

River Restoration Northwest

Putting fish back in the rivers... and so much more



F Lorraine Bodi, Vice President, BPA Environment Fish & Wildlife
February 2017



Footprint of BPA Fish and Wildlife Program



Legal overview of BPA's F&W mitigation program

<p>Pacific Northwest Electric Power Planning and Conservation Act</p>	<ul style="list-style-type: none"> • Protect, mitigate, and enhance fish and wildlife, including related spawning grounds and habitat, on the Columbia River and its tributaries. • Equitable treatment of F&W with other purposes. • Consistency with the Columbia Basin F&W program.
<p>Endangered Species Act</p>	<ul style="list-style-type: none"> • Avoiding jeopardy to listed fish and wildlife. • Avoiding adverse modification of critical habitat. • Biological Opinions.
<p>Tribal treaty and trust responsibilities</p>	<ul style="list-style-type: none"> • The right to take fish at usual and accustomed places. • Government to government consultations.
<p>Clean Water Act</p>	<ul style="list-style-type: none"> • Address water quality standards adopted by states & tribes.
<p>National Environmental Policy Act</p>	<ul style="list-style-type: none"> • Assess major federal actions that may significantly affect the environment.
<p>National Historic Preservation Act</p>	<ul style="list-style-type: none"> • Assess federal undertakings that may adversely affect historic and cultural resources.

BPA annual funding for fish and wildlife mitigation

- Approximately \$500 million per year in direct expenditures.
- Includes debt service, operations and maintenance for fish ladders, hatcheries, etc.
- All paid for by the region's electric ratepayers, comprising more than 20 percent of BPA's power revenues, and roughly 30 percent of total costs.

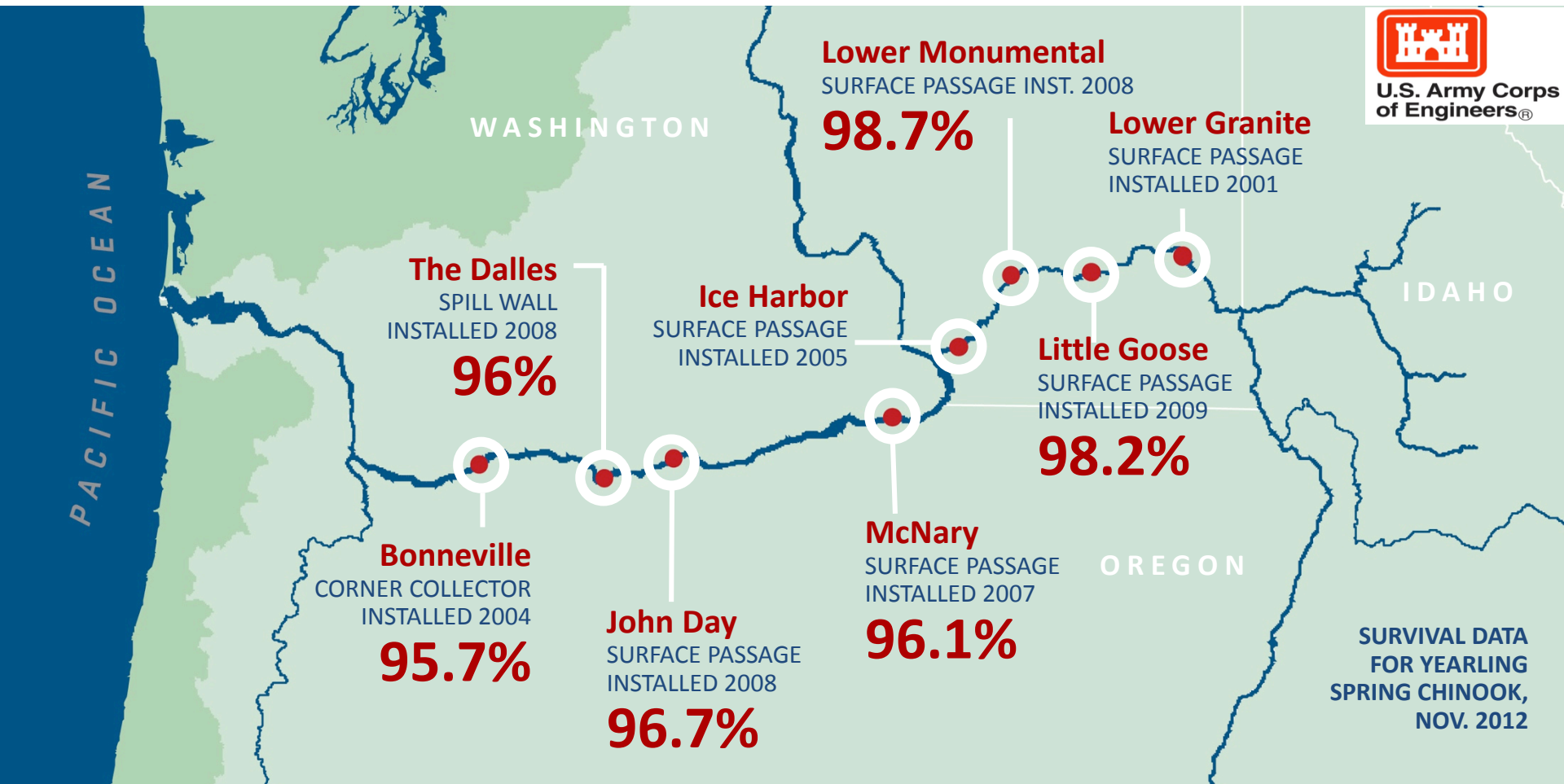


Implementing the 2008 NOAA Fisheries BiOp

- **Hydro:** Achieve 96% dam survival for migrating spring fish and 93% for summer fish.
- **Habitat:** Restore high priority habitat in tributaries and the estuary (more than \$50 m per year).
- **Hatcheries:** Manage hatcheries to support and not impede recovery of listed fish.
- **Harvest:** “Companion” BiOps with abundance-based sliding-scale harvest numbers.
- **Predator management:** Managing predation from non-native fish, birds, and marine mammals.



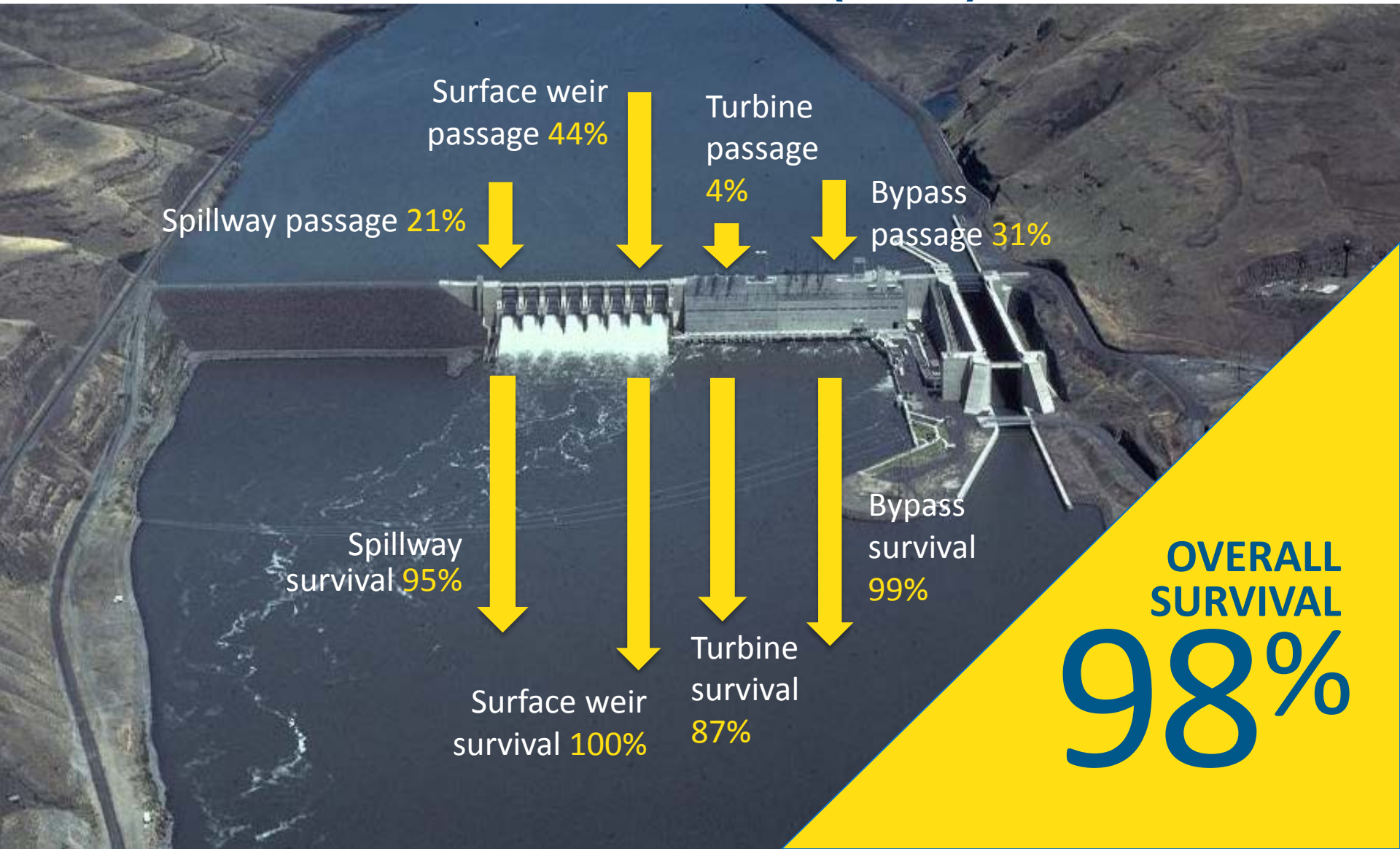
Results for fish – optimizing fish passage through dams



U.S. Army Corps of Engineers®

- Dams are on track to meet performance standards of 96% average survival for spring and 93% for summer migrating fish.
- Fish travel times and survivals per kilometer are approaching those for an undammed river. 6

Little Goose Dam passage and survival Chinook Salmon (2012)



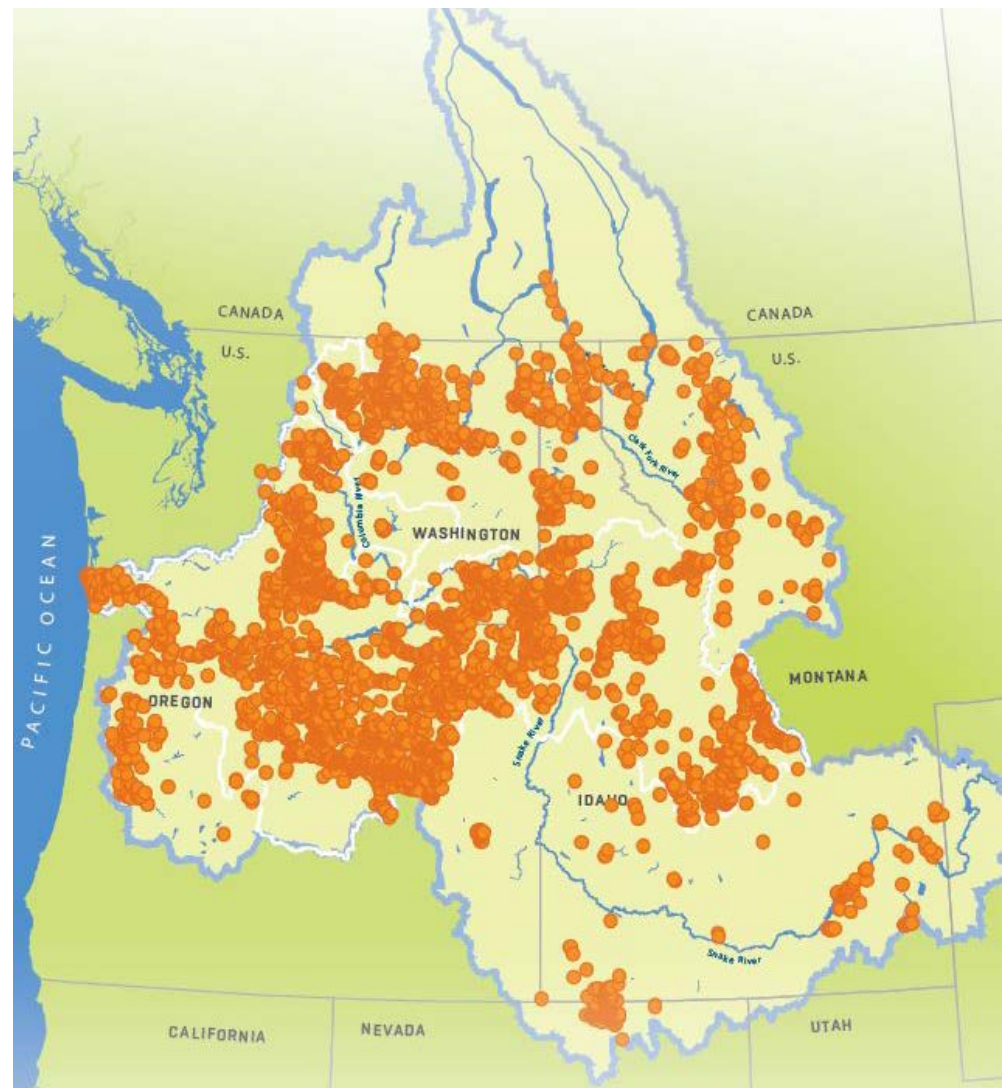
Results for fish – Habitat restoration

Tributary habitat (2007 to 2015)

- Protected more than 373,000 acre feet of water.
- Opened access to more than 3,304 miles of fish habitat.
- Restored 400 miles of stream habitat complexity.

Estuary habitat (2007 to 2015)

- Protected or restored more than 7,760 acres of estuary floodplain by purchase or lease, including 1,321 acres in 2015.
- Restored or enhanced more than 42 miles of estuarine tidal channels.



Here's one example in Washington

Klickitat Watershed Enhancement Project – Yakama Nation

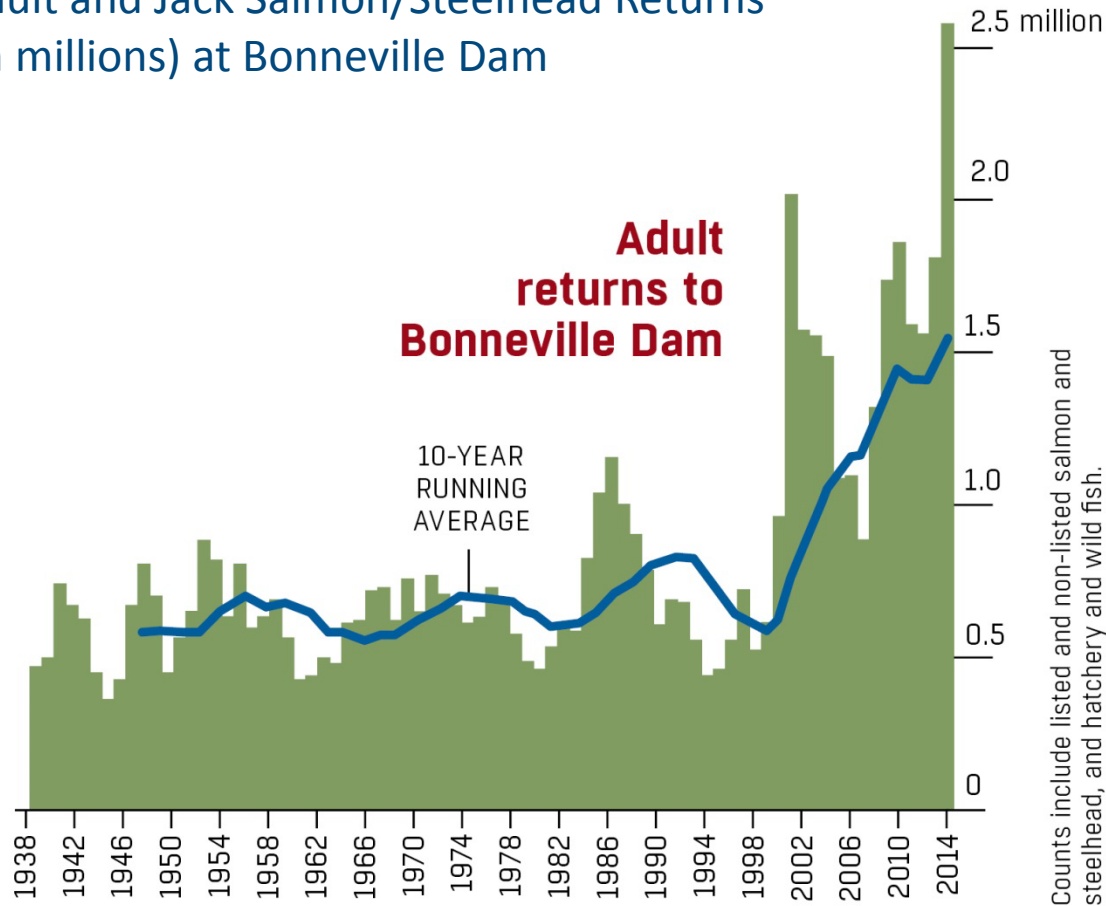


- Removed ***eight miles of asphalt road*** next to the mainstem Klickitat River.
- Reconnected 31 acres of floodplain and off-channel habitat.
- Built 1/2 mile of secondary channel.
- Removed railroad bridge.
- Removed 34 culverts.
- Installed tens of thousands of native plants on 60 acres of floodplain riparian habitat.
- Cost share averaged \$5.50 for every BPA dollar expended.

How are the fish doing?

Abundance of salmon and steelhead

Adult and Jack Salmon/Steelhead Returns (in millions) at Bonneville Dam



Of the 49 Columbia Basin **wild** fish populations where data are available, 48 have increased in abundance since ESA listings.

On average, abundance levels of **wild** Chinook salmon and steelhead have more than doubled.

NOAA has concluded that combined hatchery and wild fish numbers indicate that operation of the system is “not likely to affect” Southern resident orcas.

Summary of court ruling and next steps

- On May 4, 2016, the U.S. District Court for the District of Oregon issued a decision invalidating NOAA Fisheries' latest FCRPS Biological Opinion.
- The Court also ruled that the Corps and Reclamation failed to comply with the National Environmental Policy Act (NEPA) when they issued decision documents to adopt and implement the BiOp.
- NOAA will issue a new BiOp by December 31, 2018, and the Action Agencies will continue to implement the current BiOp until then.
- BPA and its partnering federal agencies will issue a Columbia River System Operations (CRSO) EIS by March 2021.



CRSO EIS next steps

- Scoping and comment period on the multi-faceted operation of federal dams ended February 7.
- Issues included flood risk management, irrigation, power generation, fish and wildlife, navigation and recreation.
- 16 public meetings and two webinars held
 - Held in four states, in major cities and areas affected
 - More than 2,300 people attended, 81,000 comments received
 - Attendees included the general public, environmental groups, elected officials, river users, tribes and others
- Status report to the court, and hearing, in Fall 2017.
- Draft EIS in Spring 2020, and final EIS/BiOp in Spring 2021.



Questions?



Resources:

<http://www.crsso.info/>

<https://www.salmonrecovery.gov/>