

**Rhonda Whiting**  
Chair  
Montana

**Bruce A. Measure**  
Montana

**James A. Yost**  
Idaho

**W. Bill Booth**  
Idaho



**Bill Bradbury**  
Vice-Chair  
Oregon

**Henry Lorenzen**  
Oregon

**Tom Karier**  
Washington

**Phil Rockefeller**  
Washington

October 25, 2012

## MEMORANDUM

**TO:** Fish and Wildlife Committee members

**FROM:** Patty O'Toole, Program Implementation Manager  
Peter Paquet, Wildlife and Resident Fish Manager

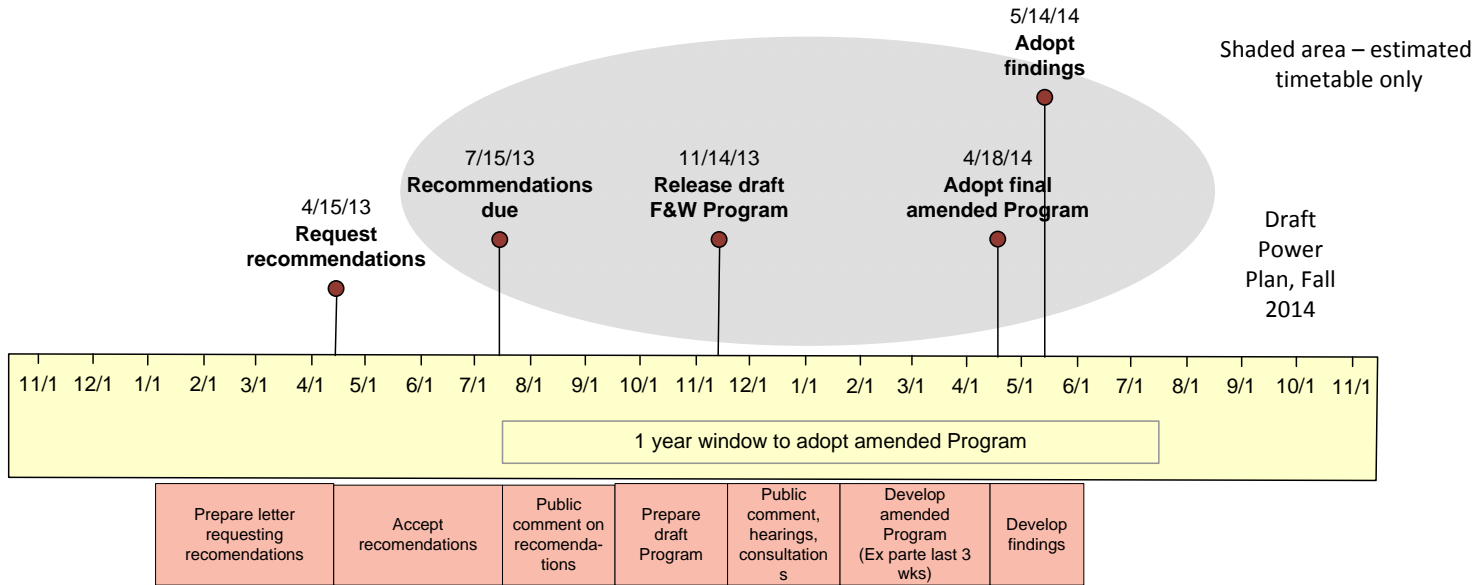
**SUBJECT:** Discussion of the next Fish and Wildlife Program Amendment

At the November Fish and Wildlife Committee meeting the staff will 1) review with the Committee a draft schedule for the amendment process and 2) start the first of several discussions about specific Fish and Wildlife Program topics. The staff is preparing brief summaries for some of the Program topic areas to assist in the discussion. The purpose of the summaries is to reacquaint the Committee members, staff and others about particular areas of the existing Fish and Wildlife Program, highlight existing Program policy in those areas and also to highlight some key regional developments that may influence future Fish and Wildlife Program policy. Staff suggests that each month, over the next couple of months, the Committee and staff review a different set of topics.

Several brief summaries are attached covering the topics of habitat, artificial production, harvest, resident fish, wildlife and non-native species. Staff purposely kept the summaries brief and of a similar style for ease of reading. They are not presented in any priority order. For a more comprehensive review of Fish and Wildlife Program policy in these areas, please refer to the 2009 Columbia River Basin Fish and Wildlife Program.

One of the amendment process related tasks to be accomplished in the next several months is the need to draft a formal, written, request for recommendations. This is a required step for the Council to initiate the program amendment process. In some past amendment processes, the Council has opted to highlight particular topics or issues for the region to consider when developing their recommendations to the Council. As the Committee and staff review the program topic summaries the Committee may find that some of the topics and recent developments may be appropriate for inclusion in the formal letter the Council will send to the region requesting recommendations.

**Possible 2014 Fish and Wildlife Program  
Amendment Timeline ( 9/24/12)**



10/15/12

11/15/14

**2013 COUNCIL MEETINGS**

January 15-16, 2013	Portland, OR
February 12-13, 2013	Portland, OR
March 12-13, 2013	Portland, OR
April 9-10, 2013	Washington
May 7-8, 2013	Oregon
June 11-12, 2013	Montana
July 9-10, 2013	Washington
August 6-7, 2013	Idaho (Coeur d'Alene)
September 10-11, 2013	Oregon
October 8-9, 2013	Montana
November 5-7, 2013	Idaho
December 10-11, 2013	Portland

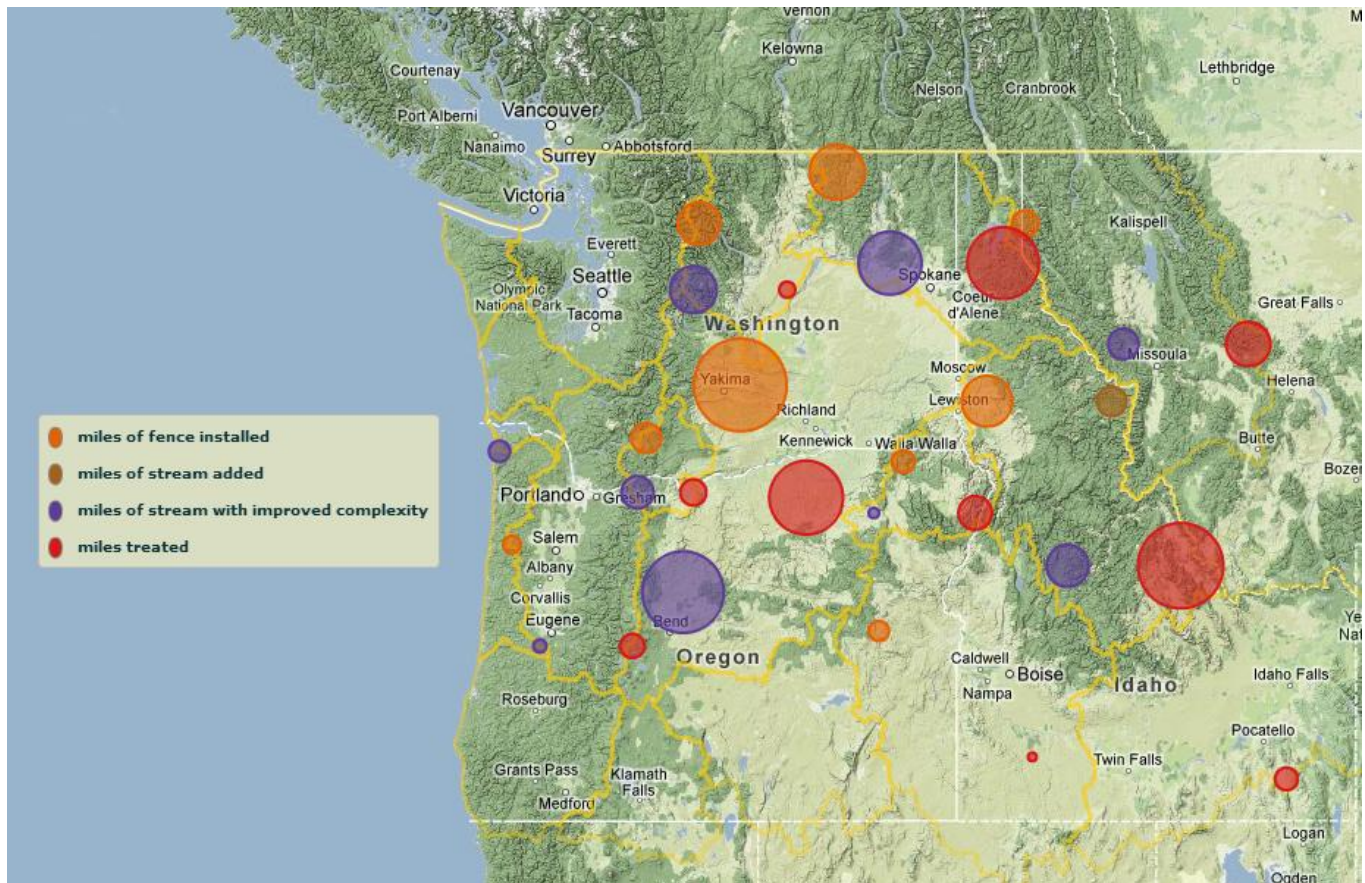
<b>Fish and Wildlife Program Habitat Policy</b> (staff summary, section D-1, page 14)	
Council Primary Strategy	<p><b>The Council supports habitat restoration to the extent described in Program when there is understanding of:</b></p> <p>1. current condition 2. biological potential of the habitat</p> <p>A variety of potentially successful approaches may be used to improve and maintain habitat. Protection and restoration of mainstem habitat conditions must be a critical piece of this habitat-based Program. The decision of which approach to use is best made at the local, site-specific level, subject to scientific review. However, all subbasin plans and measures within those plans should be consistent with the vision and biological objectives of the Program, and the following strategies:</p>
Strategies	<p>Build from strength - protect habitat that supports existing populations that are relatively healthy and productive.</p> <ul style="list-style-type: none"> <li>• Protect adjacent habitat if historically productive or are likely to sustain healthy populations by reconnecting or improving habitat.</li> <li>• For weak stocks, restoration should focus first on the habitat where portions of the weak populations are doing relatively well.</li> <li>• The Council will work with regional entities to establish criteria for identification of stronghold areas within the Columbia River Basin.</li> </ul> <p>Restore ecosystems, not just single species.</p> <p>Use native species even in degraded or altered habitat.</p> <p>Address transboundary species.</p> <p>Protected Areas (Future Hydroelectric Development and Licensing)</p> <ul style="list-style-type: none"> <li>• The Council adopted a set of standards that apply to the development and licensing of new hydroelectric facilities in the Columbia River Basin.</li> </ul> <p>Habitat Protection and Improvement Activities to Address Biological Objectives:</p> <ul style="list-style-type: none"> <li>• Habitat work is intended to be consistent with the Program’s biological objectives and with measures contained in subbasin plans.</li> <li>• As the Program addresses flow, temperature, and other water-quality problems, finding ways to relax channel constraints and allow rivers to regain more natural floodplain connections may be both the greatest habitat need and the biggest challenge in the coming decades.</li> </ul> <p>Emerging Habitat Issues – non-native species in altered habitats, climate change, toxic contaminants.</p> <ul style="list-style-type: none"> <li>• Strategies to address these emerging concerns are not likely to constitute a significant part of the Program’s implemented habitat activities, and the Council’s Program will be but one small part of the region’s response to these problems.</li> </ul>

Some key developments since 2009 F&W Program adoption include:

- ISAB Food Web and Landscape reports
- Umbrella projects becoming more common for implementation
- Biological Opinion remanded for more specific habitat measures for post 2013
- Subbasin plans, 2011 survey, some outdated, creation of subbasin dashboards
- CHAMP – evaluation of the effects of habitat change
- Development and ISAB review of CEERP

## High-Level Indicator Map

This interactive map shows quantitative habitat accomplishments, grouped by High-Level Indicators, over time.. For past years, this map sums Actual metric values for Completed work; for the current year it sums Planned metric values for In-Progress work and Actual metric values for Completed work. The underlying data is from the Habitat Metrics by FY reports which can be accessed from the [Interactive Data & Reports](#) page, cbfish.org.



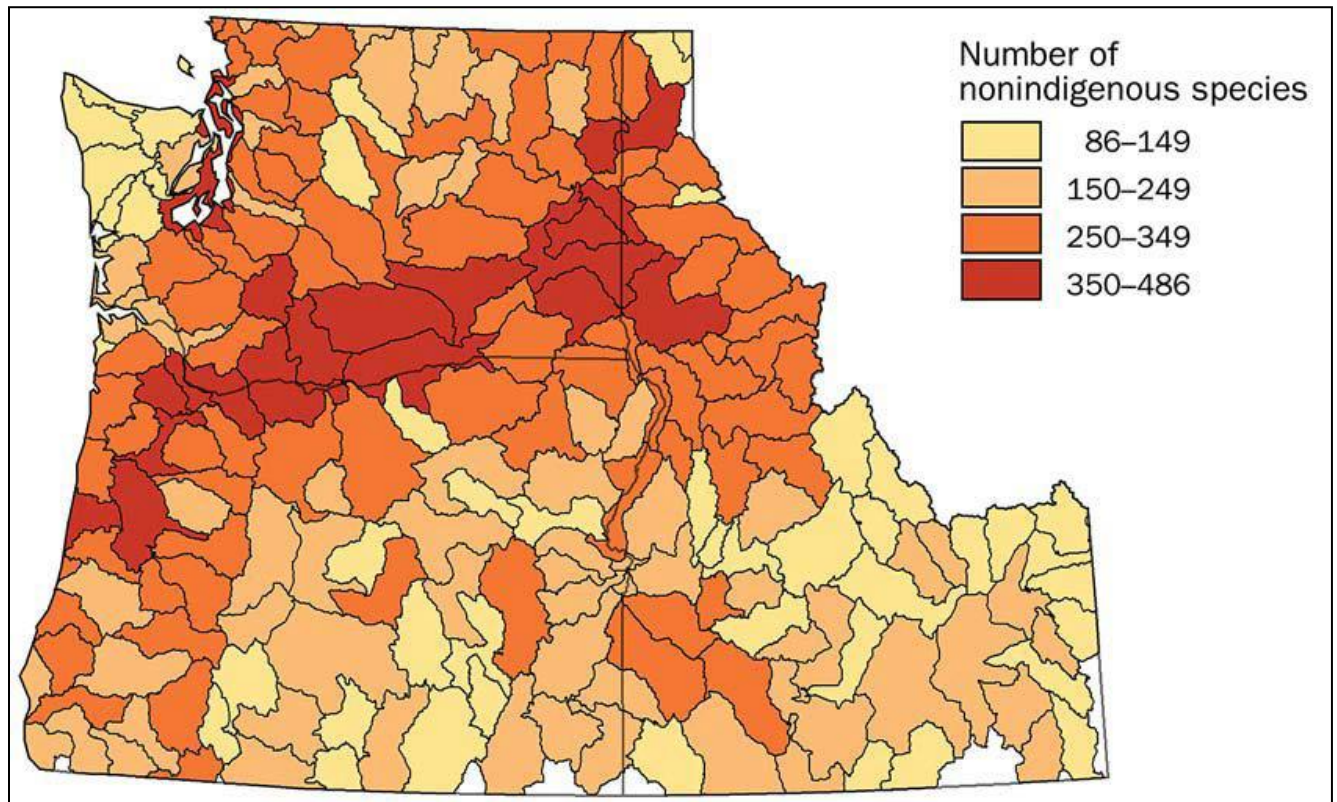
Indicator - habitat miles for 2012

CBfish.org, 2012

<b>Fish and Wildlife Program Non-Native Species Policy</b> (staff summary, section D-2, page 18)	
Strategies	<p>Non-native invasions imperil native species in the Pacific Northwest's ecosystems through predation, competition for food, interbreeding, disease transmission, food web disruption, and physical habitat alteration.</p> <p>Specific measures addressing the effects of non-native species on native fish, wildlife, and habitat can be found in the Program's subbasin and mainstem plans along with wildlife management plans.</p> <p>While the Program recommends resident fish substitutions for lost salmon and steelhead where in-kind mitigation cannot occur, the Program also includes a resident fish substitution strategy. The resident fish substitution strategy describes conditions under which non-native fish management should occur, including an environmental-risk assessment prior to introduction or enhancement of non-native species.</p> <p>The Council supports actions that suppress non-native populations that directly or indirectly adversely affect juvenile and adult salmonids. For example, the Council urges state agencies to modify fishing regulations or harvest limits as appropriate, to reduce predation on native populations.</p>

Some key developments since 2009 F&W Program adoption include:

- ISAB Food Web report
- Elevated regional concern and interest in the prevention of the introduction and establishment of quagga and zebra mussels, among other non-native species.
- 2012 Predation workshop (science–policy exchange)
- Northern Pike introduction and proliferation



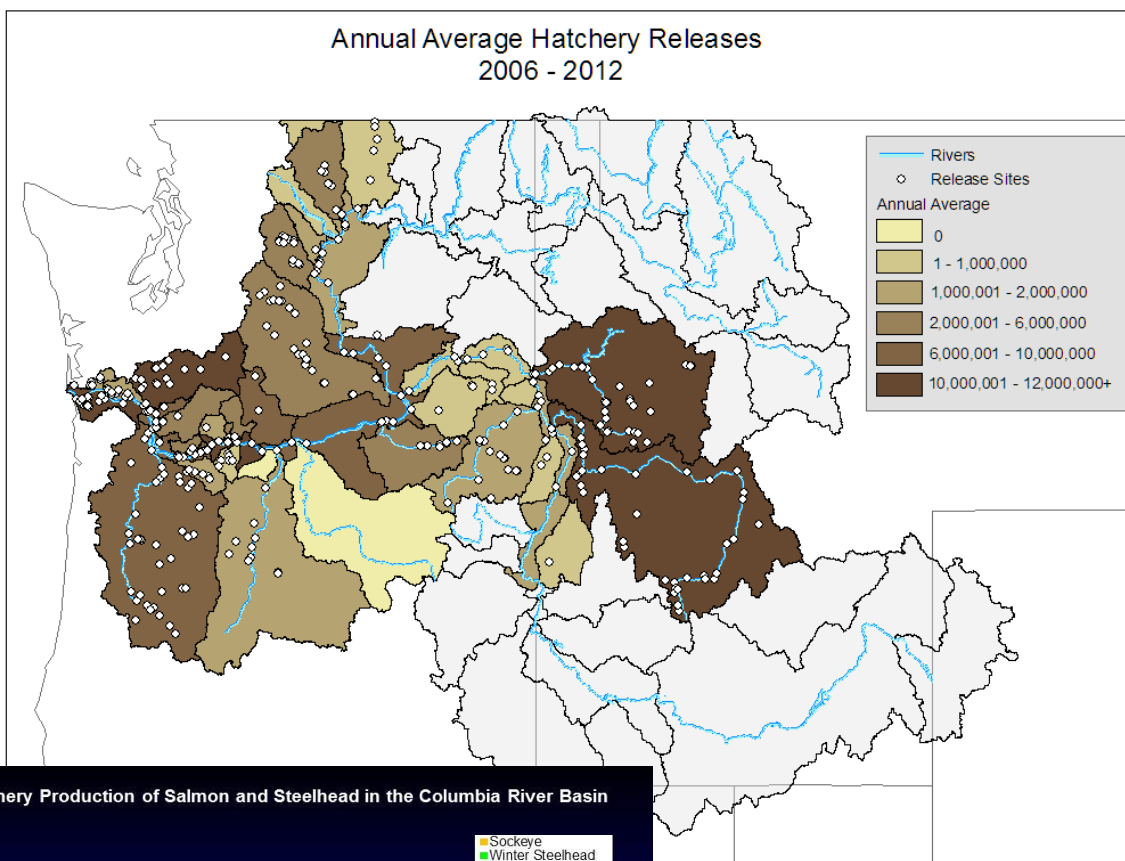
Numbers of non-native species per watershed (4th field Hydrologic Unit Code) in Washington, Oregon and Idaho, for 2007 (from Sanderson et al. 2009).

**F&W Program Artificial Production Policy** (staff summary, section D-3, page 18)

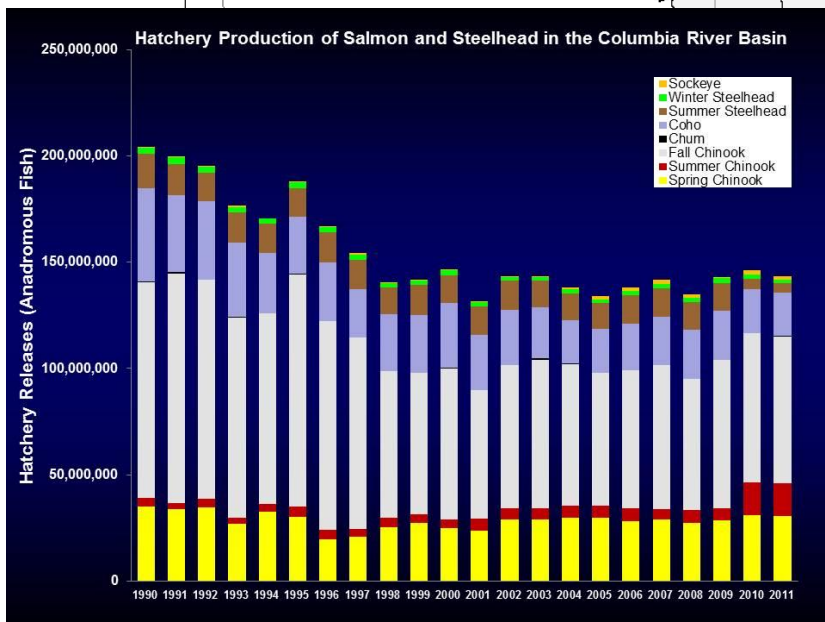
<i>Council Primary Strategy</i>	<p><b>The Program supports and funds the production of hatchery fish in three ways:</b></p> <ul style="list-style-type: none"> <li>• With habitat improvements where native populations are below carrying capacity, hatchery fish should be as similar to the native fish as possible</li> <li>• To support harvest and protect native populations, hatchery fish should be kept as distinct as possible from the native population</li> <li>• For reintroduction into areas where the fish are extirpated</li> </ul>
<i>Principles</i>	<p><b>Given the uncertainties and risk associated with the use of hatchery fish, the Council adopted the following principles for the use of hatchery fish under the Council's Fish and Wildlife Program:</b></p>
	<ul style="list-style-type: none"> <li>• must consider the ecology of the environment where they will be used, consider hatchery fish as part of the ecology, subject to other larger-scale basin, regional and global factors</li> </ul>
	<ul style="list-style-type: none"> <li>• use of hatchery fish is considered experimental, must adapt to new information and include an aggressive evaluation program to evaluate risks and benefits, must be accompanied by a plan: purpose, methods, relationship to other projects, measurable objectives, evaluation and reporting.</li> </ul>
	<ul style="list-style-type: none"> <li>• maintain life history diversity in order to be sustainable as environmental conditions change.</li> </ul>
	<ul style="list-style-type: none"> <li>• hatchery fish programs must have clear purpose and objectives (augmentation, mitigation, restoration, preservation, research, or some combination)</li> </ul>
	<ul style="list-style-type: none"> <li>• the decision to use hatchery fish should be made locally, and be consistent with fish and wildlife goals, objectives and strategies in the <u>subbasin plan</u></li> </ul>
	<ul style="list-style-type: none"> <li>• harvest as a goal is supported, but need to minimize impacts and link the harvest rates and practices to the naturally spawning populations</li> </ul>
	<ul style="list-style-type: none"> <li>• supplementation with hatchery fish may be used to preserve and rebuild natural runs, accompanied by habitat improvements</li> </ul>
	<ul style="list-style-type: none"> <li>• hatchery fish programs must be consistent with federal, legal and other mandates</li> </ul>
	<ul style="list-style-type: none"> <li>• where habitat is intact, hatchery fish are not currently used, and the native fish population is doing OK, hatchery fish should not be used. Protect the habitat associated with this population</li> </ul>
	<ul style="list-style-type: none"> <li>• consider adoption of HSRG recommendations, accounting for <i>U.S. v. Oregon Management Plan</i>, the Pacific Salmon Treaty, tribal trust and treaty rights, and recovery plans.</li> </ul>

Some key developments since 2009 F&W Program adoption include:

- ISAB Food web report
- Hatchery Science Review Group – recommendations and elements more commonly accepted across the region. However, still viewed as “a tool, not a rule” by some.
- Concerns raised by science panel/board about density dependence in the estuary, plume, and ocean from increases in hatchery production
- HGMPs – NOAA adoption pending.
- Supplementation studies results published
- Ad Hoc Supplementation Work Group & CHREET



Fish Passage Center, 2012



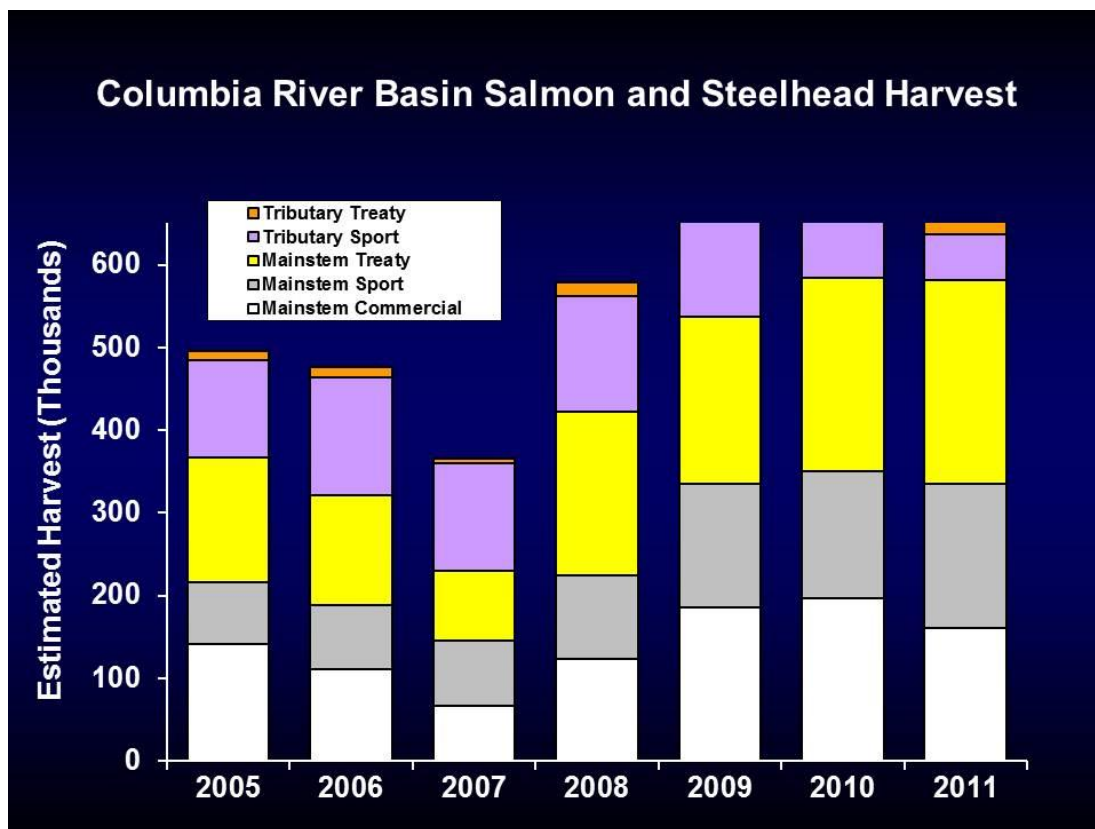
Columbia Basin Fish and Wildlife Authority, Status of the Resource, 2012



<b>Fish and Wildlife Program Harvest Policy</b> (staff summary, section D-4, page 19)	
Primary strategy	<p><b>Ensure subbasin plans are consistent with harvest management practices and increase opportunities for harvest wherever feasible.</b></p> <p>The Council makes no claim to regulatory authority over fish and wildlife harvest. The Council recognizes and affirms fish and wildlife managers' legal jurisdiction and tribal trust and treaty rights. However, there is little point in recommending funding for implementation of a subbasin plan when the objectives for the plan cannot be reached under current harvest regimes.</p>
Strategies	<p><b>Consider Adopting HSRG Recommendations</b></p> <p>The HSRG is scheduled to make recommendations on changes necessary in hatchery and harvest practices consistent with regional conservation and harvest goals. The Council will consider adopting the HSRG recommendations into the Program.</p>
	<p><b>Artificial Production</b></p> <p>Artificially produced fish created for harvest should not be produced unless they can be effectively harvested in a fishery or provide other significant benefits. The appropriate response to artificial production programs that do not meet this strategy is termination or revision so that the Program complies with this strategy.</p>
	<p><b>Monitoring and Reporting</b></p> <p>The Council recommends the following practices in harvest management, and encourages the region's fish and wildlife managers to adopt them:</p> <ul style="list-style-type: none"> <li>• Encourage an open and public process, and provide timely dissemination of harvest-related information in a publicly accessible manner.</li> <li>• Integrate harvest management to ensure conservation efforts made in one fishery can be passed through subsequent fisheries.</li> <li>• Manage harvest to ensure that risk of imprecision and error in predicted run size does not threaten the survival and recovery of naturally spawning populations.</li> <li>• Monitor inriver and ocean fisheries and routinely estimate stock composition and stock-specific abundance, escapement, catch, and age distribution. Expand monitoring programs as necessary to reduce critical uncertainties. Manage data so that it can be easily integrated and readily available in real time.</li> <li>• Manage harvest consistent with the protection and recovery of naturally spawning populations.</li> <li>• Encourage scientific peer review of harvest management plans and analyses to assess compatibility with strategies and objectives in this Program.</li> </ul>

Some key developments since 2009 F&W Program adoption include:

- HSRG more commonly accepted, however some entities still consider it to be “a tool, not a rule.”
- US v OR (2008-2017 Management Agreement continues)
- ISAB Food Web report



Columbia Basin Fish and Wildlife Authority, Status of the Resource, 2012

\*Tributary treaty data for 2009-11 not included.

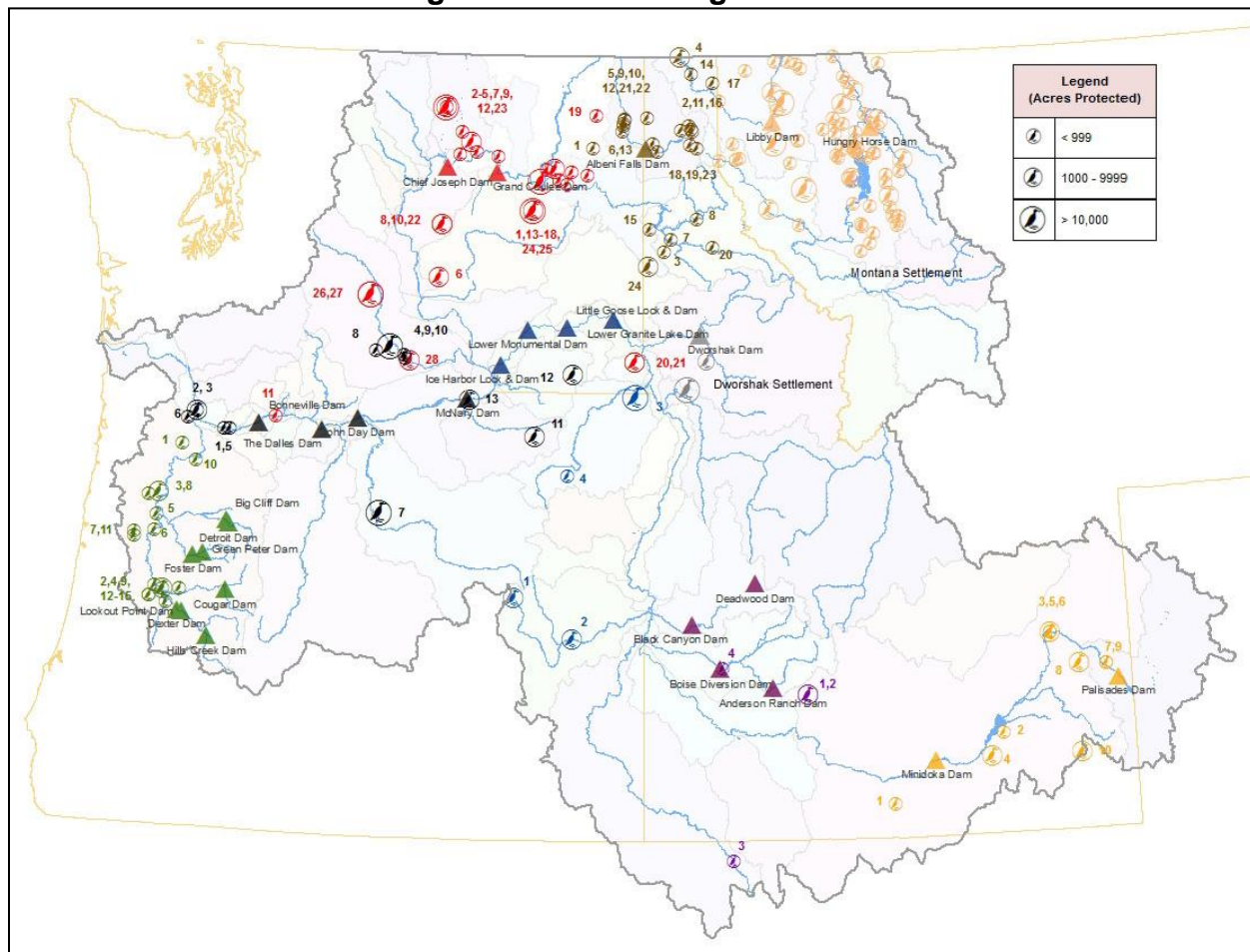
\*Tributary sport data incomplete for Washington (2005-11) and Oregon (2011).

<b>Fish and Wildlife Program Wildlife Mitigation Policy</b> (staff summary, section D-6, page 20)	
Primary strategy	<p>Complete the current mitigation program for construction and inundation losses and include wildlife mitigation for all operational losses as an integrated part of habitat protection and restoration.</p> <ul style="list-style-type: none"> <li>• The Wildlife C&amp;I loss assessments table (C-4) to be used as the starting point for wildlife mitigation measures and long-term mitigation agreements.</li> <li>• The parties should reach agreement on how wildlife mitigation projects and fish mitigation projects should be credited toward identified losses.</li> </ul>
Strategies	Bonneville and the fish and wildlife managers should develop long term mitigation agreements by 2011.
	Bonneville and the applicable management agency shall propose a management plan adequate to sustain the minimum credited habitat values for the life of the project.
	Wildlife mitigation projects should be integrated with the fish mitigation projects as much as possible.
	The Council adopted and continues to endorse the 2:1 crediting ratio for the remaining habitat units. However, when loss estimates appear inaccurate due to habitat unit stacking and those inaccuracies cannot be resolved through use of a different, cost-effective tool or approach recommended by the crediting forum and approved by the Council, then the 2:1 ratio will not apply to the remaining stacked habitat units.
	<p>Long-term agreements should include :</p> <ul style="list-style-type: none"> <li>• Measurable objectives and a statement estimating the contribution to addressing the wildlife losses identified in Table C-4 in the Appendix;</li> <li>• Demonstration of consistency with the wildlife policies in the Program,</li> <li>• Adherence to the open and public process language found in the Northwest Power Act.</li> <li>• Provide for protection for riparian habitat that can benefit both fish and wildlife, protect high-quality native habitat and species of special concern, including ESA species</li> <li>• Incentives to ensure effective implementation of the agreement, with monitoring and evaluation and reporting of results.</li> <li>• Provisions for long-term maintenance of the habitat to sustain minimum credited habitat values, sufficient funding to demonstrate a substantial likelihood of achieving and sustaining the mitigation objectives.</li> </ul>
	<p>The Council endorses habitat units as the preferred unit for mitigation accounting and the Habitat Evaluation Procedure methodology as the preferred method for estimating habitat units lost and acquired.</p> <p>The program specifically addresses allocation of habitat units, habitat enhancement credits, operational losses, implementation guidelines, the mitigation (wildlife) crediting forum.</p>

Some key developments since 2009 F&W Program adoption include:

- Wildlife Crediting Forum – initial work complete
- Major settlements completed or underway
- HEP future?
- Monitoring of populations/habitat over time
- ISAB Food Web report

### BPA Wildlife Mitigation Projects - Wildlife Management Areas assigned to FCRPS Dams

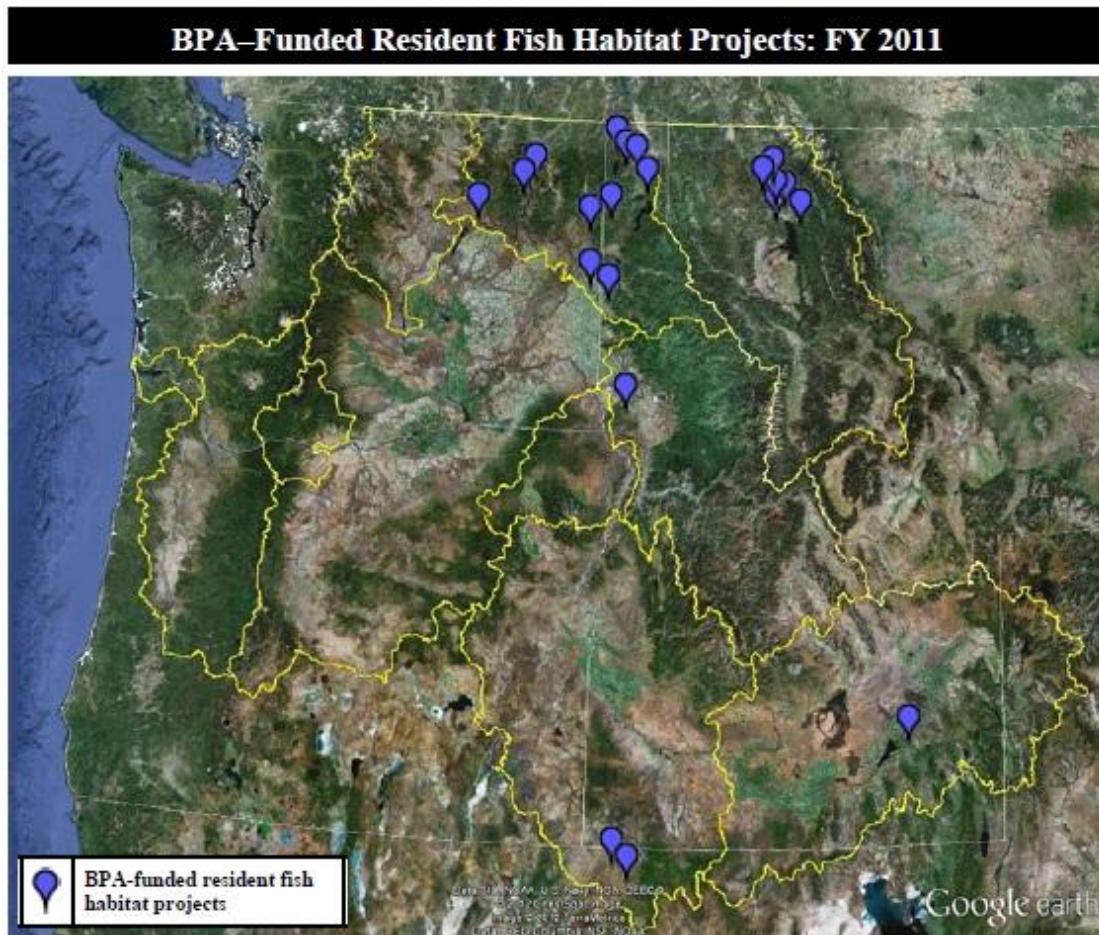


Columbia Basin Fish and Wildlife Authority, Status of the Resource, 2012

<b>Fish and Wildlife Program Resident Fish Mitigation Policy</b> (staff summary, section D-7, page 22)	
	The habitat, artificial production, harvest, and hydrosystem protection and mitigation strategies address effects on both anadromous and resident fish. There are additional considerations that apply to resident fish mitigation in those areas of the Program with completed quantitative resident fish loss assessments and where land acquisitions are a primary tool for mitigation. These include:
Strategies	<p><b>Resident Fish Mitigation and Crediting.</b> In areas where construction and inundation losses have been assessed and quantified by the appropriate agencies and tribes, mitigation should occur through the acquisition of appropriate interests in real property at a minimum ratio of 1:1 mitigation to lost distance or area.</p>
	<p><b>Resident Fish Mitigation Settlement Agreements.</b> Whenever possible, resident fish mitigation via habitat acquisitions should take place through long-term agreements that have clear objectives, a management plan, a committed level of funding that provides a substantial likelihood of achieving and sustaining the stated wildlife mitigation objectives, and provisions to ensure effective implementation with periodic monitoring and evaluation and reporting. Resident fish mitigation agreements should include:</p> <p>Measurable objectives, including the estimated resident fish habitat losses addressed by acquisitions</p> <ul style="list-style-type: none"> <li>• Demonstration of consistency with the policies, objectives and strategies in the Council's program</li> <li>• Adherence to the open and public process language found in the Northwest Power Act</li> <li>• When possible, provide protection for riparian habitat that can benefit both fish and wildlife, and protection for high-quality native habitat and species of special concern, including endangered, threatened, or sensitive species</li> <li>• Incentives to ensure effective implementation of the agreement, with periodic monitoring and evaluation and reporting of results.</li> <li>• Provisions for long-term maintenance of the habitat adequate to sustain the minimum credited habitat values for the life of the project</li> <li>• Sufficient funding to demonstrate a substantial likelihood of achieving and sustaining the resident fish mitigation objectives</li> </ul> <p>Resident fish mitigation agreements may include the protection of undegraded or less degraded habitat or, in appropriate circumstances may include protection and improvement of degraded habitat when necessary for effective mitigation. In the latter case, any mitigation agreements with Bonneville should include sufficient funding to enhance, restore, and create habitat functions and values for the target species of resident fish on acquired lands that are degraded.</p> <p>Resident fish mitigation agreements may represent incremental mitigation based on individual habitat acquisitions. However, where a resident fish loss assessment has been developed for a particular hydropower facility or for an entire subbasin using the best available scientific methods, and the loss assessment has been accepted as part of the Program, the Council encourages mitigation settlement agreements.</p>

Some key developments since 2009 F&W Program adoption include:

- Loss assessments not completed
- Perspective that some areas have not achieved mitigation
- All resident fish projects reviewed in 2011/12.
- ISAB Food Web report



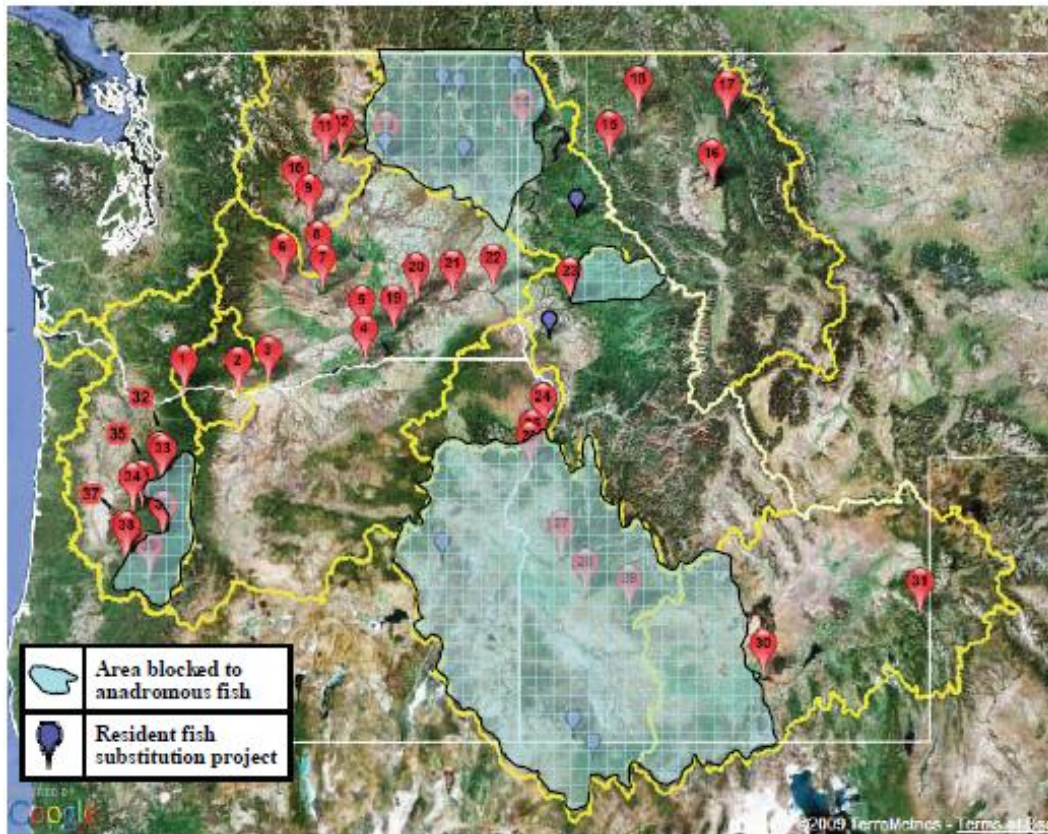
Columbia Basin Fish and Wildlife Authority, Status of the Resource, 2012

<b>Fish and Wildlife Program Resident Fish Substitution Policy</b> (staff summary, section D-8, page 23)	
Primary Strategy	Resident fish substitution is an appropriate mitigation strategy in areas blocked to salmon and steelhead by the development and operation of the hydropower system. Flexibility in approach is needed to develop a program that provides resident fish substitutions for lost salmon and steelhead where in-kind mitigation cannot occur.
Strategies/principles	<p>The following principles should guide decisions on mitigation strategies to address anadromous fish losses in blocked areas, including the use of resident fish substitution:</p> <ul style="list-style-type: none"> <li>• Investigate reintroduction of anadromous fish into blocked areas</li> <li>• Restore and increase the abundance of native resident fish species throughout their historic ranges when original habitat conditions exist or can be feasibly restored or improved</li> <li>• Develop and increase opportunities for consumptive and non-consumptive resident fisheries for native, introduced, wild, and hatchery-reared stocks that are compatible with the continued persistence of native resident fish species and their restoration to near their historic abundance</li> <li>• When full mitigation by improving the abundance of native fish species is not feasible, manage non-native fish to maximize use of available existing and improved habitats, consistent with state and local regulations, to provide a subsistence and sport-fishing resource, without adversely affecting native fish populations</li> </ul> <p>All proposals for ongoing or new resident fish substitution projects that involve or might involve a non-native species should include an environmental risk assessment of potential negative impacts on native fish species.</p> <p>The Independent Scientific Advisory Board recommended a template for such an environmental risk assessment. Starting with that template, the Council will work with the Independent Scientific Review Panel and the appropriate fish and wildlife agencies and tribes to develop the final environmental risk assessment template.</p> <p>In developing the appropriate template, the Council will consider the criteria currently being used by managers to assess the consequences of substitution in light of the Program's subbasin and basinwide objectives.</p>

Some key developments since 2009 F&W Program adoption include:

- Perspective that some areas have not achieved mitigation
- All resident fish projects reviewed in 2011/12.
- ISAB Food Web report

### Resident Fish Substitution for Lost Anadromous Fish Opportunities



Columbia Basin Fish and Wildlife Authority, Status of the Resource, 2012