

2021-2022 Weather Review and Look Ahead

Lee Crowley

Senior Hydro-Meteorologist
Arkansas-Red Basin River Forecast Center
Tulsa, OK



Outline

1. Brief overview of Water Supply Operations for the Arkansas River in Colorado.
2. Overview of 2021 Weather for Eastern Colorado.
3. What can we expect weather-wise for 2022?
4. Questions



NWS Water Supply Forecast Operations

Forecasts are produced by the Arkansas-Red Basin River Forecast Center (ABRFC) in close collaboration with the NRCS.

Forecasts from ABRFC are derived from the Ensemble Stream Prediction model using Climatology and Numerical Weather Prediction model precipitation input.

Most forecasts are for seasonal (April – September) native runoff volume. We also independently issue runoff volume forecasts (not native flow) for the Arkansas River and Purgatoire River at Las Animas.

Forecasts are issued in the first week of the month from January – June.

NRCS is changing to using Median instead of Average for their new (1991-2020) seasonal runoff volume Normals. ABRFC is contemplating doing the same.



Data Sources

Observed Flows

USGS Gaging Stations and Webpages

Colorado DWR Gaging Stations and Webpages

Native Flows

Calculations derived in cooperation with the NRCS to estimate the effects of trans-basin, irrigation, and water supply diversions into and out of the system. It is simple accounting. Only diversions that can be estimated from readily available data are used in the accounting.



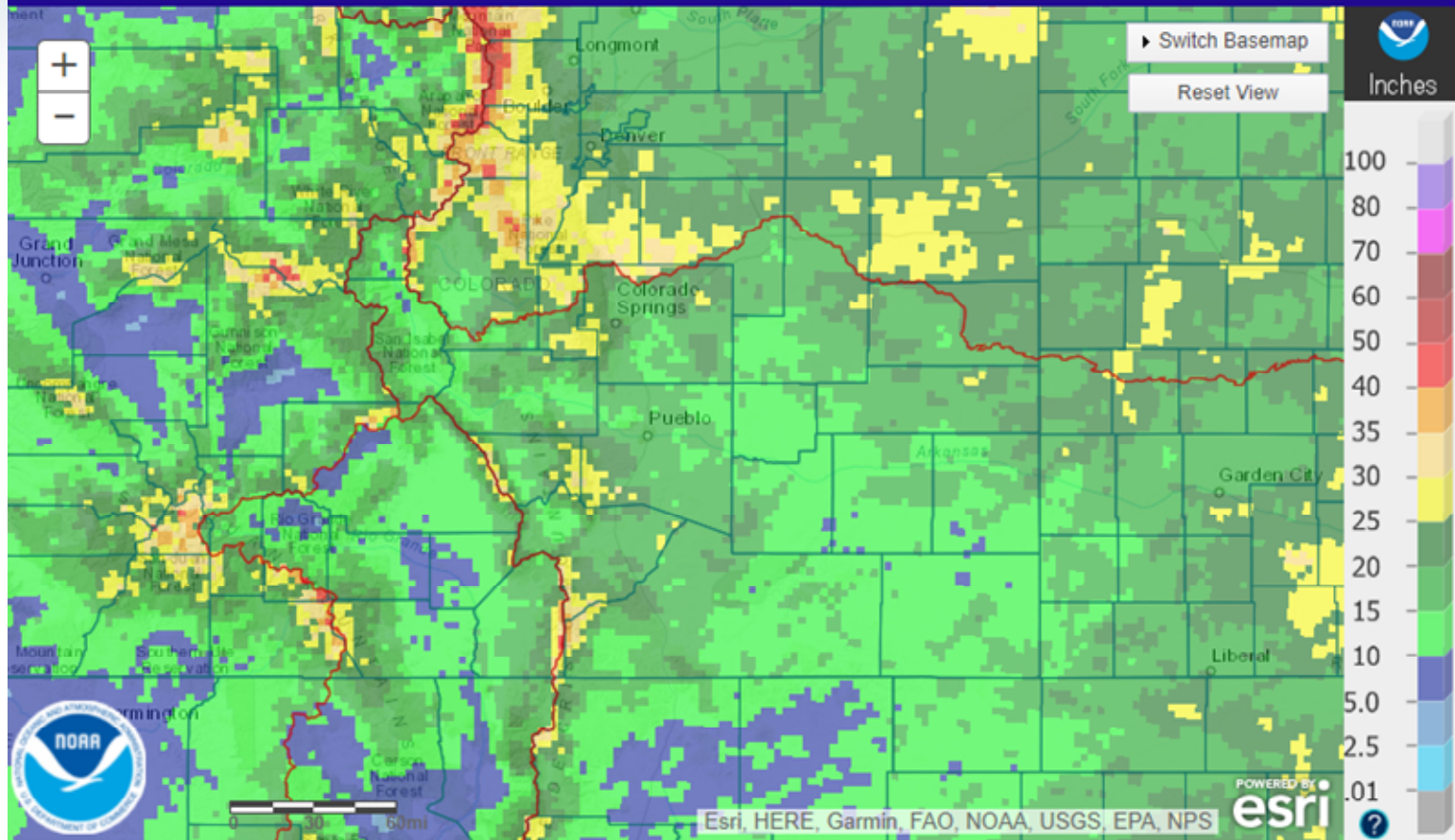
Observed Precipitation for WY2021 Arkansas River Basin in SE Colorado

Displaying 2021 Water Year (Oct. 1) Observed Precipitation
Valid on: October 01, 2021 12:00 UTC

Print this map Permalink BOOKMARK

What is UTC time? Map Help

Find address or location



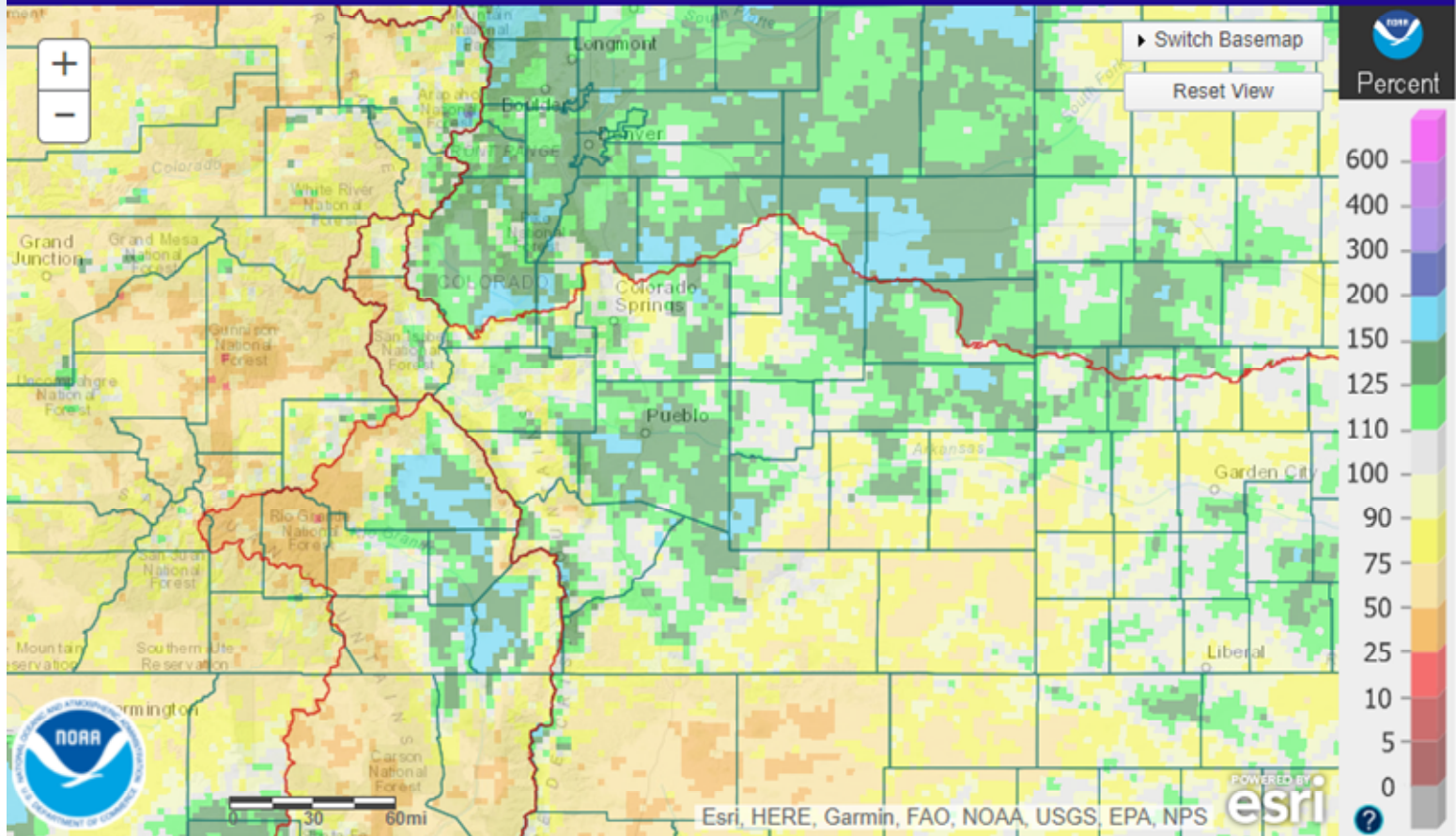
Percent-of-Normal Precipitation for WY-2021 Arkansas River Basin in SE Colorado

Displaying 2021 Water Year (Oct. 1) Percent of Normal Precipitation
Valid on: October 01, 2021 12:00 UTC

Print this map Permalink BOOKMARK

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Find address or location

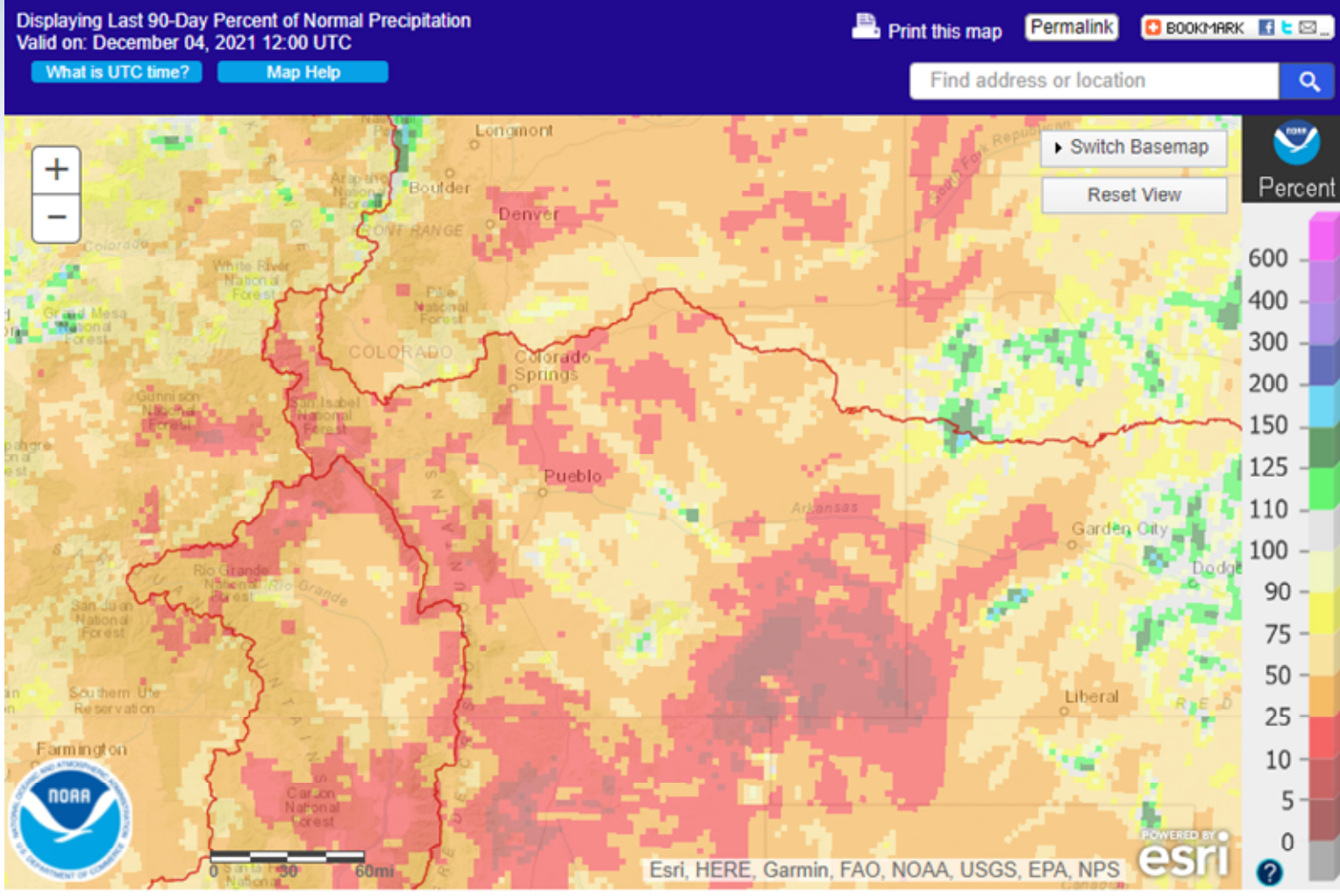


Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS

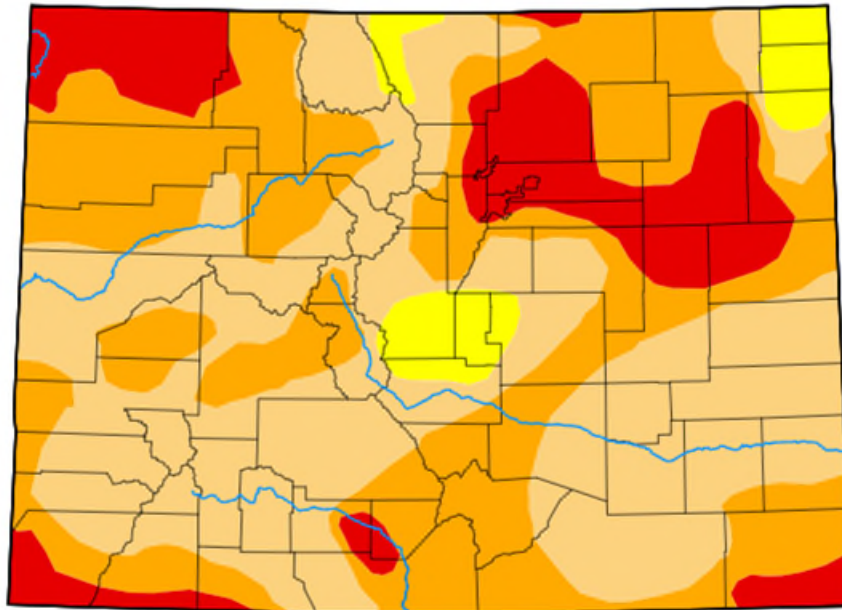
POWERED BY
esri



Percent-of-Normal Precipitation for Last 90 Days Arkansas River Basin in SE Colorado



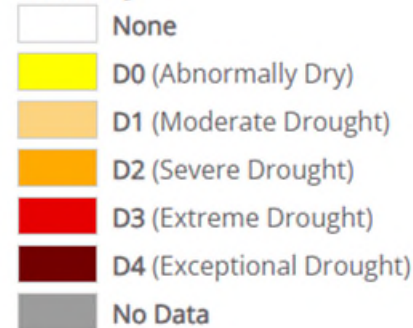
2020 and 2021 Drought Monitors First Week of December



**Map released: Thurs. December 2,
2021**

Data valid: November 30, 2021 at 7 a.m. EST

Intensity



Authors

United States and Puerto Rico Author(s):

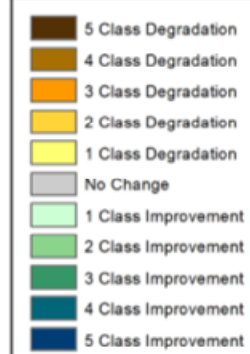
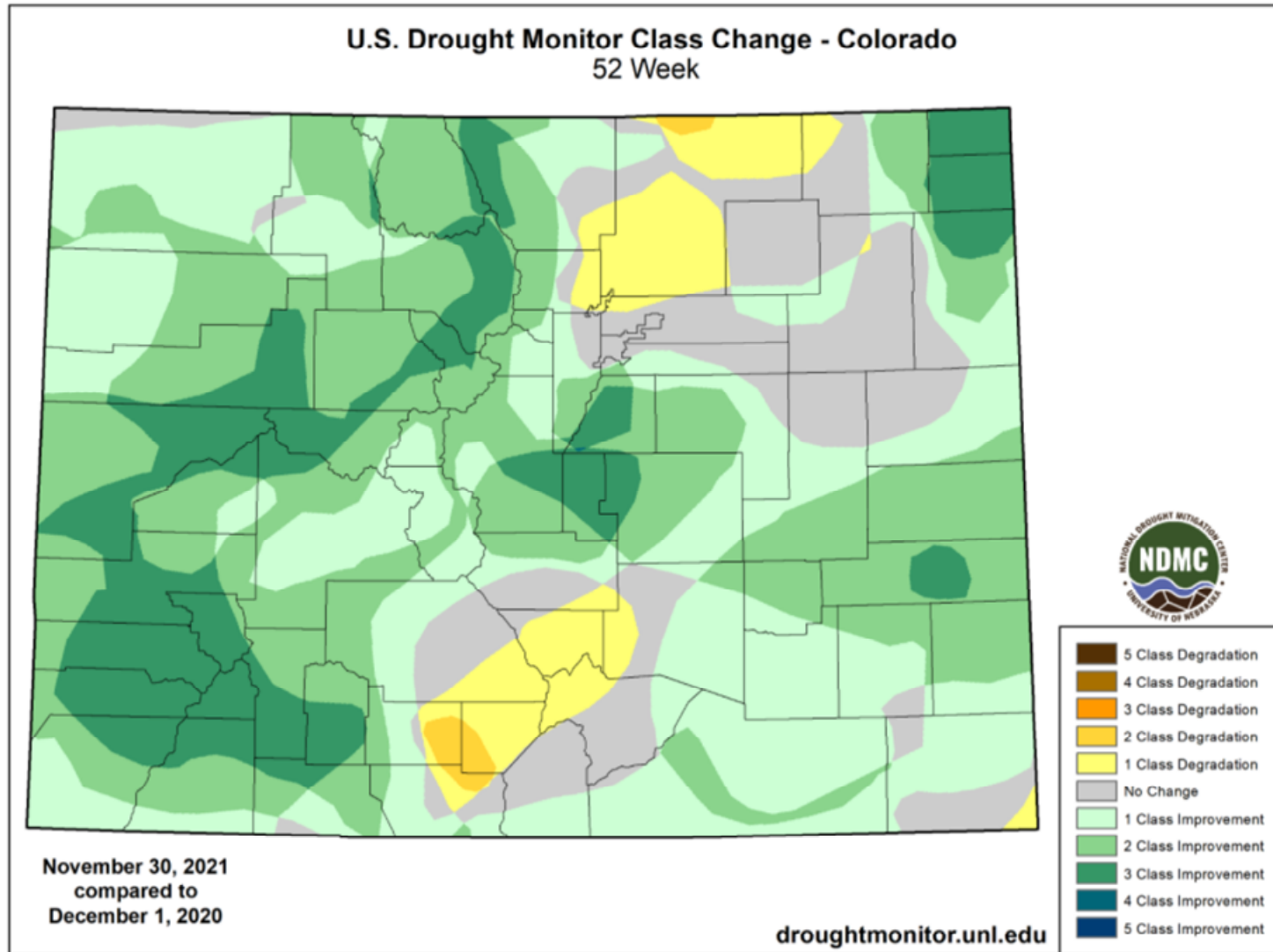
Richard Heim, NOAA/NCEI

Pacific Islands and Virgin Islands Author(s):

Denise Gutzmer, National Drought Mitigation Center



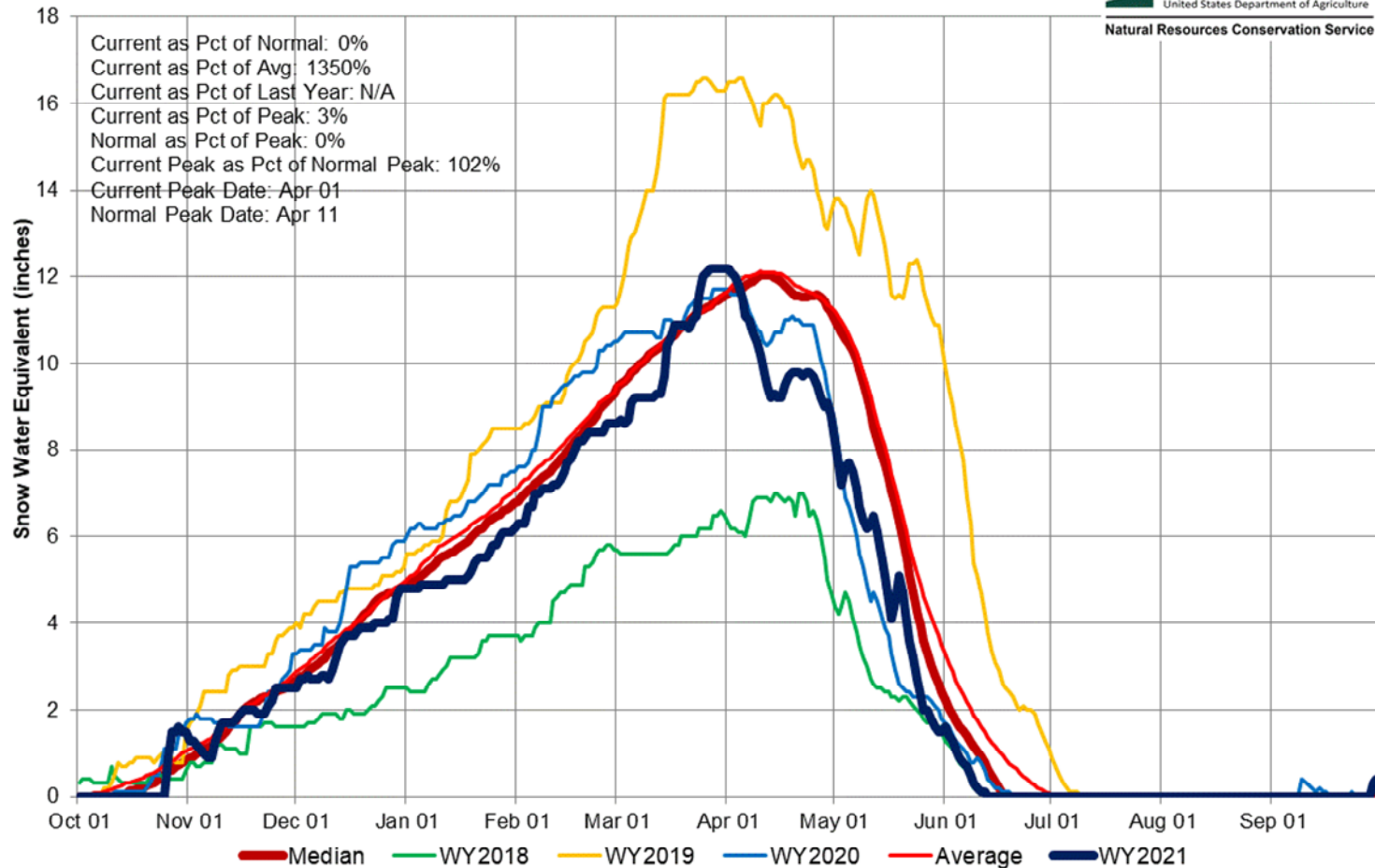
2020 and 2021 Drought Monitor Change Map First Week of December



Water Year 2021, Arkansas Basin SWE Time Series

Arkansas River Basin Time Series Snowpack Summary

Based on Provisional SNOTEL data as of Sep 30, 2021

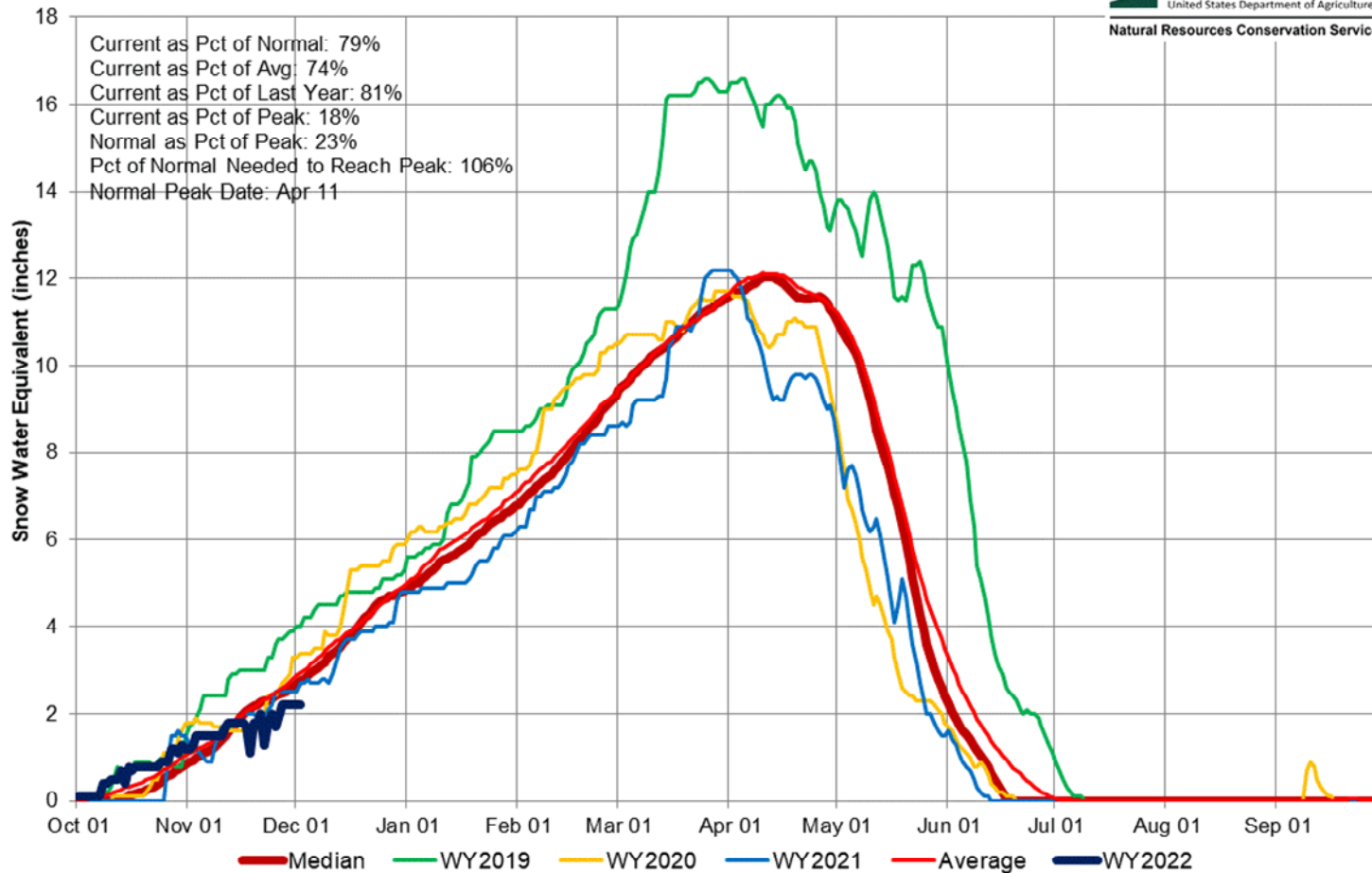


Water Year 2022, Arkansas Basin SWE Time Series

Arkansas River Basin Time Series Snowpack Summary

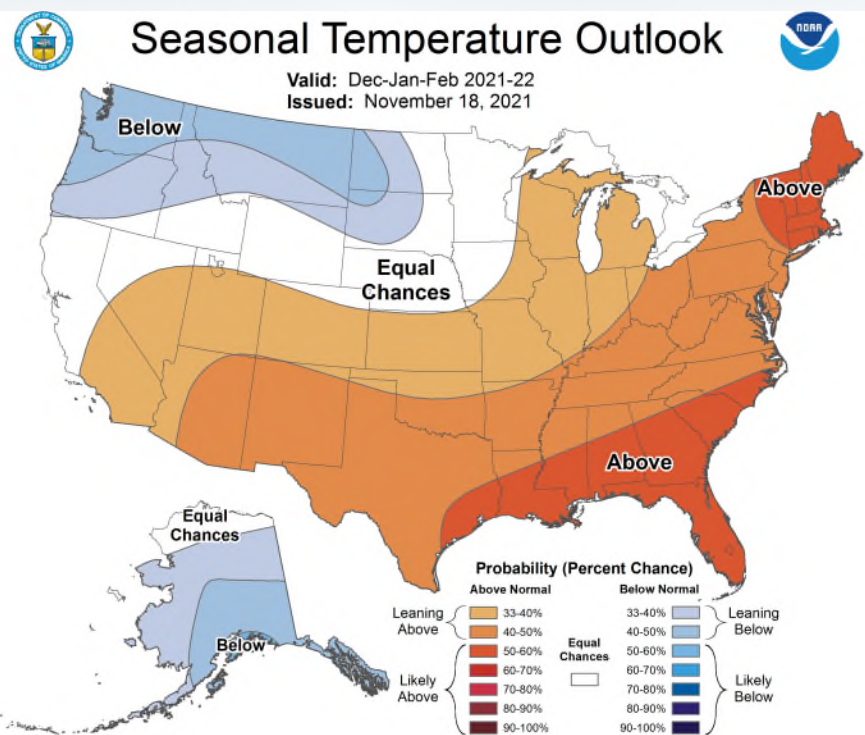
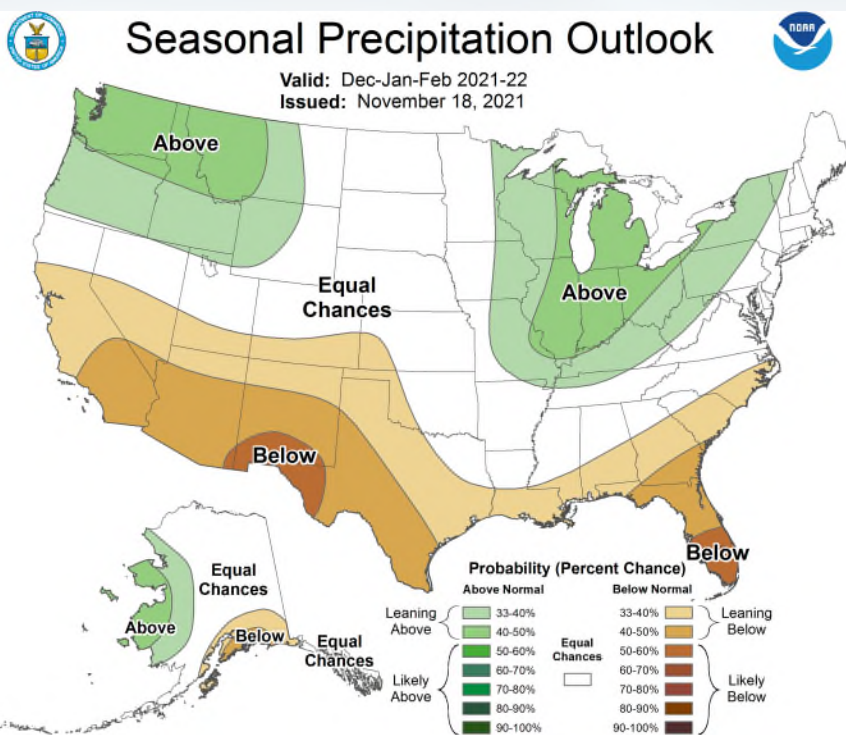
Based on Provisional SNOTEL data as of Dec 02, 2021

USDA
United States Department of Agriculture
Natural Resources Conservation Service



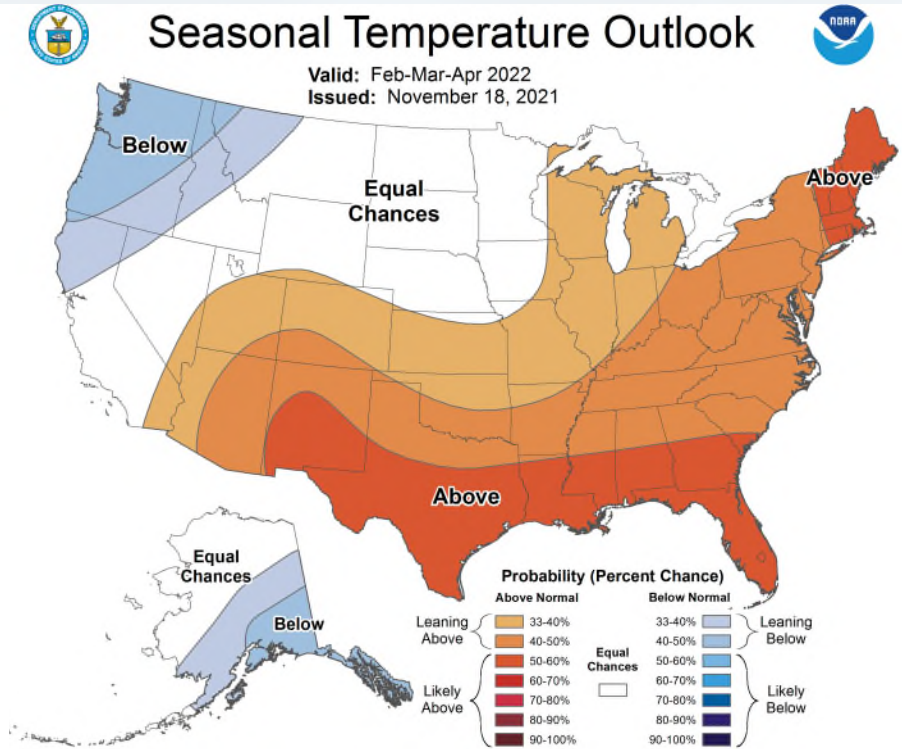
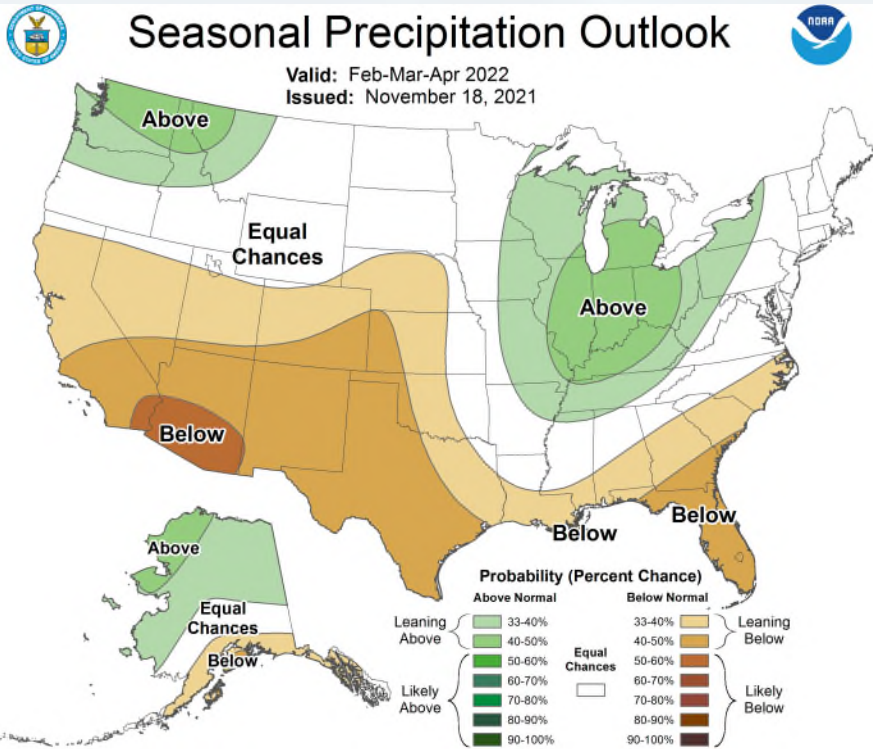
Climate Prediction Center Temperature and Precipitation Outlooks Dec-Jan-Feb

December-January-February Outlooks



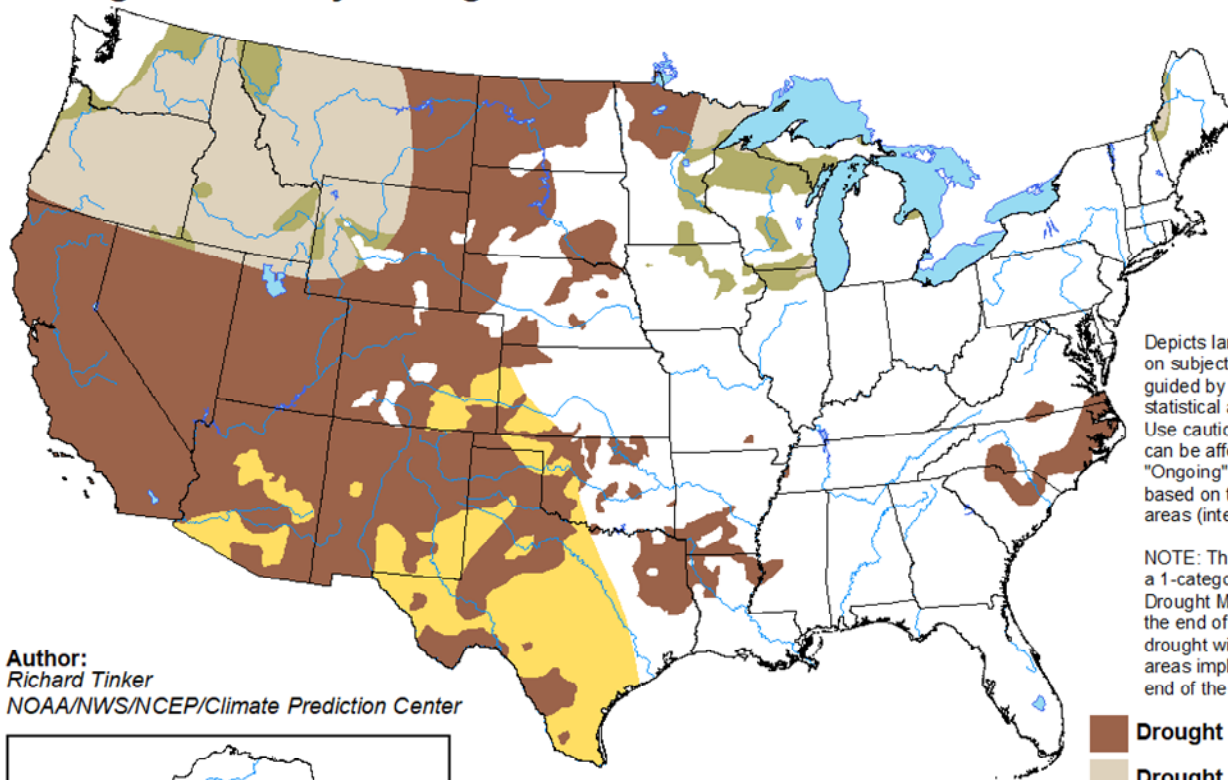
Climate Prediction Center Temperature and Precipitation Outlooks Feb-Mar-Apr

February-March-April Outlooks



Climate Prediction Center Drought Outlook Dec-Jan-Feb





U.S. Seasonal Drought Outlook *Valid for November 18, 2021 - February 28, 2022* Drought Tendency During the Valid Period *Released November 18, 2021*

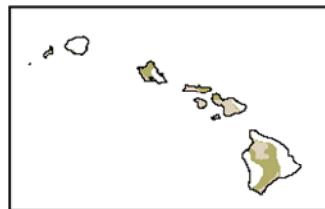


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

Author:
Richard Tinker
NOAA/NWS/NCEP/Climate Prediction Center

-  Drought persists
-  Drought remains but improves
-  Drought removal likely
-  Drought development likely



<http://go.usa.gov/3eZ73>



Questions?????

