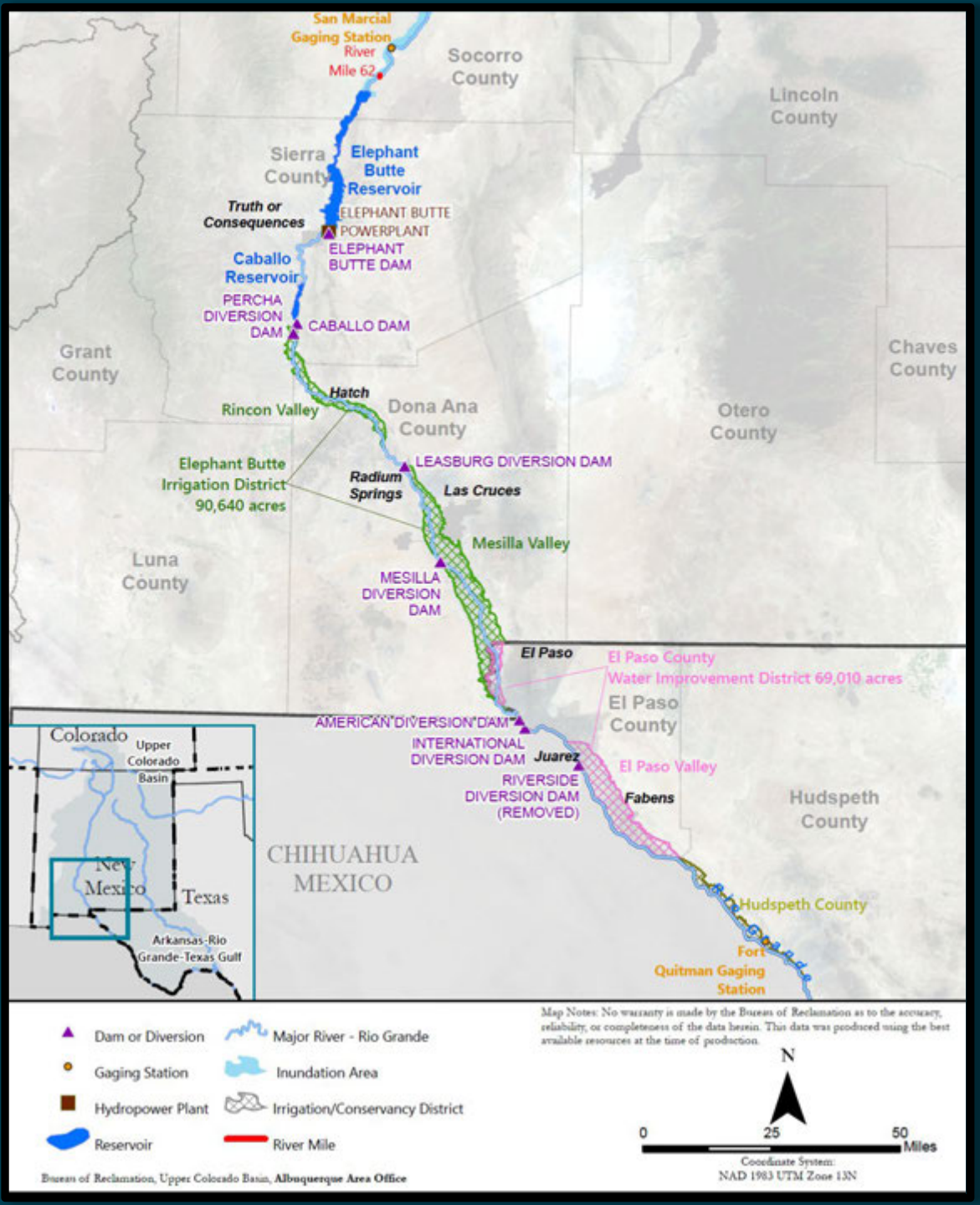
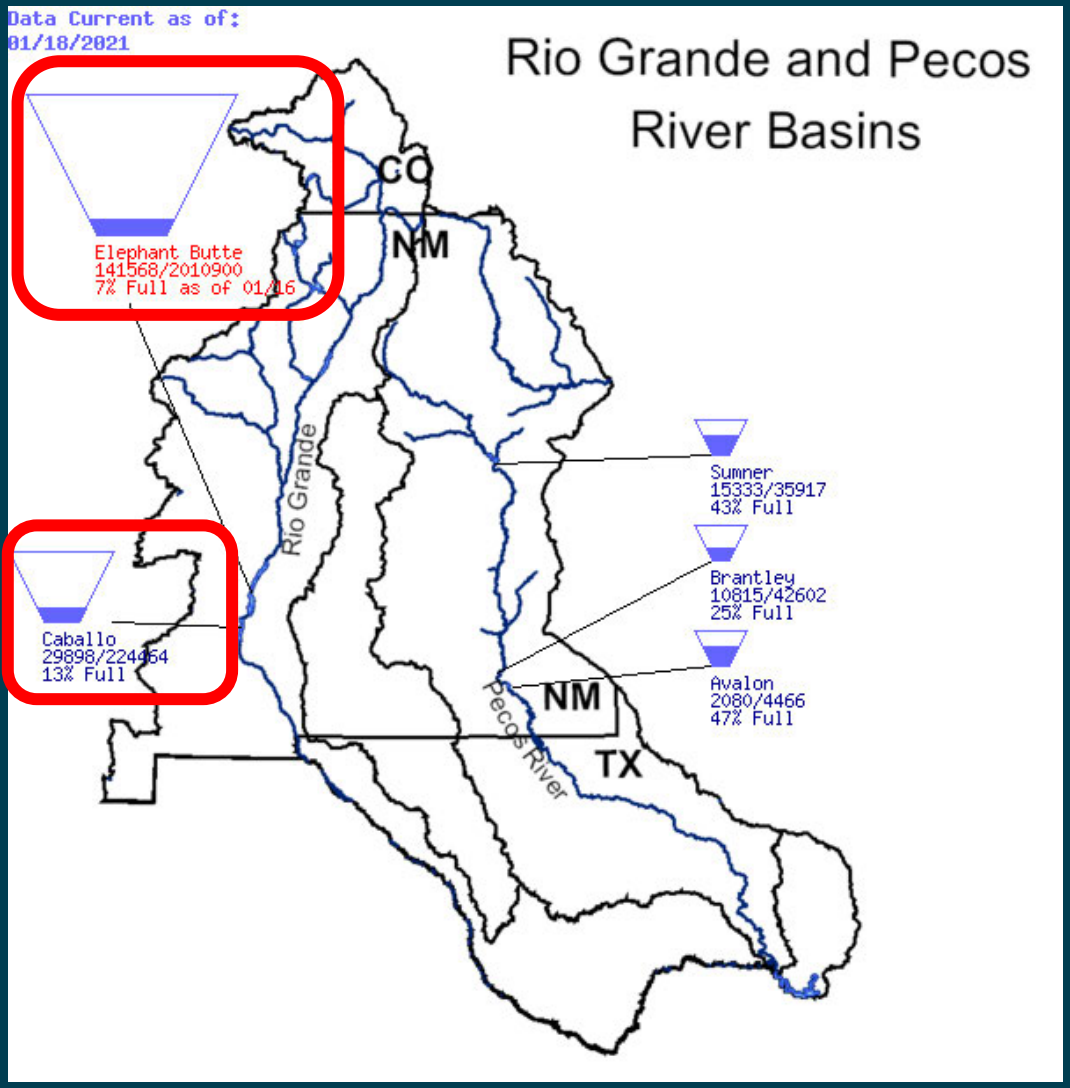


RIO GRANDE PROJECT

1906 Meeting

January 20, 2021

Current Project Storage Conditions



As of 1/149/2021	2021 STORAGE (AF)	2020 STORAGE (AF)
Elephant Butte Reservoir	144,388	564,476
Caballo Reservoir	29,926	33,993
Total Rio Grande Project Storage	174,314	598,469
Rio Grande Compact Credit Water	595	897
San Juan - Chama Water	161	194
RGP Usable Water	**173,558**	597,378

EL NIÑO/SOUTHERN OSCILLATION (ENSO)

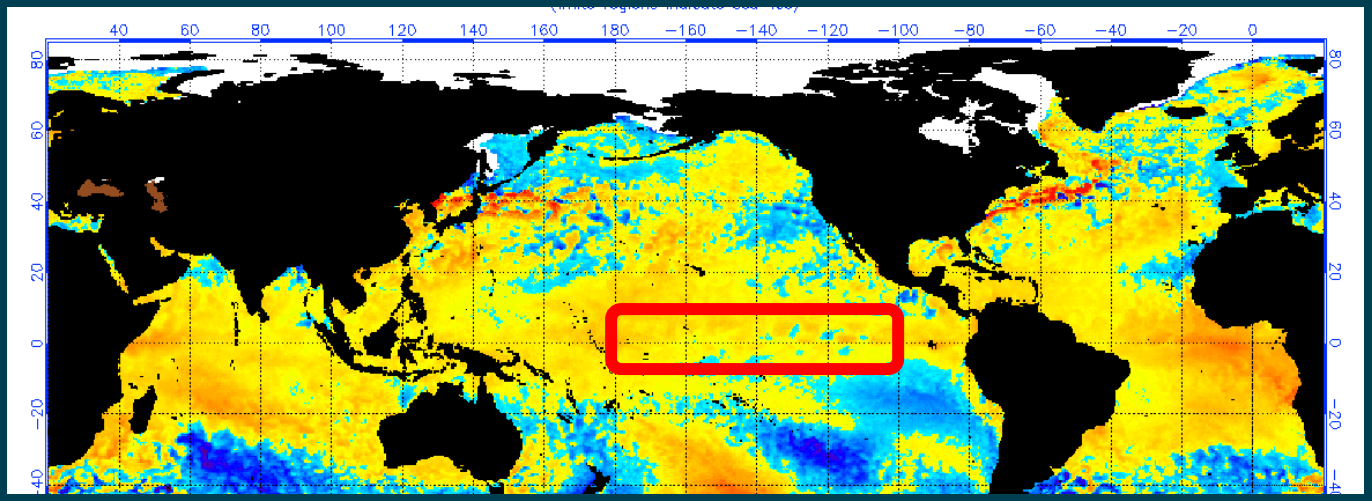
DIAGNOSTIC DISCUSSION

January 14, 2021

ENSO Alert System Status: La Niña Advisory

Synopsis: La Niña is expected to continue through the Northern Hemisphere winter 2020-21 (~95% chance during January-March), with a potential transition to ENSO-neutral during the spring 2021 (55% chance during April-June).

- **La Niña continued during December**
- **Tropical convection continued to be suppressed over the western and central Pacific**
- **A majority of the IRI/CPC models IRI/CPC plume predict La Niña to continue through the Northern Hemisphere spring 2020-21 and a transition to ENSO-neutral in the late spring 2021.**



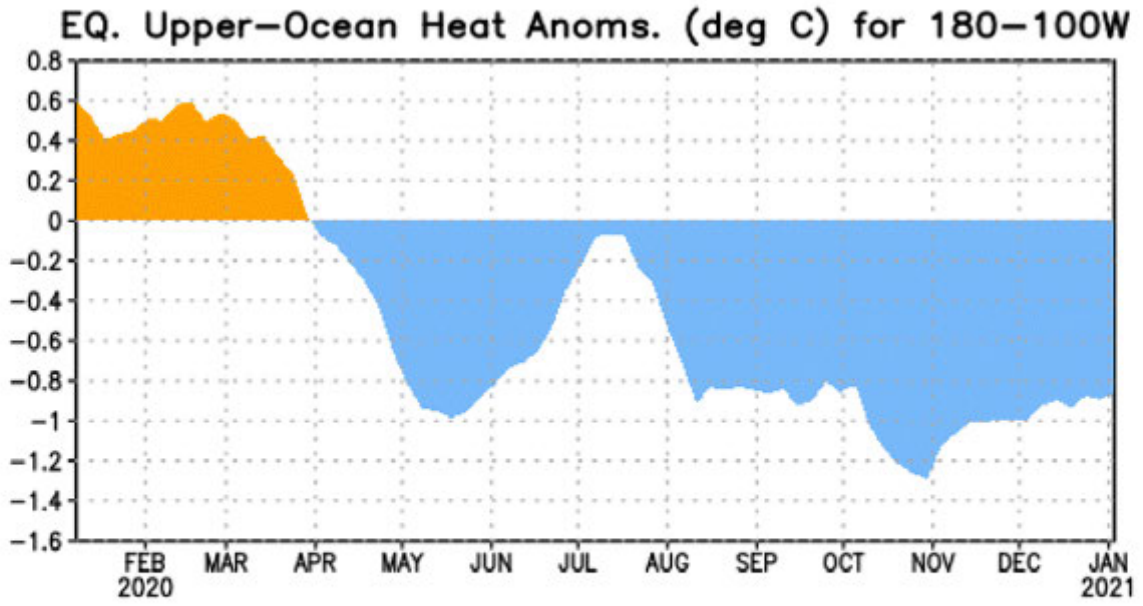


Figure 3. Area-averaged upper-ocean heat content anomaly (°C) in the equatorial Pacific (5°N-5°S, 180°-100°W). The heat content anomaly is computed as the departure from the 1981-2010 base period pentad means.

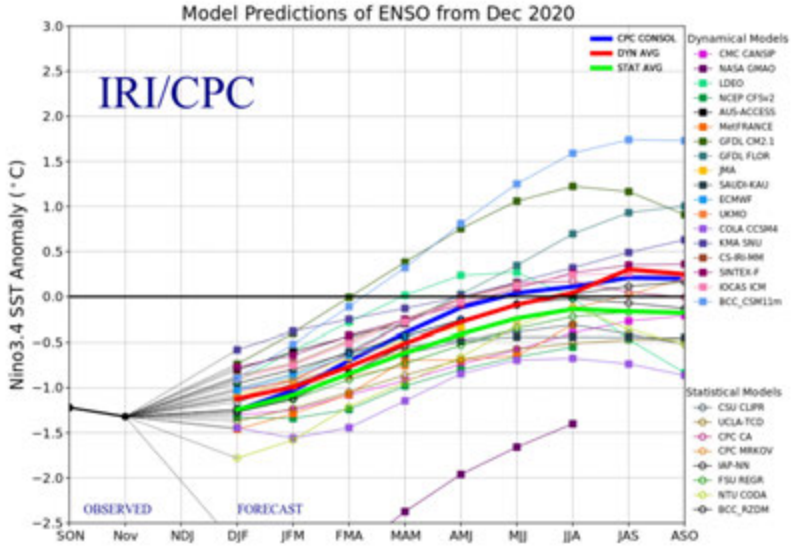
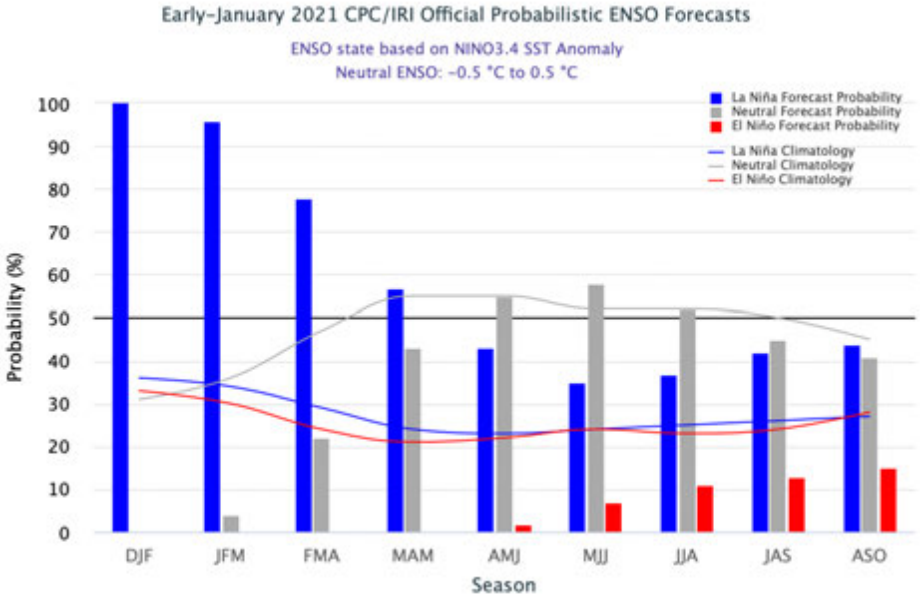
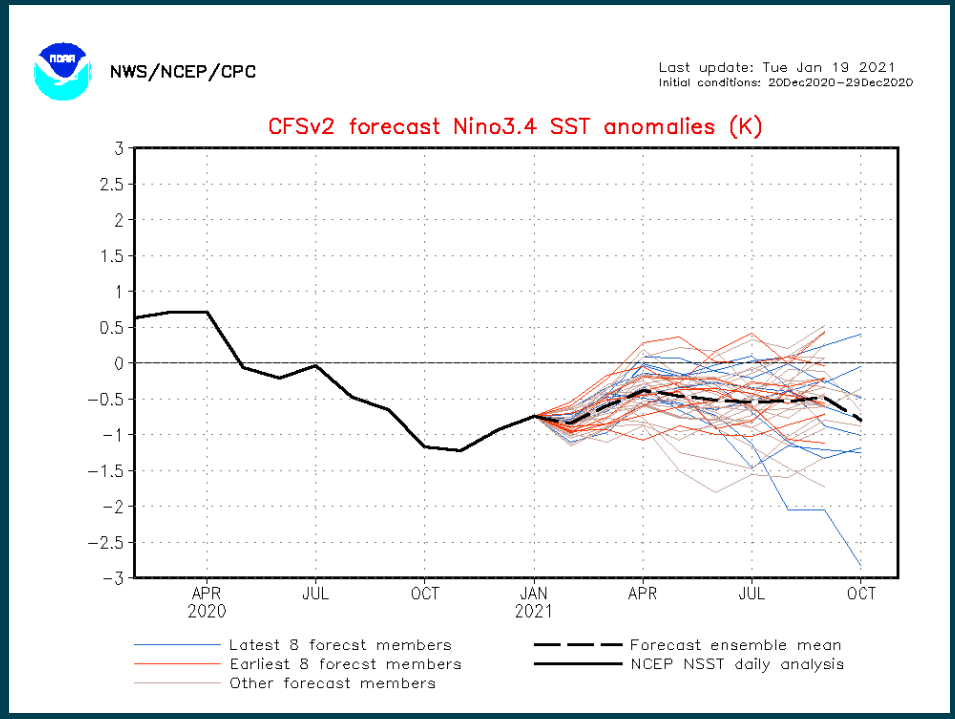


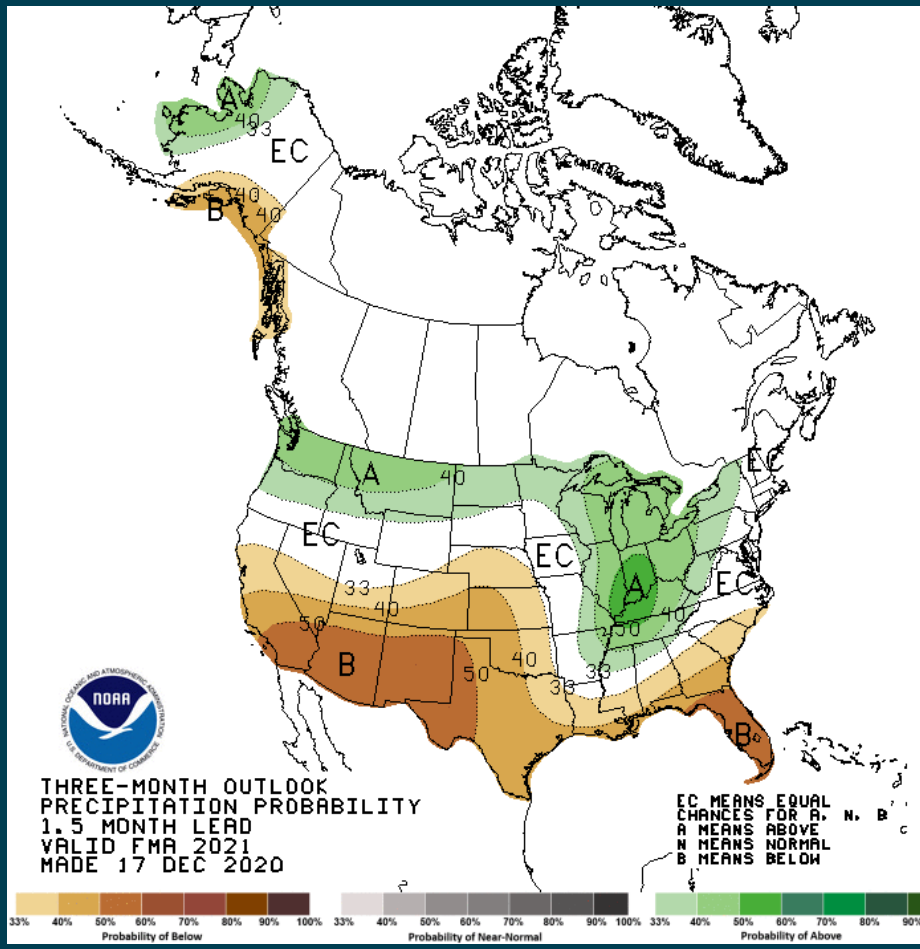
Figure 6. Forecasts of sea surface temperature (SST) anomalies for the Niño 3.4 region (5°N-5°S, 120°W-170°W). Figure updated 19 December 2020.



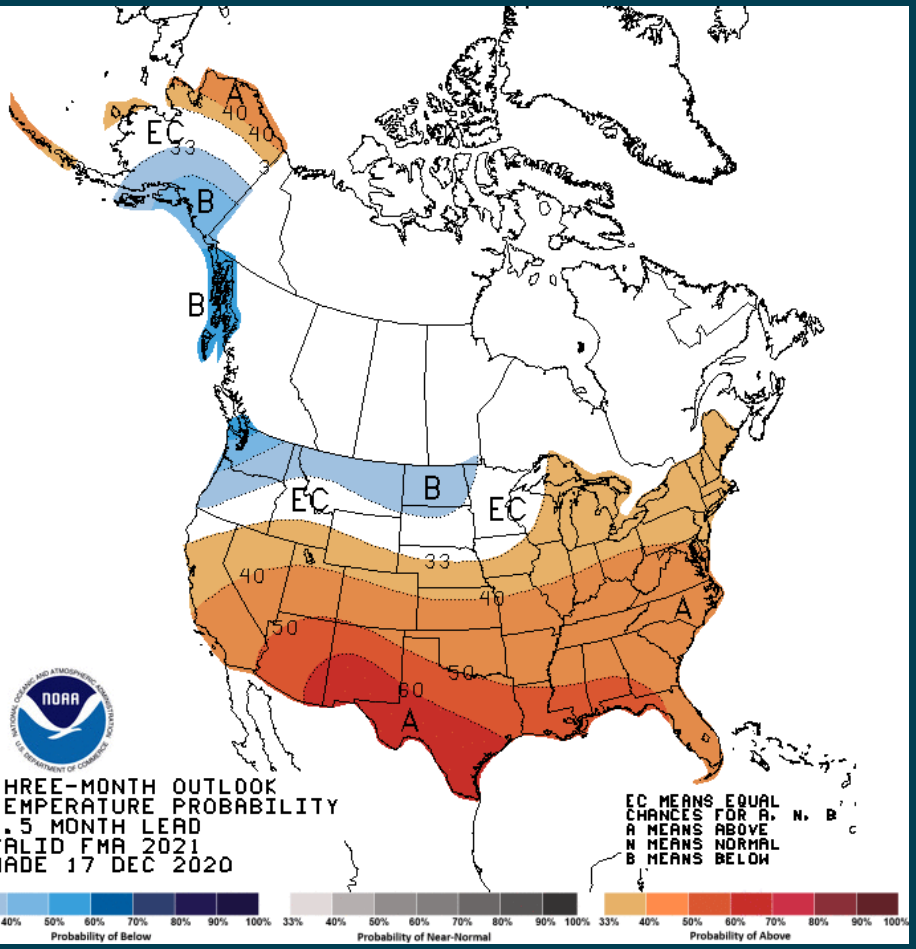


Seasonal Climate Forecast

Precipitation



Temperature



North American Drought Monitor

December 31, 2020

(Released Friday, Jan. 15, 2021)

https://www.ncdc.noaa.gov/temp-and-precip/drought/nadm/

Analysts:

Canada - Trevor Hadwen
Alyssa Klein
Mexico - Minerva Lopez
Yenifeer Loranca
U.S.A. - Adam Hartman
Mark Svoboda*

(* Responsible for collecting analysts' input & assembling the NA-DM map)

Intensity

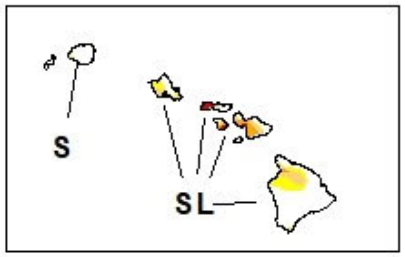
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

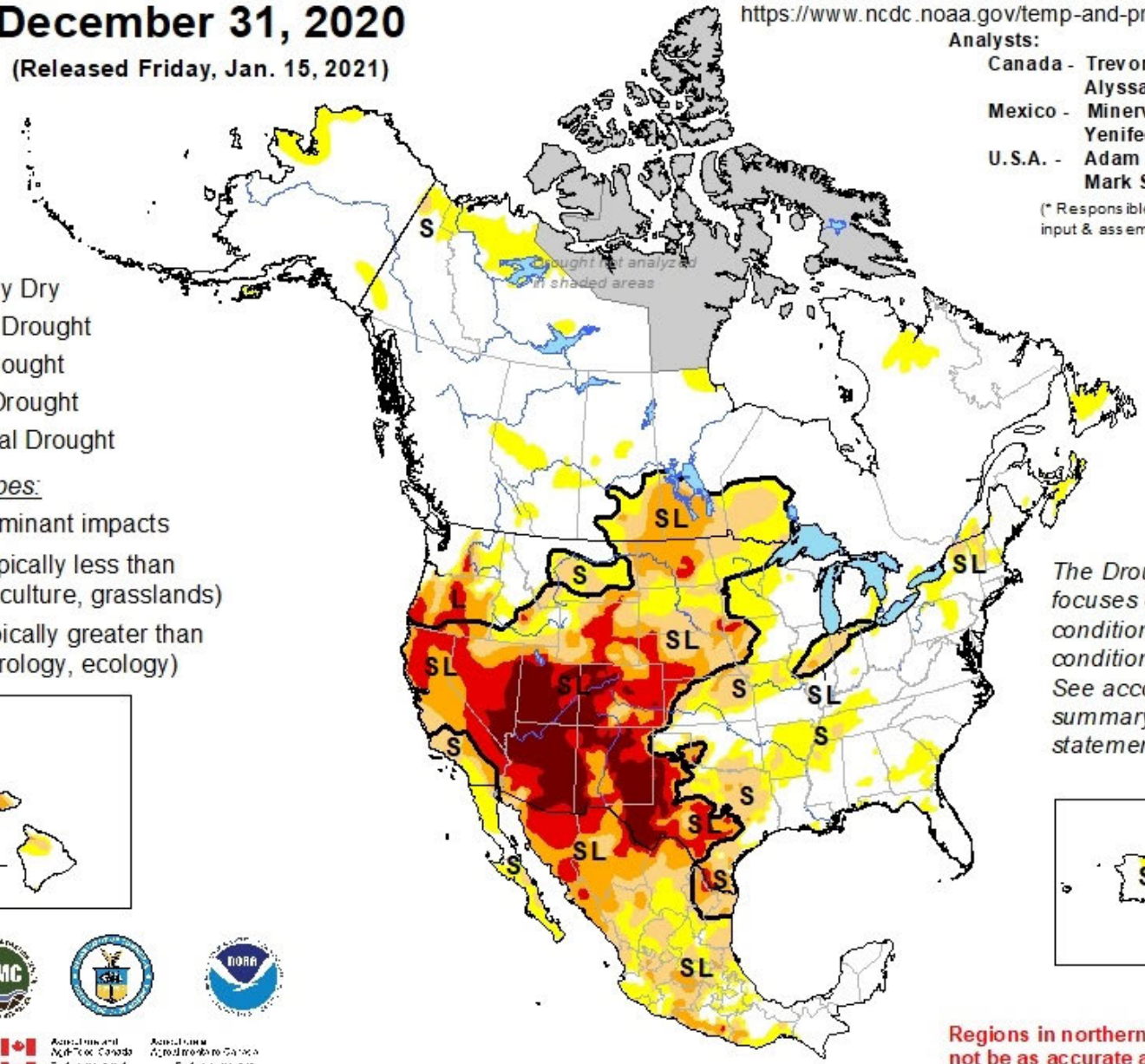
Drought Impact Types:

Delineates dominant impacts

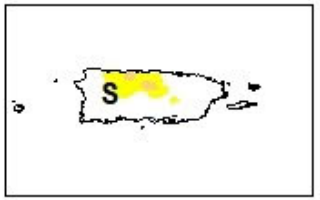
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)

L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)





The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



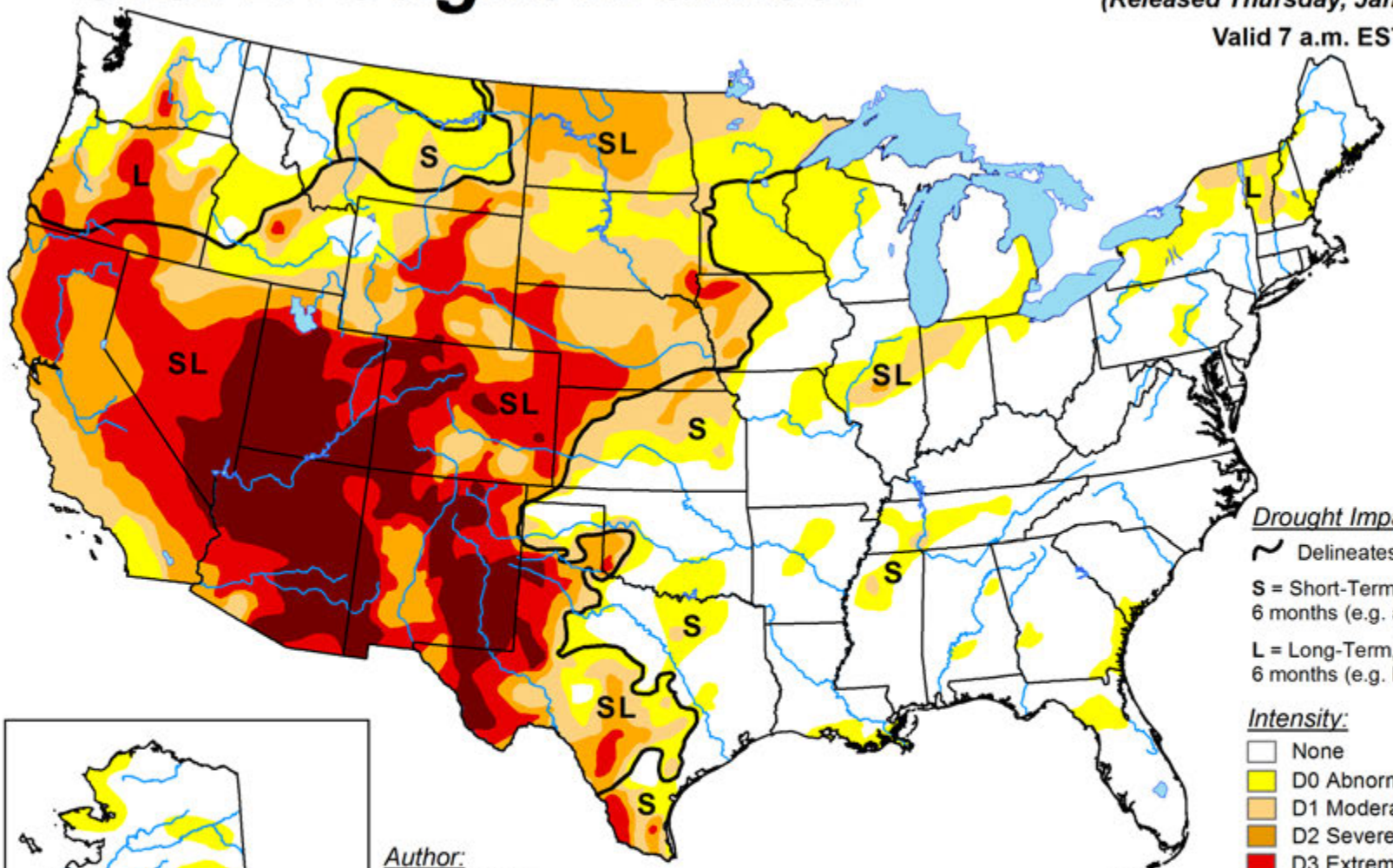
Regions in northern Canada may not be as accurate as other regions due to limited information.

U.S. Drought Monitor

January 12, 2021

(Released Thursday, Jan. 14, 2021)

Valid 7 a.m. EST



Drought Impact Types:

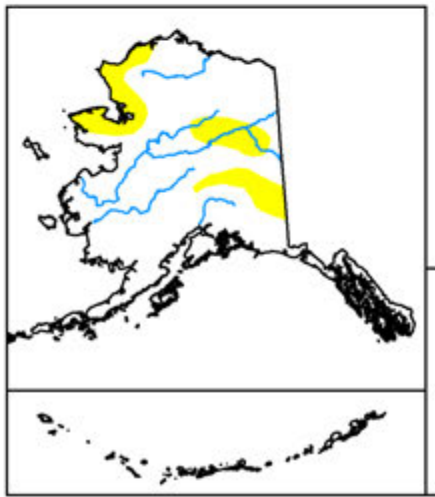
Delineates dominant impacts

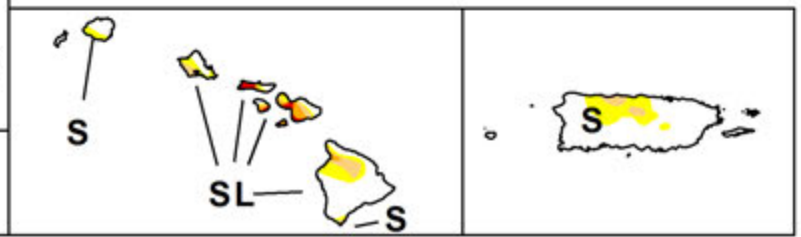
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)

L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought





Author:
Deborah Bathke
National Drought Mitigation Center

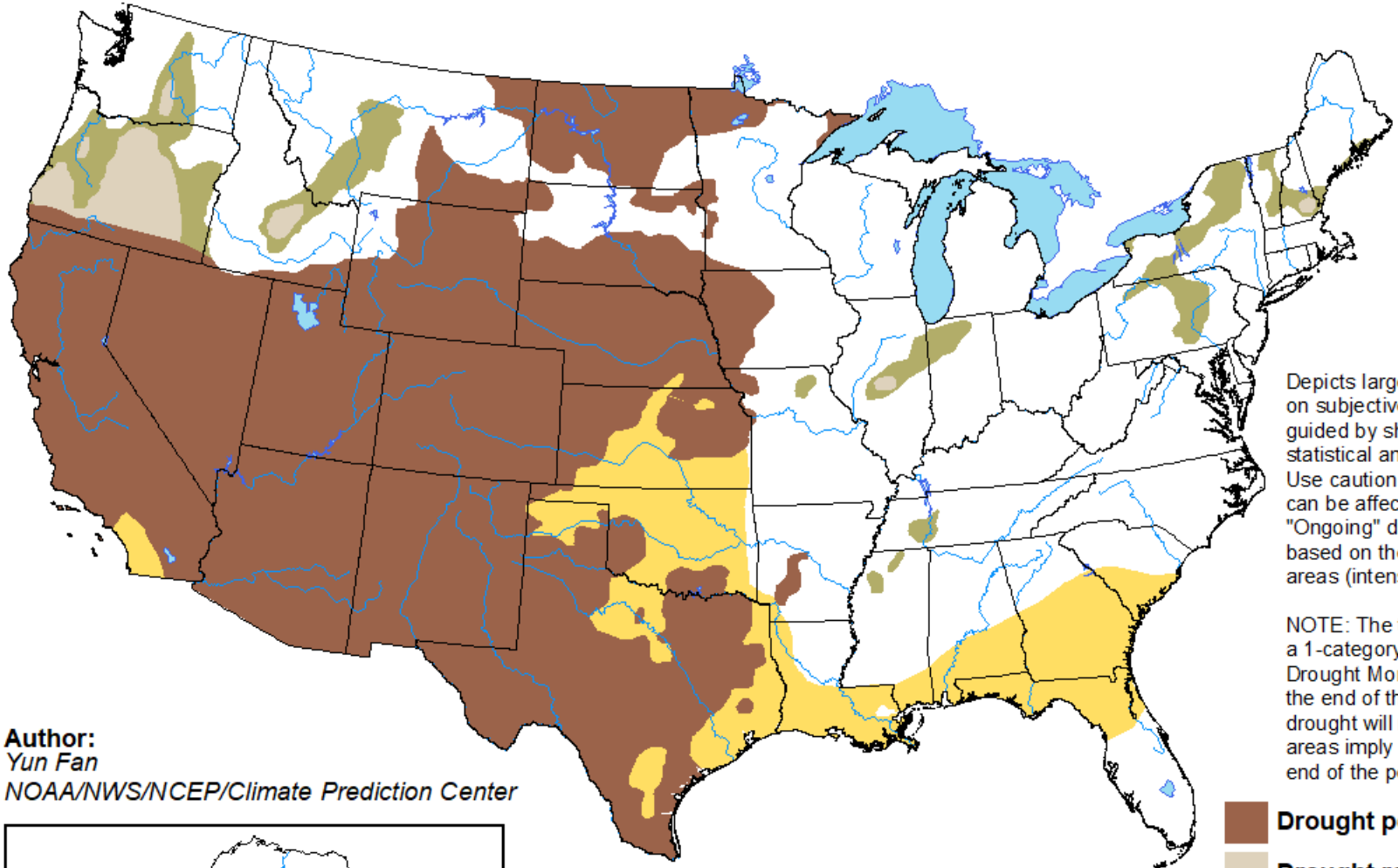
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

droughtmonitor.unl.edu

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for December 17, 2020 - March 31, 2021
Released December 17, 2020



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).

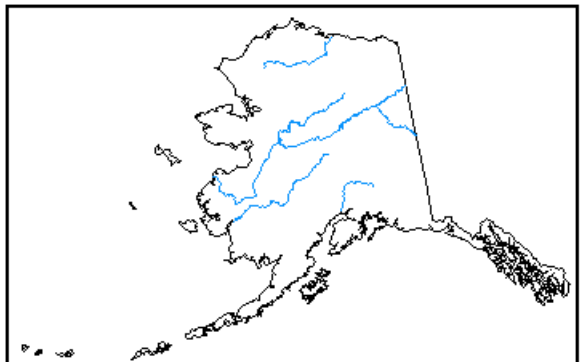
Drought persists

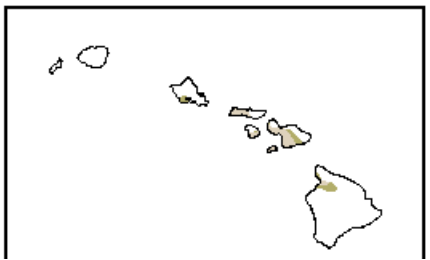
Drought remains but improves

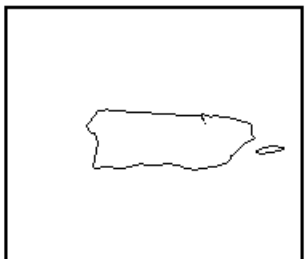
Drought removal likely

Drought development likely

Author:
Yun Fan
NOAA/NWS/NCEP/Climate Prediction Center



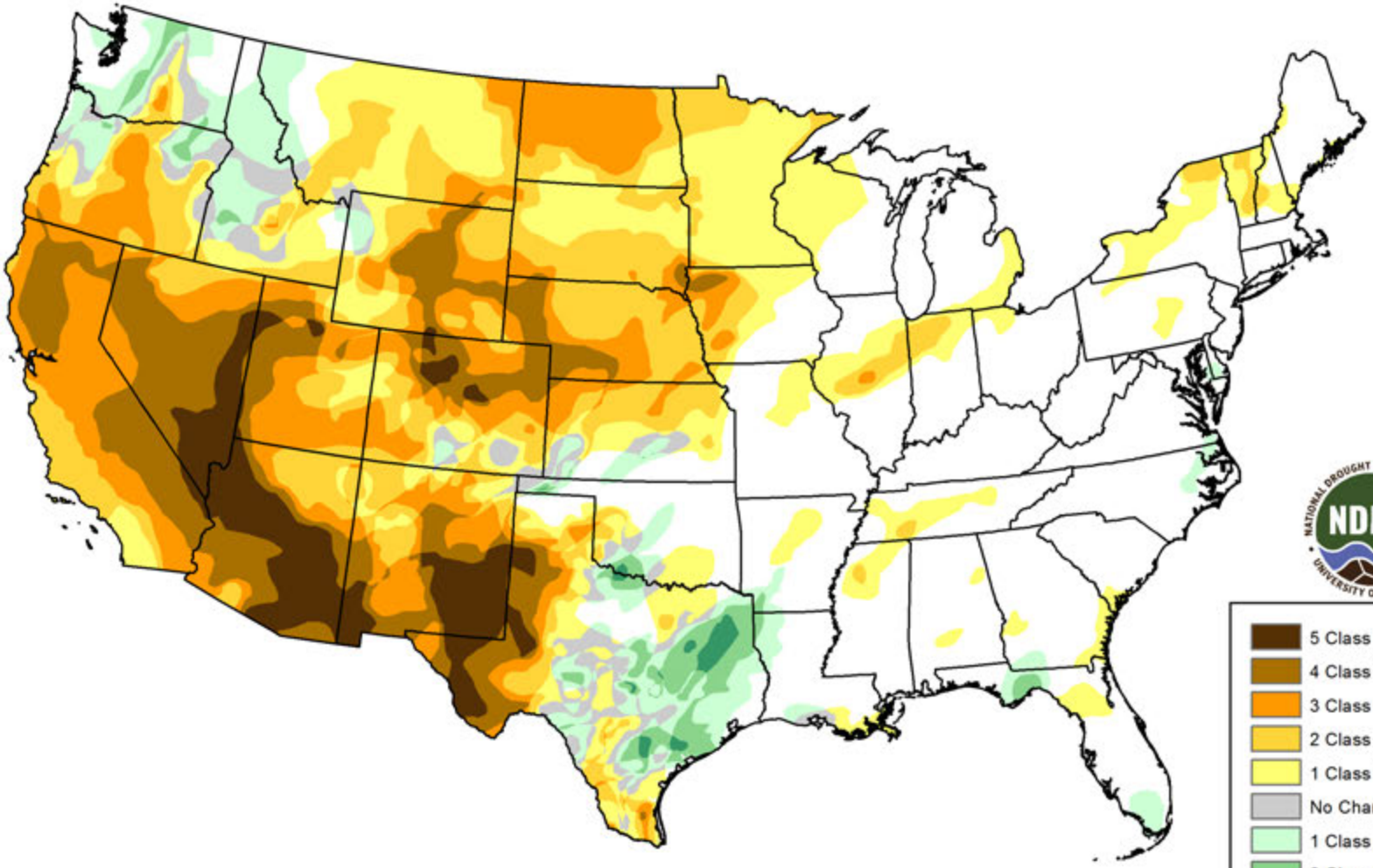




http://go.usa.gov/3eZ73

U.S. Drought Monitor Class Change - CONUS

1 Year



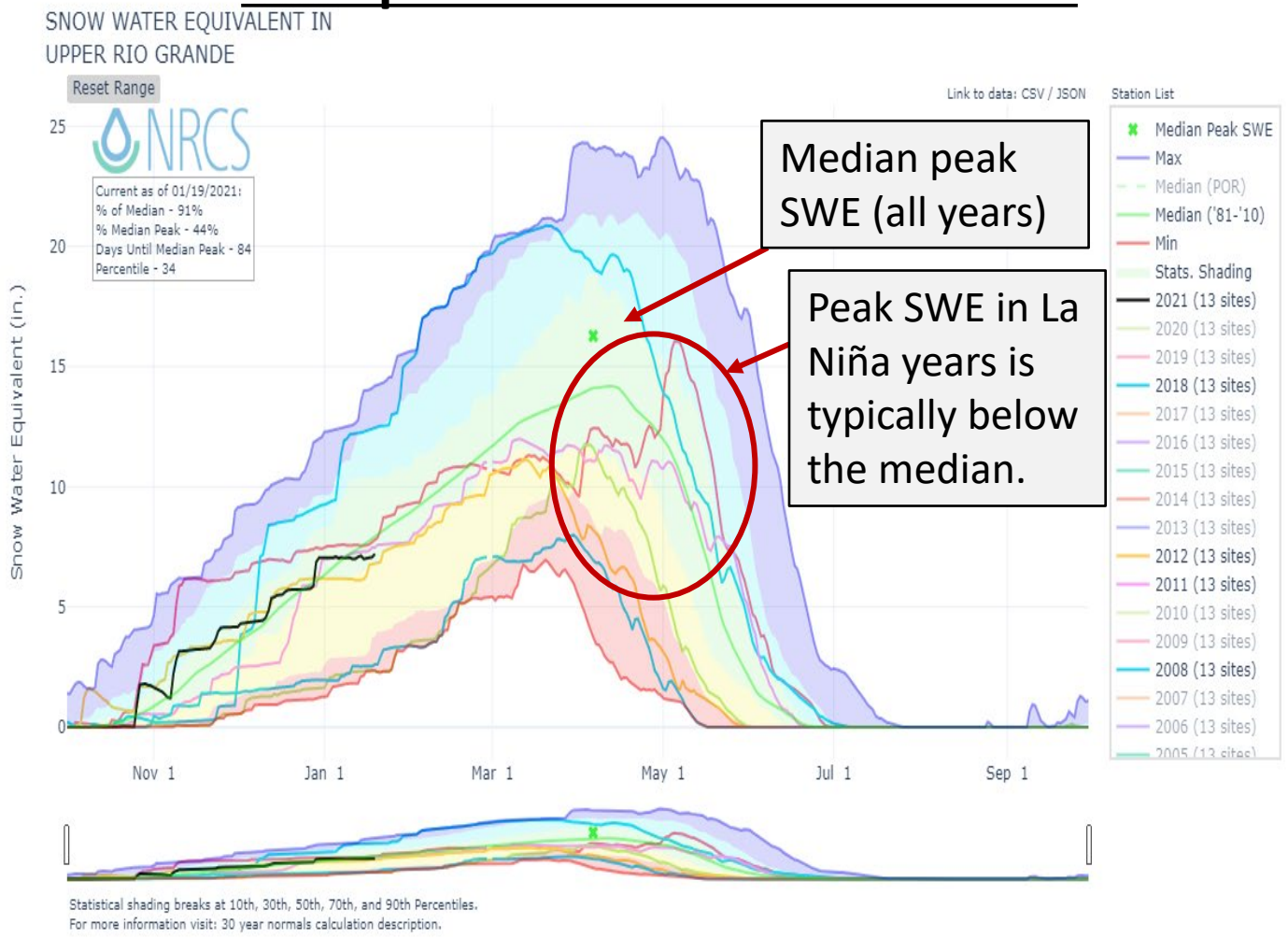
5 Class Degradation
4 Class Degradation
3 Class Degradation
2 Class Degradation
1 Class Degradation
No Change
1 Class Improvement
2 Class Improvement
3 Class Improvement
4 Class Improvement
5 Class Improvement

January 12, 2021
compared to
January 14, 2020

droughtmonitor.unl.edu

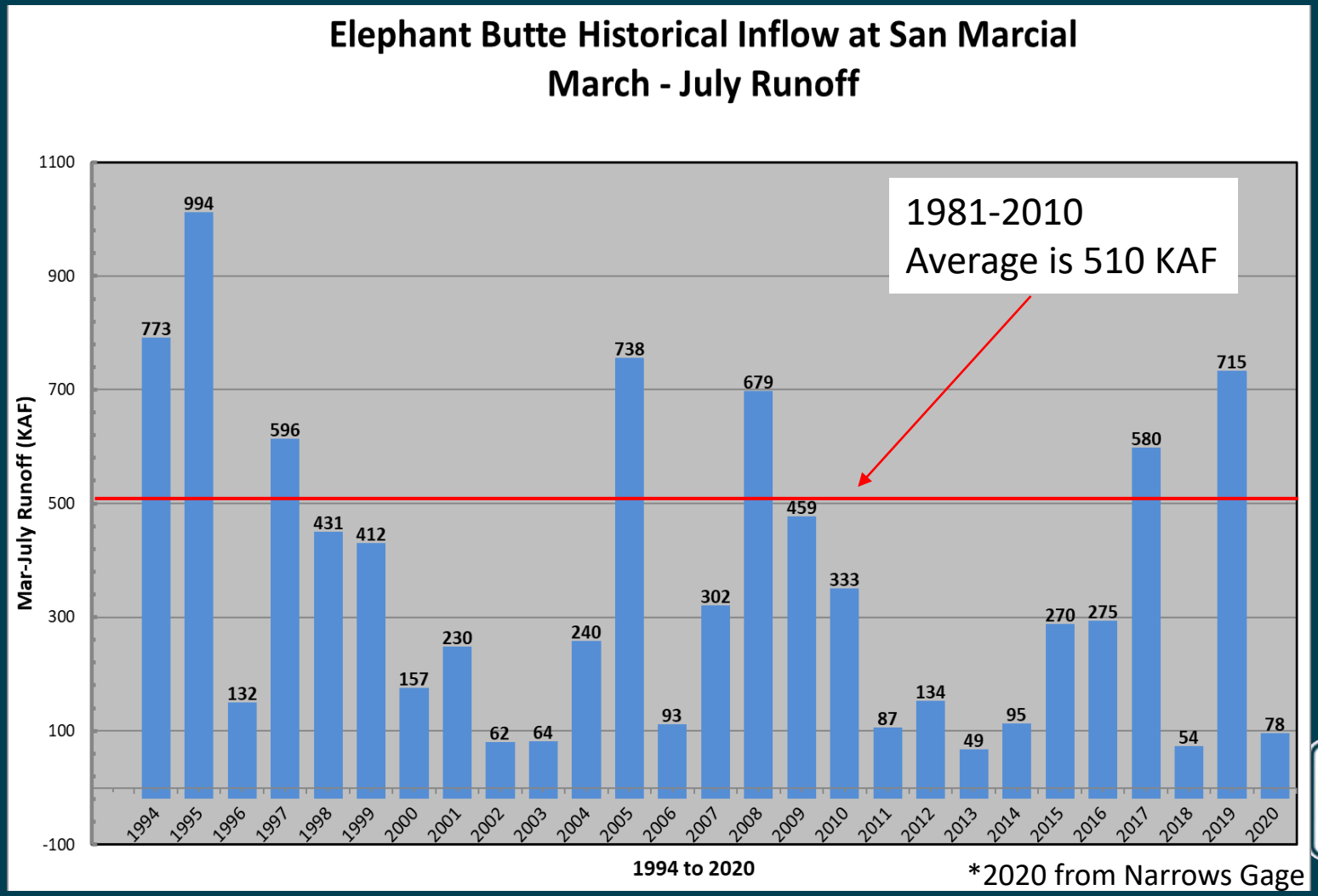
Seasonal Climate Forecast

Snowpack in Recent La Niña Years

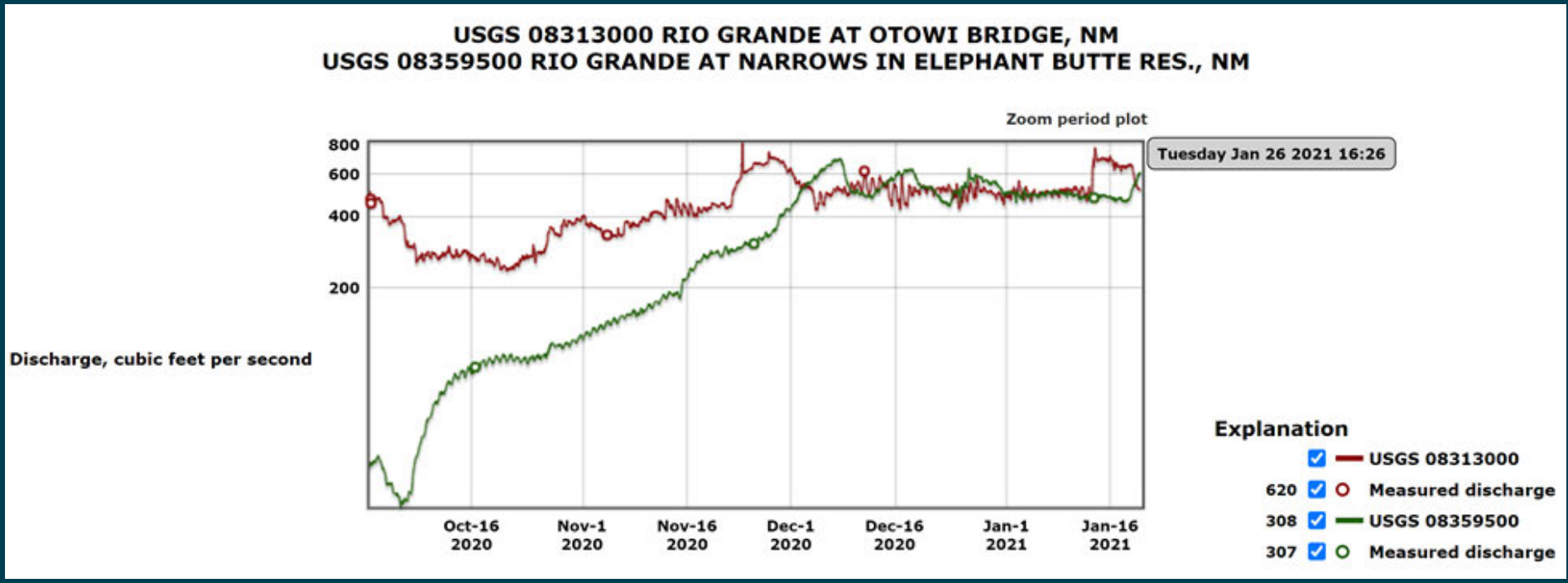


https://www.nrcs.usda.gov/wps/portal/nrcs/detail/co/snow/products/?cid=nrcseprd1432263

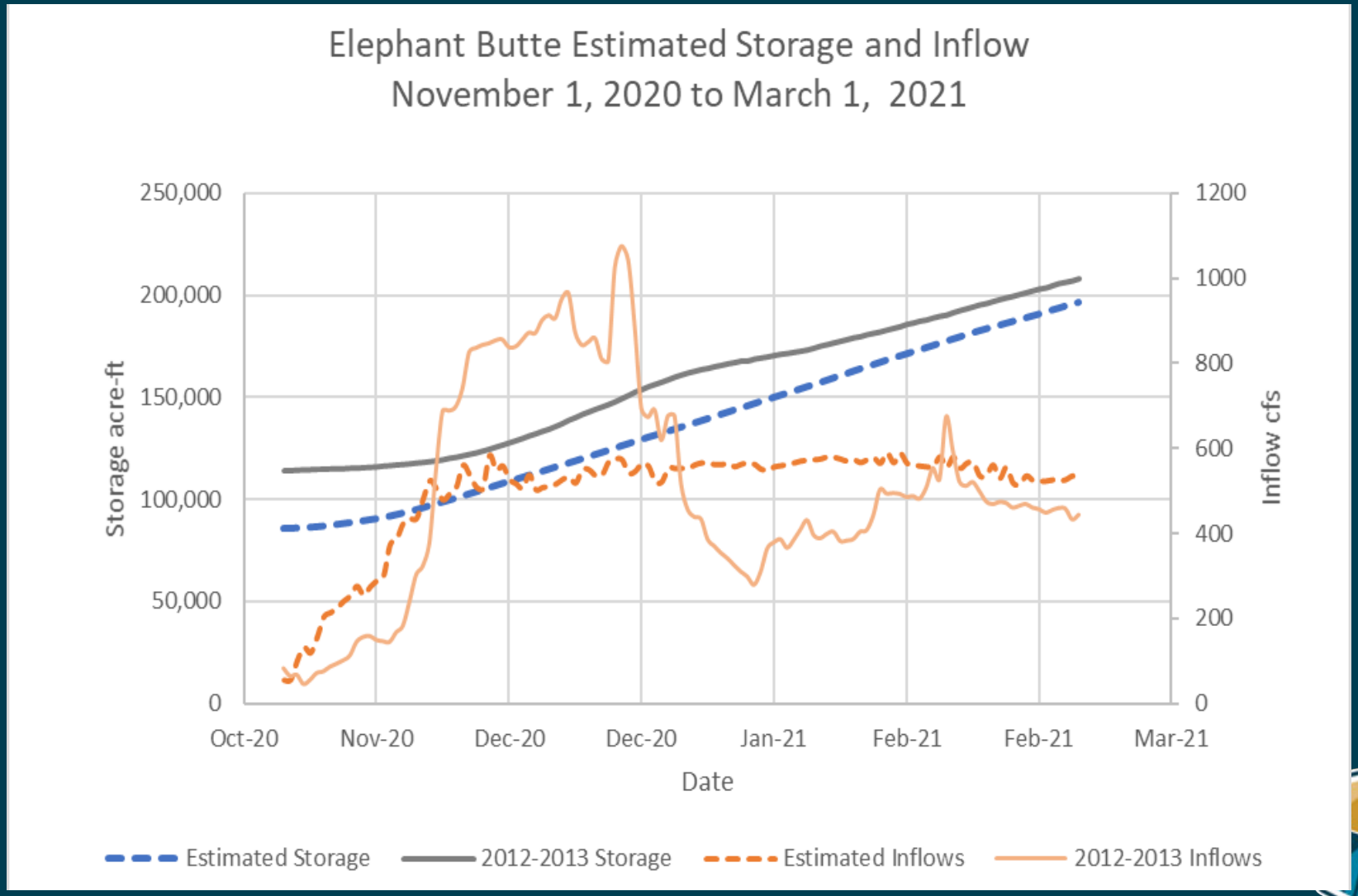
Elephant Butte Inflow



Otowi and Narrows Gages



2021 Operations



2021 Considerations

EBID:

- Plan for allotment of 6" or less
  - Subject to change based on hydrologic conditions
- Possible June 1 start date

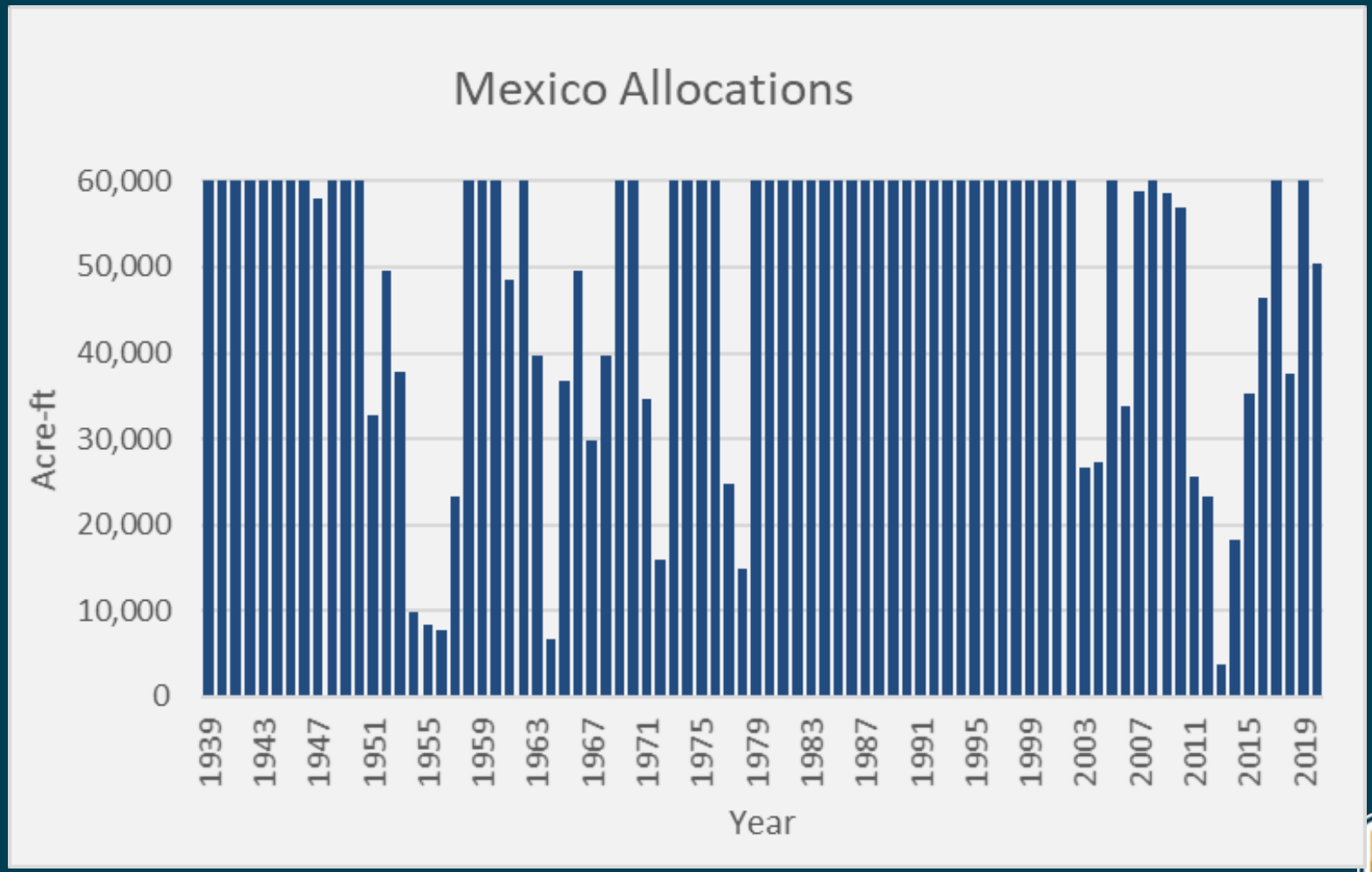
EPCWID:

- Expected to have 85-95 KAF of carryover
- Anticipate May or June start date

Reservoir Operations:

- Minimum pools established
- Possible 2013 conditions or worse
- Zero Project allocation for 2021 as of December 2020

Historical Mexico Allocations



2021 Scenarios

Allocation*		April 2021	July 2021
Release for all three entities	EBID (NM)	14,500-26,000	19,000-32,000
	EP1 (TX)	104,000-113,000	107,000-117,000
	Mexico	7,200	7,500
EBID – No release	EBID (NM)	14,500-26,000	19,000-32,000
	EP1 (TX)	104,000-109,000	107,000-109,000
	Mexico	2,900-4,000	3,600-4,700

*Subject to change

- Assumptions:
  - 2013 inflow hydrology – worst case scenario
  - EP1's allocations include 85 – 95 KAF of carryover
  - Diversion Ratio 0.66 – 0.77 (similar to 2012 – 2014)

Summary

- **Total Project storage is at 174 KAF, or 8% of total capacity. There is about 424 KAF less than this time last year.**
- **We are in a La Nina Advisory with an 95% chance of continuation through the Northern Hemisphere winter 2020-21 and a 55% chance into spring 2021.**
- **Irrigation season expected to start in May or June**
- **2020 Project accounting not yet final**

Questions?