

# Environment, Fish and Wildlife

June 22, 2016

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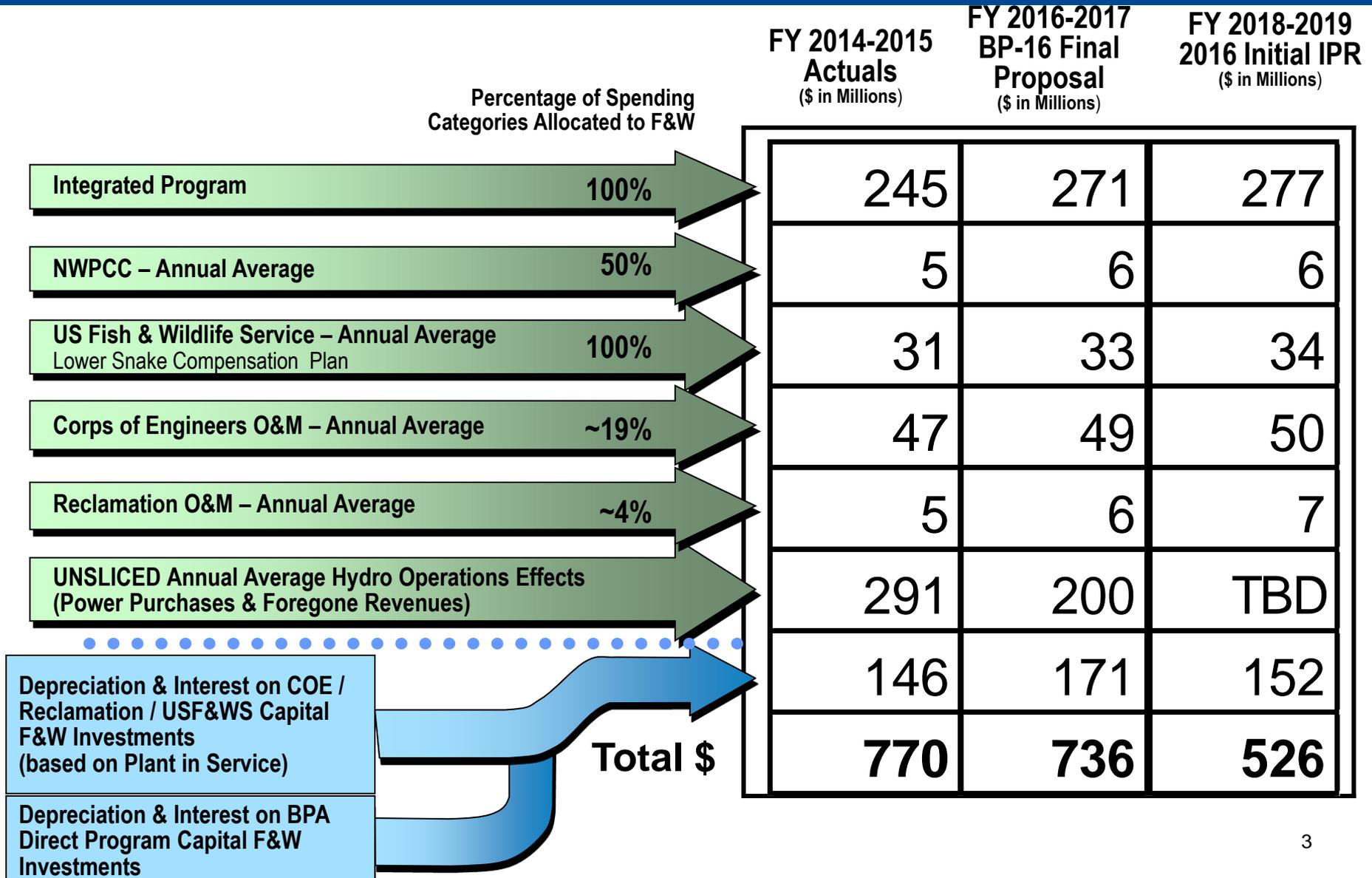


## Financial components of BPA's F&W program

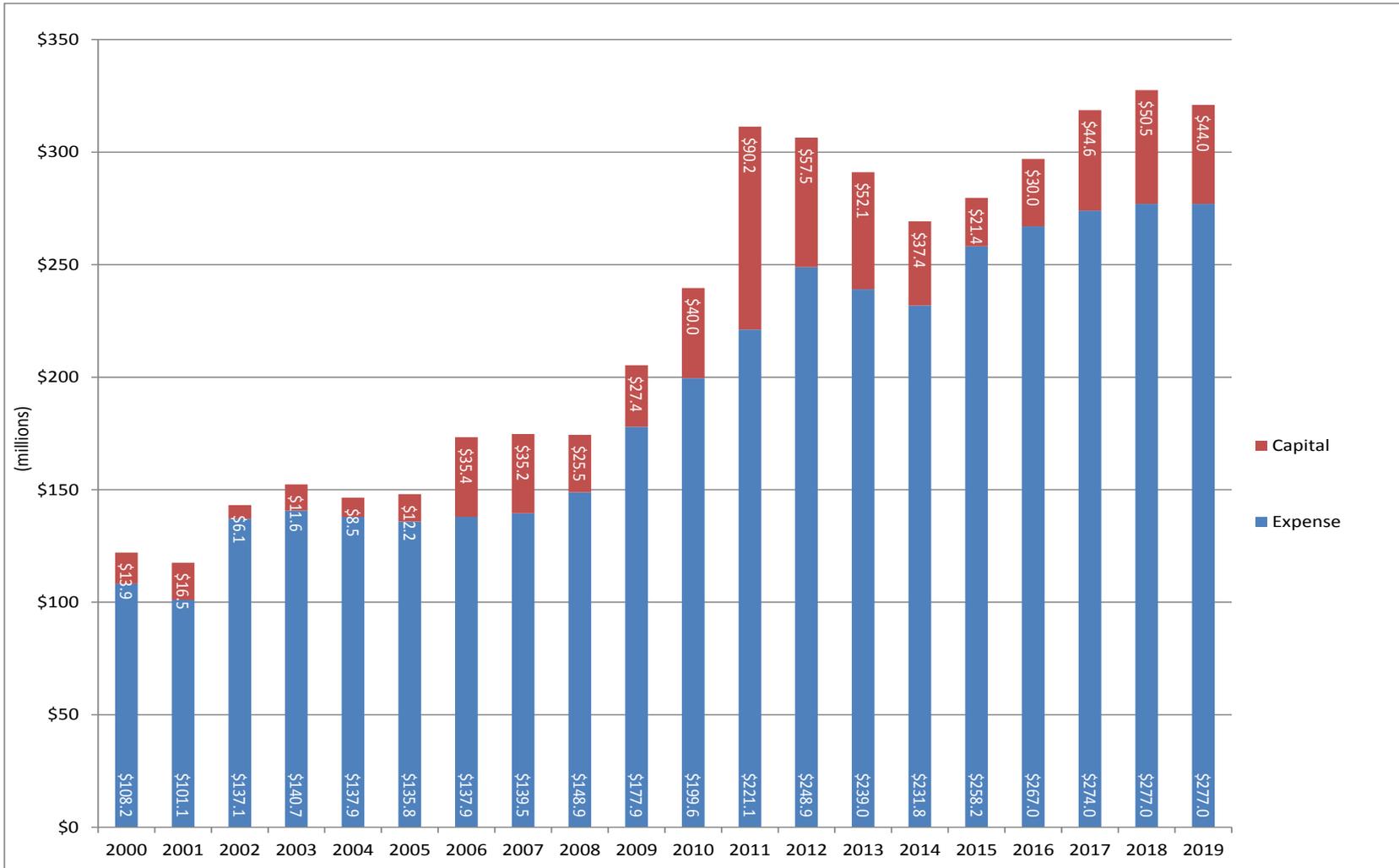
- **Integrated program** –The Fish and Wildlife program funds several hundred mitigation projects to meet both BPA's Northwest Power Act and Endangered Species Act obligations.
- **Debt service** – The projected amortization, depreciation and interest payments for investments directly funded through BPA borrowing, as well as capital investments by the Corps and Reclamation funded by the U.S. Treasury and reimbursed by BPA.
- **Fish-related O&M** (“reimbursable expenses”) – The hydroelectric share of operations and maintenance and other non-capital expenditures for fish and wildlife activities by the Corps and Reclamation (i.e., O&M of fish facilities at the federal mainstem dams and Corps/Reclamation mitigation hatcheries), and U.S. Fish & Wildlife Service (for hatcheries under the Lower Snake River Compensation Plan – 11 hatcheries and 18 satellite facilities).
- **River operations** – The power production effects of river operations required by NOAA Fisheries and USFWS biological opinions.



# Total annual average cost of BPA fish and wildlife actions



# Fish & Wildlife annual expenditures



## Fish & Wildlife and LSRCP – capital and expense

(\$ Thousands)	2015 Actuals	2016 Rate Case	2017 Rate Case	2018 IPR	2019 IPR
Fish & Wildlife	\$258,177	\$267,000	\$274,000	\$277,000	\$277,000
Lower Snake Hatcheries	\$30,930	\$32,303	\$32,949	\$33,483	\$33,483
<b>EXPENSE Total</b>	<b>\$289,107</b>	<b>\$299,303</b>	<b>\$306,949</b>	<b>\$310,483</b>	<b>\$310,483</b>
Fish & Wildlife	\$21,373	\$40,000	\$44,602	\$50,532	\$44,000
<b>CAPITAL Total</b>	<b>\$21,373</b>	<b>\$40,000</b>	<b>\$44,602</b>	<b>\$50,532</b>	<b>\$44,000</b>

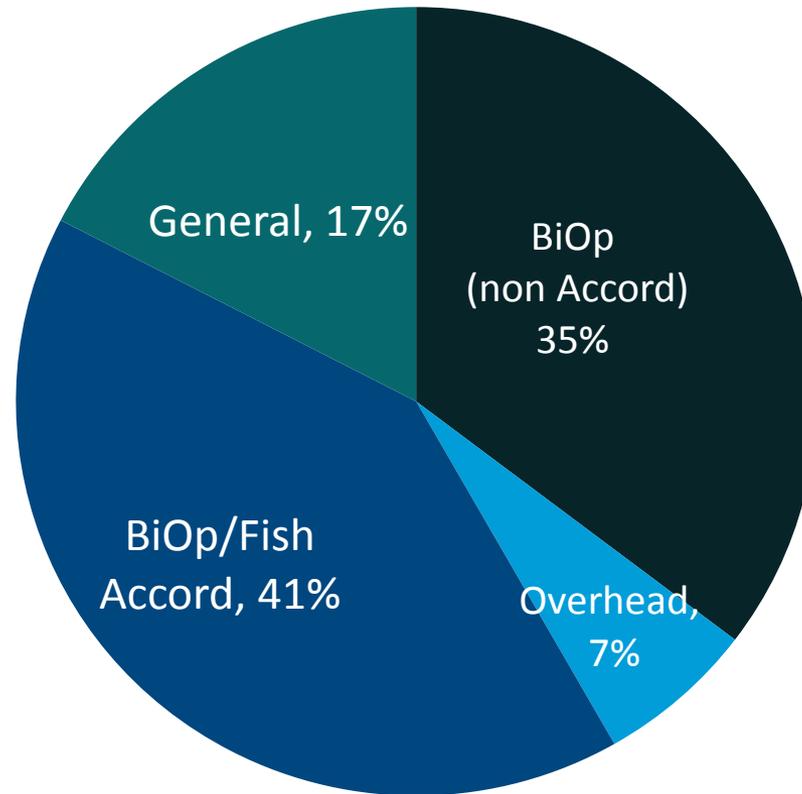
### Program description

- BPA's Fish and Wildlife program implements projects that meet BPA's fish and wildlife mitigation objectives under the Northwest Power Act consistent with the program adopted by the Northwest Power and Conservation Council. The projects also meet BPA's ESA fish and wildlife requirements under biological opinions from the USFWS and NOAA Fisheries, and the commitments encompassed within the Columbia Basin Fish Accords.

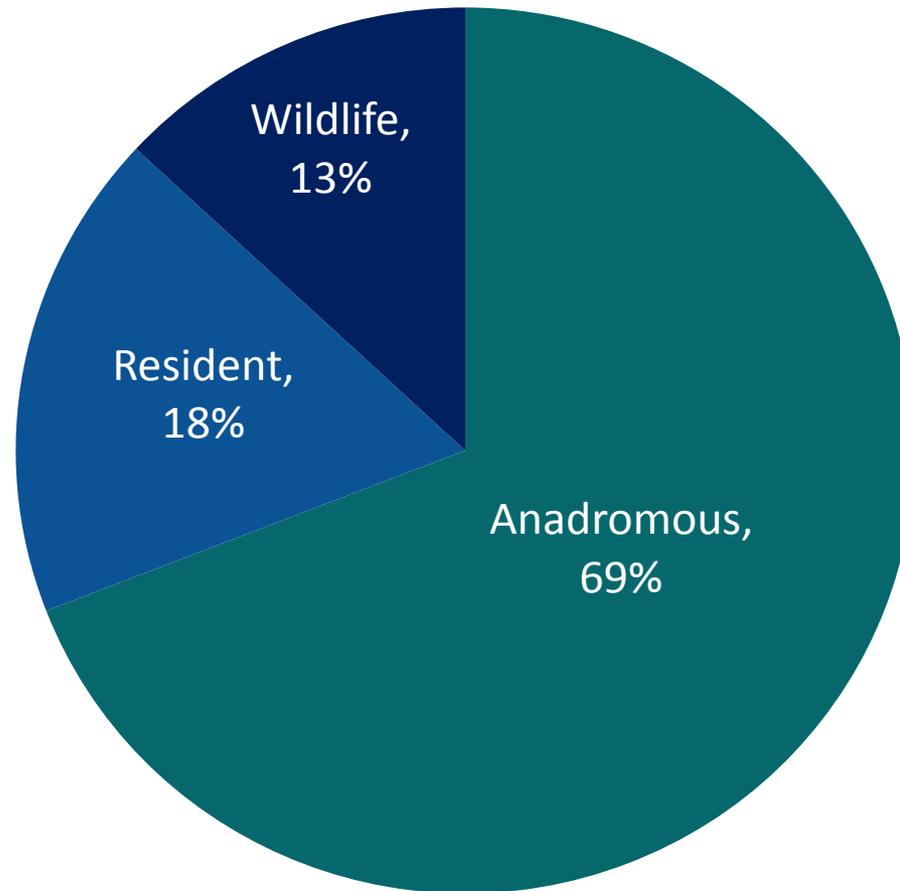
### Key products and outputs

- The Fish and Wildlife program is carried out in partnership with the Northwest Power and Conservation Council. The Council develops and updates the program every five years, making recommendations to BPA for projects to implement in support of the program.
- The Fish and Wildlife program expense budget also ensures the agency's environmental and cultural resource compliance for program activities, through analysis and documentation consistent with the requirements of the National Environmental Policy Act and the National Historic Preservation Act.

## F&W costs related to legal compliance



## F&W costs by type of species



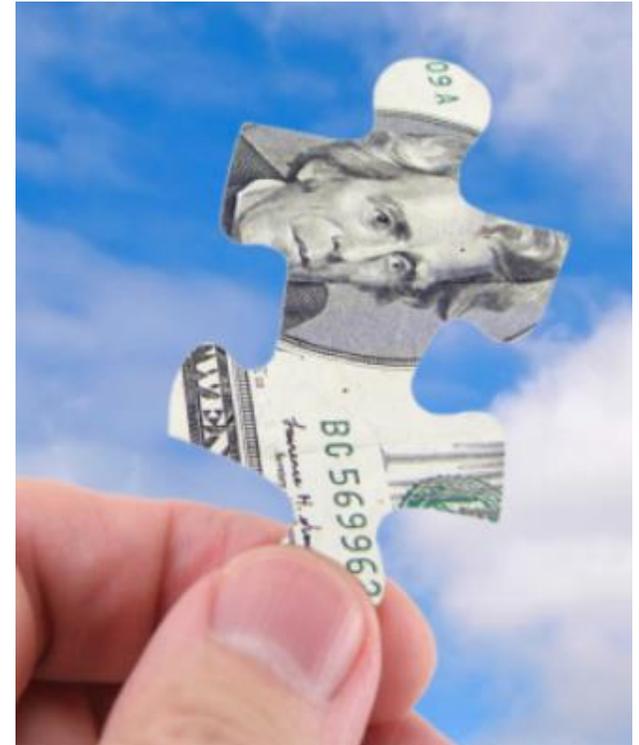
## Fish & Wildlife KSI

- Strategic planning for F&W KSI will be heavily informed by recent decision of the federal district court in BiOp litigation.
- Primary goal is to protect and mitigate for fish and wildlife affected by the federal dams, while assuring adequate, efficient, economical and reliable power.
- Funding should be stable and reflect legal and biological priorities.
- Next steps:
  - Implement the 2008/2014 FCRPS BiOp and 2008 Fish Accords through 2018.
  - Assure coordinated power operations and transmission operations.
  - Assure regional collaboration for broad support of F&W actions.
  - Collaborate on a comprehensive EIS for FCRPS operations.
  - Prioritize for efficiency and cost effectiveness (i.e., cost management).
  - Review and consider future implementation agreements.



# Managing F&W budgets for efficiency

- **Financial efficiency and biological effectiveness**
- **Budget and operational certainty**
- **Cost management tools**
- **Asset management**



# F&W legal and cost drivers

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

# All-H for salmon and steelhead

**Hydro:** Achieve 96 percent dam survival for migrating spring fish and 93 percent for summer fish (juvenile fish swimming downstream to ocean).

**Habitat:** Restore high priority habitat in tributaries and the estuary (over \$60 million annually).

**Hatcheries:** Produce fish to support, and not impede, the recovery of listed fish.

**Harvest:** “Companion” BiOps with abundance-based sliding-scale harvest numbers.

**Predator management:** Managing predation by fish, birds and marine mammals.

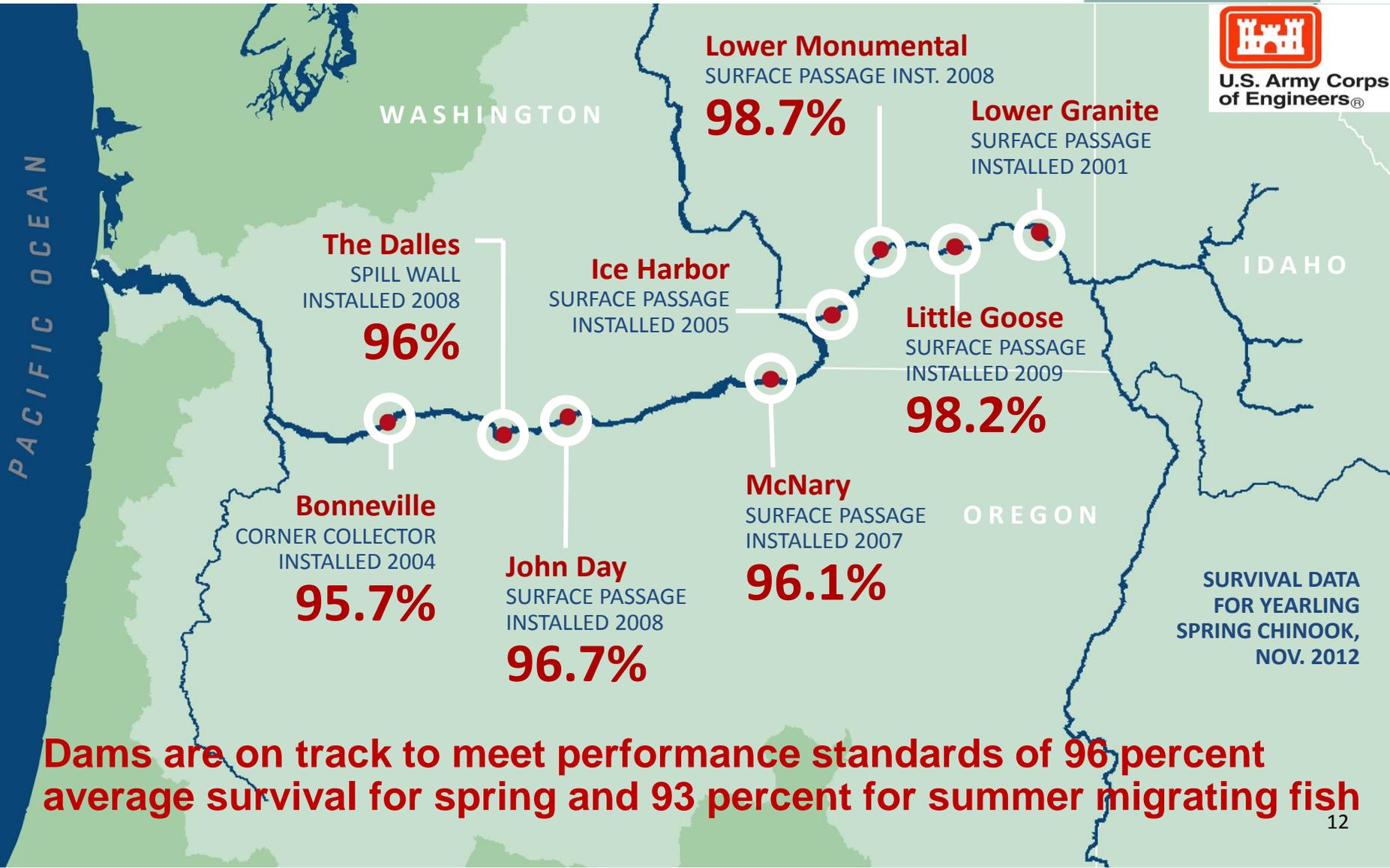


**GOAL:** Rebuild Columbia Basin fish stocks

# Results for the fish: optimizing fish passage



U.S. Army Corps of Engineers®



**Dams are on track to meet performance standards of 96 percent average survival for spring and 93 percent for summer migrating fish**

## Background: 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.

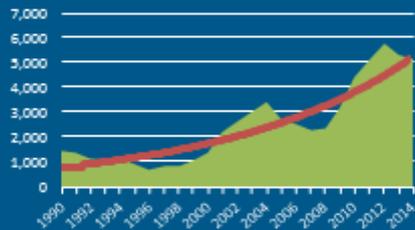
### Estuary habitat (2007 to 2015)

- 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.

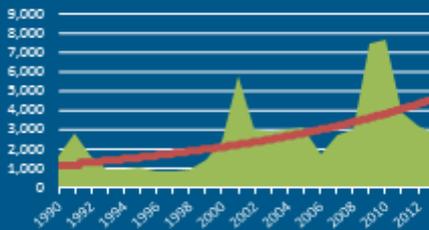


# How are the fish doing?: Abundance of wild salmon and steelhead

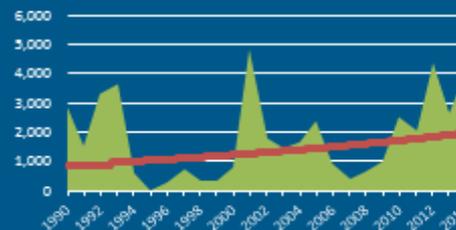
Mid-Columbia River Steelhead\*



Upper Columbia River Steelhead



Upper Columbia Spring Chinook

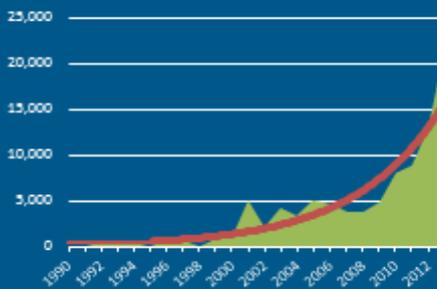


Trend

Snake River Steelhead



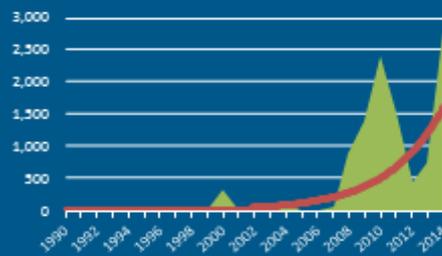
Snake River Fall Chinook



Snake River Spring/Summer Chinook



Snake River Sockeye

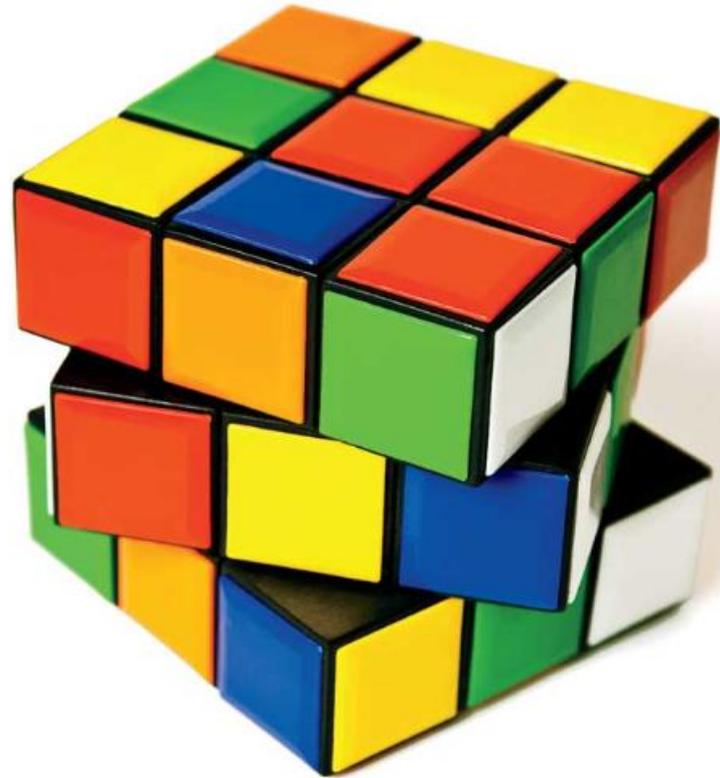


Of the 49 Interior Columbia Basin wild adult fish populations where data is available, 47 have increased in abundance since listings in the 1990s.

On average, wild chinook numbers have more than tripled. Wild steelhead numbers have doubled.

## What is happening now?

- BiOps/ESA
- Fish Accords
- Council processes
- Columbia River Treaty
- Clean Water Act issues
- Climate change adaptation
- Litigation



## Summary of U.S. District Court ruling

On May 4, 2016, the U.S. District Court for the District of Oregon issued a decision invalidating NOAA Fisheries' latest Biological Opinion for the effects of the Federal Columbia River Power System on salmon and steelhead listed under the Endangered Species Act.

The Court also ruled that the Corps and Reclamation failed to comply with the National Environmental Policy Act when they issued decision documents to adopt and implement the BiOp.



## Remedy and next steps

The court ordered NMFS to produce a new BiOp by March 1, 2018, and ordered the Corps and Reclamation to continue funding and implementing the current BiOp until then.

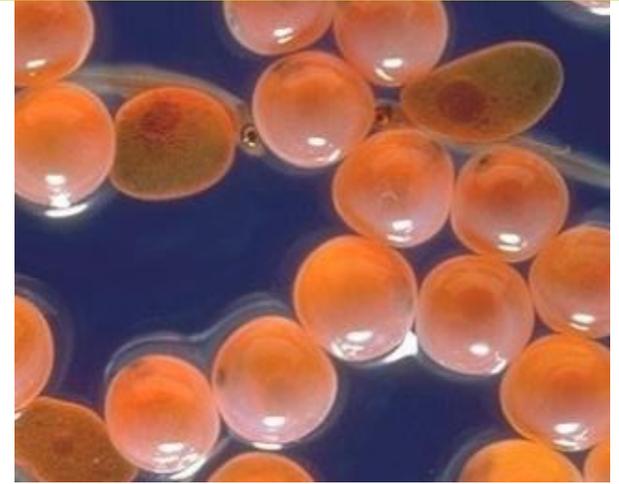
The court also issued an injunction requiring the Corps and Reclamation to comply with NEPA, signaling it expects the agencies to evaluate all reasonable alternatives, including dam breaching as part of the NEPA process.

Per court order, the action agencies outlined a reasonable NEPA process and 5-year schedule. The court will retain jurisdiction to supervise compliance with the injunction.



# Emerging issues

- ESA Biological Opinions, NEPA, and potential Accords and settlements
- Climate change/ocean conditions
- Predator management
- Columbia River Treaty
- Proposals for increased spill
- High head dam passage
- Hatchery consultations/reforms
- Bull trout consultation
- Lamprey and sturgeon conservation
- NPCC initiatives (toxics, invasives, etc.)



# Financial Disclosure

This information was made publicly available on June 20, 2016, and contains information not sourced directly from BPA financial statements.

