Colorado-Big Thompson Project
2020 Operations

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Eastern Colorado Area Office
Summit County State of River, May 14, 2020
Outline

• Bureau of Reclamation-Eastern Colorado Area Office
• Colorado-Big Thompson Project
• Green Mountain Reservoir 2020 Run-off and Fill Operations
• Colorado River Collection System 2020 Runoff Operations
Bureau of Reclamation-
Eastern Colorado Area Office

• Reclamation:
  • Federal Agency-Largest wholesale supplier of water in the Western United States and major supplier of hydro-electric power
  • Serves as trustee in the operation and management of multiple water projects owned by the Citizens of the United States

• Eastern Colorado Area Office:
  • Main Office Located in Loveland Colorado at the Flatiron Power Plant
  • Trustee for the Colorado-Big Thompson and Frying Pan-Arkansas Projects
Colorado-Big Thompson Project

- Colorado’s largest trans basin diversion project
  - 230,000 acre-feet diverted annually to the northern South Platte River Basin for agriculture, municipal and industrial use
  - Project Beneficiaries from Nebraska Border to Utah Border

- Green Mountain Reservoir
  - Replacement water – Collection System and Upper Colorado River Basin consumptive use
  - Power Generation
  - Other Upper Colorado River basin beneficial use

- Colorado River Collection System
- East Slope Power and Distribution System
- South Platte Basin Delivery System
Green Mountain Reservoir

- The “Little Engine that Could” for the Upper Colorado River Basin
  - Annually Stores Runoff for delivery during low flow periods
  - Provides “Replacement Water” for project collection system and beneficiaries
  - Provides water for Upper Colorado River Basin irrigated agriculture, municipal, and industrial use
  - Augments river flow for endangered fish recovery
  - Generates electrical power for almost 6,000 homes
- Reservoir designed to refill most years
Green Mountain Reservoir
2020 Run-off and Fill Operations

• May 1, May-July Most Probable snow melt forecast: 255 KAF (101% of historical median)

• Coordinated Reservoir Operations (CROs) possible in late May-early June

• Reservoir obtains physical fill 7 July
  • Refills all reservoir allocations
  • Maintains power generation through-out fill season
  • No Spillway release – Maximum release approximately 1,400 for CROs
  • Denver and Colorado Springs hold no water obligated to Green Mtn. Reservoir

• 66 KAF HUP allocation refilled
  • Typically 40 – 65 KAF for later summer and early fall release
Earlier fill than typical due to high storage in Dillon Reservoir and earlier runoff.
Green Mountain Reservoir Planned Fill Operation

1st Week of July Reservoir fill
Green Mountain Reservoir Planned Fill Operation

Start Irrigation Season Storage Release

- Reservoir Storage
- Fill
- Historical Median Storage
Green Mountain Reservoir Planned Fill Operation

- **Reservoir Storage**
- **Fill**
- **Historical Median Storage**

Start Winter Season Storage Release
Release Increase to slow last part of Reservoir fill
Reservoir fills and maintains storage.
Reservoir Starts Storage Release for Irrigation Season
Green Mountain Release to the Blue River

- Reservoir Starts Winter Storage Release

[Graph showing Blue River Flow Below Green Mtn. Reservoir in cfs from May to Dec.]

- Blue River Flow: 0 to 1600
- Green Mountain Planned Release (blue line)
- Max Turbine Release (orange line)
- Historical Median Reservoir Release (dashed black line)
Release increase to powerplant capacity to enhance peak flow for endangered fish recovery.
Store additional water before and after CROs operation.
Colorado River Collection System
2020 Run-off and Fill Operations

• May 1 May-July Most Probable snow melt forecast:
  • Willow Creek, 45.9 KAF (106% of average)
  • Three Lakes, 207 KAF (111% of historical median)
• Granby Reservoir obtains physical fill late June
  • 20 – 30 KAF bypass of water, will likely include curtailment of Willow Creek diversion
  • Higher than typical east-slope storage limits Colorado River diversion
• East slope maintenance will constrain diversion operations
  • Canal outage for rehabilitation from July to November
  • Horsetooth Reservoir maintenance around November
• Grand Lake Clarity Adaptive Management beginning July
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