

Staff summary of Issues & Recommendations Subbasins/Subbasin Plans & Measures/Action Plan

*Preliminary draft, please refer to full recommendations for complete review

10/29/2013 10:09 AM

2009 Fish and Wildlife Program Section

Section VII (pages 57-58); Appendix E (pages 91-95)

I. Overview

Subbasin/Subbasin Plans

Many of the agencies, tribes and recovery boards recommend incorporating ESA recovery plans, including implementation plans, into basin-wide and subbasin management plans and multi-year action plans. Many ESA recovery plans for salmon and steelhead are now complete. Those recovery plans were built from the 2004-05 subbasin plans and these recommending agencies want to see the cycle continue with the incorporation of the final ESA recovery plans into the subbasin plans. They also recommend that the Council implement the ISAB's recommendations for landscape and subbasin planning, including the recommendation to actively encourage and support a midscale planning process that supports and utilizes existing partnerships and organizations. Some suggest this could be done at the province level, which is geographically similar to NOAA's recovery domains.

Some agencies and tribes recommend updating the subbasin management plans in 2014 to explicitly incorporate final recovery plans and the Tribal Pacific Lamprey Restoration Plan. For additional recovery plans completed after 2014, it was recommended that the Council should accept recommendations to incorporate those plans in the appropriate subbasin plans. Because of the importance of subbasin plans, some agencies and tribes would like progress towards implementation of these plans to be reported on periodically by the Council. It was recommended that documenting which measures are currently funded and those which have not been funded would suffice. They also recommend expanding anadromous goals to the subbasin and province levels and adding specific and measurable objectives for resident fish and wildlife to support high level indicators. The Council also received recommendations in support of funding new projects to meet subbasin plan objectives.

Complete subbasin plan updates were only recommended in areas that had drastic change, such as the White Salmon River subbasin due to the removal of Condit Dam. Where updates would be needed, entities stated that subbasin planning guidance and stakeholder participation would be crucial, as it was in the original subbasin planning process.

Measures/Action Plan

Many entities recommended that elements of the recovery plans be incorporated into the program, and that recovery plan implementation plans be adopted as multi-year action plans, and limiting factors identified in the plans be addressed as priority actions funded through the Program. Several entities recommended that the Council work with fish and wildlife managers to periodically review the implementation of Program measures and report annually to the region

on what has and has not been implemented. Some agencies provided a list of high priority measures from recovery plans and other planning documents that they wish to see incorporated in the program, and others submitted species-specific measures they recommend for implementation.

Some entities called for implementation plans to be built from subbasin plans, recommending that limiting factors identified in the subbasin plans inform future projects. In fact, one entity stated that the Blackfoot and Bitterroot subbasins have readied projects to address limiting factors, but need the program funding to begin their work. Some regional managers recommended that the Council work with the action agencies and local managers to create long-term implementation plans to recover target species to levels that would not only meet ESA requirements, but mandates of the Northwest Power Act.

Some entities reminded the Council of the measures submitted for the 2009 program amendment and asked the Council to consider those as specific program measures to be implemented by 2018 through the updated program. Many expressed interest in multi-year action plans as called for in the 2009 program and would like to see those come to fruition.

II. Summary

Subbasin/Subbasin Plans

Incorporation of ESA recovery plans as subbasin plans

Oregon Department of Fish and Wildlife (ODFW; 3), Washington Department of Fish and Wildlife (WDFW; 4), The Confederated Tribes of the Grand Ronde (CTGR; 18), The Cowlitz Indian Tribe (CIT; 22), The Nez Perce Tribe (NPT; 25), the Upper Snake River Tribes (USRT; 28); NOAA Fisheries (NOAA; 30), and the Regional Fisheries Enhancement Group Coalition (RFEG; 63) recommend that the Council incorporate the final ESA recovery plans into the Program as updates to the subbasin plans, with updates continuing beyond 2014 based on recovery plan updates. **ODFW (3) and the CTGR (18)** recommend specific portions of the recovery plans be adopted into the Willamette Subbasin Management Plan; see the Willamette summary for details. **Native Fish Society (NFS; 60)** recommends that the Council require each subbasin plan include an agreement signed by the managers and private land owners in areas effecting the salmonid life cycle in order to support salmon life history requirements. **CIT (22)** suggests that incorporating the recovery plans will speed progress towards biological objectives and support close coordination amongst recovery partners between plan updates. **ODFW (3), WDFW (4), CTGR (18), CIT (22), USRT (28), and NOAA (30)** recommend that the Council take into account the ISAB's recommendation to reconsider a planning process that utilizes other existing structures and uses salmon and steelhead recovery domains as an example. These entities call for the Council to implement the ISAB's recommendations for landscape and subbasin planning, including the need to actively encourage and support a mid-scale (perhaps Province-level which is close to the recovery domains) planning process that supports and utilizes existing partnerships and organizations.

Tribal Pacific Lamprey Restoration Plan

ODFW (3), WDFW (4), The Columbia River Inter-Tribal Fish Commission (CRITFC; 14), The Confederated Tribes and Bands of the Yakama Nation (CTBYN; 17), The Confederated Tribes of the Umatilla Indian Reservation (CTUIR; 19), CIT (22), NPT (25), and USRT (28) recommend that the Council recognize the Tribal Pacific Lamprey Restoration Plan as an update to the subbasin plans.

General subbasin plan updates

Montana Fish, Wildlife and Parks (MFWP; 2), WDFW (4), The Washington Governor's Salmon Recovery Office (WGSRO; 5), The Coeur d'Alene Tribe (CdAT; 13), CIT (22), The Spokane Tribe of Indians (STOI; 26), The Upper Columbia United Tribes (UCUT; 27), NOAA (30), NFS (60), and Trout Unlimited (TU; 67) recommend general updates to subbasin plans. **WDFW (4), NFS (60), and TU (67)** recommend the ISAB's review of the 2009 Fish and Wildlife Program in its entirety. The ISAB report calls for the Council to: actively encourage and support a mid-scale planning process while engaging collaborative structures that already exist or can be developed at a local level; actively highlight particularly effective planning efforts; require proposed and continuing projects to demonstrate their relevance in the broader context of mid-scale social and ecological conditions; evaluate how effectively mid-scale planning efforts articulate objectives for artificial and natural production and integrate supplementation and habitat restoration efforts; and conduct periodic surveys of stakeholders to determine the effectiveness of communication and coordination efforts and to identify the most influential pathways for new information. **WGSRO (5)** called for the Council to conduct a comprehensive strategy to update portions of the subbasin plans which include but are not be limited to: updating subbasin level goals and objectives; conducting local climate models; setting data management and reporting standards; verifying and aligning the data; analyzing the amount of data that has not been thoroughly vetted; along with other regionally specific endeavors. **CdAT (13), STOI (26), and UCUT (27)** proposed subbasin plan updates and reminded the Council to perform these updates with subbasin planning guidance and stakeholder participation.

Specific subbasin plan updates and implementation

Several recommenders proposed specific updates to the subbasin plans. **STOI (26)** supports further implementation of the subbasin plans, particularly in relation to operational losses. **CTBYN (17)** would like an update to the Big White Subbasin Plan given that the removal of Condit Dam has likely made significant changes to the watershed. **The Clark Fork Coalition (CFC; 51)** recommends that the Council support the implementation of the existing Bitterroot and Blackfoot Subbasin Plans, and urges the Council Members to consider establishing mechanisms for non-traditional partners to seek support for this work.

Subbasin Plan Elements

Subbasin objectives

ODFW (3), WDFW (4), WAGSRO (5), BPT (12), CRITFC (14), CIT (22), USRT (28), and NOAA (30) all support developing objectives and goals for the subbasin and provincial levels.

PFMC (34), NFS (60), RFEG (63), and TU (67) recommend establishing species-specific goals based on information provided in the subbasin plans. (*See the Biological Objectives Summary for further information and recommendations extractions*)

Limiting Factors

ODFW (3), WDFW (4), WAGSRO (5), BPT (12), CTGR (18), CIT (22), NPT (25), USRT (28) recommend that the Council track adaptive management steps relating to limiting factors, to address those that create gaps in biological productivity of focal populations. (*See Program Framework Summary for recommendations extractions*)

Measures/Action Plans

Multi-year Action Plans

MFWP (2) recommends that subbasin management plans be revisited to ensure that actions remain abreast of the new science and results. **ODFW (3), WDFW (4), CIT (22), The Kootenai Tribe of Idaho (KTOI; 24), and USRT (28)** recommend progress towards implementation of the plans be reported on periodically to document which measures are currently funded and those that have not been funded. The **Hood River Watershed Group (HRWG; 20)** submitted their Hood River Watershed Action Plan 2013 Update, which they recommend to be adopted into the Program. The **CTGR (18)** recommends tables of specific implementation measures for 2008-2018. The **CTUIR (19)** recommends specific lamprey measures for inclusion in the Program. **ODFW (3), WDFW (4), CIT (22), and USRT (28)** recommend that the recovery plan implementation plans be incorporated as multi-year action plans for the Program. The **Yakima Basin Fish & Wildlife Recovery Board (YBFWRB; 8)** recommends that long-term implementation plans, consistent with the subbasin plans, be developed between the Council and the Action Agencies. This could involve adopting the ESA Recovery Plans and their associated implementation plans.

Measures

Various measures, both broad and specific, were submitted by most recommending entities. Some recommended new projects while others recommended the same suite of actions they submitted in 2009, requesting that the Council implement those actions with the 2014 Program. The extraction of recommendations relating to action plans and measures is ongoing. A few are provided in the extractions below.

State Fish and Wildlife Agencies and Other State and State-Supported Agencies

Montana Department of Fish, Wildlife and Parks - MFWP (2)

The management plans should be revisited when necessary to ensure that actions remain abreast of new science and results, indicating which techniques are the most effective. It is important that project proponents retain the flexibility to respond to new opportunities or scientific results as new information becomes available such as the recently completed Operational Loss Assessment for the Kootenai River (BPA Project 200201100).

Montana's subbasin plans were designed in internally-linked, electronic format to facilitate periodic updates. This electronic format makes updates easy and inexpensive.

Oregon Department of Fish and Wildlife - ODFW (3)

Recommendation 1: Maintain the current language under Program Framework, page 4, expressed in the 2009 Program with modifications shown here in bold:

“...That is, the Council's Program is designed to link to and accommodate the needs of other programs in the basin that affect fish and wildlife. This includes meeting the needs of the ESA by ~~describing the kinds of ecological change needed to improve the survival and productivity of the diverse fish and wildlife populations in the basin.~~ **implementing the Program to be consistent with ESA regulatory findings in biological opinions and rulemakings; incorporating ESA recovery criteria into Program biological objectives; and incorporating ESA recovery plans, including implementation plans, into Basin-wide and subbasin management plans and multi-year action plans.**”

Recommendation 2: Update the current language under Implementation and Performance, page 5, expressed in the 2009 Program with modifications shown here in bold:

“The Council comprehensively revised the Program in 2000 with the addition of the current program framework, added specific measures and objectives for the mainstem in 2003, and then developed and adopted the subbasin management plans into the Program in 2004-05. Together, these elements provide a coordinated and integrated plan for fish and wildlife actions across the basin. The federal, state, and tribal governments have been working since then with local partners to expand the subbasin plans into ESA recovery plans for areas of the basin that include ESA-listed populations. ~~The Council is planning a subsequent amendment process in 2009-2010 to update the subbasin management plans and Program objectives to reflect these and other recent planning developments.~~ Many ESA recovery plans for salmon and steelhead are now complete. Those recovery plans used the 2004-05 subbasin plans and this cycle should continue, so the subbasin plans should now incorporate the final ESA recovery plans.”

Recommendation 3: The ISAB points out a concern that the subbasin planning process was a great idea that has been diminished by the lack of support or continued engagement of the original stakeholders in recent years. The ISAB also recommends that the Council reconsider a planning process that utilizes other existing structures and uses salmon and steelhead recovery domains as an example. The Council should implement the ISAB's recommendations for landscape and subbasin

planning, including the need to actively encourage and support a mid-scale (perhaps Province-level which is close to the recovery domains) planning process that supports and utilizes and existing partnerships and organizations.

Recommendation 12: Under Updating Existing Subbasin Management Plans, page 58, insert “*A number of recovery plans have been completed. The subbasin management plans will be updated by 2014 to explicitly incorporate final recovery plans. For additional recovery plans completed after 2014, the Council will accept recommendations to incorporate those plans in the appropriate subbasin plans.*”

Recommendation 14: Under Appendix E: Subbasin and Basinwide Measures, add to Columbia Gorge Province the Mid-Columbia Steelhead Recovery plan and the Lower Columbia Salmon and Steelhead Recovery Plan.

Recommendation 17: Revise first paragraph under *Updating Existing Subbasin Management Plans* on Page 58 as follows: “*The Council recognizes that work has continued in some subbasins to refine and update management plans. The Council also recognizes that work has continued outside the Program, such as recovery planning, and the Tribal Pacific Lamprey Restoration Plan, that will influence implementation of the Council’s Program at the subbasin level. The Council recognizes the objectives and recommended actions of the Tribal Pacific Lamprey Restoration Plan as updates to subbasin plans.*”

Recommendation 1: ... because of the importance of Subbasin plans, progress towards implementation of these plans should be reported on periodically. This could be as simple as documenting which measures are currently funded and those which have not been funded.

Recommendation: Priority actions identified in the *Upper Willamette River Conservation and Recovery Plan for Chinook Salmon and Steelhead* to address priority limiting factors should be identified as measures to be funded under the Program.

Adopt the following high priority **measures** (summarized below and detailed in Tables 9.2.29.2.6) as an update to the Council’s Willamette Subbasin Plan:

Develop and implement passage solutions for reintroducing anadromous fish above the following federal hydropower facilities: Dexter Dam, Lookout Dam, Hills Creek Dam, Foster Dam, Green Peter Dam, Big Cliff Dam, and Detroit Dam. *Willamette Subbasin Plan references:* Section 5.2.2.1. Deal with the Dams; Table 5.3 Aquatic Strategies (Connect Favorable Habitats). The relevant reintroduction actions from the Recovery Plan are 191-SUB-SSA, 202-SUB-SSA, 162-SUB-NS, 177-SUB-NS, 229-SUB-MK, 230-SUB-MK, 240-SUB-MF, 249-SUB-MF, 235-SUB-MF, 10-ESU-ADM. The relevant RPAs from the Willamette BiOp include: 4.1, 4.13, 6.2.3.

Implement safe and effective downstream passage for anadromous and resident fish populations including lamprey and listed bull trout at the federal flood control and hydroelectric projects and reservoirs in the Upper Willamette River Subbasin. Projects include Detroit and Big Cliff dams, Cougar Dam, Fall Creek Dam, Lookout Point and Dexter dams, and Foster Dam. (Recovery Plan action 183-SUB-SSA, 157-SUB-NS, 212-SUB-MK, 215-SUB-MK, 236-SUB-MF, 237-SUB-MF, and 238-SUB-MF; and BiOp RPA 2.8, 2.10, 4.12, 4.12.1, 4.12.2, 4.12.3, 4.13, 4.8, 8.1, and 9.3)

Operate and maintain Upper Willamette fish hatcheries to ensure fisheries, mitigation, and conservation and recovery goals are achieved including adequate funding of operations, production targets, and baseline and uncertainty monitoring. (Recovery Plan action 212-SUB-MK, 215-SUB-MK, 229-SUB-MK, 230-SUB-MK, 177-SUB-NS, 202-SUB-SSA, 183-SUB-SSA, 184-SUB-SSA, 190-SUB-SSA, 191-SUB-SSA, 249-SUB-MF, 236-SUB-MF, 238-SUB-MF, 29-ESU-ADM, 30-ESU-ADM; and RPA 6.1.2, 6.1.3, 6.1.4, 9.5, and 9.5.1)

Reduce pre-spawn mortality by reducing injury and stress related to fish handling and brood holding environment at and above USACE facilities. Improved collection facilities have been completed at Cougar Dam and Minto Collection Facility on the North Santiam. A new collection facility at Foster Dam is currently under construction. Improved adult handling, brood holding environment and passage facilities are still needed at Dexter Dam, Willamette Hatchery and Fall Creek Dam. (Recovery Plan action 239-SUB-MF; and BiOp RPA 4.6)

Reduce pre-spawn mortality by reducing injury and stress related to fish handling at and above USACE facilities. Improved collection facilities have been completed at Cougar Dam and Minto Collection Facility on the North Santiam. A new collection facility at Foster Dam is currently under construction. Improved adult handling and passage facilities are still needed at Dexter Dam and Fall Creek Dam. (Recovery Plan action 239-SUB-MF; and BiOp RPA 4.6)

Increase protection and implementation of appropriate instream flows for UWR salmonids by a) removing barriers to coordinating with relevant management agencies on water withdrawals, b) encouraging BMP's to conserve water and reduce pollution loads, and c) not issuing anymore water rights within subbasins. Operate federal flood control and hydroelectric projects to minimize adverse effects of ramping on fish stranding, redd desiccation, and loss of habitat. (Recovery Plan action 102-FW-ALL, 199-SUB-SSA, 173-SUB-NS, and 242-SUB-MF; and BiOp RPA 2.3, 2.4, 2.4.2, 2.4.3, 2.4.4, 2.5, 2.6, and 2.7)

Evaluate and implement structural or operational changes to release water that more closely resembles normative water temperatures, reduces TDG exceedences, and meets TMDL temperature targets downstream of dams and operating dams to maximize benefits to Chinook and steelhead. (Recovery Plan actions 175-SUB-NS, 167-SUB-NS, 201-SUB-SSA, 228-SUB-MK, 241-SUB-MF, 248-SUB-MF, 120-MST/SUB-AMO, 69-EST-ALL, 70-EST-ALL, and 111-MST-ALL; and BiOp RPA 2.7, 5.1, 5.2, 5.3, and 5.4)

Protect and restore aquatic habitat function in tributaries, mainstem, and confluence areas of the Willamette River including but not limited to removing unnecessary revetments, increasing setback areas, restoring structure and function to strategic natural riparian reaches, and increase overall channel complexity, floodplain connectivity, and flood storage to improve salmonid rearing and migration habitat. (Recovery Plan actions 110-MST-ALL, 112-MST-AMO, 113-MST-AMO, 116-MST-AMO, and 219-SUB-MK; and BiOp RPA 7.1, 7.1.2, 7.1.3, 7.2, and 7.4)

Expand population and project implementation monitoring to track status and trends of salmon and steelhead VSP metrics and improve understanding of natural origin spawners, other life history information, habitat status and utilization, and evaluation of actions implemented to address limiting factor threats described in the recovery plan. Continue monitoring efforts to track status and trends of bull trout in relevant Upper Willamette subbasins. Secure funding sources to implement RM&E for baseline and post action monitoring and to answer critical uncertainties related to the assumptions under which the recovery plan was developed. (Recovery Plan action

13–ESU-ADM, 22-ESU-ADM, and 23–ESU-ADM; and BiOp RPA 9.1, 9.2, 9.3, 9.4, 9.5, 9.5.1, 9.5.2, and 9.6)

Adopt the following measures consistent with the Council’s Willamette Subbasin Plan:

Provide upstream and downstream passage for bull trout and resident fish species in conjunction with anadromous passage solutions at the federal hydropower/flood control facilities.

Complete feasibility assessment and subsequent steps for reintroduction of bull trout above federal hydropower/flood control facilities in the Santiam Basin.

Determine if anadromous and resident salmonid passage alternatives are suitable for lamprey passage. Reintroduce lamprey into areas blocked by the hydrosystem.

Willamette Subbasin Plan references: Section 3.2.4.6 Pacific Lamprey; Section 5.2.2.1.

Deal with the Dams; Table 5.3 Aquatic Strategies (Connect Favorable Habitats).

Determine the extent of lamprey spawning habitat downstream of hydrosystem projects and determine the effects operation has on spawning, incubating and rearing lamprey.

Willamette Subbasin Plan references: Section 3.2.4.6 Pacific Lamprey

The tables below represent actions from the *Upper Willamette River Conservation and Recovery Plan for Chinook Salmon and Steelhead* (ODFW and NMFS 2011) that are considered high priority to implement (fully or in part) in the Willamette Basin within the term of the Northwest Power and Conservation Council’s Columbia River Basin Fish and Wildlife Program. The tables also include a reference to the associated Willamette Project Biological Opinion (WP BiOp) RPA, if appropriate, as many of the high priority Recovery Plan actions area also included in the WP BiOp. The Recovery Plan also includes numerous other actions that should be adopted into the Fish and Wildlife Program as recommended in Section 5.2, of the Columbia River Basin Fish and Wildlife Manager’s Reference for Developing 2014 Fish and Wildlife Program Amendment Recommendations.

Table 9.2.2. High priority recovery actions for the South Santiam subbasin from the Upper Willamette River Conservation and Recovery Plan for Chinook Salmon and Steelhead (ODFW and NMFS 2011). The table summarizes the recovery plan action, including potential sub-actions, listing factor and limiting factor addressed, strategy and VSP objective, and also references the associated Willamette Project Biological Opinion RPA (NMFS 2008).

Action ID and Priority	Recovery Action	Sub Action or Task	Associated BiOp RPA Measure
183 - SUB -	Improve downstream passage Foster reservoir and dam for kelts.	1. Implement WP-RPA's 2.8 and 2.10) to evaluate the Foster Dam Spring Spill passage of CHS and STW. 1.1. based on these studies, implement WP-RPA 4.8 requiring interim 1.2. if more extensive improvements are needed, WP BiOP Action Agencies through COP process, described in WP-RPA 4.13 (COP studies)	2.8
			2.10
			4.8
			4.13
199 - SUB -	(WP BiOp WQ RPA's) Release flows from Green Peter dams to meet flow requirements South Santiam River that protect spawning, rearing and migration of salmonids	1. Update facilities to minimize adverse effects of ramping on fish stranding, redd desiccation, and loss of habitat.	2.1
			2.3
			9
			2.4
			2.5
			2.6
201 - SUB -	Evaluate feasibility and effectiveness of interim Foster and Green Peter dams.	1. Consider temperature control structure at most appropriate dam in next term effective at restoring normative conditions or reducing the LFT. 1.1. resolve potential conflicts between meeting TMDL temperature targets operating dams to maximize benefits to Chinook and steelhead	5.1
			5.1.2

			5.1.3
202 - SUB - SSA	Manage current CHS Harvest Mitigation Hatchery Program broodstock to meet mitigation goals, but do so in demographic impacts of program do not pose unacceptable risk to extant productivity of a reintroduction/stock that reintroduction/supplementation program above Foster	1. In the long term the VSP CHS diversity target is to maintain an average total basin pHOS rate <30%, which is coupled with improvements in access and passage and other LFT's affecting capacity and productivity. 1.1. promote a short and long term conservation hatchery strategy that will lead produced population	6.1.1
			6.2.2
		2. In the short term, implement actions and associated RME below Foster facility that will reduce genetic and demographic risk to extant NOR 2.1. improving trap attraction, operation, and sorting at new Foster facility 2.2. minimize the recycling of HOR fish entering trap, maximize the recycling 2.3. adjust juvenile rearing and release strategies as feasible 2.4. modifying other hatchery rearing practices 2.5. increase harvest of HOR fish while minimizing risk to NOR fish 2.6. maintain HOR tagging efforts and CHS spawning surveys to support above efforts opportunities to "outplant" NOR fish to other locales in lower subbasin	6.1.2
			6.1.3
			6.2.2
			6.2.4
			4.3
		3. Over long term, increase NOR production below Foster through WP BiOp RPA water quality/quantity improvements and other actions addressing (reintroduction) program (CSP) or set of strategies to be implemented above 3.1. adopt as template the new ODFW recommendations for reintroduction and modify as needed based on results of scientific review of program type	6.2.3
4. After Recovery Plan is adopted, develop a new HGMP with conservation details.	6.1.1		

Table 9.2.3. High priority recovery actions for the North Santiam subbasin from the Upper Willamette River Conservation and Recovery Plan for Chinook Salmon and Steelhead (ODFW and NMFS 2011). The table summarizes the recovery plan action, including potential subactions, listing factor and limiting factor addressed, strategy and VSP objective, and also references the associated Willamette Project Biological Opinion RPA (NMFS 2008).

Action ID and Priority	Recovery Action	Sub Action or Task	Associated BiOp RPA
			4.8

157 - SUB-NS	Implement WP-RPA's 4.12.3 and 4.12.4 to provide safe and effective downstream passage through Detroit reservoir, Detroit and Big Chim Dams for Hyacinths and Reefs.	1: Study conceptual alternatives for downstream passage through dam complex reservoir(s).	4.10
		1.1. based on studies and design alternatives, construct and operate new by 2023 or sooner	4.11
167 - SUB-NS	(see LFT 2b for handling uncertainty of any remaining mortality not associated with stress associated with Minto Collection facility.	WP-RPA's 5.2.1 and 5.2.2 in subbasin below Big Chim Dam by implementing the for water quality to meet adult fish needs by resolving inadequacies of 1.1. build temperature control structure at Detroit Dam; WP- RPA 5.2.	4.12.3 (relation RPA 5.2)
			5.1
			5.1.1
			5.1.2
			5.1.3
			5.1.4
		5.1.5	
5.2			
		2. Monitor metrics of fish health at different times and locations above whether the problem is solely related to Flood Control/hydropower effects, or is exacerbated by other issues that impact fish condition and maturity (i.e. disease, toxins)	no RPA measure
173 - SUB-NS	(WP, BiOp, water Quality RPA's) Release flows from Detroit/Big Chim Dams to flow targets in the North Santiam River that protect and migration of salmonids.	1. Operate facilities to minimize adverse effects of ramping on fish stranding, redd desiccation, and loss of habitat.	2.1
			2.3
			9
			2.4
			2.5
			2.6
			2.7
			2.10
175 - SUB-NS	Construct, operate, and evaluate a temperature control structure at Detroit Dam to release water that more closely resembles normative water temperatures, reduces TDG exceedences, and meets TMDL temperature targets downstream of NS dams and	1. Resolve any potential conflicts between meeting TMDL temperature targets downstream of dams and operating dams to maximize benefits to steelhead.	5.2
		1. In the long term the VSP diversity target is to maintain an average total	6.1.1

-NS	Mitigation Hatchery Program (HMP) facilities and broodstock to meet mitigation goals, but do so in a manner that the genetic and demographic impacts of program do not pose unacceptable risk to extant NOR fish populations or compromise long term productivity of a reintroduction stock that would preclude success of conservation reintroduction/supplementation program above Detroit Dam.	basin pHOS rate <10%, which is coupled with improvements in access and passage and other LFT's affecting capacity and productivity. 1.1. promote a short and long term conservation hatchery strategy that will lead to a viable	6.2.2
		2. In the short term, implement actions and associated RME below Minto facility that will reduce genetic and demographic risk to extant NOR population	6.1.2
		2.1. improve trap attraction, operation, and sorting at new Minto facility; (open earlier and longer)	6.1.3
		2.2. modify hatchery fish recycling program (end sooner)?	6.2.2
		2.3. acclimate, release, or evaluate other rearing strategy modifications	6.2.4
		2.4 modify other hatchery rearing practices	6.2.4
		2.5. encourage greater harvest of hatchery fish above Upper Bennett Dam 2.6. maintain HOR tagging efforts and CHS spawning surveys to support above efforts	4.3
3. Over long term, increase NOR production below Minto through WP BiOp RPA water quality/quantity improvements at Detroit, and other actions addressing LFT's.	6.2.3		
3.1. further develop a conservation supplementation (reintroduction) program (CSP) or set of strategies to be implemented above Detroit dam 3.2. adopt as template the new ODFW recommendations for reintroduction and			
4: If above actions and WP BiOp RPA actions related to access, temperature, and flow do not get pHOS to acceptable levels below Minto, and after a period of 2 life cycles (depending on ocean conditions) install and operate sorter at Upper and Lower Bennett Dams and modify existing regulations accordingly.	no RPA measure		
5: After Recovery Plan is adopted, develop a new HGMP with conservation details	6.1.1		

Table 9.2.4. High priority recovery actions for the McKenzie subbasin from the Upper Willamette River Conservation and Recovery Plan for Chinook Salmon and Steelhead (ODFW and NMFS 2011). The table summarizes the recovery plan action, including potential subactions, listing factor and limiting factor addressed, strategy and VSP objective, and also references the associated Willamette Project Biological Opinion RPA (NMFS 2008).

Action ID and Priority	Recovery Action	Sub Action or Task	Associated BiOp RPA
212 - SUB -	Restore adult access of natural origin fish to historic habitat	3. Since the new trap below Cougar Dam has been constructed, implement WP-RPA's 4.3, 4.4, and 4.5 to improve handling and transport protocols.	4.5
		4. Implement WP-RPA 4.7 to improve and increase the number of suitable "outplanting=release" sites above Cougar Dam.	4.7

MK	blocked by large dams.	5. Continue to provide appropriate temperatures to attract adults into the SF McKenzie River.	5.4
215 - SUB - MK	Provide safe and effective downstream passage through Cougar reservoir and dam.	1. Implement WP-RPA 4.12.1 that studies and reports on conceptual alternatives for downstream passage through dam complex and fish distribution in Cougar Reservoir. 1.1. based on studies and design alternatives, construct and operate a new downstream fish passage facility	4.12.1
219 - SUB - MK	Increase retention and sourcing of gravels and other materials below USACE facilities with a combination of habitat improvements, targeted flows, and augmentation.	1. Improve channel complexity below dams with existing habitat restoration and enhancement program on USACE lands.	7.2
		2. Augment depleted areas below dams with most appropriate source and size composition. 2.1. provide appropriate channel complexity to retain material	no RPA measure
		3. Prioritize some projects within the comprehensive habitat restoration program to include projects that improve incubation habitat.	7.1.2
		4. Implement to collect large wood in USACE reservoirs, and strategically promote placement of this wood in areas below dams that promote sourcing of incubation gravels	7.3
		5. To the extent that restoration at revetment sites implemented through WP RPA 7.4 leads to greater interaction and movement of floodplain substrates, fund as high priority projects those that produce incubation	7.4
		6. Couple these improvements with Environmental Flow opportunities as described in RPA 2.7. to distribute gravel and other materials.	2.7
228 - SUB - MK	Operate McKenzie subbasin WP flood control/hydropower projects same time complementing the downstream passage benefits of spillage, and minimizing exceedence of TDG (total managing ramping rates to minimize stranding of early Chinook life stages.	1. Temperature control is now possible at Cougar Dam with the Selective 2005 1.1. use RME under WP RPA 5.4 to evaluate the effects of the Cougar temperature structure operation on TDG 1.2. resolve remaining issues with ODEQ regarding TMDL temperature targets 1.3. evaluate whether temperature control at other WP facilities in the subbasin	5.4
		2: Monitor TDG below each large dam to identify the operating and TDG. 2.1. based on monitoring TDG, design structural and/or operational modifications to dams to reduce project-related TDG exceedences	5.4
		1. In the long term the VSP diversity target is to maintain an average total basin pHOS rate <10%, which is coupled with improvements in access and passage and other LFT's affecting capacity and productivity. To achieve this, feasible pHOS target of <5%.	6.1.1 6.2
		2.1. adopt new ODFW recommendations for lower level of integration of NOR NOK fish above Leaburg Dam.	6.1.4

230 - SUB -	Manage current CHS Harvest Mitigation Hatchery Program broodstock to meet mitigation do so in a manner that the genetic and demographic impacts of program do not wild fish population	2.2. improve attraction flows and entry to McKenzie Hatchery	6.1.3
		2.3. modify Leaburg Hatchery ladder facility to assist in removing HOR CHS and collecting NOR CHS for passage above Leaburg	6.2.2
		2.4. minimize the recycling of HOR adults entering traps at Leaburg ladder and	6.2.4
		2.5. increase harvest of HOR fish below Leaburg dam while minimizing risk to NOR fish	4.3
		2.6. evaluate pHOS reduction effectiveness of the on-going partial program subbasin; modify harvest regulation zones as needed to shift fishery effort to	6.2.3
		2.8. resolve technical/feasibility issues of upgrading Leaburg Dam EWEB facility with engineering subgroup to achieve better sorting and handling of	
		2.9. maintain HOR tagging efforts and CHS spawning surveys to support above efforts	
		3. Over long term, increase NOR fish production below and above Leaburg through WP BiOp RPA water quality/quantity improvements and other	
		3.1. once adult and juvenile passage issues are resolved at Cougar Dam through WP BiOp RPA's, develop a conservation strategy and allocation schedule where it is defined under what demographic conditions and passage improvement conditions the HOR outplants above Cougar Dam could be	

Table 9.2.5. High priority recovery actions for the Middle Fork Willamette subbasin from the Upper Willamette River Conservation and Recovery Plan for Chinook Salmon and Steelhead (ODFW and NMFS 2011). The table summarizes the recovery plan action, including potential subactions, listing factor and limiting factor addressed, strategy and VSP objective, and also references the associated Willamette Project Biological Opinion RPA (NMFS 2008).

Action ID and Priority	Recovery Action	Sub Action or Task	Associated BiOp RPA Measure
236 - SUB - MF	Provide safe and effective downstream passage through the Dexter/Lookout Point flood Control/hydropower complex	1. Manage reservoir levels for more normative flows (pre-dam flows) to pass inflow year round, except during flood control operations. 1.1. WP-RPA 4.8: Evaluates interim measures to improve downstream passage within Project constraints, within COP process. Measures could include evaluating dam & facility constraints on how far down the reservoirs could be dropped. Need to assess cost/benefits of this action, relative to authorizations, storage loss for flow augmentation, and pollution abatement. Therefore it is unclear that a drawdown alternative will be	4.8
		2. Build, evaluate, and report on effectiveness of Head of Reservoir (HOR) Dam. Permanent HOR does not occur if not effective at increasing overall Point.	4.9

	produced above Lookout Pt.		4.10
		3. Supporting studies to evaluate passage improvement alternatives through Lookout Pt/Dexter reservoirs and dams	4.11
		4. Investigate feasibility of fish passage at Lookout Pt. Dam. Based on studies and design alternatives, construct new downstream fish passage - does not secure guarantee structural downstream passage improvements at Lookout Pt. Dam	4.12.2
237 - SUB - MF	Provide safe and effective downstream passage through Fall Creek reservoir and dam.	1. Implement WP-RPA 4.8.1 to drawdown in autumn as an operational measure to reduce smolt injury, supported by effectiveness RME. 1.1. WP BiOp entities clarify timeline and standard for evaluating this drawdown option	4.8.1
		2. If drawdown is deemed insufficient to provide safe and effective passage, measures through WP-RPA 4.8 and WP-RPA 4.13 (COP process). 2.1. study conceptual alternatives for downstream passage through dam complex based on fish distribution	4.8
		in the reservoir. 2.2. based on COP studies and design alternatives, consider construction and operation of structural protections and/or fish bypass facilities	4.13
238 - SUB -MF	Provide safe and effective downstream passage through Hills Creek reservoir and dam.		4.8
		1. Within WP-RPA's 4.10 and 4.11, assess passage through Hills Creek reservoir and dam.	4.10
			4.11
		2. Use these data and results within language of WP-RPA 4.12 to support SLAM modeling to reduce uncertainty regarding need to improve downstream survival in the future - needed to support decisions regarding need to construct and operate new	4.12
239 - SUB -MF	(see relation to LFT 2m) Reduce pre-spawn mortality by reducing injury and stress related to fish handling at and above USACE facilities.	1. WP-RPA 4.6 to rebuild, operate, and maintain the Adult Fish Collection and handling facilities below Dexter and Fall Creek dams for expanded and improved sorting and handling of wild and hatchery fish	4.6.3
			4.6.4
		2. Support objective of WP-RPA 4.6 by implementing WP-RPA's 4.3, 4.4, and 4.5 to improve and standardize handling and transport protocols, and by implementing WP- RPA 4.7 to improve and increase the number of suitable outplanting sites above Lookout Pt. Dam, Hills Creek Dam, and Fall Creek dams. 2.1. assess through RME whether these show demonstrable improvement	4.3
			4.4
			4.5
			4.7
			5.1
			5.1.2
		1. Improve water quality in subbasin below MF Willamette dams by	5.1.3

-MF	actions) Resolve uncertainty of any remaining pre-spawn mortality not associated with injury and stress associated with Middle Fork Willamette Collection facilities.	implementing WP RPA's 5.1 and 5.2 for water quality to meet adult fish needs by resolving inadequacies of temperature and TDG profiles.	5.1.4
			5.1.5
		2. Monitor metrics of fish health at different times and locations above Willamette Falls to further delineate whether the problem is solely related to Flood Control/hydropower effects, or is exacerbated by other issues that impact fish condition and maturity (i.e. disease, toxins). <small>this is not a current WP BiOp BPA</small>	no RPA measure
242 - SUB -MF	(same as for LFT 7c [NS] and 7e [MK]) Increase retention and sourcing of gravels and other materials below USACE facilities with a combination of habitat improvements, targeted flows, and augmentation.	1. Improve channel complexity below dams with existing habitat restoration and enhancement program on USACE lands.	7.2
		2. Augment depleted areas below dams with most appropriate source and size composition, 2.1. provide appropriate channel complexity to retain material	no RPA measure
		3. Prioritize some projects within the comprehensive habitat restoration program to include projects that improve incubation habitat.	7.1.2
		4. Implement to collect large wood in USACE reservoirs, and strategically promote placement of this wood in areas below dams that promote sourcing of incubation gravels	7.3
		5. To the extent that restoration at revetment sites implemented through WP RPA 7.4 leads to greater interaction and movement of floodplain substrates, fund as high priority projects those that produce incubation	7.4
		6. Couple these improvements with Environmental Flow opportunities as described in RPA 2.7. to distribute gravel and other materials.	2.7
248 - SUB -MF	Operate WP flows in MF subbasin to mimic the natural temperature regime in the fall	'- A water Temperature Control Facility would presumably need to be constructed, which is not a certainty in current term of the WP BiOp	
NEW ACTION	LWF BiOp, water Quality BPA by BPA, flows from Look Out Creek, and Hills Creek dams to targets in the Middle Fork that protect spawning, incubation, rearing and	1. Operate facilities to minimize adverse effects of ramping on fish stranding, habitat.	2.1
			2.3
			9
			2.4
			2.5
			2.6
			2.7
			2.1
		1. In the long term the VSP CHS diversity target is to maintain an average total basin pHOS rate <10%, which is coupled with improvements in access and passage and other LFT's affecting capacity and productivity. Promote a naturally-produced population, focused in the area above MF Willamette dams.	6.1.1
			6.2.2

249 - SUB - MF	Manage current CHS Harvest Hatchery Program (HMP) facilities and broodstock to do so in a manner that the genetic and demographic impacts of program do not populations or compromise long term productivity of a would preclude success of reintroduction/supplementation program above MF	2. Actions and goals to control pHOS are modest below Dexter and Falls Creek isolation becomes an issue) but to minimize further genetic risk impacts, for a future reintroduction effort using MF Willamette HMP stock, actions in	6.1.2
		2.1. improve trap attraction, operation, and sorting at new Dexter facility	6.1.3
		2.2. adjust juvenile rearing and release strategies as feasible	6.2.2
		2.4. maintain HOR tagging efforts and CHS spawning surveys to support above efforts	6.2.4
		2.5 adopt new ODFW	4.3
3. Over long term, further develop a conservation supplementation (reintroduction) program (CSP), or set of strategies to be implemented above	6.2.3		
3.1. improve other LFI's associated with passage and pre-spawn mortality, then			
3.2. adopt as template the new ODFW recommendations for reintroduction and modify as needed based on results of scientific review of program type			
4: After Recovery Plan is adopted, develop a new HGMP with conservation details	6.1.1		
235 - SUB	Within the 2008 BiOp COP process and BRT activities, eventual reintroduction and above Hills Creek Dam is a viable alternative to other VSP criteria to meet desired status risk level (Chinook-Low)	- Current WP BiOp does not formalize specific passage improvements for Hills Creek Dam, but indicates outplant sites may be established above dam, of determining future passage needs in next term of BiOp, implement actions in current WP BiOp	4.10
		1. As other LFT's improve and NOR abundance increases above Lookout Pt., monitor adult fish movement below Hills Creek dam to determine if large the benefits of continued trap-and-haul from the new Dexter facility	4.11
		1.1. if so, evaluate within COP studies the feasibility of a future adult fish 1.2. in support of this effort, implement the juvenile downstream passage RPA's 4.10 and 4.11	
2. Use these data and results within language of WP-RPA 4.12 to support BRT uncertainty regarding need to improve downstream survival at Hills Creek - needed to support decisions regarding need to construct and operate new downstream fish passage facility at Hills Creek Dam in next term of the WP BiOp	4.12		

Table 9.2.6. High priority recovery actions for the Upper Willamette ESU/DPS from the Upper Willamette River Conservation and Recovery Plan for Chinook Salmon and Steelhead (ODFW and NMFS 2011). The table summarizes the recovery plan action, including potential subactions, listing factor and limiting factor addressed, strategy and VSP objective, and also references the associated Willamette Project Biological Opinion RPA (NMFS 2008).

Action ID and Priority	Recovery Action	Sub Action or Task	Associated BiOp RPA Measure
102 - FWC ALL	(In coordination with LFI 9a) Increase protection and implementation of appropriate instream flows for UWR barriers to coordinating with relevant management agencies on water withdrawals, b) loads, and c) not issuing anymore water rights within subbasins.	1. Designate instream flow targets at the mouth of the tributaries (or other to ensure sufficient water is available for fish. 1.1. Planning Team subgroup to ID priority or problem reaches and future 1.2. ID process to get designation established 1.3. Encourage RME of flow needs for various life stages	2.3 7
		2. OWRD to pass rules to enforce and protect stored water released from USACE reservoirs for fish purposes, and ensure that water is not diverted by water users with natural water rights or by illegal water use. And 6. OWRD to complete conversion of Minimum Perennial Streamflows for stored water (in USACE/USBOR reservoirs) to instream water rights in NS, SSA, MK, and MF subbasins.	2.9
		5. Revise integrated flow management or water diversion plan to ensure sufficient water remains instream for fish during critical periods. Plan should (USACE, USBOR, OWRD, ODFW, irrigation districts, and local water users). 5.1. ensure future USBOR water service contracts do not reduce instream flow 5.2. USBOR water service contracts should allow for interruption of service during low water years to protect instream flows 5.3. release additional flows from storage dams to meet USBOR water service contracts while still meeting instream flows 5.4. for non USBOR contracts, OWRD stop issuing new live flow rights	3
			3.1
			3.2
3.3			
3.4			
22 - ESU-ADM	Expand monitoring of populations to track status and trends of VSP metrics and improve understanding of the composition of natural spawners (what type/pHOS? how many? where from?)	1. Coordinate with WP BiOp monitoring.	no specific RPA

13 – ESU-ADM	Adequately fund and implement RME needed to answer critical uncertainties related to the assumptions under which the recovery plan was developed.	TBD	n/a
23 – ESU-ADM	Determine funding sources and strategies to implement monitoring needed to track progress towards achieving recovery goals.	TBD	n/a
116 - MST-AMO	Protect and restore aquatic habitat function at confluence areas of Willamette River tributaries.	1. Prioritize some BPA funding of the WP BiOp habitat restoration projects (WATER HTT) to these areas. See WP-RPA's 7.1.2 and 7.1.3.	7.1.1
		2: Identify other funding or coordination opportunities so that restoration at confluence sites is substantial enough to provide meaningful ecological benefits to anadromous fishes.	7.1.2
			7.1.3
120 - MST/SUB-AMO	Evaluate the potential for releasing habitat-forming flows from WP Project storage dams to complement habitat restoration activities in the mainstem Willamette River.	1. WP BiOp RPA 2.7; Work through WATER Flow Management Team to identify opportunities to provide environmental pulse flows that can create new and sustain existing fish habitat in the lower subbasins and the mainstem Willamette River 1.1. these types of flows may not be met in low flow years, so evaluate the	2.7
		2. Complete The Nature Conservancy's Sustainable Rivers study process. 2.1. implement and evaluate the study recommendations in Coast Fork and Middle Fork, and conduct similar Nature Conservancy studies in other subbasins where flows have been significantly modified	7.1.2
110 - MST-ALL	Look for opportunities to remove unnecessary revetments or increasing setbacks in the Mainstem Willamette and in subbasins.	1. For sites that were funded or placed by the USACE, the WP BiOp Action Agencies conduct assessment to identify high priority revetment through WP BiOp RPA 7.4, and fund restoration at these sites. 2. Replace revetment segments with bioengineering and natural features	7.4
69 – EST-ALL	Manage flow during dry years to maintain and improve habitat conditions for ESA-listed species.	TBD	FCRPS RPA14
111 - MST-ALL	Release flows from WP dams storage dams to meet flow targets in mainstem Willamette River for rearing and migration.	1. Ensure sufficient spring flows to allow downstream migration of juveniles, channels. 2. Coordinate annual flow operations with ODFW and NMFS and other parties to optimize project operations for UWR ESU's, while meeting flood control and other mandatory project purposes.	n/a

<p>AMO MS 1-</p>	<p>Increase overall channel complexity, floodplain to the mainstem Willamette River to increase and improve salmonid rearing and migration habitat.</p>	<p>1. Work with regional federal and state entities to resolve larger issues related to future increased channel meandering and the factors that inhibit it now. success will be high. 3. Find opportunities within these priority reaches with willing landowners by offering economic incentives, conservation easements, leases, or acquisition. Provide technical assistance and analyses on risks and benefits to</p>	<p>n/a</p>
------------------	---	---	------------

Washington Department of Fish and Wildlife - WDFW (4)

Recommendation 1: ...because of the importance of Subbasin plans, progress towards implementation of these plans should be reported on periodically. This could be as simple as documenting which measures are currently funded and those which have not been funded.

Recommendation 1: Maintain the current language under Program Framework, page 4, expressed in the 2009 Program with modifications shown here in bold:

*“...That is, the Council’s Program is designed to link to and accommodate the needs of other programs in the basin that affect fish and wildlife. This includes meeting the needs of the ESA by **describing the kinds of ecological change needed to improve the survival and productivity of the diverse fish and wildlife populations in the basin. implementing the Program to be consistent with ESA regulatory findings in biological opinions and rulemakings; incorporating ESA recovery criteria into Program biological objectives; and incorporating ESA recovery plans, including implementation plans, into Basin-wide and subbasin management plans and multi-year action plans.**”*

Recommendation 2: Update the current language under Implementation and Performance, page 5, expressed in the 2009 Program with modifications shown here in bold:

*“The Council comprehensively revised the Program in 2000 with the addition of the current program framework, added specific measures and objectives for the mainstem in 2003, and then developed and adopted the subbasin management plans into the Program in 2004-05. Together, these elements provide a coordinated and integrated plan for fish and wildlife actions across the basin. The federal, state, and tribal governments have been working since then with local partners to expand the subbasin plans into ESA recovery plans for areas of the basin that include ESA-listed populations. **The Council is planning a subsequent amendment process in 2009-2010 to update the subbasin management plans and Program objectives to reflect these and other recent planning developments.** Many ESA recovery plans for salmon and steelhead are now complete. Those recovery plans used the 2004-05 subbasin plans and this cycle should continue, so the subbasin plans should now incorporate the final ESA recovery plans.”*

Recommendation 3: The ISAB points out a concern that the subbasin planning process was a great idea that has been diminished by the lack of support or continued engagement of the original stakeholders in recent years. The ISAB also recommends that the Council reconsider a planning process that utilizes other existing structures and uses salmon and steelhead recovery domains as an example. The Council should implement the ISAB’s recommendations for landscape and subbasin planning, including the need to actively encourage and support a mid-scale (perhaps Province-level which is close to the recovery domains) planning process that supports and utilizes and existing partnerships and organizations.

Recommendation 12: Under Updating Existing Subbasin Management Plans, page 58, insert *“A number of recovery plans have been completed. The subbasin management plans will be updated by 2014 to explicitly incorporate final recovery plans. For additional recovery plans*

completed after 2014, the Council will accept recommendations to incorporate those plans in the appropriate subbasin plans.”

Recommendation 14: Under Appendix E: Subbasin and Basinwide Measures, add to Columbia Gorge Province the Mid-Columbia Steelhead Recovery plan and the Lower Columbia Salmon and Steelhead Recovery Plan.

Recommendation 17: Revise first paragraph under *Updating Existing Subbasin Management Plans* on Page 58 as follows: “*The Council recognizes that work has continued in some subbasins to refine and update management plans. The Council also recognizes that work has continued outside the Program, such as recovery planning, and the **Tribal Pacific Lamprey Restoration Plan**, that will influence implementation of the Council’s Program at the subbasin level. The Council recognizes the objectives and recommended actions of the Tribal Pacific Lamprey Restoration Plan as updates to subbasin plans.*”

From the ISAB Review of the 2009 Fish and Wildlife Program, which WDFW recommended in its entirety:

1. **Actively encourage and support a mid-scale planning process** that provides the context for a more complete landscape approach, but not necessarily with physical boundaries of the established subbasins. A strict reliance on subbasins as the formal structure for mid-scale planning should be reconsidered if other structures exist. Benefits of engaging collaborative structures that already exist or develop through local efforts may be better adaptive learning, communication, and trust.
2. **Actively highlight particularly effective planning efforts**, and the partnerships and organizations that support them, as outlined in the discussion of social engagement and leadership. This would step beyond the summary of existing subbasin coordination to publicize unique approaches in the implementation of landscape and ecological restoration. The intent is to share and focus attention of all planning groups on specific efforts that demonstrate particular success and innovation.
3. **Require proposed and continuing projects to demonstrate their relevance in the broader context of mid-scale social and ecological conditions.** This requirement was basic to the original subbasin planning efforts, but understanding of habitat capacity and the physical and biological processes relevant at the scales of entire watersheds and riverbasins are continually being refined. Proponents should clearly demonstrate the anticipated benefits of any project relative to the scale of the problem being addressed.
4. **Evaluate how effectively mid-scale planning efforts articulate objectives for artificial and natural production and integrate supplementation and habitat restoration efforts.**
5. **Conduct periodic surveys of stakeholders to determine the effectiveness of communication and coordination efforts and to identify the most influential pathways for new information.**

Washington Governor's Salmon Recovery Office - WGSRO (5)

Sub-basin plans and review/ update

Each sub-basin plan has its own particular nuances and characteristics. Certain initiatives associated with each sub-basin define the appropriate level and scale as well as the investment required for updating.

While a majority of the cited recommendations are relevant, and can both be implemented and incorporated through-out the entirety of the Columbia basin, specific sub-basin issues could necessitate and thus benefit from a more comprehensive review of the sub-basin plans. The Council is in a position to provide leadership, along with the resources to support local capacity. Specific regional-based program amendment recommendations by definition would need to engage the specific stakeholders in order to review and subsequently revise the local planning documents, which could include but not be limited to: updating sub-basin level goals and objectives; conducting local climate models; setting data management and reporting standards; verifying and aligning the data; analyzing the amount of data that has not been thoroughly vetted; along with other regionally specific endeavors.

Such a comprehensive strategy of sub-basin review should aim to include sub-basins above and below Bonneville, and as well as the estuary, plume and near-shore areas under the influence.

Yakima Basin Fish & Wildlife Recovery Board YBFWRB (8)

The Program should commit the Council and federal Action Agencies to continuing to work with local and regional partners (including Washington State's recovery boards) to develop long-term implementation plans that, if implemented, would recover target species to levels that meet both ESA recovery criteria and the broader mandates of the Northwest Power Planning Act. These implementation plans should build on the existing work described above and be consistent with existing subbasin plans. In places (e.g. areas where all anadromous species are listed) it may be possible to simply adopt ESA recovery plans and associated implementation planning efforts. In other areas, where significant actions are needed for non-listed target species and ecosystems, or to recover listed species to levels well beyond meeting delisting criteria, additional work will be needed to identify appropriate goals and criteria and identify the actions that will be needed to meet those goals. We believe that it is critical that broadly accepted implementation plans be available prior to 2018, so that they are able to inform 1) development of the next FCRPS Biological Opinion, 2) future Fish Accords, 3) the next round of Council project reviews, 4) subsequent NOAA 5-year status reviews and any associated recovery plan updates, and 5) other local and regional efforts.

Indian Tribes and Tribal Organizations

Coeur d'Alene Tribe - CdAT (13)

The Coeur d'Alene Tribe specifically proposes the following to be included in the new Program:

- j. Updates to Subbasin Plans consistent with subbasin planning guidance and stakeholder participation.

Columbia River Inter-Tribal Fish Commission - CRITFC (14)

Recommendation 17: Revise first paragraph under *Updating Existing Subbasin Management Plans* on Page 58 as follows: “*The Council recognizes that work has continued in some subbasins to refine and update management plans. The Council also recognizes that work has continued outside the Program, such as recovery planning, and the **Tribal Pacific Lamprey Restoration Plan**, that will influence implementation of the Council’s Program at the subbasin level. The Council recognizes the objectives and recommended actions of the Tribal Pacific Lamprey Restoration Plan as updates to subbasin plans.*”

Confederated Tribes and Bands of the Yakama Nation - CTBYN (17)

Recommendation: Develop a White Salmon River sub-basin plan.

Recommendation 17: Revise first paragraph under *Updating Existing Subbasin Management Plans* on Page 58 as follows: *The Council recognizes that work has continued in some subbasins to refine and update management plans. The Council also recognizes that work has continued outside the Program, such as recovery planning, and the Tribal Pacific Lamprey Restoration Plan, that will influence implementation of the Council's Program at the subbasin level. The Council recognizes the objectives and recommended actions of the Tribal Pacific Lamprey Restoration Plan as updates to subbasin plans.*

Confederated Tribes of Grand Ronde - CTGR (18)

Recommendation 45: The ISAB points out a concern that the subbasin planning process was a great idea that has been diminished by the lack of support or continued engagement of the original stakeholders in recent years. The ISAB also recommends that the Council reconsider a planning process that utilizes other existing structures and uses salmon and steelhead recovery domains as an example. The Council should implement the ISAB's recommendations for landscape and subbasin planning, including the need to actively encourage and support a mid-scale (perhaps Province-level which is close to the recovery domains) planning process that supports and utilizes and existing partnerships and organizations.

Recommendation 46: The NPCC should amend the Lower Columbia Subbasin Plan (1 paragraph on Page 2-18) to include more specific objectives and strategies for eulachon. BPA should fund protection, mitigation and enhancement of eulachon through the following measures:

- Develop biological objectives for eulachon that are consistent with recovery.
- Monitor and evaluate eulachon abundance in the Columbia River via annual spawning stock biomass surveys following protocols developed by the Washington Department of Fish and Wildlife and acoustic estimates by NOAA - NWFS.
- Monitor and evaluate the causal mechanisms and migration/behavior characteristics affecting survival of larval eulachon during their first weeks in the Columbia River estuary, plume, and ocean environments.
- Monitor and evaluate the ecological importance of the tidal freshwater, estuary, plume, and nearshore ocean environments to the viability and recovery of eulachon in the Columbia River Basin.
- Develop an oceanographic indicators ecosystem conditions model to determine the significance of plume and nearshore ocean conditions that affect eulachon survival.
- Adjust the timing, magnitude, and frequency of hydrosystem flows (especially spring freshets) entering the estuary and plume to better reflect the natural hydrologic cycle, improve access to habitats, and provide better transport of coarse sediments and nutrients in the estuary and plume if these are found to be limiting to eulachon life history.

Recommendation 47: The NPCC should adopt into the Willamette Subbasin Management Plan:

- The 2008 Willamette Biological Opinion (NMFS 2008) http://www.nwr.noaa.gov/hydropower/willamette_opinion/index.html
- The Upper Willamette River Conservation and Recovery Plan (NMFS 2011) for Chinook salmon and steelhead www.nmfs.gov/pr/pdfs/recovery/chinook_steelhead_upperwillametteriver.pdf

The Program should adopt ESA delisting goals and broad sense goals of the *Upper Willamette River Conservation and Recovery Plan for Chinook Salmon* (ODFW and NMFS 2011) as Biological Objectives in the Willamette Subbasin Plan.

Table A. Viable Salmonid Population (VSP) scenarios from the Upper Willamette Table

X - Conservation and Recovery Plan for Chinook Salmon and Steelhead (Recovery Plan) (ODFW and NMFS 2011). This table summarizes the VSP Extinction Risk for abundance and productivity (A&P), diversity (DIV), and spatial structure (SS) for each population under current conditions, at delisting, and at broad sense recovery. This information is summarized from Tables 6-11 through 6-21 and Table 10-1 in the Recovery Plan. The Recovery Plan also details threat reduction scenarios and ESA threats delisting criteria.

Species and Population	Current VSP Extinction Risk			Desired VSP Extinction Risk at Delisting			Broad Sense Recovery VSP Extinction Risk			
	in		Overall Current	os	E	Overall Status at	Abundance Target	i	>	Overall Status -

Chinook				Status	a	l		Delisting	at delisting	†	a	n	Broad Sense	ce Target
Clackamas	M	M	L	Moderate	VL	L	L	Very Low	2,514	VL+	L	L	Very Low+	5,618
Molalla	VH	H	H	Very High	I-1	H	L	High	699	VL	L	L	Very Low	2,627
Santiam N	VH	H	H	Very high	L	M	L	Low	5,428				Very Low	
Santiam S	VH	M	M	Very High	M	M	L	Moderate	3,115				Very Low	
Calapooia	VH	H	VH	Very High	H	H-M	L	High	598	VL+	L	L	Very Low+	1.615
McKenzie	VL	M	M	Low	VL+	L	L	Very Low+	10,916	VL+	L	H	Very Low	12.613
Willamette	VH		H	Very High				Low	5,820	.			Very Low	
Steelhead														
Molalla	V	M	M	Low	VL	L	L	Very Low	3,226	VL+	L	L	Very Low+	19470
Santiam N	L	M		Low	VL	L	L	Very Low	8,362	VL+	L	L	Very Low+	10,013
Santiam S	V	M	M	Low	VL	L	L	Very Low	3,912	VL+	L	L	Very Low+	5,371
Calapooia	M	M	VH	Moderate	M	M	M	Moderate	522	VL+	L	L	Very Low+	4,471

– *specific target not developed

¹From the Recovery Plan Chapter 6: Delisting Goals, Criteria and Scenarios - ²From the Recovery Plan Chapter 10: Broad Sense Recovery

Recommendation 48 — On page 59 of the Program, the Confederated Tribes of Grand Ronde would like to incorporate Tribal specific program measures listed in Table B as Implementing Measures Recommended for 2008 — 2018.

Rationale: The Tribe has identified several implementation measures that are of high priority that are not being addressed. These measures need to be adopted into the 10 Year Plan.

Recommendation 49: Priority actions identified in the Upper Willamette River Conservation and Recovery Plan for Chinook Salmon and Steelhead to address priority limiting factors should be identified as measures to be funded under the Program. In addition, these measures should consider and address the limiting factors for Pacific lamprey. Adopt the following high priority **measures** as an update to the Council's Willamette Subbasin Plan: The tables below (Tables C — G) represent actions from the Upper Willamette River Conservation and Recovery Plan for Chinook Salmon and Steelhead (ODFW and NMFS 2011) that are considered high priority to implement (fully or in part) in the Willamette Basin within the term of the Northwest Power and Conservation Council's Columbia River Basin Fish and Wildlife Program. The tables also include a reference to the associated Willamette Project Biological Opinion (WP BiOp) RPA, if appropriate, as many of the high priority Recovery Plan actions area also included in the WP BiOp. The Recovery Plan also includes numerous other actions that should be adopted into the Fish and Wildlife Program as recommended in Section 5.2, of the Columbia River Basin Fish and Wildlife Manager's Reference for Developing 2014 Fish and Wildlife Program Amendment Recommendations.

Confederated Tribes of the Umatilla Indian Reservation - CTUIR (19)

Recommendation 17: Revise first paragraph under Updating Existing Subbasin Management Plans on Page 58 as follows: The Council recognizes that work has continued in some subbasins

to refine and update management plans. The Council also recognizes that work has continued outside the Program, such as recovery planning, and the Tribal Pacific Lamprey Restoration Plan, that will influence implementation of the Council's Program at the subbasin level. The Council recognizes the objectives and recommended actions of the Tribal Pacific Lamprey Restoration Plan as updates to subbasin plans.

Cowlitz Indian Tribe - CIT (22)

Fully integrate the Plan with Endangered Species Act planning activities and products The Lower Columbia Salmon Recovery and Fish & Wildlife Subbasin Plan published by the LCFRB in 2004 was adopted by NOAA in 2006 as an interim ESA recovery plan and by the Council in 2005 as the subbasin plan for 8 lower Columbia subbasins. The plan was updated in 2010 and incorporated into the broader Lower Columbia ESU plan adopted by NOAA in July 2013. These plans provide the framework of goals, strategies, measures, and actions guiding recovery efforts throughout the Lower Columbia. This planning effort has been further refined with the development of site specific restoration assessments in several subbasins. The Council should incorporate the Recovery Plan and associated habitat strategies and project identification assessments to speed progress toward biological objectives, and support close coordination between recovery partners between plan updates.

Recommendation 3: The ISAB points out a concern that the subbasin planning process was a great idea that has been diminished by the lack of support or continued engagement of the original stakeholders in recent years. The ISAB also recommends that the Council reconsider a planning process that utilizes other existing structures and uses salmon and steelhead recovery domains as an example. The Council should implement the ISAB's recommendations for landscape and subbasin planning, including the need to actively encourage and support a mid-scale (perhaps Province-level which is close to the recovery domains) planning process that supports and utilizes and existing partnerships and organizations.

Recommendation 12: Under Updating Existing Subbasin Management Plans, page 58, insert “***A number of recovery plans have been completed. The subbasin management plans will be updated by 2014 to explicitly incorporate final recovery plans. For additional recovery plans completed after 2014, the Council will accept recommendations to incorporate those plans in the appropriate subbasin plans.***”

Recommendation 17: Revise first paragraph under *Updating Existing Subbasin Management Plans* on Page 58 as follows: “*The Council recognizes that work has continued in some subbasins to refine and update management plans. The Council also recognizes that work has continued outside the Program, such as recovery planning, and the **Tribal Pacific Lamprey Restoration Plan**, that will influence implementation of the Council's Program at the subbasin level. The Council recognizes the objectives and recommended actions of the Tribal Pacific Lamprey Restoration Plan as updates to subbasin plans.*”

Recommendation 1: ... because of the importance of Subbasin plans, progress towards implementation of these plans should be reported on periodically. This could be as simple as documenting which measures are currently funded and those which have not been funded.

Recommendation 1: Maintain the current language under Program Framework, page 4, expressed in the 2009 Program with modifications shown here in bold:

*“...That is, the Council’s Program is designed to link to and accommodate the needs of other programs in the basin that affect fish and wildlife. This includes meeting the needs of the ESA by **describing the kinds of ecological change needed to improve the survival and productivity of the diverse fish and wildlife populations in the basin. implementing the Program to be consistent with ESA regulatory findings in biological opinions and rulemakings; incorporating ESA recovery criteria into Program biological objectives; and incorporating ESA recovery plans, including implementation plans, into Basin-wide and subbasin management plans and multi-year action plans.**”*

Recommendation 2: Update the current language under Implementation and Performance, page 5, expressed in the 2009 Program with modifications shown here in bold:

*“The Council comprehensively revised the Program in 2000 with the addition of the current program framework, added specific measures and objectives for the mainstem in 2003, and then developed and adopted the subbasin management plans into the Program in 2004-05. Together, these elements provide a coordinated and integrated plan for fish and wildlife actions across the basin. The federal, state, and tribal governments have been working since then with local partners to expand the subbasin plans into ESA recovery plans for areas of the basin that include ESA-listed populations. **The Council is planning a subsequent amendment process in 2009-2010 to update the subbasin management plans and Program objectives to reflect these and other recent planning developments. Many ESA recovery plans for salmon and steelhead are now complete. Those recovery plans used the 2004-05 subbasin plans and this cycle should continue, so the subbasin plans should now incorporate the final ESA recovery plans.**”*

Kootenai Tribe of Idaho - KTOI (24)

Recommendation 1: ... because of the importance of Subbasin plans, progress towards implementation of these plans should be reported on periodically. This could be as simple as documenting which measures are currently funded and those that have not been funded.

Nez Perce Tribe - NPT (25)

Page 5, first paragraph.

Reword to: "The Council comprehensively revised the Program in 2000 with the addition of the current program framework, added specific measures and objectives for the mainstem in 2003, and then developed and adopted the subbasin management plans into the Program in 2004-05. Together, these elements provide a coordinated and integrated plan for fish and wildlife actions across the basin. The federal, state, and tribal governments have been working since then with local partners to expand the subbasin plans into ESA recovery plans for areas of the basin that include ESA-listed populations. Many ESA recovery plans for salmon and steelhead are now complete. Those recovery plans used the 2004-05 subbasin plans and this cycle should continue, so the subbasin plans should now incorporate the final ESA recovery plans."

Page 58, Paragraph 1.

Reword to: "The Council recognizes that work has continued in some subbasins to refine and update management plans. The Council also recognizes that work has continued outside the Program, such as recovery planning, and the Tribal Pacific Lamprey Restoration Plan, that will

influence implementation of the Council's Program at the subbasin level. The Council recognizes the objectives and recommended actions of the Tribal Pacific Lamprey Restoration Plan as updates to subbasin plans."

Spokane Tribe of Indians - STOI (26)
SUBBASIN PLAN IMPLEMENTATION

The region invested a substantial amount of time and finances into the subbasin planning process. Although this process was a high priority at the time, the subbasin plans remain less than fully implemented. The Spokane Tribe of Indians supports fully integrated subbasin plan implementation operational losses.

Set forth the Program's general funding priorities:

...Updates to Subbasin Plans consistent with subbasin planning guidance and stakeholder participation.

Upper Columbia United Tribes - UCUT (27) (minus Colville; w/ Kalispel caveats)

Set forth the Program's general funding priorities:

...Updates to Subbasin Plans consistent with subbasin planning guidance and stakeholder participation.

Upper Snake River Tribes -USRT (28)

Recommendation 1: Maintain the current language under Program Framework, page 4, expressed in the 2009 Program with modifications shown here in bold:

*"...That is, the Council's Program is designed to link to and accommodate the needs of other programs in the basin that affect fish and wildlife. This includes meeting the needs of the ESA by **describing the kinds of ecological change needed to improve the survival and productivity of the diverse fish and wildlife populations in the basin. implementing the Program to be consistent with ESA regulatory findings in biological opinions and rulemakings; incorporating ESA recovery criteria into Program biological objectives; and incorporating ESA recovery plans, including implementation plans, into Basin-wide and subbasin management plans and multi-year action plans.**"*

Recommendation 2: Update the current language under Implementation and Performance, page 5, expressed in the 2009 Program with modifications shown here in bold:

*"The Council comprehensively revised the Program in 2000 with the addition of the current program framework, added specific measures and objectives for the mainstem in 2003, and then developed and adopted the subbasin management plans into the Program in 2004-05. Together, these elements provide a coordinated and integrated plan for fish and wildlife actions across the basin. The federal, state, and tribal governments have been working since then with local partners to expand the subbasin plans into ESA recovery plans for areas of the basin that include ESA-listed populations. **The Council is planning a subsequent amendment process in 2009-2010 to update the subbasin management plans and Program objectives to reflect these and other recent planning developments.** Many ESA recovery plans for salmon and steelhead are now complete. Those recovery plans used the 2004-05 subbasin plans and this cycle should continue, so the subbasin plans should now incorporate the final ESA recovery plans."*

Recommendation 3: The ISAB points out a concern that the subbasin planning process was a great idea that has been diminished by the lack of support or continued engagement of the original stakeholders in recent years. The ISAB also recommends that the Council reconsider a planning process that utilizes other existing structures and uses salmon and steelhead recovery domains as an example. The Council should implement the ISAB's recommendations for landscape and subbasin planning, including the need to actively encourage and support a mid-scale (perhaps Province-level which is close to the recovery domains) planning process that supports and utilizes and existing partnerships and organizations.

Recommendation 12: Under Updating Existing Subbasin Management Plans, page 58, insert “*A number of recovery plans have been completed. The subbasin management plans will be updated by 2014 to explicitly incorporate final recovery plans. For additional recovery plans completed after 2014, the Council will accept recommendations to incorporate those plans in the appropriate subbasin plans.*”

Recommendation 17: Revise first paragraph under *Updating Existing Subbasin Management Plans* on Page 58 as follows: “*The Council recognizes that work has continued in some subbasins to refine and update management plans. The Council also recognizes that work has continued outside the Program, such as recovery planning, and the **Tribal Pacific Lamprey Restoration Plan**, that will influence implementation of the Council's Program at the subbasin level. The Council recognizes the objectives and recommended actions of the Tribal Pacific Lamprey Restoration Plan as updates to subbasin plans.*”

Recommendation 1: ... because of the importance of Subbasin plans, progress towards implementation of these plans should be reported on periodically. This could be as simple as documenting which measures are currently funded and those that have not been funded.

Federal Agencies

NOAA Fisheries - NOAA (30)

Recommendation:

[Insert] *Many ESA recovery plans for salmon and steelhead are now complete. Those recovery plans used the 2004-05 subbasin plans. This cycle should continue, so the subbasin plans should now incorporate the final ESA recovery plans* [End Insert].

Recommendation:

The Council should implement the ISAB's recommendations for landscape and subbasin planning, and consider a planning and implementation process that utilizes other existing partnerships and organizations such as those established for salmon recovery. This recommendation does not mean the Council should engage a whole new planning process; rather, it should work with and utilize products and processes that are already working at the mid-scale.

Recommendation 1:

Follow through on the Program's intent to update existing subbasin management plans.

Recommendation 2:

[insert] *A number of recovery plans have been completed. The subbasin management plans will be updated by 2014 to explicitly incorporate final recovery plans. For additional recovery plans completed after 2014, the Council will accept recommendations to incorporate those plans in the appropriate subbasin plans.* [End Insert]

Environmental and fishing groups -- and individuals in support (either by explicit connection or by similar recommendations)

Clark Fork Coalition - CFC (51)

Support implementation of existing subbasin plans in the Bitterroot and Blackfoot Subbasins.

The Bitterroot and Blackfoot Subbasin Plans are relatively recent additions to the Council's Program. Rather than abandoning the subbasin planning process altogether as suggested by the ISAB (p. 57), the Coalition recommends that the Program provide support for the implementation of projects to address limiting factors identified in the Bitterroot and Blackfoot subbasin plans. The planning process in both basins generated a significant amount of momentum and interest in taking the plans to the next level by various private, state and federal entities. Since the 2010 amendment process that incorporated these plans into the Program, the Coalition and our partners have sought ways to secure support for implementing these plans. Currently, there are no clear paths to seek investment in the Bitterroot and Blackfoot through the Fish and Wildlife Program, despite a number of shovel-ready projects that would directly address limiting factors identified in the respective plans. We urge the Council to consider establishing mechanisms for non-traditional partners to seek support for this work.

Native Fish Society - NFS (60)

Even though salmonids are adapted to habitat disturbance, an important ecological function, a requirement for wild salmonid sustaining ecological conditions in subbasins, mainstem and estuary habitats is needed so that salmonids are able to complete their life cycle.

Amendment Proposal: In order to accomplish this important objective, the Council would require that subbasin and fish recovery plans would include an agreement between fish management agencies and land and water management agencies and private land owners in each area affecting salmonid life cycle requirements to develop plans that effectively support salmon life history requirements.

From the ISAB Review of the 2009 Fish and Wildlife Program, which The Native Fish Society recommended in its entirety:

1. **Actively encourage and support a mid-scale planning process** that provides the context for a more complete landscape approach, but not necessarily with physical boundaries of the established subbasins. A strict reliance on subbasins as the formal structure for mid-scale planning should be reconsidered if other structures exist. Benefits of engaging collaborative structures that already exist or develop through local efforts may be better adaptive learning, communication, and trust.
2. **Actively highlight particularly effective planning efforts**, and the partnerships and organizations that support them, as outlined in the discussion of social engagement and leadership. This would step beyond the summary of existing subbasin coordination to publicize unique approaches in the implementation of landscape and ecological restoration. The intent is to share and focus attention of all planning groups on specific efforts that demonstrate particular success and innovation.

3. **Require proposed and continuing projects to demonstrate their relevance in the broader context of mid-scale social and ecological conditions.** This requirement was basic to the original subbasin planning efforts, but understanding of habitat capacity and the physical and biological processes relevant at the scales of entire watersheds and riverbasins are continually being refined. Proponents should clearly demonstrate the anticipated benefits of any project relative to the scale of the problem being addressed.
4. **Evaluate how effectively mid-scale planning efforts articulate objectives for artificial and natural production and integrate supplementation and habitat restoration efforts.**
5. **Conduct periodic surveys of stakeholders to determine the effectiveness of communication and coordination efforts and to identify the most influential pathways for new information.**

Regional Fisheries Enhancement Group Coalition - RFEG (63)

Pg 18 Non-native Species Strategies and P. 22 Implementation Guidelines

Comment: Not all subbasin plans are up-to-date. New issues (such as non-native species) have arisen in some subbasin plans since the plans were adopted. On P. 58, it is stated that updating of subbasin plans will be voluntary, without any dedicated funding. It seems unlikely that all subbasin plans will be updated, and therefore will become further outdated. Other local planning documents should be used in addition for guiding strategies and priorities, such as salmon recovery plans and related work and/or implementation schedules. These reflect “adaptive management,” allowing for priorities to **change with changing circumstances, including new threats and the achievement of habitat recovery goals.**

Trout Unlimited - TU (67)

From the ISAB Review of the 2009 Fish and Wildlife Program, which Trout Unlimited recommended in its entirety:

1. **Actively encourage and support a mid-scale planning process** that provides the context for a more complete landscape approach, but not necessarily with physical boundaries of the established subbasins. A strict reliance on subbasins as the formal structure for mid-scale planning should be reconsidered if other structures exist. Benefits of engaging collaborative structures that already exist or develop through local efforts may be better adaptive learning, communication, and trust.
2. **Actively highlight particularly effective planning efforts,** and the partnerships and organizations that support them, as outlined in the discussion of social engagement and leadership. This would step beyond the summary of existing subbasin coordination to publicize unique approaches in the implementation of landscape and ecological restoration. The intent is to share and focus attention of all planning groups on specific efforts that demonstrate particular success and innovation.
3. **Require proposed and continuing projects to demonstrate their relevance in the broader context of mid-scale social and ecological conditions.** This requirement was basic to the original subbasin planning efforts, but understanding of habitat capacity and the physical and biological processes relevant at the scales of entire watersheds and

riverbasins are continually being refined. Proponents should clearly demonstrate the anticipated benefits of any project relative to the scale of the problem being addressed.

4. **Evaluate how effectively mid-scale planning efforts articulate objectives for artificial and natural production and integrate supplementation and habitat restoration efforts.**
5. **Conduct periodic surveys of stakeholders to determine the effectiveness of communication and coordination efforts and to identify the most influential pathways for new information.**

w:\2014 amends\staff work\for nov committee mtg\23 subbasin_subbasinplans summary for committee.docx