Bureau of Reclamation
Northern Water Users Meeting
J. Signe Snortland
Area Manager
April 9, 2019
What’s Up at Eastern Colorado Area Office?

• Federal Budget

• Colorado-Big Thompson Power Generation

• Aquatic Nuisance Species Infestation Prevention Program
Eastern Colorado Area Office
FY2019 Enacted Budget
$29.5M

- Fryingpan - Arkansas 42.7%
- Leadville Mine Drainage Tunnel 8.8%
- Colorado-Big Thompson 47.3%
- Other 1.2%
C–BT Project
FY2019 Budget
$14.175 M

Facility Operations, $13,416

Water & Energy Development, $293

Fish & Wildlife and Land Mgt, $155

Facility Maintenance/Rehab, $311
FY2020 President’s Budget

- **$53.990 Million for ECAO**
  - Includes $27.8 Million for Leadville Mine Drainage Tunnel Water Treatment Plant Replacement Project

- **C-BT $13.6 Million**
  - Slight Overall Decrease from FY2019
    - Operations and Maintenance Decreased by 2%
    - RAX Project Budget Fluctuates Based on Planned Projects Each Year
C-BT - Hydropower

• C-BT is One of the Largest, Most Complex Projects Built by Reclamation – over 100 Structures

• Construction period: 1938-1952

• Economic Benefit of C-BT Water Did Not Equal Construction Cost
  o Hydroelectric Power Tipped the Scales

• 6 Hydroelectric Powerplants, 700+ Miles of Powerlines

• Produces ~750 Million Kilo-Watt Hours
  o ~ $65M at Ft Collins Rates
  o Generates Energy Falling 2,900 feet

• Green Energy
Green Mt Penstocks

- Rehab includes blasting and re-coating penstock interiors, penstock exteriors, scroll cases, and draft tubes

- Replacing existing emergency discharge tube valves with new jet flow gates

- Ultrasonic flow metering

- $17.5 M
East Portal

• East Portal Spillway Concrete Degrading Annually. Temporary Shoring for Ceiling Support Installed November 2018

• Several Alternatives Under Consideration

• Cost Reimbursable by Northern Water and Power Customers
Marys Lake

- Generates 8,100 KW
- Replace Turbine Runner and Refurbish Mechanical and Electrical Components
- Install Permanent Penstock Flow Metering
- Water to Bypass the Powerplant during the Overhaul
- October 2020 to March 2021
- $5.5 million
Estes Powerplant

- Generates 45,000 Kw
Polehill Powerplant

- Water from Lake Estes Flows through Olympus Siphon and Tunnel into Pole Hill Penstock
- Water Drops 815 ft
- Generates 33,250 kW
- Planning Replacement of Plant Controls
Big Thompson Powerplant

- Damaged by 2013 Big Thompson Flood
- Restored in 2014
- On Big Thompson River by the Dam Store
- Operates Seasonally
- Generates 4,500 kW
Bald Mt Tunnel

- Constructed in 1951-1952
  Designed for 960 cfs

- 2008-2010 Uprated Flatiron Generators Increased Flow-Rates for Peaking Power to 1200 cfs through the Tunnel

- Inspection Revealed Concrete Spalling and Samples Collected in September 2018

- Technical Services Center is Analyzing Safe Flow Rates this Month

- Modifications to the Tunnel May be Needed to Increase Flow Rate
Flatiron Powerplant

- Two Generators and One Pump-Generator
- Generates 71,500 kW
- Pumps 200-300 ft up to Carter Lake
- Value Planning Rehabilitation of Pump-Gen in 2021
Aquatic Nuisance Species (ANS)

COLORADO'S
LEAST WANTED
INVASIVE SPECIES

QUAGGA MUSSELS
ZEBRA MUSSELS
RUSTY CRAYFISH
AKA "ROWDY RUSTY"
NEW ZEALAND
MUD SNAIL
EURASIAN WATERMILFOIL

THE NOTORIOUS ANS GANG
ANS

- Nonindigenous and Rapidly Reproduce
- Transported on Trailered Watercraft and in Live Wells, Bilge Water, Ballast Tanks, and Bait Buckets
- Threatens Ecological Stability, Water Infrastructure, Power Generation, and Water Supply
- No Control Methods for Open-Water
Colorado Response to ANS

• Mussel-Free Colorado Act
  o Governor Signed April 23, 2018
  o Covers Half of ANS Program Funding
  o ANS Stamp for Motorboats and Sailboats
    ▪ Colorado Residents $25
    ▪ Non-Residents $50
  o Increased fines for ANS violations
    ▪ Unlawful Launches and Knowingly Importing ANS

• CO ANS Program needs $5 million
**ANS ECAO 2018**

- All ECAO Boat Ramps Closed and Locked if no Inspector
  - Pinewood Hand-Launch Only
- $550,000 Spent on Colorado ANS Program
  - Cost-shared Gates and Information Signs
  - $420,000 from FY18 – Safeguarding the West from Invasive Species Initiative
    - Inspection Station Modifications and Improvements
    - Traffic Control Infrastructure Upgrades
- All Colorado Big-Thompson Projects Tested Negative for Mussels!
- (New Zealand Mud Snails in Trinidad Reservoir)
• **Evolution in boating recreation - After-Hour Ingress/Egress Traffic**
  - **Carter Lake and Horsetooth Reservoir**
    - Installing Traffic Spikes and Gates
  - **Granby and Shadow Mt Reservoirs**
    - Arapaho Forest Partners Completing 3 After-Hour Traffic Control Locations
  - **Grand Lake**
    - Cost share with Northern Water and Recreation Partner on Traffic Controls

• **Continue Locking Ramps when Inspector Absent, Public Outreach, Education, and Partnership Building**
$570,041 from *Safeguarding the West from Invasive Species Initiative*

- Constructing 8 Boat Inspection and Decontamination Stations on 6 ECAO Projects
  - Facilitating Longer Inspector Seasons
  - Stabilizing Decontamination Water
  - Improving Inspector Retention
  - Better Public Service
  - Increasing Access to Public Recreation

- Funding to Colorado Parks and Wildlife for Boat Inspectors, ANS Program Administration, and Management of Reclamation Waters
Questions and Comments