March 5, 2019

MEMORANDUM

TO: **Fish and Wildlife Committee Members**

FROM: **Patty O'Toole**

SUBJECT: **Briefing on the Fish and Wildlife Program amendment process**

BACKGROUND:

Presenter: Staff

Summary: Staff will brief the Fish and Wildlife Committee on the amendment schedule and review and discuss recommendations to amend the Columbia River Basin Fish and Wildlife Program and associated topics.

Relevance: The Council called for recommendations to amend its Program in May of last year. Recommendations were due on December 13th, 2018 and comments on the recommendations were due on February 8th. The recommendations and comments are posted on the Council's website.

At the next work session, the Committee will continue its work on discussing the recommendations and considering options for moving forward to amend the Program. The staff will review the current program amendment schedule and tasks but anticipates that most of the work session will focus on a few topics. The staff proposes that the work session focus on:

- Continue 2014 Program orientation
- Review recommendations and comments:
  - Recommendations and comments related to specific Program strategies
    - Anadromous Fish in Blocked Areas
    - Resident Fish Mitigation

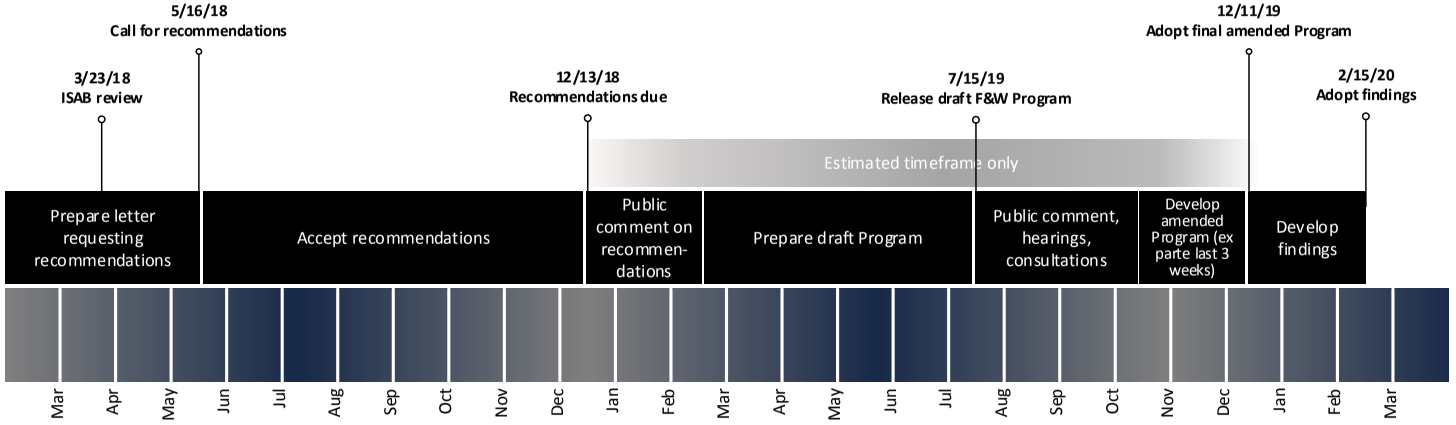
- Follow up to February 12th Committee work session
  - Further discussion regarding the Program's biological objectives

Materials provided with this memo include:

- Program amendment timeline
- Draft staff summaries of recommendations regarding two Program strategies:
    - Anadromous Fish Mitigation in Blocked Areas
    - Resident Fish Mitigation

More Info: https://www.nwcouncil.org/fw/program/2018-amendments

DRAFT TIMELINE



Staff summary of issues and recommendations
2014 Program Part Three: Basinwide Vision, Scientific Foundation, Goals, Objectives, and Strategies
Anadromous Fish Mitigation in Blocked Areas
Use of Hatcheries for Reintroduction

2014 Fish and Wildlife Program Section
Part Three: Basinwide Vision, Scientific Foundation, Goals, Objectives, and Strategies
IV. Strategies
C. Other Strategies
2. The use of hatcheries for reintroduction
3. Anadromous fish mitigation in blocked areas

Overview
Recommendations were received on numerous topics relating to reintroduction of anadromous fish into blocked areas of the basin: above Chief Joseph and Grand Coulee dams, Willamette dams, Hells Canyon Complex, and Pelton Round Butte Complex, as well as fish passage into other blocked areas in Oregon and Washington.

Thirteen recommenders call for continued support of the phased approach for reintroduction above Grand Coulee and Chief Joseph dams, and the STI recommends a specific action plan to complete the first phase. STI recommends that BPA fund both its anadromous fish mitigation program and the proposed action plan to complete Phase I. Several managers recommend that funding allocation be examined for equity throughout the Basin and provide specific percentages that should be followed until fish harvest opportunities are equal throughout the Columbia River Basin.

Four tribes and tribal groups recommend specific language for reintroduction of anadromous fish above the Hells Canyon Complex to be included in the Program, and three of those entities recommend that the Council adopt into the Program the Hells Canyon Complex Fish Management Program Plan.

Six entities recommend that the Program retain the language for fish passage and reintroduction at the Willamette dams, and ODFW specifically recommends additional funds from BPA and the Corps be used to expand the passage efforts. In addition, several entities recommend restoring and/or recognizing fish passage in other areas of the Basin including the Deschutes, Yakima, Grand Ronde, and Umatilla river basins.

I. Summary of Recommendations:

Reintroduction above Chief Joseph and Grand Coulee dams
12 entities and one individual (**ODFW, WDFW, UCSRB, BPT, CDA Tribe, Kalispel Tribe, STI, USRT, NOAA, USGS, American Rivers, TU, and one individual**) express support of the phased approach regarding the reintroduction of anadromous fish above

Chief Joseph and Grand Coulee dams and recommended that the current language stay in the Program.

Several managers (**UCSRB, Kalispel Tribe, STI, USGS, American Rivers, and TU**) specify work that they recommend go forward. **UCSRB** recommends that the Council support development of tools to model habitat capacity and relative reproductive success studies for the Upper Columbia region. The **Kalispel Tribe** recommends that the Program language be updated to reflect the near completion of Phase I and the habitat potential that is now documented, and to call for the implementation of Phases II and III. **STI** recommends an action plan to complete Phase I's requirements of selective releases which includes translocation of adult chinook and/or sockeye for cultural releases, salmon rearing in the classroom for regional educational programs, juvenile releases to determine survival and migratory success, outplanting of eggs for habitat seeding to measure survival of early life stages, and lastly perform hydrologic modeling to inform the type and location of juvenile and adult fish passage systems. **STI** also recommends that the Program explicitly state in the emerging priorities list the completion of Phase I of reintroduction in the upper Columbia. **USGS** also recommends that selective releases of salmon and steelhead by done to address survival, travel times, and behavior of adults and juveniles in the tributaries and reservoirs; continued pathogen screening; and food web studies to assess potential carrying capacity issues. **American Rivers** recommends that the Council support all three phases with life cycle modeling genetic studies and an adaptive management approach, and **TU** recommends that the Council direct funds to studies and modeling exercises.

Some managers (**UCSRB, CDA Tribe, Kalispel Tribe, STI, and TU**) recommend that more funds be directed to the phased approach. The **CDA Tribe and STI** recommend that at least 45% of Program funding be directed to the blocked areas above Chief Joseph and Grand Coulee dams (where 40% of the documented losses have occurred and nearly 50% of the federal system's electricity is produced), while **Kalispel Tribe** recommends that 40% of Program funding go to the blocked waters of the upper Columbia. **CDA Tribe and Kalispel Tribe** recommend an alternative to this which is that anadromous fish substitution projects be funded by the anadromous fish allocation and that all resident fish funding be directed to the blocked area in the upper Columbia until resident fish harvest opportunities in the blocked areas equal the combined anadromous and resident fish harvest elsewhere in the Basin. **STI** recommends that BPA fund $250,000 to the tribe within 60 days of the adoption of amendments for the tribe's anadromous fish program, as well as to fund their recommended action plan within 90 days of adoption using all cost savings funds that are made available over the implementation period of the adopted amendments.

Reintroduction above Willamette River dams

Several recommendations call for the Council to retain the current Program language on reintroduction in the Willamette River Basin (**ODFW, WDFW, BPT, CTGR, USRT, TU**). **CTGR** specifically recommends that the Program alter the language from "should" to "shall." **ODFW** recommends that the language also be expanded to include funding by BPA and the Corps as well as prioritization of volitional downstream passage options

and a combination of structural and operational solutions to maximize safe and effective passage. They also call for the Corps and BPA to support and implement reintroduction plans being prepared by ODFW and NMFS. **TU** supports the ISAB's request that more funding be directed to studies and modeling exercises to help reduce uncertainties.

Reintroduction above the Hells Canyon Complex
Several tribes and tribal entities (**BPT, NPT, SBT, and USRT)** recommend new draft Program language for anadromous fish passage and reintroduction at the Hells Canyon Complex. **BPT, SBT, and USRT** recommend that the Council adopt into the Program the Hells Canyon Complex Fish Management Program Plan as a long-term vision for restoration of Pacific salmon and steelhead into the blocked, but historical anadromous fish, areas of the Upper Snake River Basin. The goal of the plan is to use a phased approach, over likely 20-30 years, to re-establish anadromous fisheries on unlisted, hatchery origin spring/summer chinook salmon and/or steelhead in select tributaries to provide subsistence, cultural, and recreational harvest opportunities, and to restore naturally reproducing salmon and steelhead populations to meet harvest, cultural, and ecological needs.

NPT recommends that BPA fund a long-term vision for restoration of the Pacific salmon and Pacific lamprey to the Upper Snake River.

Restoring anadromous fish in the Deschutes Basin
ODFW recommends that a section on restoring anadromous fish above the Pelton Round Butte Dam complex be added to the Program's strategy on reintroduction of anadromous fish. They recommend specific emphasis on investment in flow transactions in Whychus and lower Crooked rivers.

Fish passage into other blocked areas
Several managers (**ODFW, WDFW, and USRT**) recommend Council, BPA, and BOR support fish passage into blocked areas in the Yakima River Basin, Grand Ronde Basin in Wallowa Lake, and other areas of the Basin such as the upper Snake River. **OFDW** also recommends that the Umatilla River Basin above McKay Creek Dam be included.

II. Summary of Comments on Recommendations:

WDFW and STI note the strong support of reintroduction into the upper Columbia from recommenders. **STI** emphasize their action plan recommendation and comment that the Council's Program should complete those actions within 3 years of the adoption of the amendments. **STI** also expand on their recommended action plan, adding greater detail on areas such as cultural use of adult fish, passage system modeling, and habitat capacity project.

BPA comments that a regional discussion on passage and reintroduction of anadromous fish in blocked areas would benefit from an organized forum where the entities concerned could work through considerations related to the Program,

congressional authorizations, international implications, private entity responsibilities, and other relevant matters.

III. Excerpts of the recommendations and comments

View the document linked here for the excerpts of the recommendations referring to the 2014 Program's Anadromous Fish Mitigation in Blocked Areas Strategy and Use of Hatcheries for Reintroduction Strategy.

Staff summary of issues and recommendations
2014 Program Part Three: Basinwide Vision, Scientific Foundation, Goals, Objectives, and Strategies
Resident Fish

2014 Fish and Wildlife Program Section
Part Three: Basinwide Vision, Scientific Foundation, Goals, Objectives, and Strategies
IV. Strategies
C. Other Strategies
4. Resident Fish Mitigation

Overview
Most recommenders support initiating, completing and funding the resident fish habitat loss assessment as described in the 2014 Program, and another called for mitigation of these unquantified impacts. With respect to fish passage, a recommender provided a detailed schedule and approach for the Action Agencies to pass fish above Albeni Falls by 2024, and another recommends including passage above Chief Joseph Dam and Grand Coulee Dam in this section of the Program. Recommendations were also submitted supporting investigating means to supplement natural production of freshwater mussels, and that the Action Agencies evaluate the presence, status, and biological needs of all freshwater mussel species and seek action to mitigate for adverse effects of the hydrosystem. It was also recommended to include measures and alternatives from the bull trout biological opinion, strategies and actions for three recovery units from the bull trout recovery plan, and recognition of enhancement and restoration efforts guided by FERC license requirements.

Creating a redband trout repatriation project to improve survival of these wild adfluvial fish and increase the number of adults returning to their natal tributaries was recommended. Individuals also recommend funding and investing in restoration using a basin-wide ecosystem approach; prioritizing, mapping focal species; tracking status and trends of focal species; and providing long-term operation and maintenance funding for all resident fish mitigation properties. Some recommenders specifically stated that they supported the existing language in the strategy, which in the 2014 Program pertains to resident fish including freshwater mussels, threatened bull trout, burbot, westslope cutthroat trout, mountain whitefish, endangered Kootenai white sturgeon, and resident life histories of the native anadromous species, such as Columbia River white sturgeon and kokanee. Recommendations for this section were submitted by 10 entities, consisting of six tribes, one state, one federal agency, one PUD, and one NGO.

I. Staff summary of Recommendations

1. Resident fish habitat loss assessment
WDFW, **CTGR, Kalispel Tribe**, and **STI** all support resident fish habitat loss assessments.

- **WDFW and CTGR** support completion of a standardized methodology for resident fish habitat loss assessments.
- Recommend prioritizing this task because it was not initiated as stated in the 2014 Program. (**CTGR**)
- Recommend including loss assessments and mitigation for un-quantified impacts on resident fish as a general funding priority. (**Kalispel Tribe**)
- Ensure that the guidance language of Part 3, Chapter IV, Section C, Subsection 4 (Page 87 - 89) in the 2014 Program be maintained in the 2019 Program (some additions – see STI). (**STI**)

2. Resident Fish Passage

- Action Agencies to restore upstream fish passage at Albeni Falls Dam no later than the end of this amendment period (2024). If the Action Agencies deviate from the schedule submitted to the Council, they shall make operational changes at Albeni Falls Dam to moderate downstream water temperatures for native fish during all critical time periods. (**Kalispel Tribe**)
- Bonneville, the Corps, and the Bureau shall restore passage for native resident fish where feasible, including at Albeni Falls Dam**, Chief Joseph Dam, and, Grand Coulee Dam.** (**STI** – additions bolded and underlined).

3. Freshwater Mussels

- To address major population declines in freshwater, urge the Council to support the effort bring initiated by CTUIR for freshwater mussels. This effort is similar to the tribal Lamprey Master Plan for Restoration and Research in that the CTUIR looks to this plan and its recommended actions to develop and evaluate various means to supplement natural production of freshwater mussels. (**CTUIR**)
- Action agencies shall evaluate the presence and status of freshwater mussel species and consider the biological needs of all freshwater mussel species. The action agencies will seek actions to mitigate any adverse effects caused by the hydrosystem. (**CTGR**)

4. Bull trout

- We recommend the measures and alternatives outlined in our biological opinion for bull trout and KRWS (see previous recommendations for KRWS) be included in the 2019 Program, similar to the measures necessary to avoid jeopardizing Pacific salmon outlined in the National Marine Fisheries Service's most recent biological opinion. (**USFWS**)
- We recommend the 2019 Program include strategies and actions outlined in our Bull Trout Recovery Plan for the three Recovery Units in the Columbia Basin (Mid-Columbia, the Upper Snake, and the Columbia Headwaters Recovery Units). To maximize the benefits of the measures funded by Federal agencies and other Columbia Basin funding entities, we recommend the conservation actions for bull trout be incorporated with measures to protect Pacific salmon. (**USFWS**)
- The District is also implementing a wide range of fish and wildlife protection, enhancement and restoration efforts within the project areas of the Rock Island, Rocky Reach and Lake Chelan projects. These efforts are guided by FERC license

requirements and address native salmonid populations, sturgeon, water quality, lamprey, bull trout, predators (avian and fish), and aquatic invasives. The District recommends that the new Program recognize these efforts and direct the federal action agencies and others to continue their work with the District with successful implementation of the fish and wildlife requirements within the FERC licenses. (**Chelan PUD**)

5. Redband Trout

- Work with STI and direct BPA to provide funding to create a Redband Trout Repatriation Project aims to improve survival of wild adfluvial redband trout and increase the number of adult redband trout returning to their natal tributaries. Juvenile redband trout (*Oncorhynchus mykiss gairdnerii)* will be collected from tributaries within and surrounding the Spokane Indian Reservation as they out-migrate to the Spokane River and Lake Roosevelt. Once juvenile redband trout have reached 175mm or larger in fork length (8-12 months in facilities) they will be released near their natal tributary in either the Spokane River or Lake Roosevelt. (**STI**)

6. Keep existing language / focus

- Ensure that the guidance language of Part 3, Chapter IV, Section C, Subsection 4 (Page 87 - 89) in the 2014 Program be maintained in the 2019 Program (some additions – see STI) (**STI**). *Note that existing strategy applies to* freshwater mussels, threatened bull trout, burbot, westslope cutthroat trout, mountain whitefish, endangered Kootenai white sturgeon, and resident life histories of the native anadromous species, such as Columbia River white sturgeon and kokanee.
- Retain the approach to Anadromous Fish Mitigation in Blocked Areas laid out in the 2014 Plan with a continued focus on addressing unmitigated losses. (**Kalispel Tribe**)

7. Prioritization and Funding

- Apply highest priority to weak and recoverable native populations, and high priority to areas without anadromous fish, to resident fish projects that benefit wildlife and/or anadromous fish, and to populations that support important native and introduced fisheries. (**Kalispel Tribe**)
- Urges the full consideration, support, and funding of projects consistent with the strategies of wild fish, resident fish, and anadromous fish mitigation in blocked areas as described within the 2014 Program, specific to the Spokane Tribe and waters within their usual and accustomed area. (**STI**)

8. Land Operation and Maintenance

- **CSKT** fully support long-term operation and maintenance funding for mitigation properties acquired through fee title purchase or protected by conservation easement, both past and future acquisitions.

9. Basin-wide Restoration Approach

- Further invest in basin-wide restoration to protect and enhance native resident and anadromous fish and wildlife, including redband trout in the Deschutes Basin. (**DRC** citing ISAB)
    - *More generally, the strategy section should recognize that provision of habitat for fishes with complex life histories requires a Basin-wide ecosystem approach. This requires simultaneous restoration of critical spawning, rearing, and mainstem habitats such that self-sustaining populations can complete their life cycles. Land purchases that maximize both lateral and longitudinal connectivity among purchased parcels should be considered high priority, for example.*

10. Map Focal Species

- The mapping of "extirpated" or "historical distribution" of focal species would give some added value or perspective of what has been lost. (**CTGR**)

11. Prioritize per Focal Species

- Need to identify and prioritize monitoring and evaluation per focal species. (**CTGR**)
- As a general principle, we support the prioritization of fish and wildlife mitigation investments based on their biological effectiveness and emphasize that an element of cost-effectiveness analysis should be incorporated into the setting of broader Program priorities. This does not imply that mitigation efforts must be inexpensive, but rather they should demonstrate measurable progress toward meeting the goals and objectives of the Program. In general, projects that satisfy the criteria of providing high conservation impact for focal species and their habitat, having a reasonably high likelihood of success (i.e., do not have highly speculative outcomes), and offering sustainable benefits, as opposed to short-term gains, should be considered as having the highest biological effectiveness and representing a good mitigation investment of ratepayer dollars. (**MFW&P**)

12. Track Status and Trend of Focal Species

- Identify expected iterative improvements of Program implementation and develop and maintain Research, Monitoring, and Evaluation Plans that will track the status and trends of focal species and their threats and limiting factors. (**YNF**)
- Assess/track the status and trends of focal species and their habitat. **(WDFW, ODFW)**

II. Staff summary of Comments of Recommendations

Submitted comment to restore adequate conditions for fish in the mainstem of the Columbia and Snake rivers. (**Sierra Club et al.**)

Submitted comment for the program to acknowledge climate change impacts and detail the actions necessary to address these impacts. (**Sierra Club et al.**)

Supports recommendations for highlighting focal species and for addressing limiting factors and critical uncertainties associated with program focal species (lamprey, sturgeon, eulachon, trout, etc.). (**ODFW, WDFW**)

III. Excerpts of Recommendations and Comments

View the document linked here for the excerpts of the recommendations and comments on the recommendations referring to the 2014 Program's resident fish mitigation strategy.

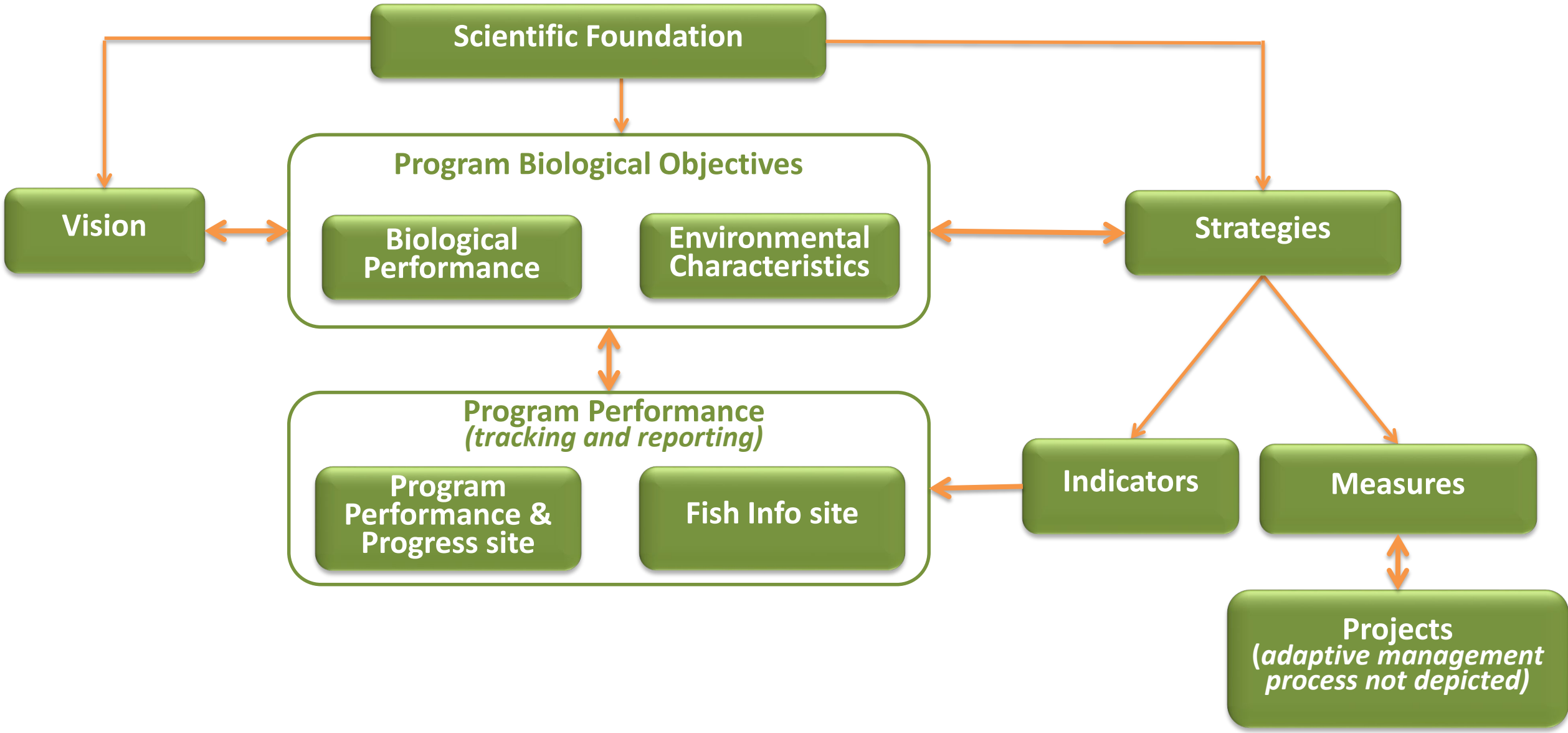
Program Goals and Objectives Examples and Discussion

Nancy Leonard
Program Performance Manager

Northwest **Power** and **Conservation** Council

Fish and Wildlife Program Framework

(current 2014 program)



Program Goals and Objectives Structure
(current 2014 program)

Recommendations and Comments
Program Goals and Objectives
(abbreviated)

- Linkage
  - Improve linkage among goals, objectives, strategies, indicators, and Program reporting
- Goals and Objectives
  - Retain existing and clarify/restructure
  - Add new/interim to reflect program scope
- Indicators
  - Refine/add indicators to evaluate strategies' performance
- Process
  - Update and expand process to review/refine goals and objectives post-program adoption

Program Goals and Objectives Structure

improvements

Vision
What we want to achieve

Qualitative Program Goals (22)
What needs to change to meet our vision

Quantitative Program Objectives
Quantity of needed change to meet goals

Themes

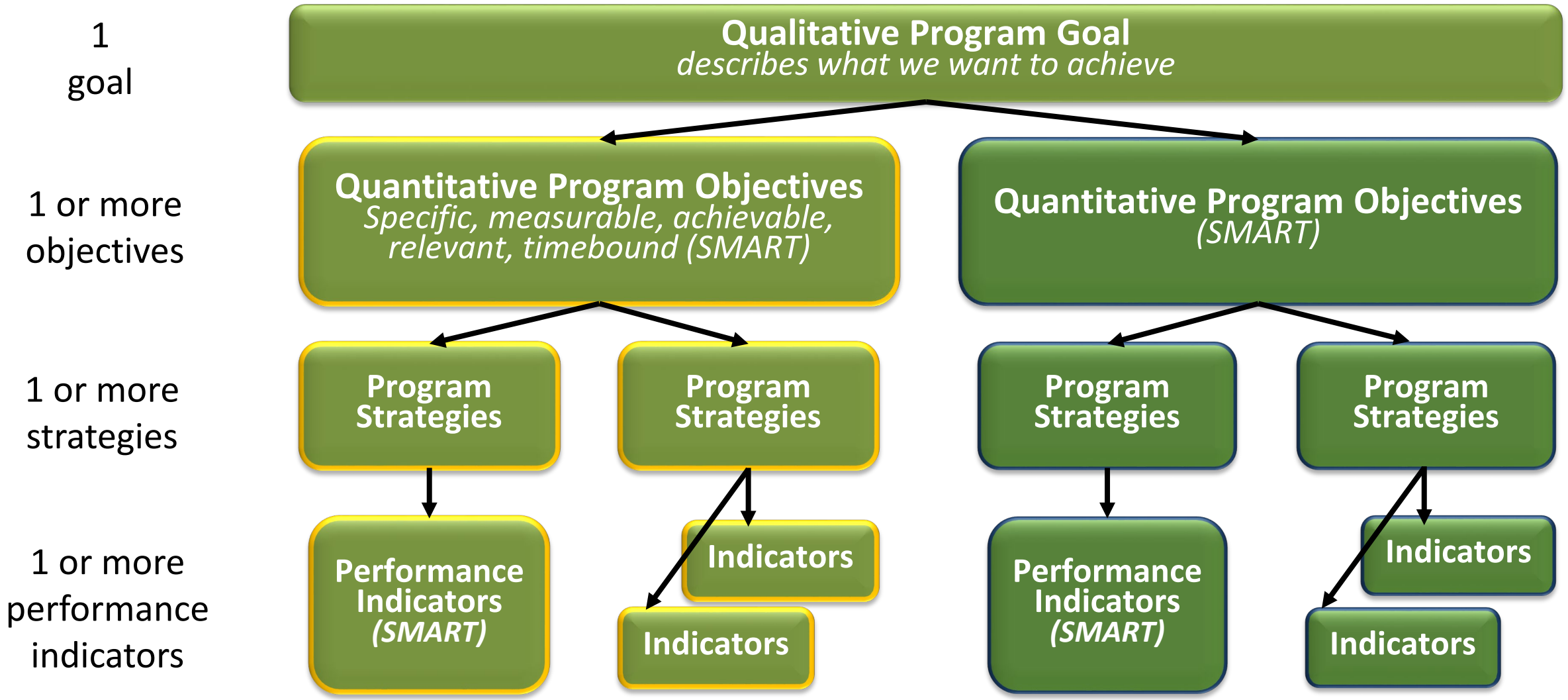
- **Biological & Ecological**
- **Communication & Coordination**

Strategies
What we believe will result in the needed change

Performance Indicators
How we track progress towards goals and objectives

Program Goals and Objectives

Relationship between Goals, Objectives, Strategies and Performance Indicators



Program Goals and Objectives

Draft Examples: Biological & Ecological

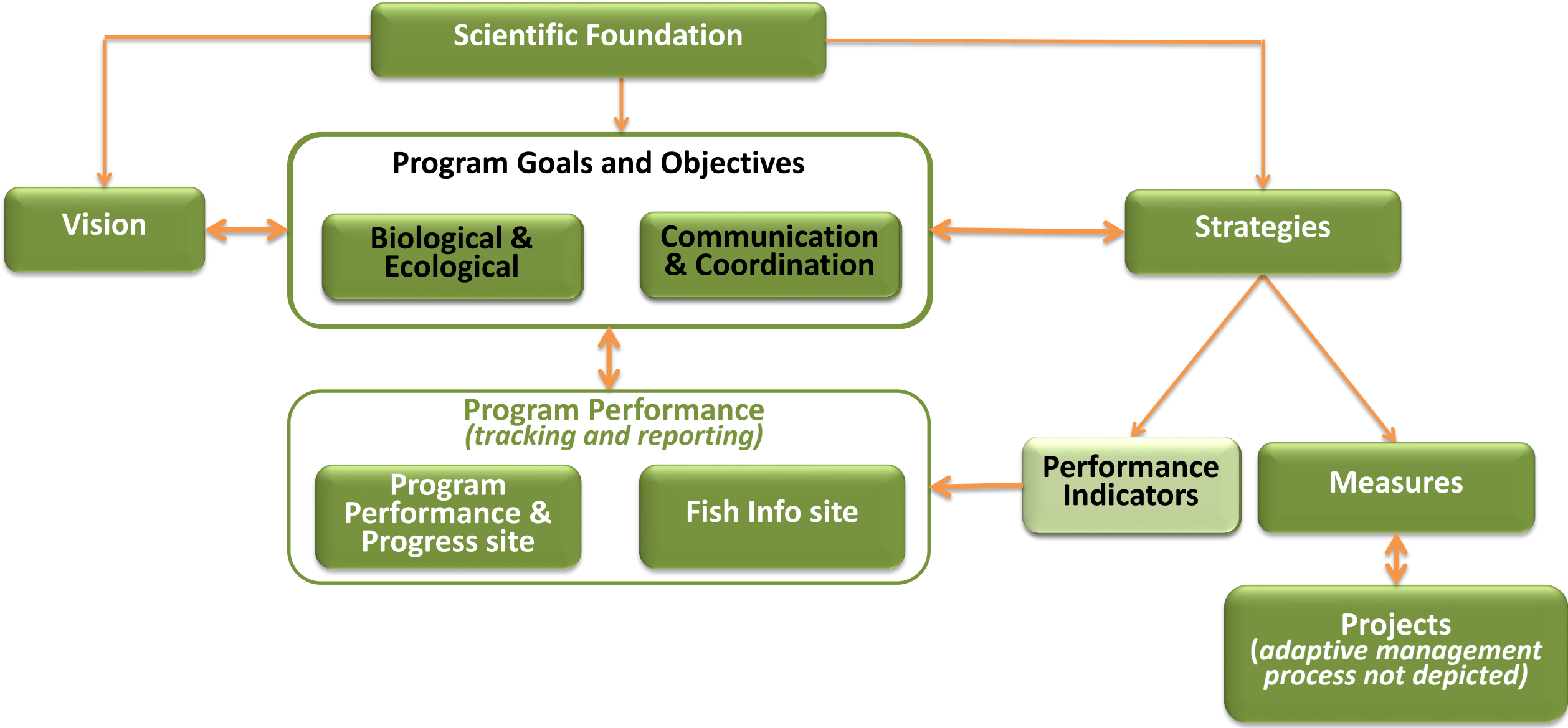
	Biological	Ecological
Qualitative Program Goals	Mitigate for natural origin adult salmon & Steelhead losses due to hydropower	Mitigate for wildlife losses due to hydropower
Quantitative Program Objectives *(trend, % , range, number)*	Achieve an average of 5 million natural origin adult salmon & steelhead returning to the Basin, including ocean harvested fish, by 2025	Acquire habitat units (HU) to offset identified hydropower construction & inundation losses
Program Strategies	Wild Fish	Wildlife Mitigation
Performance Indicators *(trend, % , range, number)*	Population targets (min, mid, high milestones); Stock escapement targets (low, mid, high milestones)	% of full mitigation ; % or trend direction of progress towards target mitigation (HU or acres)

Program Goals and Objectives

Draft Examples: Communication & Coordination

	Communication	Coordination
Qualitative Program Goals	Inform the public about the program to encourage involvement	Encourage inriver management decisions to consider ocean conditions affecting survival of anadromous fish
Quantitative Program Objectives *(trend, %, range, number)*	Maintain and increase annual posting of web-based news and outreach information	Increase information exchange about ocean science and managers' information needs to improve inriver management activities.
Program Strategies	Public Engagement	Plume and Nearshore Ocean
Performance Indicators *(trend, % , range, number)*	Number of news articles/blogs; webpage visits; tweets, Facebook posts, track shared or liked	Organize 2 Ocean Forum meetings a year; Frequency of interactions between managers/scientists; Attendees composition reflect % of managing and science entities

Fish and Wildlife Program Framework improvements



Questions?

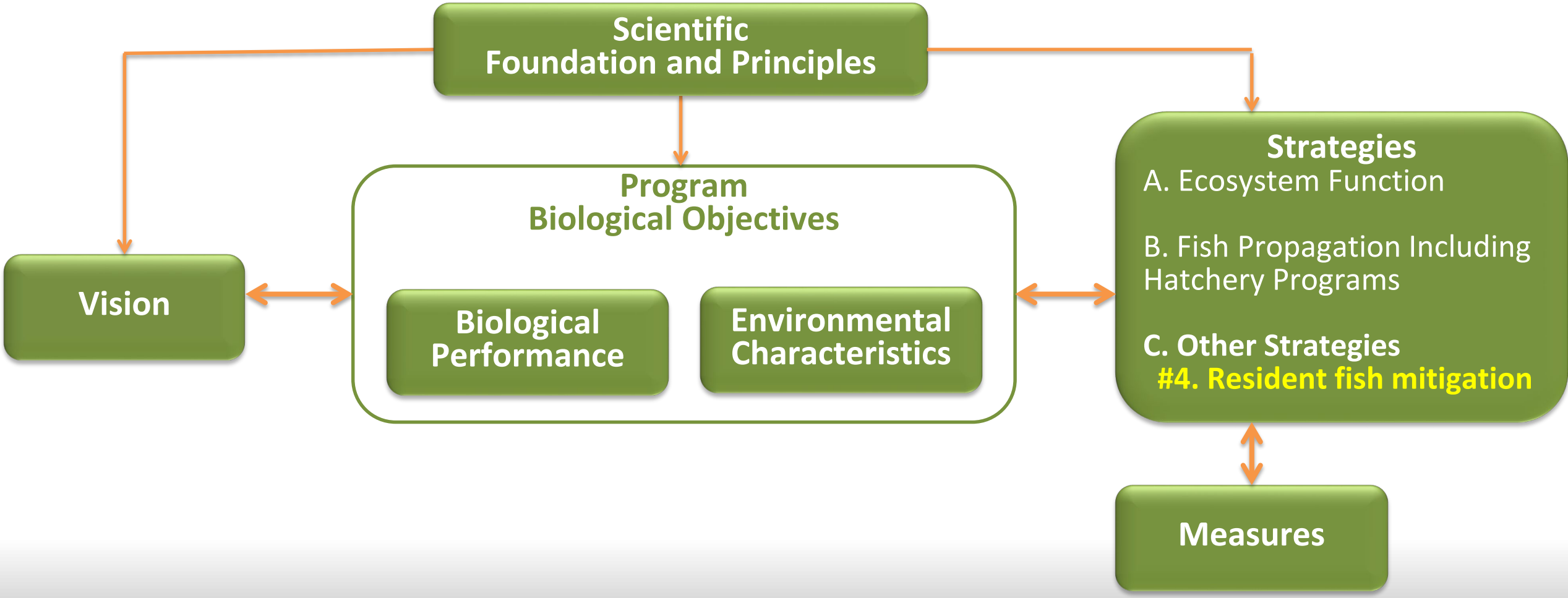

Program Goals and Objectives
Informing Program Performance & Progress

Resident Fish Mitigation

Nancy Leonard
Program Performance Manager
&
Fish and Wildlife Division Staff

Juvenile bull trout, USFWS 2010

Fish and Wildlife Program Framework
(current 2014 program



Highlights from Past to Present
Resident Fish Mitigation Strategy

1980s

1982, 1984, and 1987 amendments for Resident Fish Section

- Measures related to hydrosystem operations, habitat, and hatcheries
  - Flow requirements, drawdown requirements, streambed protection, operations, resident fish substitution etc

1990s

1994, 1995 amendments for Resident Fish Section

- Measures similar to past programs with some additional measures
  - Using storage water to maintain water temperatures
  - Identification of mitigation objectives, rebuilding schedules, survival targets, and performance standard needed
  - Call to complete basinwide assessments of hydrosystem resident fish losses and gains

Highlights from Past to Present
Resident Fish Mitigation Strategy

Early 2000

2000 and 2003 amendments

- No specific Resident Fish section; past measures appear in other sections (Resident Fish Substitution in Harvest) or later in subbasin plans
- Call to complete resident fish loss assessments now an Overarching/Basin objective

2009

2009 amendment

- Resident Fish Mitigation Strategy focused on guidance where have loss assessments or land acquisitions are primary mitigation tool
  - Mitigation crediting (minimum 1:1 ratio), settlement agreements, plans, O&M
- Call to complete resident fish loss assessments remains in Basin objectives

Current 2014

2014 amendment

- Resident Fish Mitigation Strategy,
  - includes convene a workgroup to develop a standardized methodology for habitat loss assessments in areas without assessment or agreement.
  - Albeni Falls Dam measure to investigate dam changes and habitat to benefit native fish in Mainstem Hydrosystem Strategy

Recommendations & Comments draft summary

- **2014 Program Resident Fish Mitigation Strategy**
  - Maintain language and guidance
- **Land operation and maintenance-**
  - Support long-term and maintenance funding for mitigation properties
- **Climate Change**
  - Acknowledge impacts and detail the actions needed to address
- **Mainstem Habitat**
  - Restore conditions for fish in Columbia and snake rivers
- **Prioritizing and Funding**
  - Criteria for prioritizing projects, e.g., weak and recoverable native populations, areas without anadromous fish, benefit other fish and wildlife, support important fisheries
  - Prioritize monitoring per focal species
  - Prioritize investments based on biological effectiveness, considering cost- effectiveness
  - General funding priority should include loss assessment and mitigation for un-quantified impacts

Recommendations & Comments draft summary

- **Focal Species** (eg. mussels, bull trout, burbot, cutthroat trout, mountain whitefish, sturgeon, kokanee)
  - Highlight focal species, support limiting factors RME, address limiting factors/critical uncertainties
  - Map extirpated or historical distribution of focal species to convey what has been lost
  - Assess/track status and trend of focal species and their habitat
  - Basin-wide restoration to benefit fish, including redband in the Deschutes Basin
- **Freshwater Mussels**
  - Action agencies to evaluate presence/status; mitigate hydrosystem adverse effects; support CTUIR effort exploring means to supplement natural production
- **Bull Trout**
  - Biological opinion measures and alternatives; recovery plans strategies and actions
- **Redband Trout**
  - Fund creation of a Redband Trout Repatriation Project to improve survival and adult abundance; recognize Rock Island, Rocky Reach and Lake Chelan projects efforts guided by FERC license requirements; direct Action Agencies to continue work with Chelan PUD on FERC requirements

Recommendations & Comments draft summary

Loss Assessments

- Complete a standardized methodology for loss assessment as described in the 2014 Program

Resident fish dam passage

- Action agencies to restore upstream passage at Albeni Falls Dam by 2024
  - following specified schedule submitted with recommendation
  - if deviate from schedule make operational changes to moderate downstream water temperatures during critical time periods for native fish.
- Restore passage for native resident fish where feasible including at Chief Joseph Dam and Grand Coulee Dam

Questions?

Cutthroat trout
Timothy Knepp, USFWS
2008