

Snake River Salmon Recovery Region

82



The Snake River Salmon Recovery Region is in the southeastern corner of Washington. Rolling, semi-arid crop and pasture lands are

flanked by the forested Blue Mountains to the south. The Snake River is a major transportation corridor for many of the region's products, which are barged downstream to Columbia River ports. The recovery region is sparsely populated, with residents scattered throughout the area in communities of less than 1,000 people or clustered in a few larger cities. The recovery plan covers the Walla Walla portion of the middle Columbia River steelhead listing in Washington. There is one lead entity in the region, which is also the regional recovery organization.

SCOTT BUHNER - FLICKR



Listed Fish

Steelhead, Snake River
(threatened) – 1997

Steelhead, Middle Columbia
(threatened) – 1997

Sockeye (endangered) – 1991²⁶

Spring Chinook (threatened) – 1992

Fall Chinook (threatened) – 1992²⁷

Bull trout (threatened) – 1998

Major Factors Limiting Recovery

- Degraded floodplain and channel structure
- Riparian degradation
- Degraded water quality and temperature
- Impaired stream flows in tributaries
- Excessive sediment
- Barriers to fish passage in tributaries
- Harvest impacts
- Hydropower system fish mortality on Columbia River

Recovery Plan Snapshot

- Plan status – Washington portions of Snake River steelhead, and Chinook: adopted as interim recovery plan by the National Oceanic and Atmospheric Administration (NOAA) Fisheries Service in 2006. Middle Columbia River steelhead (DPS scale) recovery plan: adopted by NOAA Fisheries Service in 2009. Federal draft bull trout recovery plan: status review underway.
- Time frame – 15 years
- Estimated cost – \$206 million for first 10 years

Recovery Plan Implementation

Current three-year implementation schedule identifies \$44 million in habitat project needs

Regional Recovery Organization

Snake River Salmon Recovery Board

Federally Recognized Tribes

Nez Perce and Confederated Tribes of the Umatilla Reservation

Counties

Walla Walla, Columbia, Garfield, Asotin, and portions of Whitman

Threats to Salmon Recovery

Recovery of Snake River salmon and steelhead is vulnerable to the loss of refuge watersheds, federal levee vegetation policies, and the dependency on cooperative agreements and fragile relationships with private landowners to implement recovery actions. Major threats in this region include:

Climate Change will increase stream temperatures and force flow changes that impact salmon.

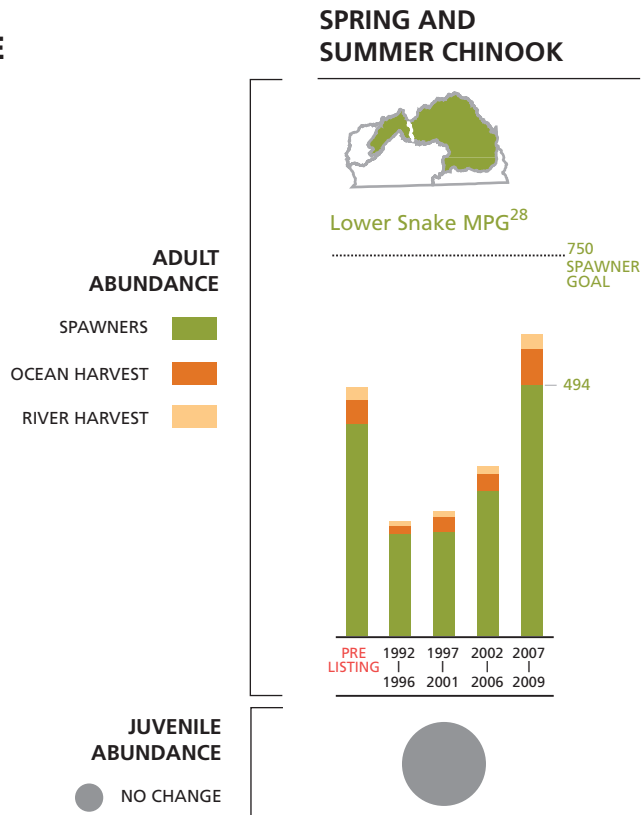
Human Population Growth and Development will lead to increased water allocations, and challenge the adequacy, implementation, and enforcement of land use regulations.

Ecological Interactions increase invasive species and predation effects on wild fish.

Uncertain Long-Term Funding for implementation of recovery actions (federal, state, and other sources) will challenge our ability to stay the course.

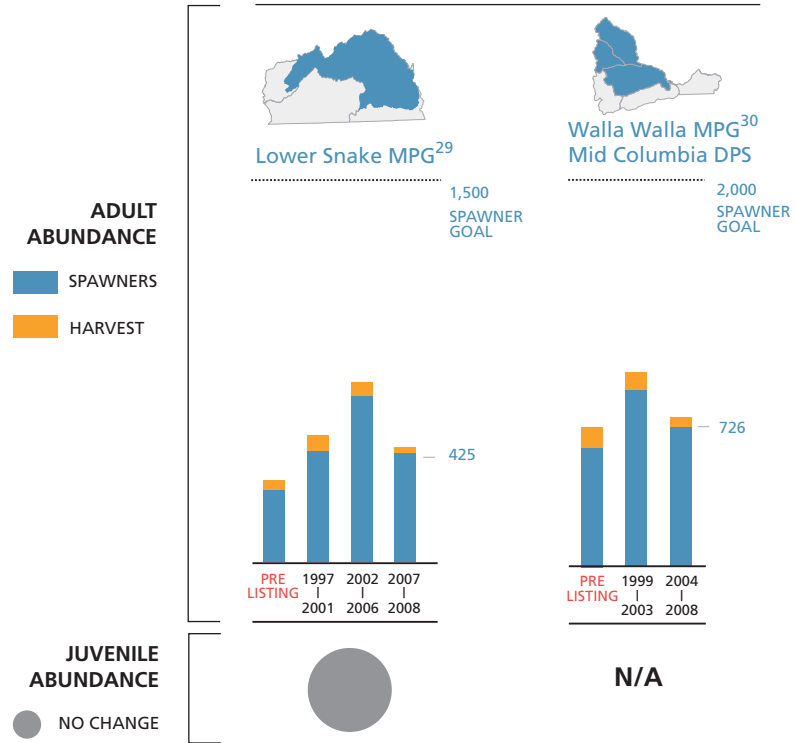
Are listed populations abundant and productive?

FISH: ABUNDANCE



- Graphs show wild adult and juvenile abundance for Major Population Groups (MPGs) for Evolutionarily Significant Units (ESU) or Distinct Population Segments (DPS). ESUs and DPSs are the scale at which species are listed and de-listed under the federal Endangered Species Act.
- Bar charts show the number of returning adult wild fish, separated by what was harvested and what returned to spawn.

STEELHEAD



- Pie charts show the percentage of juvenile sampling locations where trends have increased, decreased, or not changed. Juvenile data generally are not available for all populations of each species. Trends in juvenile Chinook data were available for two populations in the MPG. Juvenile steelhead data were available for two populations in the Lower Snake MPG. No juvenile trend data was available for steelhead in the Walla Walla MPG.

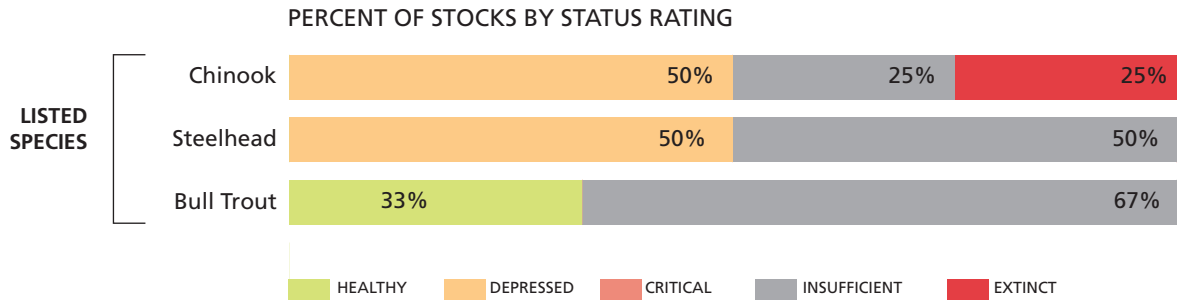
DATA SOURCES: WASHINGTON DEPARTMENT OF FISH AND WILDLIFE AND TRIBES

Are listed populations abundant and productive?

FISH: STATUS SUMMARY

- 2010 status ratings are determined by the Washington Department of Fish and Wildlife and tribes.
- Includes listed and non-listed species.

DATA SOURCE: WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

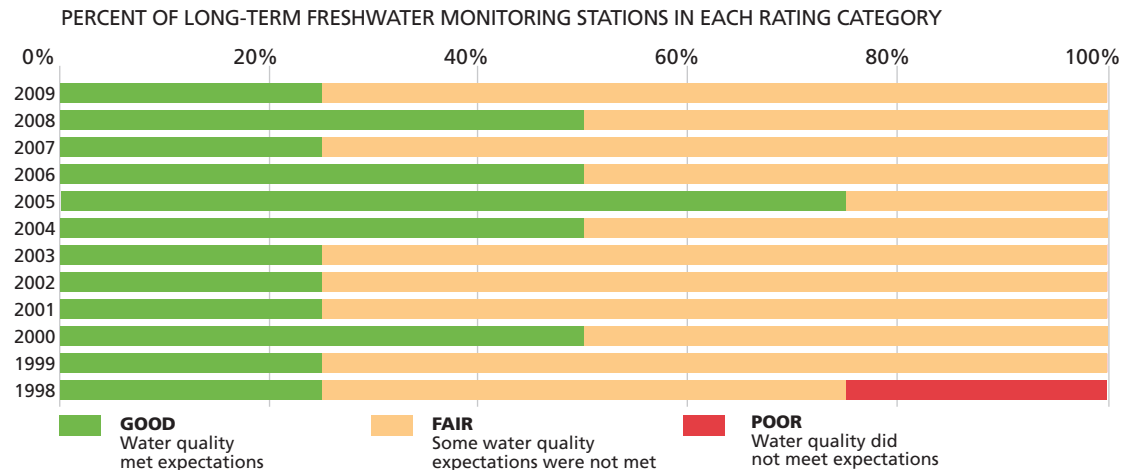


Is water clean enough to support wild salmon?

WATERSHED HEALTH: WATER QUALITY

- Water quality is measured by a Water Quality Index. This is a number that aggregates water quality data at a monitoring station for temperature, acidity, fecal coliform bacteria, dissolved oxygen, nutrients, and sediments from October 1 to September 30.
- Only four sampling stations are reflected in this index.
- There are 67 sites requiring management for high water temperatures.

DATA SOURCE: WASHINGTON DEPARTMENT OF ECOLOGY



What are trends in salmon funding?

PLAN IMPLEMENTATION: FUNDING

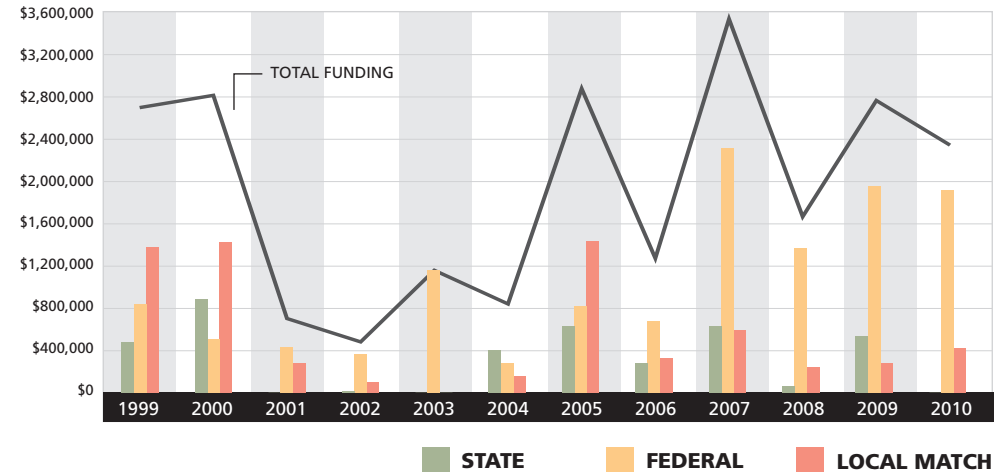
- Total Salmon Recovery Funding Board-related funding was \$23 million in state and federal, and local match from 1999-2010. 2010 data are preliminary.
- Charts to the right reflect all money administered by the Salmon Recovery Funding Board through the Pacific Coastal Salmon Recovery Fund, salmon recovery fund (state match), Family Forest and Fish Passage Program, Pacific States Marine Fisheries Commission, and hatchery reform.
- The table of percentages below reflects funding from the Pacific Coastal Salmon Recovery Fund and salmon recovery fund (state match) only – the two primary funding sources for grants through the Salmon Recovery Funding Board. The large statewide monitoring projects funded by the board are reflected in the statewide funding overview, not in individual regional overviews.

DATA SOURCE: WASHINGTON RECREATION AND CONSERVATION OFFICE

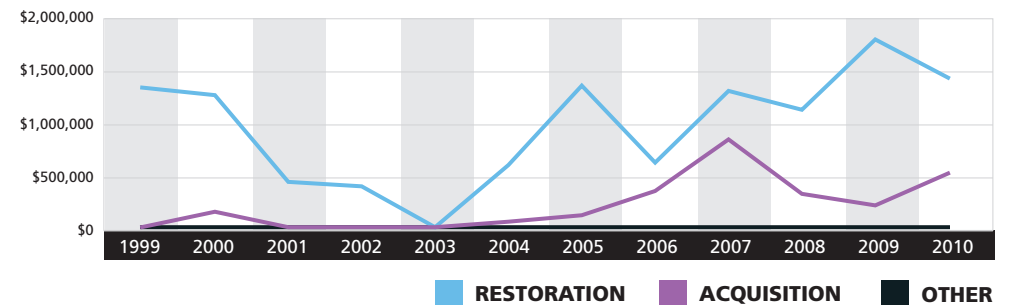
DISTRIBUTION OF PACIFIC COASTAL SALMON RECOVERY FUND AND SALMON RECOVERY FUND (STATE MATCH) BY CATEGORY

	PROJECTS	ADMIN.	MONITORING	TOTAL
1999	100%	0%	0%	\$1,318,840
2000	100%	0%	0%	\$1,392,613
2001	100%	0%	0%	\$427,660
2002	0%	0%	0%	\$386,211
2003	0%	0%	0%	\$1,160,289
2004	92%	8%	0%	\$562,670
2005	100%	0%	0%	\$1,431,998
2006	100%	0%	0%	\$812,724
2007	77%	23%	0%	\$2,760,011
2008	100%	0%	0%	\$1,423,693
2009	93%	7%	0%	\$1,957,900
2010	100%	0%	0%	\$1,919,475

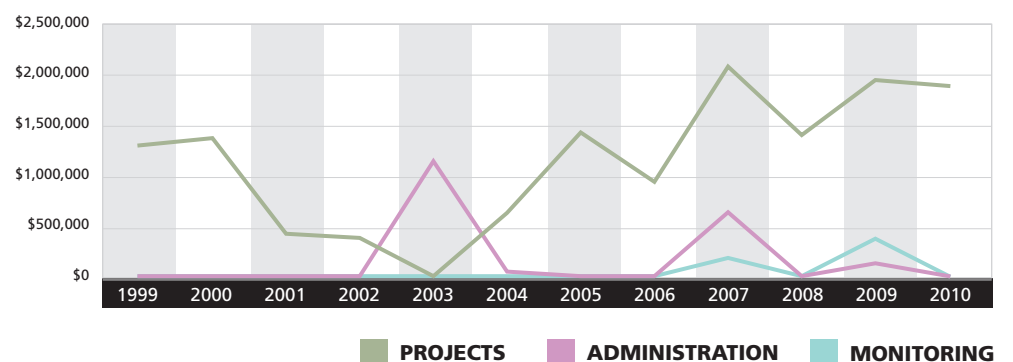
TOTAL FUNDING BY SOURCE (ADMINISTERED BY THE SALMON RECOVERY FUNDING BOARD)



TOTAL FUNDING BY PROJECT TYPE (ADMINISTERED BY THE SALMON RECOVERY FUNDING BOARD)



TOTAL FUNDING BY CATEGORY (ADMINISTERED BY THE SALMON RECOVERY FUNDING BOARD)

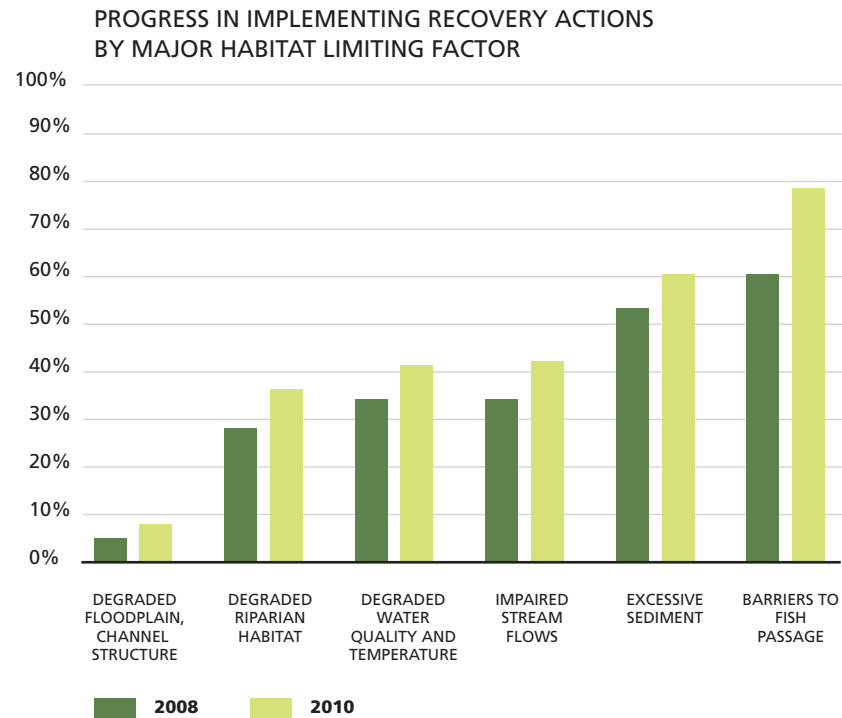


Are public resources used cost-effectively and efficiently?

PLAN IMPLEMENTATION: RECOVERY PLAN IMPLEMENTATION

- Major limiting factors are identified in recovery plans, and are based on the National Oceanic and Atmospheric Administration listing determinations. These are the main habitat factors that must be addressed for recovery.
- Percentages are averages of progress toward implementing actions addressing each major habitat limiting factor. They do not reflect the biological response of fish.
- Estimates of progress are based on best professional judgement.
- Recovery plan implementation is relatively recent—from 4 to 6 years.

DATA SOURCE: SNAKE RIVER SALMON RECOVERY BOARD



Are public resources used cost-effectively and efficiently?

PLAN IMPLEMENTATION: WATERSHED PLANNING SUMMARY

An in-stream flow rule was developed based on the Watershed Planning Act in the Walla Walla Water Resource Inventory Area (WRIA) 32.

Two WRIAs are participating in the Watershed Planning Act, and both have county-adopted watershed plans. The WRIAs are: Walla Walla (32) and Middle Snake (35).

DATA SOURCE: WASHINGTON DEPARTMENT OF ECOLOGY

Watershed Planning Highlights and Outcomes

- Walla Walla (WRIA 32): The Watershed Planning Unit evolved into the Walla Walla Watershed Partnership, a separate entity that received funding to continue plan implementation.
- Middle Snake (WRIA 35): The planning group is working on in-stream flow stream discharge values for several upland tributaries.

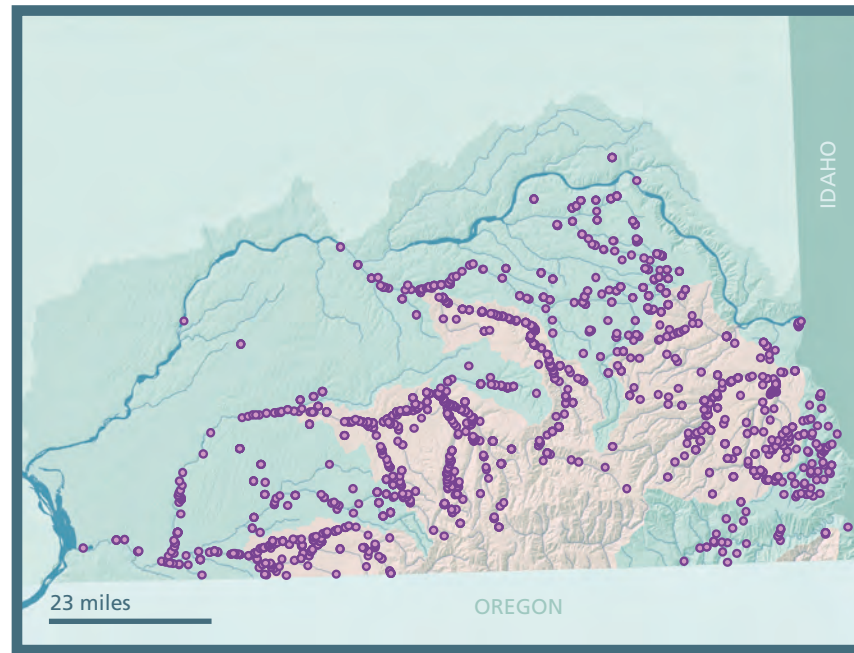
Are public resources being used cost-effectively and efficiently?

PLAN IMPLEMENTATION: FISH PASSAGE AND HABITAT PROJECTS

88

- Map shows fish and habitat protection and restoration project locations from 2000 to 2010.

DATA SOURCES: WASHINGTON RECREATION AND CONSERVATION OFFICE, WASHINGTON DEPARTMENT OF FISH AND WILDLIFE, WASHINGTON DEPARTMENT OF NATURAL RESOURCES, NORTHWEST INDIAN FISHERIES COMMISSION, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, NORTHWEST FISHERIES SCIENCE CENTER, U.S. FOREST SERVICE, BONNEVILLE POWER ADMINISTRATION, REGIONAL FISHERIES ENHANCEMENT GROUPS



- Fish Passage and Habitat Projects
- Priority Habitat Areas

Are hydroelectric facilities operating in a fish friendly manner?

PLAN IMPLEMENTATION:

DAMS WITH FISH PASSAGE STANDARDS

- This indicator is intended to show large dams in tributaries requiring a Federal Energy Regulatory Commission license or other similar license or permit.
- Mainstem Snake River dams are not included in this regional indicator.
- Many dams are operating in non-anadromous fish zones and are not included in this indicator.

DATA SOURCE: WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

	NO STANDARDS			HAVE STANDARDS			
	DON'T HAVE STANDARDS	STANDARDS UNDER NEGOTIATION	TOTAL	NOT MEETING STANDARDS	MEETING STANDARDS	CAN'T TELL IF MEETING STANDARDS	TOTAL
2008	N/A	N/A	0	N/A	N/A	N/A	0
2010	N/A	N/A	0	N/A	N/A	N/A	0

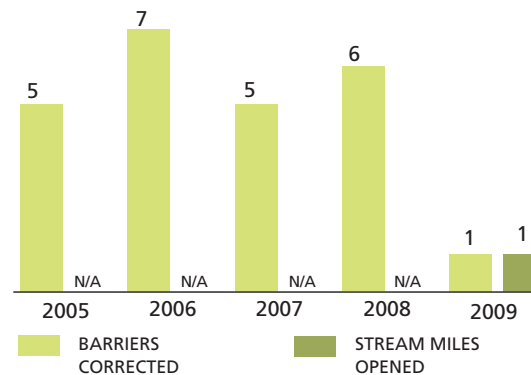
Are streams accessible to wild salmon?

PLAN IMPLEMENTATION:

FISH PASSAGE BARRIERS

- Number of barriers corrected are estimates. Because of incomplete reporting, these numbers are expected to be lower than actual values.
- Stream miles opened reflects the number of miles estimated to be opened to fish passage by year.

DATA SOURCES: WASHINGTON DEPARTMENT OF FISH AND WILDLIFE, WASHINGTON DEPARTMENT OF NATURAL RESOURCES, WASHINGTON DEPARTMENT OF TRANSPORTATION, WASHINGTON RECREATION AND CONSERVATION OFFICE, FORESTS AND FISH, U.S. FOREST SERVICE, BUREAU OF LAND MANAGEMENT



Do hatchery practices protect wild salmon?

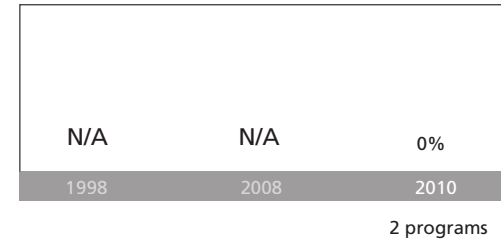
PLAN IMPLEMENTATION: HATCHERY PROGRAMS MEETING SCIENTIFIC STANDARDS

- Standards are recommendations from the Hatchery Scientific Review Group, an independent scientific panel established and funded by Congress to assemble, organize, and apply the best available scientific information for hatchery reform.
- Programs are defined as a single release or group of smolt releases, that come from the same broodstock and released in the same watershed. Releases from a broodstock into a different watershed are considered to be independent hatchery programs.
- Washington Department of Fish and Wildlife data are not available at the regional scale prior to 2010.
- Data are for Washington Department of Fish and Wildlife hatchery programs.

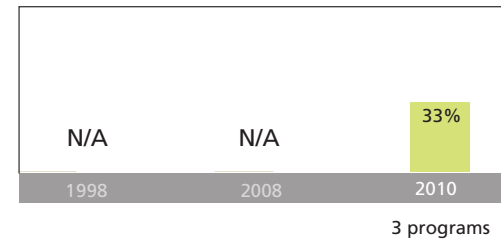
DATA SOURCE:
WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

PERCENTAGE OF HATCHERY PROGRAMS MEETING STANDARDS

CHINOOK



STEELHEAD



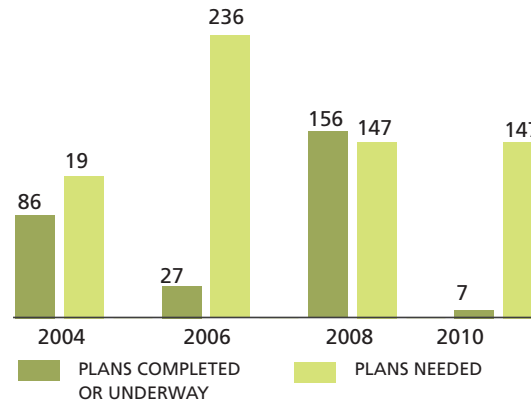
Is water clean enough to support wild salmon?

PLAN IMPLEMENTATION:

WATERSHED CLEANUP PLANS

- Cleanup plans address water quality impairments covered by total maximum daily load management plans.

DATA SOURCE: WASHINGTON DEPARTMENT OF ECOLOGY



Do rivers and streams have flows that support wild salmon?

PLAN IMPLEMENTATION:

STREAMFLOW

- Water restored to streams includes water from purchases, donations, or leases. The focus is on summer low flow periods and in-stream reaches where water availability is a limiting factor for fish.
- An acre-foot is one foot of water covering one acre of land.
- 33 percent (1 of 3) of the WRIsA in the region have in-stream flows set.

DATA SOURCE: WASHINGTON DEPARTMENT OF ECOLOGY

