

# Monitoring climate and drought in Colorado

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Tri-Ute Climate and Drought Early Warning Workshop

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ATMOSPHERIC SCIENCE  
COLORADO STATE UNIVERSITY



*SCAN ME*

*We monitor drought  
and climate conditions  
weekly!*

*Check out our Colorado  
Drought Update page  
for resources.*

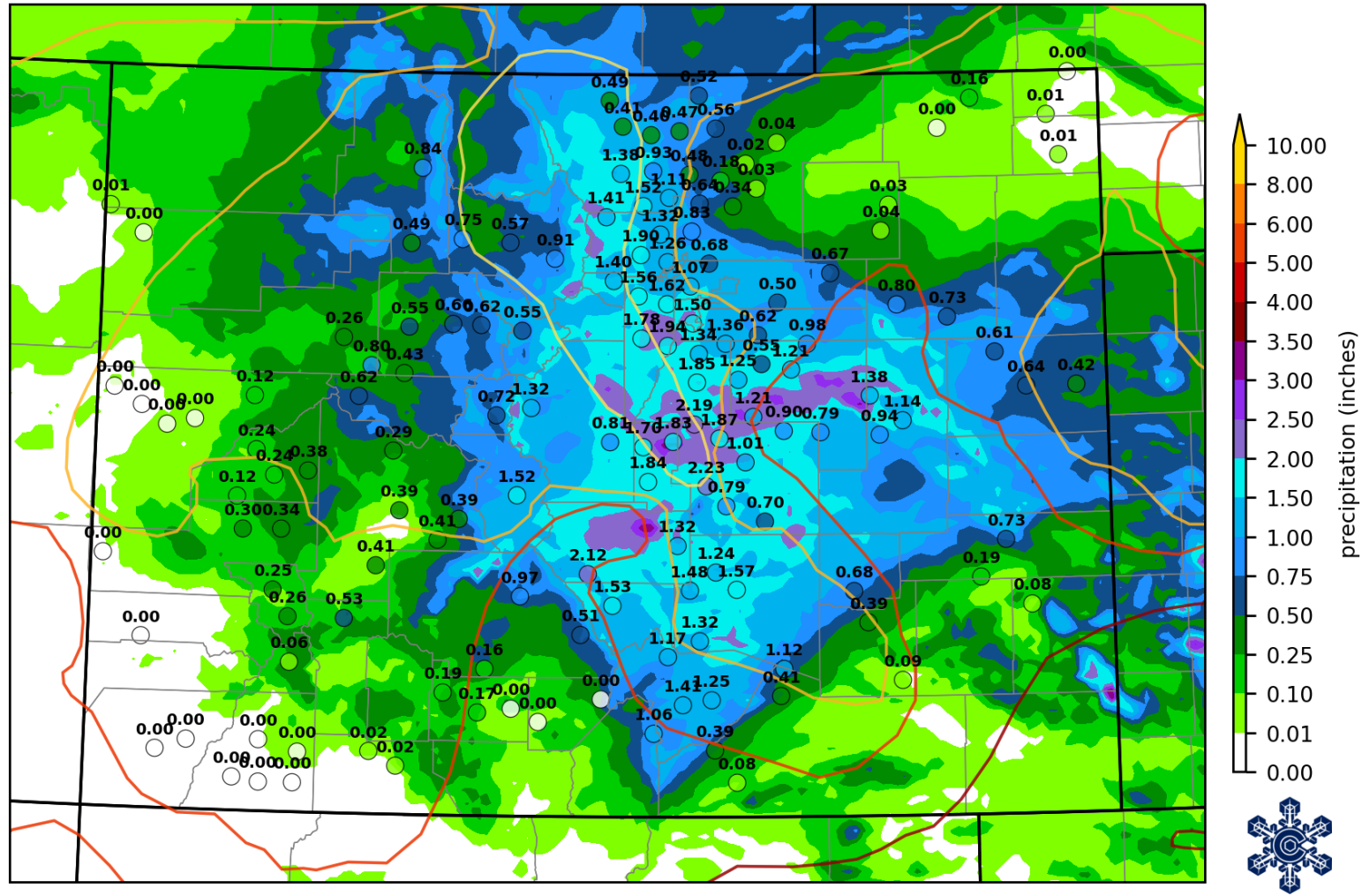
[climate.colostate.edu/drought](https://climate.colostate.edu/drought)



# Colorado weekly drought monitoring

- ❑ Our drought team – Russ Schumacher, Becky Bolinger, Peter Goble, Zach Schwalbe
- ❑ We begin looking through the data on Monday
- ❑ One person leads the monitoring for the week. On Tuesday, they look at conditions, draft up recommendations
- ❑ We share recommendations amongst our team. Then share them with a larger group of CO drought experts
- ❑ Official recommendations go to the U.S. Drought Monitor author on Tuesday afternoon
- ❑ We also have monthly webinars. Anyone can register:  
[https://climate.colostate.edu/webinar\\_registration.html](https://climate.colostate.edu/webinar_registration.html)
- ❑ Every month, we publish a monthly climate summary here:  
[https://climate.colostate.edu/monthly\\_summary.html](https://climate.colostate.edu/monthly_summary.html)

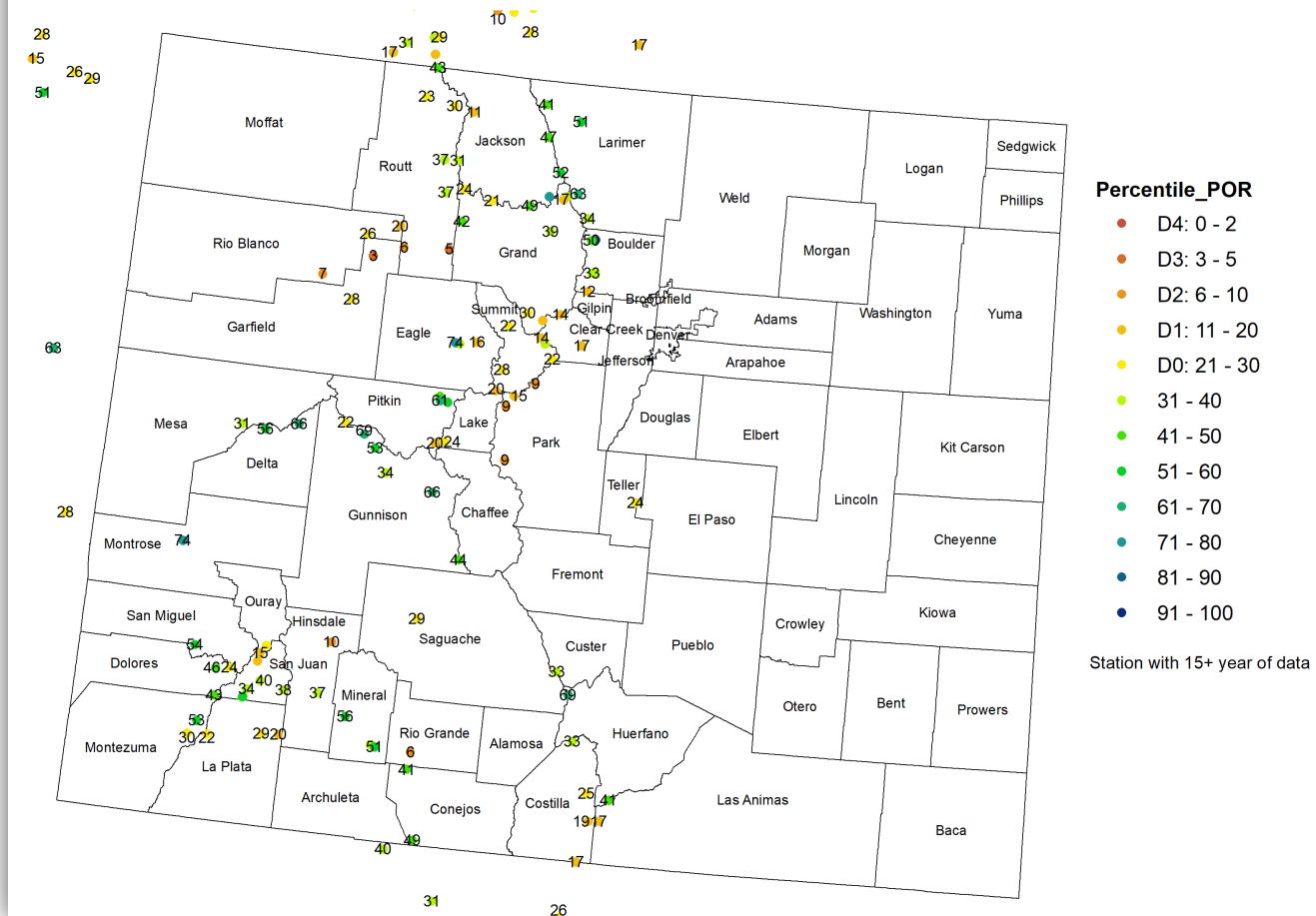




We look at last week's precipitation for potential changes to current drought conditions



# Snotel Water Year 2022 Peak Snowpack Percentile Ranking



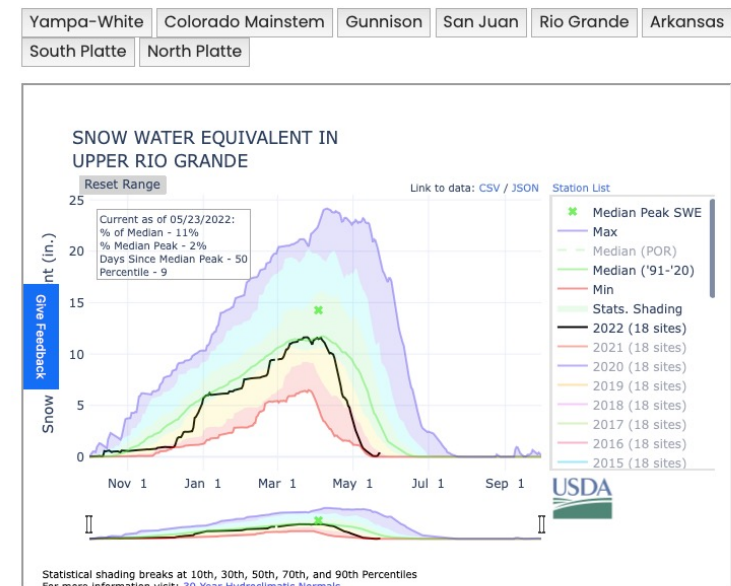
In the winter, we closely monitor snowpack conditions...



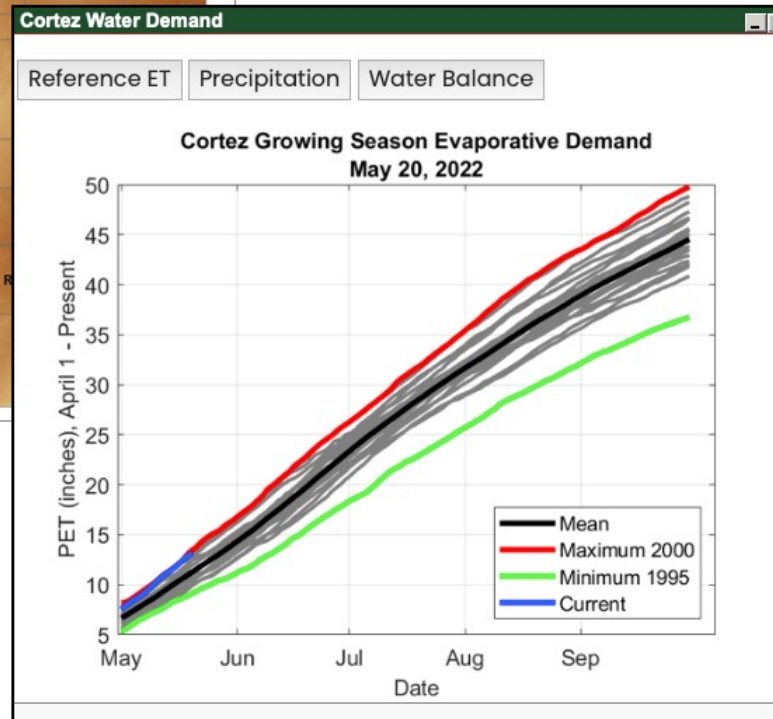
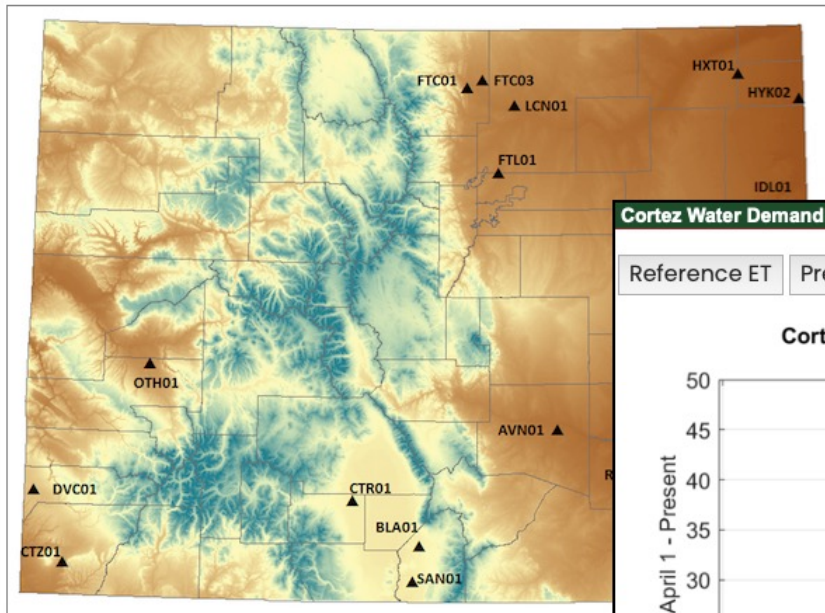
# NRCS SNOTEL Resources

- ❑ NRCS Interactive Map:
  - ❑ <https://www.nrcs.usda.gov/wps/portal/wcc/home/quicklinks/imap>
  - ❑ Set the parameters you want, then bookmark the page to always go back to those parameters!
  - ❑ Within the interactive map, click on a station to view the current season's snowpack chart and other information.
- ❑ NRCS Colorado Snow Survey Basin Charts:
  - ❑ <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/co/snow/products/?cid=nrcseprd1432263>
  - ❑ We also have basin charts on our CO Drought Update page!
- ❑ NRCS Utah Snow Survey Basin Charts:
  - ❑ <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/ut/snow/products/?cid=nrcseprd1330021>

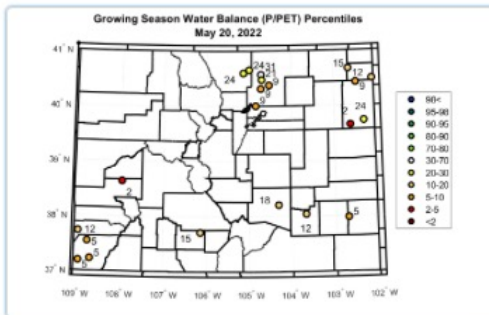
## basin snowpack graphs



# CoAgMET reference ET



## water balance



We monitor conditions at our CoAgMET stations.

Colorado Agricultural Meteorological nETwork – [coagmet.colostate.edu](http://coagmet.colostate.edu)

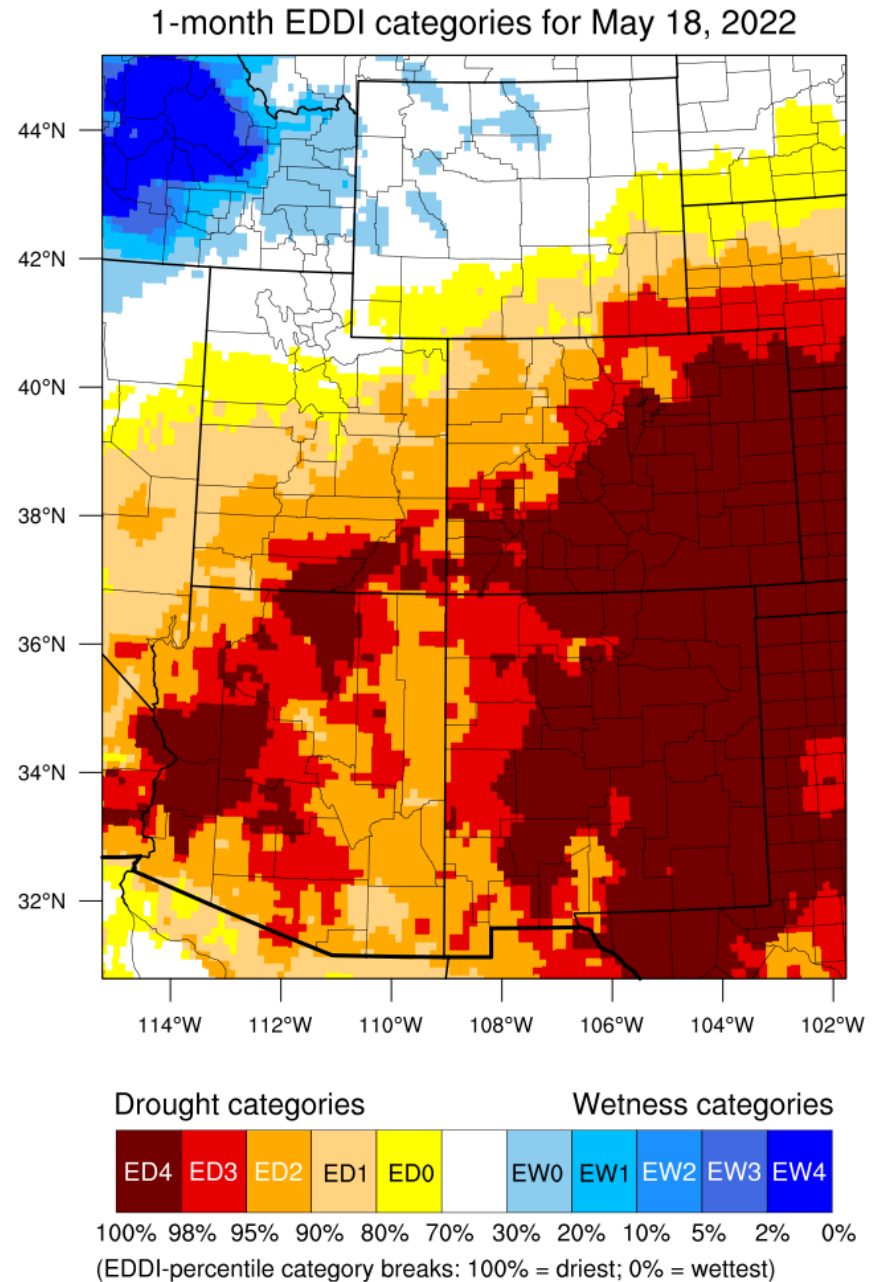


What happens in the atmosphere is as important as what's happening on the ground!

EDDI looks at temperature, humidity, solar radiation, and wind, and compares current conditions to that same time period in history.

When the atmosphere is more “thirsty” it tries to take more water from the ground.

<https://psl.noaa.gov/eddi/>



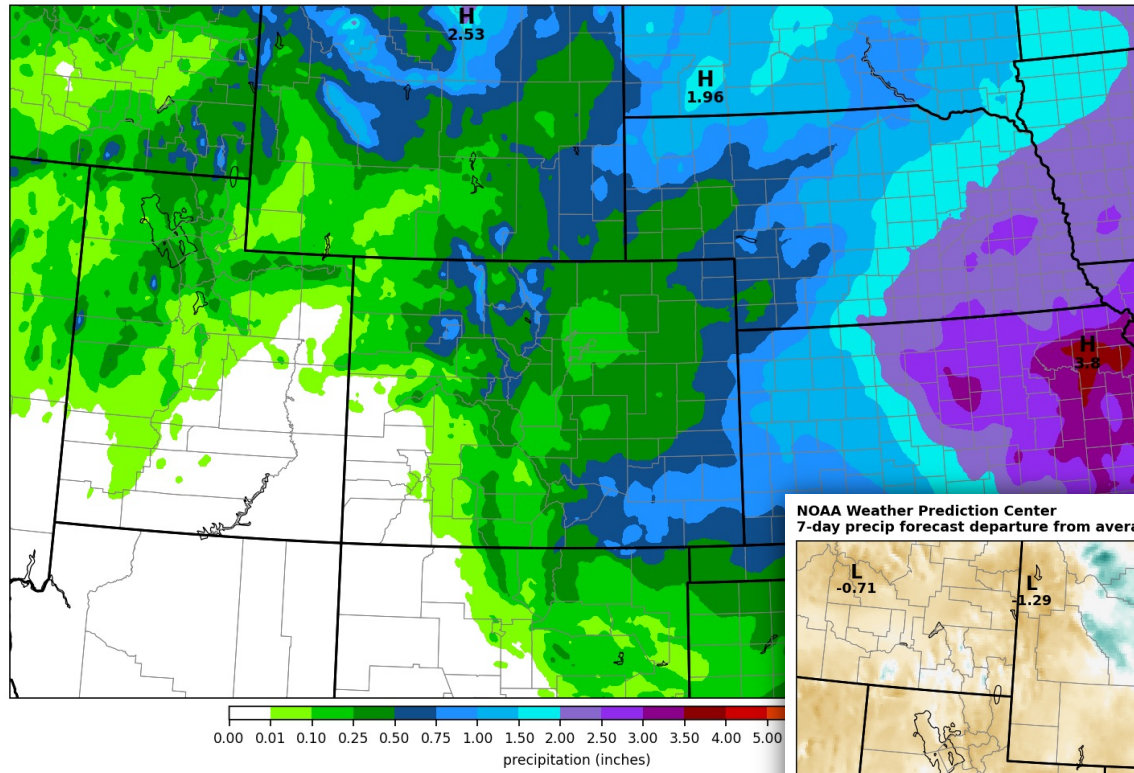
Generated by NOAA/ESRL/Physical Sciences Laboratory





**NOAA Weather Prediction Center  
7-day precipitation forecast**

forecast issued 1200 UTC Tue 24 May 2022  
precipitation in 168 hrs ending 1200 UTC Tue 31 May 2022

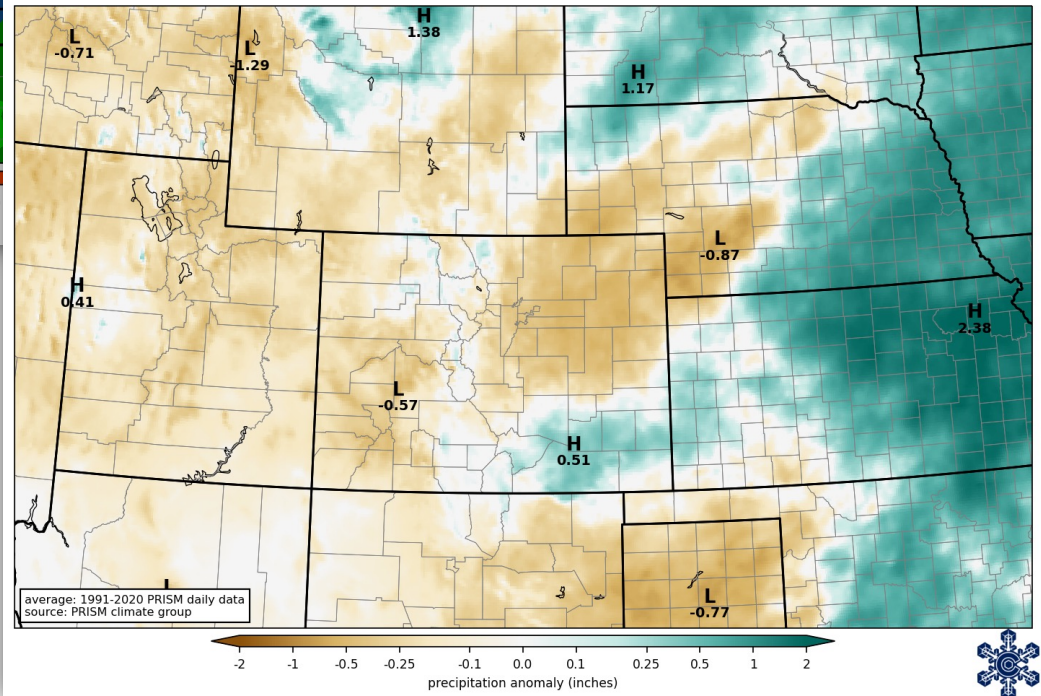


We look at the 7-day precipitation forecast for planning.

Not all precipitation is equal!  
Time of year is important!

**NOAA Weather Prediction Center  
7-day precip forecast departure from average**

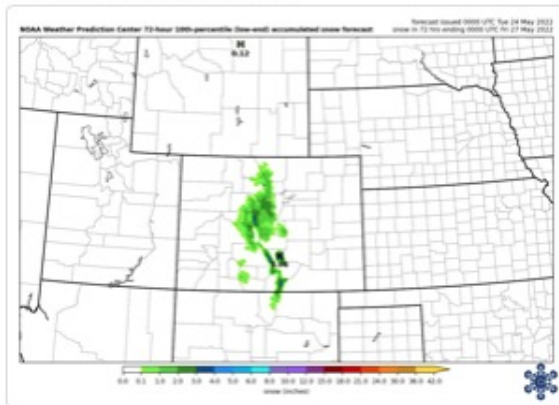
forecast issued 1200 UTC Tue 24 May 2022  
precipitation in 168 hrs ending 1200 UTC Tue 31 May 2022



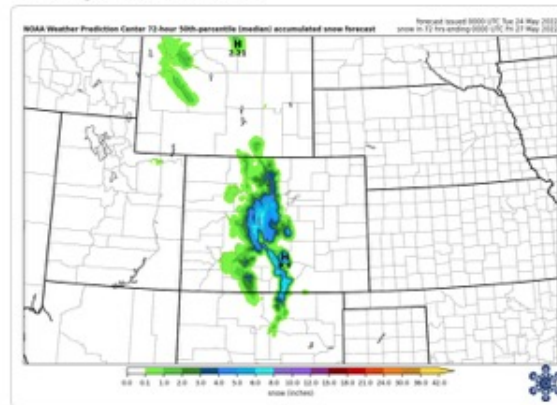
We also provide 72-hour snowfall forecasts for the region, including the 10<sup>th</sup> percentile, median (likely), and 90<sup>th</sup> percentile amounts.

## 72-hour snowfall accumulation

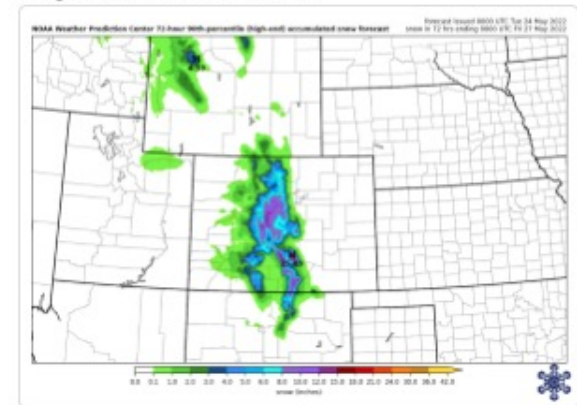
Low end amounts



Likely amounts



High end amounts



<https://climate.colostate.edu/ski-dashboard/>

For more Colorado weather and forecast products, check out Russ Schumacher's real-time weather page: <https://schumacher.atmos.colostate.edu/weather/>

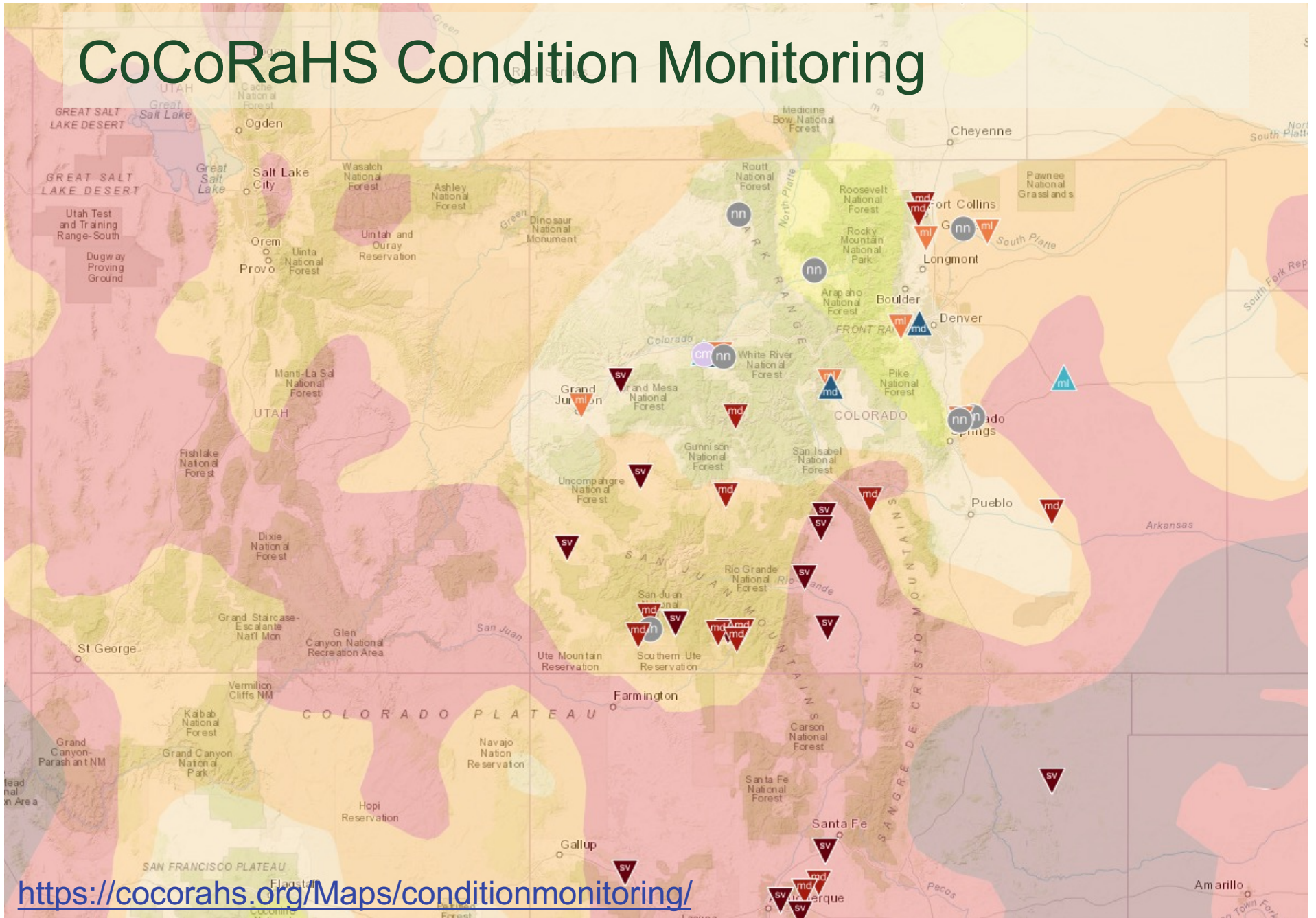


Are we using condition monitoring?

*Of course!*



# CoCoRaHS Condition Monitoring



# Monitoring

## Pagosa Springs 5.8 SSE

<b>Station Number</b>	CO-AU-37
<b>Report</b>	Watering perennials and established garden plants at least weekly. Planting the garden, soil is dry though there is still some moisture several inches down - perhaps one of the benefits of hard clay! There is a wildfire burning north of town as of yesterday afternoon, high winds and no significant precipitation in the forecast. Taking extra measures to ensure our home is mitigated against wildfire risk. I need to remember to put out water for the birds. The pond on our lot across the road is barely muddy in the middle.
<b>Condition</b>	Moderately Dry
<b>Date</b>	Wed May 18 2022
<b>Summary Data</b>	<a href="#">CoCoRaHS summary data by week for this station.</a>

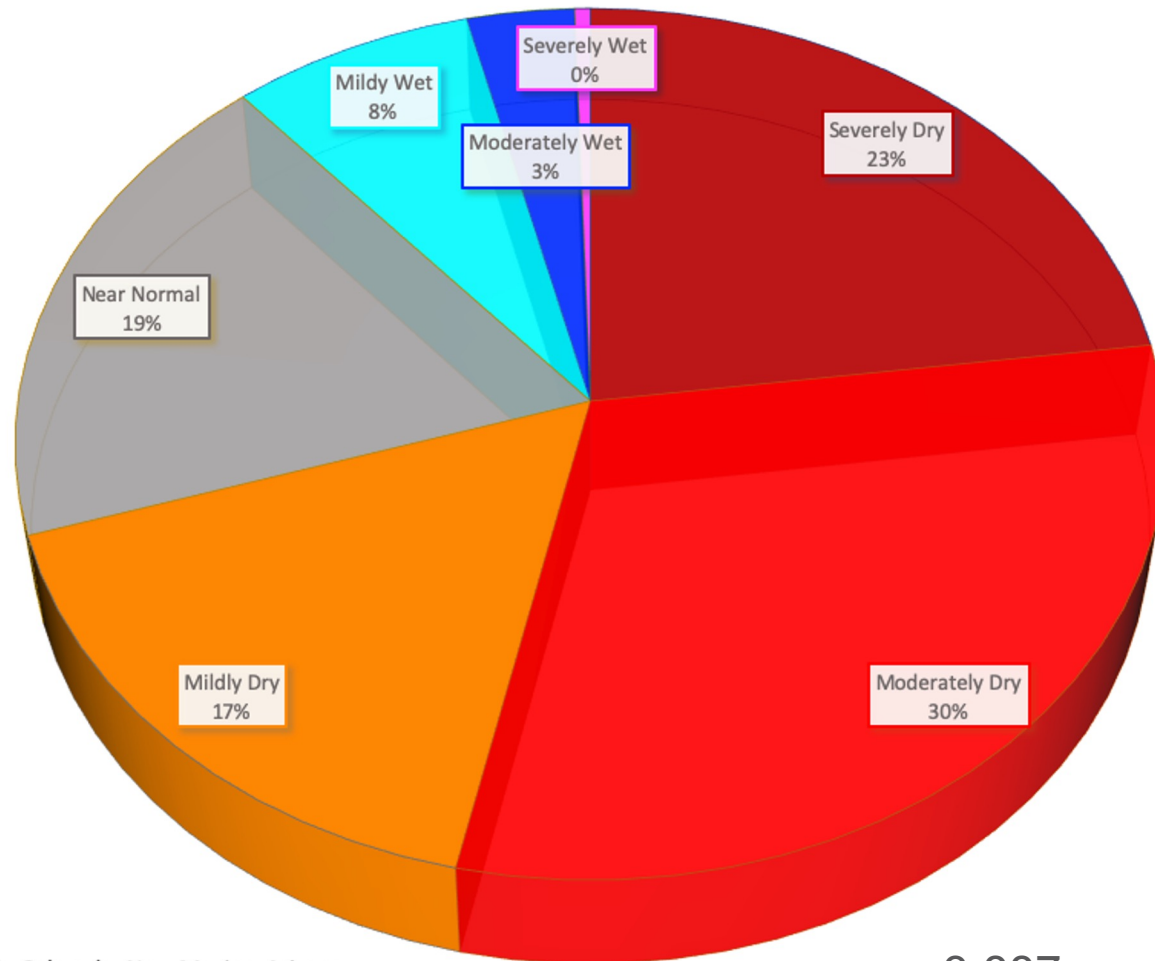
Close

<https://cocorahs.org/Maps/conditionmonitoring/>



# CM Reports during the 2018 Four Corners drought

## CONDITION MONITORING REPORTS

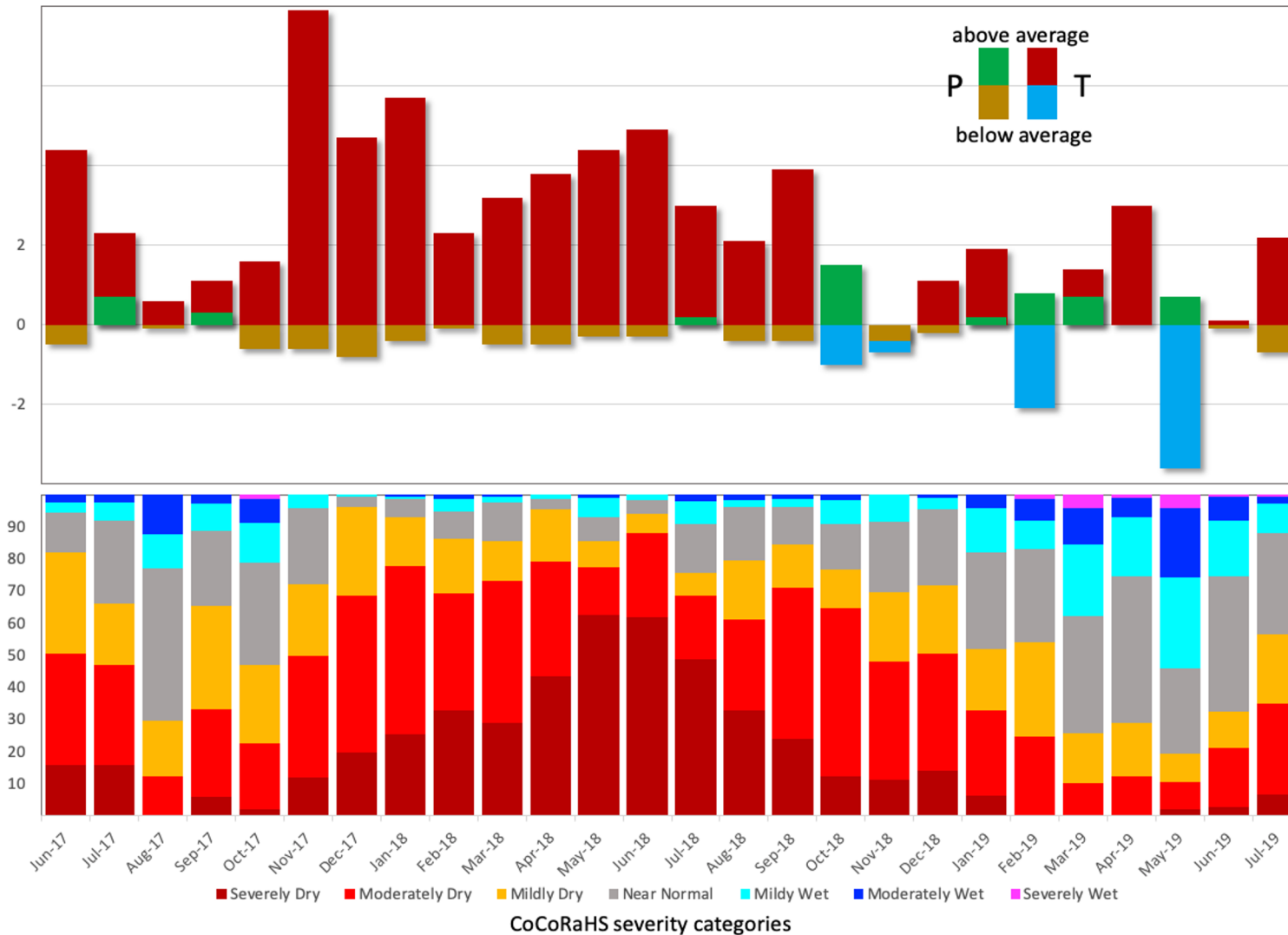


Reports in Utah, Colorado, New Mexico, Arizona  
June 1, 2017 - July 31, 2019

3,887 reports



# CM reports compare well with climate



# Reach out to us any time!

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  - ❑ Assistant State Climatologist
- ❑ Russ Schumacher – [russ.schumacher@colostate.edu](mailto:russ.schumacher@colostate.edu)
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  - ❑ CoAgMET Manager





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Thank you

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CENTER



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