

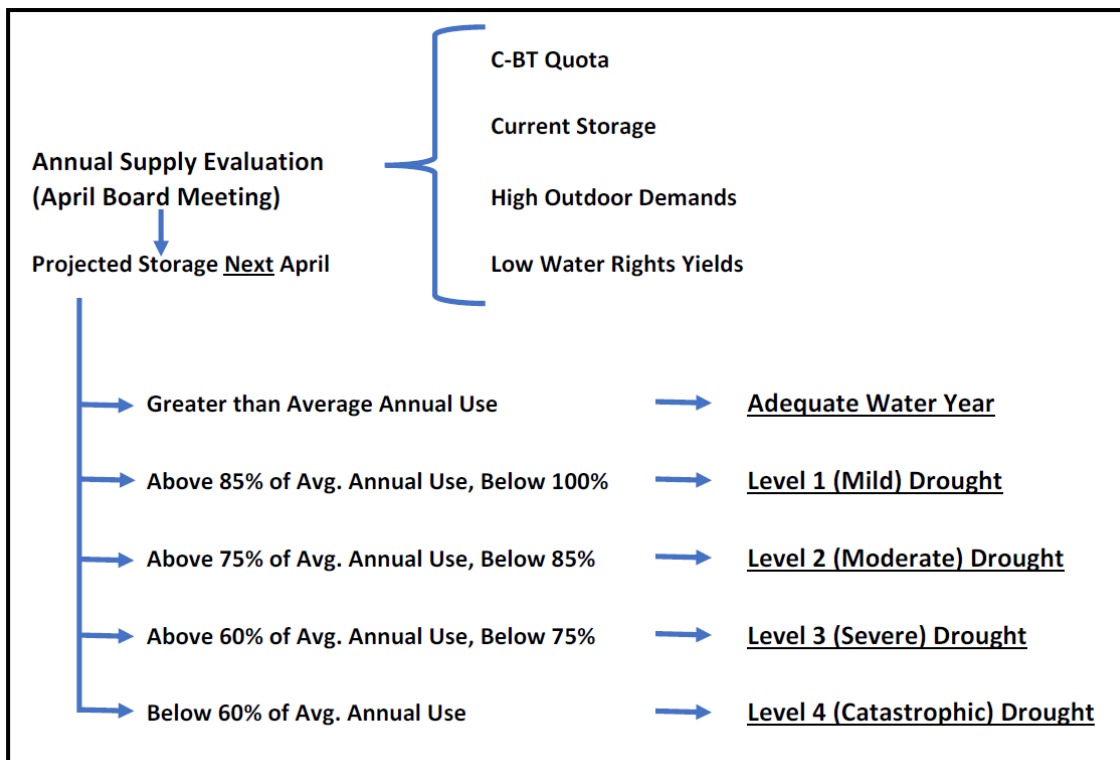


# MEMORANDUM

TO: Sean Chambers, Water and Sewer Director  
FROM: Alex Tennant, Water Resources Administrator II  
DATE: April 12, 2023  
RE: April 2023 Water Supply Update and Adequacy Determination

## ISSUE

In accordance with the Drought Emergency Plan, staff will report the water supply status to the Greeley Water and Sewer Board (“Board”) in April, July and November of each year. Previous modeling analysis has shown that the amount of water needed in storage to supply the citizens of Greeley for 12 months is approximately 21,300 acre-feet. When this target storage level is met, the Board can declare an “adequate water year” with normal watering restrictions. The following graphic illustrates the process for determining the projected target storage volume for April 2024.



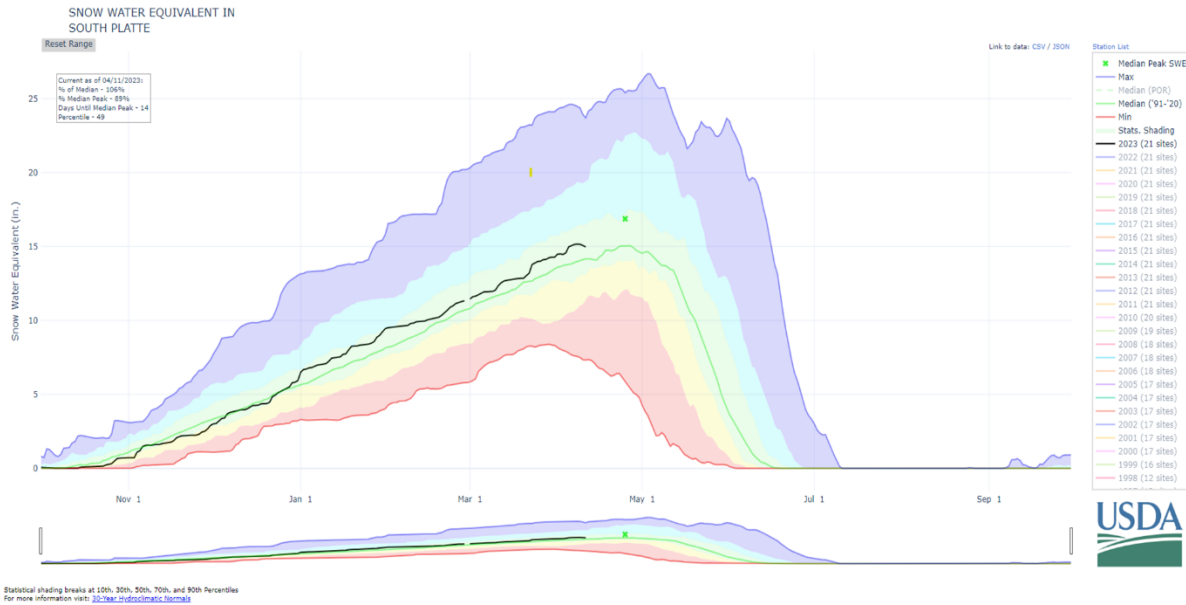
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## **BACKGROUND**

The beginning of water year 2023 provided above average snowpack levels. The northern mountains began receiving snow in late November and frequent precipitation events paired with cooler temperatures have maintained the above average snowpack into April. As of April 12, the South Platte River basin is at 107% of average and the Colorado River basin is at 131% of average. Water supply conditions are slightly below normal at 94% of average as indicated by a NRCS Water Supply Outlook through March 31st. Stream flows are expected to be above average for the Cache la Poudre, Big Thompson and Colorado River basins at 109%, 114%, and 111% of average, respectively ('Northern Water Streamflow Forecasts').

In November 2022, much of Colorado was in a moderate to severe drought with a part of northeast Colorado in extreme drought. Conditions have improved across most of the state with the Northern front range showing a mix of no drought, abnormally dry and moderate drought. The 3-month temperature and precipitation forecasts show average temperatures and average precipitation in Northern Colorado indicating abnormally dry conditions will likely continue.



The Greeley System Storage Analysis table for Water Year 2023 shows the April 2024 storage levels will be approximately 30,990 acre-feet (table on following page). This is after a 70% CBT quota that which was declared at Northern's April Board meeting to satisfy demand for 2023. The WY2023 projections for the Greeley Loveland Irrigation system are based on dry year yields.

Wildfire potential is projected to be moderate, and we expect impacts to continue from the Cameron Peak burn scar. Therefore, we also have reserved 500 acre-feet of CBT to replace Poudre directs in anticipation that water quality from the fire will prevent treatment of directs approximately 25% of the irrigation season. Similar to 2022, we are also finalizing an agreement with a local ditch company to trade our directs for C-BT they have stored in Horsetooth Reservoir when we cannot treat river water.

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<b>April 2023 Storage (acre-feet)</b>	
CBT	22,774
Windy Gap	1,000
GLIC	13,498
Tunnel	968
<b>Total</b>	<b>38,240</b>
<b>Demands (April 2023 - March 2024) (acre-feet)</b>	
CBT	12,272
Windy Gap	2,500
GLIC	10,462
Tunnel	1,140
<b>Total</b>	<b>26,374</b>
<b>Yields through April 2024 (acre-feet)</b>	
CBT (Nov. 2022-April 1, 2022)	11,402
Windy Gap	3,500
GLIC	9,816
Tunnel	850
<b>Total</b>	<b>25,568</b>
<b>April 2024 Storage by Source</b>	
CBT	17,460
Windy Gap	0
GLIC	12,852
Tunnel	678
<b>April 2024 Storage</b>	<b>30,990</b>
<b>Target Storage Volume</b>	<b>21,300</b>

**RECOMMENDATION**

The projection for the April 1, 2024 storage volume exceeds the target storage volume. Staff recommends the Board declare an adequate water year and that supplies be made available for immediate rental to agriculture while assuring target storage does not fall below 21,300 acre-feet.