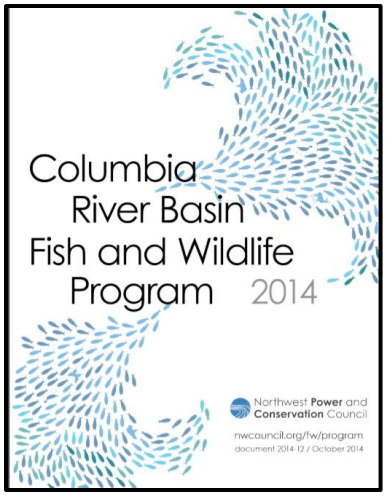
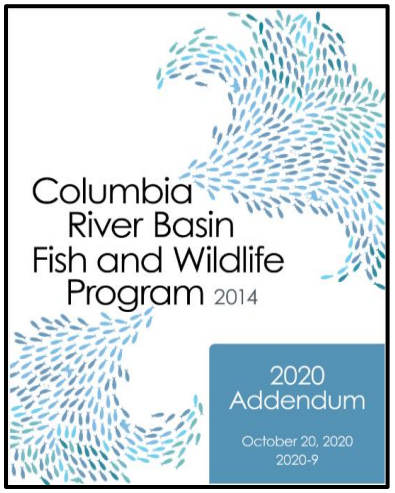
How Data and Data Management Fit Within the Northwest Power and Conservation Council's Fish and Wildlife Program





Presentation Outline

- Background on Council
- Overview of Fish and Wildlife (F&W) Program
- Data Management Principles in the F&W Program
- Program Performance in the 2020 Addendum
- Council Tools for Tracking and Reporting (with data examples)
- Next Steps

Council Background

- Authorized by Congress in the Northwest Power Act of 1980
- An interstate compact of Idaho, Oregon, Montana, and Washington
- Each state's Governor appoints two Council members
- Headquarters in Portland with offices in each state

The Council is a Unique Agency

- Not a federal agency, although authorized and directed by federal law
- Not a state agency, even though the appointees are high-level governors' appointments; receives no funding from the Northwest states
- An **interstate compact agency** assigned governmental duties by Congress and the agreement of four states; highly **public in intent and function**

Council's Responsibilities under the Northwest Power Act of 1980

- Develop and periodically amend a program to **protect, mitigate and enhance** fish and wildlife affected by hydroelectric facilities in the Columbia River Basin

- Develop a conservation and generation power plan to assure the Pacific Northwest an **adequate, efficient, economical & reliable power supply**

- Inform and involve **the public**

Columbia River Basin Fish and Wildlife Program

- First program adopted in 1982
- Review and revise at least every five years in a public process
- Becomes part of the NW Power Plan

Fish and Wildlife Program

Implemented throughout the Columbia River Basin

Includes all fish and wildlife affected by the hydrosystem, not just anadromous fish -- *but*, anadromous fish have special significance.

Extends beyond the mainstem and hydrosystem passage to tributaries and to spawning and other habitat.

Hundreds of projects across the region

Data Management in the 2014 F&W Program: General Principles

- Readily accessible, usable information in searchable formats
- Coordinated data sharing/coordinated data management
- Collaborative efforts to develop and refine data exchange standards
- Regional data collection/compilation efforts to support program objectives and indicators

Program-funded Data Management Projects

- StreamNet
- Pacific Northwest Aquatic Monitoring Program
- Columbia Basin Fish and Wildlife Library
- **CRITFC Inter-Tribal Monitoring Data**
- Intermountain Province/ Pend Oreille Subbasin Data Management Project
- Data Access in Real Time
- Fish Passage Center

2020 Fish and Wildlife Addendum

- Part I: Program Performance and Adaptive Management
- Part II: Program Implementation

Defining Program Performance

- Performance of strategies as demonstrated by strategy performance indicators
- Progress towards implementing Program priorities
- Progress towards achieving Program objectives and goals
- Outcomes across space and time
- Other potential definitions

Addendum Part I: Goals and Objectives

- Anadromous Salmon and steelhead: returns, SARs, survival standards
- Sturgeon: abundance, distribution, diversity, productivity
- Lamprey: abundance, passage
- Resident salmonids: self-sustaining populations, habitat (miles and acres)
- Wildlife: acres and HUs
- Ecological objectives: flow, habitat, water quality
- Communication, coordination objectives

Strategies listed in the 2014/2020 Program

- Habitat
- Non-native and Invasive Species
- Predator Management
- Protected Areas and Hydroelectric Development and Licensing
- Water Quality
- Climate Change (*uses indicators from other strategies*)
- Estuary
- Plume and Nearshore Ocean
- Mainstem Hydrosystem Flow and Passage
- Wildlife
- Fish Propagation and Hatchery
- Wild Fish
- Anadromous Fish Mitigation in Blocked Areas
- Resident Fish Mitigation
- White Sturgeon
- Pacific Lamprey
- Eulachon
- Public Engagement

Addendum Part I Strategy Performance Indicators

- 105 indicators
- 271 components to indicators (currently)

Data and Data Management

Part I: Assessing, Monitoring and Reporting

To assess the program, the following activities must continue to be adequately supported:

- Improved delivery of information that the Council uses to assess and report on program performance.
- Continued development of centralized databases of information needed for reporting on program goals, objectives, strategy performance indicators.
- Maintenance of structured, searchable locations for historical and current program data and products (e.g. libraries and databases).

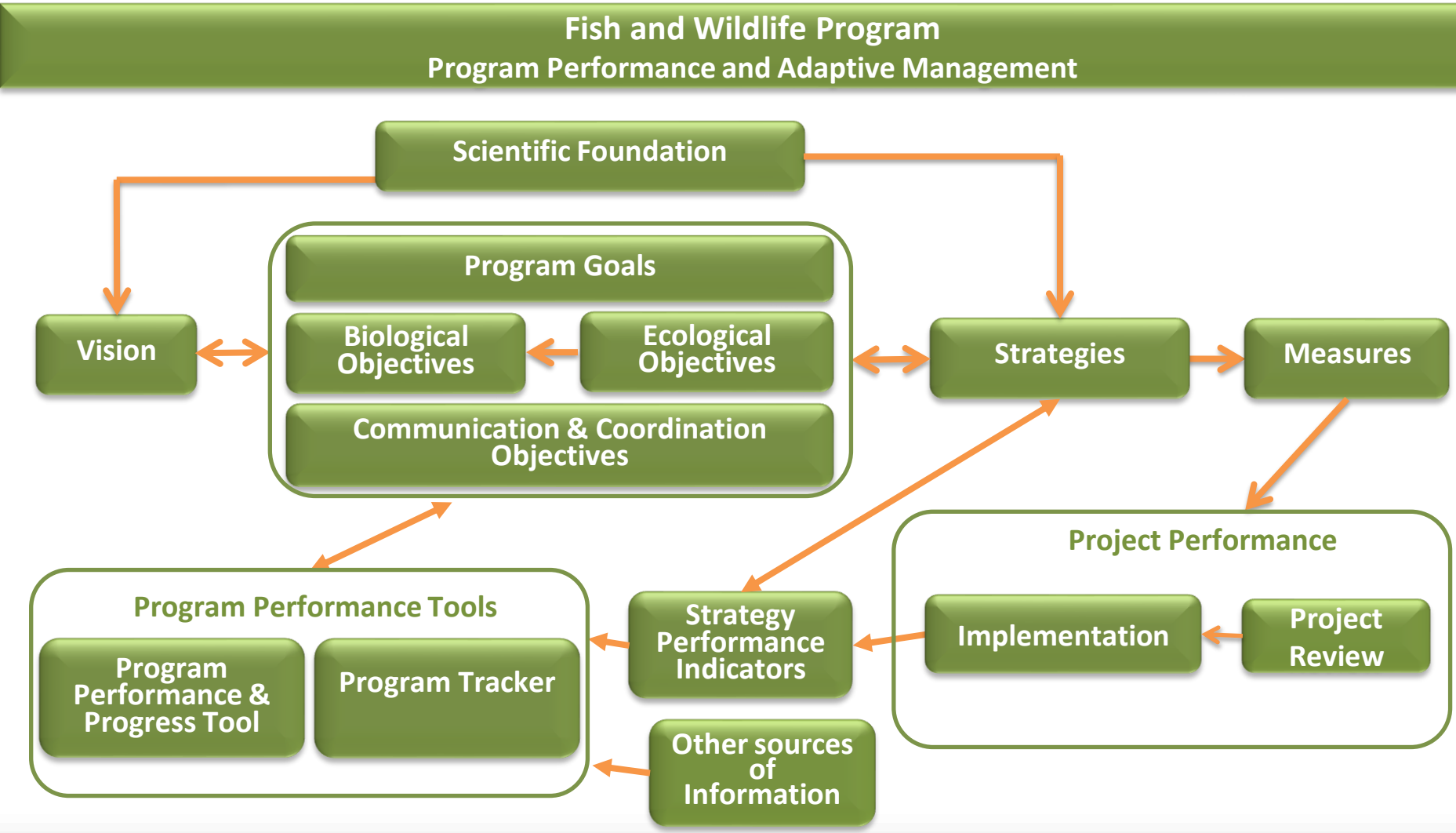
Addendum Part I Workgroup

Goals, objectives, and strategy performance indicators

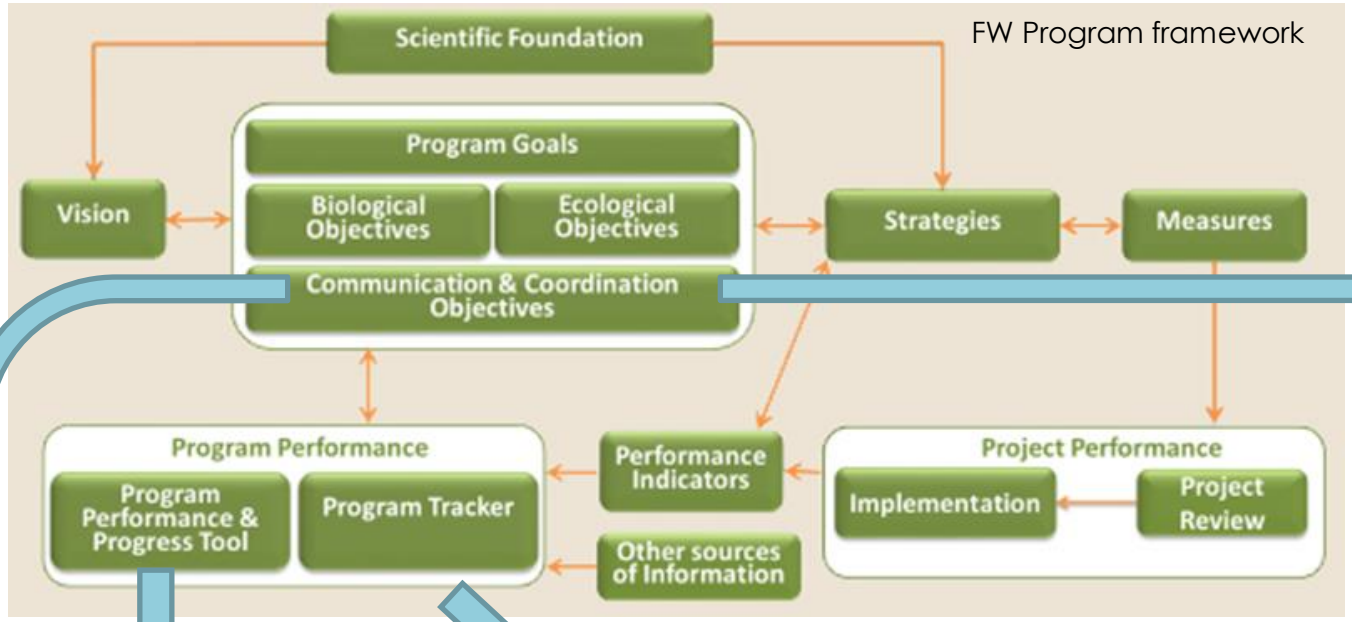
- Compile data
- Refine indicators
- Report on goals, objectives, and indicators
- Review data tools

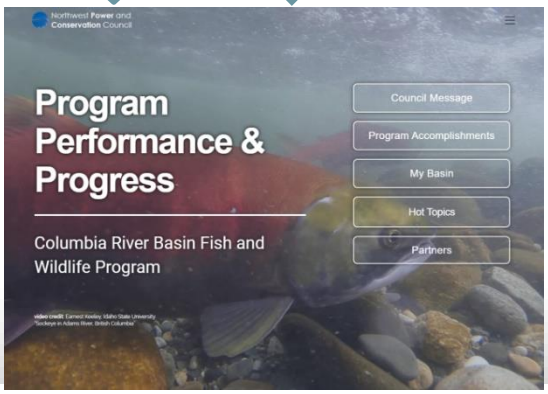
Data Needs

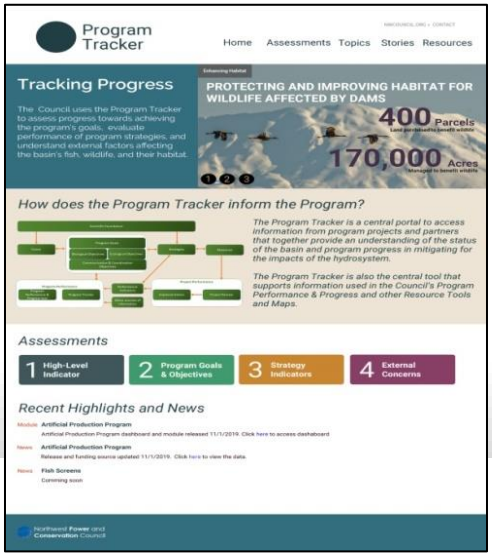
Program Framework



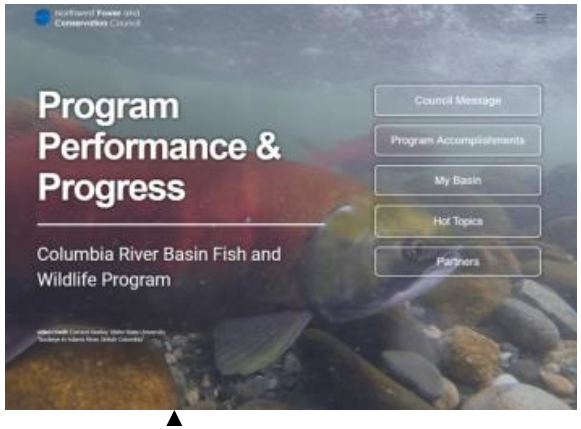
Program Data Management: Tools

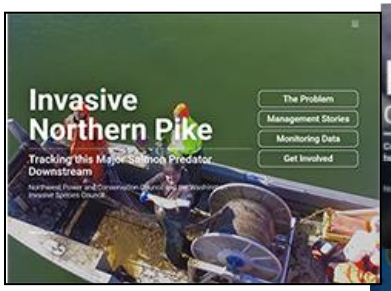


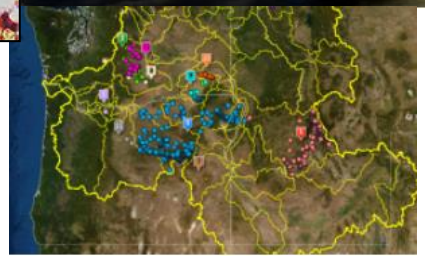




Program Data Management: Data Sources and Flow







Summarized data and information

manual and automated

Direct Project Information

Stream Net

FPC

DART

Other FW websites

ITMD

IM DMP

Project annual reports and other info from managers

Direct Program funded projects: 300 +

External Sources

NOAA Ocean Condition
Invasive Species – Zebras Muscles, Northern Pike Etc.

Northwest Power and Conservation Council
Program Tracker

Home | Assessments | Topics | Stories | Resources

1.Select Assessments

Assessments

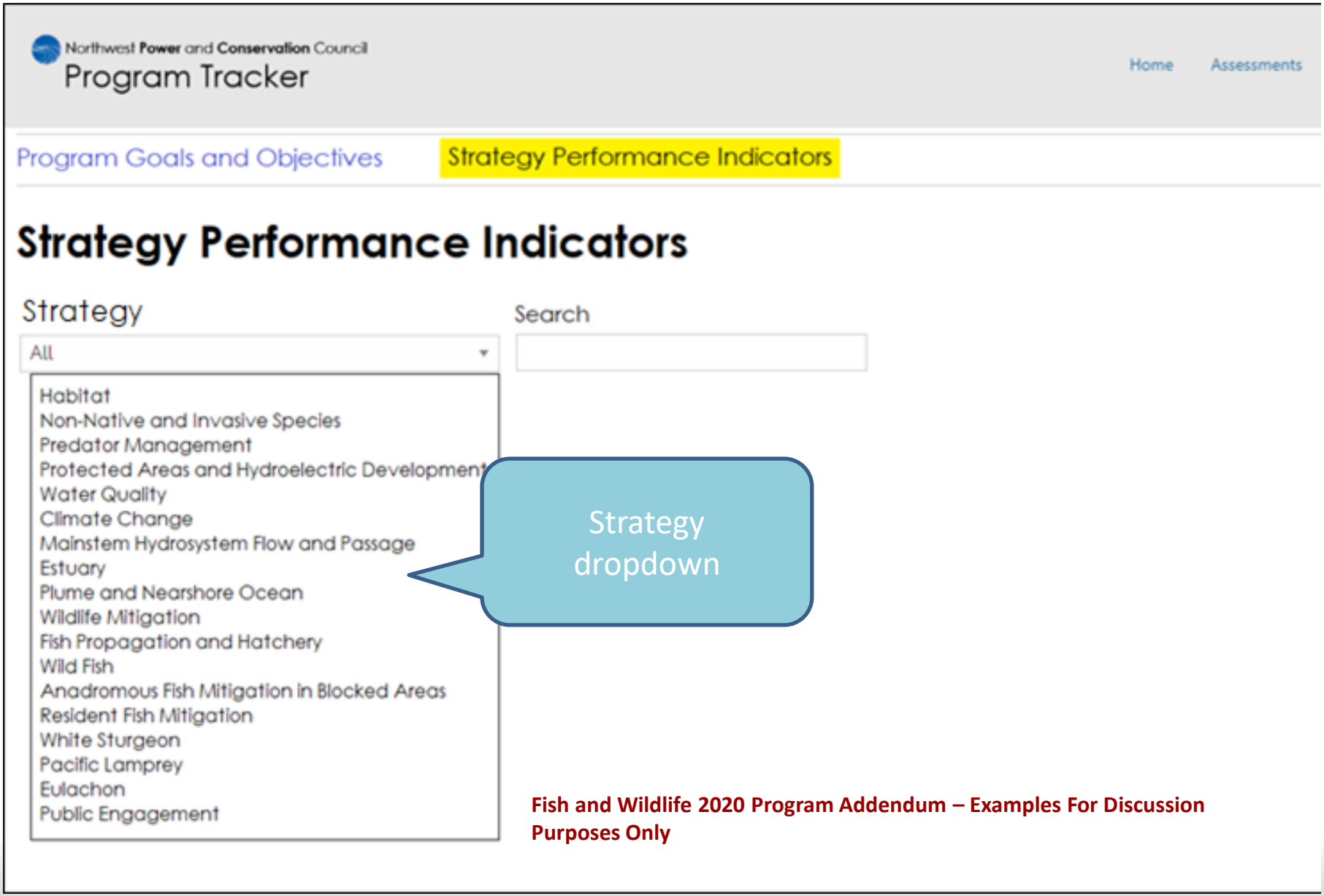
(Some Text on modules in this section)

Tracking the Program In development

Program Goals and Objectives

Strategy Performance Indicators

2.Select Strategy Performance Indicators



Fish and Wildlife 2020 Program Addendum – Examples For Discussion Purposes Only

Northwest Power and Conservation Council
Program Tracker

Home | Assessments | Topics | Stories | Resources

Program Goals and Objectives | Strategy Performance Indicators

Strategy Performance Indicators

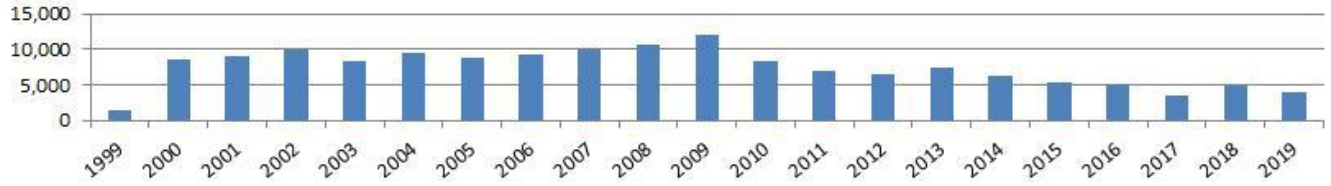
Strategy: Predator Management Strategy Indicators

Search

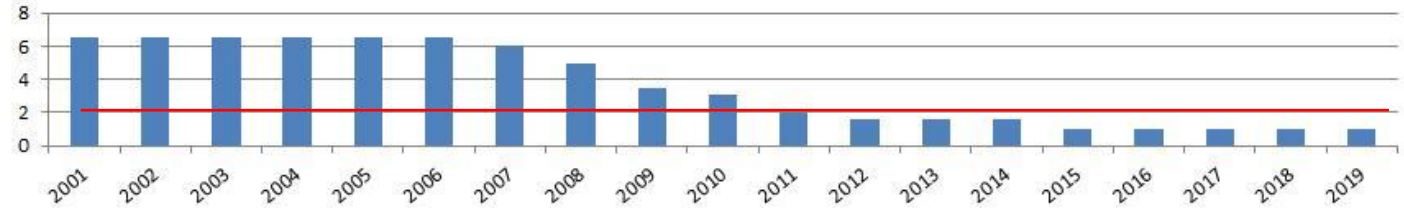
Predator Management Strategy Indicators

- 1. The number of breeding pairs of Caspian Terns and availability of suitable nesting habitat on East Sand Island. Compare the breeding pairs to the target range of 3,125 to 4,375, and the suitable nesting habitat to the target of one acre. (E4-1)

Caspian Tern Breeding Pairs



Available Suitable Nesting Habitat (Acres)



+ 2. Cormorant colony size at East Sand Island. Compare to management goal that colony size does not exceed management average of 5600 breeding pairs.33 (E4-2)

+ 3. Predation rate on ESA-listed juvenile salmonids by Caspian Terns in the Columbia Plateau region compares to target of less than 2%.34 (E4-3)

+ 4. Exploitation rate on Northern Pikeminnow measuring nine inches or greater in total length (228 mm fork length).35 Compare the exploitation rate to the 10-20 percent annual target. (E4-4)

Fish and Wildlife 2020 Program Addendum – Examples For Discussion Purposes Only

Strategy Performance Indicators

Strategy

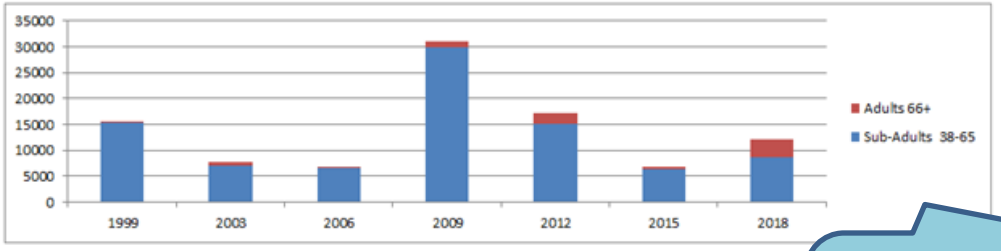
White Sturgeon

Search

White Sturgeon Strategy Indicators

- I. Population Abundance

1. Lower Columbia and Lower Snake (WS1-4)
   a. **Lower Columbia:** Three-year running mean of Sub-Adults and Adults.
   b. **Bonneville Reservoir:** Three-event sampling mean of Sub-Adults and Adults.



   c. **The Dalles Reservoir:** Three-event sampling mean of Sub-Adults and Adults.
   d. **John Day Reservoir:** Three-event sampling mean of Sub-Adults and Adults.
   e. **McNary Reservoir and Free-flowing section:** Sub-adult and adult abundance when available.
   f. **Ice Harbor Reservoir:** Sub-adult and adult abundance when available.
   g. **Lower Monumental Reservoir:** Sub-adult and adult abundance when available.
   h. **Little Goose Reservoir:** Sub-adult and adult abundance when available.

2. Middle Snake
   a. Juvenile and adult abundance. (WS1-5)

3. Upper Snake
   a. Population abundance (> 60 cm FL) and stock structure (juvenile, subadult, adult) compared at five-year sampling intervals for all Upper Snake reaches between Shoshone Falls and Brownlee Dam and 10-year intervals for Hells Canyon Dam to Lower Granite Dam. (WS1-6)

4. Transbounary Upper Columbia
   a. Adult populations in the Canadian Transboundary Reach and the U.S. Transboundary Reach. Subsistence and recreational fishery harvest per year. (WS1-7)

5. Kootenai River
   a. 10-year average of number of Kootenai sturgeon wild recruits (offspring that survive to sexual maturity at 25 years) that are added to the adult (25 years or older) population annually. Number of wild juveniles, ages 3 to 24 years. Production of wild age-3 juveniles in three of 10 consecutive years. (WS1-8).

Each indicator will display data (example Bonneville here)

Fish and Wildlife 2020 Program Addendum – Examples For Discussion Purposes Only

Northwest Power and Conservation Council
Program Tracker

Home Assessments Topics Stories Resources

Program Goals and Objectives | Strategy Performance Indicators

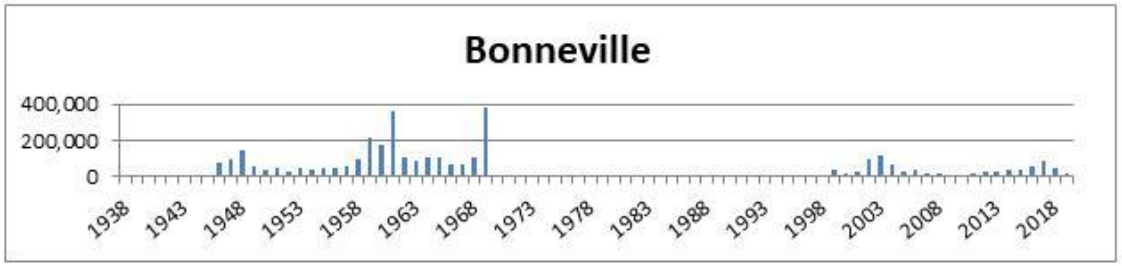
Strategy Performance Indicators

Strategy: Pacific Lamprey Strategy Indicators

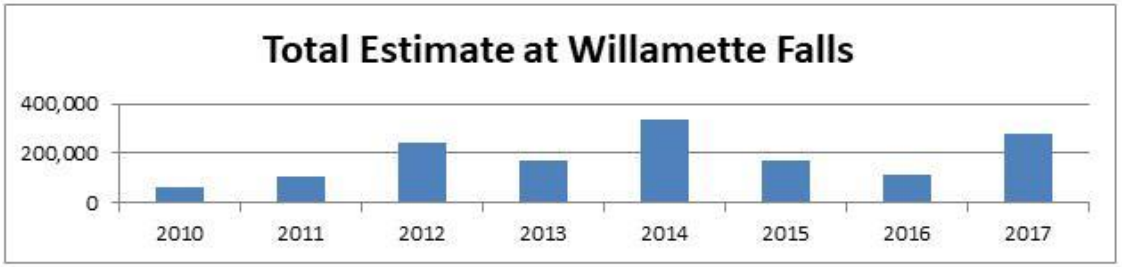
Search

Pacific Lamprey Strategy Indicators

- 1. Total end-of-year dam count at Bonneville Dam. (L1-2)



+ 2. Geographic distribution as indicated by total end-of-year counts at Willamette Falls, Columbia and Snake River dams. (L1-3)



Northwest Power and Conservation Council
Program Tracker

Home Assessments Topics Stories Resources

Program Goals and Objectives | Strategy Performance Indicators

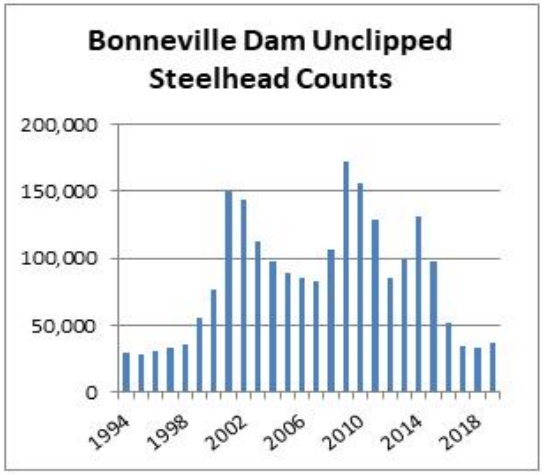
Strategy Performance Indicators

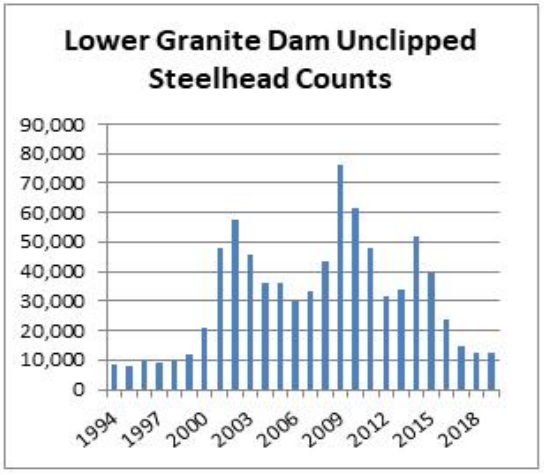
Strategy: Wild Fish Strategy Indicators

Search

Wild Fish Strategy Indicators

+ 1. Progress toward the following regionally agreed-upon adult abundance escapement targets for natural-origin salmon and steelhead. These targets were developed by the NOAA Marine Fisheries Advisory Committee's (MAFAC) Columbia Basin Partnership Task Force. For the complete details on these targets and supporting information go to A Vision for Salmon and Steelhead, Goals and Pathways for Restoring Thriving Salmon and Steelhead to the Columbia River Basin. Phase 2 Report of the Columbia Basin Partnership Task Force to the NOAA Fisheries Marine Fisheries Advisory Committee, July 16, 2020 version. See Objective S1 above for the relationship of these targets to the program. (S1-3, S5-1)
+ 2. Powerhouse encounter rates, Lower Granite to Bonneville Dam and uppermost dam to Bonneville Dam.41 (S3-1)
+ 3. Total Bonneville Dam, Lower Granite Dam and Willamette Falls counts. (S1-5)





Fish and Wildlife 2020 Program Addendum – Examples For Discussion Purposes Only

Next Steps

- Integrate Indicator data into the Program Tracker; develop reporting products
- Automate information updates between StreamNet and the Program Tracker
- Work with partners, data managers, others to prioritize information needs and acquire additional data sets.
- Continue coordination among all data management groups within the Program

Questions?

Contacts:

lbach@nwcouncil.org

mhess@nwcouncil.org

khomel@nwcouncil.org

Photo credit: Erik Merrill