

**Utilities**

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## MEMORANDUM

**DATE:** February 9, 2021  
**TO:** Water Commission  
**FROM:** Michael Neale, MSc, Water Resources Engineer  
**RE:** **January 2022 Water Resources Division Staff Report**

### Purpose

This memorandum is intended to update the Water Commission on water resource conditions for the City of Fort Collins Water Utility (Water Utility) over the month of January and provide updated future outlook information. For additional information, please refer to the City's website: <https://www.fcgov.com/utilities/water-status>

### Water Resources Summary

#### Supply and Demand Projections for the remainder of WY2021

- **Water Supply** – In mid January, Utilities began work to remove sediment directly upstream of our Poudre River intake near Gateway Park. On January 21<sup>st</sup>, the intake was closed to prevent suspended material from entering the treatment plant. Total water supply has since been provided by our Horsetooth Reservoir supplies. Project completion is expected to be February 18<sup>th</sup> and subsequently, intake from the Poudre can resume. For the month of January, water supply intake consisted of 64% from Horsetooth and 36% from the Cache la Poudre River.
- **Water Demand**- Demands for the month of January were slightly below projected. Please refer to the attached graphs and tables. Water demands within the Water Utility service area for the month:
  - Water demand for January: 94% of the projected demand.

#### Weather: <https://climate.colostate.edu/>

The conditions in January were slightly warmer than average however significantly wetter. Measured at the Fort Collins weather station:

- Mean daily high temperature recorded for the month: 43.8 °F.
  - Long term average daily high temperature for the month is: 41.8 °F.
- Total recorded monthly precipitation: 0.85 inches.
  - Long term normal (30-year average) precipitation for the month: 0.41 inches.

**Reservoir Storage:** Northern allocated an initial 50% quota in early January. Project reserves are at 90% quota at this time, which increases the likelihood of receiving additional quota in April. As of February 1<sup>st</sup> and presented in Northern District Storage and Delivery Report:

- Colorado-Big Thompson project reservoirs (Granby, Carter, and Horsetooth): 71% full.
- Horsetooth Reservoir: 89% full.
- Joe Wright Reservoir: 71% full (116% of average based on 14 years of data).

**Snowpack:** Natural Resources Conservation Service SNOTEL program percent of 1991-2020 median snow water equivalent as of 02/07/2021:

- Upper Colorado Basin: 104% of median.
- South Platte Basin: 109% of median.
- Poudre Basin (5 SNOTEL site average): 118% of the 1991-2020 combined median.

**Poudre River flow:** Graphical data for the Poudre River is available on-line at:

- Cache La Poudre River at the Canyon Mouth  
<https://dwr.state.co.us/Tools/Stations/CLAFTRCO?params=DISCHRG>
- Cache La Poudre River at Fort Collins  
<https://dwr.state.co.us/Tools/Stations/CLAFORCO?params=DISCHRG>

**Drought Monitors:**

- Larimer County and Colorado [https://climate.colostate.edu/drought\\_info.html](https://climate.colostate.edu/drought_info.html)  
Larimer County and upper South Platte basin are abnormally dry at this time.
- Colorado and the USA <https://droughtmonitor.unl.edu/>  
The Colorado River basin remains in a drought.

**Climate Outlook:** <https://www.cpc.ncep.noaa.gov/>

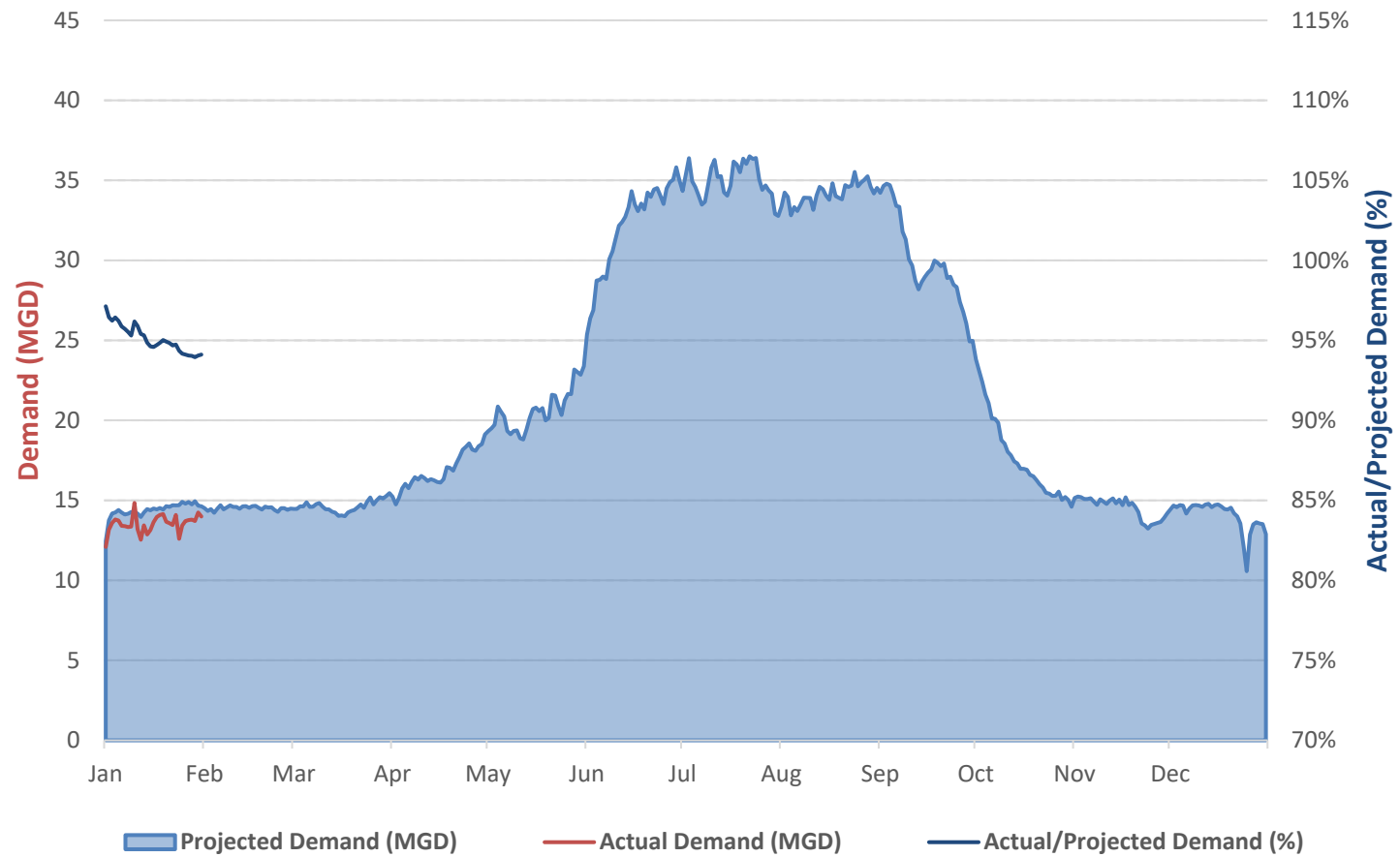
National Oceanic and Atmospheric Administration (NOAA) climate outlooks for the northern Front Range and northern mountains, over the next three months:

- Equal chances of above or below average precipitation
- Leaning above normal temperature.

**Other Water Supply Considerations:**

- The Colorado River basin remains in a significant drought. Utilities staff will continue to monitor conditions in the new water year.

## 2022 Fort Collins Utilities Treated Water Demands

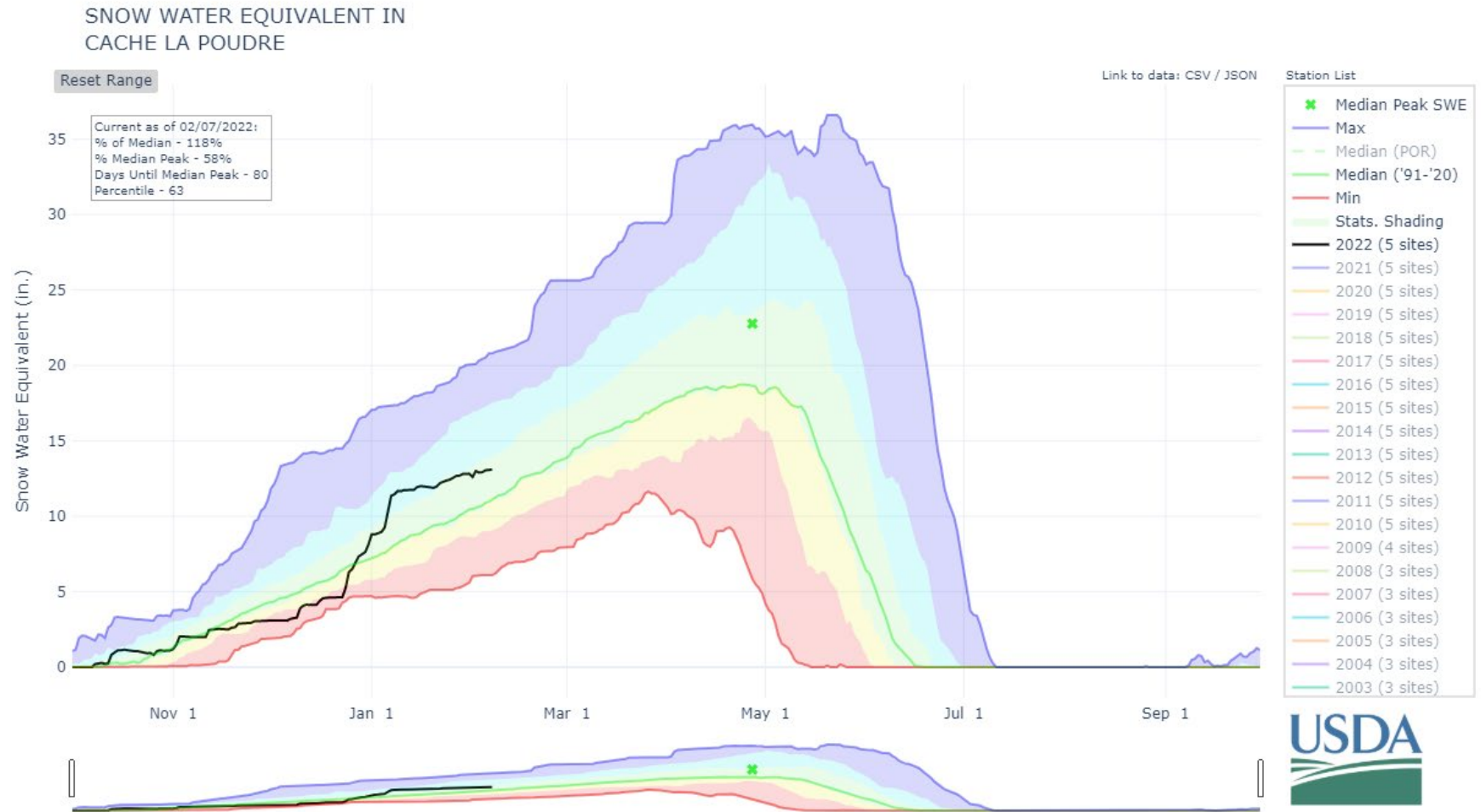




**City of Fort Collins Utilities  
Treated Water Monthly Summary  
2022**

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## Upper Cache la Poudre Basin SNOTEL - Daily time series for water year 2022



## Snowpack and Streamflow Comparisons February 1, 2022



### Snow Water Content

% of Average

Colorado's Statewide Snowpack	105%
Upper Colorado River <sup>(1)</sup>	<b>101%</b>
South Platte Tributaries <sup>(2)</sup>	<b>116%</b>

### Snow-Water Content Comparisons (inches)

Watershed	February 1, 2022 Snow-Water Content			February 1 Comparative Snow-Water Content			
	2022	Average	% Avg	2021	2020	2019	2002
Blue River	8.3	8.8	<b>95%</b>	68%	101%	119%	74%
Upper Colorado River	10.1	10.0	<b>102%</b>	60%	103%	99%	65%
Willow Creek	8.2	7.0	<b>116%</b>	64%	96%	107%	60%
Fraser River	8.6	9.3	<b>92%</b>	80%	114%	104%	70%
Poudre River	9.9	8.7	<b>114%</b>	66%	99%	105%	53%
Big Thompson River	10.4	8.6	<b>121%</b>	62%	118%	98%	58%
St. Vrain River	8.6	6.8	<b>127%</b>	58%	116%	108%	56%
Boulder Creek	6.9	6.9	<b>101%</b>	64%	111%	109%	59%

### Apr-Jul Maximum, Minimum and Most Probable Streamflow Forecasts (1000 af)

Watershed	Forecast Minimum	Most Probable	Forecast Maximum	Apr-Jul Avg <sup>(3)</sup>	Most Prob % Average
Blue River	176	255	334	275	<b>93%</b>
Upper Colorado River	161	212	279	220	<b>96%</b>
Willow Creek	34	52	70	47	<b>111%</b>
Fraser River	73	107	141	117	<b>91%</b>
Poudre River	163	249	335	225	<b>111%</b>
Big Thompson River	63	100	137	90	<b>111%</b>
St. Vrain River	62	96	130	88	<b>109%</b>
Boulder Creek	37	53	69	54	<b>98%</b>
South Platte Tributaries	--	498	--	457	<b>109%</b>

### Precipitation within District Boundaries <sup>(4)</sup>

	Totals	Average	% Average
January	0.64	0.38	<b>167%</b>
Nov - Jan	1.22	1.47	<b>83%</b>

(1) Includes the Colorado, Willow Creek, Fraser and Blue River Watersheds

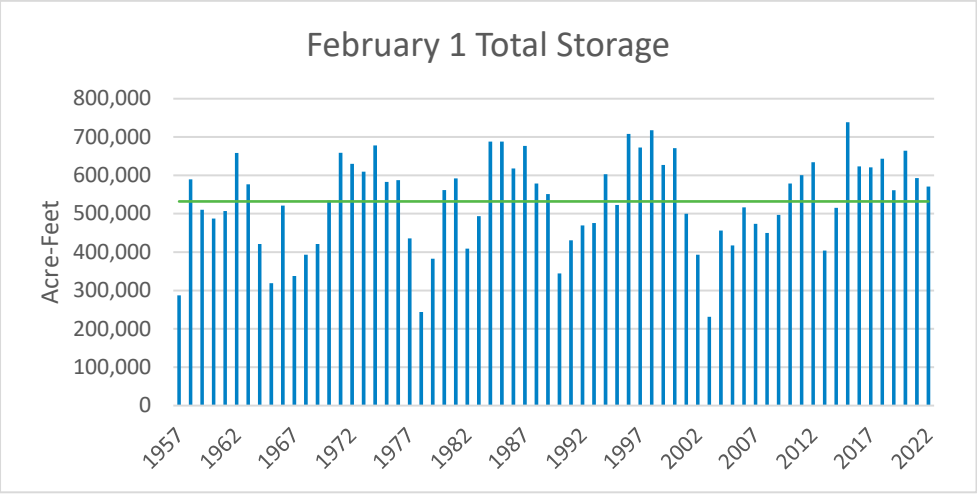
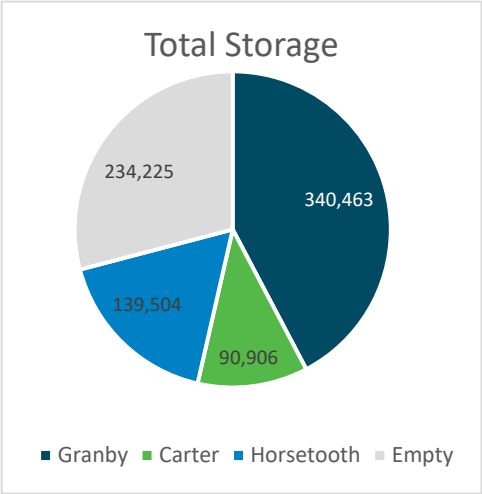
(2) Includes the Poudre, Big Thompson, Saint Vrain and Boulder Creek Watersheds

(3) Average for the period 1981-2010

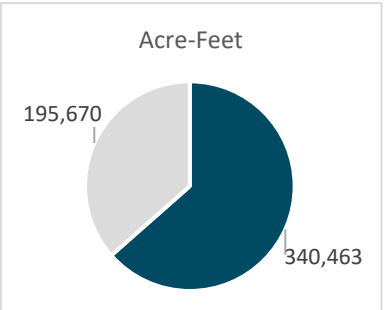
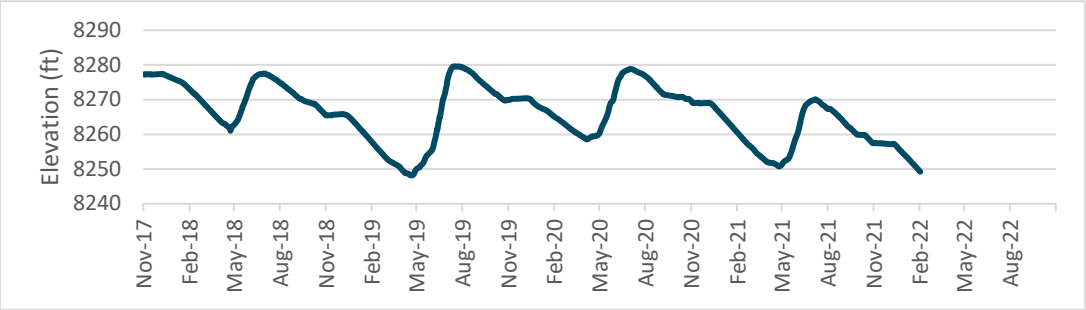
(4) Computed using CoCoRaHS and Northern Water Stations

# C-BT Project Storage

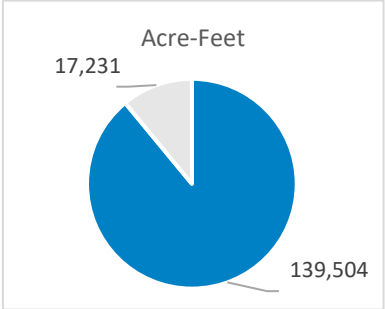
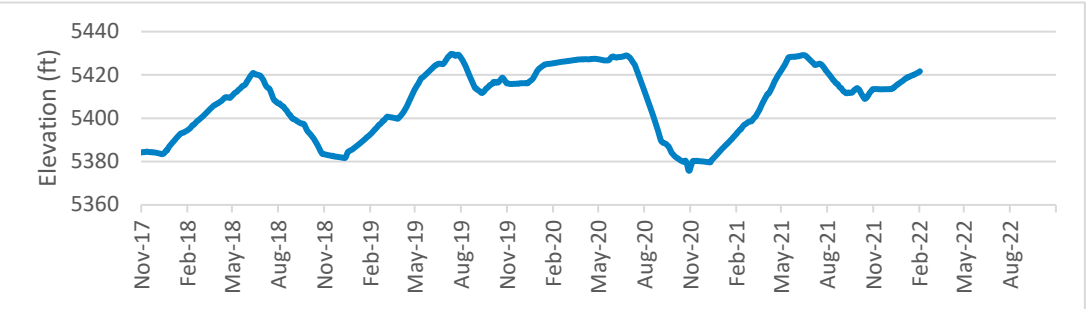
February 1, 2022



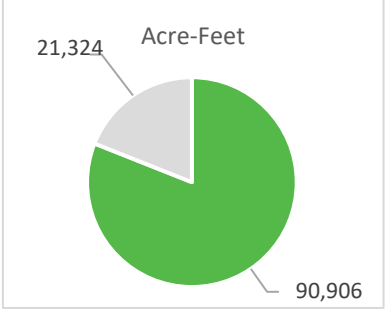
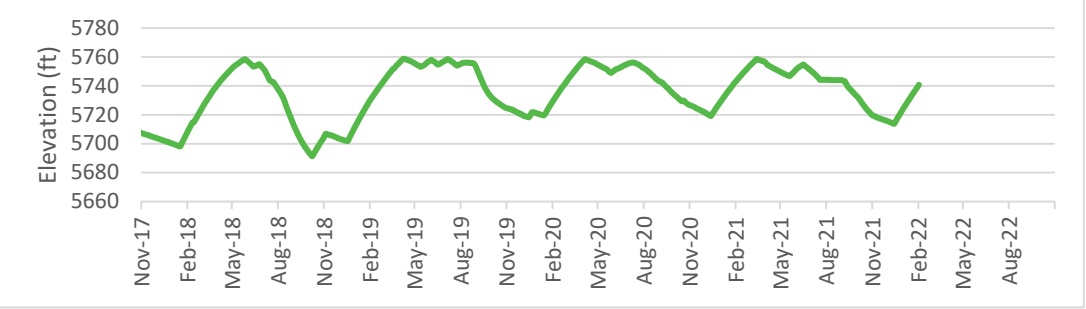
**Lake Granby** Storage in Lake Granby decreased 28,443 acre-feet last month



**Horsetooth Reservoir** Storage in Horsetooth Reservoir increased 7,126 acre-feet last month



**Carter Lake** Storage in Carter Lake increased 16,708 acre-feet last month

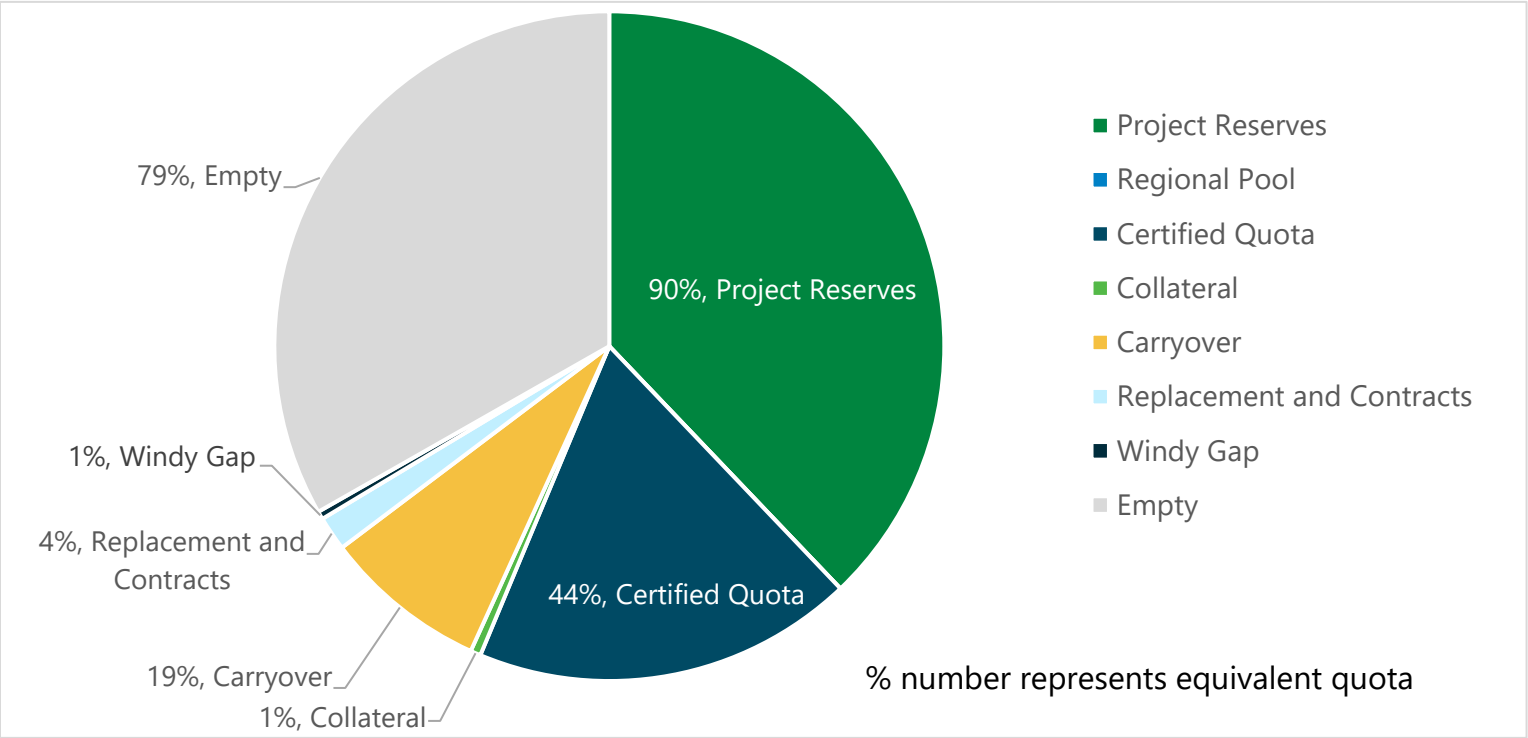


# C-BT Project Allocated Water

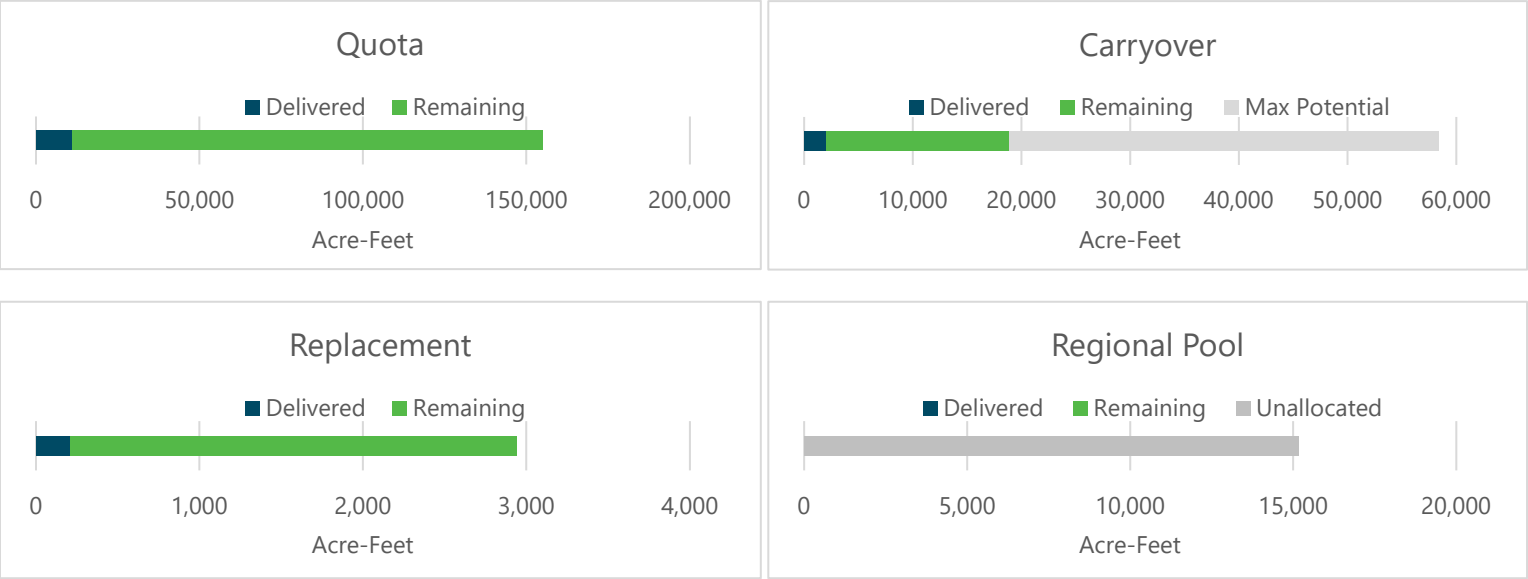
February 1, 2022



## C-BT Active Storage



## C-BT Delivery Obligations

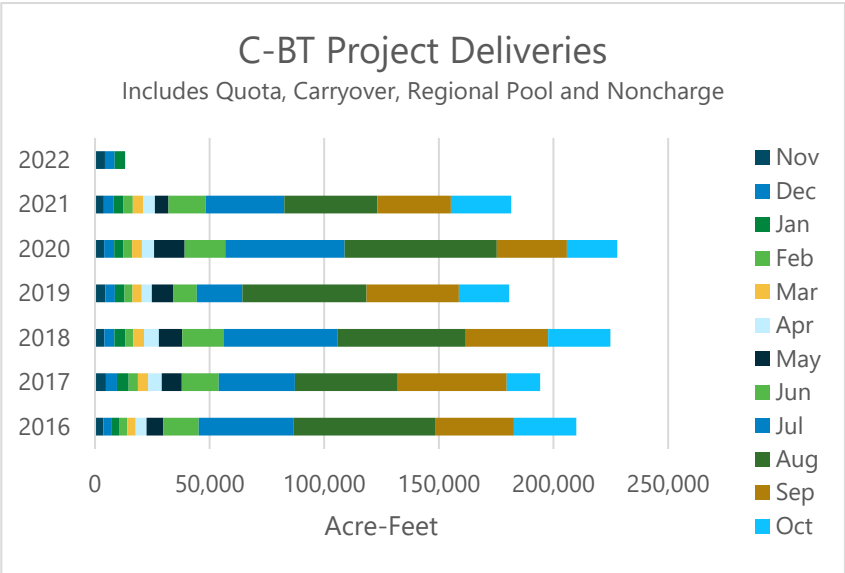
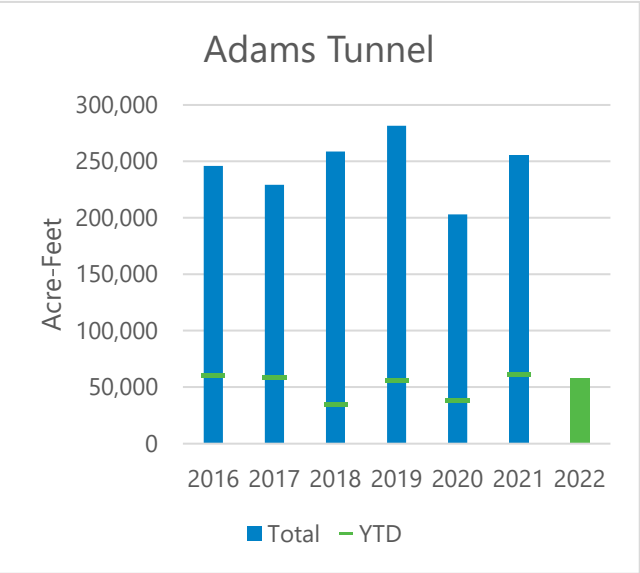


- Notes:**
- 1) Quota set at 50%
  - 2) Carryover - Carryover will not be certified until April 30. Until that date, the Maximum Potential Carryover is reported for Carryover so that adequate supplies are set aside to fulfill all potential obligations.
  - 3) Regional Pool - Additional water accrued to the Regional Pool on April 30, 2022. There is 15,159.9 Acre-Feet in the Regional Pool for WY 2022.

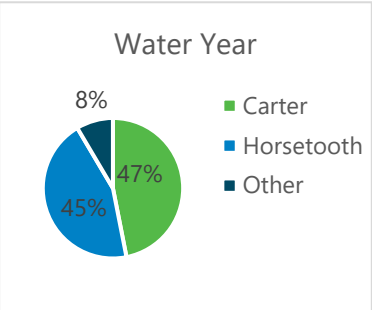
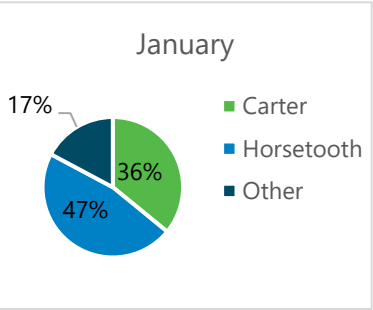


# C-BT Project Deliveries

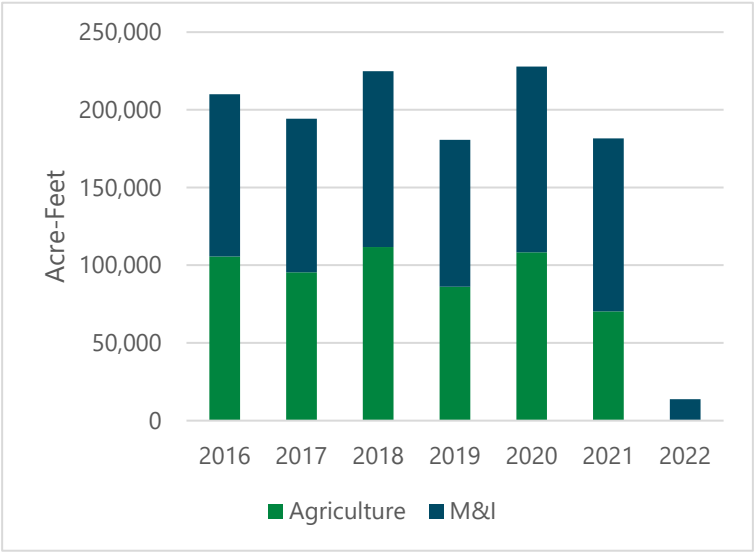
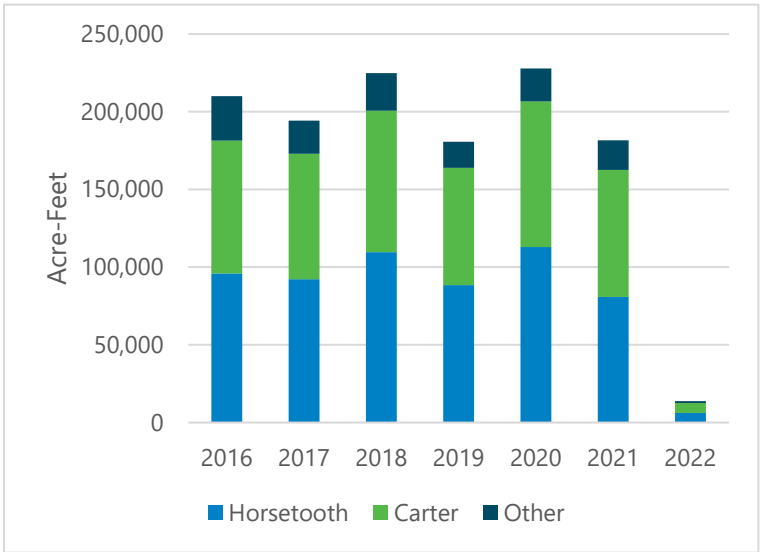
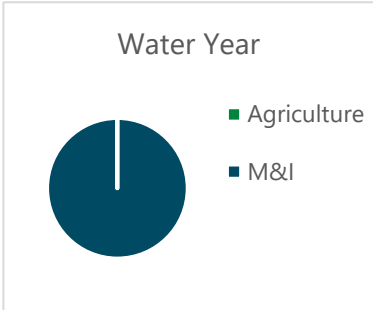
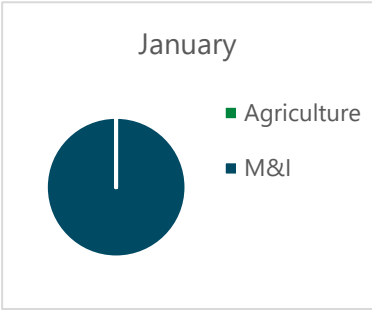
February 1, 2022



## Deliveries by Area



## Deliveries by Use

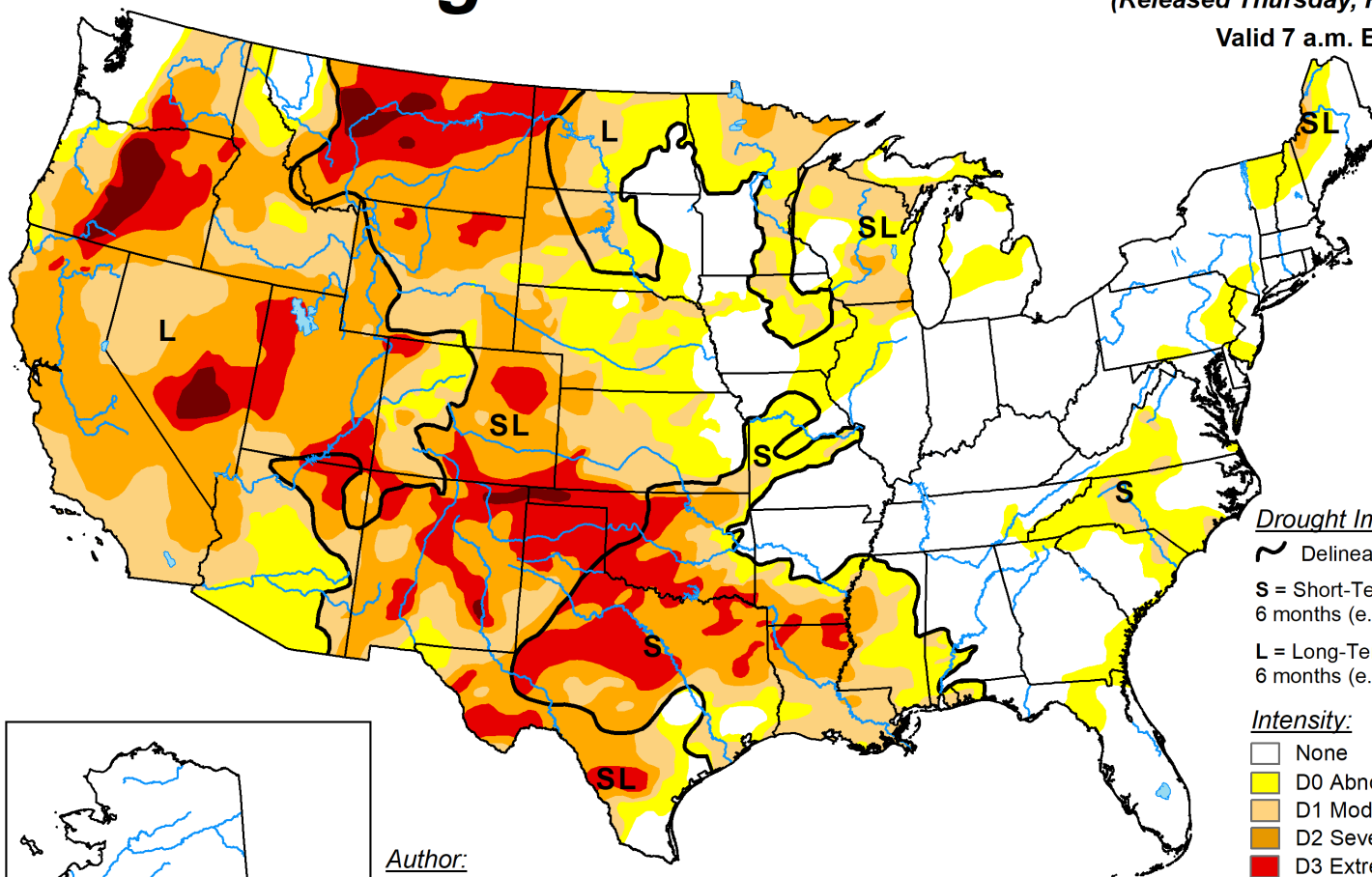


# U.S. Drought Monitor

February 1, 2022

(Released Thursday, Feb. 3, 2022)

Valid 7 a.m. EST



## Drought Impact Types:

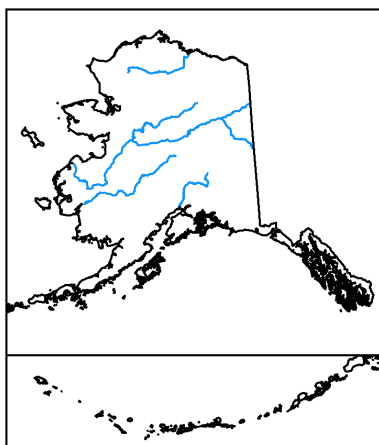
~ Delineates dominant impacts

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

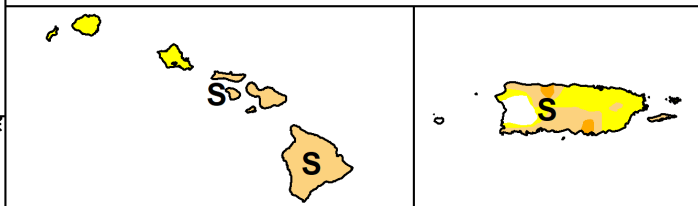
**L** = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

## Intensity:

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



Author:  
Curtis Riganti  
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>



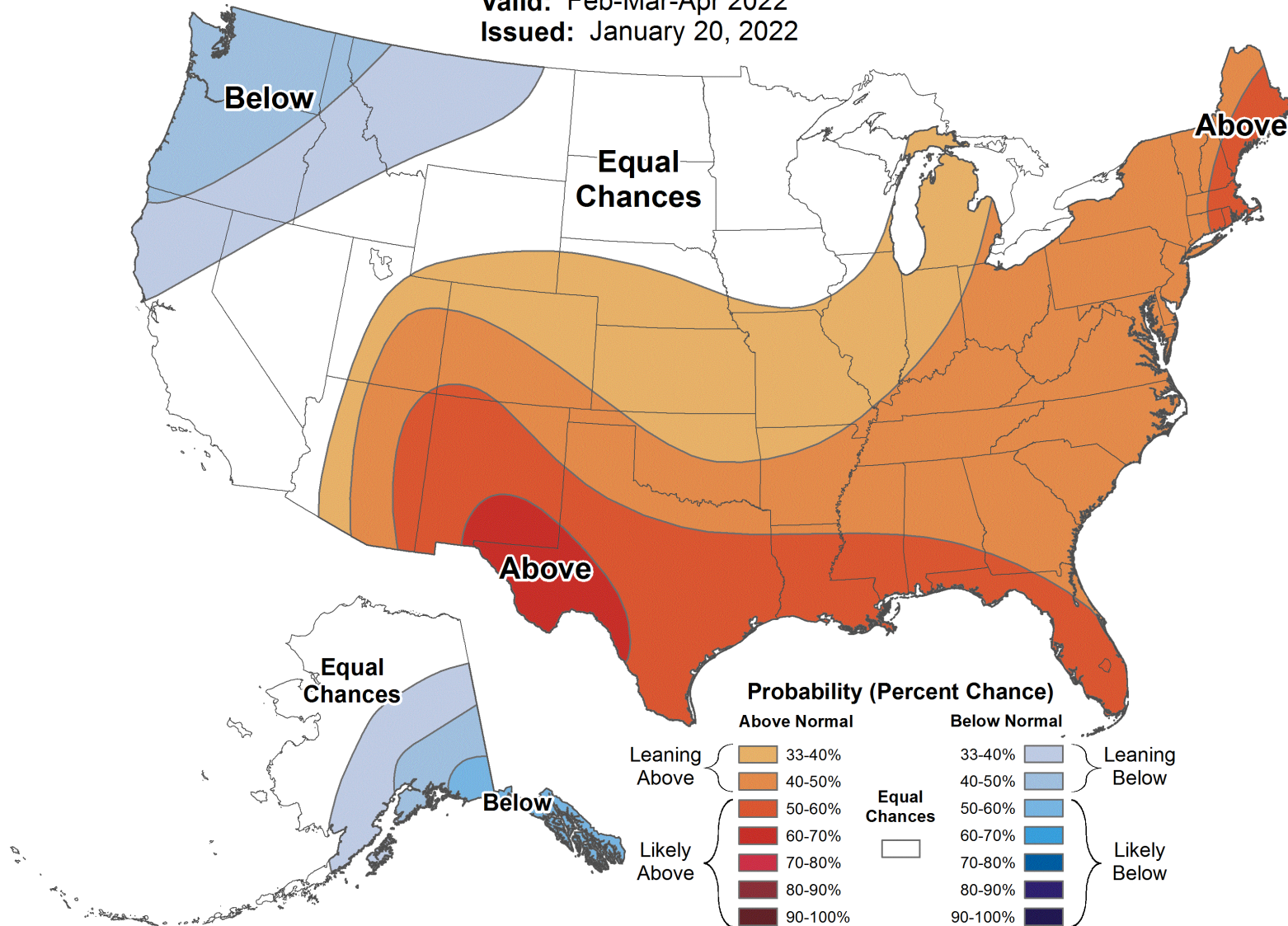
[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)



# Seasonal Temperature Outlook



Valid: Feb-Mar-Apr 2022  
Issued: January 20, 2022





# Seasonal Precipitation Outlook



Valid: Feb-Mar-Apr 2022  
Issued: January 20, 2022

