Fishway Inspections

Hydro Training
U.S. Fish and Wildlife Service
Hadley, MA
February 2015
Recall that our definition of “fishway” is broad.

In 1992, Congress provided guidance on what constitutes a fishway in the National Energy Policy Act, Section 1701(b):

“...items which may constitute a "fishway" under section 18 for the safe and timely upstream and downstream passage of fish shall be limited to physical structures, facilities, or devices necessary to maintain all life stages of such fish, and project operations and measures related to such structures, facilities, or devices which are necessary to ensure the effectiveness of such structures, facilities, or devices for such fish.”
Fishways can be small or large, fixed structures or moving machines or made from natural materials.
A fishway can include...

- physical structures
- facilities
- devices
- project operations
- measures

... a lot of moving parts!
Why inspect a fishway?

*Fishways are complex machines and hydraulic structures.*

- Verify debris maintenance program
- Identify damage
- Document changing conditions
- Ensure proper functioning

*Safe, Timely & Effective!*
When to inspect a fishway...

- Daily*
- Pre-Season
- During fish run
  - Upstream
  - Downstream
- During construction
- Shutdown
- ...when problems are identified
Who should inspect a fishway?
USFWS R5 Fish Passage Engineering

- Maintains a cadre of engineers with ___ years of experience in river hydraulics, surface water hydrology, hydropower, and fish passage.
- Supported, in part, by Ecological Services
- Works throughout the Northeast Region (and beyond)
- Supports FWS biologists, state agencies, tribes, and other stakeholders
How to inspect a fishway?

Figure 2. Major components in typical volitional fish ladders
- Hydrology & ecology
- Hydropower Operations
- Entrance
- Ladder/Lift
- AWS
- Exit
- Downstream bypass
- Counting/Trapping facilities
- Eelways
Fishway Inspection Guidelines

- Developed 2013
- Joint USFWS/NMFS/USGS
- Including input from:
  - CTDEEP
  - Maine DMR
  - NOAA NWR
  - and many others!

“provides guidance for engineers, biologists, operators, regulators and dam owners involved in the inspection of fishways at dams”
Available online:

http://scholarworks.umass.edu/fishpassage/
Questions?