

**Utilities**

electric · stormwater · wastewater · water

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**DATE:** March 8, 2021

**TO:** Water Board

**FROM:** Susan Smolnik, P.E., Water Resources Engineer  
Donnie Dustin, P.E., Water Resources Manager

**RE:** **February 2021 Water Resources Division Staff Report**

**Purpose**

This memorandum is intended to update the Water Board on water resource conditions for the City of Fort Collins Water Utility (Water Utility) over the month of February.

**Water Resources Summary**

Weather: The conditions measured at the Colorado State University weather station for the month:

- Mean daily high temperature for the month: 38.1 °F.
  - 8.5 °F below average for the month.
- Total recorded monthly precipitation: 0.46 inches.
  - 77% above average for the month.

Water Demand: Water demands within the Water Utility service area for the month:

- Water demand for the month: 104% of the projected demand.
- Water demand for calendar year: 104% of the projected demand.

Poudre River Streamflows:

- Poudre River streamflows measured at Colorado Division of Water Resources gage CLAFTCCO/ U.S. Geologic Survey gage 06752000 at the canyon mouth:
  - Mean daily discharge: ice conditions at gage prevent measurement.
- Poudre River streamflows measured at U.S. Geologic Survey gage 06752260 at Fort Collins, near the Lincoln Street Bridge:
  - Mean daily discharge: 33.0 cfs (99% of average)

Reservoir Storage: End of month reservoir storages:

- Colorado-Big Thompson project reservoirs (Granby, Carter, and Horsetooth): 73% full
- Horsetooth Reservoir: 63% full.
- Joe Wright Reservoir: 69% full (111% of average based on 13 years of data).

Snowpack:

- Natural Resources Conservation Service SNOTEL program percent of average snow water equivalent totals as of 03/05/2021:
  - Upper Colorado Basin: 85% of average.
  - South Platte Basin: 90% of average.
  - Poudre Basin (Joe Wright & Deadman Hill): 99% of the 1981-2010 combined median.

Drought Monitor and Climate Outlook:

- The U.S. Drought Monitor lists Larimer County in Severe Drought and with a small portion of western Larimer County in Extreme Drought.
- National Oceanic and Atmospheric Administration (NOAA) climate outlooks for the northern Front Range and northern mountains, over the next three months<sup>1</sup>:
  - Below normal precipitation.
  - Above normal temperature.

2021 Water Supply Considerations:

- The Cameron Peak and East Troublesome Fires will likely impact Utilities water availability in 2021 and subsequent years.
- Utilities staff is monitoring the potential impacts to both the Poudre River basin and the CBT project system from these fires, which may be exacerbated if drought conditions persist in the region.
- As additional information becomes available, Utilities staff will be considering the need for potential water restrictions next spring/summer and exploring potential ways to increase water supplies.

## City of Fort Collins Utilities

### ASSUMPTIONS

- Values look at remaining demands and supplies through the end of the Water Year (Oct 31)

### DEMANDS (treated only)

- Average Demand is projected demand
- Low Demand is projected Average Demand reduced by 10%
- High Demand applies a monthly worse case factor to projected Average Demand

### SUPPLIES

#### Poudre

- High Supply is a fire impacted Poudre that is 62% of the annual average. Monthly percentages of average are Nov-Mar 95%, May-Jun 5%, Jul 25%, Aug 60%, Sep 70%, Oct 80%. Medium Supply is 95% of the fire impacted Poudre (or 59% of annual average) and Low Supply is 90% (or 56% of annual average).

#### Horsetooth Reservoir

- Horsetooth Supplies include CBT, NPIC MU & Windy Gap
- CBT supply is 70% quota, 2.66 NPIC MU allocation/share
- All remaining Horsetooth raw water obligations have been deducted. A 1,000 AF exchange of Joe Wright water for CBT is included.

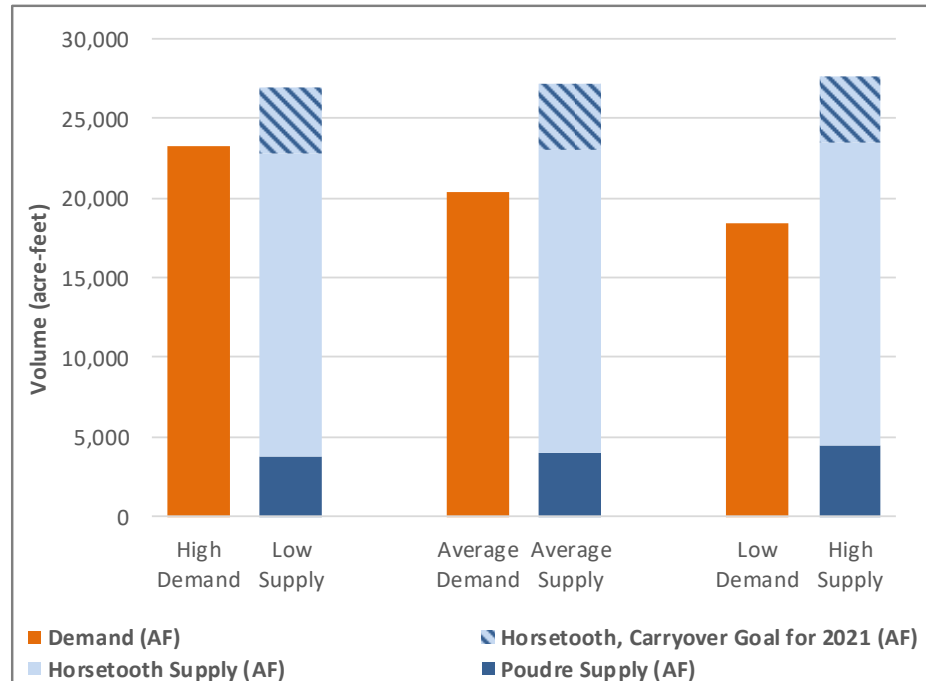
#### Horsetooth Carryover Objective

- Amount from this years Horsetooth supplies to carryover for next year
- Max amount allowable is 4,190 AF before 10% shrink

### NOTES:

MGD = million gallons per day; PVP = Pleasant Valley Pipeline; CBT = Colorado-Big Thompson Project; NPIC = North Poudre Irrigation Company; MU = Multiple Use (NPIC allocation of CBT water, measured in acre-feet per share); AF = acre-feet

## Remaining Water Demand and Supply from Mar 07 - Oct 31, 2021



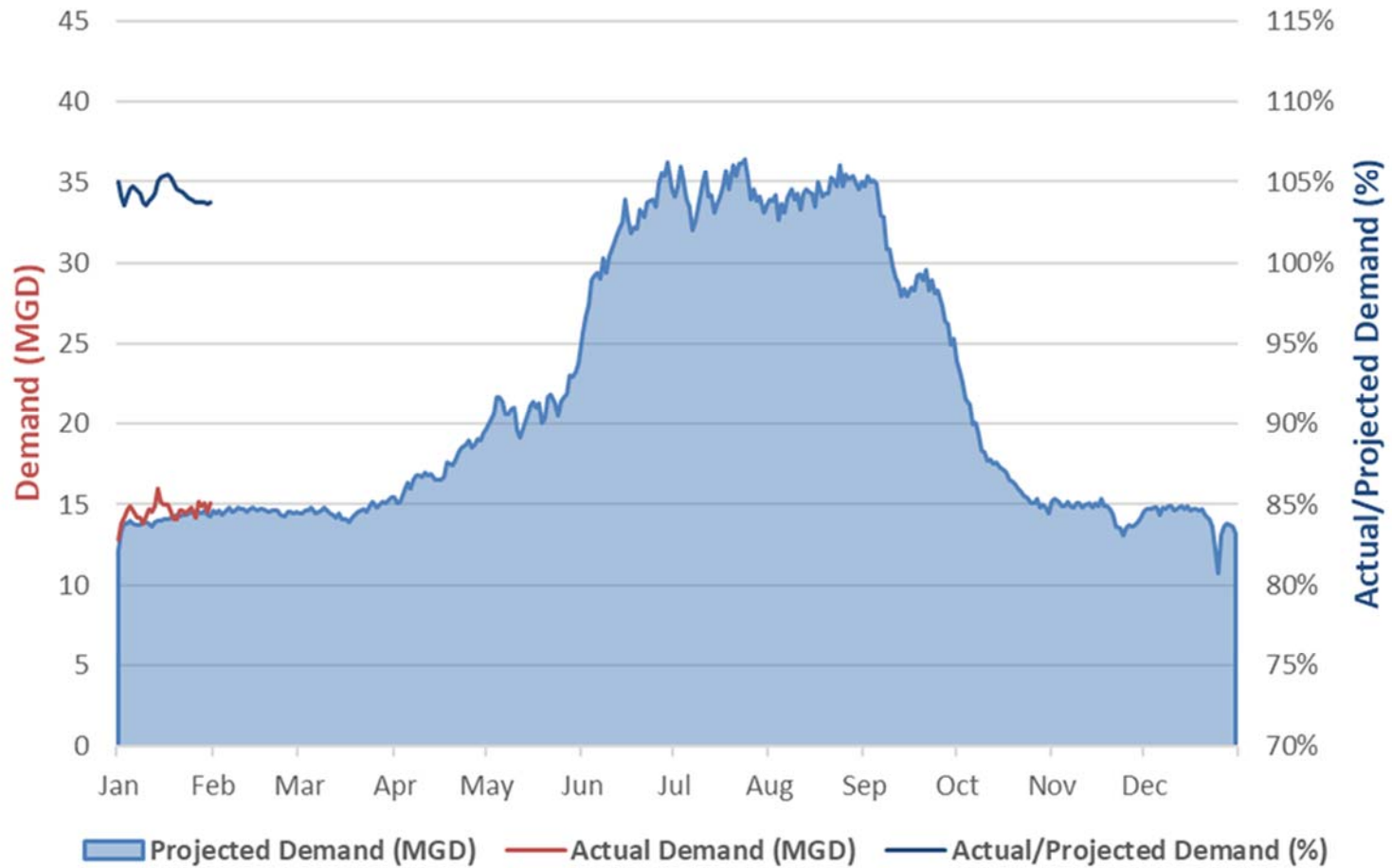
Scenario	Demand (AF)	Poudre Supply (AF)	Horsetooth Supply (AF)	Horsetooth, Carryover Goal for 2021 (AF)
High Demand Low Supply	23,275	3,828	18,957	4,190
Average Demand Average Supply	20,349	4,029	18,957	4,190
Low Demand High Supply	18,394	4,477	18,957	4,190



# City of Fort Collins Utilities Treated Water Monthly Summary 2021

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## 2021 Fort Collins Utilities Treated Water Demands



# U.S. Drought Monitor Colorado

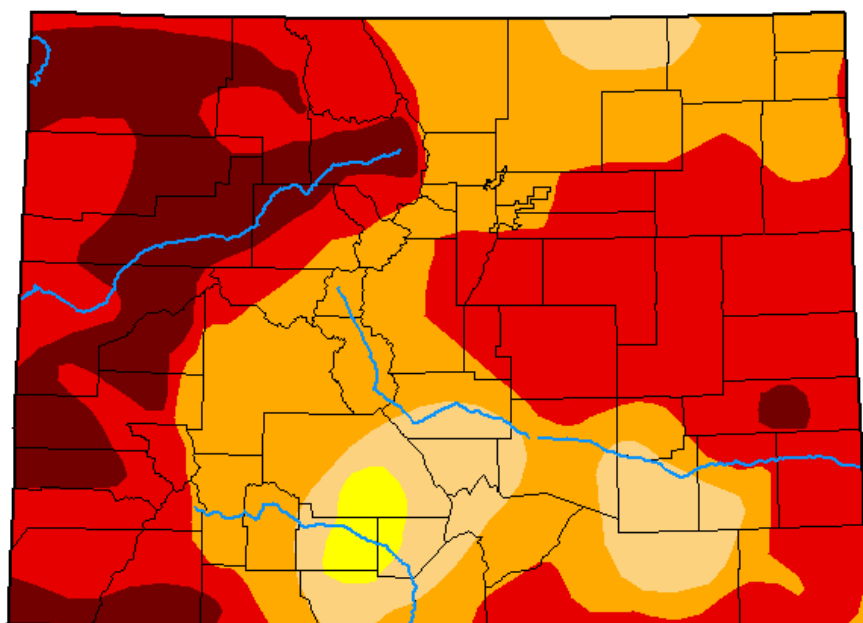
**March 2, 2021**

(Released Thursday, Mar. 4, 2021)

Valid 7 a.m. EST

*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	0.00	100.00	98.57	88.76	56.66	15.89
<b>Last Week</b> 02-23-2021	0.00	100.00	98.57	88.76	56.93	15.89
<b>3 Months Ago</b> 12-01-2020	0.00	100.00	100.00	93.71	74.68	26.71
<b>Start of Calendar Year</b> 12-29-2020	0.00	100.00	100.00	93.73	76.17	27.60
<b>Start of Water Year</b> 09-29-2020	0.00	100.00	99.29	89.35	52.88	2.64
<b>One Year Ago</b> 03-03-2020	30.09	69.91	45.33	3.30	0.00	0.00



## Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate 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:

Brian Fuchs  
National Drought Mitigation Center

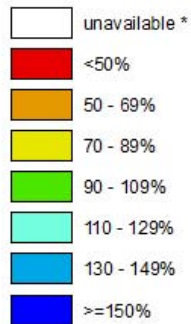


[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

**Mar 05, 2021**

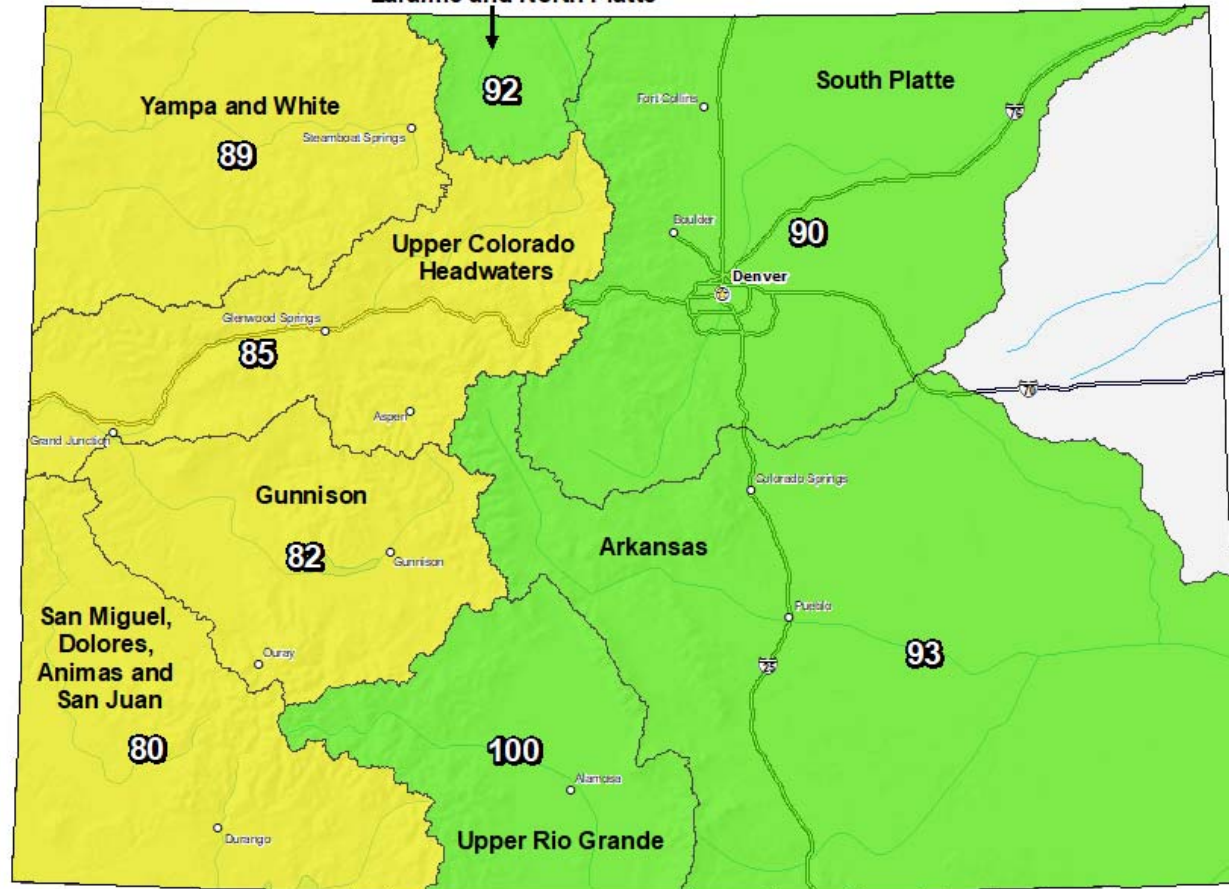
**Colorado**  
**SNOTEL Current Snow Water Equivalent (SWE) % of Normal**  
**Laramie and North Platte**

Current Snow Water  
Equivalent (SWE)  
Basin-wide Percent  
of 1981-2010 Median



\* Data unavailable at time  
of posting or measurement  
is not representative at this  
time of year

*Provisional Data  
Subject to Revision*

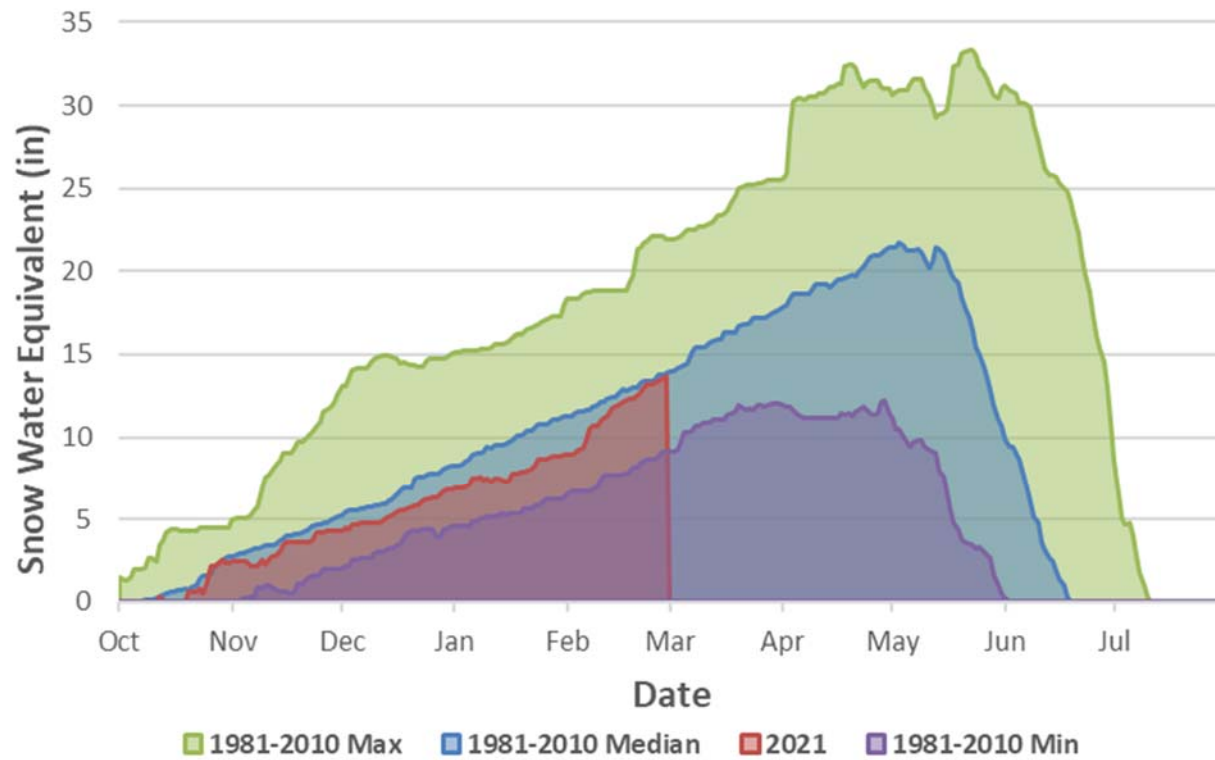


The snow water equivalent percent of normal represents the current  
snow water equivalent found at selected SNOTEL sites in or near the basin  
compared to the average value for those sites on this day. Data based on  
the first reading of the day (typically 00:00).

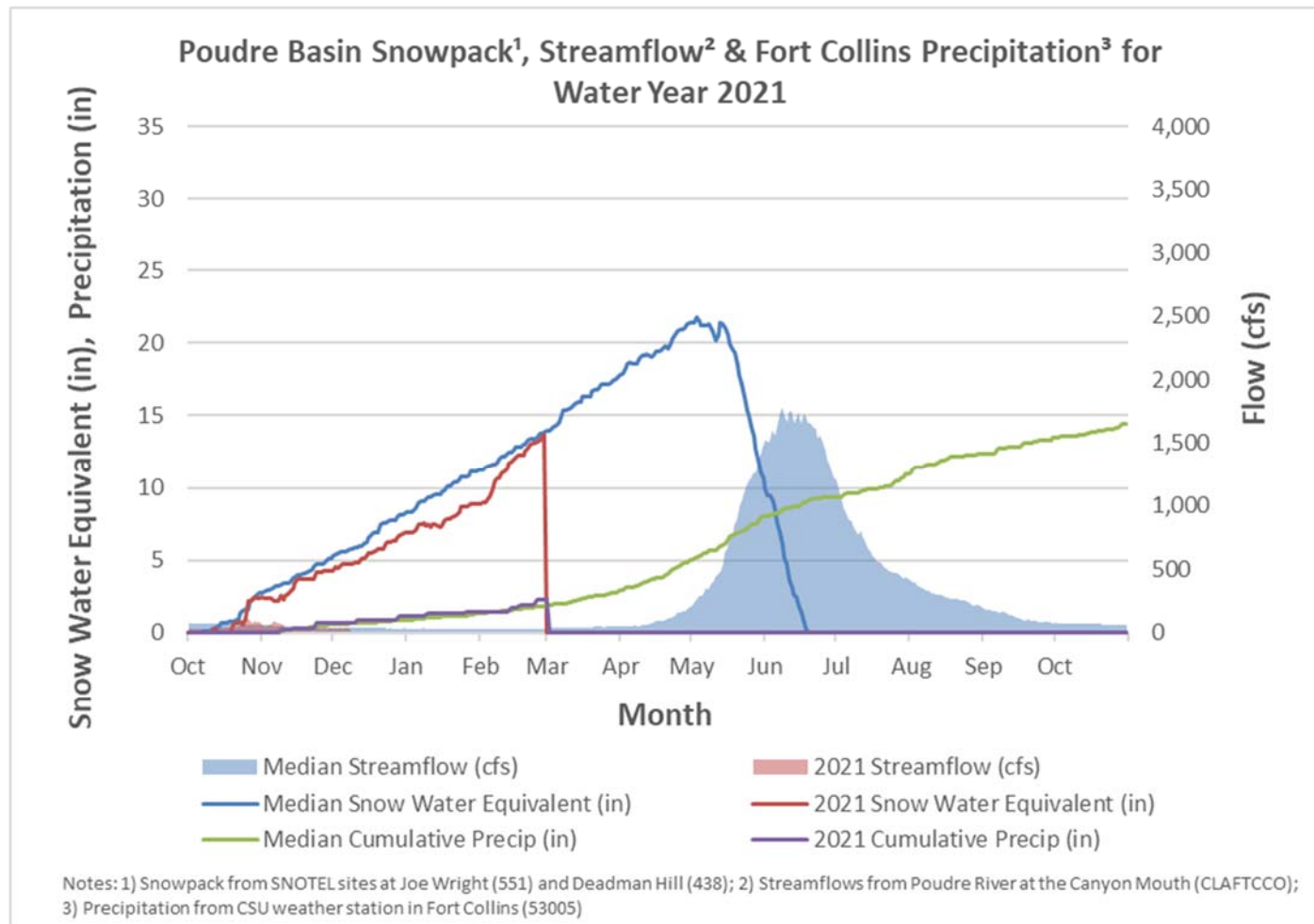
Prepared by:  
USDA/NRCS National Water and Climate Center  
Portland, Oregon  
<http://www.wcc.nrcs.usda.gov>



**Poudre Basin Snowpack for Water Year 2021**  
**Average of Joe Wright and Deadman Hill SNOTEL Sites**

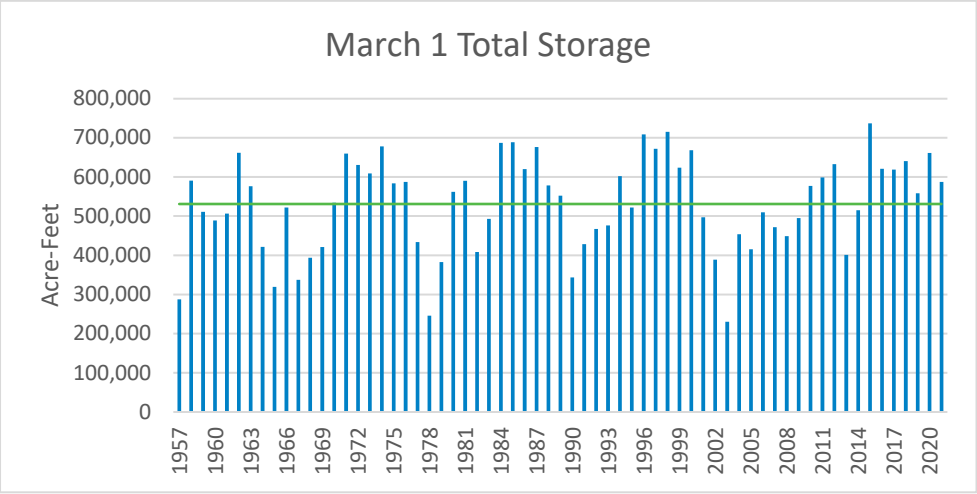
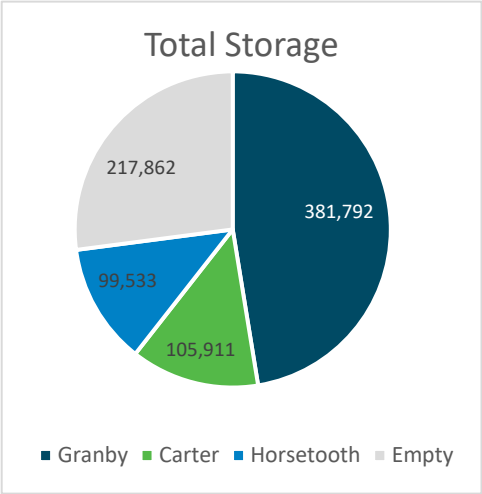




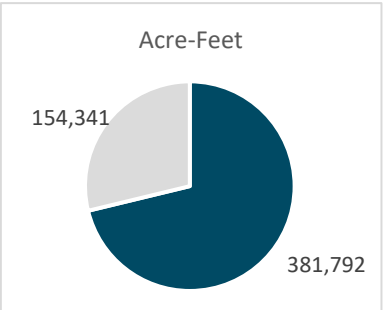
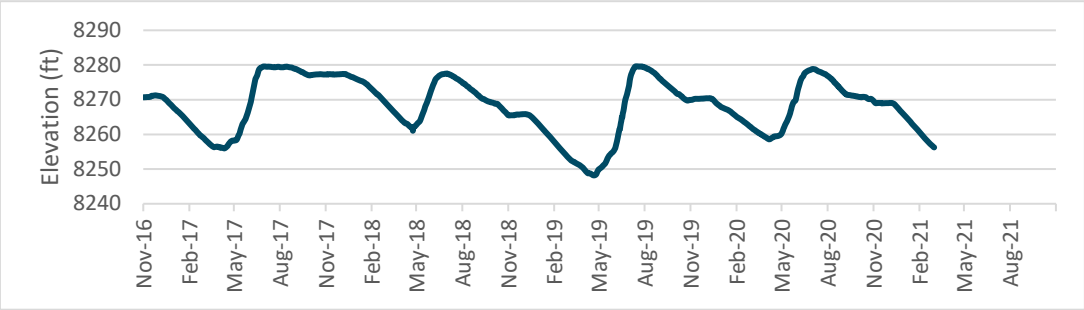


# C-BT Project Storage

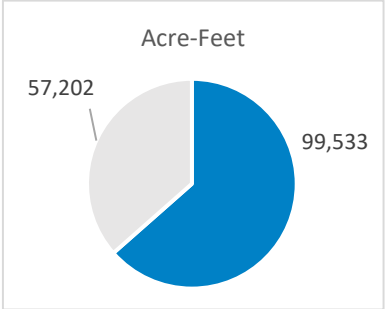
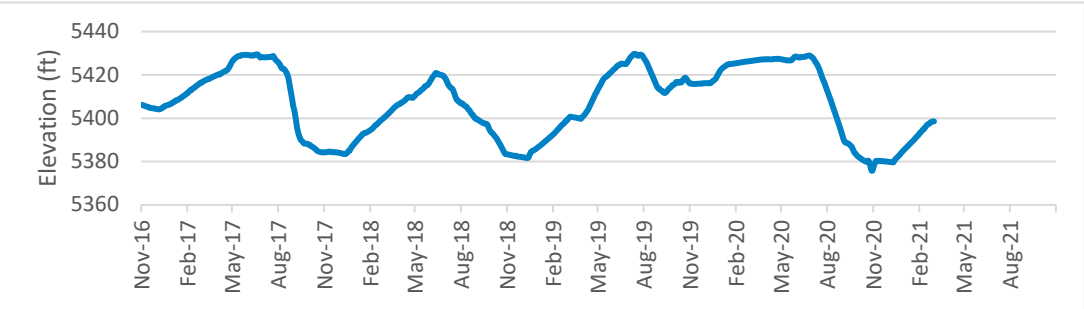
March 1, 2021



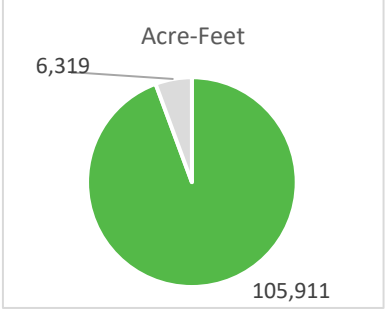
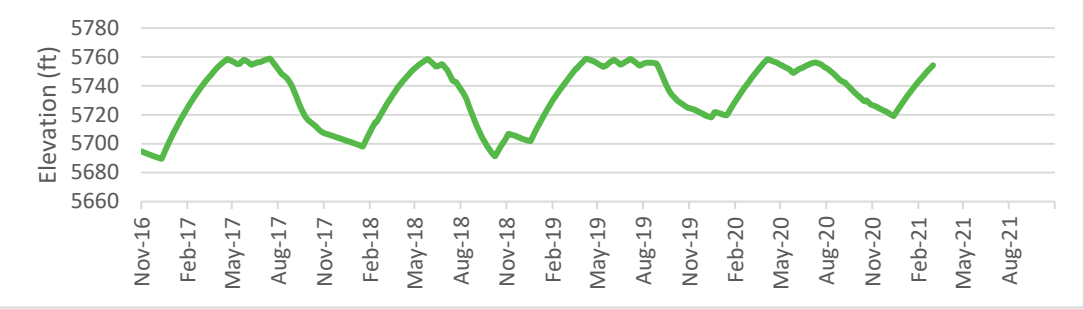
**Lake Granby** Storage in Lake Granby decreased 26,535 acre-feet last month



**Horsetooth Reservoir** Storage in Horsetooth Reservoir increased 9,253 acre-feet last month



**Carter Lake** Storage in Carter Lake increased 11,891 acre-feet last month

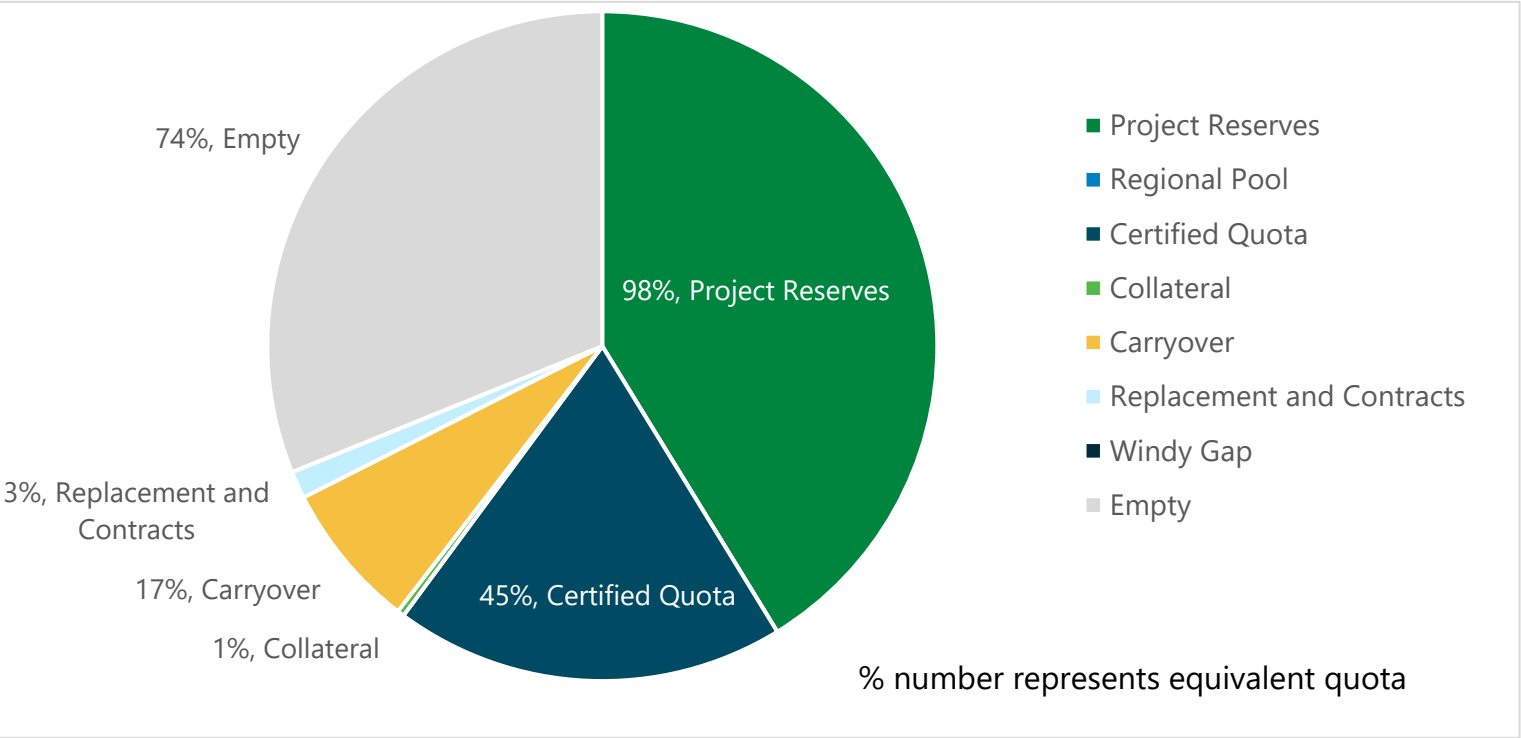


# C-BT Project Allocated Water

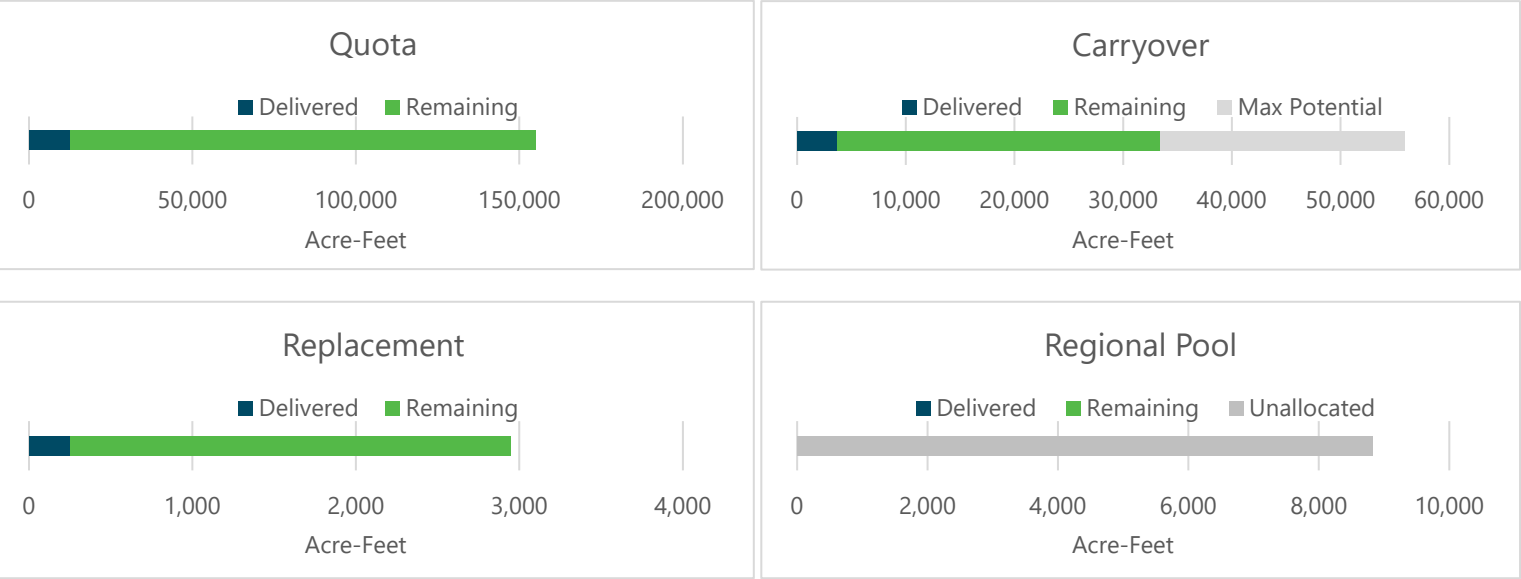
March 1, 2021



## C-BT Active Storage



## C-BT Delivery Obligations

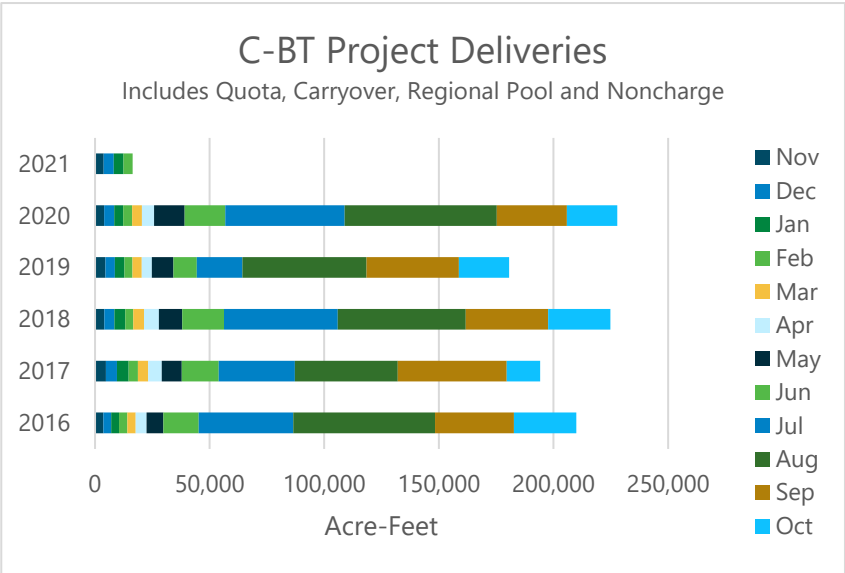
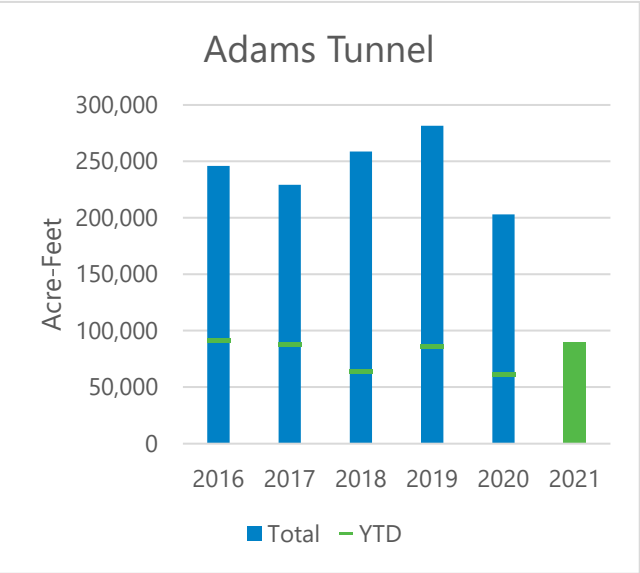


### Notes:

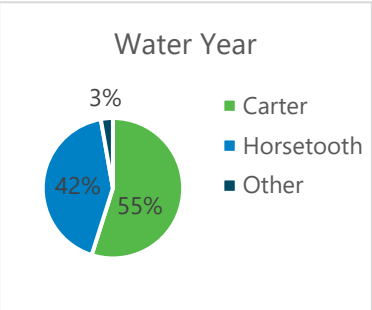
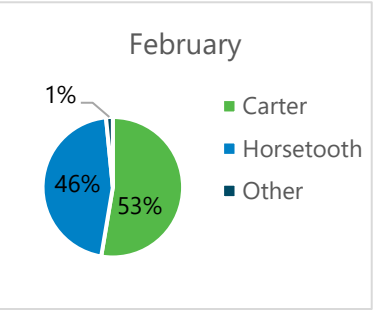
- 1) Quota - Initial Quota set at 50%
- 2) Carryover - Carryover will not be certified until April 30. Until that date, the Maximum Potential Carryover is reported for Carryover so that adequate supplies are set aside to fulfill all potential obligations.
- 3) Regional Pool - Additional water will accrue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

# C-BT Project Deliveries

March 1, 2021



## Deliveries by Area



## Deliveries by Use

