

# Bonneville Dam Major Rehabilitation Report FFDRWG Brief

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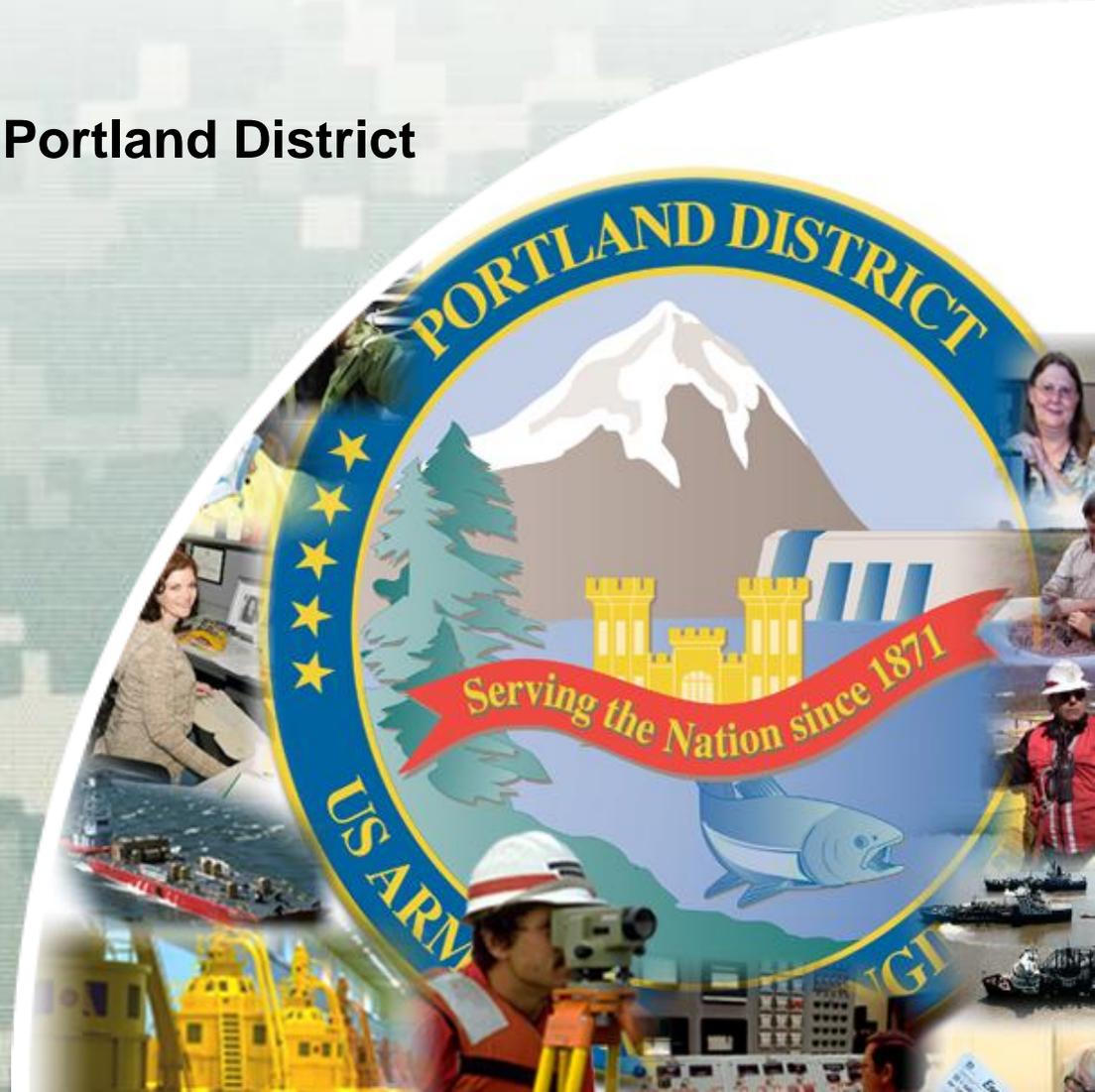
U.S. Army Corps of Engineers Portland District

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# Bonneville Major Rehab Project Brief

## Agenda

- FY15/Phase 1: Identified what should be in:
  - ▶ Urgent Issues
  - ▶ Interim O&M Issues
  - ▶ Major Maintenance Report (MMR) <2 yrs, >\$6M
  - ▶ Major Rehabilitation Report (MRR) >2yrs, >\$20M
  - ▶ Issue Evaluation Study (IES)
  - ▶ Post Authorization Change Report
- FY16/Phase 2: Collect data/info for MMR/MRR/IES
- FY17/Phase 3: Draft MMR & MRR

# Urgent Issue

- Cascades Island subsidence
  - ▶ Safety and environmental impacts



# Interim O&M Issues: Bridges

- Old Navlock
- Bradford Island Fish Ladder
- North Spillway



# Interim O&M Issues: Fish Ladders

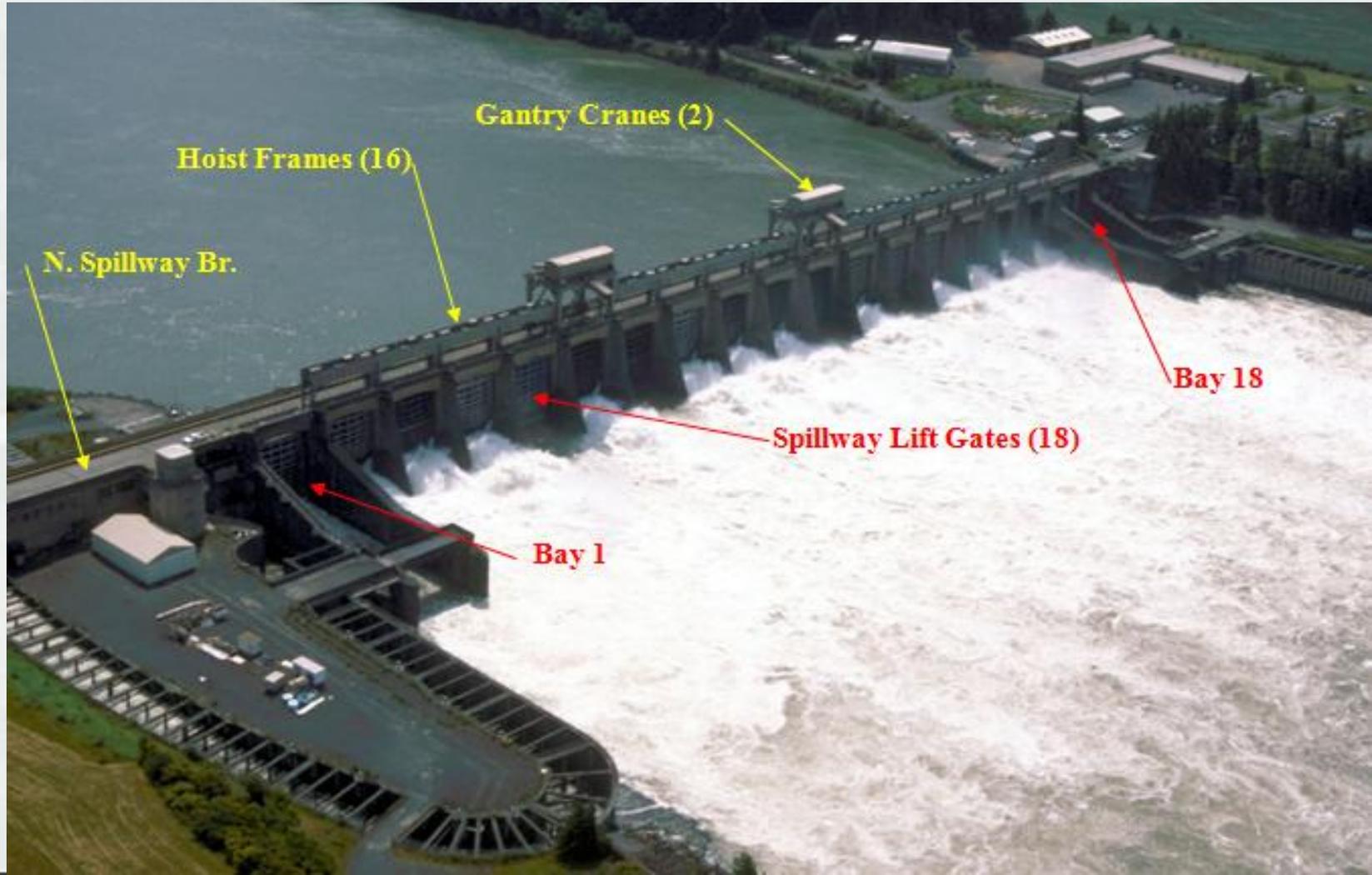


- WA Shore aux water supply leaks
- Cascades Island PLCs
- Bradford Island aux water supply leaks



# Interim O&M Issue

- Spillway Gantry Cranes



# Basis for MMR & MRR Recommendations

- Potential failure mode analyses
  - ▶ Fish ladders & bridges / spillway & navlocks
  - ▶ Life safety, economic, and environmental risks
- MMR and MRR requirements
- Authority issues

# Issue Evaluation Study

- Performed by Corps Risk Mgmt Center
- Will address:
  - ▶ Seismic loading
  - ▶ Overtopping – Hydrologic capacity
- May lead to Dam Safety Modification Study

# Issue Evaluation Study Interface: Hydrologic Capacity & Seismic Criteria

- Hydrologic Capacity
  - ▶ 1 million cfs – can pass without splitting gates; replace necessary features
  - ▶ 1.6 million cfs – design capacity
  - ▶ 2.1 million cfs – current Probable Maximum Flood
- Develop alternative spillway concepts
- Seismic Criteria: Site Characterization Report
  - ▶ RMC starting work on this; NWP PDT participating

# Summary

- Urgent Issue: Cascades Island Subsidence
- Interim O&M Issues
  - ▶ Bridges, Fish Ladders, Spillway Cranes & Gate Repair Pit
- Major Maintenance Report – Potential: Spillway Cranes
- Major Rehabilitation Report
  - ▶ Bridges, Fish Ladders, Spillway, Navigation Locks
- Issue Evaluation Study
  - ▶ Seismic Loading
  - ▶ Overtopping – Hydrologic Capacity
- Potential Post Authorization Change Report
  - ▶ Navlock 1 (Old)
  - ▶ Hydrologic Capacity