

**Utilities**

electric · stormwater · wastewater · water

700 Wood Street

PO Box 580

Fort Collins, CO 80522

970.212.2900

V/TDD: 711

utilities@fcgov.comfcgov.com/utilities**M E M O R A N D U M**

DATE: November 10, 2021

TO: Water Commission

FROM: Michael Neale, MSc, Water Resources Engineer
Donnie Dustin, P.E., Water Resources Manager

RE: **October 2021 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 October 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- The supply outlook was typical during October. Water supply intake for October consisted of 57% from Horsetooth and 43% from the Cache la Poudre River.
- Water Demand- Demands for the month of October were slightly above projected. Please refer to the attached graphs and tables. Water demands within the Water Utility service area for the month:
 - Water demand for October: 102.7% of the projected demand.
 - Water demand for calendar year: 97.7% of the projected demand.

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

The conditions in October were warmer and drier than average, measured at the Fort Collins weather station:

- Mean daily high temperature recorded for the month: 67.5 °F.
 - Long term average daily high temperature for the month is: 64.4 °F.
- Total recorded monthly precipitation: 0.2 inches.
 - Long term average precipitation for the month: 1.14 inches.

Reservoir Storage: (See attached sheet from Northern Water)

- Colorado-Big Thompson project reservoirs (Granby, Carter, and Horsetooth): 72% full.
- Horsetooth Reservoir: 80% full.
- Joe Wright Reservoir: 69% full (116% of average based on 14 years of data).

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
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.

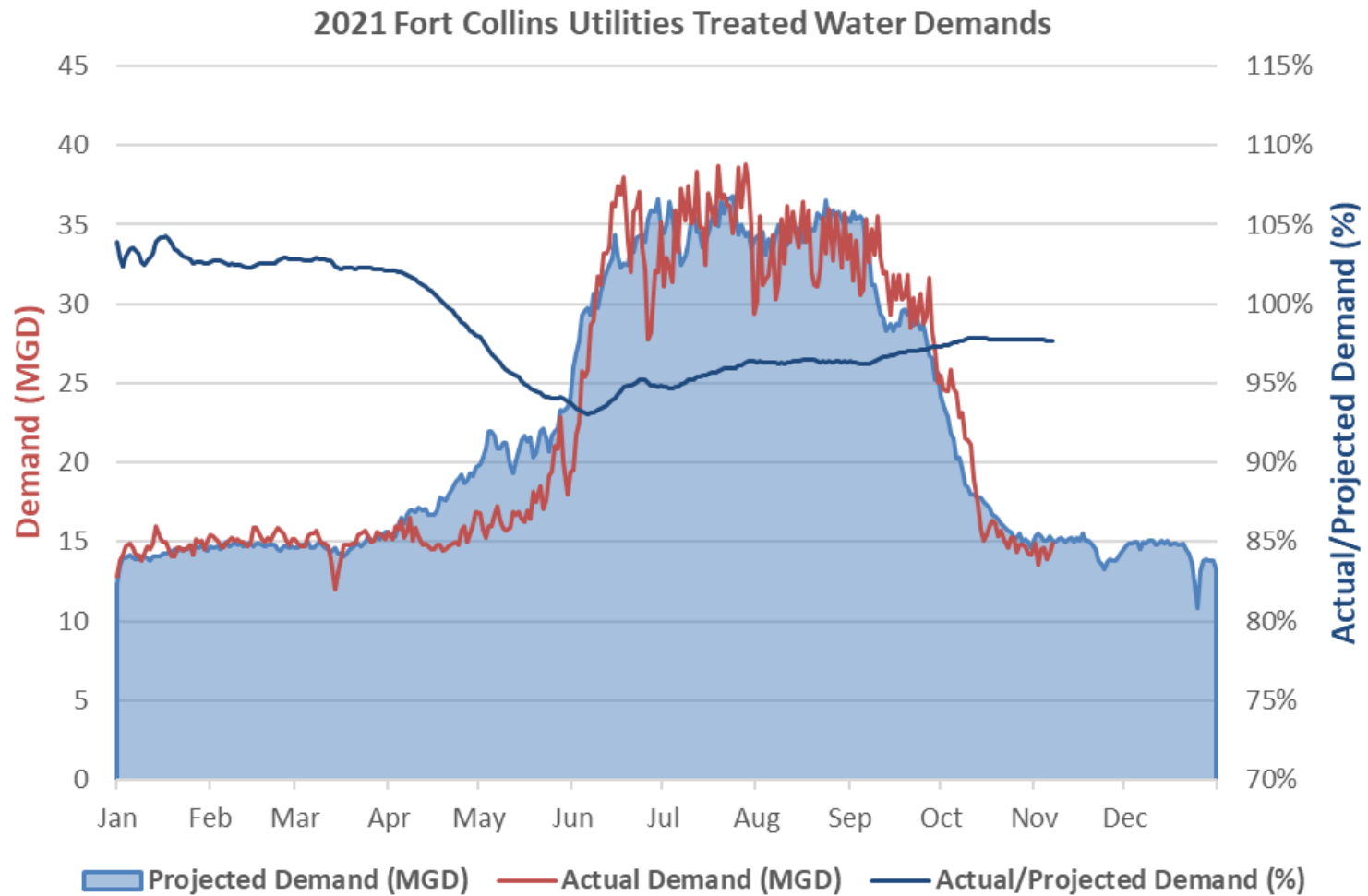
Climate Outlook: <https://www.cpc.ncep.noaa.gov/>

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:

- Utilities staff continues to monitor any precipitation runoff impacts to the Poudre River basin due to the Cameron Peak burn area. In addition, impacts to the Upper Colorado River basin from the Troublesome fire. Water quality impacts will likely subside into the winter months.
- The Colorado River basin remains in a drought. Utilities staff will continue to monitor conditions and potential curtailments in the new water year.



City of Fort Collins Utilities
Treated Water Monthly Summary
2021

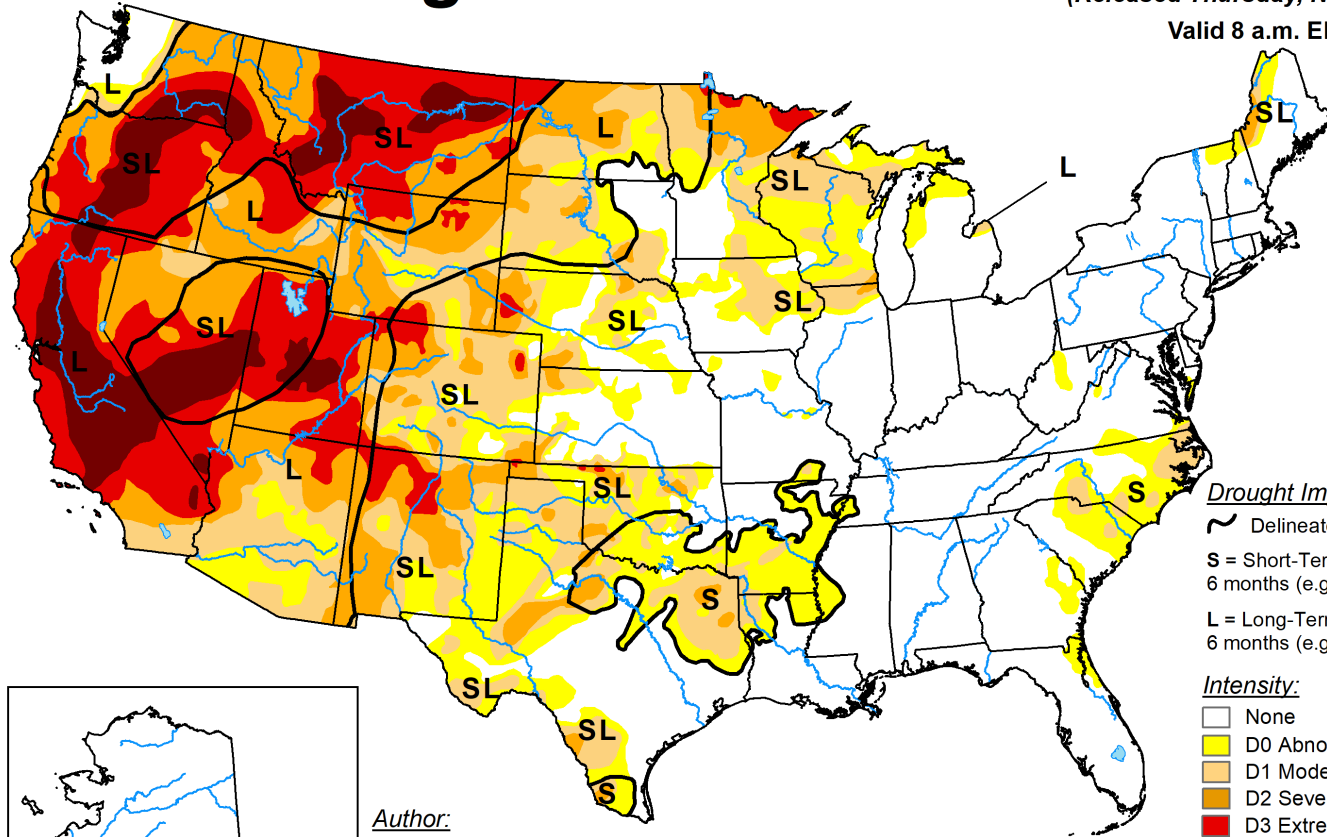
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year to Date
WTF Water Supply (MG)													
From Poudre	304.5	290.0	288.6	155.0	275.5	403.0	241.8	169.6	324.3	277.2			2,729.5
From Horsetooth	206.3	186.0	218.7	359.0	330.8	681.8	1,019.1	1,036.1	752.1	369.7			5,159.6
Total Raw Water	510.8	476.0	507.2	514.0	606.4	1,084.9	1,260.8	1,205.7	1,076.4	647.0			7,889.1
Demands (MG)													
WTF Production	489.7	451.6	478.1	492.0	582.7	1,039.1	1,211.4	1,156.6	1,033.1	626.1			7,560.6
Change in Storage	9.0	-1.1	-1.1	5.0	-3.9	4.4	-0.9	0.2	0.5	-6.3			
Demand on WTF	480.7	452.7	479.2	487.1	586.7	1,034.7	1,212.3	1,156.4	1,032.6	632.4			7,554.7
From Soldier Canyon	10.7	10.3	23.0	21.8	80.7	264.0	340.7	299.1	257.3	104.2			1,411.6
To Soldier Canyon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0
To FC-Lov/NWCWD	-39.8	-37.0	-40.4	-49.6	-123.7	-357.2	-457.9	-417.0	-356.7	-167.5			-2,046.6
For City	451.6	426.0	461.8	459.3	543.7	941.6	1,095.1	1,038.4	933.2	569.1			6,919.6
Daily Deliveries to City (MG)													
Max During Month	16.0	15.9	15.7	16.9	22.8	38.0	38.8	36.4	35.5	25.9			38.8
Min During Month	12.8	14.7	12.0	14.5	15.2	19.5	29.4	30.2	25.0	14.2			12.0
Avg During Month	14.6	15.2	14.9	15.3	17.5	31.4	35.3	33.5	31.1	18.4			22.7
Monthly Deliveries (Ac-Ft)													
Projected	1,351	1,268	1,407	1,605	2,038	2,962	3,317	3,311	2,770	1,700	1,357	1,367	24,453
Actual	1,386	1,307	1,417	1,409	1,668	2,890	3,361	3,187	2,864	1,747			21,236
Ratio	103%	103%	101%	88%	82%	98%	101%	96%	103%	103%			87%
Year to Date Deliveries (Ac-Ft)													
Projected	1,351	2,619	4,025	5,631	7,668	10,630	13,947	17,258	20,028	21,728	23,086	24,453	24,453
Actual	1,386	2,693	4,110	5,520	7,188	10,078	13,438	16,625	19,489	21,236			21,236
Ratio	103%	103%	102%	98%	94%	95%	96%	96%	97%	98%			87%

U.S. Drought Monitor

November 2, 2021

(Released Thursday, Nov. 4, 2021)

Valid 8 a.m. EDT



Drought Impact Types:

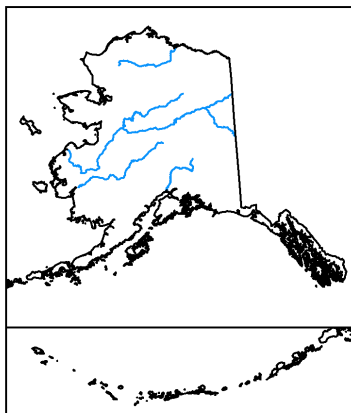
~ Delineates dominant impacts

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

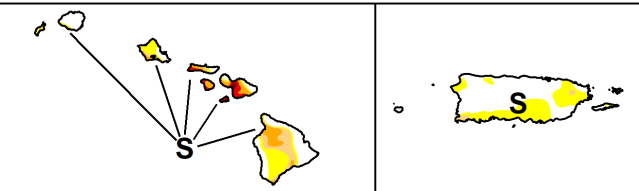
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

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



Author:
Adam Hartman
NOAA/NWS/NCEP/CPC

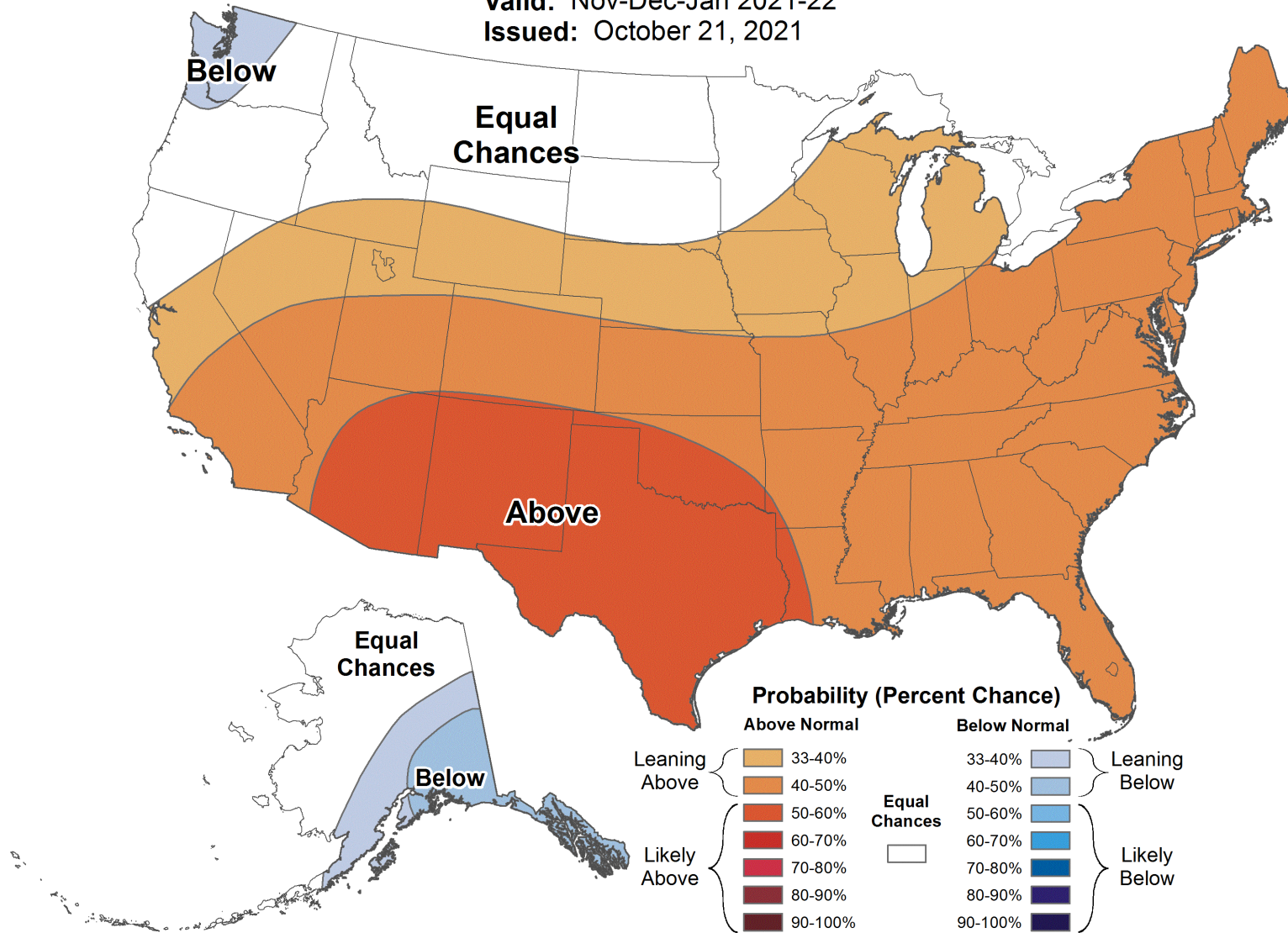


The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>



droughtmonitor.unl.edu

Issued: October 21, 2021



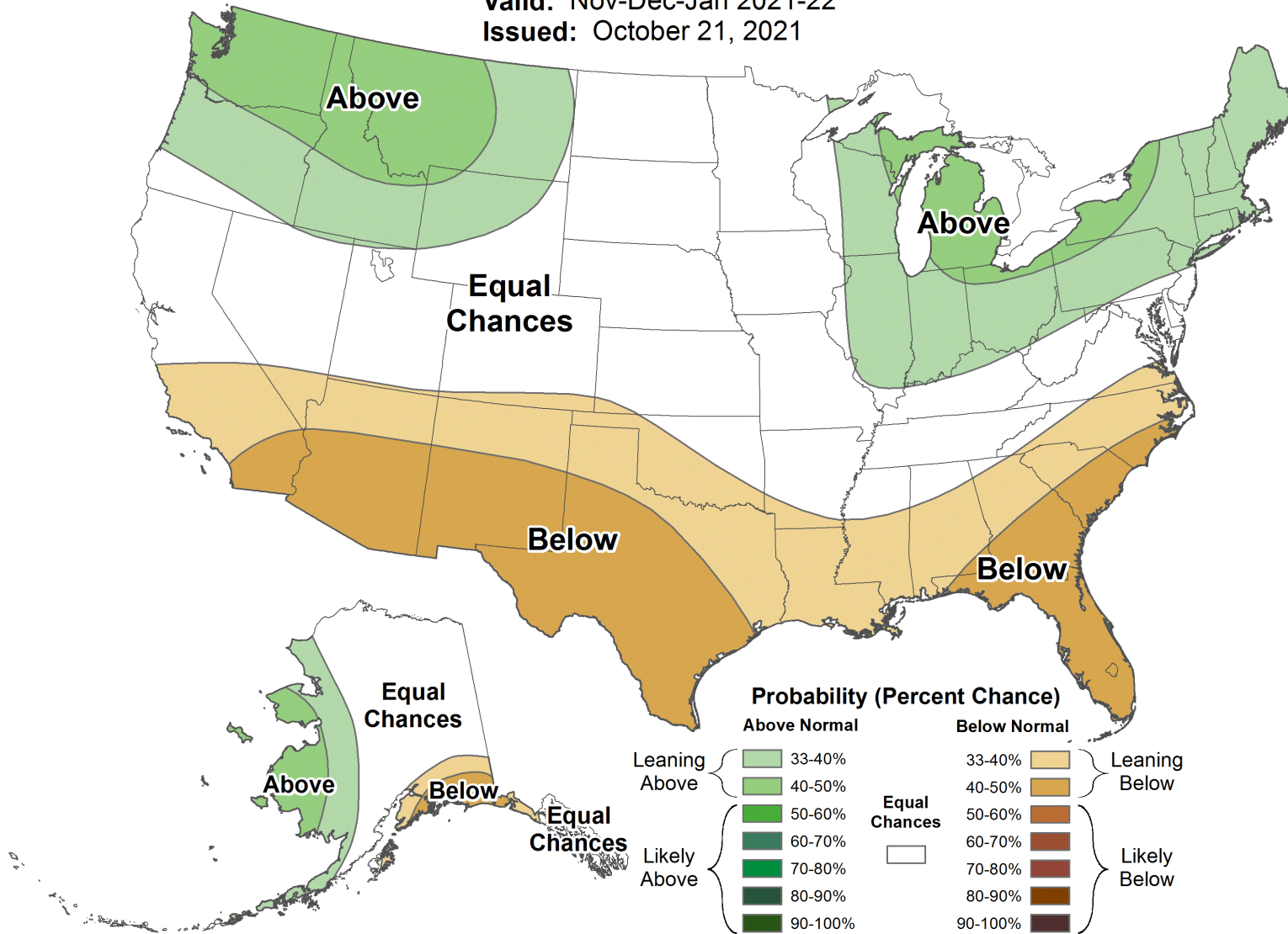


Seasonal Precipitation Outlook



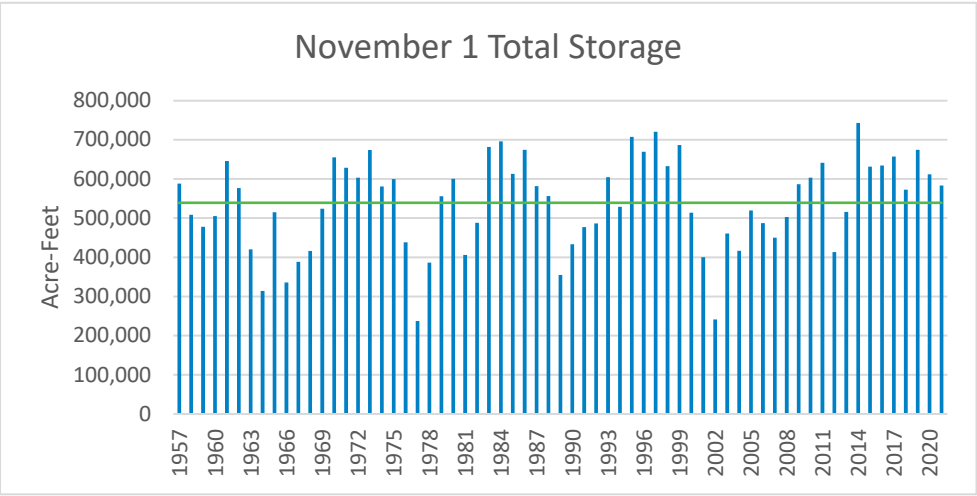
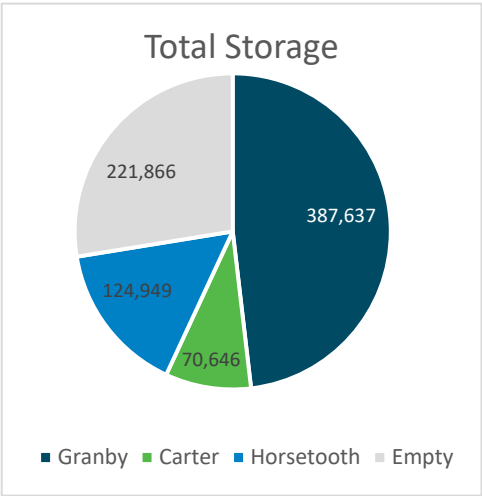
Valid: Nov-Dec-Jan 2021-22

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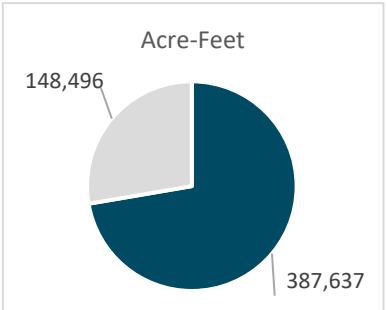
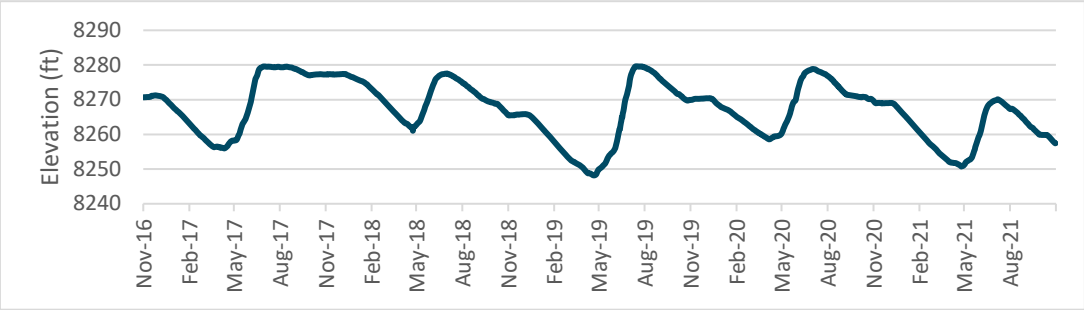


C-BT Project Storage

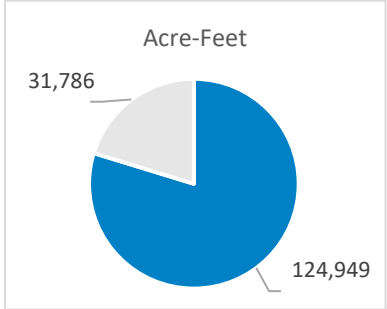
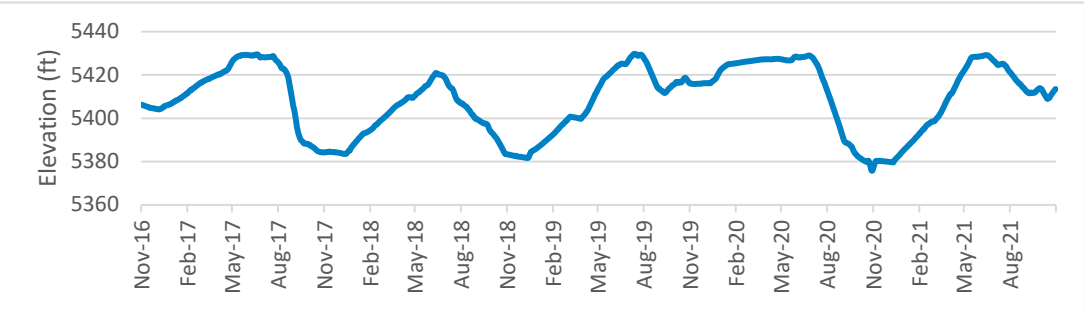
November 1, 2021



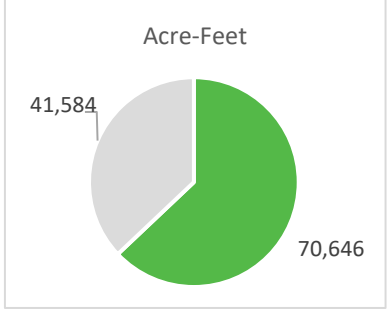
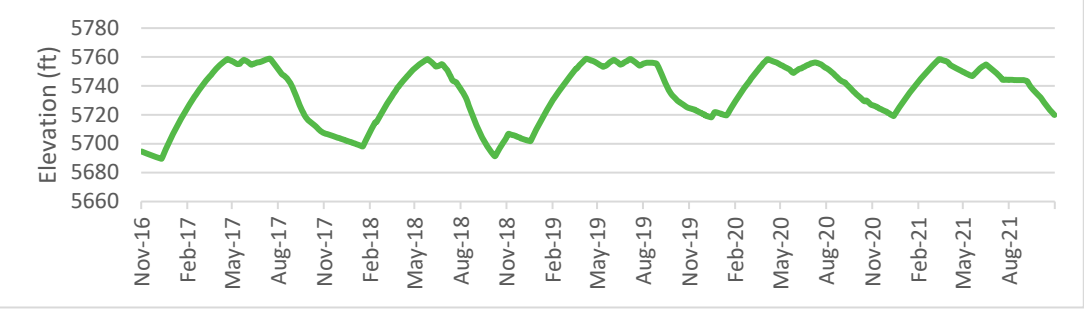
Lake Granby Storage in Lake Granby decreased 15,074 acre-feet last month



Horsetooth Reservoir Storage in Horsetooth Reservoir decreased 759 acre-feet last month



Carter Lake Storage in Carter Lake decreased 13,185 acre-feet last month

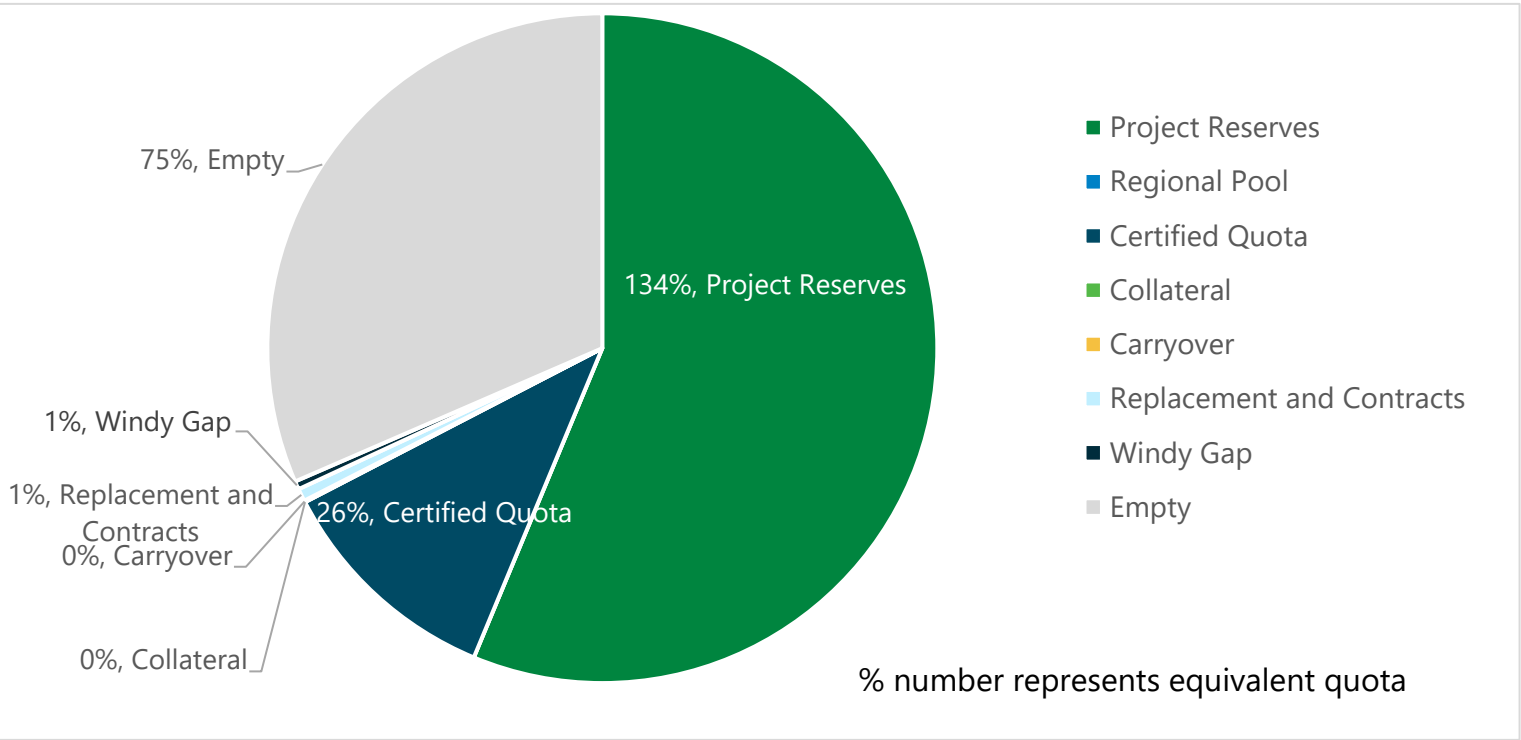


C-BT Project Allocated Water

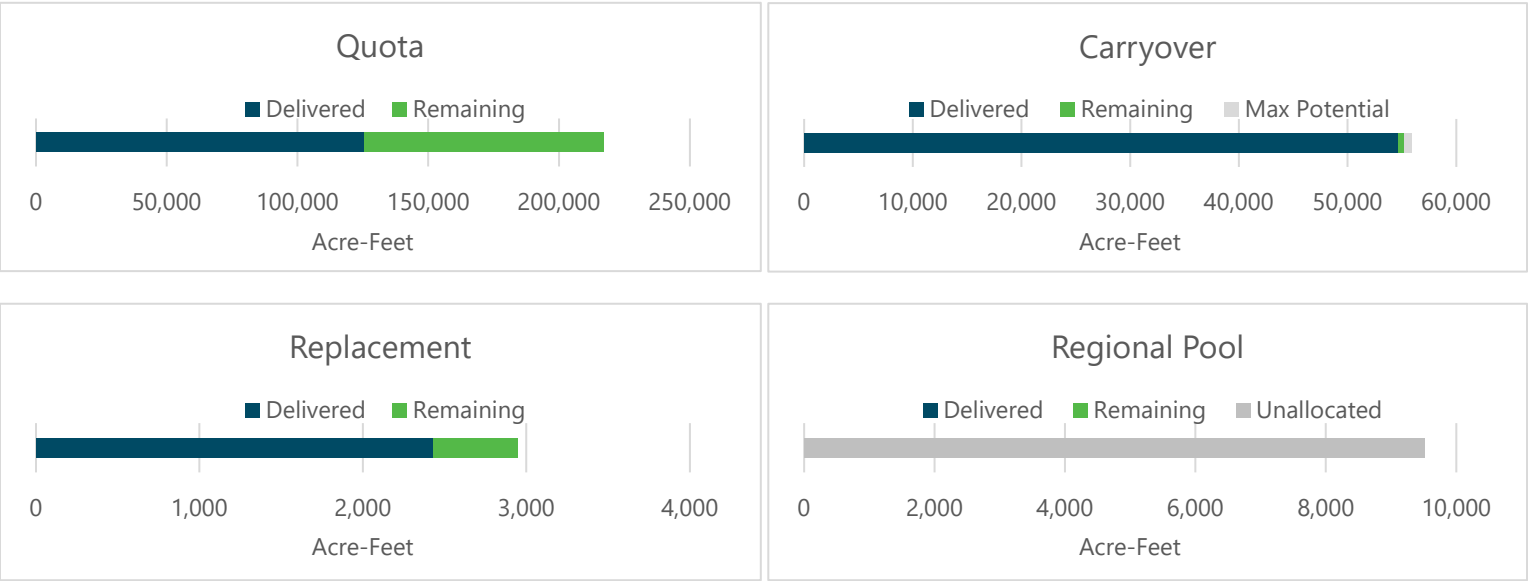
October 31, 2021



C-BT Active Storage



C-BT Delivery Obligations



Notes:

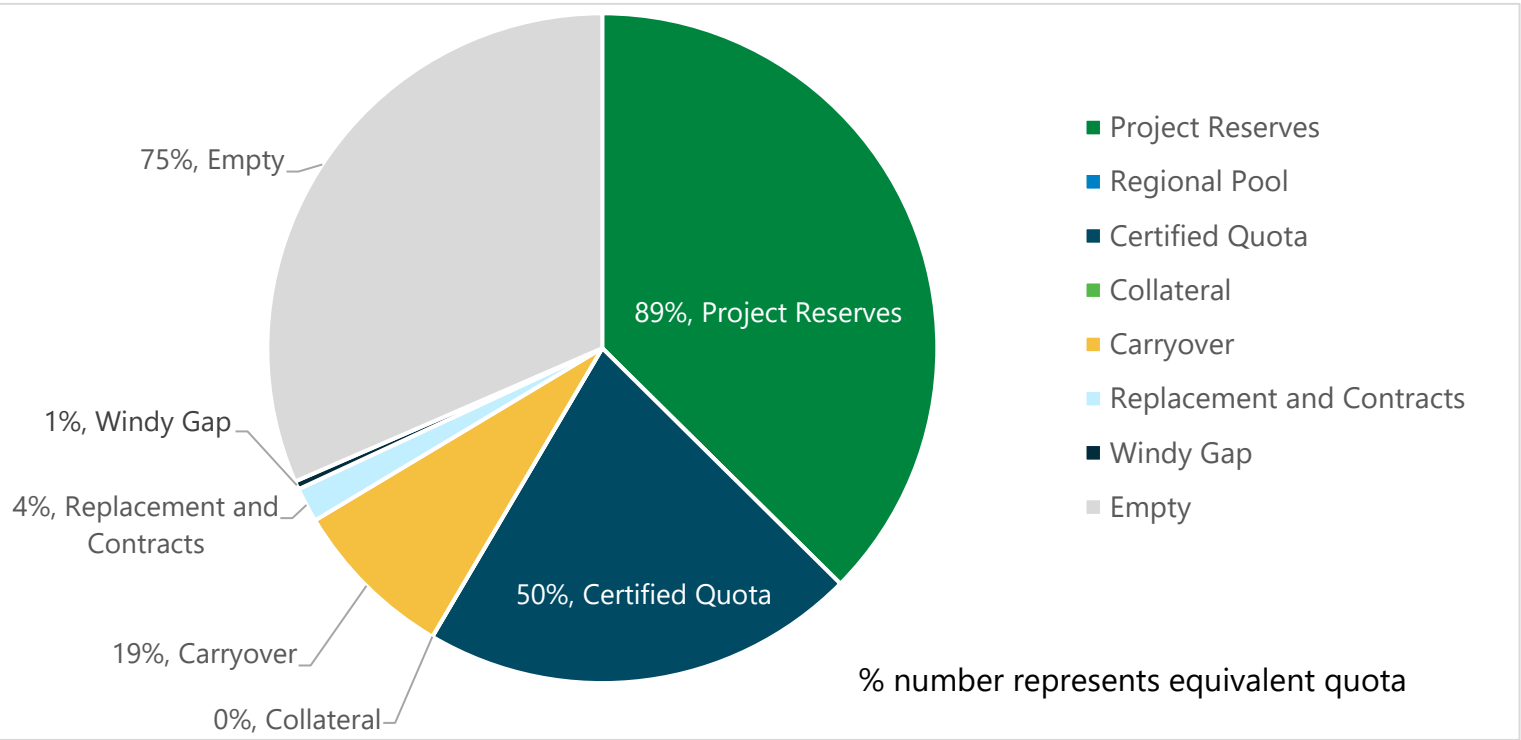
- 1) Quota set at 70%
- 2) Carryover - Entites certified 55,240.5 Acre-Feet of Carryover for WY2021.
- 3) Regional Pool - Additional water acrued to the Regional Pool on April 30, 2021. There is 9,510.3 Acre-Feet in the Regional Pool for WY 2021.

C-BT Project Allocated Water

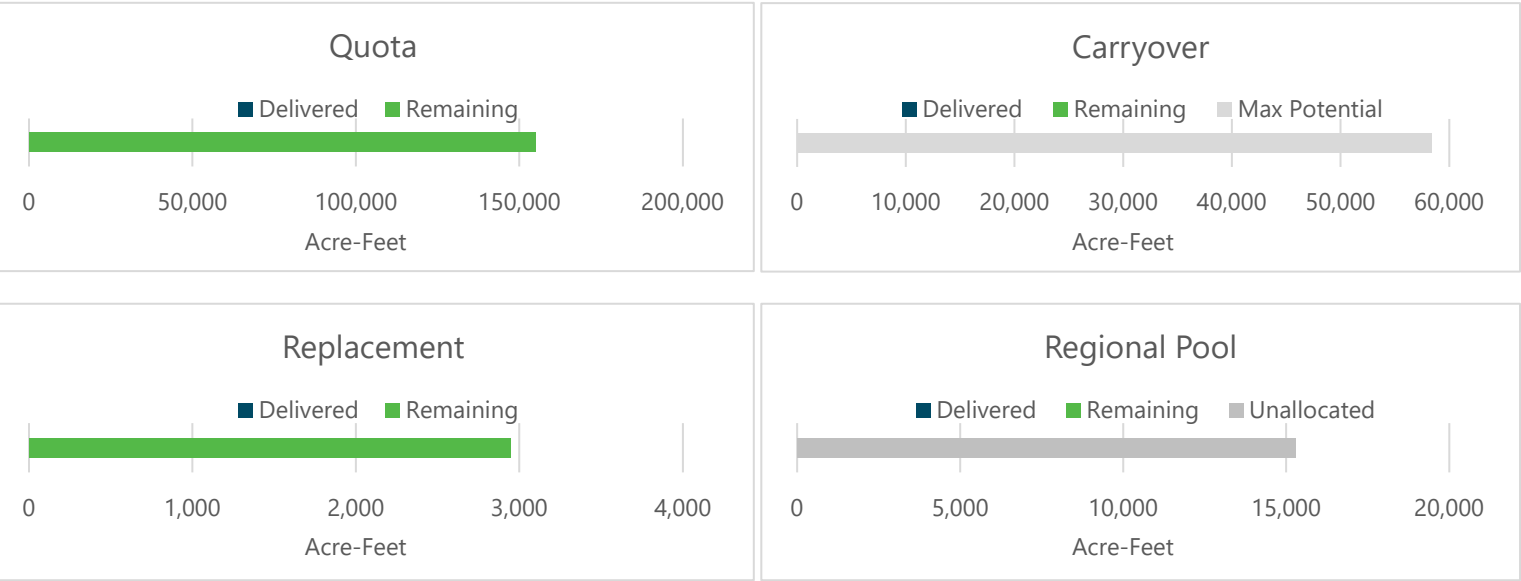
November 1, 2021



C-BT Active Storage



C-BT Delivery Obligations

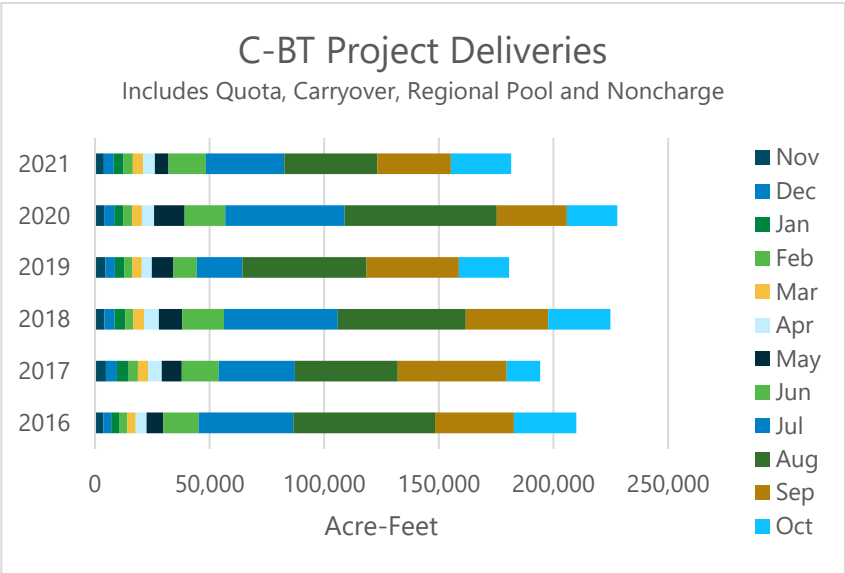
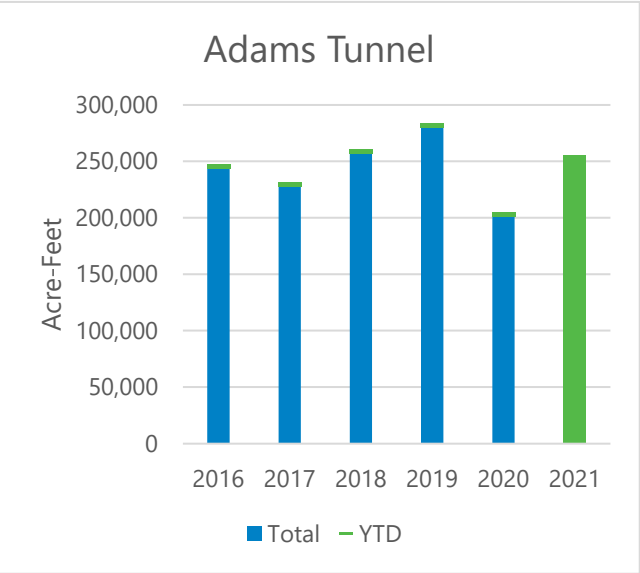


Notes:

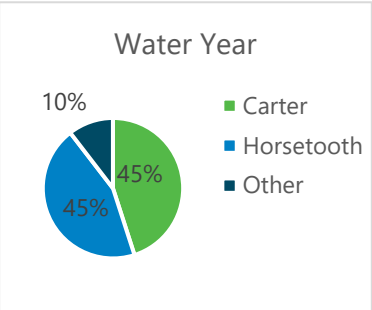
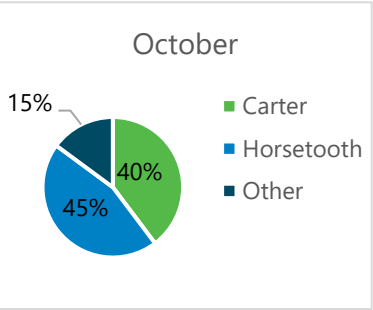
- 1) Initial Quota set at 50%
- 2) Carryover - Carryover will not be certified until April 30. Until that date, the Maximum Potential Carryover is reported for so that adequate supplies are set aside to fulfill all potential obligations.
- 3) Regional Pool - Additional water will accrue to the Regional Pool until April 30. The current volume reflects water supplies not eligible for the Carryover Program.

C-BT Project Deliveries

November 1, 2021



Deliveries by Area



Deliveries by Use

