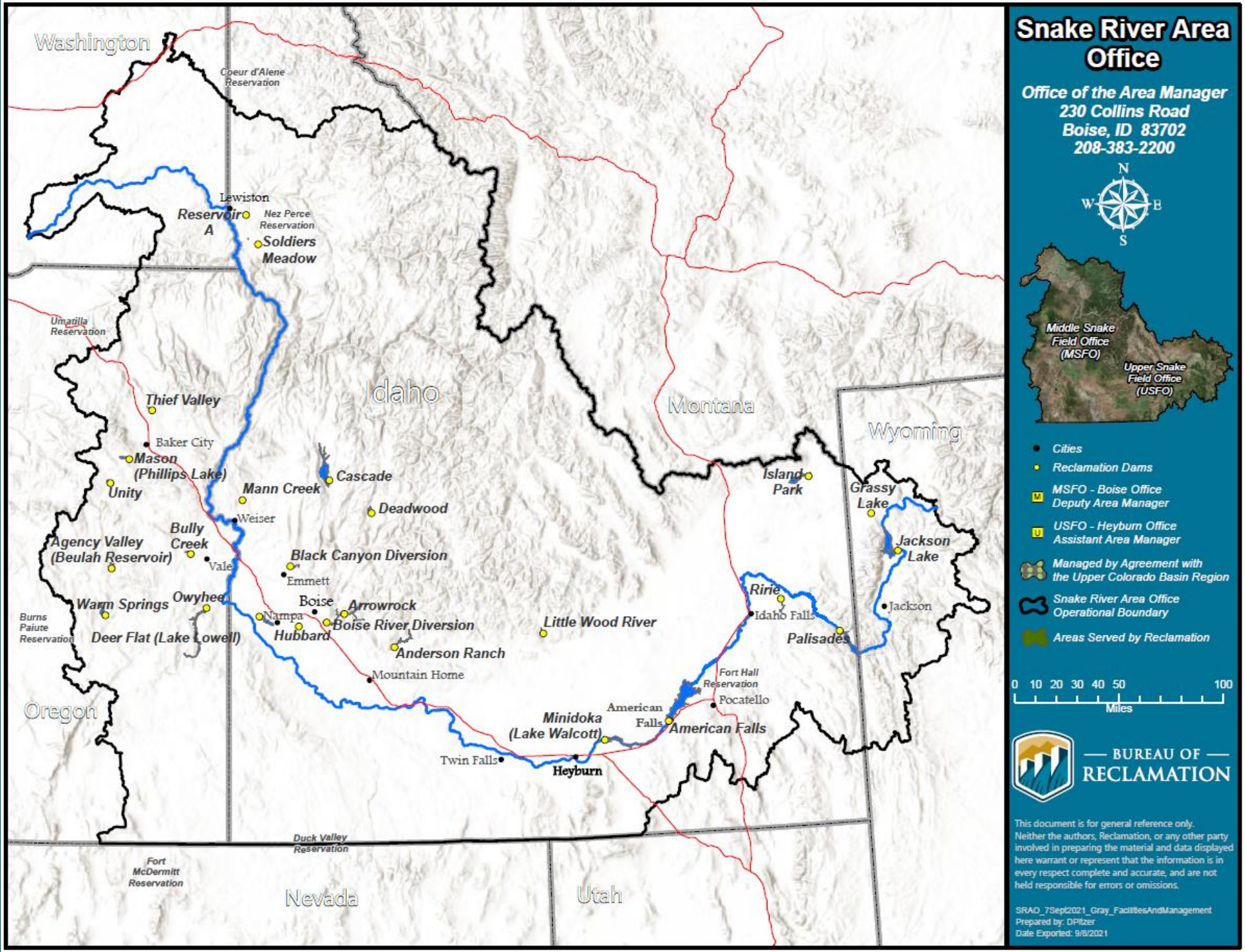
BUREAU OF RECLAMATION

Bureau of Reclamation
Snake River Area Office

Reclamation O&M Overview

May 12, 2026

Snake River Area Office



Facility Operation and Maintenance Group

Overview

- Operate and maintain assets
- Conduct maintenance reviews and condition examination of assets
- Identify issues at an early stage
- Routine, Preventative, and extraordinary

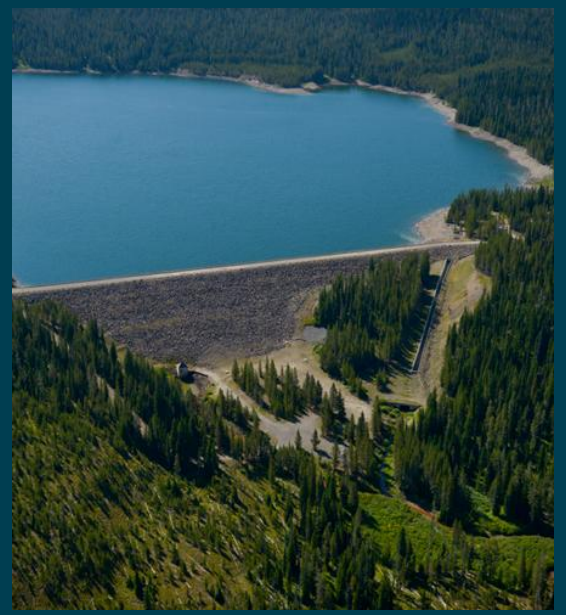
Benefits

- Mission fulfillment
- Public safety
- Effective management of assets

Reclamation - Reserved & Transferred

Reclamation is responsible for the constructed assets and their associated authorized benefits

- Reserved Facilities
  - 33% of Reclamation Dams – O&M completed by Federal Staff
  - Costs of each asset are distributed to “cost allocations” (*defined by congressional project authorizations)*
- Transferred Facilities
  - 67% of Reclamation Dams – O&M completed non-Federal operating entities (i.e., irrigation districts)
  - Costs of each asset are distributed to “cost allocations” (*defined by congressional project authorizations)*

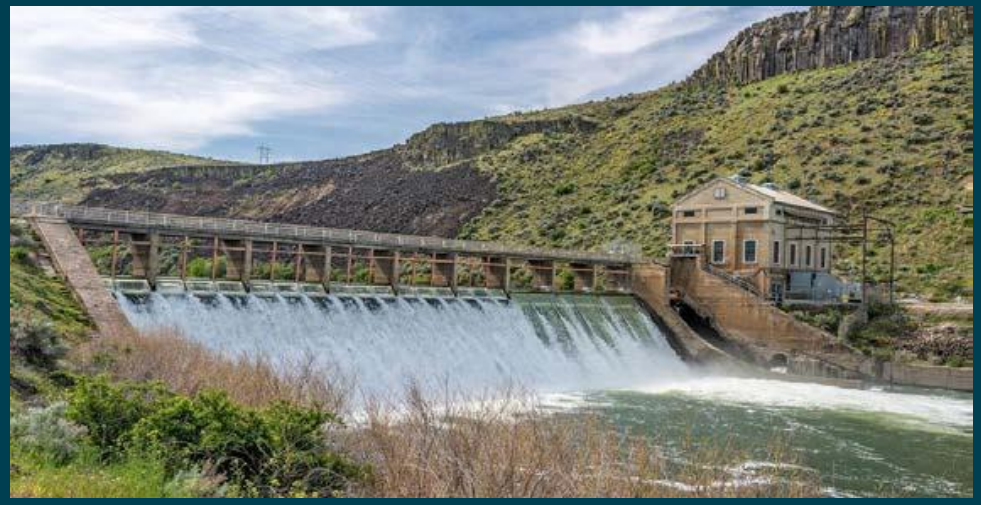


Reserved Facilities

- Reclamation
  - Performs the O&M
- Funding - Authorized Allocations
  - Reimbursable and Non-reimbursable
  - Allocations by economic analysis of the authorized benefits
  - Benefits from the reservoir space and regulating inflow/outflow
    - Primary - Water Supply (storage contracts)
    - Incidental - Flood Risk Management, Hydropower, Recreation, Fish & Wildlife

Transferred Facilities

- Process for O&M or Title transfer of assets
- Transferred contract partners:
  - Fund and Perform O&M
- O&M Transfer
  - Title remains with Reclamation
  - Reclamation continues to provide oversight
- Title Transfer
  - Title transfer to entity



Middle Snake Field Office

- Mason Dam
- Thief Valley Dam
- Unity Dam
- Reservoir A Dam
- Soldiers Meadow Dams
- Mann Creek Dam
- Owyhee Dam
- Agency Valley Dam
- Bully Creek Dam
- Warm Springs Dams (Section 12)
- Deer Flats Embankment

Transferred Facilities

Middle Snake Field Office

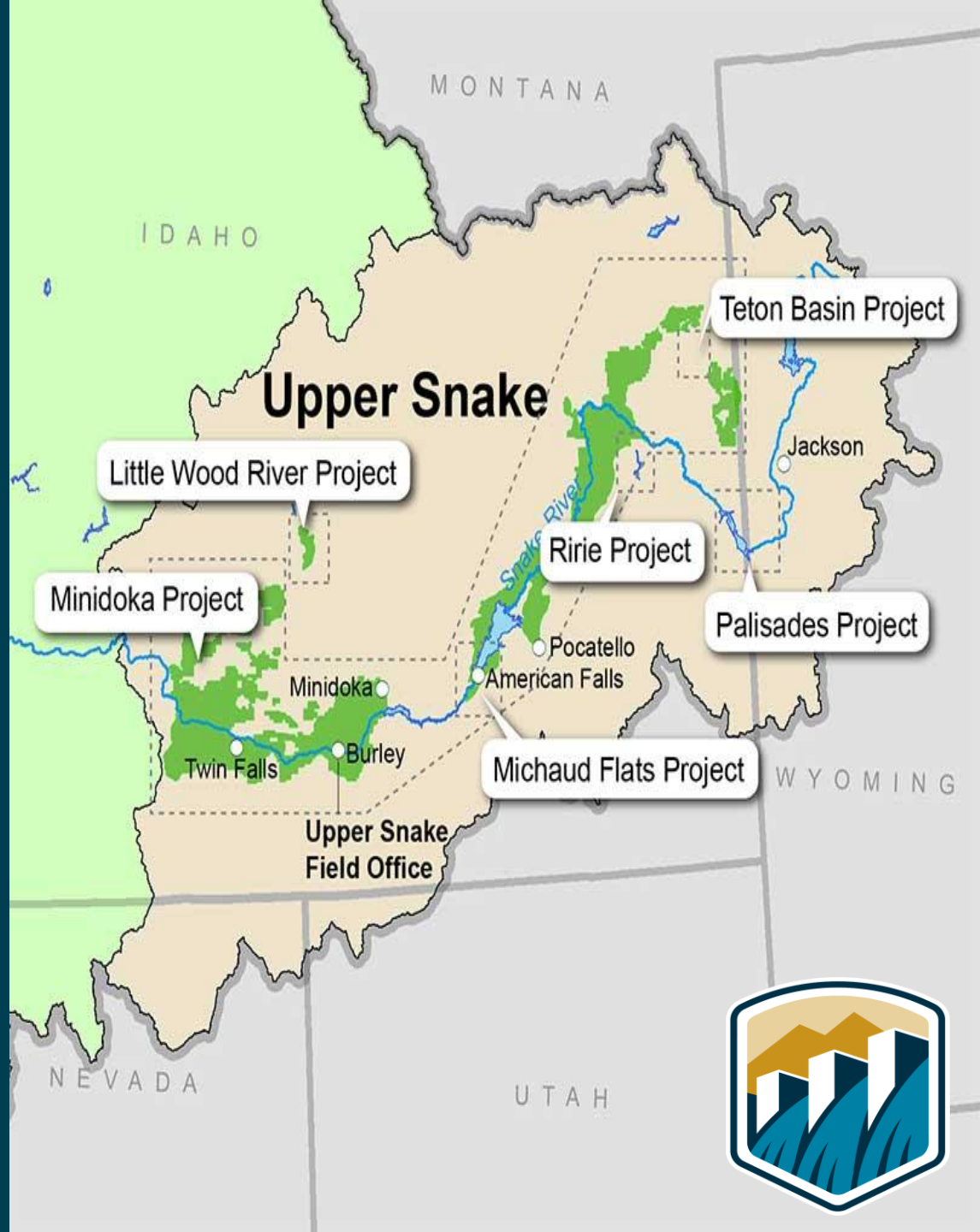
- Anderson Ranch Dam
- Arrowrock Dam
- Black Canyon Diversion Dam
- Boise Diversion Dam
- Cascade Dam
- Deadwood Dam

Reserved Facilities

Upper Snake Field Office

- Island Park Dam
- Grassy Lake Dam
- Little Wood River Dam (Section 12)

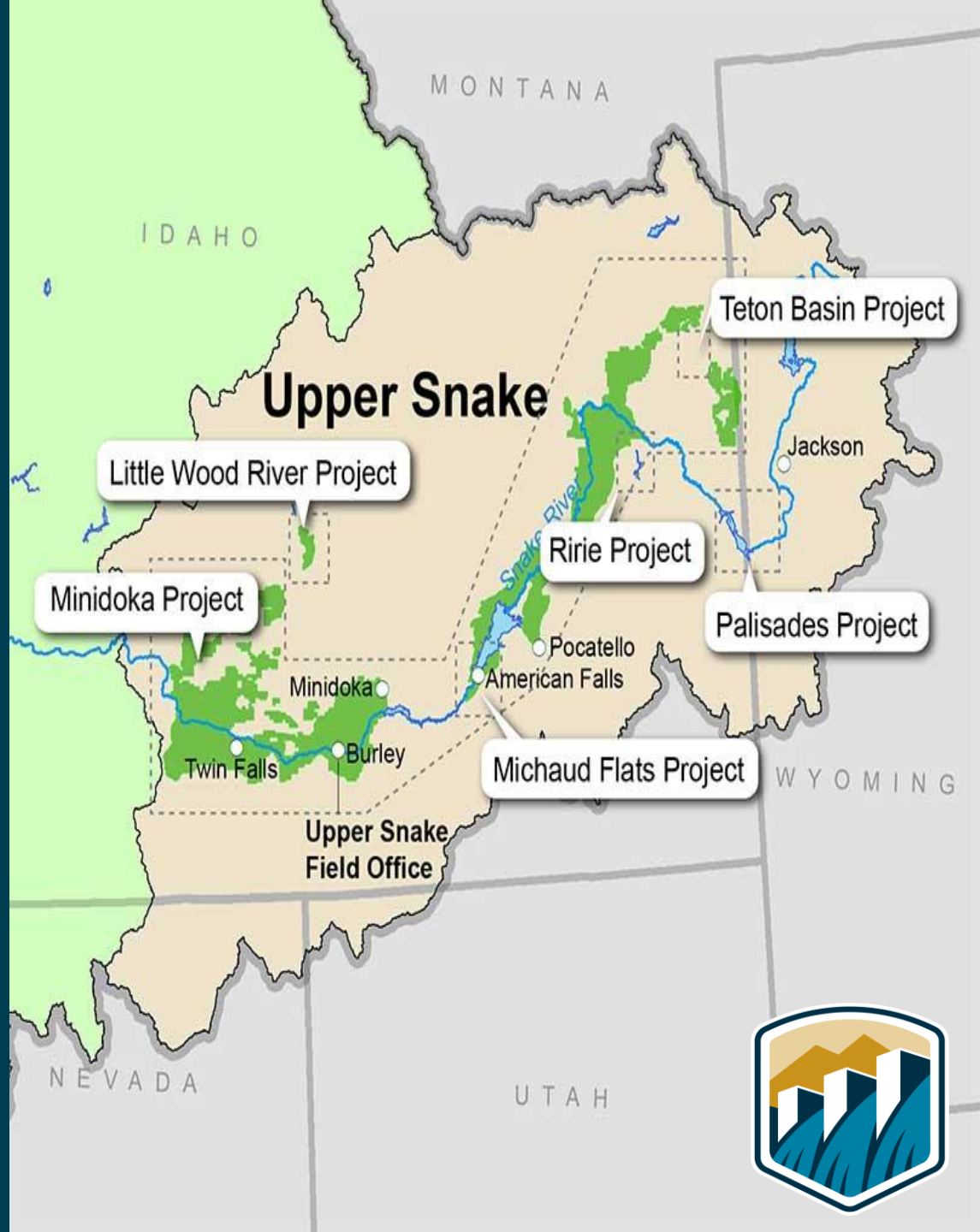
Transferred Facilities



Upper Snake Field Office

- Minidoka Dam
- American Falls Dam
- Ririe Dam
- Palisades Dam
- Jackson Lake Dam

Reserved Facilities



Bureau of Reclamation Maintenance

- Delegations of Authority
  - Secretary of DOI – Commissioner – Regional Director – Area Manager
- Reclamation Requirements *(examples)*
  - Policies
  - Directives and Standards (D&S)
  - Facility Instructions, Standards and Techniques (FIST)
  - Reclamation Safety Health Standards (RSHS)
- Tools *(examples)*
  - Capital Asset and Resource Management Application (CARMA)
  - Data Asset Management System (DAMS)
  - Hydromet

Aging Facilities

- Increased age = increased maintenance
- Meeting or exceeding expected service lives – when to replace certain components or equipment
- Uses are changing which requires changes in both operation and maintenance practices
- Replacement parts for facilities are more difficult to find
- Changes in code compliance may require upgrades to facilities

Facility Inspections

FAC 01-07 - Review and Examination Program for High and Significant Hazard Potential Dams

- Annual Site Inspection (ASI)
  - Conducted by Field Office O&M Staff
- Periodic Facility Review (PFR)
  - Every 8-years
  - Conducted by Regional Office O&M Staff
- Comprehensive Review (CR)
  - Every 8-years
  - Lead by Denver Asset Management Staff – Potential Failure Modes, etc.
- Examinations of Inaccessible Features
  - Stilling basin, intake structures, gate structures, bridges(foundations), tunnels/conduits/pipelines, drains and toe drains, and abutments/faces of concrete dams

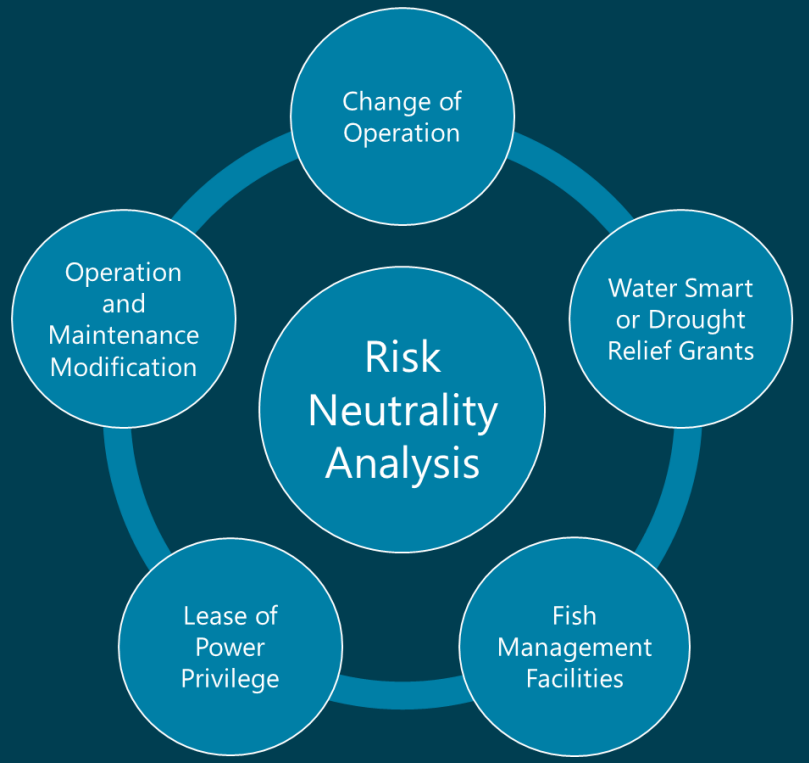
Changes to Transferred Facilities

- CMP 10-05 - Substantial Changes on Transferred Works, Bureau of Reclamation Facilities
  - Area Manager makes the decision
  - Costs for review of design drawings and written specifications and to monitor construction progress are non-reimbursable costs
  - Substantial Change - A modification in, or addition to, a project facility which involves changes in the original design intent, function, and/or operational parameters of the facility, or changes in project benefits, including non-routine maintenance activities that involve construction or reconstruction of a portion of the facility.

Facility Operations

- **FAC 02-01 -** Operating Practices and Procedures for High and Significant Hazard Potential Dams (and other facilities, as applicable)
  - Gate Operations & Testing
    - Yearly – full cycle (dry), 1 foot at or near full pool (wet)
  - Dam Tender (Primary & Backup)
    - Training – Classroom & On-site
  - Standing Operating Procedure (SOP)
    - Written Facility Operating Instructions
  - Facility Operating Record
    - Log Book – on-site

Facility Operations Cont.



Safety of Dams

- Risk Neutrality Evaluations
- Technical Review Team (TRT)
- Emergency Action Plans
- Operational Configuration Management Plan (OCMP)
- Facility Security
- Instrumentation *(detail on next slide)*

Dam Instrumentation *(FAC-01-08)*

3. **Roles and Responsibilities.**

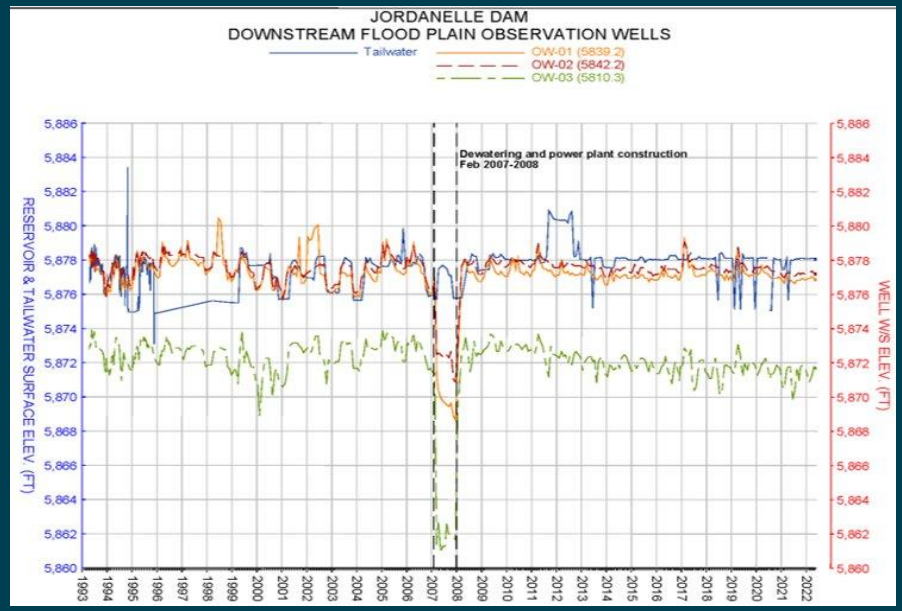
C. **Area Office Managers.** Area Office Managers are responsible for ensuring that all data and visual observations associated with performance monitoring of dams in their area are obtained, recorded, reviewed, and transmitted in accordance with required written schedules. Area Managers are responsible for ensuring that instrument installation and maintenance, including repair, rehabilitation, replacement, and calibration are completed as required.

D. **Chief, Dam Safety Office.** The Chief, Dam Safety Office is responsible for ensuring that all required data and visual observations are evaluated, and unacceptable structural performance is investigated in a timely manner. The Chief, Dam Safety Office is responsible for ensuring that performance parameters defining acceptable performance are developed and maintained for each dam; that performance monitoring schedules and necessary instructions are developed and maintained for each dam; and that performance monitoring records are permanently maintained and accessible to staff throughout Reclamation.

4. **Performance Monitoring Procedures.**

(3) All monitoring devices and systems will be periodically inspected, maintained, and calibrated in conformance with established procedures. Performance of these activities will be documented and preserved as official records.

(4) When performance monitoring devices need to be repaired, rehabilitated, replaced, or reinstalled, or when installation of new devices is determined to be necessary, appropriate action will be taken in a timely manner. System design, installation and/or rework of devices, documentation of "as-built" conditions, and data acquisition will be performed in a manner consistent with accepted practices. All essential and significant details concerning repairs or modifications to existing devices, or installation of new devices, will be recorded and maintained as official records.



Every dam leaks and moves – Monitoring provides insight (changes)

Each dam has a prescribed instrumentation monitoring program
- Seepage, water levels, dam movement, etc. are all monitored
- Periodicity varies but typically daily, monthly, annually
- Irregular condition triggers
    *New observations/changes , Water Elevation, Earthquake, etc

Types of Active Instruments

- Concrete Structural Measurement Points
- Drain Flows
- Embankment Measurement Points
- Electronic Distance Measurements
- Extensometers
- Whittemore Gauges
- Drain Flows
- Hydraulic Piezometers
- Inclinometers
- In-Place Inclinometers
- Internal Vertical Movement Devices
- Landslide Measurement Points
- Observation Wells
- Pneumatic Piezometers
- Collimation Points
- Convergence Meters
- Crack Meters
- Joint Meters
- Relief Wells
- Shear Strip Indicators
- Water Quality
- Uplift Pressures
- Seepage Monitoring
- Piezometers
  - Porous-Tube
  - Slotted-Pipe
  - Vibrating-Wire

BOR Dam Instrumentation

CPN Region

- Active # of instruments = 5,785

All of Reclamation:

Active – 40,194

Questions

Island Park Construction - 1936 - Diversion Tunnel Concrete Lining

Ryan Bliss
Snake River Area Office
O&M & Technical Services Manager

BUREAU OF RECLAMATION