Recreation, Public Safety, & Security at FERC Hydropower Projects

Recreation Management Workshop
Ontario, CA
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FERC Panel Members

- **Security** - Justin Smith, D2SI-HQ
- **Public Safety** - Jim Puglisi, D2SI-HQ
- **Recreation** - Mark Carter, DHAC-ARO
Agenda

- Who we are:
  - Public Safety
  - Security
  - Recreation

- Understanding the balancing of Recreation, Public Safety, and Security

- Panel Scenarios
  - Example Recreation Scenarios
Mission Statement

D2SI implements the Commission’s Dam Safety and Public Safety Programs by developing and implementing policies, programs, and standards for the dam safety and engineering inspection and evaluation of jurisdictional dams and projects to ensure public safety at and around projects. D2SI takes actions to ensure that jurisdictional projects are inspected and evaluated in their design, construction, operation, and maintenance phases in order to:

1. Protect life, health, property, and the environment;
2. Assess project compliance with the terms and conditions of issued licenses.
Section 10(c) of the Federal Power Act Authorizes FERC to establish regulations requiring owners of hydro projects under its jurisdiction to operate and properly maintain such projects for the protection of life, health, and property.
“To the satisfaction of, and within a time specified by the Regional Engineer, an applicant or licensee must install, operate, and maintain any signs, lights, sirens, barriers, or other safety devices that may reasonably be necessary or desirable to warn the public of fluctuations in flow from the projects or otherwise to protect the public in the use of the project lands and waters.”
Public Safety
FERC Oversight

- Public Safety Plans
- Incident reporting
Security
FERC Authority

- Post 9/11 – dams are attractive
- All dams assigned Group Number
- Critical assets only
- Detect + Assess + Delay + Respond
Recreation
at FERC Hydropower Facilities
Recreation at FERC Hydropower Facilities

- **18 CFR 2.7 Recreational development at licensed projects**
  - "The Commission will evaluate the recreational resources of all projects...and seek, within its authority, the ultimate development of these resources, consistent with the needs of the area to the extent that such development is not inconsistent with the primary purpose of the project."

- **Standard article 18**
  - "Licensee shall allow the public free access, to a reasonable extent, to project waters...for outdoor recreation purposes"

- **Compliance with specific license articles**
FERC Recreation Management

- Recreation
- Public Safety
- Security
Striking a Balance for Each Activity
Striking a Balance for Each Activity
Striking a Balance for Each Activity

Diagram showing a triangle with Recreation at the top, connected to Safety on the left and Security on the right.
Recreation Scenarios

1. Fishing
2. Portage
3. Boating
4. Camping
The ORP
The Overly Recreated (Regulated) Project

- Dam
- Powerhouse
- Switchyard
- Day Use Area
- Dispersed Camping Site
- flow

Diagram showing the layout of the ORP project area with labeled facilities.
The ORP
Flyover
Scenario 1
Fishing Access Issues

Fishing from catwalk along the powerhouse
Scenario 1
Fishing Access Issues

Fishing from catwalk along the powerhouse
Scenario 1

Fishing Access Issues

Fishing from catwalk along the powerhouse

Recreation
- Prime Location
- Ease of Access
- ADA accessible

Public Safety
- Falling into tailrace
- Attractive Nuisance
- Unaware of risks
- Good – gets fisherman out of tailrace

Security
- Poor detection
- No delay
- Powerhouse easily compromised
Scenario 2
Portage Issues
Access Issues Through Project Facilities
Scenario 2

Portage Issues

Access Issues Through Project Facilities
Scenario 2
Portage Issues

Access Issues Through Project Facilities

**Recreation**
- Wayfinding
- User experience
- Length of trail

**Public Safety**
- Proximity to PH intake
- Proximity to tailrace flows
- Sudden turning-on of units

**Security**
- Large footprint = access to many assets
- Can’t discern intent
- Backpack or canoe full of explosives
Scenario 3
Boating Issues
Downstream Rafting from Project Releases
Scenario 3
Boating Issues
Downstream Rafting from Project Releases

Spillway Gates
PH
### Scenario 3
**Boating Issues**

**Downstream Rafting from Project Releases**

#### Recreation
- Access to rapids
- Quality of launch area
- Predictability of flows
- High flows (good and bad)

#### Public Safety
- Flows change without warning
- Swift water
- Rescues
- Risk extends downstream

#### Security
- Can’t discern intent
- Can’t respond quickly
Scenario 4
Recreating Near Project Facilities
Dispersed Camping
Scenario 4
Recreating Near Project Facilities

Dispersed Camping

Camping Area
Scenario 4
Recreating Near Project Facilities

Dispersed Camping

**Recreation**
- Proximity to dam amenities
- Lights/noise

**Public Safety**
- Access to location
- Rescue limitations

**Security**
- On-going surveillance
- Difficult detection
- Can’t respond quickly
- Deterrence measures are limited
Additional FERC Guidance

www.ferc.gov

Recreation Guidelines

Security Guidelines
www.ferc.gov/industries/hydropower/safety/guidelines/security.asp

Guidelines for Public Safety

Safety Signage at Hydropower Projects
Sorry Dad, but my true passion is for making furniture, not dams...
Slides beyond here are extras if needed...
Scenario 5
Recreating on Project Facilities
Base Jumping from Dam Crest
Scenario 5
Recreating on Project Facilities
Base Jumping from Dam Crest

Jump Zone
Scenario 5
Recreating on Project Facilities

Base Jumping from Dam Crest

Recreation
• Project nexus

Public Safety
• Access to location
• Rescue limitations

Security
• Proximity
• Access to many assets
FERC’s 5 Regional Offices
2012 Incident Locations

2012 FERC Public Safety Incident Locations (124 Incidents)

- Reservoir, 91
- Project Lands, 10
- Other, 9
- Powerhouse, 1
- Downstream, 8
- Canal, 2
- Spillway or Dam, 2
- Tailrace, 1
2012 Incident Types

2012 FERC Public Safety Incident Types
(124 Incidents)

- Swimming, 22
- Boating, 27
- Other, 15
- Sea Plane, 1
- Fall, 8
- Suicide, 6
- Bank Fishing, 3
- Natural Causes, 1
- Auto/Vehicle, 8
- Unknown, 15
- Personal Water Craft, 10
- Boat Fishing, 8