

# Green Mountain Reservoir: Store watered for the West Slope

Victor Lee, PE Eastern Colorado Area Office Summit County State of River, May 23, 2023

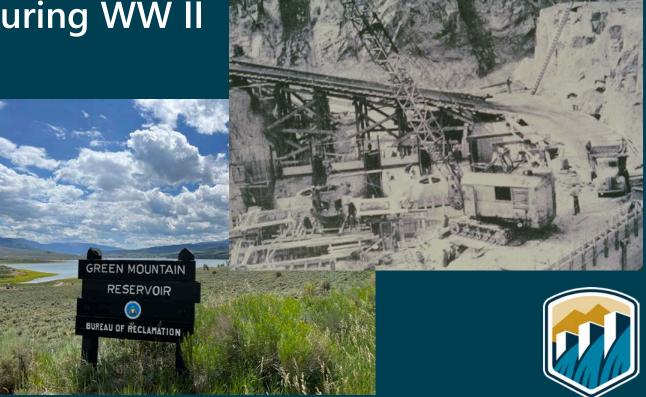
### Outline

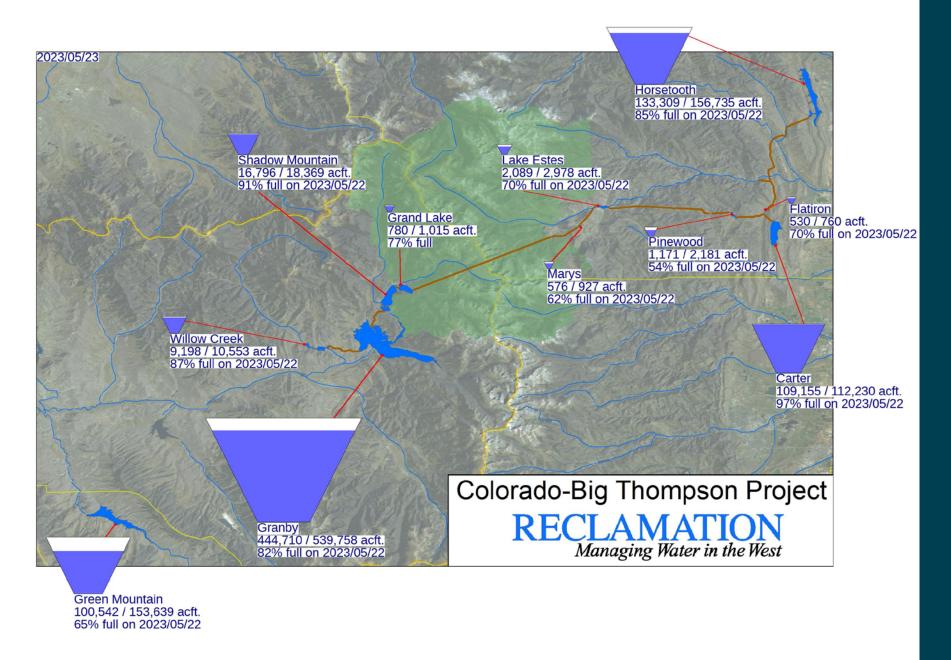
- Colorado-Big Thompson Project Green Mountain Reservoir History and Purpose
- Blue River Decree-70 years of litigation and counting
- Green Mountain Reservoir 2023 Operations



## **Colorado-Big Thompson Project**

- Authorized by Congress and approved by Franklin Roosevelt in 1937
- First Feature to build: a reservoir to mitigate project injury to Western Colorado
- Green Mountain Reservoir built during WW II
- Managed by the Bureau of Reclamation for water users benefit across Colorado
- Includes 5 storage reservoirs, 6 powerplants, over 100 miles of tunnels & canals







## Green Mountain Reservoir-Blue River Decree

- Green Mt. Reservoir two primary purposes:
  - 1/3 of storage allows C-BT Collection System to divert water when out of priority
  - 2/3 of storage for hydro power and for west slope water users benefit
- Federal court issued water rights decree in 1955 with stipulations for Denver and Colorado Springs
- Litigation over Blue River Decree continues today



### **Blue River Decree-Key Elements**

- Green Mt. Reservoir and Powerplant Water Rights with 1935 Priority
- Senior to Denver's Blue River Diversion Project and Colorado Springs' Continental-Hoosier Project expansion.
- The Secretary of the Interior allows Denver and Colorado Springs to use their junior water rights provided:
  - No injury to Green Mt. Reservoir's ability to store
  - No injury to Green Mt. Reservoir's authorized purposes
  - Reimburse the United States for powerplant loss of generation



#### **Blue River Decree Results**

- Green Mt. Reservoir does not fill approximately 30% of the time
- Denver and Colorado Springs "owe water" to Green Mt. Reservoir
  - Shortage to Green Mt. Reservoir's first fill caused by Denver and Colorado Springs Utilities is replaced- referred to a substitution operation
  - May include coordinated release from Upper Blue, Dillon, Williams Fork, Wolford, Ruedi and other reservoirs
- Substitution Operations may reduce Green Mt Reservoir releases
- Denver and Colorado Springs replaces several thousand Kilowatthours of lost generation annually
- Project beneficiaries upstream of Dillon Reservoir are accommodated

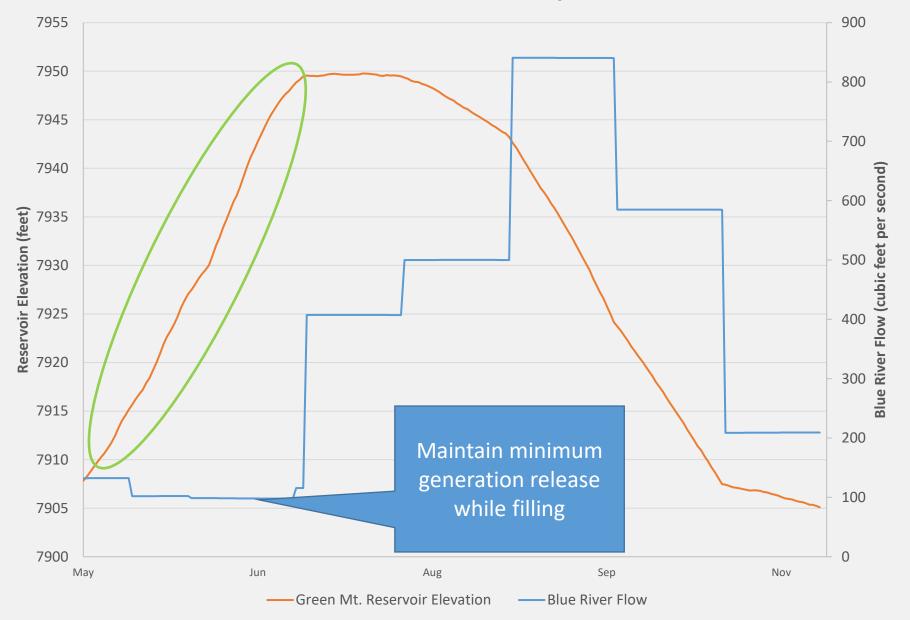


### Green Mt. Reservoir 2023 Operation Outlook

- Green Mt. Reservoir obtains a physical fill around July 4<sup>th</sup> with no Substitution Operations – First time since 2020
- Blue River flow below Green Mt. Dam will remain at approximately 100 cfs until the reservoir fills
- Normal stored water releases expected flow between 400 cfs to 850 cfs

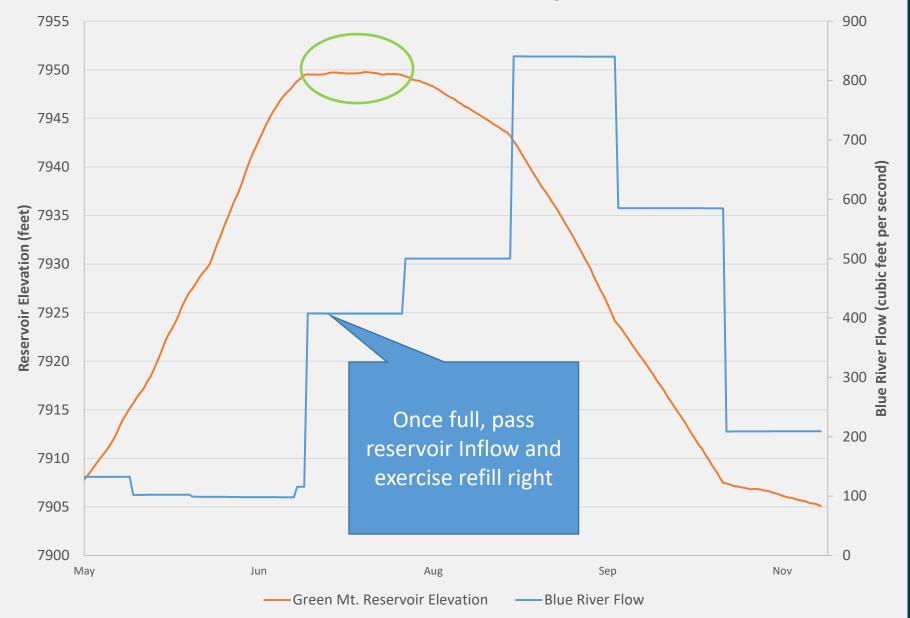


#### **Green Mt. Reservoir 2023 Operations**

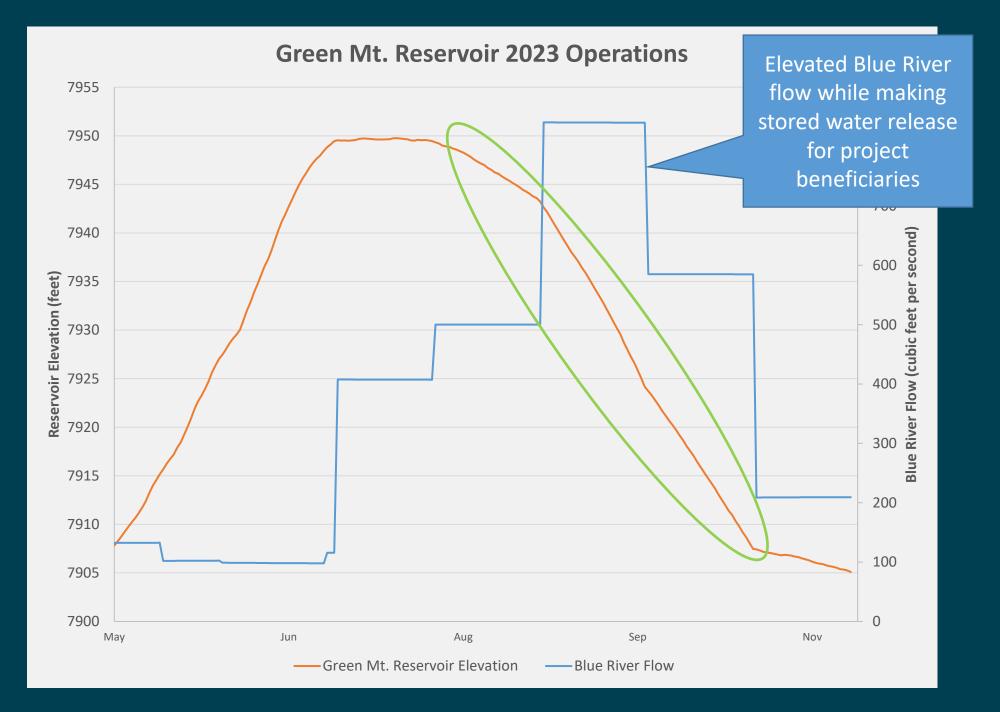




#### **Green Mt. Reservoir 2023 Operations**









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