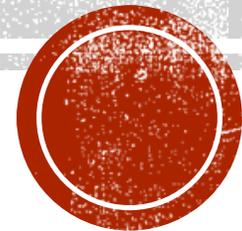


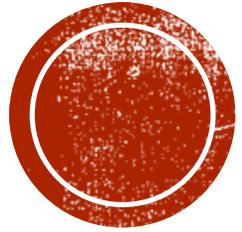
DROUGHT MONITORING EFFORTS AS PART OF THE NIDIS INTERMOUNTAIN WEST DEWS

By Dr. Becky Bolinger

Colorado Climate Center, Colorado State University



April 4, 2017



THE FUTURE FOR DROUGHT EARLY WARNING IN THE INTERMOUNTAIN WEST

- ✓ ***Improving effective communication with our user community***
- ✓ **Enhancing delivery and dissemination of drought information**
- ✓ **Developing products to improve drought early warning**



NIDIS Weekly Summary

Precipitation

Snow

Streamflow

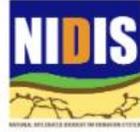
Surface Water

Evaporative Demand

Outlook

Composite Drought Evaluator eXperiment (CoDEX)

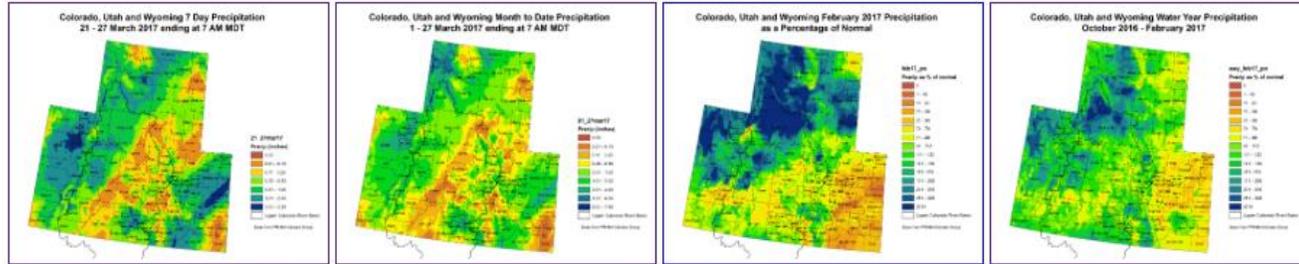
Experimental HiRes Gridded Tool



NIDIS Intermountain West Regional Drought Early Warning System March 28, 2017

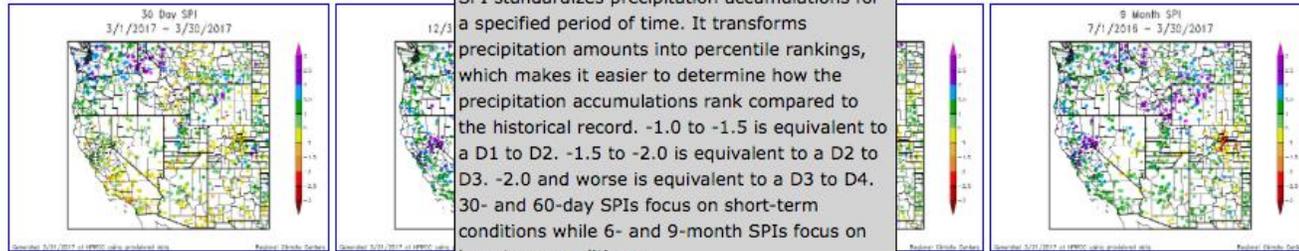


Precipitation



These images are produced by the Colorado Climate Center and use precipitation data from NWS COOP, NRCS SNOTEL, CoCoRaHS, and CoAgMet stations to generate the gridded products. Images are generally updated every Tuesday. When maps are unable to be updated, AHPS precipitation is shown, courtesy of the [National Weather Service](#).

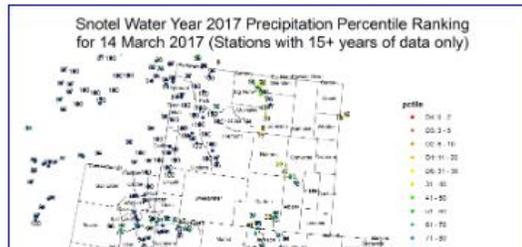
Standardized Precipitation Index



SPI standardizes precipitation accumulations for a specified period of time. It transforms precipitation amounts into percentile rankings, which makes it easier to determine how the precipitation accumulations rank compared to the historical record. -1.0 to -1.5 is equivalent to a D1 to D2. -1.5 to -2.0 is equivalent to a D2 to D3. -2.0 and worse is equivalent to a D3 to D4. 30- and 60-day SPIs focus on short-term conditions while 6- and 9-month SPIs focus on long-term conditions.

SPI maps are updated daily and are provided by [High Plains](#)

SNOTEL Precipitation Percentile



updated website!



OUR ESTABLISHED PROCEDURES...

INTERMOUNTAIN WEST
DROUGHT EARLY WARNING SYSTEM

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Upper Colorado River
Regional Drought Early Warning System

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US Drought Monitor

Hello,

This week's "Weekly Climate, Water and Drought Assessment for the Intermountain West" (**March 28, 2017**) can be accessed from the following link:
<http://climate.colostate.edu/~drought>

If you have any comments or suggestions, please reply directly to: drought@ccc.atmos.colostate.edu

Our weekly summaries are being brought to you by the Colorado Climate Center at Colorado State University with support from the National Integrated Drought Information System (NIDIS). For more information on NIDIS please visit: <https://www.drought.gov/drought/what-nidis>

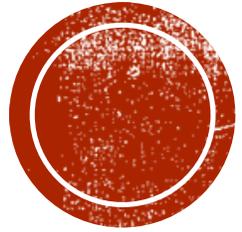
Links to current and past assessments are available at: http://ccc.atmos.colostate.edu/drought_webinar.php

Our next Intermountain West Drought Early Warning System Webinar will be held at 10AM MDT, on Tuesday, April 11, 2017.

Look for an upcoming invitation with more details soon. To register click [here](#).

- Weekly assessments with recommendations
- Webinars brief audience on current conditions and discuss recommendations
- Short-list email seeks feedback about possible recommendations
- Webinars and short-list email encourage impact reports from those “on the ground”
- Large email blast announcing weekly assessment and webinars





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DROUGHT INDICATOR EDUCATION WEBINARS

- Periodic live and archived recordings
- What do certain drought indicators mean specifically for the IMW?
- Why do we look at these variables, and what do they tell us?
- A casual course on a variety of our important indicators:
 - Standardized Precipitation Index
 - Reference Evapotranspiration
 - Snow Water Equivalent (aka Snowpack)
 - Evaporative Demand Drought Index, EDDI
 - Agricultural vs. Hydrologic, Short-term vs. Long-term
 - Return frequencies, drought categories, and analog years

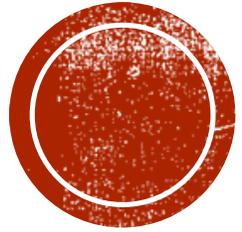


DIGITAL DROUGHT SUMMARY SERIES

- Very brief summary of current conditions
- Approximately 2 to 5 minutes in length
- Casual, conversational, more “big picture” instead of describing specific details
- Perhaps test as a “live feed” on social media

- People are demanding information in efficient ways
- Do we limit widespread interest with our current format, providing all the technical details?
- It's our responsibility to consider additional communication avenues that seek participation from a more representative audience.

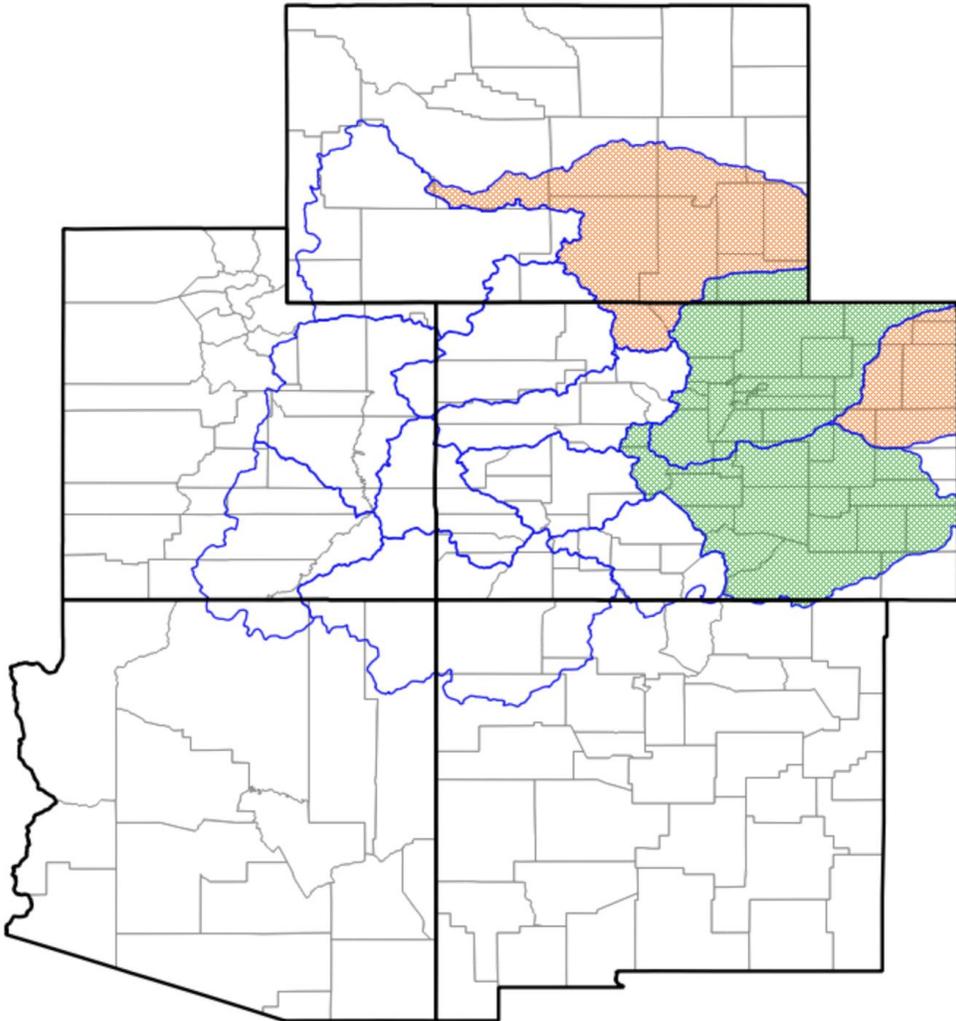




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CODEX – COMPOSITE DROUGHT EVALUATOR EXPERIMENT

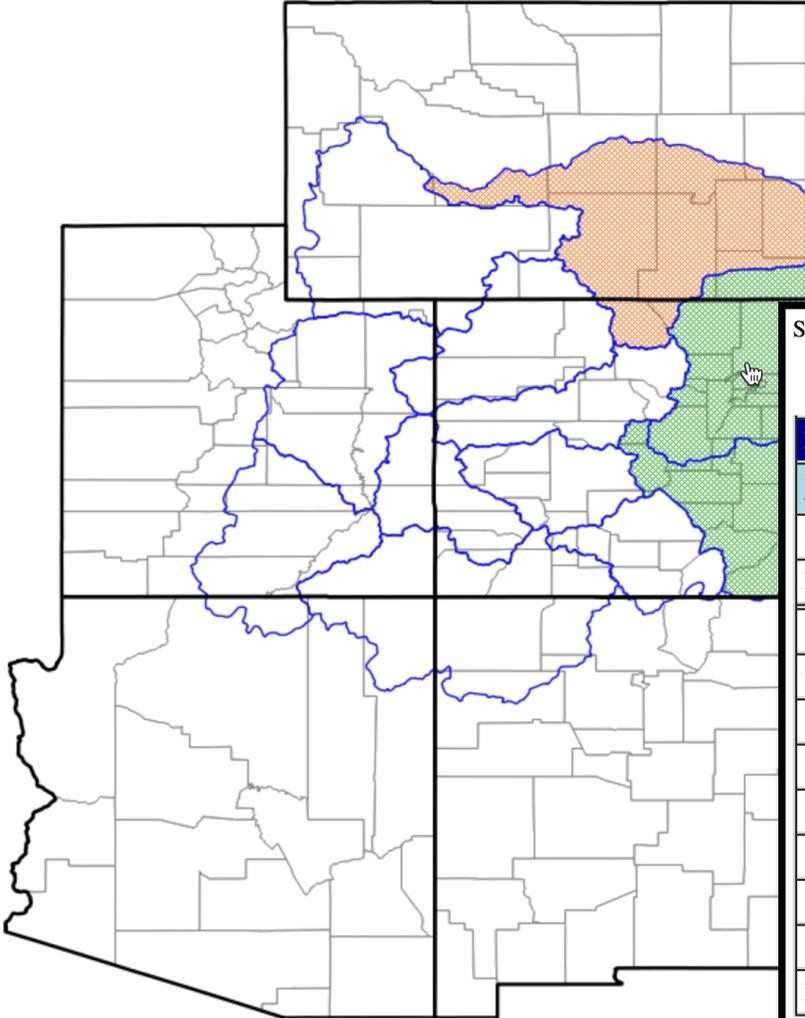
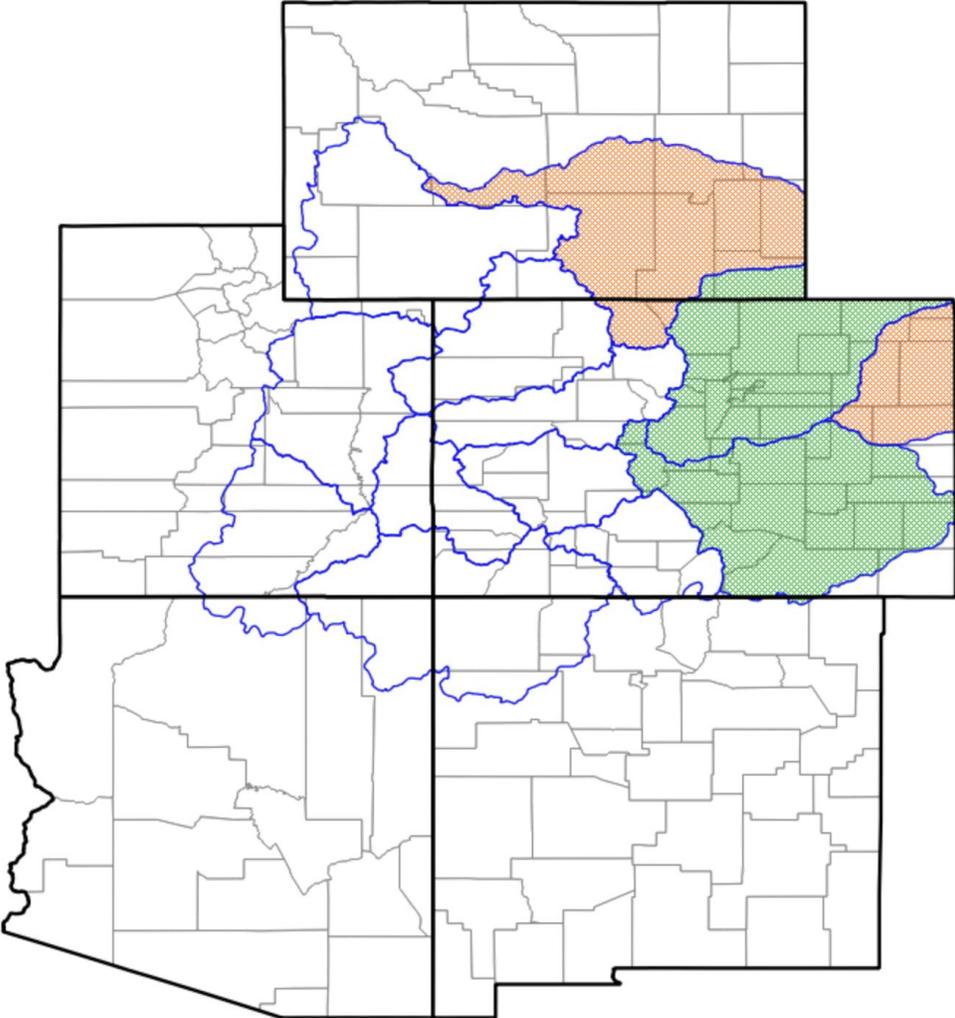


- A “composite” method of monitoring drought
- currently a manual, experimental process
- consideration of automation if successful

- Eliminates need for going back and forth between multiple products
- Helps identify areas that could be overlooked
- Points to areas that may need degradations or improvements



CODEX – COMPOSITE DROUGHT EVALUATOR EXPERIMENT



South Platte

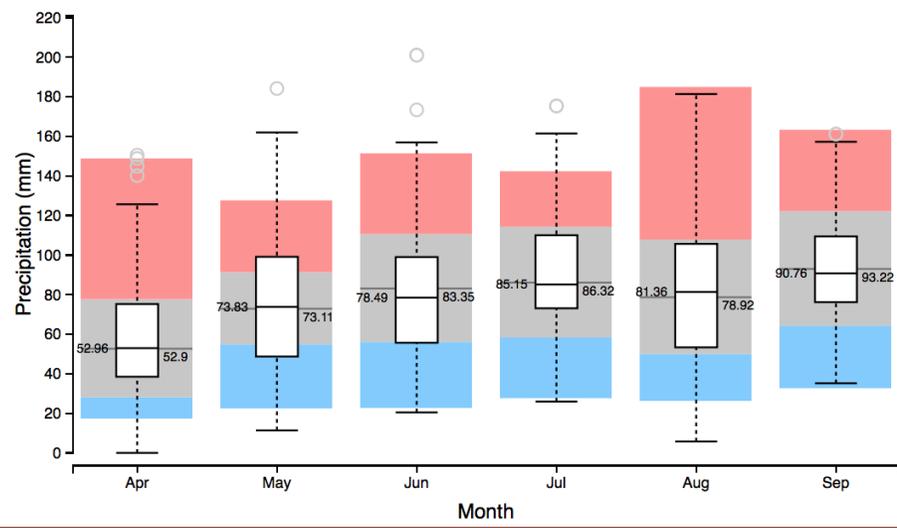
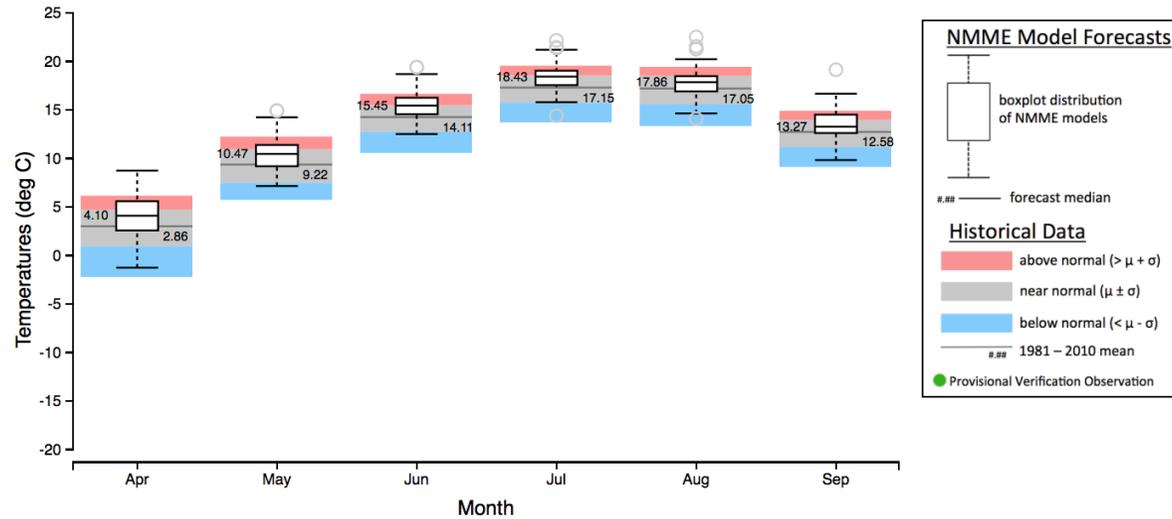
HUC 4	1019
Variable	D-Category
Current USDM	D1
Blended CoDEX	D0
30-Day SPI	-
90-Day SPI	D0
180-Day SPI	D1
Snowpack	-
Soil	D0
Streamflow	-
1mo EDDI	D3
3mo EDDI	D3
Impacts	D0



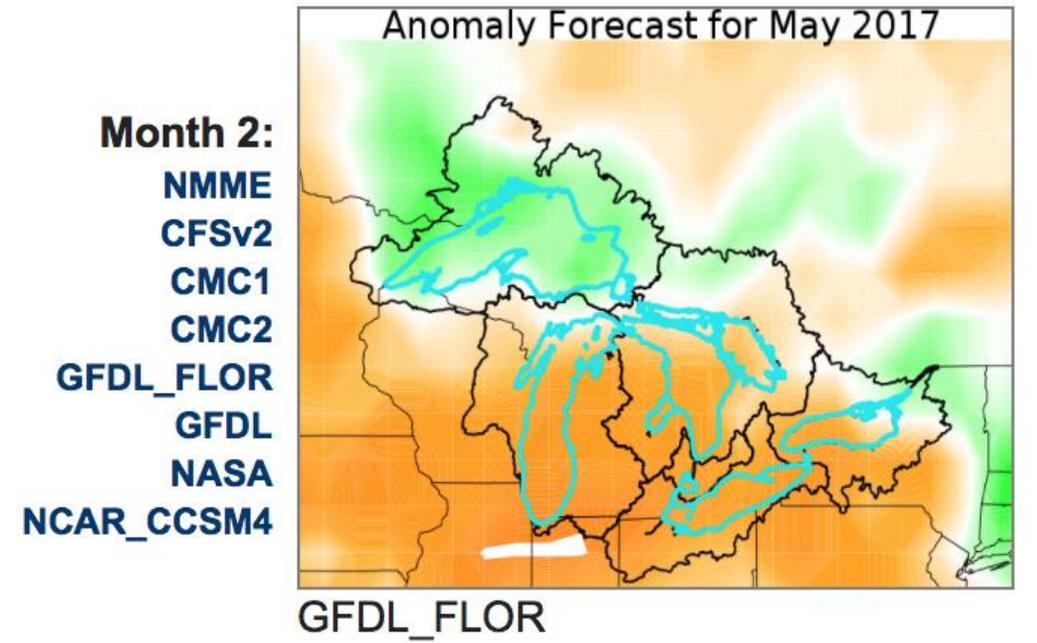
Great Lakes Seasonal Climate Forecast Tool (Version 2)

Target Basin: | Forecast Initiation Year: | Month:

CFSv2 (32) CMC1 (10) CMC2 (10) GFDL (10) GFDL_FLOR (24) NASA (11) NCAR_CCSM4 (10)



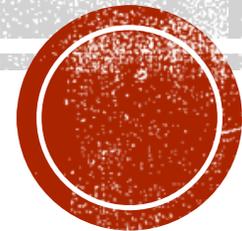
SEASONAL OUTLOOKS USING NMME



THANK YOU!!

Becky.Bolinger@colostate.edu

<http://climate.colostate.edu/>



Questions?