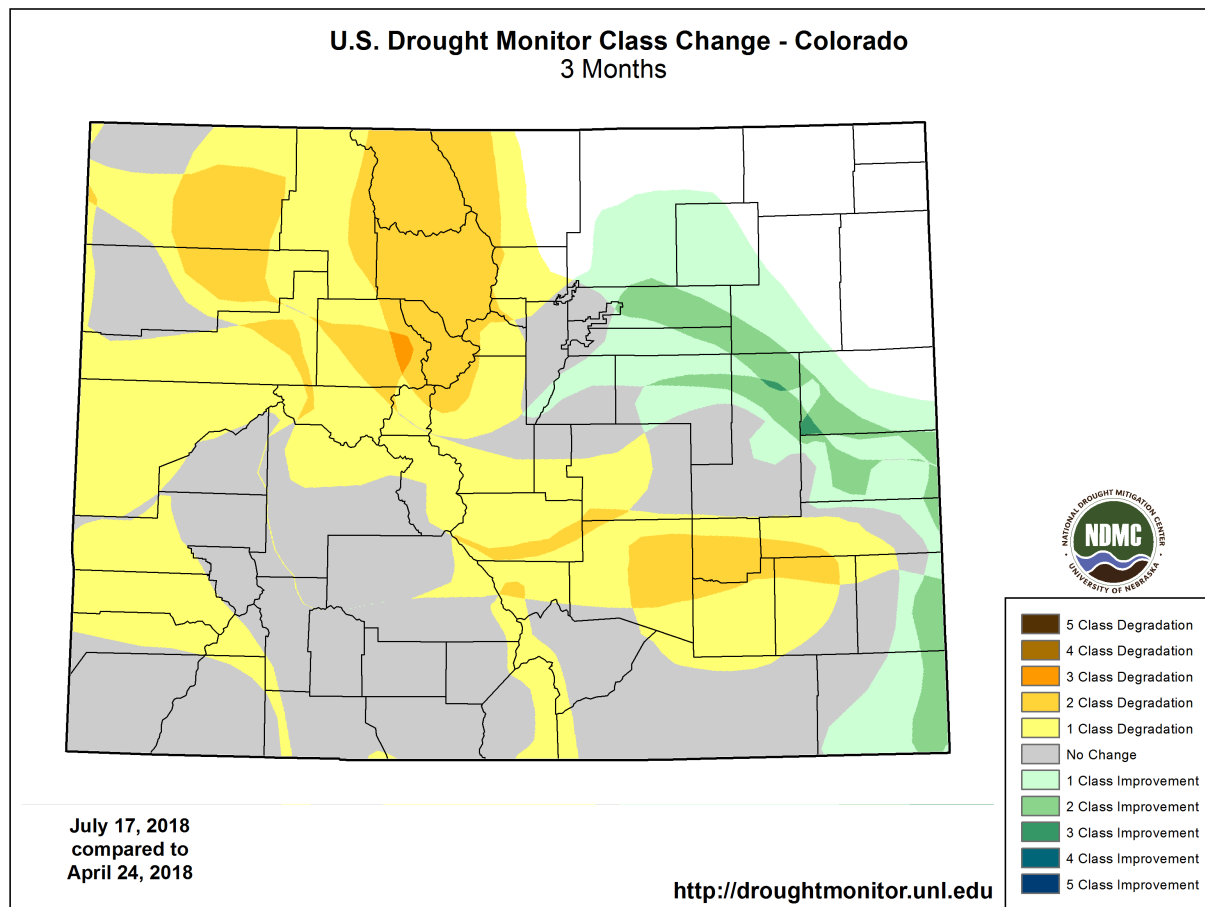




U.S. Drought Monitor

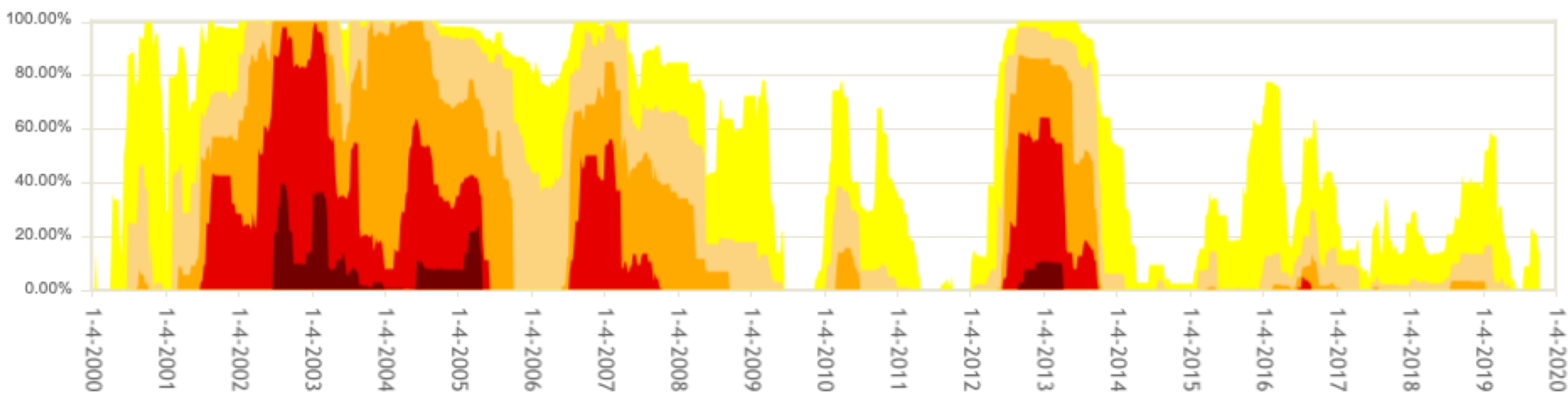
Resources found on droughtmonitor.unl.edu

Maps → Change Maps



Data → Time Series

Wyoming Percent Area



Data → Data Tables

Area type: Area:
 Statistics type: USDM 7-day Change

Percent Area in U.S. Drought Monitor Categories

Show entries

Search:

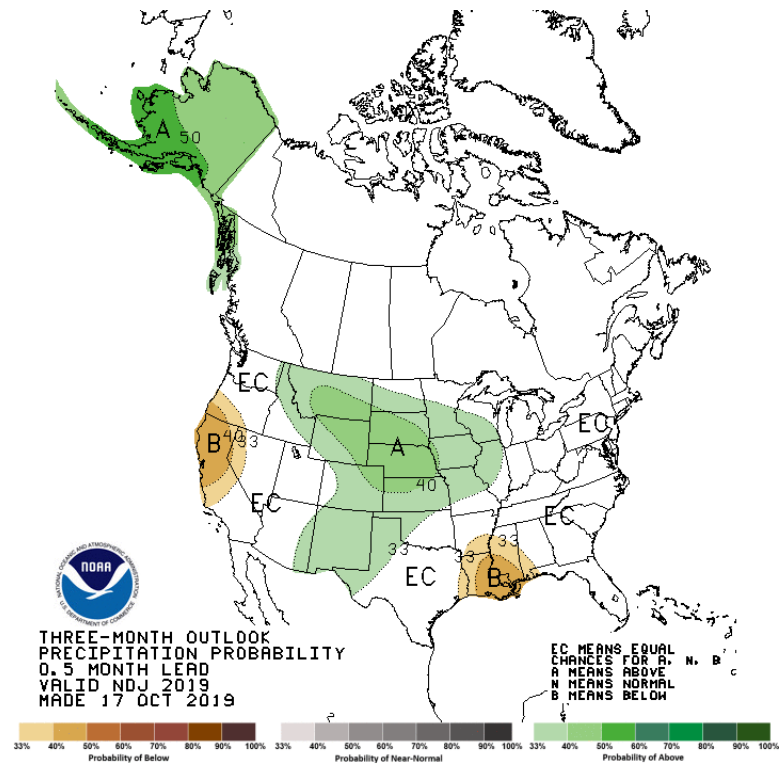
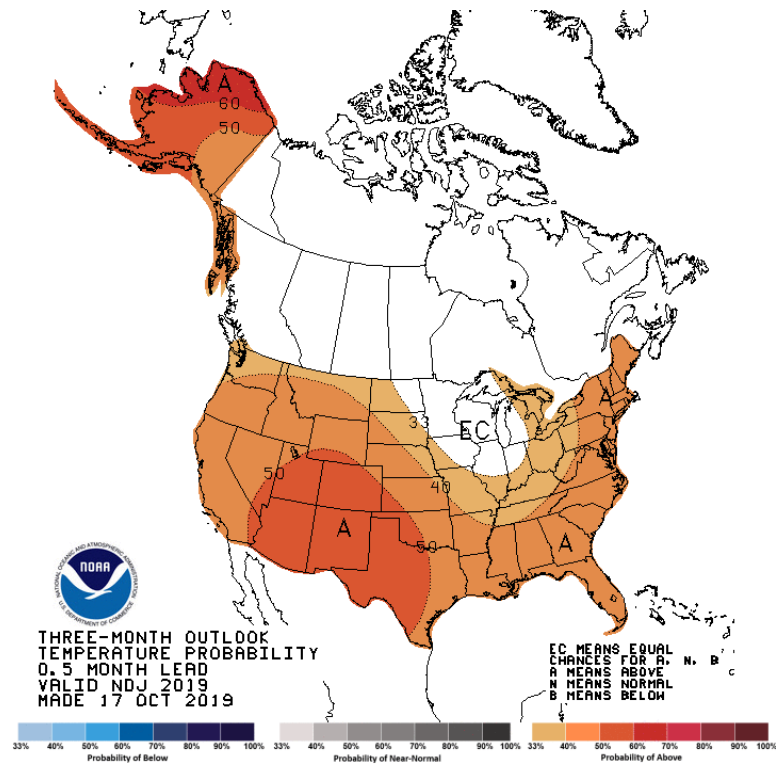
Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
2002-07-30	0.00	100.00	100.00	100.00	100.00	100.00	500
2002-07-23	0.00	100.00	100.00	100.00	100.00	100.00	500
2002-08-27	0.00	100.00	100.00	100.00	100.00	99.95	500
2002-08-13	0.00	100.00	100.00	100.00	100.00	98.96	499
2002-08-20	0.00	100.00	100.00	100.00	100.00	93.03	493
2002-08-06	0.00	100.00	100.00	100.00	100.00	90.47	490
2002-07-02	0.00	100.00	100.00	100.00	100.00	38.24	438
2002-07-09	0.00	100.00	100.00	100.00	100.00	33.83	434



Climate Prediction

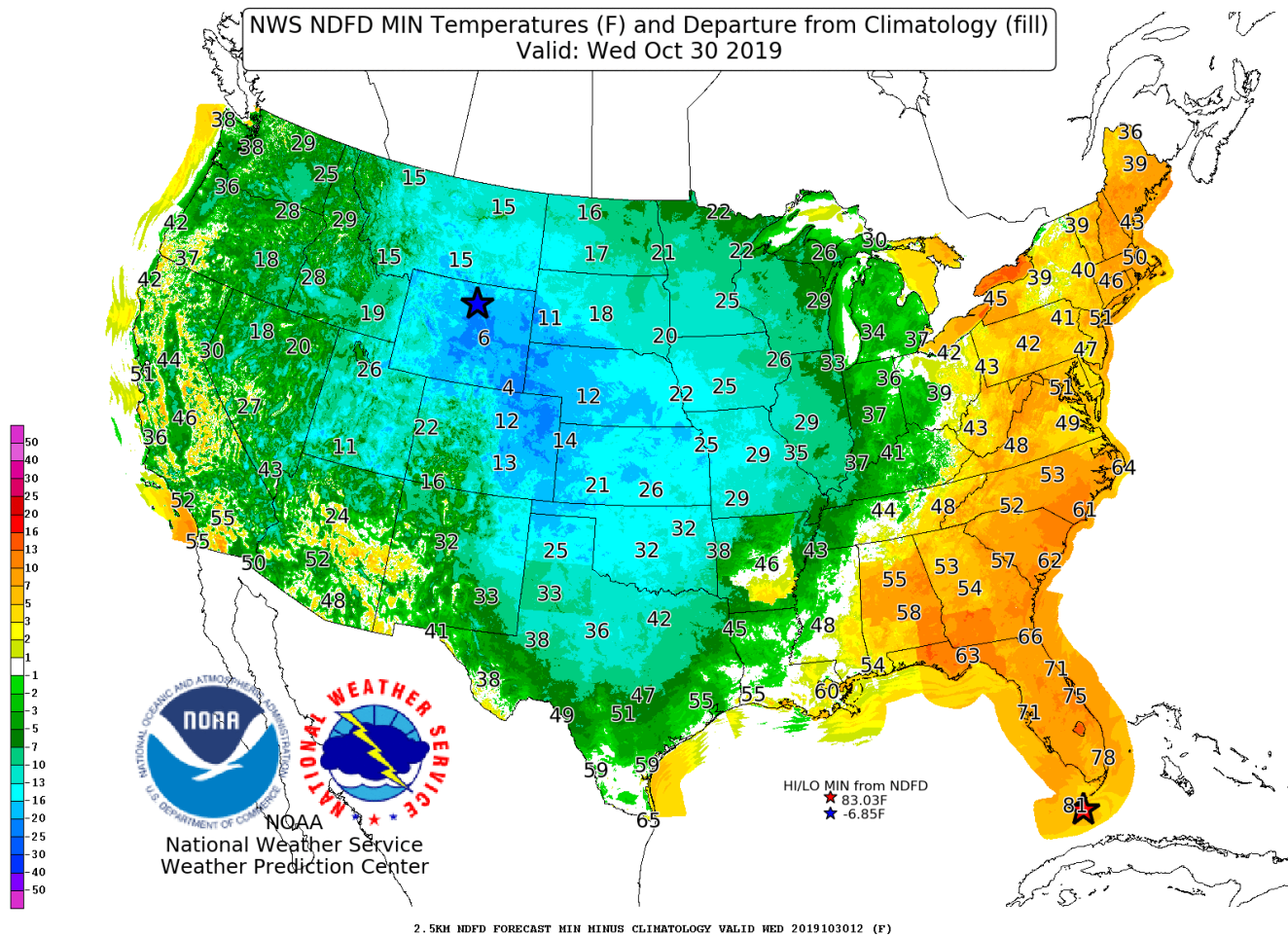
Can we really predict for the next season??

What these maps DO and DON'T tell us



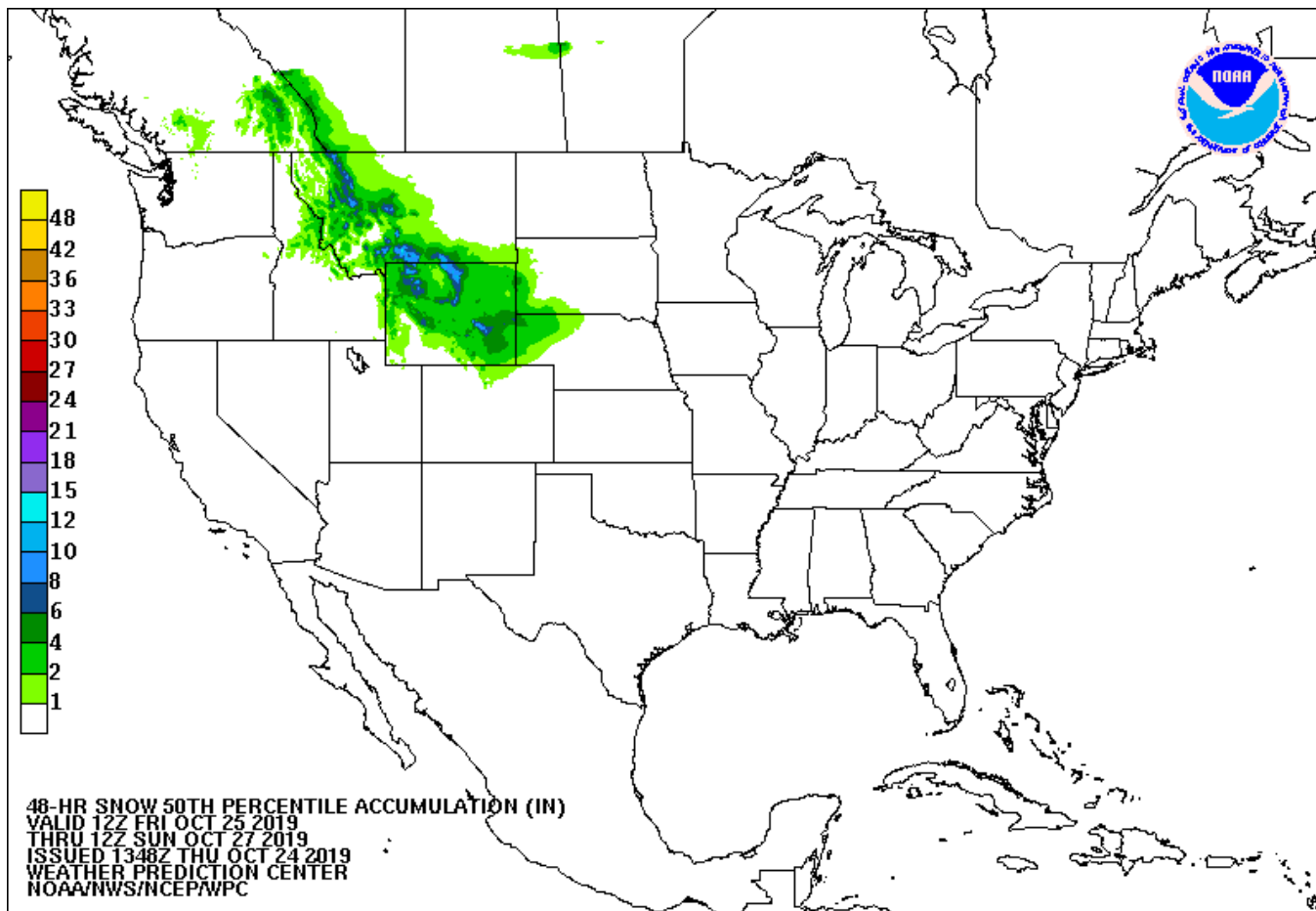
cpc.ncep.noaa.gov





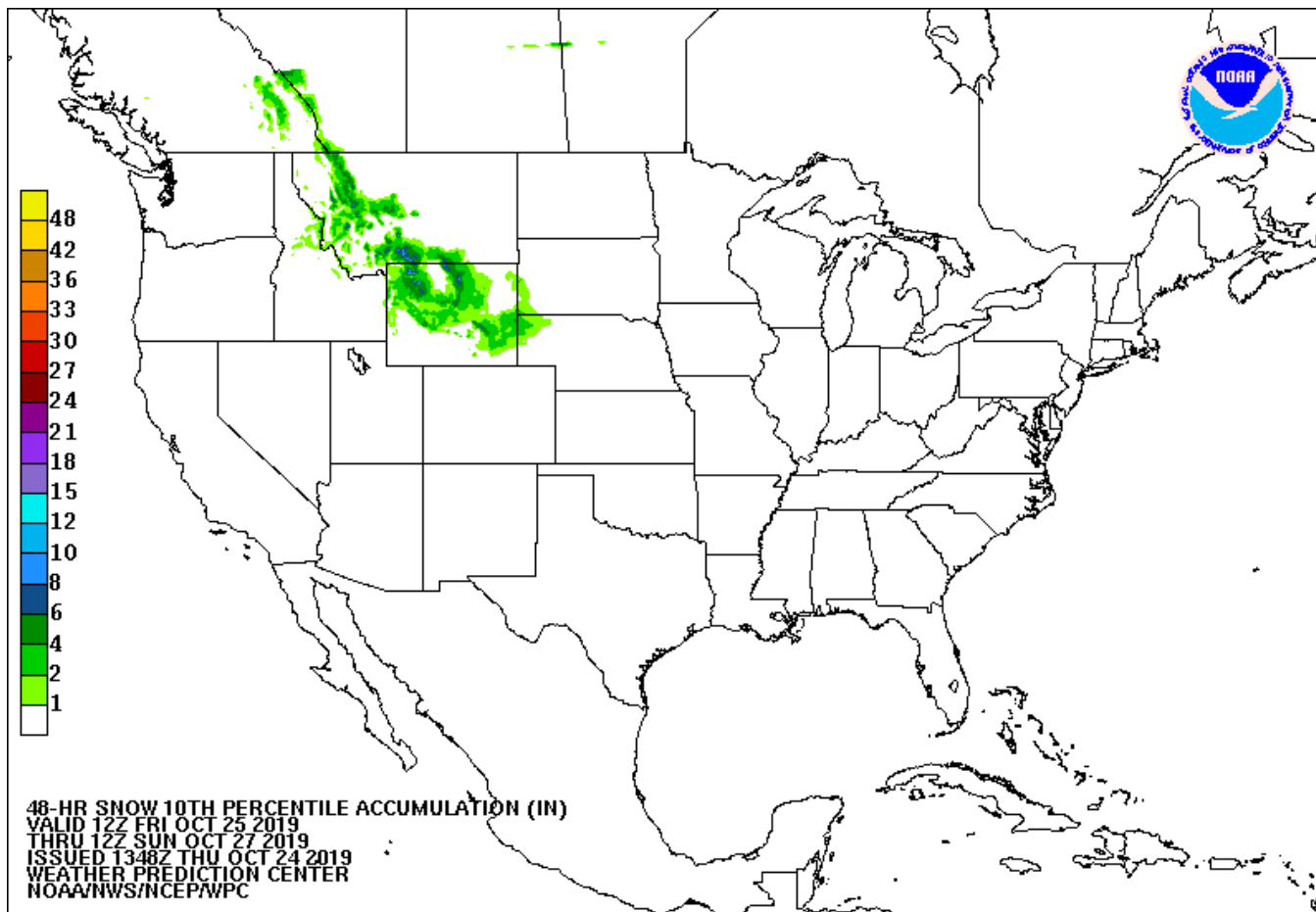
<https://www.wpc.ncep.noaa.gov/exper/ndfdmxmn/map.html>





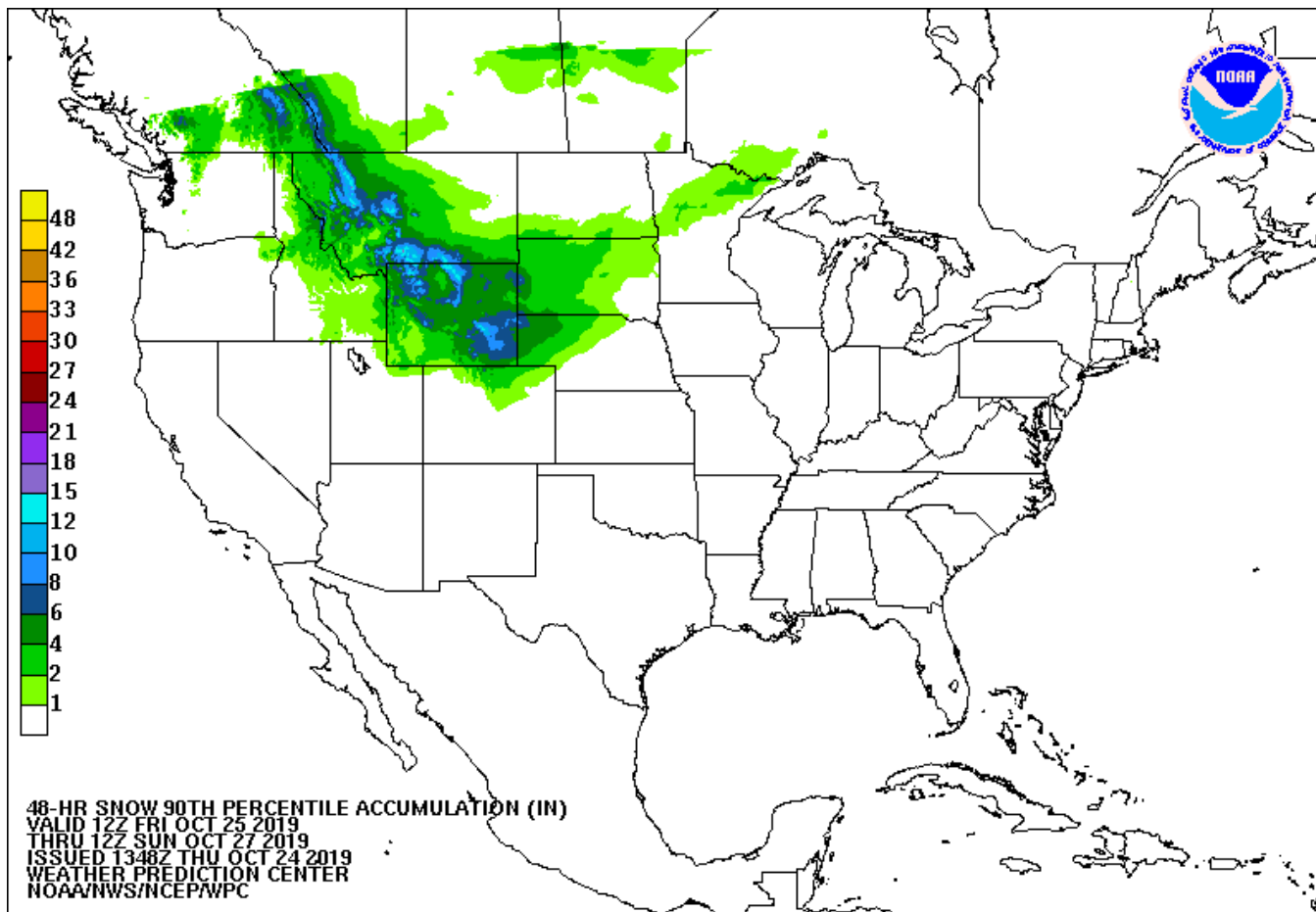
<https://tinyurl.com/SnowProb>





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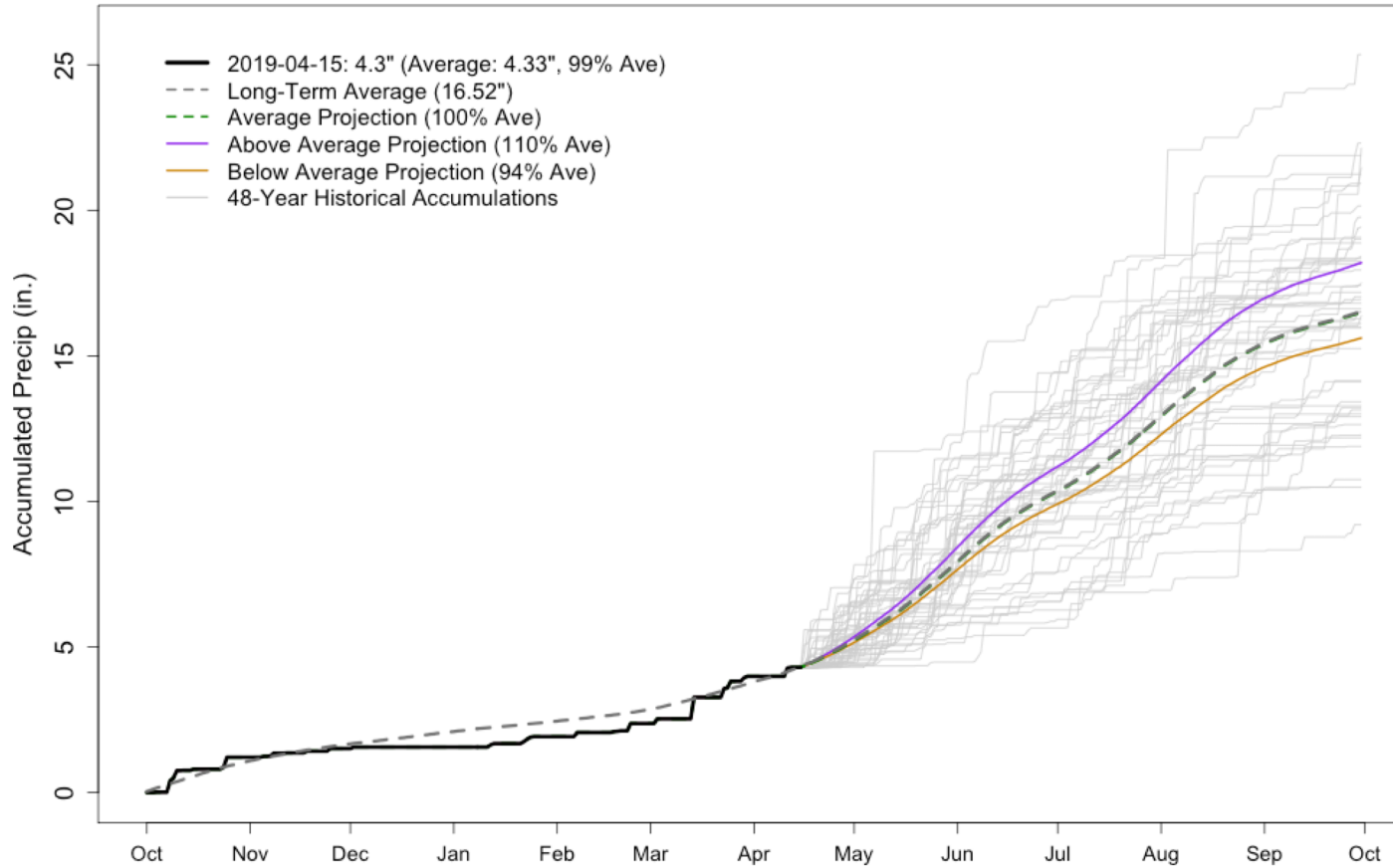




<https://tinyurl.com/SnowProb>



AKRON 4 E WY2019 Precipitation Projections



https://climate.colostate.edu/precip_proj.html





Intermountain West Drought Monitoring

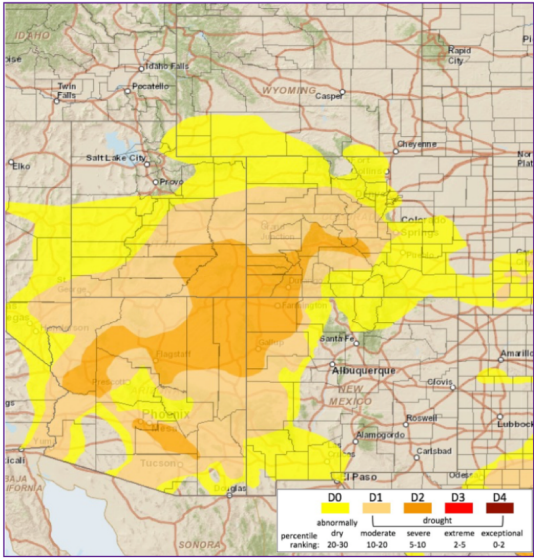
Explore our resources at climate.colostate.edu/~drought

climate.colostate.edu/~drought

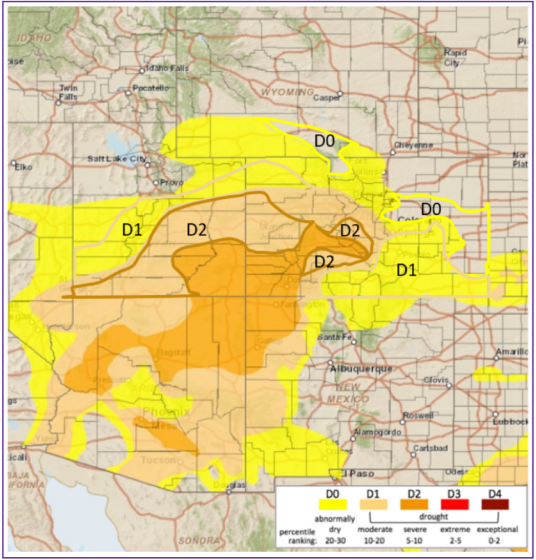
- NIDIS Weekly Summary
- Precipitation
- Snow
- Streamflow
- Surface Water
- Evaporative Demand
- Impacts Reports
- Outlook
- Interactive SPI Maps
- Monthly Precip Contribution
- Composite Drought Evaluator eXperiment (CoDEX)



NIDIS Intermountain West
Drought Early Warning System
October 22, 2019



Current U.S. Drought Monitor Depiction ⓘ



Recommended Changes ⓘ

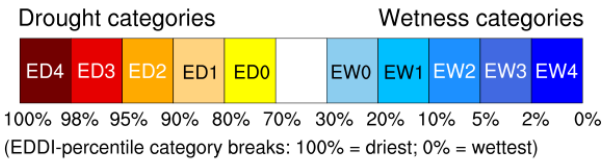
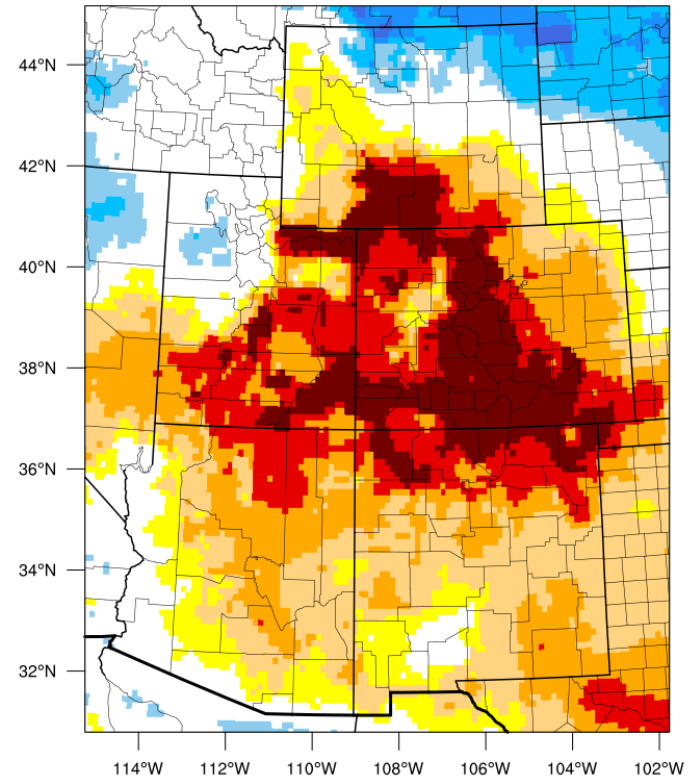
Summary: October 22 2019

The last seven day period started out warm and dry across the IMW, but another dose of winter has hit in the northern half of the region. The Tetons, northern Wasatch, and northern Colorado Rockies received 0.50-1.50" of precipitation in the last several days, mostly in the form of snow. Totals in the valleys were mostly below 0.25". Southern mountains did not fair as favorably. The San Juan, La Sal, and



evaporative demand describes how much moisture the atmosphere wants to take from the land

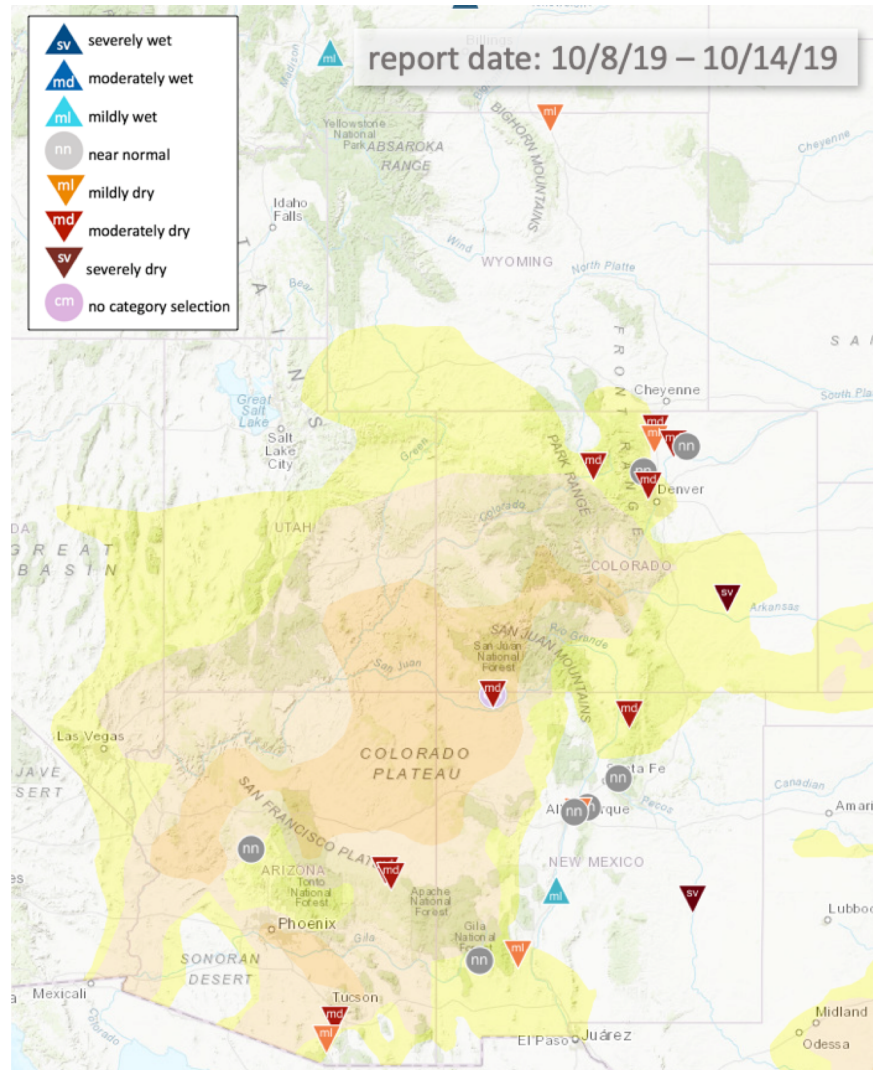
3-month EDDI categories for October 18, 2019



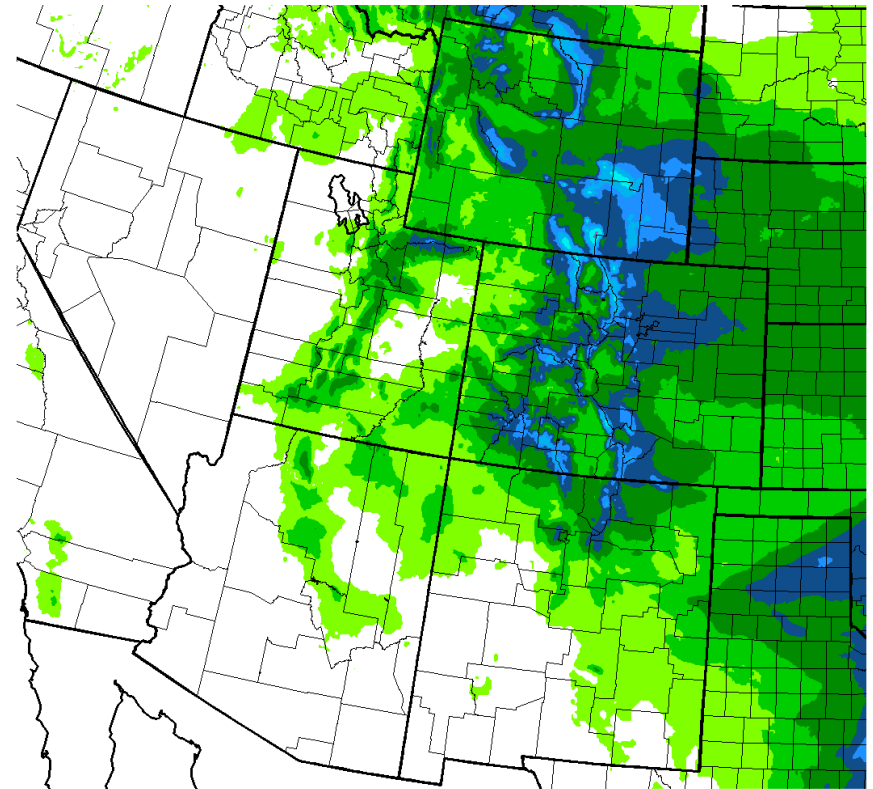
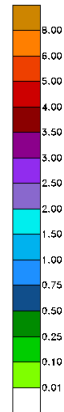
Generated by NOAA/ESRL/Physical Sciences Division



CoCoRaHS Condition
Monitoring reports come
from volunteers around the
country!



Get the 7-day precipitation accumulation forecast over the region

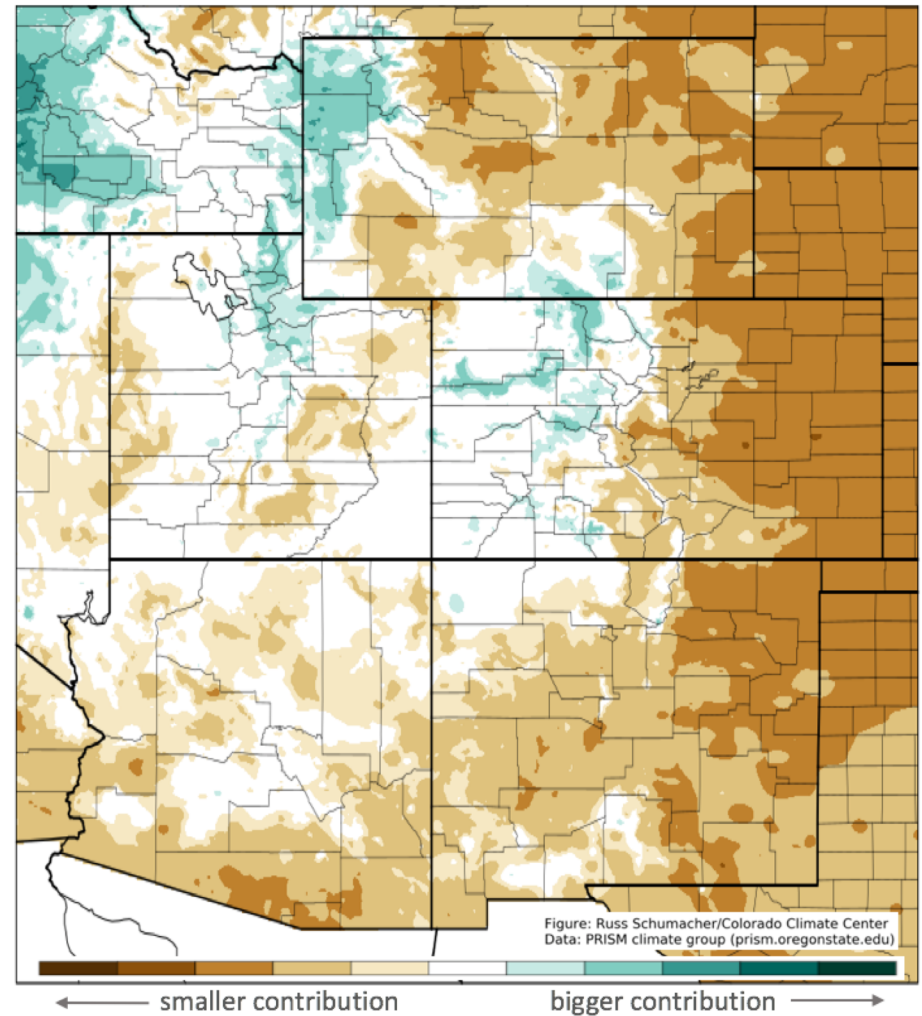


NOAA WPC FORECAST PRECIPITATION (INCHES) IN 7 DAYS ENDING THU 191051/120
FORECAST ISSUED 191024/1200F168



Monthly precipitation contributions tell you how “important” a specific month’s average precipitation is to the annual total

November climatological contribution to annual average precipitation





Where to go for
additional resources

- Check your State Climate Office websites for data and tools
 - http://www.wrds.uwyo.edu/sco/climate_office.html
 - <https://climate.colostate.edu>
- Explore Regional Climate Center tools
 - <https://hprcc.unl.edu>
 - <https://mrcc.illinois.edu>
 - <https://wrcc.dri.edu>
- Spend some time with NOAA climate products
 - <https://www.ncdc.noaa.gov/cag/>
 - <https://www.ncdc.noaa.gov/sotc/national/>



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Thank you



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