



#### Utilities

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## MEMORANDUM

**DATE:** October 12, 2022  
**TO:** Water Commission  
**FROM:** Michael Neale, MSc, Water Resources Engineer  
**RE:** **September 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 September and provide updated 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 WY2022

- Water Supply – During the month of September, water supply consisted of 54% from Horsetooth Reservoir, and 46% from the Poudre River, including 10% of total supply diverted via the Pleasant Valley Pipeline.
- Water Demand – Demands within the Water Utility service area for the month of September were slightly below projected. Please refer to the attached graphs and tables.
  - Water demand for September was 96% of the projected demand.
  - Water demand for calendar year is 97% of the projected demand.

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

Measured at the Fort Collins weather station 053005 along with average normals from 1991-2020:

- Mean daily high temperature recorded for the month: 82.3 °F.
  - 30-year average daily high temperature for the month is: 77 °F.
- Total recorded monthly precipitation: 1.22 inches.
  - 30-year average precipitation for the month: 1.43 inches.

**Reservoir Storage:** As of October 1<sup>st</sup>, and presented in the Northern District Storage and Delivery Report:

- Colorado-Big Thompson project reservoirs (Granby, Carter, and Horsetooth): 81% full.
- Horsetooth Reservoir: 60% full.
- Joe Wright Reservoir: 75% full (115% of average for the month based on 14 years of data).

**Cache la 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/CLAFTCCO?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)  
Most of Larimer County is under no drought conditions. Eastern end of the County and most of the state is experiencing abnormally dry conditions.
- Colorado and the USA <https://droughtmonitor.unl.edu/>  
The Colorado River basin remains in a drought.

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

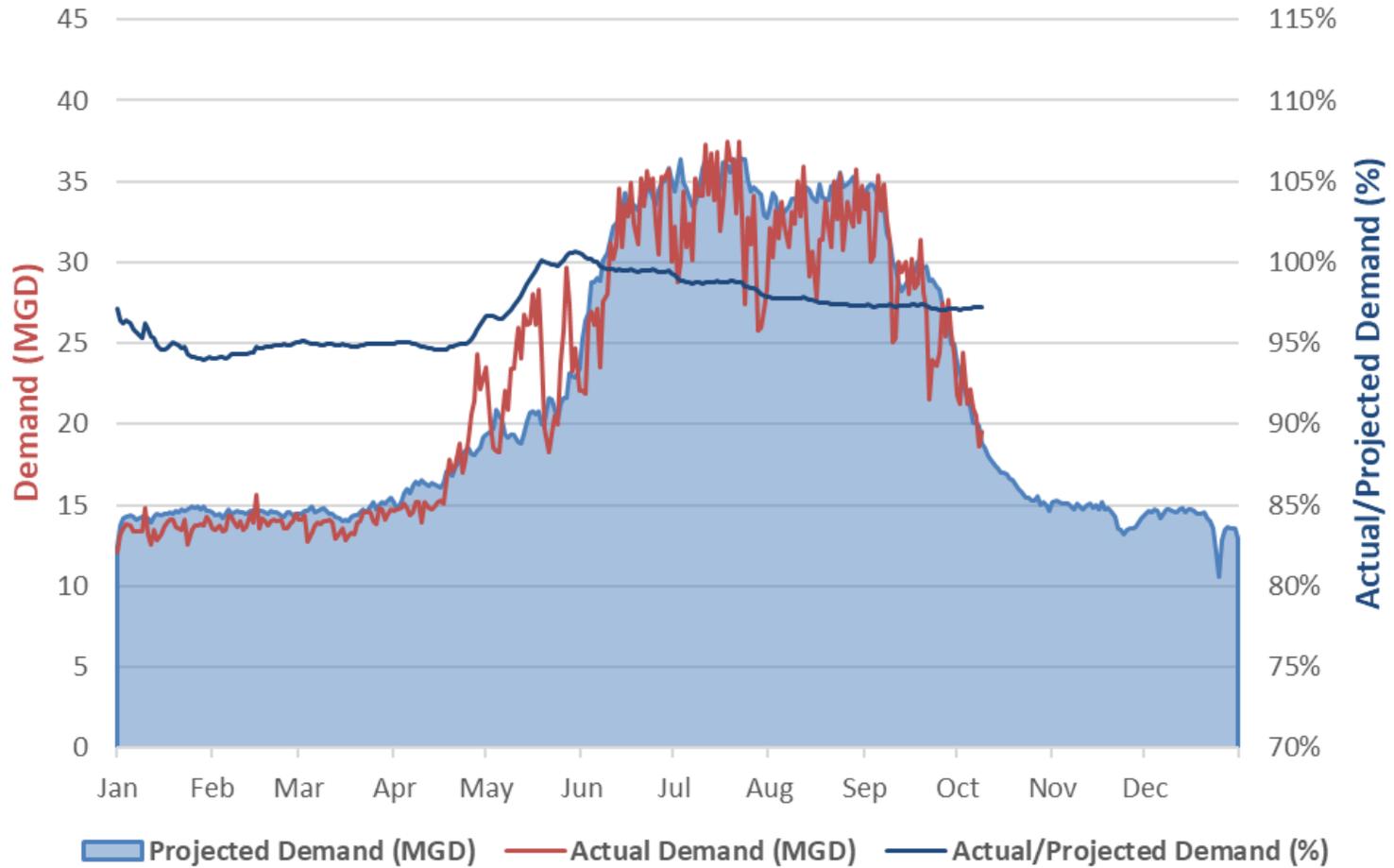
National Oceanic and Atmospheric Administration (NOAA) climate outlooks for the northern Front Range and northern mountains, over the next three months:

- Equal chances of above or below normal precipitation
- Likely above normal temperature.

#### **Other Water Supply Considerations:**

- Water Resources Division is attentive of Colorado River drought management policy and maintains communication with Northern Water on potential impacts to our supplies from the Colorado-Big Thompson project in 2023 and beyond.

### 2022 Fort Collins Utilities Treated Water Demands



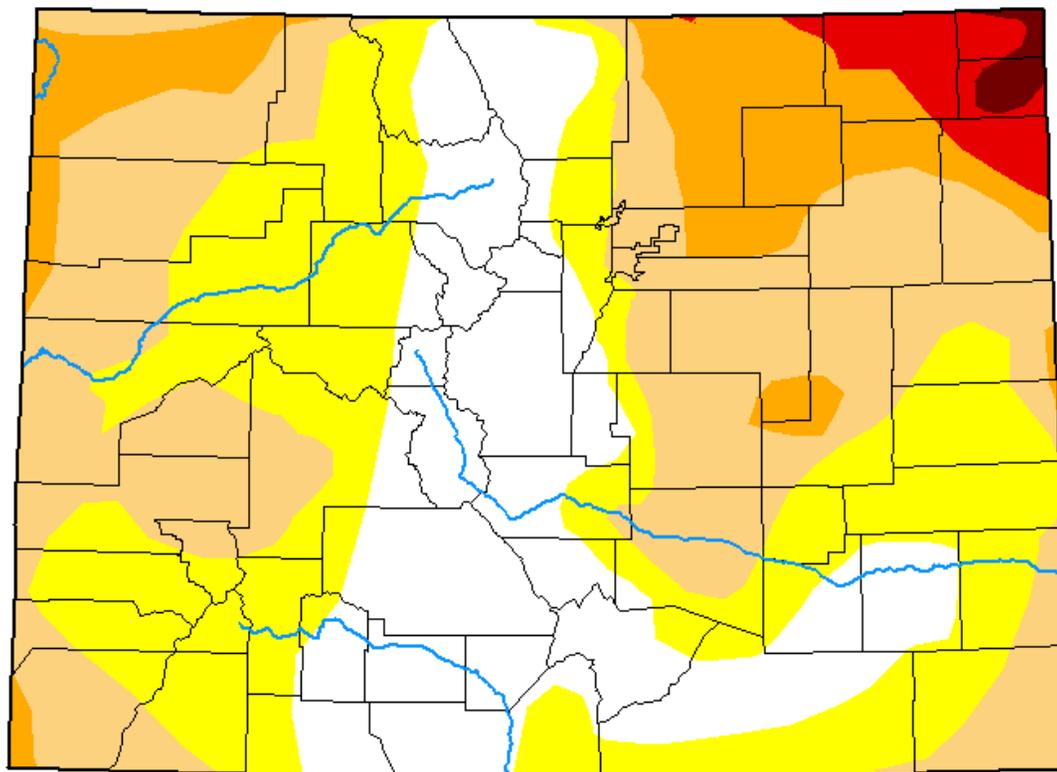


**City of Fort Collins Utilities**  
**Treated Water Monthly Summary**  
**2022**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year to Date
<b>WTF Water Supply (MG)</b>													
From Poudre	161.6	0.0	190.8	293.2	122.3	288.4	431.0	335.7	466.1				2,289.2
From Horsetooth	289.9	433.3	306.1	297.1	696.5	785.3	756.4	856.4	549.4				4,970.4
Total Raw Water	451.5	433.3	496.8	590.3	818.8	1,073.8	1,187.3	1,192.1	1,015.6				7,259.5
<b>Demands (MG)</b>													
WTF Production	436.0	415.4	468.3	557.2	780.5	1,025.9	1,134.5	1,143.8	974.0				6,935.5
Change in Storage	-1.6	-1.0	4.0	4.7	-0.2	0.5	0.7	0.8	-2.2				5.5
Demand on WTF	437.6	416.4	464.4	552.5	780.7	1,025.4	1,133.8	1,143.0	976.3				6,930.0
From Soldier Canyon	21.8	7.1	14.4	48.7	174.5	307.9	348.5	321.7	263.9				1,508.5
To Soldier Canyon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0
To FC-Lov/NWCWD	-39.6	-33.2	-48.4	-96.0	-235.9	-407.7	-469.8	-456.3	-379.4				-2,166.2
For City	419.8	390.3	430.4	505.3	719.3	925.6	1,012.4	1,008.4	860.8				6,272.3
<b>Daily Deliveries to City (MG)</b>													
Max During Month	14.8	15.7	14.8	24.3	29.7	35.7	37.4	35.9	35.3				37.4
Min During Month	12.1	13.4	12.7	13.9	18.2	21.9	25.8	27.7	21.5				12.1
Avg During Month	13.5	13.9	13.9	16.8	23.2	30.9	32.7	32.5	28.7				22.9
<b>Monthly Deliveries (Ac-Ft)</b>													
Projected	1,369	1,247	1,392	1,551	1,961	2,959	3,329	3,251	2,760	1,685	1,338	1,339	24,181
Actual	1,288	1,198	1,321	1,551	2,208	2,841	3,107	3,095	2,642				19,249
Ratio	94%	96%	95%	100%	113%	96%	93%	95%	96%				80%
<b>Year to Date Deliveries (Ac-Ft)</b>													
Projected	1,369	2,616	4,008	5,559	7,520	10,479	13,808	17,058	19,819	21,503	22,842	24,181	24,181
Actual	1,288	2,486	3,807	5,358	7,565	10,406	13,513	16,607	19,249				19,249
Ratio	94%	95%	95%	96%	101%	99%	98%	97%	97%				80%

# U.S. Drought Monitor Colorado

**October 4, 2022**  
(Released Thursday, Oct. 6, 2022)  
Valid 8 a.m. EDT



***Intensity:***

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

*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>*

***Author:***

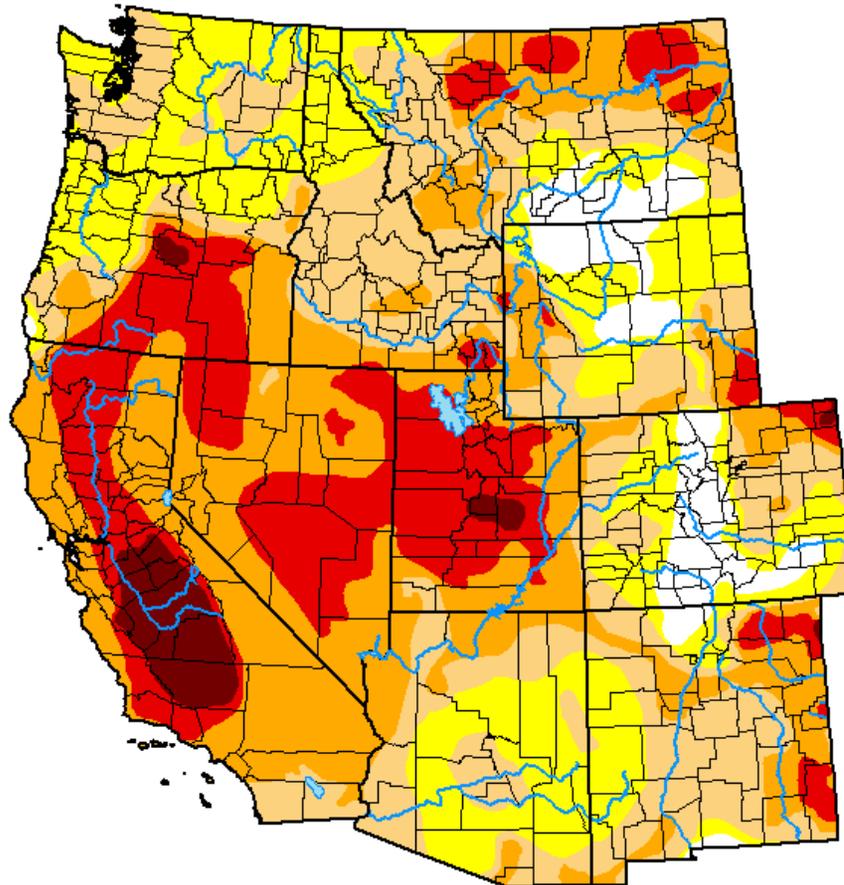
Brad Pugh  
CPC/NOAA



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

# U.S. Drought Monitor West

**October 4, 2022**  
(Released Thursday, Oct. 6, 2022)  
Valid 8 a.m. EDT



***Intensity:***

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

*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>*

***Author:***

Brad Pugh  
CPC/NOAA



**droughtmonitor.unl.edu**

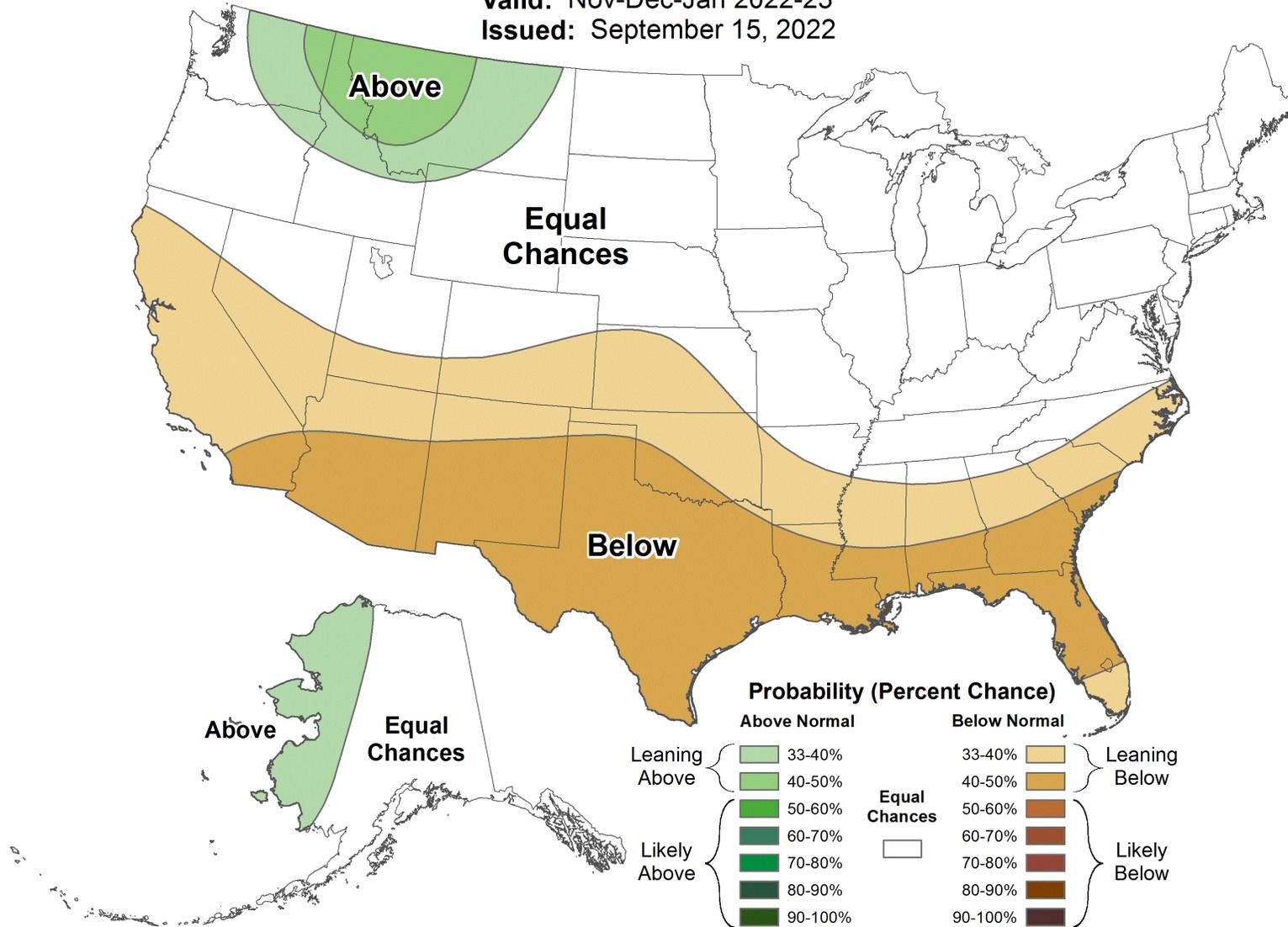




# Seasonal Precipitation Outlook

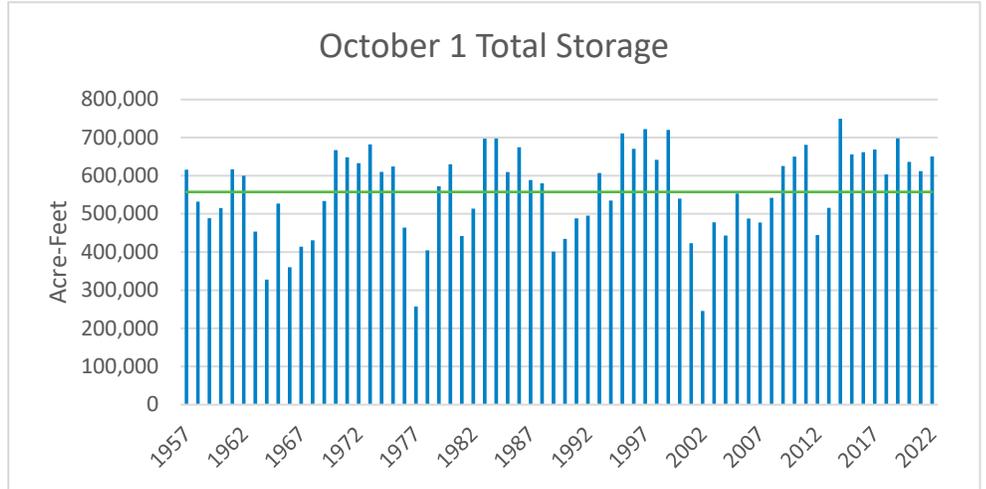
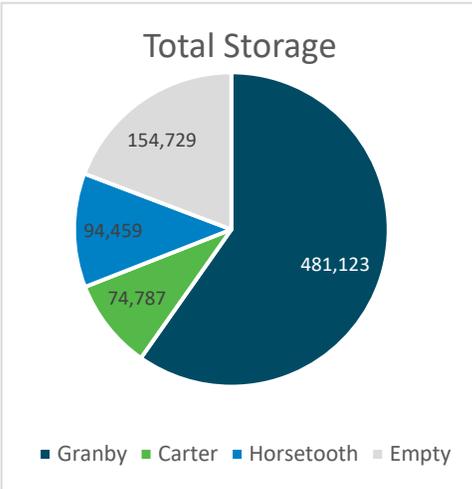


Valid: Nov-Dec-Jan 2022-23  
 Issued: September 15, 2022

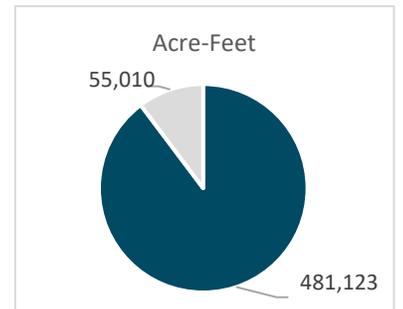


# C-BT Project Storage

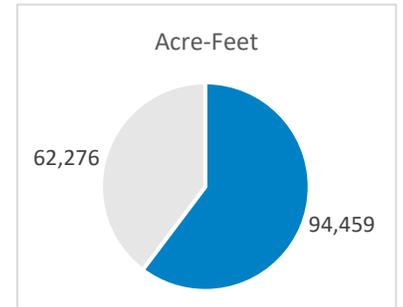
October 1, 2022



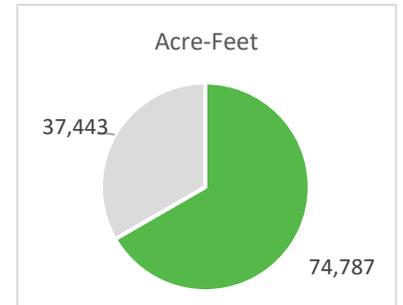
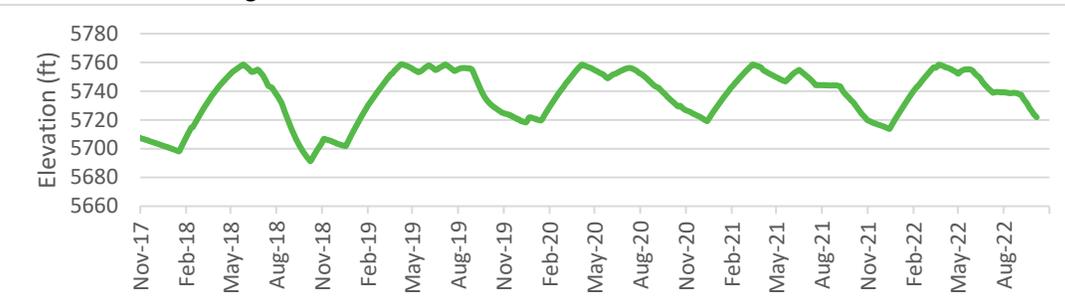
**Lake Granby** Storage in Lake Granby decreased 13,507 acre-feet last month



**Horsetooth Reservoir** Storage in Horsetooth Reservoir decreased 9,987 acre-feet last month



**Carter Lake** Storage in Carter Lake decreased 14,349 acre-feet last month

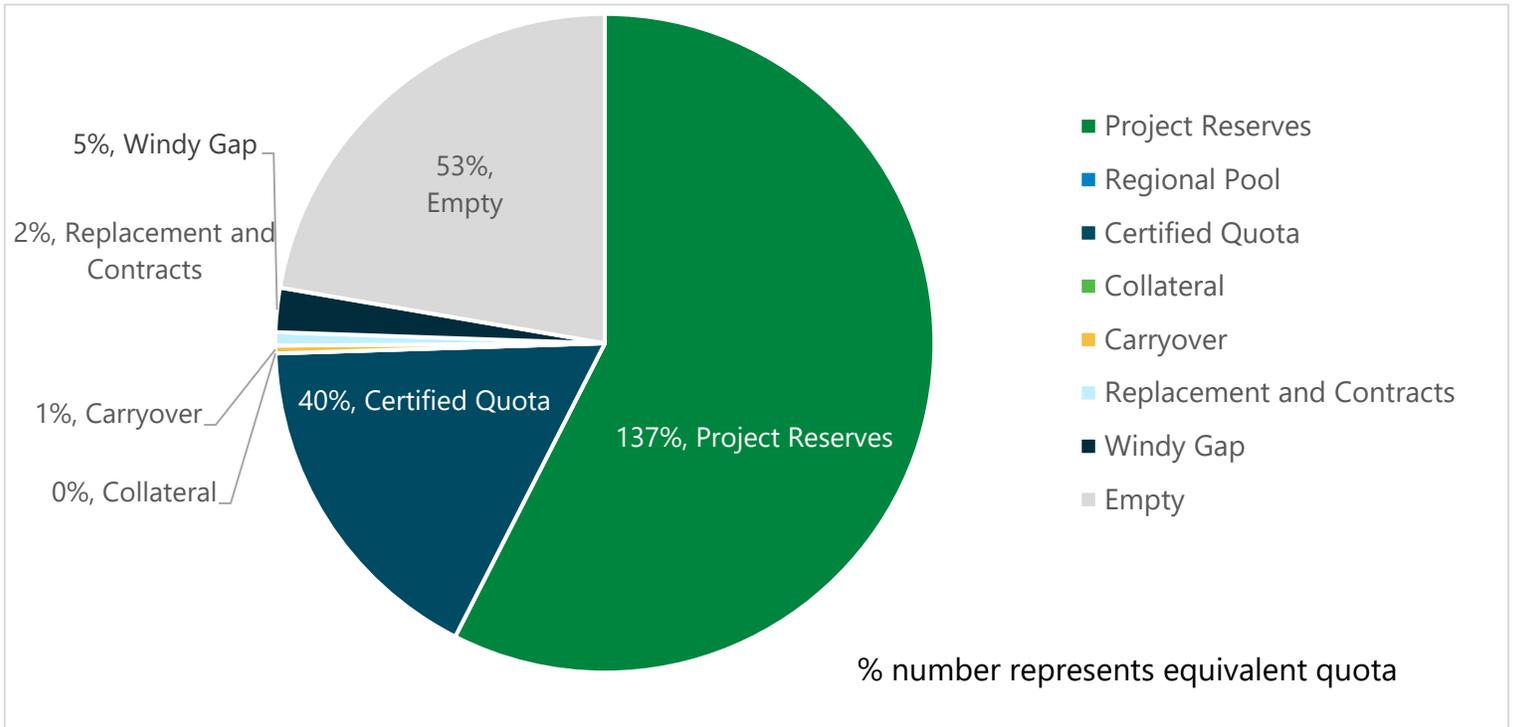


# C-BT Project Allocated Water

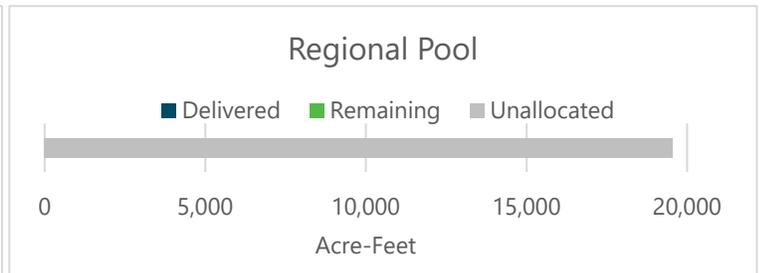
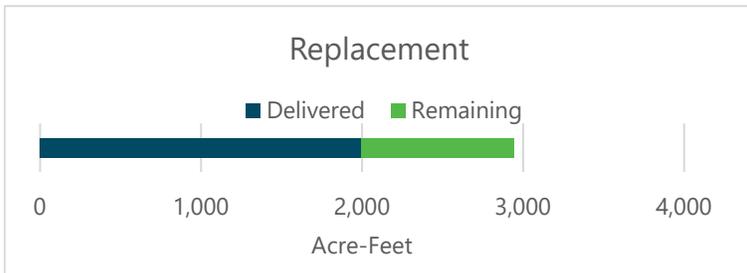
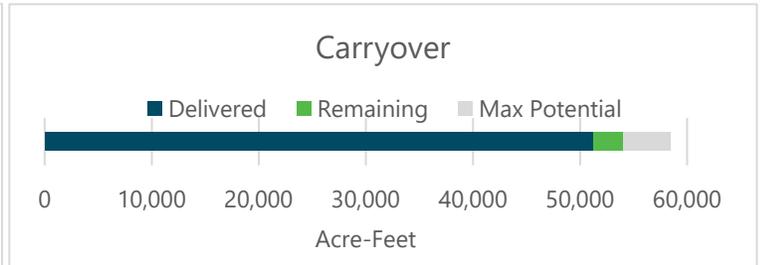
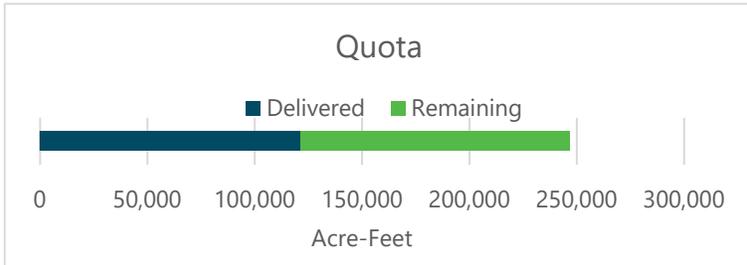
October 1, 2022



## C-BT Active Storage



## C-BT Delivery Obligations

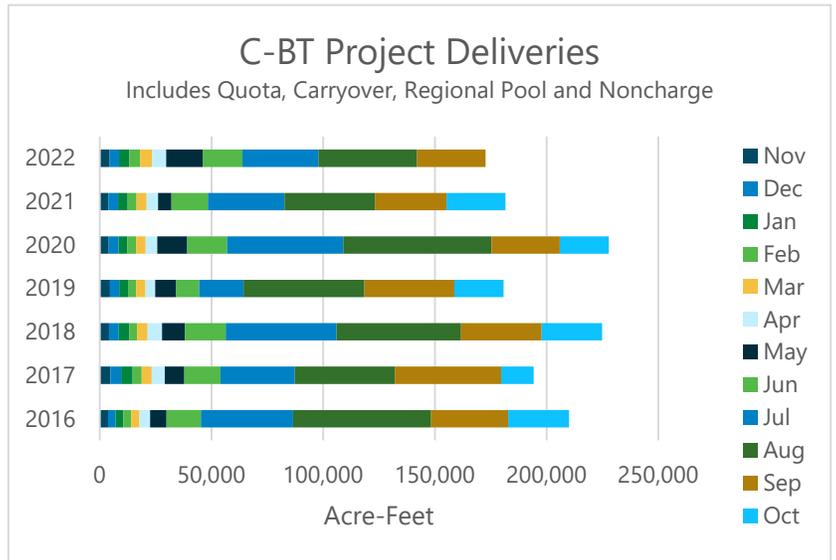
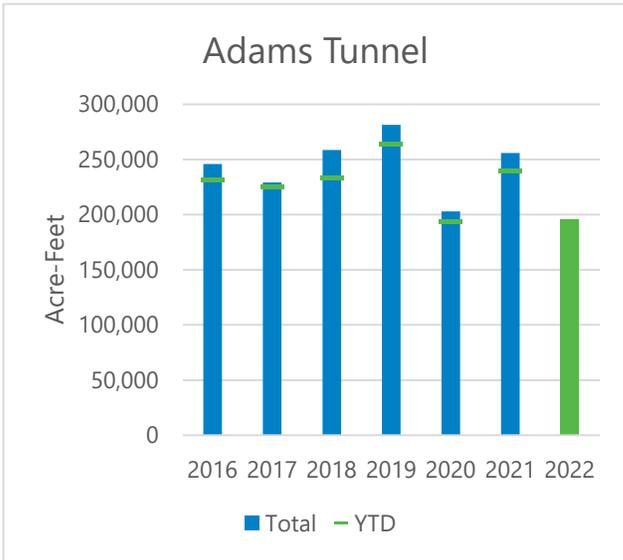


### Notes:

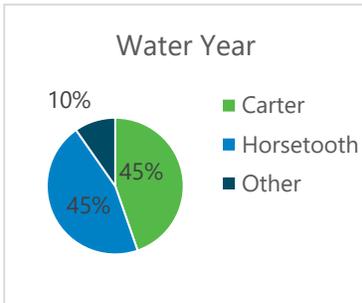
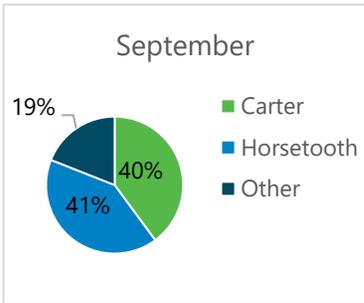
- 1) Quota set at 80%
- 2) Carryover - Entites certified 54,014 Acre-Feet of Carryover for WY2022. for Carryover so that adequate supplies are set aside to fulfill all potential obligations.
- 3) Regional Pool - Additional water acrued to the Regional Pool on April 30, 2022. There is 19,547 Acre-Feet in the Regional Pool for WY 2022.

# C-BT Project Deliveries

October 1, 2022



## Deliveries by Area



## Deliveries by Use

