WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

PROPOSED
Salmon Recovery Funding Board Meeting Agenda

March 20, 2014
Natural Resources Building, Room 172, Olympia, WA

Time: Opening sessions will begin as shown; all other times are approximate.

Order of Presentation:
In general, each agenda item will include a presentation, followed by board discussion and then public comment. The board makes decisions following the public comment portion of the agenda item.

Public Comment:
If you wish to comment at a meeting, please fill out a comment card and provide it to staff. Please be sure to note on the card if you are speaking about a particular agenda topic. The chair will call you to the front at the appropriate time.

You also may submit written comments to the Board by mailing them to the RCO, attn: Jen Masterson at the address above or at jennifer.masterson@rco.wa.gov.

Special Accommodations:
If you need special accommodations to participate in this meeting, please notify us at 360/725-3943 or TDD 360/902-1996.

MARCH 20, 2014

OPENING AND WELCOME

9:00 a.m. **Call to Order** — *Chair*
- Determine Quorum
- Introduce New Board Member
- Review and Approve Agenda ***(Decision)***
- Approve December Meeting Minutes ***(Decision)***

MANAGEMENT AND PARTNER REPORTS

9:10 a.m. **1. Management Report**
A. Director's Report — *Kaleen Cottingham*
- Legislative and Policy Updates — *Nona Snell*
- Performance Update (written only)

B. Financial Report

9:25 a.m. **2. Salmon Recovery Report**
A. Salmon Section Report — *Tara Galuska*
B. GSRO Report — *Brian Abbott*
C. Overview of Juvenile and Adult Salmon Data Exchange Network — *Keith Dublanica*

9:50 a.m. **3. Reports from Partners**
A. Council of Regions Report — *Jeff Breckel*
B. Washington Salmon Coalition Report — *Darcy Batura*
C. Regional Fisheries Enhancement Groups — *Lance Winecka*
D. Board Roundtable: Other Agency Updates — *SRFB Agency Representatives*

10:15 a.m. **General Public Comment:** *Please limit comments to 3 minutes*

BOARD BUSINESS: BRIEFINGS

10:20 a.m.	**4. Puget Sound Steelhead Plan Status**	*Jeanette Dorner, Puget Sound Partnership* *Elizabeth Babcock, NOAA Fisheries*
11:20 a.m.	**BREAK**	
11:35 a.m.	**5. Riparian Buffer Update**	*Leslie Connelly* *Steve Landino, NOAA* *Jim Weber, NWIFC*
12:35 p.m.	**LUNCH**	

BOARD BUSINESS: DECISIONS

1:30 p.m.	**6. Early Action Puget Sound Acquisition and Restoration Project Approval Request** Skagit River System Cooperative (#14-1058)	*Marc Duboiski*
1:45 p.m.	**7. Monitoring** A. Revised Monitoring Recommendations from the Stillwater Report and Subcommittee Discussions B. TetraTech Effectiveness Monitoring Contract 2014 Scope of Work C. Funding for Monitoring Video	*Brian Abbott* *Keith Dublanica*
3:45 p.m.	**BREAK**	
4:00 p.m.	**8. Conference and Lead Entity Support** A. Salmon Recovery Conference 2015 Briefing and Funding Request B. Sponsorship of Columbia River Inter-tribal Fish Commission "Future of Our Salmon" Conference C. Reallocation of Lead Entity funds to support priorities of the Washington Salmon Coalition	*Tara Galuska* *Brian Abbott*

BOARD BUSINESS: BRIEFINGS

4:15 p.m.	**9. Overview of the Department of Fish and Wildlife's Habitat Program**	*Dave Price* *Tim Quinn* *Margen Carlson* *Lisa Veneroso*
5:15 p.m.	**ADJOURN**	

SALMON RECOVERY FUNDING BOARD SUMMARIZED MEETING AGENDA AND ACTIONS
DECEMBER 4-5, 2013

Agenda Items without Formal Action

Item	Follow-up Actions
Item 1: Management Report	No follow-up actions requested.
Item 2: Salmon Recovery Management Report	No follow-up actions requested.
Item 3: Reports from Partners	No follow-up actions requested.
Item 5: Manual 18 Updates Proposed for 2014	Research will be done regarding riparian buffers and presented to board in March.
Item 7: Overview of Estuary and Salmon Restoration Program (ESRP) and projects	No follow-up actions requested.
Item 8: Recommendations for Monitoring Strategy	Sub-committee will meet to operationalize the recommendations and bring back options for the board to consider in March
Item 10: Salish Sea Marine Survival Research Project	No follow-up actions requested.

Agenda Items with Formal Action

Item	Formal Action	Follow-up Actions
Minutes	Approved October meeting minutes	No follow-up actions requested.
Service Recognition: Josh Brown #2013-03	Approved	No follow-up actions requested.
Item 4: 2013 Grant Round	Approved $1,195,165 in SRFB funds for projects and project alternates in the Hood Canal Region Approved $361,245 in PSAR funds for projects in the Hood Canal Region Approved $2,700,000 for projects in Lower Columbia.	No follow-up actions requested.

	Approved $360,000 for projects in the Northeast Region. Approved $6,795,035 in SRFB funds for projects and project alternates in the Puget Sound Region. Approved $13,017,394 in PSAR funds for projects and project alternates in the Puget Sound Region. Approved $10,823,625 in PSAR funds for Large Capital projects in the Puget Sound Region. Approved $1,598,400 for projects and project alternates in the Snake River Region. Approved $1,953,000 for projects and project alternates in the Upper Columbia Region. Approved $1,620,000 for projects and project alternates in the Coastal Region. Approved $1,776,600 for projects and project alternates in the Yakima Mid-Columbia Region.	
Item 6: Appeal of Review Panel Decision: Whidbey Camano Land Trust, Dugualla Heights Lagoon Restoration, RCO Project #11-1290	Approved Option 1 as presented.	No follow-up actions requested.
Item 9: Request by Department of Fish and Wildlife to Use Returned Funds for Fish – in/Fish-out Monitoring	Approved $208,000 in returned funds for fish-in/fish-out monitoring.	No follow-up actions requested.

SALMON RECOVERY FUNDING BOARD SUMMARY MINUTES

Date: December 4, 2013
Place: Olympia, WA

Salmon Recovery Funding Board Members Participating:

David Troutt, Chair	Olympia	**Megan Duffy**	Department of Natural Resources
Phil Rockefeller	NWPCC		
Nancy Biery	Quilcene	**Rob Duff**	Department of Ecology
Bob Bugert	Wenatchee	**Jennifer Quan**	Department of Fish and Wildlife
Josh Brown	Kitsap County		
		Susan Cierebiej	Department of Transportation

It is intended that this summary be used with the materials provided in advance of the meeting. A recording is retained by RCO as the formal record of meeting.
Carol Smith was excused.

Opening and Welcome

Chair David Troutt called the meeting to order at 9:05 a.m. and a quorum was determined. Director Cottingham introduced Susan Cierebiej as a new member of the board, representing the Department of Transportation.

Megan Duffy arrived at 9:12 a.m.

Phil Rockefeller moved to adopt the agenda.
Seconded by: Nancy Biery
Motion: APPROVED

Phil Rockefeller moved to approve the minutes from October 2013.
Seconded by: Nancy Biery
Motion: APPROVED

Phil Rockefeller moved to approve the service recognition for Josh Brown, #2013-03
Seconded by: Nancy Biery
Motion: APPROVED

Briefings

Item 1: Management Report

Director Cottingham presented information as described in her director's report. She reviewed staffing changes in the Recreation and Conservation Office, including: Alice Rubin, a grant manager working on SRFB grants; Jen Masterson RCO performance management specialist; Cindy Gower, an administrative assistant supporting the Recreation and Conservation grant section; and Kiri Kreamer, who has joined GSRO as an intern.

Legislative and Policy Updates:

Nona Snell presented information as described in the staff memo. She noted that none of the issues that were addressed in the special session will be affecting salmon recovery, but there was talk of a transportation package, before the session starts in January. It could impact in some way fish passage barriers. She also addressed the mitigation matching project from the 2013-15 budget.

Item 2: Salmon Recovery Management Report

Brian Abbott and Tara Galuska reviewed the salmon recovery management report as presented in the staff memo. Tara Galuska stated that we have wrapped up the grant round. She stated that FFFPP was given $2 million in 2013-15 biennium and ESRP was given $10 million from the legislature. She addressed Item 2A, which shows the list of 22 recently completed projects since the last board meeting.

Brian Abbott presented an update on the communication plan, and the RFQQ proposals which were due on November 22, 2013. An evaluation team meeting took place December 3 to review the 12 responses to the RFQQ. They have decided to interview the top 3 firms in early January.

Director Cottingham added that she recently sent Brian Abbott back to Washington D.C. to meet with the congressional staffers. Brian made the trip with Jennifer Quan from WDFW and was guided by Rich Innes, contractor and Sam Ricketts from the Governor's D.C. Office.

Tara Galuska noted that Jennifer O'Neil from Tetra Tech has been selected as a new member on the SRFB technical review panel.

3: Reports from Partners

Jeff Breckel, Council of Regions: Jeff Breckel from the Lower Columbia Fish Recovery Board gave a brief update on regional priorities in terms of working with the board. He noted that the Council of Regions is looking at the monitoring strategies, and expressed the concerns about the Stillwater recommendations. He noted that they don't accurately reflect the message that they were trying to provide to them, and to the board. He explained that they are anxious to be working with the board to ensure that the board's monitoring investments not only meet the needs of the board, but also in terms of making good decisions about how the board's money is invested. He also touched on the funding picture and how they were going to deal with that. The regions would like to see a proactive approach over the next few months, to start looking at where are the real priorities.

Darcy Batura, Lead Entity Advisory Group: Darcy Batura gave an update on the Lead Entity Advisory Group. She noted that they have decided to change their name to better reflect their collective work. Their new name is the Washington Salmon Coalition – Community Based Salmon Recovery. They will be working over the next few months to reflect changes, both internally and to their partners, to make sure everyone is aware of the name change, and why they made it. The group also received training on legislative process from Phil Rockefeller, Raquel Crosier, and Nona Snell. This is done in preparation for their Legislative Outreach Day, scheduled for January 22, 2014. Batura introduced new Lead Entity coordinators: Todd Andersen with Kalispel-Pend Oreille Lead Entity; Jane Atha with Chehalis Basin Lead Entity; Scott Brewer with Hood Canal Coordinating Council; and Jason Wilkinson with WRIA 8. She also congratulated Richard Brocksmith on his new position as Executive Director of the Skagit Watershed Council.

Batura also gave an update on what they have been doing the last 3 months. This includes working closely with their sponsors, review panel, and RCO Staff to finalize their projects lists. She thanked everyone for their support on behalf of the Washington Salmon Coalition.

Lance Winecka, Regional Fisheries Enhancement Groups (RFEGs): Lance Winecka from the South Puget Sound Salmon Enhancement Group gave an update on sustainable funding for the RFEG program and explained the new budget proviso.

Jennifer Quan, WDFW: Jennifer Quan gave a follow up to the recent Washington D.C. trip. She explained that they met with almost all of the House of Representatives staff. She described some of the discussions and the importance of working with the federal agencies. There was a discussion on Puget Sound and EPA funding, PSNRP and Aquatic Invasive Species. Quan explained that there was a lot of conversation regarding the administrative use of PCSRF funding.

Susan Cierebiej, Department of Transportation: WSDOT constructed 19 fish passage projects in 2013, opening up nearly 60 miles of habitat for salmon. WSDOT is also planning to construct 10 fish passage projects next summer. They are currently designing another 34 projects to be constructed in the next biennium. WSDOT will be also installing log jams in the Skagit River, which will improve habitat for fish.

Megan Duffy, Department of Natural Resources: DNR anticipates starting the NEPA/ SEPA process for their Aquatics HCP in early April. The HCP cover 29 species, including salmonids. It also addresses three activities -- log storage, aqua culture, and over water structures. DNR welcomes comments on their HCP once it is released.

Phil Rockefeller NWPCC: Provided an update on the Northwest Power and Conservation Council. He stated that the council has two main missions, one being to develop the regional power plan, and the other is to develop and periodically update a fish and wildlife program to address the impacts of the hydropower operations in the Columbia and Snake River on salmon, steelhead, sturgeon, and wildlife in general. He explained the council also engages in ocean and estuary research activities, and their work extends into tributaries, and not just the main stem of the Columbia River. The council is currently updating the Fish and Wildlife program.

Rob Duff, Ecology: He noted that the Marine Resources Advisory council met for the first time. This council was set up in response to Governor Gregoire's blue ribbon panel on ocean acidification.

General Public Comment:

There was no general public comment.

DECISIONS

Item 4: 2013 Grant Round

Tara Galuska, Salmon Section Manager, presented the information from the memo for item 4. She gave an overview of the 2013 Grant Round and noted that the total amount of dollars to be awarded at this meeting is approximately $42 million. The total approved for the grant round, including match is approximately $81 million. There are no projects of concern remaining on the lists, although the review panel did condition 22 projects.

Salmon Section Managers gave a presentation on some featured projects proposed for funding. Projects of note are:

- Hood Canal - Dosewallips Riparian Corridor Acquisition – Phase 2, #13-1211;
- Lower Columbia - Wahkiakum Conservation District - Seven Springs Restoration, #13-1083;
- Washington Coast - The Nature Conservancy, Hurst Creek Habitat Restoration Pilot Project, #13-1077;
- Northeast - Kalispel Tribe, 13-1357 LeClerc Creek Restoration Phase I;
- Puget Sound - King County, Natural Resources and Parks, 13-1135 Upper Carlson Floodplain Reconnection;
- Snake Region - Asotin County PUD, Alpowa Instream Post Assisted Log Structures, #13-1399;
- Middle Columbia Region - Kittitas Conservation Trust, Cle Elum Side Channel Restoration Phase II, #13-1314;
- Upper Columbia Region - Trout Unlimited, Methow Valley Irrigation District (MVID) Instream Flow Improvement, #13-1334.

Kelley Jorgensen, Review panel chair, presented the information as stated in the memo for item 4. Jorgensen noted the review panel has 7 members. She introduced the 3 that were present at the meeting. Jorgensen shared a few observations from the review panel, including:

- Large complex multiphase projects – The Panel is reviewing more of these types of project. They are more costly and come in at application in phases.
- Process-based restoration projects – The preference is for projects to pursue process based restoration. If this cannot be accomplished, the Panel recommended the Board consider strong encouragement for lead entities and regions to acquire property that allows process based restoration to occur.
- Data gaps/research projects – Projects continue to be submitted as data gaps that do not meet all the eligibility requirements. These will continue to receive project of concern status.

- Program vs. Project - Some projects come in that are more programmatic in nature, such as nutrient enhancement. If a trend continues, the Board may want to develop criteria for these types of projects.
- Lessons learned – monitoring – The panel sees a clear need for analysis of monitoring data and a need to share the data with project sponsors in order to inform project development.
- Sea-level rise analysis- The Board may want to consider setting a horizon year for sea level when used in project designs.
- Cost benefit analysis-The Panel has no true tool for true cost benefit analysis of projects.
- Typical project element cost ranges – The Panel could develop a document that shows the range of project costs that is typical for project implementation for project sponsors.

Jorgensen also reviewed two noteworthy projects for the 2013 grant round:

13-1336, Chewuch River Permanent In stream project which will place 10 cfs back in the river during lower flows and stops diversion of water in the late fall;

13-1334, MVID Instream Flow Improvement Project that will change the point of diversion for the MVID and compensate landowners for well development. It will also develop piping system on the east side of the Methow River

Comments from the Regions:

Hood Canal Coordinating Council, Scott Brewer – Provided an over view of the Hood Canal Coordinating Council, and updates over the past year. He explained that the council has withheld some of the PSAR funds to focus on what the top salmon recovery priorities are for the Hood Canal. He noted that HCCC is asking for the board's support, patience and understanding as they move through this process of prioritization for salmon recovery. They are on task to have a final report by March.

Lower Columbia Fish Recovery Board, Jeff Breckel – Breckel stated that PCSRF funds are the primary funds available in the Lower Columbia region. This year they are asking for funding for 17 projects and that they all address their highest priority tiers. In this grant round they have 8 restoration projects, 7 design projects, and 1 acquisition project. He noted that they work with a very diverse group of project sponsors, and noted that they have 8 different sponsoring organizations this year. Breckel stated that he would prefer more contact with the review panel in the future.

Northeast, Nick Bean and Todd Andersen – Nick introduced Todd Anderson, who will be the new Lead Entity Coordinator. Bean presented information from their grant round. Northeast has submitted 3 projects this grant round, with no projects of concern. He gave his appreciation to review panel and grant mangers on their work this year. Bean provided a synopsis of the Northeast Region and some of their efforts in salmon recovery this year. He noted their work with Invasive Species, and the removal of northern pike in the Pend Oreille River. This project has about a year left and has been very successful.

Puget Sound, Jeanette Dorner – Jeanette Dorner thanked the members for their service, and work on the board. She provided an overview of PSP, and explained the 22 listed Chinook population, steelhead, bull trout, and Hood Canal summer chum. She noted that they presented 11 projects for early action, and an additional 79 projects that they are hoping to have funded in today's meeting. There will still be PSAR money to obligate to projects throughout the rest of the year. PSP is working closely with RCO staff to ensure the money will be going to the best projects.

Dorner asked for the board's assistance on a project that was pulled entitled Marine Survival of Chinook in the San Juans. The project was proposed and reviewed as part of the San Juan Lead Entity project list, and was recently removed due to the project's inability to meet the SRFB project eligibility requirements. She has asked for the board to consider the "Marine Survival of Chinook in the San Juans" project proposal. Cottingham noted that the only funds that can be used for this project is our federal PCSRF money. San Juan LE does have additional funds in their PSAR allocation that can be shifted to an eligible project, thus freeing up federal funds to cover this project.

Member Quan provided information in support of the project, and noted that the WDFW director has made Marine survival in Puget Sound a priority.

Snake River, Steve Martin - Thanked the board for the allocation framework that they have provided. Also thanked the review panel for the technical review they have given, and gave a brief overview of the recovery efforts going on in the Snake River Region.

Upper Columbia, Derek Van Marter – Joy Juelson presented on behalf of Upper Columbia. She gave an overview of the consolidation of the three Lead Entities. She explained that they have 20 projects this year, 7 of which are above the funding line. She gave information on the Roaring Creek Instream Flow and Barrier Removal project, which is at the top of their list. She noted that over half of the wild steelhead are spawning in the Roaring Creek. She thanked GSRO and the staff at RCO for their work on the projects.

Washington Coast, Miles Batchelder – Miles thanked the chair and SRFB on their work. He explained Washington Coast's efforts to protect ESA listings throughout the state. He believes they had a great grant round this year, but explained that there were some challenges with local committees and not agreeing with the technical review panel. He thanked the technical review panel on their tremendous work throughout the year. Batchelder explained that the Washington Coast Sustainable Salmon plan was finally completed this summer, with the help of the Nature Conservancy who provided them with a full time staff member. He noted that the Coast is developing an implementation schedule.

Yakima Basin, Alex Conley – John Foltz began by presenting on behalf of Klickitat County Lead Entity. He noted that there were 2 projects from their Lead Entity on the funding list this year. He thanked Dave Caudill, RCO, GSRO, and the review panel for their work.

Alex Conley present for the Yakima Basin. He highlighted two things: one being Darcy Batura's work with their TAG, and another being their project list.

Tara Galuska provided board members with new motion language, and updated funding tables. She explained that the motions now include the San Juan Marine Survival of Chinook project.

Hood Canal:

Josh Brown moved to approve $1,195,165 in SRFB funds for projects and project alternates in the Hood Canal Region, as listed in Attachment 5 of Funding Report, dated December 4, 2013.
Seconded by: Nancy Biery
Motion: APPROVED

Josh Brown moved to approve $361,245 in PSAR funds for projects in the Hood Canal Region, as listed in Attachment 5 of Funding Report, dated December 4, 2013.
Seconded by: Bob Bugert
Motion: APPROVED

Lower Columbia

Josh Brown moved to approve $2,700,000 for projects, as listed in Attachment 5 of Funding Report, dated December 4, 2013.
Seconded by: Phil Rockefeller
Motion: APPROVED

Director Cottingham noted that this includes two projects for the Klickitat County lead entity.

Northeast

Phil Rockefeller moved to approve $360,000 for projects in the Northeast Region, as listed in Attachment 5 of Funding Report, dated December 4, 2013.
Seconded by: Josh Brown
Motion: APPROVED

Puget Sound

Nancy Biery moved to approve $6,795,035 in SRFB funds for projects and project alternates in the Puget Sound Region, as listed Attachment 5 of Funding Report, dated December 4, 2013.
Seconded by: Phil Rockefeller
Motion: APPROVED

Nancy Biery moved to approve $13,017,394 in PSAR funds for projects and project alternates in the Puget Sound Region, as listed in Attachment 5 of Funding Report, dated December 4, 2013.
Seconded by: Phil Rockefeller
Motion: APPROVED

Nancy Biery moved to approve $10,823,625 in PSAR funds for Large Capital projects in the Puget Sound Region, as listed in Attachment 5 of Funding Report, dated December 4, 2013.
Seconded by: Phil Rockefeller
Motion: APPROVED

Snake River Region

Bob Bugert moved to approve $1,598,400 for projects and project alternates in the Snake River Region, as listed in Attachment 5 of Funding Report, dated December 4, 2013.
Seconded by: Josh Brown
Motion: APPROVED

Upper Columbia Region

Josh Brown moved to approve $1,953,000 for projects and project alternates in the Upper Columbia Region, as listed in Attachment 5 of Funding Report, dated December 4, 2013.
Seconded by: Phil Rockefeller
Motion: APPROVED
Bob Bugert recused himself.

Washington Coast Region

Phil Rockefeller moved to approve $1,620,000 for projects in the Coastal Region, as listed on Funding Table as listed in Attachment 5 of Funding Report, dated December 4, 2013.
Seconded by: Nancy Biery
Motion: APPROVED

Yakima Region

Phil Rockefeller moved to approve $1,776,600 for projects and project alternates in the Yakima Mid-Columbia Region, as listed in Attachment 5 of Funding Report, dated December 4, 2013.
Seconded by: Josh Brown
Motion: APPROVED
Director Cottingham noted that 2 projects for Klickitat LE are included.

BRIEFINGS

Item 5: Manual 18 Updates Proposed for 2014

Tara Galuska presented the information as described in memo for item 5. She gave an overview of Manual 18, and its purpose in the grant round, and then went on to highlight an overview of proposed changes for 2014:

- Grant Round Schedule
  - Maintain similar schedule as 2013, which eliminates the July feedback loop as an efficiency measure to save time and resources.
- Riparian Projects
  - Allow riparian stewardship projects to be funded under riparian category to protect planting investments.
- Move Salmon Project Proposals out of the body of the Manual into Appendices. Take out any redundancies in questions.
  - Allows sponsors to easily download the proposal applicable to their project.
- Funding Report
  - In the future, we will look at streamlining the report and regional submittals.

Riparian Buffers

Leslie Connelly, RCO policy specialist, provided a background on riparian buffers width guidelines and the National Marine Fisheries Service recommendations for minimum buffer widths. She provided questions to the board to consider regarding adopting a policy on minimum riparian buffer widths:

- Should there be a minimum riparian buffer threshold?
- Where should it apply?
  - Puget Sound agriculture lands only or other geographic areas?
- What types of projects?
  - Projects in which riparian restoration is the main goal or all projects that include some riparian restoration work?
- How should it apply?
  - As an eligibility requirement or part of the review panel's evaluation?
- When should the board act?
  - Now or wait for final recommendations from NOAA?

Connelly also provided pros and cons regarding setting a riparian buffers threshold, staff recommendations and concluded with potential next steps should the board approve the staff recommendation.

General Public Comment:

Todd Bolster, NWIFC- provided comments regarding riparian buffer policy. He states that the NWIFC strongly supports the SRFB moving forward with this decision.

Eli Asher, Cowlitz Indian Tribe – Provided comments that he doesn't support any changes toward a minimum buffer width and asked that the board consider the impact before any decision is made.

Jeff Breckel, LCFRB – Encouraged the board to step back from this and do more research before any decision is made. He believes that this could be a significant issue for his sponsors.

Alex Conley, Yakima Basin- Commented that he is concerned about the effects on the landowners, and that he hasn't heard anyone complain that riparian buffers aren't working on their land. He believes that the SRFB shouldn't fix what is not broken.

Kelley Jorgensen, Review Panel - added some additional information regarding the buffer discussion. Jorgensen explained the variability in cost of buffers, and explained her concerns regarding the riparian buffers.

The board discussed the merits and challenges with setting a minimum riparian buffer for proposed projects. Members expressed concern for how a minimum buffer would be implemented and whether there would be "chilling effect" on applicants submitting riparian restoration projects for funding. Chairman Troutt recommended staff research the impacts on previously funded projects as a case study, meet with external partners to hear more feedback, and come back in March with more information and data as to the impacts of a minimum buffer on SRFB projects. There was no objection with this concept from the board. Staff will look at the impact of riparian buffers on a set of previously funded projects and bring that information to the March board meeting.

Item 6: Appeal of Review Panel Decision: Whidbey Camano Land Trust, Dugualla Heights Lagoon Restoration, RCO Project #11-1290

Marc Duboiski presented the information as explained in the memo for item 6. He explained that the Skagit Watershed Council does not support the grant, as well as the landowners who are not interested in changing the design.

Pat Powell, Whidbey-Camano Land Trust (project sponsor), and Fred Wilmot, President of the Dugualla Heights homeowner's association, detailed their appeal of the SRFB review panel recommendation.

Paul Schlenger and Pat Powers from the SRFB review panel provided information on the technical diagram included in the board memo. Marc Duboiski explained 3 possible options for SRFB to consider:

1 – Allow the current design. Allow the Skagit Watershed Council to remove their PSAR funding. Backfill the grant balance from the Island County lead entity PSAR funding allocation.

2 – Allow WCLT more time to negotiate a higher tide gate elevation closure, or an operation plan with the landowners acceptable to the review panel. Grant expires June 30, 2014.

3 – Terminate the grant, resulting in PSAR funds returned to the lead entities and SRFB funds back to RCO.

A decision was made by the board to adopt option 1 as presented.

Josh Brown moved to approve option #1 as listed above.
Seconded by: Nancy Biery
Motion: APPROVED

Item 7: Overview of the Estuary and Salmon Restoration Program (ESRP) and projects

Betsy Lyons and Mike Ramsey presented the information as described in the memo for item 7. Betsy provided a background of ESRP, and noted that ESRP is managed by WDFW, RCO and PSP through an interagency agreement. She went on to explain that most of the programs funding comes from state bonds appropriated by the legislature in the state capital budget.

Betsy provided an overview of the last ground round, and projects of note:

- Skokomish Estuary Restoration Phase III, Skokomish Flats
- Three Crabs Nearshore and Estuarine Restoration
- Seahurst Park Shoreline Restoration (City of Burien) – underway
- Washington Harbor Restoration (Jamestown S'Klallam Tribe) – recently completed
- Discovery Bay Railroad Grade Removal & Restoration

Betsy provided the board with some opportunities for collaboration. Those include:

- Federal funding partners
- Coordinated floodplain funding
- Storytelling around river deltas
- Supporting tribal treaty rights

Meeting adjourned for the day at 4:56pm.

Date: December 5, 2013
Place: Olympia, WA

Salmon Recovery Funding Board Members Participating:

David Troutt, Chair	Olympia	**Megan Duffy**	Department of Natural Resources
Phil Rockefeller	NWPCC	**Rob Duff**	Department of Ecology
Nancy Biery	Quilcene	**Jennifer Quan**	Department of Fish and Wildlife
Bob Bugert	Wenatchee	**Susan Cierebiej**	Department of Transportation
Josh Brown	Kitsap County		

Carol Smith was excused

Opening and Welcome

Chair David Troutt called the meeting to order at 9:10 a.m. and a quorum was determined.

Item 8: Assessment and Proposed Recommendations for the Board's New Monitoring Strategy

Brian Abbott, Keith Dublanica presented the information as described in the memo for item 8. Jody Lando from Stillwater Sciences was present as well. Abbott provided the history of the SRFB Monitoring program, highlighting the current SRFB strategy (Three –legged stool), and explaining the purpose of why the presentation is being done today. He gave an overview of SRFB-Funded Monitoring Efforts, and presented the board with the six proposed recommendations, that GSRO/RCO staff, Stillwater and SRFB subcommittee developed as a result of the November 22, 2013 meeting. The recommendations are as follows:

1. Establish (or restate) the SRFB goals with respect to monitoring.
2. Develop a functional Adaptive Management Program.
3. Establish an Independent Science Advisory Board.
4. Provide specific requirements of each monitoring component.
5. Resolve IMW implementation problem.
6. Identify how the SRFB can improve coordination with other-statewide monitoring.

A decision was made by the board to continue the board's monitoring subcommittee, which includes David Troutt, Phil Rockefeller, Jennifer Quan and Rob Duff. Brian Abbott, Keith Dublanica and Kaleen Cottingham will continue to provide support and feedback. The purpose of the subcommittee will be to develop options for the board to consider for operationalizing the

recommendations from the Stillwater Report. The subcommittee will address recommendations 1, 4, and 5. After that meeting, the subcommittee will meet with the Council of Regions chair, and WSC chair to address recommendations 2, 3 and 6. Results of these meetings will be brought back to the board in March to consider options for implementing the recommendations. This will also including an updated monitoring program goals and overall strategy.

Rob Duff stated that he would like to see an adaptive management program move forward, as well as a science panel.

Public Comment:

Bruce Crawford, NOAA – provided information in relation to his background with monitoring and gave a very brief history on purpose of the monitoring requirement in the Pacific Coastal Salmon Recovery Fund. The basic question that monitoring should answer is do restoration projects produce more fish.

Jeff Breckel, Alex Conley, Miles Batchelder, Jeannette Dorner, Steve Martin, Council of Regions - Breckel explained that the COR is there to discuss a much broader issue than the two requests presented in Abbott's presentation. He explained that there was a lot more work that has been done that was not fully recognized in the Stillwater report, and they would like to see an opportunity to sit down and work with the SRFB and agencies, to better shape the work that will be happening. He believes that there is more work that could be done to add to the Stillwater report.

Steve Martin*, *Snake River Salmon Recovery Board - agrees that Breckel has summarized everything well. He believes the report failed to recognizes the monitoring efforts done by the regions.

Jeanette Dorner, Puget Sound Partnership - adds that she believes that clarifying SRFB goals is key to the decision making. Dorner explains her concerns on monitoring, and decision making process, and believes it is important to have the opportunity to have the conversation regarding what are the regions developing, what is the SRFB accountable for, and what is the best use for the monitoring funds?

Alex Conley, Yakima Basin - provided his input in regards to the recommendations for the board's new monitoring strategy.

Jennifer O'Neal, Tetra Tech - Jennifer O'Neal explained that in 2009 a review was done of what was working in project effectiveness and what needed to be increased or enhanced. One of the outcomes of that review was for in stream structure projects, and for flood plain enhancement projects we needed to expand that sample size in order to answer the questions of what is working better, and what are some better ways for projects to be implemented on the ground. In 2012, there was an increase by the SRFB in the sample sizes for those categories. So, we added 8 in stream

projects, and another 6 projects in floodplain enhancement. She believes there are still questions to be asked in terms of project effectiveness and there are some ways to address those additional questions as they are coming forward in the next several years.

Jen Bayer, PNAMP - Explains the communication now, isn't as good as it was in the past when the monitoring forum was active. She looks forward to working with Keith Dublanica and her board and further communication and ways to proceed.

Item 9: Request by Department of Fish and Wildlife to Use Returned Funds for Fish-in/Fish-out Monitoring.

Bob Bugert moved to approve $208,000 in returned funds for fish-in/fish-out monitoring.
Seconded by: **Phil Rockefeller**
Motion: **APPROVED**

Item 10: Salish Sea Marine Survival Research Project

Long Live the Kings presented the information as described in the memo for item 10. Jacques White presented a simplified conceptual diagram of the Salish Sea Marine Survival Research Project.

Michael Schmidt, program director for Long live the kings presented background information on the Salish Sea, and mortality occurrence in the Puget Sound. He explained the problem of Marine Survival in the Puget Sound, as well as in other regions. He gave an overview of the Salish Sea Marine Survival Project, the operational structure that will be involved with the project, provided information on the project process, and scope of work. Michael explained some of the factors that are affecting survival, and also briefed the board on research activities, and their results.

Meeting adjourned for the day at 12:30 p.m.

Minutes approved by:

_____ _____

David Troutt, Chair Date

COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

700 NE Multnomah Street, Suite 1200
Portland, Oregon 97232

(503) 238-0667
F (503) 235-4228
www.critfc.org

December 20, 2013

David Troutt
Chairman
Salmon Recovery Funding Board
Recreation and Conservation Office
PO Box 40917
Olympia, WA 98504

Dear Mr. Troutt:

The Columbia River Inter-Tribal Fish Commission (CRITFC) held two successful Future of Our Salmon Conferences in 2011 and 2012. The first conference addressed many critical aspects associated with the salmon life cycle and the second one concentrated on how hatchery policies shape salmon recovery efforts and how they can best serve the needs of the salmon and the region. Both conferences attracted nearly 300 participants who have an investment in Columbia Basin salmon recovery.

The third Future of Our Salmon conference will address the restoration of fish passage at all historical locations in the Columbia River Basin. It is scheduled for April 23-24, 2014 at the Oregon Convention Center in Portland, Oregon. This conference is being hosted by a coalition of Columbia River Basin Tribes and First Nations, which include the Canadian Columbia River Intertribal Fisheries Commission, the Confederated Salish and Kootenai Tribes, the Cowlitz Indian Tribe, the Okanagan Nation Alliance, the Upper Columbia United Tribes, the Upper Snake River Tribes, and the Columbia River Inter-Tribal Fish Commission. Our targeted audience will be tribes, First Nations, federal, state, provincial and local government representatives; public utility districts; Indian, sport, and commercial fishers; environmental organizations, engineers, consulting firms, and the public.

The goal of the 2014 conference will focus on developing a unified strategy to restore fish in the Columbia River Basin so that they can return to their entire historical range. Prior to the conference, a four-day workshop will be held in Spokane, Washington to review recent advances in fish passage technology, identify obstacles, and develop viable solutions. The findings from this workshop will be reported at the conference. Focus areas will include salmon, lamprey, sturgeon, and resident fish.

The Columbia Basin tribes believe that the region needs a common vision to restore naturally spawning fish populations based on practical management, habitat protection, restoration, innovative recovery, and rebuilding programs. Fish are the shared bounty as well as the responsibility of all the people of the Pacific Northwest.

Any contributions from your organization will go towards making the 2014 conference even more effective and will be greatly appreciated. By sponsoring the conference, your organization will benefit from extended exposure through media campaigns, promotional efforts, inclusion in the promotional materials, and an opportunity to be a key player in future salmon recovery decisions.

Multiple levels of commitment will be available and those details can be found in the attached sponsorship flyer. If you have any questions, please contact Aja DeCoteau, CRITFC Watershed Department Manager, at 503-238-0667.

Thank you in advance for your willingness to support the efforts of the CRITFC and other partners as we seek to put fish back in the rivers and protect the watersheds where they live.

Sincerely,

Babtist Paul Lumley
Executive Director

Attachment

December 19, 2013

Stone and Sharlynn Parker

PO Box 448

Leavenworth, Wa 98826

Chelan-Douglas Land Trust

c/o Mickey Flemming

PO Box 4461

Wenatchee, Wa 98807-4461

Dear CDLT,

We would like to thank you for the work you have done in Merritt this summer. We are delighted to have such a significant open space project in our neighborhood and to have been a part of creating it. Please put us on your list of volunteers for maintenance and advising for the stewardship of this area. We love the land and want to help take good care of it. We would also be happy to attend any meetings where our input could be helpful, so please feel free to pass on our contact info/email along so that we could be involved.

This chunk of land is significant to wildlife and to public contact with nature. As the growth of population increases the public contact decreases. As more people move into an area, the less that area is accessible to the public. We wanted to see this wildlife corridor remain as is, and full of things to enjoy. If you look to the east and west of this land the trees have been clear cut, houses built and public access cut off. The views from this "park" are extraordinary: wild mountain goats on the cliff's of Nason Ridge, waterfalls coming off both valley walls, the salmon swimming up stream, beavers sliding in and out of the water, dear, bear, grouse walking through, high snow capped mountains views, and nice big cedar and doug fir trees. Without "open space" lands, all of this winds up with ugly, mean, territorial, unfriendly, with no trespassing signs. We are all stewards to this land and to the earth, if we can't walk where we want, we wont love it, and we wont treat it well. I've seen too many fences, loss of river access, and this is exactly why we need these open spaces mixed in close to private land.

<u>What this does for the area</u>- Anyone driving by can enjoy a few minute walk to the river. If you live in the area this is a nice river access park, and a great asset to our community. There are times in the summer that my family and I walk to this area as

much as 7 days a week, to play in the sand, cool off in the river, or look for morels. I love that nobody is going to shoot me for walking to the river.

You asked me, "What did this land purchase, from the CDLT, do to or for your family?"

The CD Land Trust, Mickey Flemming and I have been on the phone and emailing for about 5 years to make this happen. Now it is a much bigger project then anticipated when I first made the phone call. Our only hesitation in giving more money to this project is the lack of money. We have been asked to donate an additional $500 to this project, which I see as a good thing, but money is tight. It is always the people who have little, that give a lot. I might not be able to pay my taxes on the sale of this land, or fix our car, or buy a working fridge, but I have a lot that many don't. Also what this sale did financially for our family is this; I was like so many Americans (but on a small scale) "upside down," "Land rich money poor." We got caught up in the real estate bubble and I was dishing out $1600 per month in interest payments of which about $700 was going to this land. We had the idea to buy land and build a house for my mom, but came up short on funds, time, ambition and health. Once that bubble got burst that became a $700 a month bill, to walk to the river. Which has been too much for our family. With the sale of this land I directly paid off three major loans, and credit cards. **And we can still walk to the river.** In the seven years that we have owned this land we have been good stewards, and have shared our access with neighbors and friends, and that has set the mood of such a cool place.

We wish you well in your endeavors in Chelan and Douglas counties and hope that further work develops in the upper valley (i.e. Merritt). In a side note, there is much local history here that may not be documented anywhere. We know people who know some of it, and feel it is pretty extraordinary.

Wishing you the best in the holiday season and the New Year.

Sincerely,

Stone and Sharlynn Parker

YAKIMA BASIN
FISH AND WILDLIFE
RECOVERY BOARD

January 28, 2014

David Trout, Chair
Salmon Recovery Funding Board
PO Box 40917
Olympia WA 98504-0917

Dear Chairman Trout,

At the December meeting of the Salmon Recovery Funding Board (SRFB), the Board discussed a proposal to adopt the new wider riparian buffer standards recently released by the Department of Ecology as required standards for SRFB grants. We would like to encourage the SRFB not to adopt this proposal.
Buffers are an important part of restoration projects, and we applaud the SRFB's desire to ensure that they are as effective as possible. However setting specific requirements for their width pose problems.

For some settings and objectives, narrower buffers may meet project goals effectively. In others settings, new buffer standards may still not achieve full benefits (e.g. when an active channel migration zone extends beyond the designated buffer width). Setting appropriate buffer widths is a case-by-case process that requires careful attention to site-specific conditions and project goals and objectives.

Restoration projects- especially those on private lands- typically require some compromise between landowner goals and restoration goals. Requiring wider buffers will inevitably create situations where a landowner choses not installing a buffer over having to implement a wider buffer that reduces their ability to use their land for agricultural production. In cases where much of the benefit of the larger buffer would be gained with a smaller buffer more workable for a landowner, this results in a good project not happening. Often, buffers are but a small part of a larger project; many of our projects improve fish passage and screening on small irrigation dams and include small buffers around re-vegetated areas near the diversions. In these cases, more stringent requirements may lead landowners either to not include a buffer component in a larger project, or to drop the project all together.

We share the SRFB's desire to insure that SRFB funding is not awarded to projects that propose buffer widths that are insufficient to meet project goals. However, we believe that the existing intensive local and state reviews of SRFB projects will weed out proposals that use buffer widths that are insufficient to meet their goals. Setting new standards accomplishes little not already addressed in the existing project review, yet risk alienating key partners.

Sincerely,

Mike Leita, Chairman

1200 Chesterly Drive, Suite 280, Yakima, WA 98902
Phone (509) 453-4104 Email: info@ybfwrb.org Web: www.ybfwrb.org

methow grist

More than $269.1 million has been spent in the Methow Valley over recent decades to entice these elusive guests to the table. We're talking about salmon, of course.

Spring Chinook ready to have their eggs removed at the Winthrop National Fish Hatchery, one of two hatcheries here.

Flipping on a light switch in the hydro-powered Pacific Northwest means flipping off salmon. So it follows that it's electric ratepayers who bear much of the salmon restoration burden, though taxpayers contribute significant sums. Local contributions, user fees and private donations also make their way into the mix.

The Methow Valley's piece of the Northwest's multi-billion-dollar salmon restoration experiment is a microcosm of this large-scale, unprecedented attempt to restore a wild species. It offers an illuminating, close-up look at what it takes to undo a century of eco-system damage.

The money spent in the Methow is being used to lure endangered, naturally spawning wild spring Chinook salmon as well as threatened summer steelhead and bull trout back to the Methow, and to raise designer fish in local hatcheries.

Where 16 million salmon once thrived in the pre-dammed Columbia Basin, today only one million do. In the 1860s, biologists say, an estimated 64,000 salmon—24,000 spring and summer Chinook (King), 36,000 coho (silver) and 3,600 steelhead (seagoing trout)—existed in the Methow river system.

Today, it's a good year when 5,500 naturally spawning salmon and steelhead show up in the Methow, as they did in 2010. Two to four times more of returning salmon typically are hatchery fish rather than natural spawners, according to Greer Maier, science program manager for the Upper Columbia Salmon Recovery Board (UCSRB).

> It's a good year when 5,500 naturally spawning salmon and steelhead show up

Hatchery fish are released from the Methow Basin by the hundreds of thousands. But government biologists argue that they are genetically inferior to wild fish and prone to disease. They also say hatchery fish crowd out wild fish, a contention that tribal hatchery proponents and others dispute. The upshot is that the wild salmon revival experiment and hatchery production run in parallel, and perhaps in conflict, on the same turf.

Methow salmon enter the Columbia River at Pateros

This Afternoon
50 %
Chance Rain
Hi 41 °F

weather & cams
pass report
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and travel the 424 miles to sea and back past nine dams—if they're lucky. In 2002, for example, said Maier, 7,585 spring Chinook passed over Wells Dam headed for the Methow River but only 2,637 made it home to their spawning ground. "We have a very high pre-spawn mortality rate," she added, due to harvest and poor habitat conditions.

Derek Van Marter, executive director of the Upper Columbia Salmon Recovery Board

"Steelhead are responding. Spring Chinook are not yet responding," said Derek Van Marter, executive director of the UCSRB, which funnels funds to organizations that are restoring salmon.

A dogged effort is under way to get at least 2,000 naturally-spawning spring Chinook and 2,000 steelhead back to spawn each year over a 12-year period. When that happens—and some additional criteria are met—the Methow will have sustainable populations of these wild fish, according to scientists. In 2006, a 30-year clock was set for reaching that recovery goal for salmon and steelhead. There is as yet no recovery plan for bull trout.

The two drivers of salmon restoration are the 1973 Endangered Species Act and the 19th Century treaties signed by the United States with sovereign Indian nations that reserved their historic rights to harvest salmon.

The bible that governs salmon recovery is the Biological Opinion of the National Oceanographic and Atmospheric Administration (NOAA). It states that fish survival depends on water quality and quantity, cover and shelter, food, riparian vegetation, space, safe passage and access. This is a nice way of saying that the infamous "four H's"—hydropower, harvest, habitat and hatcheries—all have played a role in destroying wild salmon runs.

Salmon restoration in the Methow focuses on habitat fixes and getting water back into streams and rivers. Along with improved hatchery production, they are the low-hanging fruits of salmon restoration because they are politically feasible. But dismantling dams, which provide electricity and flood control, and reducing salmon harvests? Not so much.

> The four H's have all played a role in destroying wild salmon runs

Production of hatchery-raised fish has been under way in the Methow for almost 74 years. But local habitat restoration projects got seriously under way more recently. Heavy equipment has been rolled into rivers to deposit woody debris and logs and to reroute channels. Miles of fencing has been built along riverbanks to keep cattle out of rivers, and miles of plastic irrigation pipes have been installed to move irrigation water downstream more efficiently. More large-scale habitat remodeling is on the way: This year, the Yakama Nation plans to dig out and restore 4,500 feet of an old side channel to the Methow River in Twisp for use by juvenile salmon.

Yakama Nation biologist John Jorgensen knee-deep in salmon restoration at Hancock Spring where pools were created and thousands of tiny plugs of vegetation planted. *read more >>*

Among the ongoing local habitat projects is a fish spawning refuge created below Hancock Spring in what once was a trampled-down, shallow stream below an old Mazama dairy. First, the stream bed was laboriously dug out by hand. The broken-down stream banks were rebuilt. Hundreds of small logs were added to the stream bed, which was replanted with thousands of tiny plugs of insect-friendly or shady native plants.

Overseeing this work is John Jorgensen, a Yakama fish biologist. He worries that the Methow River lacks nutrients because it has long been deprived of the masses of decaying salmon carcasses needed to keep river ecosystems fish-friendly. He will add nutrients to the stream to see if that helps.

The one-mile long stream is divided into two reaches, one untreated, the other improved. It's a natural scientific laboratory where Jorgensen over

> Every endangered or threatened fish species has shown up to spawn

time hopes to test what salmon need to spawn here and get high numbers of their offspring to sea. Salmon science is maddeningly time-consuming, thanks to their four-year migration cycle.

Since completion of the first restoration phase in 2011, a sprinkling of every endangered or threatened fish species in the Upper Columbia basin has shown up to spawn in the newly rehabilitated stream, said Jorgensen. The salmon much prefer the restored reach; they built 18 redds in it compared with just one in the unrestored reach, for example. But it's non-native brook trout that are most common in this stream, and they snack on salmon eggs. So they will be removed to see if that helps salmon survival, he said.

"Rebuild it and they will come," is the mantra that's driving the transformation of the Methow Valley's riverine ecosystem.

THE COSTS

The 1,000-pound gorilla in the Upper Columbia salmon recovery funding mix is the Portland-based Bonneville Power Administration (BPA). BPA markets power produced by 31 dams operated by the U.S. Army Corps of Engineers or U.S. Bureau of Reclamation throughout the massive Columbia River drainage. BPA wheels the electricity over 15,000 miles of transmission lines to wholesale customers in eight western states, including utilities such as Winthrop's Okanogan County Electric Cooperative.

BPA markets and distributes wholesale power to utilities such as Winthrop's Okanogan County Electric Cooperative. Much of the salmon recovery funding has come from BPA ratepayers. BPA photo

Though its salmon recovery efforts began in 1978, the BPA cannot provide records of salmon expenditures in the Methow prior to 2004 because its previous accounting system did not reveal that level of local detail, BPA spokesman Kevin M. Wingert told Methow Grist.

This accounting black hole means the $269.1 million spending estimate likely is too conservative, since it does not represent any funds that may have been spent by BPA in the valley in the 26-year-period between 1978 and 2004. Moreover, hatchery work has been ongoing in Winthrop since1940, but the costs represented here account only for spending during the last 11 years. Also missing from the tally are federal taxpayer funds spent on salmon habitat in the Methow before 1999.

The truth is that no one knows how much has been spent restoring salmon to the Methow. However, the numbers that are available help capture the extent of the effort. At the present rate of spending, the day is not far off when it will reach the $300 million mark—if it hasn't already.

Since 2004, BPA has doled out $183.2 million total for Methow salmon recovery, to eight major partners that perform, or contract out, the hands-on work. Of that sum, $3.4 million was spent on capital expenditures, according to BPA spokesman Wingert.

The $269.1 million spending estimate likely is too conservative

In addition, $21.6 million has come to the valley since 1999 from the State of Washington's Salmon Recovery Funding Board/Recreation and Conservation Office (RCO).

It distributes salmon restoration funds from state, federal and local sources—but not from the BPA or the PUDs—to regional boards such as the Upper Columbia Salmon Recovery Board, the umbrella organization that then passes on the RCO funds to salmon-restoration entities in the five sub-basins in the Upper Columbia region. That board's members are county commissioners from Chelan, Douglas and Okanogan counties and representatives from the Confederated Tribes of the Yakama Nation and Confederated Tribes of the Colville Reservation.

These regional boards wrote the federally mandated wild salmon recovery plans and they are now implementing those plans. The RCO has distributed grants to projects in the Methow Valley some 60 times since 1999, RCO records show.

The RCO requires a 15 percent matching fund from grant applicants. That added approximately $5.1 million more in expenditures here, according to RCO documents. Some, but not all, of those funds came from PUDs or other sources that already may have been accounted for elsewhere. To avoid counting the same funds twice, the $5.1 million in matching funds are not added to the RCO's $21.6 million contribution.

HATCHERIES

There are two fish hatcheries in the Methow Valley, both in Winthrop. Hatchery operators generally try to supplement wild runs with hatchery fish that are as genetically close as possible to the ones that originally evolved to live here. The hatcheries traffic in fish that are designed to meet the demands of sport, tribal and commercial fisheries, which are major economic and political drivers of salmon policy. Combined, the two hatcheries annually raise and release more than a million baby salmon, called smolts.

The Winthrop National Fish Hatchery off Twin Lakes Road was built in 1940 to mitigate the effects of Grand Coulee Dam on fish runs. It's operated by the U.S. Fish and Wildlife Service with federal tax funds bicycled over from the U.S. Bureau of Reclamation and with ratepayer funds from the BPA.

It has six permanent full-time employees, one part-time, and an annual operating budget in 2013 of $932,000. It produces 950,000 smolts annually, including 250,000 coho produced for the Yakama Nation with BPA funds, all at a total cost of about $1 per fish, according to hatchery project leader Chris R. Pasley.

In the last 11 years alone, a total of $6.8 million was spent to operate this federal hatchery, excluding the BPA funds (accounted for elsewhere) that paid for Yakama operations there, according to Pasley.

During the last five years, releases from the federal hatchery of spring Chinook smolts ranged from 372,000 to 590,000. Between 750 and 3,800 returned as adults to be counted at Wells Dam, Pasely said. During the same period, 100,000 to 121,000 summer steelhead smolts were released, and between 450 and 1,300 returned.

U.S. Fish and Wildlife Service biologist Matt Hall with a spring Chinook that made it home to the Winthrop National Fish Hatchery

The federal hatchery plans to reduce production of spring Chinook "since too many hatchery fish on the spawning grounds is considered a risk to the natural-origin spring Chinook population," said Pasley. That will be done

The highest adult return over the last 10 years was 5,796 coho

by transferring production of 200,000 smolts to the Okanogan River Basin, he said.

The Yakama release 350,000 smolts annually from the Winthrop federal hatchery and tribal acclimation ponds in the valley, according to Yakama fish biologist Rick Alford. Counted at Wells Dam, the highest adult return of the tribe's smolts over the last 10 years was 5,796 coho in 2011, he said. In 2016, as the federal hatchery moves its production of spring Chinook out of the Methow, the tribe plans to increase its releases from the Methow basin to a total of 1 million coho smolts, according to Alford.

The Yakama, headquartered in Toppenish, don't harvest fish in the Methow watershed but depend on homeward-bound Methow fish runs as part of their treaty rights to harvest salmon on the Columbia River. The Yakama Nation keeps three offices in the Methow Valley for 12 to 15 permanent employees as well as half-a-dozen seasonal technicians who carry out its hatchery and habitat-related projects here, according to Jorgensen. All told, the Yakama have been awarded $39 million in ratepayer funds for salmon restoration work in the Methow, according to BPA's Wingert.

Next door to the federal hatchery is the Methow Salmon Hatchery, off Wolf Creek Road. It was built by the Douglas County Public Utility District in 1991 near the confluence of the Chewuch and Methow rivers at a cost of $10.2 million. It's operated at that PUD's expense, a cost of $1.9 million annually, by the Washington State Department of Fish and Wildlife.

One of the many recent salmon projects underway in the Methow was the salmon acclimation facility in Carlton.

This hatchery has three permanent full-time employees and hires four to six part-timers each year. In addition to non-Methow related duties, it produces 170,000 Methow River spring Chinook smolts and 30,000 Twisp River spring Chinook smolts annually, according to hatchery specialist Leif Seaburg.

Douglas County PUD also has built fish acclimation ponds on the Twisp, Chewuch and Methow rivers. All told, the Douglas County PUD has spent $35.6 million in the Methow since the early 1990s to mitigate the fish-killing effects of its Wells Dam, said spokeswoman Meaghan Vibbert. Included is $23.6 million for hatchery operations and maintenance since 1991.

To mitigate the effects of its Rocky Reach and Rock Island dams, Chelan County PUD has spent $6.9 million in the valley: $5.7 million on hatchery operations since 2004 and $1.2 million on habitat restoration since 2006, according to public information officer Kimberlee Craig. The Chelan PUD acclimates summer Chinook south of Twisp at its own facility there and also raises spring Chinook under contract with Douglas County PUD at that utility's Winthrop hatchery.

The Grant County PUD has invested $15 million in the Methow on hatchery production since 2006, said spokesman Thomas Stredwick. The PUD produces summer Chinook—not federally listed as threatened or endangered—as part of its Federal Energy Regulatory Commission relicensing requirements for its Wanapum and Priest Rapids dams on the Columbia. The expenditure includes $5 million for the PUD's new Carlton Summer Chinook Acclimation Facility, which the PUD is obliged to operate until 2052.

Still, all this is not enough to do what the recovery plans mandate. A 2011 study for the Governor's Salmon Recovery Office projected it would cost $5.5 billion just between 2010 and 2019 to implement federally required wild salmon restoration projects in Washington. But with the present funding, only one-fourth of proposed projects can be paid for, the report said.

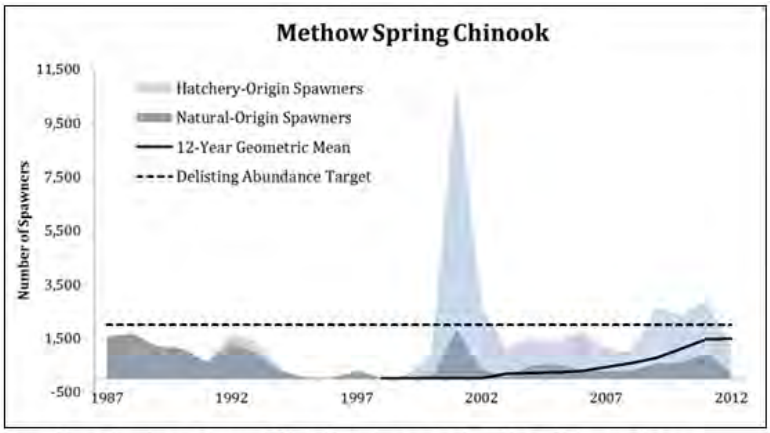
THE POLITICS

In 2008, all the salmon tribes affected by the BPA dams, except the Nez Perce, signed a 10-year peace treaty with the federal government called the Columbia Basin Accords. The tribes promised not to sue for fish-passage fixes at the Columbia River dams nor to litigate for outright removal of the Snake River dams. In exchange, they were promised $900 million in fisheries restoration money over the next decade. Funds flow from this accord to the Methow.

BPA claims to have spent more than $13 billion region-wide

Overall, the BPA claims to have spent more than $13 billion region-wide since 1978 to mitigate the dams' effects on salmon. (This sum does not include the untold millions in federal taxpayer funds spent on salmon recovery in the Columbia Basin and throughout the Northwest, nor any Washington state tax funds.)

The BPA's $13 billion figure includes lost revenue from foregone power sales when water was spilled over dams to move juvenile fish to sea instead of being used to generate power. It also includes BPA's cost of buying replacement power to fulfill its delivery contracts when salmon passage took precedence over power generation.



Spring Chinook salmon returns at Wells Dam. Image courtesy Upper Columbia Salmon Recovery Board

However, "only" $2.84 billion of that $13 billion was used on the ground—or in the water—for salmon restoration, according to the Northwest Power and Conservation Council. It is the Portland-based agency authorized by Congress to tell BPA what it must do for fish. The governors of Washington, Oregon, Montana and Idaho each appoint two representatives to this council, which oversees the implementation of the Pacific Northwest Power Planning and Conservation Act, passed by Congress in 1980.

The power council and the BPA are hinged at the hip in a sometimes tense relationship atop the salmon-funding pyramid. Deciding when river water should be used to produce electricity and when it should produce salmon lies at the heart of these tensions.

The power council's job is to balance an inherent conflict: Assuring that the Northwest has enough power and that its wild fish runs thrive. The council takes its cues from NOAA and the U.S. Fish and Wildlife Service, the federal agencies charged by Congress with implementing Endangered Species Act requirements for salmon.

NOAA shut down leaky Methow Valley irrigation ditches in 1999 when the valley's water and salmon war erupted and says it will shut down the Methow Valley Irrigation District (MVID) in 2015 if fixes are not made to its wasteful water delivery system.


NOAA could shut down the Methow Valley Irrigation District if it does not improve the efficiency of water delivery. more >>

This threat is driving the $9.6 million in ratepayer and tax expenditures to modernize the century-old MVID. However, only $750,000 of that sum is characterized as salmon restoration funding, according to Lisa Pelly, executive director of the Wenatchee-based Trout Unlimited-Washington Water Project, which was hired by the state Department of Ecology to manage the MVID project.

It's up to the power council to guide the BPA's salmon recovery efforts. The council, not BPA, advertises for grant proposals from entities that want to compete for the coveted BPA salmon restoration funds. The council, not the BPA, approves both the applicants and their projects. But it's the BPA that enters into contracts with the applicants.

A contentious funding dispute arose in the 1990s when the Yakama Nation asked the power council to approve BPA ratepayer spending to restore coho, once the most abundant fish in the Methow.

Those coho had been declared extinct. For one thing, a dam was erected across the Methow River 2.3 miles above Pateros in 1912 by the Nixon-Kimmel Co. of Spokane to provide electricity to Pateros, Brewster and Bridgeport, according to local historical researcher Barry George. The dam apparently was removed in 1929.

Coho are said to be poor jumpers. Some of the

Chinook and steelhead managed to get over dams, said Seaburg of the Methow Salmon Hatchery. "The coho wouldn't jump, so they are gone. The spring Chinook could jump over that dam," he added.

"The coho wouldn't jump, so they are gone."

Whatever the case, the power council ruled that BPA restoration funds could not be spent on coho. They are to be spent only on fish that still exist genetically as "evolutionary significant units" in fish bio-speak, according to power council spokesman John Harrison, not on fish that have vanished.

Yakama tribal officials, who did not respond to requests for interviews, apparently thought otherwise. They lobbied their case in the political arena and got their coho funding from the BPA, $245,000 of which now is spent annually raising coho at the Winthrop federal hatchery.

Critics of hatcheries have argued for a long time that the fish they release compete for food and space with the struggling wild fish, threatening to overwhelm them and doom the hugely expensive effort to restore the sorry remnants of existing wild salmon populations. In 2012, 39 percent of hatcheries were violating recommended scientific methods for avoiding harm to wild fish, according to the Governor's "State of Salmon in Watersheds" report.

But Jorgensen, the Yakama's fish biologist, sees an upside. If hatchery fish mate with wild fish, he noted, "they are considered wild fish."

THE ECONOMIC BY-CATCH

A bewildering array of entities—federal and state government agencies, public utilities, Indian tribes and non-profit organizations—are busy funding, studying, restoring and protecting the upper Methow's Valley's rivers and creeks and stocking them with hatchery fish. Rebuilding and restocking the Methow's riverine ecosystem has become a thriving enterprise. All this activity on behalf of salmon has the happy effect of helping boost the local economy, claims the "State of the Salmon in Watersheds" report.

An estimated total of 500 "living wage," short and long-term jobs have been created over the last 13 years in the Methow and the four other sub-basins of the Upper Columbia River because of salmon habitat restoration, according to Van Marter of the Upper Columbia Salmon Recovery Board.

Though no one has kept track of the number of jobs created in the Methow by salmon restoration work, the local economic fallout "is not an insignificant amount," he said.

The availability of hundreds of millions of dollars for salmon projects has spawned a cottage industry of non-profit groups and consultants throughout the Northwest. They seek funding, manage projects, hire contractors, and perform studies for their clients.

The non-profits, which cannot legally make a profit from their activities—after allowances for salaries and other expenses—have been key players in the valley's salmon-related projects.

Pelly's Trout Unlimited organization, which has an office in Twisp and specializes in irrigation efficiency, is managing two major projects in the Methow, the roughly $2 million Chewuch Ditch piping project—which includes $318,547 in salmon-targeted funding—and the $9.6 million MVID upgrades. "We don't make any money on these projects," said Pelly.

SALMON RECOVERY PLAYERS IN THE METHOW VALLEY

- Methow Salmon Recovery Foundation
- Yakama Nation
- Upper Columbia Salmon Recovery Board
- Methow Conservancy
- Trout Unlimited
- Bureau of Reclamation
- Grant, Douglas and Chelan County Public Utility Districts
- Washington Salmon Recovery Funding Board
- U.S. Fish and Wildlife

Another section of the Chewuch Canal irrigation ditch being piped to reduce water loss through seepage and evaporation and leave more water in the river. Irrigation efficiency is a big part of salmon recovery work in the Methow.

The Winthrop-based Methow Conservancy, which focuses on land conservation, has been awarded $12.7 million from various sources for targeted salmon recovery projects over the last 13 years, according to executive director Jason Paulson.

The Okanogan-based Methow Salmon Recovery Foundation, a non-profit with an office in Twisp's Riverbank building, has been awarded $14 million in grants since 2003, according to executive director Chris Johnson.

For-profit groups do not qualify for salmon restoration funding

His organization started out as a for-profit in 1998, but became non-profit in 2002. Operating as a for-profit "became too much

of a burden on the people we were trying to help," he said, because for-profit groups do not qualify for salmon funding. Johnson says his organization focuses on hiring local contractors to keep salmon restoration money that is spent in the valley churning in the local economy.

THE END GAME

In the unlikely event that dams were removed and salmon harvests stopped, more fish might return to the Methow River Basin. But could they survive in sustainable numbers in our rivers and creeks, given what more than a century of white settlement has done to them?

Biologists say no. They warn that protecting habitat is critical to ensuring the stability of naturally producing salmon in the Methow watershed—if there are adequate returns of adult spawners. It's that caveat about returning adult spawners that makes this huge investment such a gamble.

Biologists say salmon that do manage to return to the Methow won't survive without enough suitable habitat here.

Whether enough fish get to, and return from, the sea to make these expenditures worthwhile depends not only on the ongoing habitat and hatchery work in the Methow sub-basin, which NOAA lists as one of the 16 most important in the Columbia Basin for fish recovery.

It also depends on how willing fisheries managers are to set sustainable harvest levels and whether something more can be done about the nine dams that Methow fish twice must navigate in the polluted Columbia River's main stem –not to mention the poorly understood, uncontrollable ocean and changing climate conditions.

Robert A. Turner led NOAA's negotiations with Methow irrigation districts when NOAA shut down the ditches for killing salmon back in the late 1990s. Now he's NOAA Fisheries' assistant regional administrator for sustainable fisheries.

"The actions we are taking are having a beneficial effect," he told Methow Grist when asked to evaluate the efficacy of the salmon recovery effort overall. In the Methow, he added, that's particularly true for improvements that have been made in fish passage and river and stream flow. "We need to turn our attention to hatchery reform there," he added.

In the late 1990s NOAA shut down Methow Valley irrigation ditches.

Asked if more attention should be focused on harvest and hydropower improvements, Turner replied: "We try to ensure that harvest is consistent with recovery." He reminded that by law, tribes are entitled to harvest even during ongoing salmon recovery efforts.

As for the dams, said Turner, people in the Northwest have said: "'We like to maintain hydropower but we want fish too.'" Politicians and bureaucrats who are trying to manage this conflict must "reconcile competing public values," he added.

Asked if he thinks the amounts spent on salmon recovery will succeed in saving them, Turner said there's a "two-part" answer. Some successful interventions "are being masked by other things less in our control. The net benefit isn't as rapid as we would hope."

> "The net benefit isn't as rapid as we would hope."

Still, funds flow to the Methow because the odds are considered exceptionally good here for salmon recovery. As the author of one 2001 BPA salmon funding document put it: "The extremely competitive grants for these funds have always featured substantial biannual allocations for the Upper Methow because of its natural resource values –more than any other area of Washington." (This was written to help justify the $3.75 million BPA expenditure in 2002 to purchase 600 acres from the Trust for Public Lands for a conservation easement adjoining the Arrowleaf property in Mazama.)

If creating habitable homes for them were all that's needed to save wild salmon, the habitat expenditures in the Methow doubtless would show quicker results. But as long as nothing much changes downstream, the efficacy of upstream expenditures remains hard to evaluate.

That said, no downstream improvement would make it possible to have thriving populations of these remarkable creatures in the Methow without a suitable home awaiting them here.

And then there's this calculation: Amortized over the next 100 years, today's cost of fixing mistakes made in ecological stewardship over the last 100 years may be seen as a wise investment by 2114.

But only if the salmon survive.

01-27-2014

see past stories *in the archive >> (index.php?option=com_content&view=article&id=174&catid=80)*

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WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board Briefing Memo

Item **1A**

Meeting Date: March 2014

Title: Director's Report

Approved by the RCO Director: Kaleen Cottingham

Summary

This memo is the director's report on key agency activities, including operations, agency policy issues, and legislation. Information specific to salmon grant management, performance management, and the fiscal report are in separate board memos.

Board Action Requested

This item will be a:

- ☐ Request for Decision
- ☐ Request for Direction
- ☒ Briefing

In this Report

- Agency operations
- Legislative, budget, and policy updates
- Update on sister boards

Agency Operations

Surprise Visitor

The Governor made a surprise visit on January 21st to help us launch our year of celebrating the agency's 50th Anniversary. He spoke about his connections with our great outdoors and then talked to staff individually and in small groups. He fielded questions from staff and asked questions about the allocation of funding in Puget Sound and whether our system worked for the smaller jurisdictions that need park funds.

Agency Strategic Planning

The Recreation and Conservation Office (RCO) finalized the update to its strategic plan, which can be viewed on the RCO Web site. The agency's vision, mission, and values changed slightly and the goals now focus around three new organizing principles: fair and accountable grant management, leadership, and innovative support services. Under the fair and accountable grant

management principle, RCO will focus on efforts to provide competitive grants efficiently and fairly so that partners can make strategic investments and to ensure that grants are implemented and maintained efficiently and effectively. Under the leadership principle, RCO will increase the public's understanding of the importance of RCO's investments in conservation, recreation, and salmon recovery; and actively address emerging or critical issues in natural resources and outdoor recreation and salmon recovery. For the third organizing principle of fostering innovative support services, RCO will focus on meeting business needs with strategic communication, policy, fiscal, business, and technology services; and ensuring the boards and councils can make informed and transparent decisions.

IT Strategic Planning

RCO and the Puget Sound Partnership contracted with Insignia Consulting LLC to review our Information Technology operations and systems and develop a scope of work for an IT strategic plan. Our two agencies are increasingly reliant on our IT systems, many of which are shared. As a result, we are looking for a long-range plan for future maintenance and expansion of these systems and a blueprint on how to achieve our goals, given staffing and fiscal constraints. During the past three months, Insignia has met with staff from both agencies and researched and reviewed various agency plans and our IT budgets. In January, executives from both agencies met with Insignia and prioritized many issues that were identified during the initial information gathering. The final report outlines how to move forward in the development of a long-range plan that will help both agencies be more strategic with IT management and investment.

Governor's Results Washington

I continue to serve on the Governor's Results Washington goal council for sustainable energy and a clean environment. RCO is partnering with the Department of Fish and Wildlife and Puget Sound Partnership to track leading indicators related to salmon recovery and estuary restoration, respectively. Initial performance data will be posted to the Results Washington Web site (www.results.wa.gov) in April.

Legislative, Budget, and Policy Updates

Public Lands Inventory Update

As reported on previously, the public lands inventory status report was completed and submitted to the legislature by January 1st. The report is also on the RCO Web site (http://www.rco.wa.gov/documents/plip/PublicLandsInventoryStatusReport2013.pdf). In mid-January, I presented progress on the inventory to the Senate Ways and Means Committee.

The University of Washington, Department of Natural Resources, State Parks, and the Department of Fish and Wildlife are working closely together to integrate public lands information and verify its quality. We are all working closely with the Joint Legislative Audit and

Review Committee to provide information as quickly as possible for their economic review of public lands.

Mitigation Matching Project Update

In 2013, The Washington State Legislature provided RCO $100,000 to identify opportunities to optimize salmon habitat restoration and minimize permit delays for transportation mitigation projects. The Governor's Salmon Recovery Office (GSRO) met with the Department of Transportation to explore a partnership between the agencies using our existing data systems to identify mitigation and salmon projects. GSRO is now coordinating a competitive request for proposals, which were due February 24, 2014. This is further discussed in the Salmon Recovery Report (Item 2).

2014 Legislative Session Update

The 2014 legislative session started on January 13th, and is scheduled to adjourn on March 13th. So far, we have testified on bills related to salmon barrier removal, invasive species, and land acquisitions. Several board members on both the Recreation and Conservation Funding Board and the Salmon Recovery Funding Board were present for their Senate confirmation hearings. So far the Senate has not voted on any of these appointments; however, members can continue to serve on the board without confirmation. We have also met with several legislators to talk to them about recreation, salmon recovery, and land acquisitions.

At the time of writing this memo, the Legislature has not passed final operating and capital budgets but each chamber has passed its own version of each budget.

<u>Operating Budget</u>

- Both the House and Senate leave RCO's operating budget the same as the 2013-14 biennial budget, except for technical adjustments.
- Both budgets include funding to staff the Governor's Blue Ribbon Parks and Outdoor Recreation Task Force. The Governor issued an Executive Order to form an outdoor recreation task force to develop a strategic plan for how the state's outdoor assets can be better leveraged. Funding is provided for meetings across the state, travel reimbursement of task force members, contract costs for a facilitator, and staff to conduct research and write a plan with recommendations. The Senate includes $144,000 and the House $200,000 (the same as the Governor's budget) to support the task force.
- The Senate budget added $100,000 for an economic study of outdoor recreation. The funding is provided for RCO to contract with a consultant to conduct a study that will quantify the economic contribution to the state economy from the state's public lands and to quantify the economic contribution from statewide recreation to the state's economy. The House did not add this item to its budget.

<u>Capital Budget</u>

- The Senate's capital budget does not make changes to RCO's 2013-15 biennial capital budget.

- Our one capital budget request, to replace funds removed two years ago from the Recreation Resources Account for the Boating Facilities Program, was not included in the Senate budget. The House capital budget included the $3.3 million additional for the Boating Facilities Program. The Governor's budget proposal backfills $2 million for the program.
- The House capital budget also includes $9.05 million in RCO's budget for coastal restoration grants to projects that restore forests, water quality, and fish and wildlife habitat on the Washington Pacific Coast and are on a list of 21 projects.

Legislation

We are closely tracking three bills: HB 2251, SB 6040, and SB 6052.

- HB 2251 improves coordination of culvert removal. It passed out of the full House and the Senate natural resources committee. To pass, it must be "pulled" from the Rules Committee and be passed by the full Senate.
- SB 6040, which improves invasive species monitoring and elimination, passed the full Senate and the House Appropriations Committee. The next step for the bill is to move from the Rules Committee and to be voted on by the Full House.
- SB 6052 requires the Department of Fish and Wildlife, the Department of Natural Resources, and State Parks to report to RCO, though the Habitat and Recreation Lands Coordinating Group, on anticipated and actual costs and intended and actual uses of lands acquired for habitat and recreation. The bill also makes the Lands Group permanent. The bill is technically dead, but the Senate budget assumes the bill will pass or that it will be incorporated into the budget, and provides funds to the affected agencies for the additional reporting requirements.

We will update you on the budget and other legislation at the board meeting.

Update on Sister Boards

Washington Invasive Species Council

Following the December council meeting, staff completed the 2013 annual report to the Legislature. The plans for 2014 include updating the council's statewide strategy on invasive species, planning for a workshop on prevention protocols and decontamination practices, submitting a grant proposal to complete the Puget Sound baseline assessment for the remaining priority species, rolling out the new invasive species reporting app for smartphones, and continuing work with the Pacific Education Institute and school science programs. Council staff have testified in strong support on a comprehensive invasive species bill that would add new authorities to the Washington Department of Fish and Wildlife and enhance prevention and response capabilities for aquatic invasive animal species. The council will continue tracking and supporting this bill through the Legislative session.

Habitat and Recreation Lands Coordinating Group

The Habitat and Recreation Lands Coordinating Group completed the 2013 monitoring report that shows the progress of habitat and recreation acquisitions that were funded in the 2009-11 budgets. We are just about to complete the annual report and 2014 work plan. The next quarterly meeting and the acquisition forum is scheduled for March 14th. At the forum, the Department of Fish and Wildlife, the Department of Natural Resources, and State Parks will present their coordination efforts on anticipated land acquisitions.

Recreation and Conservation Funding Board

The Recreation and Conservation Funding Board (RCFB) had a productive January meeting. The board welcomed a new chair (Harriet Spanel) and a new governor-appointed member (Mike Deller). A number of measures were approved by the board, including two trails plans (the Nonhighway and Off-road Vehicle Activities plan and the Recreational Trails Program plan) and 2014 criteria changes for several grant programs. RCO staff updated the board on proposed 2014 policy priorities, summarized a phased process to update state administrative rules, and presented successes including recently closed projects and the boating app.

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board Briefing Memo

Item **1B**

Meeting Date: March 2014

Title: Management Status Report: Financial Report

Prepared By: Mark Jarasitis, Chief Financial Officer

Approved by the RCO Director: Kaleen Cottingham

Summary

This financial report reflects Salmon Recovery Funding Board activities as of February 18, 2014.

The available balance (funds to be committed) is $56.2 million. The amount for the board to allocate is approximately $10.8 million, primarily in new state and federal funds as well as returned funds. The amount for other entities to allocate is $45.4 million.

Board Action Requested

This item will be a:

- ☐ Request for Decision
- ☐ Request for Direction
- ☒ Briefing

Balance Summary

Fund	Balance
Current State Balance	$11,519,442
Current Federal Balance – Projects, Hatchery Reform, Monitoring	$1,540,240
Current Federal Balance – Activities	$969,483
Lead Entities	$63,132
Puget Sound Acquisition and Restoration (PSAR) & Puget Sound Restoration (PSR)	$34,018,218
Estuary and Salmon Restoration	$4,415,882
Family Forest Fish Passage Program (FFFPP)	$3,426,602
Puget Sound Critical Stock	$221,090

Salmon Recovery Funding Board Budget Summary

For the Period of July 1, 2013 - June 30, 2015, actuals through 2/18/2014 (fiscal month 07).
Percentage of biennium reported: 29.2%

	BUDGET	COMMITTED		TO BE COMMITTED		EXPENDITURES	
	new & reapp. 2013-15	Dollars	% of budget	Dollars	% of budget	Dollars	% of completed
GRANT PROGRAMS							
State Funded 03-05	159,127	141,243	89	17,884	11	141,243	100
State Funded 05-07	947,980	920,094	97	27,886	3	143,143	16
State Funded 07-09	1,892,914	1,845,179	97	47,735	2.5	389,816	21
State Funded 09-11	210,888	205,363	97	5,525	3	174,541	85
State Funded 11-13	7,238,131	6,099,142	84	1,138,989	16	2,089,207	34
State Funded 13-15	14,382,000	4,100,575	29	10,281,425	71	0	0
State Funded Total	$24,831,040	$13,311,598	54%	$11,519,442	46%	$2,937,950	22%
Federal Funded 2009	4,221,630	3,906,570	93	315,061	7	1,394,213	36
Federal Funded 2010	12,820,920	12,789,452	100	31,469	0	4,018,858	31
Federal Funded 2011	12,544,842	12,464,575	99	80,267	1	3,967,887	32
Federal Funded 2012	19,224,074	17,242,249	90	1,981,825	10	3,344,765	19
Federal Funded 2013	18,284,837	18,183,735	99	101,102	1	680,247	4
Federal Funded Total	$67,096,304	$64,586,581	96%	$2,509,723	4%	$13,405,971	21%
Lead Entities	6,204,166	6,141,035	99	63,132	1	1,670,591	27
Puget Sound Acquisition and Restoration	82,201,096	48,182,878	59	34,018,218	41	9,794,454	20
Estuary and Salmon Restoration	16,749,076	12,333,194	74	4,415,882	26	1,900,712	15
Family Forest Fish Passage Program	11,291,693	7,865,091	70	3,426,602	30	3,374,183	43
Puget Sound Critical Stock	2,395,012	2,173,921	91	221,090	9	1,007,690	46
Subtotal Grant Programs	$210,768,386	$154,594,297	73%	$56,174,090	27%	$34,091,552	22%
ADMINISTRATION							
Salmon Recovery Funding Board Admin/Staff	4,265,478	4,265,478	100	-	0	948,742	22
Review Panel	684,516	684,516	100	-		156,777	23
Subtotal Administration	$4,949,994	$4,949,994	100%	-	0%	$1,105,519	22%
GRANT AND ADMINISTRATION TOTAL	$215,718,380	$159,544,291	74%	$56,174,090	26%	$35,197,071	22%

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board Briefing Memo

Item **1C**

Meeting Date: March 2014
Title: Performance Report
Prepared by: Jennifer Masterson, Performance Analyst

Approved by the RCO Director: Kaleen Cottingham

Summary
This memo summarizes fiscal year-to-date grant management and project impact performance measures for projects funded by the Salmon Recovery Funding Board.

Board Action Requested
This item will be a:
- ☐ Request for Decision
- ☐ Request for Direction
- ☒ Briefing

In this Report
- Project Impact Performance Measures
- Grant Management Performance Measures

The data included in this memo are specific to projects funded by the Salmon Recovery Funding Board. Data are current as of February 19, 2014.

Project Impact Performance Measures

The following tables provide an overview of fish passage accomplishments funded by the Salmon Recovery Funding Board in fiscal year 2014. Grant sponsors submit these performance measure data for blockages removed, fish passages installed, and stream miles made accessible when a project is completed and in the process of closing.

Twenty-one salmon blockages have been removed so far this fiscal year (July 1, 2013 to June 30, 2014), with a total of 11 passageways installed (Table 1C-1). These projects have cumulatively opened over 38 miles of streams (Table 1C-2).

Table 1C-1 SRFB-Funded Fish Passage Metrics

Measure	FY 2014 Performance
Total Blockages Removed	21
Bridges Installed	6
Culverts Installed	2
Fish Ladders Installed	0
Fishway Chutes Installed	3

Table 1C-2 Stream Miles Made Accessible

Project #	Project Name	Primary Sponsor	Stream Miles
09-1232	Wickett Flood Plain Connection/Barrier Removal	Chehalis Confederated Tribes	14.15
10-1504	Middle Branch LeClerc Creek Restoration	Kalispel Tribe	0.25
10-1750	Little Bear Creek - 132nd Ave Barrier Removal	Adopt A Stream Foundation	8
10-1776	Midway Creek Fish Barrier Removal Project	South Puget Sound SEG	0.6
10-1847	Teanaway River - Red Bridge Road Project	Kittitas Co Conservation Dist	2.8
10-1916	Green Creek Weir Removal	Pacific County Anglers	5.89
11-1340	Christmas Creek Drainage Restoration	Pacific Coast Salmon Coalition	1.04
11-1441	Upper Chumstick Barrier Removal	Chelan Co Natural Resource	3
11-1516	Middle Branch LeClerc Creek Restoration Phase II	Kalispel Tribe	3
Total Miles			38.73

Grant Management Performance Measures

Table 1C-3 summarizes fiscal year 2014 operational performance measures. Recreation and Conservation Office grant managers and fiscal staff continue to meet or exceed performance targets related to timely issuance of project agreements, response to progress reports, and project closure.

Table 1C-3 SRFB-Funded Grants: Management Performance Measures

Measure	FY Target	FY 2014 Performance	Indicator	Notes
Percent of Salmon Projects Issued Agreement within 120 Days of Board Funding	85-95%	**100%**	●	Staff have mailed a total of 11 agreements so far this fiscal year for SRFB-funded projects. All SRFB agreements were mailed on time.
Percent of Salmon Progress Reports Responded to On Time	65-75%	**87%**	●	A total of 304 progress reports have been due so far this fiscal year for SRFB-funded projects. Staff responded to 265 in 15 days or less.
Percent of Salmon Bills Paid within 30 days	100%	**92%**	●	This fiscal year-to-date, 616 bills have come due for SRFB-funded projects. Bills may not paid on time because of incomplete sponsor paperwork or lack of proper documentation.
Percent of Projects Closed on Time	60-70%	**65%**	●	A total of 74 SRFB-funded projects were scheduled to close so far this fiscal year. Forty-eight of these projects closed on time.
Number of Projects in Project Backlog	0	**13**	●	Thirteen SRFB-funded projects are currently in the backlog.
Number of Post-Completion Inspections Done	No target set	**24**	*NA*	

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board Briefing Memo

Item **2**

Meeting Date: March 2014

Title: Salmon Recovery Management Report

Prepared By: Brian Abbott, Governor's Salmon Recovery Office Coordinator
Tara Galuska, Salmon Recovery Section Manager

Approved by the RCO Director: Kaleen Cottingham

Summary

The following are some highlights of work being done by the Salmon Section staff in the Recreation and Conservation Office and the Governor's Salmon Recovery Office.

Board Action Requested

This item will be a:

- ☐ Request for Decision
- ☐ Request for Direction
- ☒ Briefing

Grant Management

Wrapping up the 2013 Grant Cycle and Starting the 2014 Grant Cycle

The Salmon Recovery Funding Board (board) approved funding for over 140 projects at the August, October, and December board meetings in 2013. Since then, Recreation and Conservation Office (RCO) staff have been busy developing project agreements with sponsors and routing them electronically for signature.

At the same time, staff members have been gearing up for the 2014 grant round. At the December 2013 meeting, the board approved administrative changes and minor policy clarifications for inclusion in Manual 18. Staff completed a draft of the manual and made it available for the review of lead entities and regional organizations through the first week of February 2014. Staff posted the finalized manual to the RCO Web site the second week of February. It is available at: http://www.rco.wa.gov/documents/manuals&forms/Manual_18.pdf.

RCO staff are in the process of scheduling review panel site visits for the 2014 grant round. We will have the calendar completed by early March. Staff have also scheduled an application workshop for March 26, 2014. Like last year, we will record the workshop and make it available online.

Family Forest Fish Passage Program Projects Underway

RCO staff are working closely with partner agencies to get the 2014 Family Forest Fish Passage projects underway, with the addition of $10 million in funding in 2012 and $2 million in 2013. Staff are closing out 42 projects that were constructed in summer 2013 and getting under contract 52 projects in preparation for construction in summer 2014. These projects remove fish passage barriers on small, private forestlands.

Estuary and Salmon Restoration Program

Staff are currently placing $12 million in funding under contract for 20 Estuary and Salmon Restoration Program projects funded in 2013. Six additional projects received $2.3 million through the Environmental Protection Agency's National Estuary Program for beach restoration projects. Staff are preparing for the next grant round in fall of 2014.

Viewing Closed Projects

Attachment A lists projects that have closed between November 7, 2013 and February 10, 2014. To view information about a project, click on the blue project number[1]. From that link, you can open and view the project attachments (e.g., design, photos, maps, and final report).

Amendments Approved by the Director

The table below shows the major amendments approved between November 1, 2012 and February 15, 2013. Staff processed a total of 45 project related amendments during this period, but most were minor revisions related to project scope or time extensions.

Number	Name	Sponsor	Program	Type	Amount/Notes
11-1469	Wenatchee Nutrient Assessment & Design	Cascade Columbia Regional Fisheries Enhancement Group	Salmon Federal	Cost Change	Project grant funds increased by $12,000 to cover additional data analysis and collection.
11-1372	Nason Creek LWP Alcove	Chelan-Douglas Land Trust	Salmon Federal	Cost Change	Project grant funds increased by $3,000 for unexpected stewardship and landowner agreement costs.
07-1676	Historic Skamokawa Creek Channel	Wahkiakum Conservation District	Salmon State	Cost Change	Project grant funds increased by $34,972 to complete the engineered scope of the project.

[1] Must be connected to the internet. Depending on the computer, you may have to right click and select "open hyperlink."

Number	Name	Sponsor	Program	Type	Amount/Notes
10-1779	Case Inlet	South Puget Sound Salmon Enhancement Group	Puget Sound Acquisition and Restoration (PSAR)	Cost Change	Used returned PSAR funds to increase project grant funds by $12,000 due to cultural resources expenses.
13-1354	Reid Harbor Conservation Easement	San Juan Preservation Trust	Puget Sound Acquisition and Restoration Large Capital	Cost Change	Project grant funds reduced by $795,000 due to lower land value.
09-1449	Sauk River Riparian Restoration	Skagit System Coop	Puget Sound Acquisition and Restoration	Cost Change	Used returned PSAR funds to increase project grant funds by $22,000 for riparian restoration.

Grant Administration

The following table shows projects funded by the board and administered by staff since 1999. Data are current as of February 5, 2014.

- Staff are working with sponsors to place "pending" projects under agreement, following approval at the December 2013 board meeting.
- Active projects are under agreement. Sponsors are working on implementation with RCO support for grant administration and compliance.

	Pending Projects	Active Projects	Completed Projects	Total Funded Projects
Salmon Projects to Date	104	328	1,524	1,956
Percent of Total	5.3%	16.8%	77.9%	

This table does not include projects funded through the Family Forest Fish Passage Program or the Estuary and Salmon Restoration Program. Although RCO staff support these programs through grant administration, the board does not review and approve projects under these programs.

Governor's Salmon Recovery Office

Communications Plan

The Governor's Salmon Recovery Office (GSRO) completed a competitive procurement for a consulting firm to develop a communications plan on behalf of regional organizations and recovery partners. Pyramid Communications was selected from a pool of twelve applicants. The

first meeting of the communications workgroup is scheduled for February 21, 2014. The timeline for final products is the end of April.

The workgroup is made up of the following individuals:

Name	Organization
Nancy Biery	Salmon Recovery Funding Board Member
Susan Zemek	RCO Communication Director
Darcy Batura	Washington Salmon Coalition Chair and Yakima Lead Entity Coordinator
Jeff Breckel	Council of Regions Chair and Lower Columbia Fish Recovery Board Executive Director
Derek Van Marter	Upper Columbia Salmon Recovery Board Executive Director
Alicia Lawver	Puget Sound Partnership Public Information Officer
Jennifer Quan	Washington Department of Fish and Wildlife Special Assistant to the Director-Salmon Recovery
Brian Abbott	GSRO Executive Coordinator
Alex Conley*	Yakima Fish and Wildlife Recovery Board, Executive Director
Jeanette Dorner*	Puget Sound Partnership, Salmon Program Manager
Miles Batchelder*	Washington Coast Sustainable Salmon Partnership, Executive Director
Scott Brewer*	Hood Canal Coordinating Council, Executive Director
Steve Martin*	Snake River Recovery Board, Executive Director

*Regional Organization Executive Director; will participate as needed.

Mitigation Matching Demonstration Project

The GSRO solicited contractor proposals in early February for a mitigation matching project that matches transportation projects with habitat restoration and protection projects. Funding for this project was included in the state capital budget in the amount of $100,000. Proposals are due February 24, 2014 with contractor selection planned by early March.

This project is to develop a system that enables a landscape mitigation approach and evaluates compensatory mitigation in an ecosystem context.

Mitigation matching can both minimize permit delays and optimize salmon habitat restoration for compensatory mitigation. This project will show how state-of-the-art technology can streamline permitting by providing easy access to habitat project lists and mapped locations, which can help permitting agencies and permit applicants implement projects more efficiently. Mitigation matching can assist the State of Washington and RCO optimize the benefits of their salmon recovery and habitat protection and restoration planning by identifying proposed projects and actions that align with transportation mitigation obligations.

RCO's project tracking and reporting system, Habitat Work Schedule (HWS), has helped make mitigation matching in Washington State possible. HWS tracks nearly 10,000 habitat restoration and protection projects, of which 2,000 are proposed or conceptual projects that are either partially or not yet funded. Paired with the sophistication of the State Department of Transportation's planning products and technologies, HWS creates an excellent opportunity to test the benefits of mitigation matching.

Lead Entity Program Manager Position

Lloyd Moody of the GSRO announced his retirement effective April 30, 2014. Lloyd has spent the last five years guiding the lead entity program. His knowledge of salmon recovery and the history of the "Washington Way" will be greatly missed by all. A recruitment announcement has been posted. It is hoped that we will have the opportunity to fill the position by mid-April so Lloyd can provide training before he leaves.

Pacific Coastal Salmon Recovery Fund Application

The 2014 Pacific Coastal Salmon Recovery Fund application announcement was sent out January 16; two months earlier than previous years. The pre-application was submitted before the February 24 deadline, with the final submittal due March 24. RCO submits the application on behalf of the State of Washington. State partners in crafting the application include the Washington Department of Fish and Wildlife and the Northwest Indian Fish Commission. The application is asking for the maximum amount of $25 million. In 2013 RCO was awarded $20 million. We expect to hear the award amount by August.

Regional Organization Monitoring Budget Request

Regional organizations have consistently expressed a need for additional funding to meet delisting requirements. Monitoring activities can be funded only through federal funds or state operating funds; state capital (bond) funds cannot be used for monitoring. The GSRO has committed to work with regional organizations to develop a state general fund budget request to submit to the Office of Financial Management for potential inclusion in the Governor's proposed budget for the 2015-2017 biennium. Such budget requests are submitted by a state agency in early September.of even-numbered years. To be successful, regional organizations will need to work with RCO staff to:

1. Identify specific monitoring activities that will be necessary to achieve delisting under the Endangered Species Act, by region and the time period;
2. Describe who will implement the monitoring work within each region;
3. Identify gaps between current state and local monitoring and the monitoring necessary to achieve de-listing;
4. Detail overall monitoring needs for the next 10 years in 2 year (biennial) increments.

RCO staff need this information from the regions by June 2014 in order to fully develop the budget request and submit it, along with RCO entire budget, to the Office of Financial Management by the September deadline.

EPA Data and Information Exchange Network Grants

GSRO is assisting the Washington Department of Fish and Wildlife and Northwest Indian Fish Commission in the management of several EPA grants related to data and information sharing. These grants support the migration of data on fish distributions into the high-resolution National Hydrography Dataset and reconcile and integrate these distributions into a single, unified dataset. Keith Dublanica of GSRO will provide a short briefing for the board at the March meeting.

Conference Sponsorship

The Columbia River Inter-tribal Fish Commission has requested help to support their Future of Our Salmon Conference scheduled for April 23-24 at the Oregon Convention Center in Portland, Oregon. GSRO/RCO staff will ask the board to consider sponsoring the conference at the $1,000 level. The Columbia River Inter-tribal Fish Commission's request letter is included in the board correspondence.

State of Salmon

GSRO is working with our salmon recovery partners on the biennial update of the State of Salmon in Watersheds Web site and executive summary. In addition to reporting our regional and statewide progress in salmon recovery and bringing transparency of our state data to the public through state of the art technology, we are also boosting our efforts to coordinate better with tribes and the Washington Department of Fish and Wildlife to align our data and messages.

Habitat Work Schedule

GSRO recently hired a part-time data management intern to assist with Habitat Work Schedule data quality and an assessment of future system needs. As we move forward in sharing data with other systems including RCO's PRISM database, we are uncovering needs for clarity in data definitions, sustained data stewardship for data quality, and standardized guidance for more consistent reporting. The internship has proved to be of great value in identifying and prioritizing these needs as well as improving data quality and communication with system users.

Salmon Projects Completed and Closed from November 7, 2013-February 10, 2014

Number	Name	Sponsor	Program	Closed On
11-1617	Stillaguamish Fall (S. Fork) Chinook Natural Stock	Stillaguamish Tribe of Indians	Puget Sound Critical Stock	11/8/2013
08-2033	Walla Walla Basin Fish Screen Projects	Walla Walla Co Cons Dist	Salmon Federal Projects	11/12/2013
11-1256	Cherry Creek Feasibility	Sound Salmon Solutions	Salmon Federal Projects	11/14/2013
11-1523	Blakely Island Forage Fish Habitat Restoration	Friends of the San Juans	Salmon Federal Projects	11/18/2013
07-1592	Skagit Bay Nearshore Protection	Whidbey Camano Land Trust	Puget Sound Acq. & Restoration	11/21/2013
10-1804	White River Van Dusen Conservation Easement	Chelan-Douglas Land Trust	Salmon Federal Projects	11/21/2013
10-1571	Granite Subbasin Large Wood Replenishment	Fish & Wildlife Dept of	Salmon State Projects	12/2/2013
11-1573	S. Fork Asotin Stream Channel Restoration	Fish & Wildlife Dept of	Salmon Federal Projects	12/11/2013
09-1448	Skagit Floodplain Habitat Acquisition Phase II	Skagit Land Trust	Salmon State Projects	12/16/2013
09-1519	Morse Creek Floodplain Reconnection and Phase II	North Olympic Salmon Coalition	Puget Sound Acq. & Restoration	12/19/2013
07-1725	Upper Klickitat River - Phase 3	Yakama Nation	Salmon Federal Projects	12/19/2013
10-1847	Teanaway River - Red Bridge Road Project	Kittitas Co Conservation Dist	Salmon Federal Projects	12/19/2013
10-1022	Upper Washougal Restoration III	Lower Columbia River FEG	Salmon Federal Projects	12/24/2013
10-1611	Snow Creek Delta Cone & Estuary Design	North Olympic Salmon Coalition	Salmon Federal Projects	12/24/2013
11-1373	Rattlesnake Creek Side Channel Restoration	Inouye, Robert	Salmon Federal Projects	12/24/2013
12-1350	YTID Tieton to Cowiche Delivery Assessment	Yakima-Tieton Irrigation Dist	Salmon Federal Projects	12/27/2013
11-1552	Puget Sound Regional Salmon Recovery	Puget Sound Partnership	Salmon Federal Activities	12/30/2013
07-2021	Union River and Bear Creek Headwaters	Forterra	Salmon State Projects	12/30/2013
10-1927	Middle Skagit Tier 1 & 2 Floodplain Protection	Skagit Land Trust	Puget Sound Acq. & Restoration	12/31/2013
10-1769	Upper Skagit Tier 1 & 2 Floodplain Protection	Seattle City Light	Salmon Federal Projects	12/31/2013
11-1546	Upper Columbia Regional Salmon Recovery	Upper Columbia Salmon Rec. BD	Salmon Federal Activities	1/2/2014
11-1341	Twins Nearshore Planning	Coastal Watershed Institute	Puget Sound Acq. & Restoration	1/3/2014
11-1666	Skokomish Estuary Island Adaptive Mgt Elements	Skokomish Tribe	Salmon State Projects	1/3/2014
10-1716	Cornet Bay Shoreline Areas 4, 6, and 7 Restoration	NW Straits Marine Cons Found	Salmon State Projects	1/7/2014
09-1788	Donovan Creek Acquisition	Jefferson Land Trust	Puget Sound Acq. & Restoration	1/8/2014
13-1085	PERS SRV 2013 Review Panel - Ecolution	Ecolution	Salmon Federal Activities	1/8/2014

Number	Name	Sponsor	Program	Closed On
08-1725	Brim Bar: Lower Cowlitz RM42.7 Side Channel Restor	Cowlitz Indian Tribe	Salmon Federal Projects	1/8/2014
11-1340	Christmas Creek Drainage Restoration	Pacific Coast Salmon Coalition	Salmon Federal Projects	1/8/2014
10-1054	Eagle Island Site A	Cowlitz Indian Tribe	Salmon Federal Projects	1/9/2014
11-1316	Lilliwaup Creek-Restoration Design Plan Completion	Long Live the Kings	Puget Sound Acq. & Restoration	1/14/2014
08-1953	Quinault LiDAR Assessment	Quinault Indian Nation	Salmon State Projects	1/14/2014
12-1005	PERS SRV 2012 Review Panel - Kelley Jorgensen	Kelley Jorgensen	Salmon Federal Activities	1/15/2014
12-1006	PERS SRV 2012 Review Panel - Steve Toth	Steven Toth Consulting Hydro	Salmon Federal Activities	1/15/2014
10-1014	Washougal Hatchery Intake Fishway & Trap 2009	Fish & Wildlife Dept of	Salmon Federal Activities	1/17/2014
11-1511	Indian Creek Fish Passage Design 2011	Pend Oreille Co Public Works	Salmon Federal Projects	1/17/2014
11-1365	Hardy Creek Design	Lower Columbia River FEG	Salmon Federal Projects	1/23/2014
07-1678	Trout Creek Restoration/Hemlock Dam	Mid-Columbia RFEG	Salmon Federal Projects	1/27/2014
10-1916	Green Creek Weir Removal	Pacific County Anglers	Salmon Federal Projects	1/27/2014
11-1346	Columbia Estuary - Knappton Conservation Project	Columbia Land Trust	Salmon State Projects	1/28/2014
11-1542	Illabot Creek Alluvial Fan Restoration Phase 1	Skagit River Sys Cooperative	Puget Sound Acq. & Restoration	1/30/2014
09-1449	Sauk River Riparian Restoration	Skagit River Sys Cooperative	Puget Sound Acq. & Restoration	2/4/2014
11-1323	McDonald Creek Barrier Removal	Jamestown S'Klallam Tribe	Puget Sound Acq. & Restoration	2/5/2014
09-1752	PERS SRV Hatchery Reform NWMT	Northwest Marine Tech In	Salmon Federal Activities	2/5/2014
11-1632	PERS SRV HSRG Member participation	D.J. Warren and Associates Inc	Salmon Federal Activities	2/5/2014
11-1528	Cedar River: Mouth of Taylor Ck Reach Acquisitions	King Co Water & Land Res	Salmon Federal Projects	2/5/2014
10-1479	Dosewallips Engineered Log Jams	Wild Fish Conservancy	Puget Sound Critical Stock	2/6/2014
10-1606	Dosewallips Engineered Log Jams SRFB	Wild Fish Conservancy	Salmon Federal Projects	2/7/2014

Washington Council of Salmon Recovery Regions
Report to the Salmon Recovery Funding Board
March 2014

Communication Strategy and Outreach Plan

Development of the communication strategy and outreach plan to revitalize the Washington Way has begun. The workgroup, including representatives from the regions and lead entities, SRFB members, Recreation and Conservation Office, the Governor's Salmon Recovery Office, WA Department of Fish and Wildlife, and the Puget Sound Partnership met with the consultant on February 21 to discuss the workplan in more detail. This project is a high priority for the directors over the next several months.

The directors also met in January and March to discuss other business including:

NOAA Fisheries

- **Reorganization**
  Kim Kratz (Oregon & Washington Coastal Area Office) and Mike Tehan (Interior Columbia Basin Area Office) provided an overview of the recent NOAA Fisheries west coast reorganization. The Protected Resources Division will be the regional lead for ESA policy and coordination. The area offices will be responsible for recovery planning and plan implementation as well as habitat and hydro activities. However, recovery activities related to hatcheries and harvest will remain with the Sustainable Fisheries Division. Organization details and assignments within the area offices, such recovery leads, are still evolving.

- **2014 Pacific Coastal Salmon Recovery Fund (PCSRF) Grant Process**
  Scott Rumsey discussed the schedule and priorities for the next grant application process. GSRO will have the lead in preparing a joint RCO/SRFB, WDFW, and NWITFC application. Mr. Rumsey explained the changes in the application priorities - under the new priority 1, projects that 1) address factors limiting the productivity of ESA-listed salmon and steelhead and, 2) for salmon and steelhead necessary for exercising tribal treaty rights or native subsistence will be equal. Engineering and project designs that are a necessary precursor to implementation of on-the-ground habitat projects were moved from priority 4 to priority 1. He also stressed that the highest PCSRF priority is the protection and restoration of habitat and that funding for the other priorities should not be greater than that for priority 1 which is why organizational support remains in priority 4.

- **5-Year Status Reviews**
  Pursuant to the ESA, the 5-year status reviews are intended to assess the health of listed populations. Mr. Rumsey believes that NOAA is interested in improving the messaging and wants to work with the regions to ensure that applicable information and data from the regions is considered during the review process. The draft schedule for the reviews calls for outreach to co-managers and recovery partners during the first quarter of 2014 and the submission of updated VSP information by the co-managers in November 2014. It is anticipated that a Federal Register Notice announcing the reviews will be issued in January 2015 with a public comment period extending to March 2015. Findings would be announced in early 2016.

- **Riparian Buffer Guidance**
  The region's expressed concern over the chilling effect NOAA's riparian buffer guidelines could have on securing riparian buffers on private lands. NOAA acknowledged the concern. It was agreed that wider riparian buffers are desirable, but that incentives are needed to secure landowner cooperation and participation.

Monitoring

- **2015-17 Budget Request**
  The group discussed developing a 2015-17 biennial budget request to fund critical monitoring needs in each region. The package would be based on regional monitoring needs that document progress toward achieving delisting for ESA listed salmon and steelhead or long-term viability goals for unlisted salmon and steelhead. Where applicable, monitoring needs will be tied to NOAA's guidance. The budget package would identify the monitoring needs or gaps to be addressed in each region, who would implement the proposed monitoring measures, and the cost. It would lay out anticipated needs for the next 10 years in 2-year increments. The directors will continue to work on this item throughout the year.

- **SRFB Monitoring Subcommittee**
  The directors reviewed and provided comments on the draft subcommittee recommendations and participated in the broader monitoring workgroup meeting on February 28. This item will be discussed in more detail at the March SRFB meeting.

Governor's Policy Staff

JT Austin, Natural Resource Advisor on the Governor's Executive Policy Office, met with the directors. Each the director provided her an overview of their region and salmon recovery efforts. The directors asked her to consider them a resource in dealing with salmon recovery issues. She asked that regions individually or collectively through COR keep her apprised of significant issues.

WDFW Policy and Funding Strategy Update

Jennifer Quan discussed the federal funding outlook. Support WDFW receives through the Mitchell Act, Dingell-Johnson Act and in support of the Pacific Salmon Treaty will be less than in FY 2013. Ms. Quan also noted that WDFW has begun to identify its budget needs for the 2015-17 biennium. Discussions with GSRO, the regions, the Washington Salmon Coalition, and the Fish Enhancement Groups are ongoing to develop a combined non-project capacity salmon recovery funding package for the next biennium. The SRFB has approved $10,000 to support this planning effort. The first step in assessing the feasibility of developing the joint proposal is for the parties to describe capacity needs. Once needs have been collected, they will be reviewed to identify opportunities to streamline activities and reduce costs, identify any needed legislative fixes, and prioritize them. The goal is to develop a 4-year capacity funding plan and coordinated outreach strategy.

WASHINGTON SALMON COALITION

Community-Based Salmon Recovery

February 24, 2014

David Troutt, Chairman
Salmon Recovery Funding Board
WA Recreation and Conservation Office
PO Box 40917
Olympia, WA 98504-0917

Dear Chairman Troutt and Board Members,

Kicking off the 2014 Grant Round

This is an exciting time for Lead Entity Coordinators around the state. Our 2014 grant processes are beginning, which means we have posted requests for proposals, hosted grant kick-off meetings, and are working with both new and old sponsors to understand any local or statewide changes to the grant review process.

Over the next few weeks, we will meet with project sponsors to discuss their project ideas and the steps involved with completing the project. The goal of this discussion is for the project sponsor to demonstrate that the project is well thought out, meets priority needs, and will be able to be implemented as proposed within the grant timeframe. These meetings are also an opportunity to provide early feedback as they determine which proposals to pursue and how to develop them. The hope is that this process will allow the applicant to consider initial committee concerns and suggestions, and incorporate them into the full application. This reduces the need for extensive revisions to applications later in the review process.

Legislative Outreach

Lead Entity Coordinators participated in Legislative Outreach on January 22 with the goal of building relationships with our elected officials and educating them about the importance of salmon recovery and the ongoing efforts in our local watersheds. We highlighted Lead Entities as the backbone for locally-based recovery efforts, bringing together Tribes, federal and state agencies, local governments, citizens, non-profits, business, and technical experts to make local decisions. We reminded them that we coordinate projects that represent an investment in local and rural economic development through family-wage job creation and retention. Finally, we pointed out that their constituents benefit from our approach to salmon recovery as it keeps decisions rooted in our communities and not in the hands of the Federal government. We are happy to report that this outreach effort was a success! Our elected representatives responded well to the "Washington Way" of achieving salmon recovery.

Our legislative outreach flier titled "Community Based Salmon Restoration Works" is attached for your review.

WASHINGTON SALMON COALITION

Community-Based Salmon Recovery

2014 Washington Salmon Coalition Training & Retreat

Our annual training and retreat is taking place February 25 - 27. The retreat planning team has developed our agenda around the theme of: Strengthening Partnerships and Outcomes through Improved Communication, Coordination, and Planning.

We will touch on the highlights of the event during our partner update at the March SRFB meeting.

A Fond Farewell to Lloyd Moody

The WA Salmon Coalition would like to take the time to say "thank you" and "job well done" to Lloyd Moody who has capably captained this ship for the past several years. We realize that the Washington Salmon Coalition is a diverse group with varied needs arising from our local networks and are sometimes not the easiest group of individuals to herd. Lloyd has done an admirable job despite these challenges.

We work closely with the statewide Lead Entity Program Manager both individually and collectively – if there is anything which the Washington Salmon Coalition can do to aid in this transition we are more than happy to be of assistance.

Statewide Lead Entity News and Updates:

WA Salmon Coalition Welcomes New Lead Entity Staff:

John Foltz, new Lead Entity Coordinator for the Snake River Salmon Recovery Board
Greg Schuler, new Lead Entity Coordinator for the Klickitat Lead Entity
Alicia Olivas, new Hood Canal Lead Entity Coordinator

Lead Entity Hiring Underway:

Nisqually
West Sound

News from the West Sound Watershed: Bulkhead removal called 'a Story of Bravery

Kitsap Sun, February 20, 2014

> "I think it's a story of bravery and a story of love for this place," says Martha Kongsgaard at the beginning of the video on this page.

Kongsgaard, chairwoman of the Leadership Council of the Puget Sound Partnership, is celebrating the removal of a massive bulkhead on Bainbridge Island. The removal, known as the Powel Shoreline Restoration Project, occurred in the fall of 2012. The outcome was to reconnect a saltwater marsh with the lower shoreline by removing 1,500 feet of man-made bulkhead from property owned by the Powel family.

In the midst of the excavation — which removed rocks, logs and huge chunks of concrete — Babe Kehres, a family member whose house overlooks the site commented, "I think it's going to be beautiful when it's done. For me, it's about taking things back to the way nature wanted them to be."

Reporter Tad Sooter covered the story for the Kitsap Sun (Aug. 30, 2012). It turned out that removing the bulkhead was less costly than repair — but not by a whole lot. Still, restoring the natural conditions provided tremendous ecological benefits without creating undue shoreline erosion.

The video, by Quest Northwest reporter Sarah Sanborn, shows the excavation in progress and explains why we should celebrate the project and the Powel family. But my favorite part is a slideshow on Sarah's blog, which shows before and after photos of the shoreline. It is easy to imagine why fish, wildlife and other creatures would prefer the more natural condition.

This project was funded by the SRFB for both design (2009) and construction (2011). The monitoring of the effectiveness of the restoration of the project is being conducted by UW Sea Grant and volunteers.

News from the North Pacific Coast Lead Entity (WRIA 20)

At North Pacific Coast Lead Entity (WRIA 20) they are still soliciting for one more Citizen Member for their Citizen Committee, but they welcome new member Phil DeCillis, a retired USFS Fisheries Biologist to a new position as Citizen # 2. Also, the North Pacific Coast's Regional Fisheries Enhancement Group, Pacific Coast Salmon Coalition, has included UW graduate student Chris Vandrasek's GIS thesis project as a funded component of their new Goodman Creek Assessment project funded by SRFB this year.

On behalf of the Washington Salmon Coalition, I thank you for your continued support,

Darcy Batura
Yakima Basin Lead Entity Coordinator & Washington Salmon Coalition Chair



COMMUNITY BASED SALMON RESTORATION WORKS

Salmon recovery lead entities are the backbone for locally-based restoration efforts done the Washington Way. Lead entities provide a local, balanced, coordinated, common-sense approach to salmon habitat project implementation. We play a key role in efficiently bringing together tribes, federal and state agencies, local governments, citizens, non-profits, business, and technical experts to make local decisions about how best to recover salmon. This work has multiple benefits:*

It Works for the ECONOMY

- These community-based salmon recovery organizations develop on-the-ground projects to improve salmon habitat, bringing family-wage jobs; salmon recovery funding has resulted in 4,400 new or sustained jobs and more than $640 million in total economic activity (RCO, 2012).
- Lead entities support recreational and commercial fishing by spearheading efforts to recover and sustain salmon populations throughout Washington State. Washington recreation and commercial fisheries supports an estimated 16,374 jobs and $540 million in personal income (WDFW, 2006).
- Restoration funds are a return on investment—every dollar that is spent returns three dollars of additional matching funds and a great deal of in-kind donated labor and materials.

It Works LOCALLY

- In 1999, Washington State worked with the federal government to allow watersheds to write their own recovery plans for Endangered Species Act listings. This action kept decisions local and not in the hands of the federal government.
- Projects implemented through these local groups protect agricultural lands, provide flood protection, fix roads, bridges and other public infrastructure, and create tourism and recreational opportunities.
- 80% of grant funding is spent in the county where the project is located. For every $1 million spent on restoration 15–33 new or sustained jobs and $2.2–2.5 million in total economic activity is generated (RCO, 2012).
- Lead Entities engage hundreds of citizens as volunteers and on local committees to solve the problems in our own communities.

It Works for the ENVIRONMENT

- Businesses locate in Washington State because of the quality of life provided by abundant and beautiful natural resources.
- Maximizing the public benefit of habitat restoration, these locally implemented projects improve water quality and supply and habitat for multiple species, also benefiting human health and wellness.
- Lead entities work locally to restore and protect those resources to the benefit of people who live and work here, as well as the creatures that depend upon the habitat.

**The Salmon Recovery Planning Act (Revised Code of Washington 77.85) created lead entities in 1999. They are administered by the Recreation and Conservation Office. The Washington Salmon Coalition represents Lead Entity organizations throughout Washington State.*

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board Briefing Memo

Item **5**

Meeting Date: March 2014

Title: Proposal to Adopt Minimum Riparian Buffers Guidelines

Prepared By: Leslie Connelly, Natural Resources Policy Specialist

Approved by the RCO Director: Kaleen Cottingham

Summary

As requested by the Salmon Recovery Funding Board during its December meeting, Recreation and Conservation Office staff completed an analysis of the riparian buffer widths used in projects recently approved by the board. Riparian buffers were compared with the National Oceanic Atmospheric Administration's buffer width recommendations for western Washington and the Washington Department of Ecology's buffer width criteria for eastern Washington.

This memo describes the analysis and presents a broader array of options for the board's consideration on whether to apply buffer widths to riparian projects funded by the board. This memo also includes a recommendation for staff to solicit public comment and bring a final recommendation to the board at a future meeting.

At the March board meeting, representatives from the National Oceanic Atmospheric Administration and Northwest Indian Fisheries Commission will take part in a panel discussion on riparian buffers widths. The board also received a letter on this topic from the Yakima Basin Fish and Wildlife Recovery Board (Attachment A).

Board Action Requested

This item will be a:

- ☐ Request for Decision
- ☒ Request for Direction
- ☐ Briefing

Background

Staff provided a briefing at the December Salmon Recovery Funding Board (board) meeting on recommendations from the National Oceanic and Atmospheric Administration (NOAA) for minimum riparian buffer widths on Puget Sound agricultural lowlands. NOAA worked with the

Environmental Protection Agency (EPA) and the Department of Ecology (Ecology) to develop the recommendations and encouraged EPA, Ecology and the Natural Resources Conservation Service (NRCS) to incorporate the minimum buffer widths through their voluntary financial assistance and grant programs. NOAA is emphasizing the use of minimum buffer width recommendations on an interim basis, with the hope of refining them based on best available science. NOAA's recommendations are intended to shape salmon recovery efforts and provide advice on what aquatic functions fish need.

NOAA's suggested minimum riparian buffer widths are recommendations (not requirements) for Puget Sound agricultural lowlands. Different widths are applied based on stream type. NOAA recommends that fish bearing streams should have a 100 foot buffer width on each side of the stream, non-fish bearing streams should have a 50 foot buffer, and non-fish bearing, constructed ditches should have a 35 foot buffer. See Attachment B for a table of NOAA's recommendations.

Federal and state agencies are implementing NOAA's recommendations in different ways:

- EPA applies the NOAA recommendations as criteria to its Puget Sound National Estuary Program grants.
- NRCS was instructed in the recently passed federal Farm Bill to rely on its own technical guidance for riparian buffer widths instead of those developed by other federal agencies.
- Ecology applies the NOAA recommendations as eligibility criteria to nonpoint pollution grants. Ecology also expanded the application of minimum buffer width requirements to western Washington locations beyond Puget Sound and developed separate requirements for eastern Washington (Attachment C).

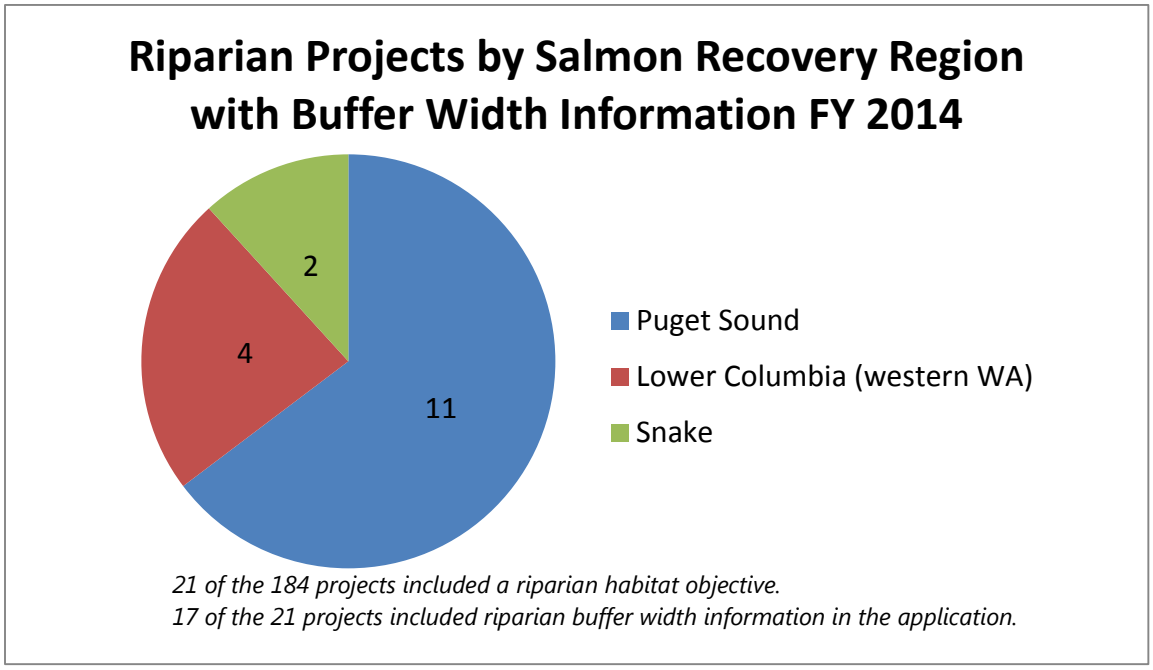
As previously discussed during the December board meeting, the Aquatic Habitat Guidelines Program lead by Ecology and the Department of Fish and Wildlife is conducting a scientific literature review to update riparian buffer best management practices. The funding for this project is an EPA grant. The Aquatic Habitat Guidelines Program expects to have a draft scientific white paper available by spring 2014 and final guidelines ready by summer 2015.

Analysis

After significant discussion and comments from the public in December, the board directed staff to research the potential implications of applying riparian buffer width recommendations to past grant cycles to see how many projects would have met them and how many would not.

This research task was challenging for two reasons. First, grant applications do not require applicants to define the width of a project's riparian buffer. The applications include data on stream length and the number of acres restored, but not the buffer width. Second, the grant applications do not define the type of landscape where the project is located (e.g., agricultural land, forest land, park land, urban setting). For these two reasons, staff relied on the written scopes of work and draft design plans submitted with the applications to determine riparian buffer width. Staff were unable to determine the landscape type of the reviewed projects.

In fiscal year 2014, the board funded 184 projects in total. The majority of projects (163 projects; 89%) did not include a riparian habitat objective. These projects were for planning and feasibility studies, land acquisitions, fish passage and screening, instream flows and habitat, upland habitat, wetlands, and marine shoreline restoration. There were 21 funded projects that included a riparian habitat objective (i.e., riparian restoration or riparian exclusion projects). Of these 21 projects, four did not include riparian buffer width information in the application materials (three projects in Puget Sound and the only project in the Coast region).



RCO staff reviewed board funded projects throughout Washington from fiscal year 2014 and retrospectively applied buffer widths as follows:

- NOAA riparian buffer width recommendations for Puget Sound to projects in Puget Sound;
- NOAA riparian buffer width recommendations for Puget Sound to projects in the rest of western Washington; and
- Ecology riparian buffer width criteria[1] for eastern Washington to projects in eastern Washington.

All 11 of the riparian projects funded in Puget Sound in fiscal year 2014 met or exceeded NOAA's riparian buffer width recommendations. Two of the four Lower Columbia western Washington projects met or exceeded NOAA's recommendations. The two Lower Columbia projects that did not meet NOAA's recommendations were Conservation Reserve Enhancement

[1] Ecology's riparian buffer widths are referred to as criteria in this memo, as they are used as eligibility criteria and not as recommendations.

Projects funded through the NRCS and leveraged as match for other restoration work funded in the grant.

For eastern Washington, one project funded in the Snake region met or exceeded Ecology's buffer width criteria and one project did not. For the project that did not meet Ecology's buffer width criteria, the riparian buffer was constrained by the soil types on site.

In summary, the majority of the funded projects in fiscal year 2014 did not focus on riparian habitat objectives. For those projects that did have a riparian habitat objective, the majority of projects in western Washington met or exceeded the buffer widths recommended by NOAA. Of the two projects with riparian habitat in eastern Washington, one met Ecology's criteria. Table 5-1 summarizes the results of staff research.

Table 5-1: Riparian Habitat Projects in Fiscal Year 2014

Western Washington Riparian Habitat Projects			
Region	**Projects that met or exceeded NOAA's recommendations**	**Projects that did not meet NOAA's recommendations**	**Unable to determine**
Puget Sound/Hood Canal	11	0	3
Lower Columbia (western WA portion)	2	2	0
Coast	0	0	1
Eastern Washington Riparian Habitat Projects			
Region	**Projects that met or exceeded Ecology's criteria**	**Projects that did not meet Ecology's criteria**	**Unable to determine**
Mid-Columbia	0	0	0
Upper Columbia	0	0	0
Snake	1	1	0

Options for Consideration

Applying a minimum riparian buffer width is potentially a three-part consideration.

Step One

The first question is:

> *Question 1 - Should the board adopt a minimum riparian buffer width for projects that are focused on riparian habitat objectives?*

Potential answers:

1A No, a minimum riparian buffer width should not be required for projects that are focused on riparian habitat objectives.

1B Possibly, but additional research would help inform the board's decision. This might include direction to:

- Collect application information on buffer widths and landscape type
- Conduct additional research into projects funded in previous years
- Request a briefing later this year on the scientific literature review of riparian buffer management best practices
- Request a briefing from EPA, NRCS, Ecology, and/or the conservation districts on how they are addressing NOAA's recommendations

1C Yes, a minimum riparian buffer width should be a guideline for projects with a riparian habitat objective.

If a proposed riparian project in Puget Sound is not designed to the adopted guidelines, the project sponsor would include a written justification as to why the proposal is for a smaller buffer. The written justification would document that the smaller buffer will support salmon recovery and describe the constraints that prohibit achieving adopted guideline. Constraints may include transportation corridors, structures, or naturally occurring conditions such as geology or soil types. If there is a lack of justification provided about the reasons for a smaller buffer, the technical review panel may deem the application a project of concern. The board would then consider whether to fund the application at its funding meeting.

1D Yes, a minimum riparian buffer width should be an eligibility criterion for projects with a riparian habitat objective.

See Attachment D for a list of these options with pros and cons for the board to consider in question one.

Step 2

If the board decides to implement a minimum riparian buffer width guideline or criteria (options 1C or 1D), then the next question is:

Question 2 – What buffer width should apply to projects with riparian habitat objectives?

Potential answers:

2A Apply NOAA's recommended buffer widths for the Puget Sound region only.

2B Apply NOAA's recommended buffer widths for the Puget Sound, Lower Columbia, and Coast regions.

2C Apply Ecology's buffer widths for eastern Washington to the mid-Columbia, upper Columbia, and Snake River regions.

2D Apply site-specific buffer widths based on soil type and potential vegetation height.

2E Ask the regional organizations to develop minimum buffer widths by region in consultation with NOAA and the Governor's Salmon Recovery Office.

See Attachment E for a list of these options with pros and cons for the board to consider in question two.

Step 3

If the board determines which minimum riparian buffer widths to apply, then the next question is:

Question 3 – For which type(s) of landscape should the minimum riparian buffer widths apply?

Potential answers:

3A Apply minimum riparian buffer widths to agricultural land only.

3B Apply minimum riparian buffers widths to any project, regardless of the type of land use.

See Attachment F for a list of these options with some pros and cons for the board to consider in question 3.

Staff Recommendation

The board may choose to combine any of the above options to develop a policy on minimum riparian buffer widths. RCO staff recommend the board select a preferred approach and solicit public comment for additional input from stakeholders and the public.

Staff recommend the board adopt a policy that applies NOAA's recommended minimum riparian buffer widths as a guideline for projects with a riparian habitat objective in the Puget Sound region for all landscapes (Options 1C, 2A, and 3B). If a proposed riparian project in Puget Sound is not designed to NOAA's minimum buffer width recommendations, the project sponsor must include a written justification as to why the proposal is for a smaller buffer. The written justification must document that the smaller buffer will support salmon recovery and describe the constraints that prohibit achieving NOAA's minimum riparian buffer recommendations. Constraints may include transportation corridors, structures, or naturally occurring conditions such as geology or soil types. If there is a lack of justification provided about the reasons for a smaller buffer, the technical review panel may deem the application a project of concern. The board would then consider whether to fund the application at its funding meeting.

Staff also recommend the board encourage the other regions to work with NOAA and the Governor's Salmon Recovery Office to develop minimum buffer width guidelines, as needed by region, in order to address regional landscapes and riparian buffer needs (Option 2E).

Finally, to encourage the participation of private landowners in restoring riparian buffers, staff recommend the board adopt a policy to encourage project sponsors to pursue riparian conservation easements[2] to compensate landowners who volunteer to use their property for a riparian habitat project. An example policy statement is:

> *The board encourages project sponsors to acquire riparian conservation easements to provide compensation to landowners who voluntarily allow their property to be used for riparian habitat projects. Securing interest in the property will also support efforts to maintain and steward riparian habitat project areas.*

The board may also wish to consider allowing other types of financial incentives to landowners, such as term easements or leases, to compensate them for use of their property.

Next Steps

Staff will implement the direction provided by the board.

Attachments

A. Letter from Yakima Basin Fish and Wildlife Recovery Board

B. NOAA Fisheries Interim Riparian Buffer Recommendations for Streams in Puget Sound Agricultural Landscapes

C. Minimum Buffer Requirements for Surface Waters for Grants Awarded through the Washington Department of Ecology for Nonpoint Source Pollution

D. Options and Pros and Cons for Question 1: *Should the board adopt a minimum riparian buffer width for projects that are focused on riparian habitat objectives*?

E. Options and Pros and Cons for Question 2: *What buffer width should apply to projects focused on riparian habitat objectives?*

F. Options and Pros and Cons for Question 3: *For which type(s) of landscape should the minimum riparian buffer widths apply?*

[2] Perpetual conservation easements are currently eligible for grant funding.

Attachment A

YAKIMA BASIN FISH AND WILDLIFE RECOVERY BOARD

RECEIVED
FEB 04 2014
WA STATE
RECREATION AND CONSERVATION OFFICE

January 28, 2014

David Trout, Chair
Salmon Recovery Funding Board
PO Box 40917
Olympia WA 98504-0917

Dear Chairman Trout,

At the December meeting of the Salmon Recovery Funding Board (SRFB), the Board discussed a proposal to adopt the new wider riparian buffer standards recently released by the Department of Ecology as required standards for SRFB grants. We would like to encourage the SRFB not to adopt this proposal.
Buffers are an important part of restoration projects, and we applaud the SRFB's desire to ensure that they are as effective as possible. However setting specific requirements for their width pose problems.

For some settings and objectives, narrower buffers may meet project goals effectively. In others settings, new buffer standards may still not achieve full benefits (e.g. when an active channel migration zone extends beyond the designated buffer width). Setting appropriate buffer widths is a case-by-case process that requires careful attention to site-specific conditions and project goals and objectives.

Restoration projects- especially those on private lands- typically require some compromise between landowner goals and restoration goals. Requiring wider buffers will inevitably create situations where a landowner choses not installing a buffer over having to implement a wider buffer that reduces their ability to use their land for agricultural production. In cases where much of the benefit of the larger buffer would be gained with a smaller buffer more workable for a landowner, this results in a good project not happening. Often, buffers are but a small part of a larger project; many of our projects improve fish passage and screening on small irrigation dams and include small buffers around re-vegetated areas near the diversions. In these cases, more stringent requirements may lead landowners either to not include a buffer component in a larger project, or to drop the project all together.

We share the SRFB's desire to insure that SRFB funding is not awarded to projects that propose buffer widths that are insufficient to meet project goals. However, we believe that the existing intensive local and state reviews of SRFB projects will weed out proposals that use buffer widths that are insufficient to meet their goals. Setting new standards accomplishes little not already addressed in the existing project review, yet risk alienating key partners.

Sincerely,

Mike Leita, Chairman

1200 Chesterly Drive, Suite 280, Yakima, WA 98902
Phone (509) 453-4104 Email: info@ybfwrb.org Web: www.ybfwrb.org

Attachment B

NOAA National Marine Fisheries Service (NMFS) Interim Riparian Buffer Recommendations for Streams in Puget Sound Agricultural Landscapes (December 2013)

NMFS Channel Type	Channel Types	Habitat Functions/Composition	Buffer – Minimum Default Width
Class I Constructed ditches; fishless streams	1. Constructed ditches, intermittent streams, and ephemeral streams that are not identified as being access by anadromous or Endangered Species Act (ESA) listed species 2. Perennial waters that are not identified as being access and were historically not accessed by anadromous or ESA listed fish species	Water quality protection; shade; sediment filtration	1. 35′ 2. 50′
Class II Fish bearing, modified natural channel, entrenched, or spring fed watercourses that do not move	Modified or highly entrenched perennial, intermittent and ephemeral waters that are identified as being accessed or were historically accessed by anadromous or ESA listed fish species	Water quality; large wood debris for cover, complexity and shade	100′ Supporting site assessment recommended to increase buffer width.
Class III Fish bearing	Unconfined perennial, intermittent and ephemeral waters that are identified as being accessed or were historically accessed by anadromous or ESA listed fish species	Water quality; large wood debris for cover, complexity, and shade	100′ Supporting site assessment recommended to increase buffer width.
Class IV Diked, permanently fixed	N/A	N/A	N/A
Class V Fish bearing, Intertidal/estuarine	Perennial, intermittent and ephemeral waters that are identified as being accessed or were historically accessed by anadromous or ESA listed fish species in intertidal and estuarine streams and channels	Site potential vegetation (salt water) sedges, shrubs, etc.	35′ – 75′ Supporting site assessment or adjacent land use recommended to increase buffer protections needed to meet all applicable water quality standards.

Attachment C

Minimum Buffer Requirements for Surface Waters for Grants Awarded through the Washington State Department of Ecology for Nonpoint Source Pollution (October 2013)

Category	Functions	Minimum Buffer Width West of Cascades	Minimum Buffer Width East of Cascades
A. Constructed ditches, intermittent streams, and ephemeral streams that are not identified as being accessed and were historically not accessed by anadromous or Endangered Species Act (ESA) listed fish species	Water quality, shade, source control and delivery reduction	35' minimum	35' minimum
B. Perennial waters that are not identified as being accessed and were historically not accessed by anadromous or ESA listed fish species	Water quality, shade, source control, and delivery reduction	50' minimum	50' minimum
C. Perennial, intermittent, and ephemeral waters that are identified as being accessed or were historically accessed by anadromous or ESA listed fish species	Water quality, large wood debris for cover, complexity and shade, and microclimate cooling, source control and delivery reduction	100' minimum	75' minimum
D. Intertidal and estuarine streams and channels that are identified as being accessed or were historically accessed by anadromous or ESA listed fish species	Water quality, habitat complexity	35'-75' minimum, or more as necessary to meet water quality standards	N/A

Attachment D

Options and Pros and Cons for Question 1: *Should the board adopt a minimum riparian buffer width for projects that are focused on riparian habitat objectives*?

	PROS	CONS
Option 1A: No, a minimum riparian buffer width should not be required for projects that are focused on riparian habitat objectives.	Doesn't place additional restrictions on our applications. Doesn't detract from current policy that encourages projects to implement the maximum buffer widths in the Stream Habitat Restoration Guidelines.	Doesn't implement advice from NOAA on what aquatic functions fish need for recovery. We may see more applications with smaller buffers, especially if those projects are ineligible for funding in other state or federal programs.
Option 1B: Possibly, but additional research would help inform the board's decision. This might include direction to: • Collect application information on buffer widths and landscape type • Conduct additional research into projects funded in previous years • Request a briefing later this year on the scientific literature review of riparian buffer management best practices • Request a briefing from EPA, NRCS, Ecology, and/or the conservation districts on how they are addressing NOAA's recommendations	Collects valuable information in the application on riparian buffers. Expands RCO's case study to have a larger data set. We can learn from other funding agencies what they are doing and how minimum buffer widths might affect their projects. Gathers additional information to further define any issues.	Delays implementation, which may affect this year's grant applications. We could be perceived as behind the curve as other agencies move ahead with implementation. We may see more applications with smaller buffers, especially if those projects are ineligible for funding in other state or federal programs. Doesn't implement the advice from NOAA on what aquatic functions fish need for recovery.
Option 1C: Yes, a minimum riparian buffer width should be a guideline for projects with a riparian habitat objective.	Implements advice from NOAA on what aquatic functions fish need for recovery. Provides a screen for meeting minimum buffer widths, with flexibility to allow for smaller buffer widths based on justification in the application.	We may see less projects submitted for riparian restoration and riparian exclusion. Creates the perception that those projects which provide at least some salmon recovery benefit would not get done.

	PROS	CONS
	Riparian restoration projects would be more likely to meet the board's evaluation criteria for the technical review panel. Provides consistency with other state and federal voluntary incentive programs. Allows for flexibility, should the board choose to fund a project that does not meet the guideline. 14 of 17 projects funded in fiscal year 2014 met or exceeded buffer widths recommended by NOAA and used by Ecology.	Project sponsors would need to provide justification for why a minimum riparian buffer was not achievable. 3 of 17 projects funded in fiscal year 2014 did not meet buffer widths recommended by NOAA and used by Ecology.
Option 1D: Yes, a minimum riparian buffer width should be an eligibility criterion for projects with a riparian habitat objective.	Implements advice from NOAA on what aquatic functions fish need for recovery. Ensures any riparian project meets minimum buffer widths. Riparian restoration projects would be more likely to meet the board's evaluation criteria for the technical review panel. Provides consistency with other state and federal voluntary incentive programs. 14 of 17 riparian projects funded in fiscal year 2014 met or exceeded buffer widths recommended by NOAA and used by Ecology	We may see less projects submitted for riparian restoration and riparian exclusion. Creates the perception that those projects which provide at least some salmon recovery benefit would not get done. 3 of 17 riparian projects funded in fiscal year 2014 would not have met buffer widths recommended by NOAA and used by Ecology.

Attachment E

Options and Pros and Cons for Question 2: *What buffer width should apply to projects focused on riparian habitat objectives?*

	PROS	CONS
Option 2A: Apply NOAA's recommended buffer widths for the Puget Sound region only	Implements advice from NOAA on what aquatic functions fish need for recovery. Focuses on the specific geography that is the subject of NOAA's recommendations. Implies that smaller buffers in other locations are not a problem for salmon recovery. Impact to projects may be minimal, since all of the projects from fiscal year 2014 would have met NOAA's recommendations anyway.	NOAA's recommendations were developed with other entities for specific purposes which may not be directly applicable to board projects. Implies that minimum buffer widths are not needed in other locations to support salmon recovery. Creates a disparity on application requirements based on the project's location.
Option 2B: Apply NOAA's recommended buffer widths for the Puget Sound, Lower Columbia, and Coast regions	Implements advice from NOAA on what aquatic functions fish need for recovery. Creates consistency in western Washington on minimum buffer widths. Implies that smaller buffers in other locations is not a problem for salmon recovery. 2 of 4 projects from fiscal year 2014 would have met NOAA's recommendations.	NOAA's recommendations are specifically targeted to the Puget Sound region, so they may not be applicable to other regions. NOAA's recommendations were developed with other entities for specific purposes, which may not be directly applicable to board projects. Implies that minimum buffer widths are not needed in other locations to support salmon recovery. Creates disparity on application requirements based on the project's location. 2 of 4 projects from fiscal year 2014 would not have met NOAA's recommendations.

	PROS	CONS
Option 2C: Apply Ecology's buffer width criteria for eastern Washington to the mid-Columbia, upper Columbia, and Snake River regions	Applies a minimum buffer width statewide while recognizing the different landscapes on the west and east sides. Applies Ecology's buffer width criteria to improve water quality which is also important for salmon recovery. 1 of 2 projects from fiscal year 2014 would have met the Ecology criteria for eastern Washington.	Ecology's buffer width criteria were developed with other entities for specific purposes which may not be directly applicable to board projects. 1 of 2 projects from fiscal year 2014 would not have met the Ecology criteria for eastern Washington.
Option 2D: Apply site specific buffer widths based on soil type and potential vegetation height	Applies a minimum buffer width statewide based on site potential which would support favorable conditions for salmon recovery.	May require the applicant to obtain technical assistance to determine what the minimum buffer width should be at the project site.
Option 2E: Ask the regional organizations to develop minimum buffer widths by region in consultation with NOAA and the Governor's Salmon Recovery Office	Develops a minimum buffer width by region. Could rely on WDFW's and Ecology's forthcoming scientific literature review to update riparian buffer best management practices to determine riparian buffer width minimums. Addresses minimum riparian buffer widths at the recovery planning unit level.	Adds to the responsibilities of regional organizations to work with NOAA. Regional organizations may be burdened with conducting scientific literature reviews. Delays implementation of any minimum buffer width in projects.

Attachment F

Options and Pros and Cons for Question 3: *For which type(s) of landscape should the minimum riparian buffer widths apply?*

	PROS	CONS
Option 3A: Apply minimum riparian buffer widths to agricultural land only	Implements advice from NOAA on what aquatic functions fish need for recovery. Recognizes that other state and local laws already provide riparian buffer protections on other land use types (e.g., critical areas ordinances, shoreline master programs, and forest practices). Recognizes that some local jurisdictions have not adopted riparian buffer protections for agricultural land uses. Focuses on the specific land use that is the subject of NOAA's recommendations. Implies that smaller buffers on other land use types is not a problem for salmon recovery.	Creates a disparity on application requirements based on the property's current land use which may or may not be appropriate based upon the land use type. Implies that minimum buffer widths are not needed for other land use types to support salmon recovery May undercut minimum riparian buffers adopted by local jurisdictions for other land use types if those buffers are larger than the agricultural buffers applied by the board.
Option 3B: Apply minimum riparian buffer widths to any project, regardless of the type of land use	Implements advice from NOAA on what aquatic functions fish need for recovery. Includes the specific land use that is the subject of NOAA's recommendations. Recognizes there should be a minimum requirement for all land use types.	Implies that the same minimum buffer width is appropriate, regardless of the landscape or adjacent land use. May undercut minimum riparian buffers adopted by local jurisdictions for other land use types if those buffers are larger than those buffers applied by the board.

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board Briefing Memo

Item **6**

Meeting Date: March 2014

Title: Early Action Puget Sound Acquisition and Restoration (PSAR) Project Approval

Prepared By: Marc Duboiski, Salmon Recovery Grants Manager

Approved by the RCO Director: Kaleen Cottingham

Summary

To approve an early action Puget Sound Acquisition and Restoration feasibility and preliminary design grant request to reconnect a salt marsh to Similk Bay in the Skagit River watershed.

Board Action Requested

This item will be a:

- ☒ Request for Decision
- ☐ Request for Direction
- ☐ Briefing

Background

As outlined in Manual 18, projects requesting Puget Sound Acquisition and Restoration (PSAR) funds can go to the Salmon Recovery Funding Board (board) for funding outside of the regular project approval schedule, dependent on the project's readiness and the needs of the watershed.

The Skagit River System Cooperative has applied for a feasibility and preliminary design grant through their lead entity, the Skagit Watershed Council. The Similk Beach Estuary Restoration Feasibility project (#14-1058), requests $284,750 in PSAR funds. With a match of $50,250, the total project cost equals $335,000. The project proposes to analyze and design an approach to reconnect a salt marsh measuring approximately 17 acres to Similk Bay in north Puget Sound (see maps included as Attachments A and B). This project would create pocket estuary habitat critical to the rearing of juvenile Chinook salmon as they out-migrate from the Skagit River. The project site is currently disconnected from the bay by a county road.

Last fall the Swinomish Tribe purchased the project site property and an additional 180 acres which include an adjacent golf course. During the spring and summer of 2014, the new golf course board of directors plans to implement an ambitious management plan which includes

recommendations for facilities upgrades, course reconfiguration, and new management practices. The board of directors of the golf course has acquiesced to this restoration feasibility project.

The Skagit River System Cooperative is requesting project funding now because they desire these two parallel planning efforts to remain on a similar timeline.

The Skagit Watershed Council lead entity and the Salmon Recovery Funding Board review panel will review the project before the March 2014 board meeting.

The Puget Sound Partnership Recovery Implementation Technical Team has reviewed and approved the project for consistency with the Skagit Chinook Recovery Plan and the Skagit Watershed Council Strategic Approach.

Staff Recommendation

The project proposal has met the funding criteria outlined in Manual 18[1]. Staff recommend funding the project as described in grant application #14-1058 and its attachments.

The $284,750 request would be funded from the $1,909,898 balance of 2013-1015 PSAR funds currently retained by the Skagit Watershed Council. The remaining PSAR fund balance of $1,625,148 would be allocated during the early action process at the September 2014 board meeting.

Next Steps

Staff will implement the direction provided by the board.

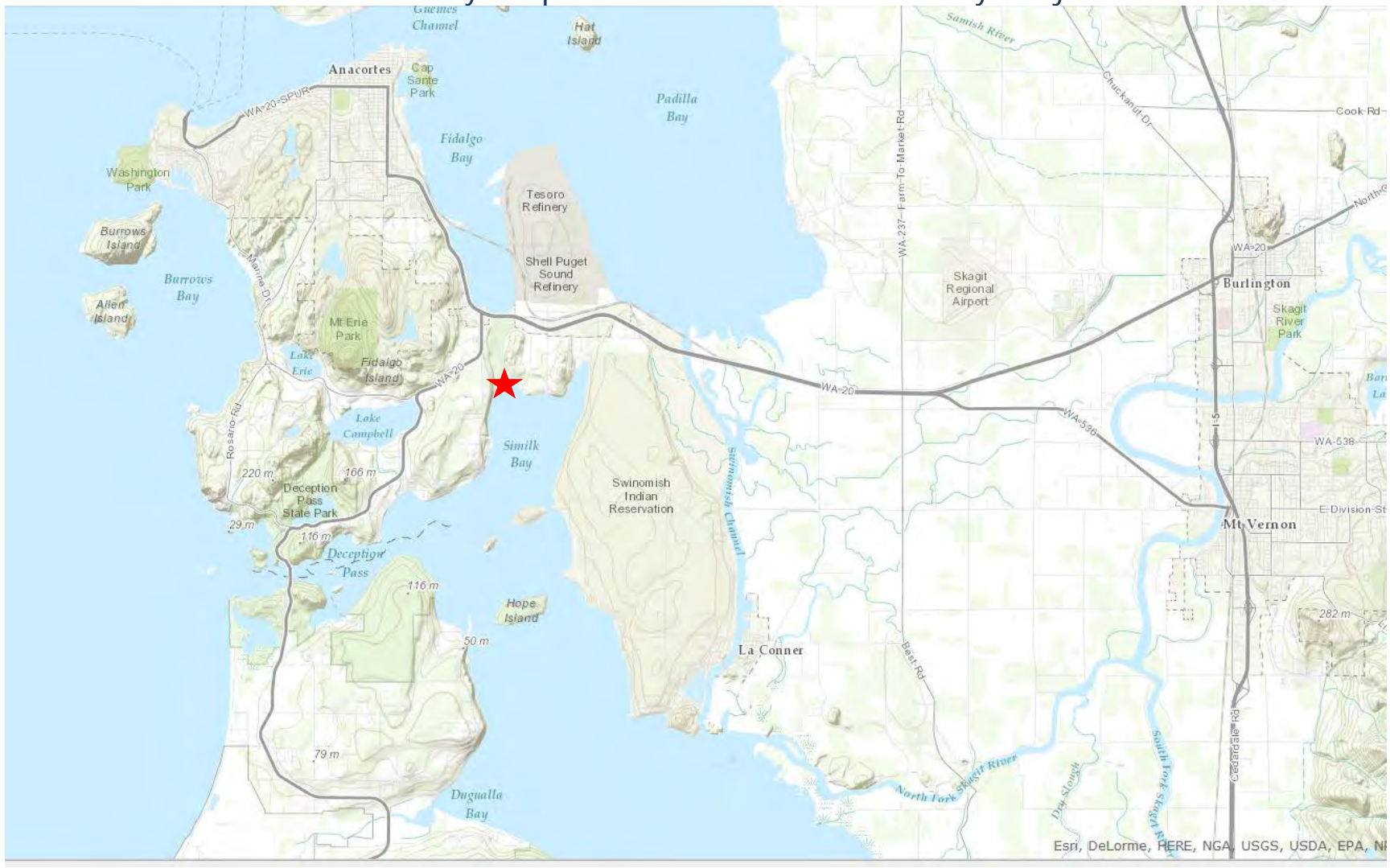
Attachments

A: Vicinity Map of the Similk Beach Estuary Project Location

B: Aerial View of the Similk Beach Estuary Project Location

[1] Appendix B, #4, page 76

Attachment A: Vicinity Map of the Similk Beach Estuary Project Location



Attachment B: Aerial View of the Similk Beach Estuary Project Location

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board Briefing Memo

Item **7A**

Meeting Date: March 2014

Title: Salmon Recovery Funding Board Monitoring Subcommittee Recommendations

Prepared By: Brian Abbott, Governor's Salmon Recovery Office Executive Coordinator
Keith Dublanica, Governor's Salmon Recovery Office Science Coordinator

Approved by the RCO Director: Kaleen Cottingham

Summary

The Salmon Recovery Funding Board will hear a series of recommendations generated by the board's subcommittee on monitoring. This is a follow-up to the Stillwater Science's monitoring assessment report and board direction given last December.

Board Action Requested

This item will be a:

- ☒ Request for Decision
- ☐ Request for Direction
- ☐ Briefing

Background

In October of 2013 the Salmon Recovery Funding Board (board) was presented a report, titled "Monitoring Investment Strategy for the Salmon Recovery Funding Board," by Stillwater Sciences (Attachment A), who was contracted to complete an independent review of the board's monitoring program.

Several factors led to the board's decision to conduct an assessment of its monitoring strategy.

In 2012, the National Oceanic and Atmospheric Administration (NOAA) introduced its own priorities for monitoring. This prioritization is an important factor for the board to consider in its funding allocation decisions, as the use of Pacific Coastal Salmon Recovery Fund (PCSRF) funding must be consistent with the NOAA guidance and with the specific state application. Specifically, NOAA articulated that one of its top four priorities would be:

> *"Effectiveness monitoring of habitat restoration actions at the watershed or larger scales for ESA-listed anadromous salmonids, status monitoring projects that directly contribute to population viability assessments for ESA-listed anadromous*

salmonids, or monitoring necessary for the exercise of tribal treaty fish rights or native subsistence fishing on anadromous salmonids."

The monitoring documents noted below were created before the development or adoption of the regional salmon recovery plans. The regional recovery organizations, among others, expressed both interest in and concerns about how monitoring is funded. At the June and August 2012 board meetings, for example, regional organizations expressed concern about how the monitoring efforts, in particular the Intensively Monitored Watersheds (IMW) Program, fit with the project selection process and with the implementation of regional recovery plans.

Monitoring Documents

"The Washington Comprehensive Monitoring Strategy and Action Plan for Watershed Health and Salmon Recovery http://www.rco.wa.gov/documents/monitoring/Executive_Report_final.pdf*; "Washington State*

Framework for Monitoring Salmon Populations Listed under the Federal Endangered Species Act and Associated Freshwater Habitats:
http://www.rco.wa.gov/documents/monitoring/SRFB_Monitoring_Strategy.pdf

Board members themselves have expressed concern that the monitoring approach may not provide data that informs future decisions about project design, funding, and selection. Some members also expressed concern about the funding balance between the types of monitoring, and whether the board needs to consider other monitoring efforts.

At the August 2012 board meeting, Recreation and Conservation Office (RCO) Director Cottingham suggested that a portion of the remaining fiscal year 2012 federal monitoring funds[1] be used for an objective and strategic assessment of how the board's monitoring funds should be used in the future. The board concurred, and directed staff to prepare a proposal of how that assessment could be done.

Stillwater Sciences was selected through a competitive process to assess the board's monitoring activities and associated funding allocations. They worked with a work group of individuals who have familiarity and expertise in monitoring as well as knowledge of the board funding process. A number of work group members previously served on the Washington Forum on Monitoring Salmon Recovery and Watershed Health, which was created by the legislature in 2007 and disbanded in 2011. Members of the work group were actively engaged in the assessment process. The Stillwater Sciences monitoring assessment report was discussed in detail at the October 2013 board meeting.

[1] Federal monitoring funds are provided through the PCSRF grant, which requires a minimum ten percent allocation to monitoring.

The discussion at the October board meeting highlighted the need to determine the board's role in monitoring. Once determined, the board's role would drive its objectives for and allocation of monitoring funds. The board created the Salmon Recovery Funding Board Monitoring Subcommittee (subcommittee) made up of RCO and Governor's Salmon Recovery Office (GSRO) staff, Stillwater Sciences staff, and board members David Troutt, Phil Rockefeller, Jennifer Quan, and Rob Duff.[2] The purpose of the subcommittee was to propose revisions to the board's monitoring strategy and recommend an approach to review and, if appropriate, implement the recommendations in the Stillwater Sciences report.

GSRO/RCO extended the Stillwater Sciences contract and added funds to further develop the recommendations in the report. Stillwater Sciences provided the board a set of six recommendations based on the direction of the subcommittee.

At the December 2013 board meeting, the subcommittee's recommendations were discussed. Although the Stillwater Sciences contract had ended, the board decided that the remaining members of the subcommittee should continue to refine and operationalize their recommendations. The subcommittee met on January 27 and again on February 28, 2014 to finalize recommendations for board action at the March 2014 meeting. The recommendations are summarized below. Attachment B includes the six recommendations of Stillwater Sciences, along with the subcommittee proposed actions for board approval.

Salmon Recovery Funding Board Monitoring Subcommittee Recommendations

1. Update of Salmon Recovery Funding Board Strategic Plan

The Salmon Recovery Funding Board Monitoring Subcommittee drafted language to amend the board's strategic plan to clarify the board's role in monitoring. The revised strategic plan language includes new statements on the three components of monitoring, the establishment of a monitoring panel (detailed below under Recommendation 2), and the inclusion of an adaptive management program (Recommendation 4). See Attachment C for the track changes version of the Salmon Recovery Funding Board Strategic Plan.

2. Create a Salmon Recovery Funding Board Monitoring Panel

A. The subcommittee recommends that the Salmon Recovery Funding Board Monitoring Panel (panel) be created. The panel will fill four important roles:
   i. Create a functional adaptive management framework with clearly written expectations and a process for timely implementation;
   ii. Evaluate, by component, the performance of the board's monitoring program and provide guidance and funding recommendations to the board;
   iii. Review project effectiveness monitoring and IMW monitoring results to recommend changes in policy or funding criteria;

[2] Rob Duff left Ecology during the middle of the subcommittee process and was replaced by Bob Cusimano.

iv. Compare and share monitoring results to see if lessons learned in other monitoring efforts could be applied to board programs.

The Monitoring Panel would be independent in nature and provide recommendations to the board, much like the Board's Technical Review Panel.

The Stillwater Sciences report emphasized that, to be effective, the Monitoring Panel must have credentials and experience in salmon recovery monitoring. The panel needs a mix of good communication abilities, people skills, and the ability to present comprehensible and actionable recommendations to the board. The subcommittee emphasized the panel should be the crosswalk between the technical science of monitoring and practical policy implications that consider funding and resources.

B. The subcommittee recommends RCO/GSRO staff prepare a competitive and public recruitment announcement for panel members. The recruitment will look to state, federal, and tribal governments; Bonneville Power Administration staff, and the private sector for the scientific and policy expertise necessary in this independent and objective role. The recruitment announcement will be reviewed by the subcommittee before posting. An evaluation team made up of RCO staff and subcommittee members will select 3-5 qualified panelists from the interested applicants.

   Members will be compensated for time and travel in a similar process to the Board's Technical Review Panel. The panel members should be under contract by the middle of June.

C. The subcommittee agrees that an annual budget for the panel should start at $50,000.

D. The GSRO Science Coordinator would staff the panel.

3. Update and Finalize the Salmon Recovery Funding Board Monitoring Strategy

The subcommittee suggests the board update and finalize its draft monitoring strategy from 2003 (Attachment D). The Monitoring Panel will perform this task, with guidance and direction from the GSRO and the board. Monitoring strategy updates will clarify the board's role in monitoring, funding activities, reporting requirements, information exchange, and adaptive management. As this is a high-priority recommendation, it is suggested this be completed from August to October 2014, if not sooner.

4. Create a functional Adaptive Management Program

The subcommittee recommends that the Monitoring Panel be charged with establishing expectations and a process for timely implementation of an adaptive management program during its first year. In years to follow, the panel will verify accountability in each monitoring component and integrate its findings into future decisions. The subcommittee did not agree with the Stillwater Sciences report, which suggested the creation of a subpanel to complete this task. The subcommittee did agree that the adaptive management program should be a

separate and explicit task for the panel. The adaptive management approach is described in the Stillwater Sciences recommendations. The Monitoring Panel will use this information to assist in the development of an adaptive management program. Given limited resources, the subcommittee concluded it is not practical to have a separate subpanel dedicated to adaptive management.

5. Implement Projects within Intensively Monitored Watersheds (IMWs)

The subcommittee recommends that the board implement its decision to move forward on implementing projects within IMWs by funding up to $2 million a year over the next three years. This will require the board to revisit its principle that has historically maintained an annual grant round of at least $18 million from the PCSRF and State salmon capital funds. Funding projects in the IMW at $2 million per year over three years may cause the annual grant round to fall below $18 million. The subcommittee recommends:

A. The board allocate return funds for projects within IMWs for the immediate future. These are older year funds available for redistribution. The use of these return funds will result in less available funding for future grant rounds.
B. In order to minimize the impact on available funds for the upcoming board grant round, the RCO will request additional funds in the State salmon capital budget for the 2015-17 biennium. The subcommittee recommends a budget request be developed by June 2014.
C. The board ask the Puget Sound Partnership to consider utilizing unobligated Puget Sound Acquisition and Restoration (PSAR) funds to complete projects within the Skagit, Straits, and Hood Canal IMWs. The Skagit IMW is limited by landowner participation in restoration projects.
D. The board spend $6 million over the next three years with a maximum investment of $2 million per year for the Lower Columbia, Straits, and Hood Canal IMWs. The subcommittee recommends that the Skagit IMW continue to garner landowner support and use available funds through their annual allocation to fund projects that are ready to proceed.
E. The board waive its match requirement for project sponsors implementing the new projects in a board-funded IMW. The no-match requirement will only apply to these new projects implemented within board funded IMWs. The purpose of this recommendation is to provide an incentive to project sponsors to complete project implementation quickly. However, projects that have matching funds may be considered ahead of those that don't.
F. GSRO/RCO utilize the existing board grant round process to review projects proposed within each IMW. Projects proposed in IMWs must be consistent with the IMW study plans (included as hyperlinks in Attachment E), clear the Salmon Recovery Funding Board Review Panel, and be recommended by the IMW Scientific Oversight Committee. Up to $2 million a year will be dedicated to projects within three IMWs. A complete RCO grant application would be submitted to RCO by August 2014. Projects would be reviewed by the Salmon Recovery Funding Board Review Panel and considered for board approval at the September 2014 meeting.

6. Coordination with other Statewide Monitoring

The subcommittee made the following recommendations to advance the overall recovery monitoring needs for the board and the regional recovery delisting requirements. GSRO will strive to be an advocate for salmon recovery in the various monitoring circles. The subcommittee recommends:

A. Annual reports for all monitoring components be posted on the RCO Web site and in the Habitat Work Schedule (HWS) Web site. The HWS site should be expanded to include the status and trends of IMW monitoring. Annual monitoring program evaluations and funding recommendations should also be posted on these sites.
B. GSRO staff and the Monitoring Panel should consult with Northwest Power and Conservation Council regarding their fish and wildlife monitoring program. The goal of this effort is to share results and learn from collective monitoring efforts.
C. The Monitoring Panel, through the GSRO, should engage the Pacific Northwest Aquatic Monitoring Partnership (PNAMP) on the following outcomes:
    i. Collaborate with PNAMP web tools to identify and post the location of all board funded restoration and monitoring projects.
    ii. Provide incentives for board-funded monitoring programs to participate in PNAMP sponsored workshops and to contribute to workshop products and documentation.
    iii. Provide resources for either a GSRO staff member or panel representative to attend quarterly PNAMP meetings to coordinate activities and share monitoring results.
D. GSRO staff should collaborate with PNAMP, the Department of Fish and Wildlife, Department of Energy, and other monitoring partners to develop an educational video on salmon recovery monitoring programs. GSRO will request funding at the March 2014 board meeting for this effort.
E. GSRO should collaborate with PNAMP to support an annual or bi-annual IMW workshop. The workshop should highlight progress in each IMW complex, lessons learned from project implementation within the complex, and fish response to the habitat elements being implemented.
F. GSRO staff, regional organizations, and the Monitoring Panel should continually look for opportunities to coordinate and share monitoring information.

Other Monitoring Related Issues Recommended by the Subcommittee:

- The subcommittee recommends that the board adjust their monitoring projects approval and make all funding decisions or program changes related to monitoring at the fall (September) board meeting. Aligning contract start dates (October 1 as per federal fiscal year) with funding availability will eliminate confusion and streamline the overall board monitoring program. This adjustment would be made in 2014.
- The subcommittee recommends the board consider making monitoring an eligible grant round project type. The board would need to narrowly define this activity. The regions

have suggested it would be the monitoring necessary for delisting. The Monitoring Panel could potentially review proposals.

Next Steps

Based on board direction at the March 2014 meeting, staff will create a work plan of how and when the board's decisions will be implemented.

Attachments

A. Stillwater Sciences Final Monitoring Report

B. Salmon Recovery Funding Board Monitoring Subcommittee Recommendations

C. Salmon Recovery Funding Board Strategic Plan (track changes)

D. Salmon Recovery Funding Board Monitoring Strategy Draft 2003

E. Intensively Monitored Watershed Study Plans (hyperlinks only)

   a. Hood Canal Intensively Monitored Watershed

   b. Lower Columbia Intensively Monitored Watershed

   c. Skagit Intensively Monitored Watershed

   d. Strait of Juan de Fuca Intensively Monitored Watershed

FINAL REPORT ◦ DECEMBER 2013

Monitoring Investment Strategy for the Salmon Recovery Funding Board

PREPARED FOR

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Lando, J. B., D. B. Booth, and S. C. Ralph. 2013. Monitoring investment strategy for the Salmon Recovery Funding Board. Prepared by Stillwater Sciences, Portland, Oregon for Washington State Recreation and Conservation Office, Olympia.

Cover photo: Smith River, Oregon; Chinook Salmon; Nisqually River, Washington; Longfellow Creek, Washington

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1 INTRODUCTION

The purpose of this report is to provide an independent review of the existing monitoring strategy of the Salmon Recovery Funding Board (SRFB, or "the Board") and to offer recommendations and alternatives that could improve and update this monitoring strategy. This work has been carried out by scientists from Stillwater Sciences (Drs. Jody Lando and Derek Booth) and Cardno/ENTRIX (Stephen Ralph), under contract to the Governor's Salmon Recovery Office (GSRO), an agency created by the State Legislature in 1999 and presently within Washington State's Recreation and Conservation Office (RCO). This review was developed in coordination with RCO and GSRO staff and was based on reports and prior reviews of the monitoring of salmon-recovery efforts in Washington State since the late 1990s (Appendix A); conversations with multiple stakeholders and participants in salmon recovery at local, state, and federal levels (Appendices B and C); and our own familiarity with monitoring principles in general and the State's recovery efforts in particular.

1.1 Background

The SRFB Strategic Plan (Washington State Recreation and Conservation Office, n.d.) articulates three overarching goals for the work of the Board: funding the best salmon-recovery efforts (Goal 1), maintaining accountability (Goal 2), and promoting public support for salmon recovery (Goal 3). Monitoring activities are primarily embraced within Goal 2:

> *"Be accountable for board investments by promoting public oversight, effective projects, and actions that result in the economical and efficient use of resources." (p. 2 of the SRFB Strategic Plan)*

With respect to the Monitoring Strategy, this goal is further expanded:

> *"Monitoring Strategy: Provide accountability for board funding by ensuring the implementation of board-funded projects and assessing their effectiveness, participate with other entities in supporting and coordinating state-wide monitoring efforts, and use monitoring results to adaptively manage board funding policies."*

This goal invokes four themes—that of promoting the *effectiveness* of Board-funded activities (which is also the primary focus of Goal 1), demonstrating *accountability* for the expenditure of public funds in pursuit of salmon recovery, working *collaboratively* with other entities to support monitoring, and embracing the principles of *adaptive management*. These themes are interrelated, because ultimately the most compelling justification for taking action is that it produces the intended outcome and materially improves future actions.

Several challenges, however, complicate the simple execution of any monitoring program that seeks to demonstrate effectiveness and accountability, and that works collaboratively to achieve meaningful changes to resource management as a result of its findings. These challenges are best recognized at the outset of any program evaluation such as this one:

- The SRFB is not the sole supporter of salmon-recovery efforts in Washington State, and it also cannot influence some of the greatest recognized determinants of both local and regional salmon populations (e.g., hydropower, hatcheries, land use).
- Individual entities have distinct missions and information needs, and so satisfying the monitoring needs of one will not necessarily address the needs of all. Even though collaboration amongst regional monitoring programs is essential to make best use of practitioners' expertise and the value of measurements, imposition of uniform metrics and protocols (the most common implementation of "collaborative monitoring") rarely benefits all parties equally.
- "Effectiveness" is multi-scalar; even an "effective project" (i.e., one that meets all of its site-specific objectives) may not result in any demonstrable progress in salmon recovery at basin, regional, or statewide scales.
- Most actions, even if fully successful, take many years to produce a measurable response, commonly exceeding the planning horizon (and patience) of most public agencies.
- "Accountability," although ultimately determined by the effectiveness of actions and expenditures, also depends on clear messages that are widely distributed and easily understood by the public. These are not elements normally articulated as goals or specific objectives of a monitoring program.
- Adaptive management, the realigning of a program's goals and actions as a result of outcomes (particularly those that are "unexpected" or "undesirable") requires a deliberate management structure, including explicit feedback loops and mandatory (re)evaluations of planned trajectories, that is uncommon in most public agencies.

With this context, we now offer the details of the scope, approach, and findings of this review.

1.2 Scope of This Evaluation

The original Request for Proposals issued by the RCO in January 2013 specified eight tasks to be accomplished within the scope of this project:

- Task 1. Review the three primary components of the current monitoring strategy used by the Board and assess their effectiveness in meeting the goals of the program.
- Task 2. Evaluate the monitoring components of the seven regional recovery plans and determine which of these components are appropriate for Board funding.
- Task 3. Evaluate how information on the results of monitoring is presently exchanged.
- Task 4. Evaluate how the current Board monitoring fits into the monitoring in Washington being conducted by federal agencies.
- Task 5. Evaluate the current monitoring funding and allocation methods used by the Board, and assess whether the funding for the three primary components is at the appropriate levels.
- Task 6. Evaluate whether (and how) a portion of the monitoring funding should be reserved for alternative methods for allocating funds.
- Task 7. Evaluate the pros and cons of adding additional effectiveness monitoring project sites.
- Task 8. Work with a Steering Committee to be established by RCO.

These tasks and discussions with the steering committee members on March 18 and May 6, 2013, developed into a workplan (Lando et al. 2013a) to structure this assessment. The overarching focus of the review anticipated by this workplan, and the bulk of our subsequent efforts, has centered on Task 1—an evaluation of the three primary components of SRFB-funded monitoring. The three components, as articulated in the SRFB Strategic Plan (p. 4 of the Plan), are as follows:

- Conduct monitoring to determine the ***effectiveness*** of different types of Board-funded restoration and protection projects in achieving stated objectives.
- Participate in supporting ***status and trend*** monitoring.
- Support validation monitoring of selected ***intensively monitored watersheds*** to determine whether watershed health and salmon populations are responding to recovery efforts.

The Strategic Plan also supports "implementation (compliance) monitoring of every board-funded project to ensure the project has been completed consistent with pre-project design objectives and criteria," but this monitoring component was not included in the scope of this review. A separate review of the implementation compliance process is currently being conducted by the RCO/GSRO, Washington Department of Fish and Wildlife (WDFW) and TetraTech.

The three monitoring types highlighted in the Strategic Plan are commonly defined in various agency reports of the last decade as follows:

- ***Effectiveness monitoring,*** here meaning the evaluation of the local effects (both physical and biological) of a project on its immediate surroundings.
- ***Intensively monitored watersheds (IMWs),*** the term given to an integrated suite of monitoring efforts at multiple scales within the same watershed (or set of watersheds), designed to reveal any cause–effect relationships between restoration actions in those watersheds and fish populations.
- ***Status and trends monitoring,*** which in the context of SRFB-funded efforts is focused on enumerating the passage of fish in and out of the major river systems of Washington State on an annual basis.

In addition, there are several other types of monitoring that are commonly recognized, but which are *not* included in this review:

- ***Implementation (or compliance) monitoring,*** which evaluates whether a project (or other action) was implemented as intended.
- ***Status and trends monitoring*** can be used to evaluate conditions of stream habitat and watershed land cover over time, in addition to evaluating trends in fish populations. The former application is not routinely funded by the SRFB.
- ***Validation monitoring*** is a term used in a variety of contexts: to evaluate more local scales of effectiveness of restoration efforts (i.e., equivalent to status and trends monitoring of regional fish populations) (King County Water and Land Resources Division), or to validate assumptions, models, and methods in a research context (Snohomish Basin Salmonid Recovery Technical Committee; Oregon Watershed Enhancement Board). However, this term is also used as a synonym for the SRFB-funded IMW programs (e.g., in documents from PNAMP).

The three components of SRFB-funded monitoring (effectiveness, IMWs, status and trends) have been described as the Board's "three-legged stool" for monitoring, and the majority of articulated tasks for this review relate to this framework. The results of our work are thus organized primarily by these three monitoring types; however, a number of issues related to SRFB-funded

monitoring cross-cut these categories (as do several of the secondary tasks of the Work Plan), and so our presentation and discussion of results does not follow this organization in all respects.

1.3 Primary Components of the Current Monitoring Strategy

The *Washington Comprehensive Monitoring Strategy for Watershed Health and Salmon Recovery* (Volume 2 of 3, December 2002; http://www.rco.wa.gov/documents/monitoring/Comprehensive_Strategy_Vol_2.pdf) established the three-fold framework for all natural resource state agencies, one that has persisted to the present day. It was advanced to answer questions raised by the two articulated goals of the Comprehensive Monitoring Strategy, "Measure changes, in terms of scientific certainty, in wild salmon populations in terms of abundance, diversity, and geographic distribution and their causes due to trends in effects of harvest, hatcheries, ocean conditions, ecological interactions, and large hydropower"; and "Measure changes, in terms of scientific certainty, in water quality, water quantity, watershed health, salmon habitat, and their effects on salmon."

To implement this framework, alternative approaches were originally considered. Given the recognized shortcomings of local, disparate evaluation of projects, a centralized approach to **effectiveness monitoring** (see above definition) of projects at the reach scale was implemented in 2004 based on a contracted report submitted to the Board by Taylor and Associates (2003), through recurring annual contracts with TetraTech EC Inc. Projects were randomly selected for long-term (typically, 10 years) monitoring across the state after being stratified into nine categorical "types", with a variety of physical and biological metrics in the locality of the project itself being collected on an annual, biannual, or less frequent schedule as determined by the project type and age.

The **intensively monitored watersheds** program was first funded in 2005 and included the four watershed complexes presently monitored today with Board funding: selected areas of the Strait of Juan de Fuca (SJF), Hood Canal (HC), Lower Columbia (LC), and the Skagit River estuary. An IMW is defined as a "watershed-scale coordinated restoration effort with an associated effectiveness monitoring program implemented in an experimental fashion to maximize the ability to detect fish responses to changes in their habitat" (Desgroseillier et al. 2011). As stated in the Comprehensive Monitoring Strategy (Crawford et al. 2002), "The common theme of these studies is to develop an understanding of the linkage between management actions and the resource" (p. 22), accomplished by monitoring a variety of physical and biological parameters at multiple spatial scales, with the intended concurrent implementation of sufficient habitat-restoration projects that measurable effects on salmonid populations could credibly be expected to occur within about a decade. In 2006 the Independent Science Panel (Currens et al., 2006) conducted a review of the IMW program.

The third element of Board-funded monitoring, **status and trends (also called "fish in–fish out") monitoring,** was an original element of the Comprehensive Monitoring Strategy (Crawford et al. 2002), with SRFB funding for juvenile monitoring starting in 2001 and the Fish In/Fish Out program starting in 2007. It remains primarily a Department of Fish and Wildlife-funded program, whose "…basic objective is to estimate fish populations, generally at the ESU [evolutionarily significant unit] scale, and to track indicators of habitat, water quality, water quantity, and other factors that impact wild fish." The SRFB has contributed limited (<10%) funding to this program for most of the past decade, but the focus has been almost entirely on the first dimension of such monitoring (i.e., smolt counts) rather than on the tracking of habitat "…and other factors that impact wild fish."

2 EVALUATION OF THE THREE BOARD-FUNDED MONITORING COMPONENTS

2.1 Evaluation Approach

Our evaluation of the monitoring components emphasized four criteria, based on the underlying goals for monitoring as articulated in the SRFB Strategic Plan:

1. What has been accomplished by SRFB-funded activities?
2. Have the monitoring results been used to inform future management decisions?
3. What is the time frame for generating new information useful for management; can monitoring results actually be used/useful?
4. Does the monitoring support a regional context to enhance the interpretation of other monitoring results?

To accomplish this evaluation, we used a variety of approaches: specifically, reviews of documents (Appendix A), structured interviews with key stakeholders and others with long-standing knowledge of salmon-enhancement monitoring in Washington State (Appendix B), and three face-to-face meetings with the RCO-convened Steering Committee for this project (Appendix C).

2.2 Findings

We have organized the presentation of our findings by the three monitoring components evaluated here (effectiveness monitoring, IMWs, and status and trends monitoring). We consider each component in two ways:

1. A descriptive evaluation, using the four criteria listed above; and
2. A numerical rating, structured around the SRFB themes (see Section 1.1) and informed by the above four criteria.

Although we recognize that each criterion does not equally apply to each monitoring component, the set does provide a systematic, structured framework for highlighting what should be the key issues for any monitoring program. We also recognize that a singular score for each monitoring component and theme cannot capture the wide range of performance that exists within each component. That said, the scoring serves as a tool to demonstrate average performance levels and relative differences between the components and within the themes. As such, we believe it serves a useful role to better focus attention on the components with the greatest opportunities for improvement.

2.2.1 Effectiveness monitoring

NOAA (2011, *Guidance for Monitoring Recovery…*) defines *Project Scale Effectiveness* as determining "[w]hether an implemented project is effective in its stated goals: 'e.g. The installed large wood is working to provide cover and channel alterations.' This is an outcome of the strategy and may have both a habitat and fish outcome at the project scale. Note that this level of monitoring may be appropriate for groups of projects or sites rather than on an individual project basis…If designed properly, it tests whether project design features were effective; whether habitat was restored at the project site as intended; whether local fish populations at the project site were improved." (p. 63)

Effectiveness monitoring is the most "intuitive" and well-defined of the monitoring components in terms of both its objectives and its scope; it occurs at a scale that is readily grasped by scientists and the lay public alike, and the objects of its attention—habitat-restoration projects—are the explicit mission for the SRFB. Thus, its long-standing inclusion in the monitoring portfolio of the SRFB is fully warranted and widely supported.

The present Effectiveness Monitoring Program traces its origins back to an early review of individual project monitoring efforts (Taylor and Associates 2003), commissioned by the RCO and SRFB in order to improve this aspect of Board-funded monitoring. Because the key findings of that report have structured much of the present Effectiveness Monitoring Program, they are quoted here in their (near)-entirety (with emphasis added):

> "Overall, very few of these completed projects or activities were (or are being) rigorously monitored to demonstrate an effect on fish survival or production…Given these findings and the accompanying observation that most monitoring has tended to rely on characterization and limited before-after comparisons rather than a structured monitoring plan, demonstrating that a project resulted in increased survival and fish production or if a project simply resulted in redistributing fish may not be possible in most cases…**causal linkages were not determined between the visually observed results of increased fish usage upstream and increases in fish production in the system as a whole.**
>
> "The preliminary results from this pilot assessment suggest that **an experimental design to test positively the cause and effect between a specific project or set of projects and increased salmon production would require a significant amount of thought and subsequent financial and time commitments.** Meeting such a rigorous experimental design may not be currently feasible on a project-by-project basis without significant funding increases.
>
> "**Given the potential scale of monitoring required to evaluate the direct impact of projects on salmonid production, the SRFB could consider instead monitoring programs at the project-type level (passage, diversion, habitat, and so on).** Such an effort could focus on determining: (1) what type of monitoring is appropriate to evaluate project effectiveness or success; (2) what specific questions should be addressed by each project type's monitoring plan; and (3) how monitoring results might affect SRFB's future decision-making processes" (Taylor and Associates 2003, pp. ix-x).

The thrust of these recommendations bear a close resemblance to the wording subsequently used to describe validation monitoring (i.e., Intensively Monitored Watersheds; see Section 2.2.2 below): "This part of the SRFB Monitoring Strategy [i.e., Intensively Managed Watersheds] pertains to monitoring that addresses how management and habitat restoration project activities, and their cumulative effects, specifically affect fish production." However, the present Effectiveness Monitoring Program, as established following the release of this report, has pursued a less ambitious path that does not attempt to measure "fish production in the system as a whole." Instead, it is characterized by a random selection of projects stratified by project type; a uniformity of monitoring questions, metrics, and protocols within each category of project; and a Before-After-Control-Impact (BACI) experimental design (for most projects). It therefore has embraced the more specific goals posed by Taylor and Associates (2003) for project-type monitoring to evaluate "success" (#1, above) and to frame monitoring questions (#2 above), with a presumed expectation (but no clear process) that influence over future decisions (#3 above) would follow.

2.2.1.1 The four criteria

What has been accomplished by SRFB-funded monitoring activities?
The Effectiveness Monitoring Program receives ~20% of the 2011-2013 total SRFB monitoring budget and has been quite successful in defining and executing a systematic program of project-scale assessments. Working from a matrix of projects grouped into each of several project "types," most of the project monitoring plans follow a schedule of yearly visits to each site at Years 0, 1, 2 (or 3), 5, and 10 (and, in some cases, later). With some projects not having been implemented until 2011, the current schedule is not anticipated to be completed until 2020, although the number of remaining projects starts to drop rapidly after 2014. Annual reports for each project visited and an annual summary of the monitoring for all projects from the prior year are regular written products, together with oral presentations before the SRFB and at regional conferences. Reports are archived and can be accessed through the web-based "Habitat Work Schedule" (http://hws.ekosystem.us/).

Reviews of a subset of these written products show a common, systematic presentation framework that emphasizes the "accountability" element of monitoring—the methods, the results, and a summary of observed changes since the prior visit are summarized in narrative text, maps, and graphs. Confirmation of the project's implementation is easy to accomplish, and any broad trends in local reach-scale metrics at any particular project site (e.g., LWD, channel dimensions, vegetation survival) are readily apparent. Reports are archived and can be accessed through the web-based "Habitat Work Schedule" (http://hws.ekosystem.us/).

Have the monitoring results been used to inform future management decisions?
We have found no evidence of any systematic feedback, or "adaptive management loop," associated with the Effectiveness Monitoring Program, although many participants and other users of the information have reported anecdotes of how the results have been used. There is little doubt that informal contacts are occurring between monitoring crews and project designers in the field, and between presenters and their audience in conferences—but these are overwhelmingly *ad hoc* in character, suggesting that opportunities for more systematic integration of past findings into upcoming decisions are being missed.

Opportunities are also being missed to generalize the findings of the effectiveness monitoring into a form that could be more useful to others. We provide multiple examples below, because this issue offers the greatest opportunity for improvement in the present program. Consider, for example, the entire text of the "Summary" section from the Year-8 evaluation of Project 02-1622 (Issaquah Creek Log Cabin Reach Acquisition) in 2012, wherein a reader might expect to find guidance useful to other such projects:

> *"Overall, in-stream conditions in Year 8 (2012) appeared to be relatively similar to what was observed during previous years' monitoring, however, the stream is migrating, as evidenced by the undercutting of the left bank, inputting sand into the system. The vegetation at the Issaquah Creek project in 2012 has not changed substantially since 2007. However, deciduous trees are continuing to fill in the edges of the grassy fields at the southern portion of the site, and conifer plantings on the eastern slope have been installed. Over time, these will likely help to decrease the abundance of non-native species in this area. Year 12 monitoring of this site is scheduled for 2016."*

Similarly, the Summary Report for this project type ("Habitat Protection") for the same year not only omits any generalized discussion that could be useful to other project designers/proponents, but also appears to question the very purpose of such monitoring:

> *"Determining the effectiveness of Habitat Protection Projects is difficult since there is no restoration action implemented at these sites. Change may occur slowly, or may not occur at all if conditions are maintained. Furthermore, a decline in conditions may not be the result of actions taken on that parcel, but rather outside of the protected area." (p. 35)*

We also reviewed the 2012 "Annual Report" to determine how these findings from one project type are rolled up into a summary document to address the program's goal of informing future management decisions. The 2102 report covers three of the project types: in-stream habitat projects, floodplain enhancement projects, and habitat protection projects. The summary of results, recommendations, and conclusions for each project type are extracted below, as follows:

- In-Stream Habitat Projects are "…retaining placed structures, significantly improving channel morphology and habitat by increasing pool area, pool depth, and $\log_{10}$ volume of wood. None of the juvenile fish species are showing statistically significant results currently…" (p. 31), but the report notes that up to 10 years may be needed to show significant changes in fish. With respect to recommendation, the report notes that "The effects of In-Stream Habitat Projects are difficult to determine due to the number of objectives accomplished using this method and the types of approaches grouped together under this category", and goes on to suggest "expanding the study in this category to include more projects and allow for stratification of the project type into groupings such as similarities in geography, geology, hydrology, project type, project objectives, and target fish species." (pp. 34-35)
- Floodplain Enhancement Projects "are maintaining connection with the main channel, as well as showing significantly increasing trends in bankfull width and flood prone width…", with more ambiguous results for pool area and juvenile coho density. (p. 31) Recommendations include making repeat topographic surveys and, as with in-stream projects, "expanding the study in this category to include more projects and allow for stratification of the project type into groupings such as similarities in geography, geology, hydrology, project type, project objectives, and target fish species." (p. 35)
- Habitat Protection Projects "have shown significant improvements in several of the upland vegetation indicators, including non-native herbaceous absolute cover, non-native herbaceous relative cover and coniferous basal area. Significant results were not found for any of the fish or riparian indicators in Year 8." (p. 31) Repeating the caveat from the Summary Report, however, the text goes on to note that "Determining the effectiveness of Habitat Protection Projects is difficult since there is no restoration action implemented at these sites. Change may occur slowly, or may not occur at all if conditions are maintained. Furthermore, a decline in conditions may not be the result of actions taken on that parcel, but rather outside of the protected area." (p. 35)

In total, such reporting generates clear demonstration of accountability with respect to project implementation, somewhat more ambiguous conclusions concerning project effectiveness of specific performance metrics, and very little to guide future management decisions. This final shortcoming is in part a consequence of the lack of formal structures to require that it occurs, and in part because the documents that first articulated the need of an effectiveness monitoring program have never had their stated goal of having "application to future projects" translated into

explicit objectives or actions. At present, project, summary, and annual reports are largely data repositories with a strong preference for highlighting positive outcomes; they show little effort to generalize findings, positive or (particularly) negative, in a way that could be used by other designers or reviewers, or to evaluate existing hypotheses or to reframe more appropriate ones.

Interestingly, one of the key tangible recommendations from the 2012 Annual Report is to further stratify the population of monitored projects with respect to geography, project objectives, etc. (see above). This appears to run contrary to the underlying principle of the Effectiveness Monitoring Program, namely the statewide clustering of projects of similar "types" to improve statistical power. It is quite well-aligned, however, with comments heard from many local and regional practitioners about how the program could be modified so that its results were more useful to project designers for informing future decisions.

What is the time frame for generating new information useful for management; can monitoring results actually be used/useful?

Of all of the monitoring types, the results of effectiveness monitoring should be the easiest to transform into useful, timely guidance. To some degree this has already occurred within this program, and the value of such applications are widely recognized. Although the some project reports include appropriate acknowledgment of the need for "more time," particularly to interpret findings of changes in local fish abundance (see above), presumably not every study needs 10 years to return meaningful (even if negative) results. Recognition of this fact has been implemented to some degree (i.e., by the termination of three project monitoring categories already widely known to have clearly beneficial results— culvert replacement, irrigation screening, and riparian fencing) but beyond this minor modification to the monitoring program itself we see no evidence of any systematic evaluation of project effectiveness being translated into the planning or design of future restoration treatments.

Does the monitoring support a regional context to enhance the interpretation of other monitoring results?

This question is least relevant to project-scale effectiveness monitoring and so was not considered in the course of this evaluation. Effectiveness monitoring, in general, ultimately plays only a "supporting" role in achieving and documenting improvement in salmon populations, as originally recognized and articulated in documents from the last decade (despite the broader assertion of Taylor and Associates 2003, which is more appropriate to the IMWs). The successful administration and regular reporting of this monitoring program has suggested to some that its role should be expanded, but reach-scale effectiveness monitoring is inherently limited in what it can accomplish—and without more rigorous analysis and reporting, particularly giving specific attention to making the results more generally useful to future projects, even this limited utility is not being fully exploited.

2.2.2 Intensively monitored watersheds

As originally articulated in the 2001 Comprehensive Monitoring Strategy document, "Intensive (validation) monitoring ...is tailored to establish "cause and effect" relationships between fish, habitat, water quality, water quantity, and management actions." (p. 22) This effort has been implemented in Washington State through *Intensively Monitored Watersheds*. As of 2013, the SRFB funds IMW monitoring in four watershed complexes: three adjacent tributaries draining to the Strait of Juan de Fuca (SJF), four adjacent tributaries draining to Hood Canal (HC), three adjacent tributaries to the Lower Columbia (LC), and the Skagit River estuary (Skagit).

> *"This part of the SRFB Monitoring Strategy [i.e., Intensively Managed Watersheds] pertains to monitoring that addresses how management and habitat restoration project activities, and their cumulative effects, specifically affect fish production. As is discussed in greater detail below, validation monitoring (or as termed here, intensive monitoring) is the only way this can be achieved (ISP 2002)…Other types of monitoring are unable to answer questions like 'to what extent did our recovery actions lead to more fish?'*
>
> *"The SRFB intends to support intensive monitoring in watersheds carefully chosen to allow efficient and meaningful results…" (from the 5/23/2003 report, Monitoring and Evaluation Strategy for Habitat Restoration and Acquisition Projects, p. 6-7)*

And, as more explicitly stated in the 2013 summaries of the IMW program (e.g., Intensively Monitored Watersheds Synthesis Report, Lower Columbia River, 2013), "The goals of the IMW Program are to determine whether freshwater habitat restoration actions, as currently conducted in Washington state, measurably increase salmonid survival and production and to explain why or why not. The basic premise of the IMW Program is that the complex interactions between salmonids and their habitat can best be understood with concentrated monitoring and research efforts at a few locations."

2.2.2.1 The four criteria

What has been accomplished by SRFB-funded monitoring activities?

IMWs have been the largest single component of the SRFB monitoring budget (for example, it was ~70% of the 2011-2013 total SRFB monitoring budget), although it is noteworthy that this funding also supports both effectiveness and status-and-trends monitoring within the affected watersheds (60% of IMW funds provided by the SRFB support status-and-trends monitoring with the IMW watersheds). IMWs are also extensively supported with matching funds from other sources (e.g., Weyerhaueser, Skagit Cooperative, Tribes, NOAA Fisheries Science Center).

IMW monitoring is the most ambitious, insofar as it seeks to establish a robust, scientifically defensible and causal linkage between restoration actions and recovery of salmonids populations (Bilby et al., 2004). The approach has an excellent scientific foundation, with the documents that established this program providing good rationale for their inclusion in the mix of SRFB-funded monitoring, systematic evaluation of quantitative criteria, and statistical justification for a likely decadal timeframe for showing results.

The accomplishments of this monitoring component, however, have been severely hampered by the general lack of "treatments" (i.e., habitat restoration projects) in the target watershed complexes. In this respect, two of the IMWs have been most problematic – Hood Canal and Lower Columbia. This is evident from the executive summaries to the watershed-specific Intensively Monitored Watersheds Synthesis Reports, which acknowledge the paucity of on-the-ground treatments to date:

> "In Little Anderson Creek, completed restoration projects include one culvert replacement and two large woody debris additions. In Seabeck Creek, completed and in-progress restoration projects include three culvert replacements and one undersized bridge replacement. In Big Beef Creek, final plans are being developed to remove bank armoring and reconnect a wetland in the lower watershed." (Hood Canal report, p. 7)

> "Few physical habitat restoration treatments have been completed. However, in Germany Creek a blocking culvert was replaced and a bank was stabilized with bioengineered armoring by Sierra Pacific Industries on their land. The Columbia Land Trust also restored some side channel habitat in 2009 and armored a tidal portion of the mainstem using concrete dolos in 2012. Restoration was initiated in Abernathy Creek in 2004 with a road abandonment followed by limited riparian invasive species removal and replanting in 2008." (Lower Columbia report, p. 1)

Both the analysis of limiting factors and the subsequent implementation focus on projects in the Skagit estuary have been more comprehensive and complete than those of the other three SRFB IMWs. Despite the schedule for full project implementation being many decades into the future, the projects are addressing what is widely judged to be the most important limiting factor, and the monitoring program should be able to determine if Chinook populations are increasing with restoration within a credible length of time.

Given limitations on project implementation throughout most of the other IMWs, and thus the absence of any credible expectation for systemic responses, the IMWs have generally met only those objectives of collecting a diversity of physical and biological data. In time, these data could presumably be integrated into a meaningful understanding of restoration–population linkages, but in general this has not occurred and the prospect for meaningful results is still many years into the future. Some results provided for some of the IMWs (in particular, HC and Skagit) show promising responses, but none are yet able to articulate any defensible conclusions.

Have the monitoring results been used to inform future management decisions?
We find no evidence of IMW results influencing management decisions, likely for two reasons. First, insufficient time has passed since the implementation of restoration projects to expect monitoring to reveal significant effects. This is only partly a consequence of the program's duration (not quite 10 years)—mainly, it reflects the slow pace at which projects have been implemented in most of the target watersheds, even after the program was initiated. We return to this underlying problem below.

The second reason for the general lack of influence being exercised by IMW findings is the lack of any systematic, widespread dissemination of results, and the absence of any formal feedback mechanism to make use of such results even if they were/are available. For example, we have identified three "synthesis reports" as referenced above for HC, LC, and SJF, all published in 2013, but their distribution is uncertain and they have no apparent precedent in the history of any of the IMWs. The Skagit has an extensive list of project-specific reports, accessible on the Skagit System Cooperative web page (http://www.skagitcoop.org/index.php/documents/), but this collection is not IMW-specific and appears to include every document produced by the Skagit Cooperative on any subject for the past 15 years. Although surely convenient for active workers in this region (who likely maintain an active, informal network for sharing information), it is a daunting archive for "outsiders" seeking to learn from the Skagit experience.

We have been introduced to a variety of irregular and/or informal settings wherein information is shared (such as at the recent IMW workshop hosted by the Pacific Northwest Aquatic Monitoring Partnership [PNAMP]). The focus of these exchanges appears to be most strongly on the methodological advances and the evaluation/documentation of the effectiveness of a set of treatments on a particular group of streams. Even in the Skagit, where we have found the greatest level of documentation, the utility of presented results for future management is limited. For example, a recent PNAMP presentation ("The Skagit IMW: Examining the Effects of Estuary Restoration on Chinook Salmon" by Greene and Beamer) apparently follows historical patterns of

detailed oral/PowerPoint presentations but without readily accessible, systematic written documentation elsewhere. The Skagit is also unique in its scope and size, and there is no indication of direct feedback or cross-pollination between it and other IMWs. The 2007 study plan for the Skagit IMW states "Lessons learned in the Skagit estuary could benefit recovery efforts in other Puget Sound Chinook salmon bearing rivers. This should be true in places that have the same habitat and life history types as the Skagit, although out of system transferability will need to put in a river specific context" (p. 6). However, it also notes that the Skagit is unique amongst the other three SRFB-funded IMWs, and it identifies NMFS as the lead for identifying whether, and to where, the results from this watershed could be extrapolated.

What is the time frame for generating new information useful for management; can monitoring results actually be used/useful?

The IMWs, in both the original defining documents and the individual reports, have always been careful to articulate a roughly decadal time frame in which scientifically defensible results could be generated. For example, the 2007 SJF study plan presumed that "up to 10 years" would be needed to see statistically meaningful results. Monitoring began in 2004, which might suggest that another year or two from the present should now be sufficient. However, the last project is not scheduled for implementation until 2013. This decadal time frame was determined by a power analysis and it appears robust. However, slow pace of implementation, episodic large storms, and expectation that biological response will lag physical changes suggest that yet longer time could be needed to show any fish response.

These are issues not unique to the SJF IMW. The HC study plan anticipates 10 years of monitoring to detect any changes, with an initial analysis in 2010. This plan likely did not anticipate implementation to proceed so slowly (2007–2009 being the main treatment period). Post-project monitoring on Seabeck Creek was not even scheduled to begin until 2013. The 2013 LC summary states, "Within seven to ten years following the completion of restoration treatments the IMW project should reliably determine whether restoration treatments increase salmon survival and production and provide valuable guidance that will improve the efficiency of future habitat restoration that is intended to increase salmon survival and production. To ensure the success of the IMW Program and reduce the cost of long-term monitoring, restoration treatments must be implemented in the IMW treatment watersheds and ongoing monitoring must continue." The anticipated time frame is thus about a decade *following* the last treatment, a restoration trajectory that by some measures has barely begun.

Does the monitoring support a regional context to enhance the interpretation of other monitoring results?

This criterion is of potential relevance to the IMWs, and it was apparently an articulated potential benefit of this program at its initiation. The intent was to have IMWs located in various geographic regions and ecotomes in order to help predict recovery response for a variety of limiting factors for both westside and eastside environments. Although each IWM watershed complexes support only a small fraction of the populations that utilize them (with the exception of the Skagit), they are credible analogs for small- to medium-sized westside watersheds. However, we have found no indication that this potential is being explored in other watersheds, or even that it is a recognized objective for the three "small" IMWs (i.e., HC, LC, SJF) as expressed in their respective 2013 Synthesis Reports. Monitoring of the Skagit could, credibly, contribute to a regional understanding of Chinook populations in Puget Sound, although this application also has not been evident in the reporting to date.

We recognize that the four SRFB-funded IMWs are part of a larger network of IMWs across the Pacific Northwest. This offers hope that, in aggregate, this network could help support such a "regional context" if so oriented in the future.

2.2.3 Status and trends monitoring

NOAA (2011, Guidance for Monitoring Recovery...) defines status and trends monitoring as a way to "assesses changes in the condition of a metric important for tracking progress in a population or listing factor. Typically conducted at the population scale, smolts are measured to reflect the cumulative fish population response to all freshwater conditions. It serves as the main monitoring necessary to determine the biological condition of the species and the status of specific statutory listing factors and threats." More specifically, status monitoring characterizes the condition of physical, chemical, or biological attributes across a given area at a single point in time (e.g., abundance of fish at time x in a watershed). Trend monitoring determines changes in biota or conditions over time (Roni, 2005). Status and trends data also can provide high-level indicators that can be easily understood by the public and policy makers and are used to plan and inform management and restoration actions.

2.2.3.1 The four criteria

What has been accomplished by SRFB-funded monitoring activities?

WDFW collects status and trend data for juvenile, smolt and adult fish in each ESU for each listed species. The primary use of the fish information is to track abundance, productivity, diversity, and spatial structure of listed populations in major population groups. The regularity of the data collection and the high quality of the data are successful attributes of this program. By quantifying abundance, productivity, distribution and diversity paired with restoration projects, status and trend data can integrate the recovery boards and lead entities habitat actions with monitoring. Within most of the regional salmon recovery plans, status and trend data for fish and habitat are identified and meaningful questions are being discussed.

Starting in 2001, SRFB funding was used to complement WDFW fish sampling (coined "Fish In/Fish Out") for populations that would not otherwise be monitored. The financial allocation for status and trend support by the SRFB varied for many years; however, in the last three years, SRFB funding has been stable and consistently applied (e.g., Hood Canal monitoring for juvenile summer chum). Currently the SRFB provides $208,000 (about 10% of the 2011-2013 total SRFB monitoring budget)annually on status and trend monitoring statewide. This represents a small percentage of the full WDFW program. In order to manage the ongoing sampling programs within the Fish In/Fish Out framework, WDFW updates and evaluates an annual table of status and trend sampling to identify gaps and priorities. Such a process helps supporting organizations such as the SRFB to know where best to allocate available funds.

An example of the type of data generated from the Status and Trend Monitoring Program is shown in Table 1 (Table 4 of Crawford et al. 2007). This table is updated annually to reflect changes in population structure and plan forthcoming sampling efforts. Gaps in monitoring are given high priority using the following criteria:

- Primary populations that are the only source of juvenile and adult monitoring per major population group (MPG) per evolutionarily significant unit (ESU) are given higher priority than all other populations within the ESU.
- Monitoring locations where previous year's data exist for a specific species and lifestage (data continuity) are given higher priority than initiating a new monitoring project.

- Projects with no alternative source of funding (e.g., Hood Canal summer chum juvenile monitoring) are given higher priority than projects with alternative sources of funding.

Table 1. Description of fish in and fish out monitoring in Washington (from Crawford 2007).

Statewide monitoring of listed species—juveniles & adults													
					Proposed for FY07-09 GF-S Funding								
					Proposed for FY07-09 GF-S and submitted for BPA funding								
2/13/2007 10:34					*Submitted for BPA funding*								
					Juveniles				**Adults**				
Recovery region	**Major population groups**	**WRIAs**	**Target species**	**Primary populations**	**Smolt sites**	**Production**	**Smolt trapping agency**	**Funding**	**Spawners (Stocks)**	**Data quality**	**Monitoring agency**	**Funding**
Puget Sound	North Sound	1 to 2	Chinook	NF Nooksack	Nooksack	Index	Lummi	Tribal	NF/MF Nooksack	Very Good		GFS
				SF Nooksack					SF Nooksack	Very Good		GFS
									Samish/MS Nooksack	Poor		
	Whidbey Basin	3 to 7	Chinook	*Upper Skagit*	Skagit	Yes	WDFW	Federal (Dingall/ Johnson) 50% Seattle PU 50%		Good		
				Lower Skagit					Upper Skagit MS/Tribs	Very Good		
				Upper Sauk (early)					Lower Sauk	Good		
				Lower Sauk					Upper Sauk	Excellent		
				Suiattle (early)					Suiattle	Excellent		
				Cascade (early)					Upper Cascade	Excellent		
				NF Stillaguamish	Stillaguamish	Yes	Stillagu-amish	Tribal	NF Stillaguamish	Good		GFS

Have the monitoring results been used to inform future management decisions?
In some cases status and trend monitoring has informed future management. For example, the Skagit River has had a successful history of long-term status and trend monitoring, particularly adult abundance, with integrated fish monitoring and habitat restoration (Skagit Chinook Recovery Plan 2005). This integration subsequently has resulted in a focus on the estuary as the most significant limiting factor. Such success is not as clear for other watersheds that collect similar data but lack integration between fish monitoring and the selection of habitat-restoration actions.

Another challenge with status and trend monitoring lies with the articulated purpose(s) for the monitoring. To date, the focus on status and trend monitoring (as funded by WDFW and SRFB) has been to document net biological results (i.e., numbers of fish). Little progress has been made towards evaluating those results and asking meaningful questions of purpose (e.g., are we monitoring the right life stages in the right places? What are the limiting factors that might respond to changes in habitat conditions?). Without such information and an intentional focus in study design, monitoring resources can be readily misappropriated. The absence of biological status and trend analysis is exacerbated by a lack of habitat status and trend monitoring, a program currently lead by Washington Department of Ecology. Although it reflects an important component of salmon recovery, habitat status and trend monitoring has not historically been a focus of SRFB and, given funding constraints, this is unlikely to change without enacting significant reductions to other components of the program.

What is the time frame for generating new information useful for management; can monitoring results actually be used/useful?
Status and trend monitoring is explicitly intended to compile long-term adult and juvenile fish population data at a watershed scale. The longer the time series, the more opportunity for analysis. That said, we have found little discussion of the recommended duration of status and trend sampling, or the point at which monitoring results would become statistically robust and useful for the purpose of salmon recovery. The Oregon coho recovery plan provides such an example. Despite the absence of much explicit discussion of time frames for utility, we note that status and trend monitoring results are actively being used to inform management (e.g., steelhead data in the Lower Columbia are informing watershed management planning and process; coho data are used to forecast run sizes throughout Washington State).

Does the monitoring support a regional context to enhance the interpretation of other monitoring results?
Status and trends monitoring provides a unique source of fish population data over large spatial and temporal scales. The information collected is directly in line with the SRFB goals. The challenge is to clearly identify how the data can be linked to other scales of monitoring in order to utilize data and justify its continued support from SRFB. It is not enough to simply collect the data.

2.2.4 Numerical ratings for the "three-legged stool"

In an effort to distill a large volume of information into a tractable summary assessment, each of the three legs of the monitoring stool were evaluated based on their success to date at meeting or supporting the articulated themes for SRFB monitoring (accountability, effectiveness, collaboration, and adaptive management). The table does not take into account the relative value of each monitoring type. The scores were assigned by the project team using a 5-point scale, based on our professional judgment using information provided by the steering committee,

document review, and interviews conducted with key stakeholders and others with long-standing knowledge of salmon-enhancement monitoring in Washington State (see Appendices A–C).

Table 2. Numerical rating of the SRFB monitoring.

Monitoring component	SRFB monitoring themes (see Section 1.1)*			
	Effectiveness	**Accountability**	**Collaboration and communication**	**Adaptive management**
Effectiveness monitoring	3	4	4	2
IMWs	2 (4 Skagit)	2	3	2 (4 Skagit)
Status and trends	3	3	3	2

* Level of performance is scored from low (1) to high (5), using the following generic criteria:
1 = no evidence of support for this theme
2 = minor support for theme but with only limited effectiveness
3 = supportive of theme, but with significant opportunities for improvement
4 = highly supportive of theme; limited improvements warranted
5 = fully supportive of theme, no changes warranted

Although we do not find any of the programs to be completely lacking in support for these themes, several challenges for the overall SRFB monitoring program are highlighted by this summary. We recognize the programs operate under disparate timelines, but believe they can still be held accountable for addressing each of the SRFB monitoring themes. The near-uniformity of "2's" for the theme of adaptive management reflects our judgment that meaningful feedback of monitoring results into future actions is critically deficient and requires substantive consideration by the Board. Although the Skagit was independently scored for two themes due to a distinct level of performance, the generally low ratings for IMWs lead us to some key recommendations for decision-making by the Board. The positive scores for effectiveness monitoring emphasize the success of this component in disseminating results, but it has yet to achieve its potential for driving fundamental improvements in the implementation of restoration projects. Status and trends monitoring, as a program only marginally under SRFB direction, could nonetheless benefit from a thoughtful assessment of its potential benefits beyond the mere annual tallying of fish.

We return to these overarching issues in greater detail in the sections that follow.

2.3 Adaptive Management and SRFB-funded Monitoring

Project funding decisions, monitoring, data analysis, decision-making, and accountability are all disconnected activities under the present operating structure of the SRFB. Each of these activities tends to happen in a different place, or not at all. This is a fundamental obstacle to the creation and execution of an effective adaptive management program. Moving the basic decisions for project selection from a centralized, SRFB-run program out to the Regions may have been a well-guided effort to improve the design and implementation of projects; but without the monitoring program following suit (*also* for good reasons), this action has had the unintended consequence of severing any intrinsic connection between the two—it retains the possibility for *ad hoc* feedback but provides no mandate for it.

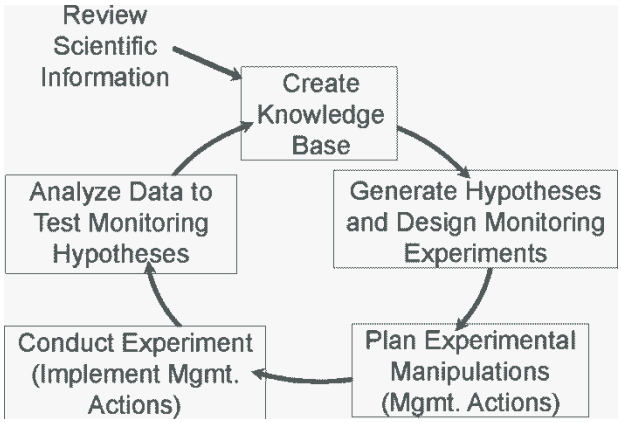

Figure 1. The adaptive management cycle (from Ralph and Poole 2003).

Consider a representation of the adaptive management cycle, reproduced above (Figure 1) from Ralph and Poole (2003, their Figure 3). The links between each step are critical to having a successful program, but many have noted how difficult they are to implement, even under the best of circumstances. However, those links are particularly challenging to implement when they connect activities being conducted by different entities. We believe these disconnections lie at the root of many of the issues that limit the overall value of the present monitoring program.

These challenges are particularly evident in the IMW program. Its most successful aspects are widely recognized to be its scientific rationale, a foundation that was carefully documented in reports from the early 2000's, affirmed by the ISP review in 2006, and no less compelling today. This foundation was executed through the well-coordinated *Washington Comprehensive Monitoring Strategy For Watershed Health and Salmon Recovery*, which continued from initial guidance documents through the generation of hypotheses and monitoring experiment design for the initial SRFB-funded IMWs (SJF, HC, LC). The next step, the planning of experimental manipulations in each watershed, was executed by smaller teams that had only partial overlap with the initial hypothesis-generating team.

Most problematic, however, is that the funding and execution of the management actions was entirely removed from these prior steps. This created what the ISP in 2006 called "Serious weaknesses [in the]…apparent disconnect between how treatments (i.e., the habitat improvement actions) are selected and funded, in relation to experimental design and monitoring needs, and uncertainty about the duration of the commitment to fund the long-term nature of the IMW program." (Currens et al., 2006, p. 1) The responsibility for data analysis returns from the SRFB to the individual IMW study teams, but we find only limited examples across the four IMWs that such analyses have been systematically executed, and even less evidence that they have been formulated and released so as to contribute to the preexisting "knowledge base" (see Figure 1) even were such a repository of such information to be identifiable. A procedure to generate and/or refine hypotheses and monitoring experiments may exist within each IMW working group, but forums for cross-fertilization amongst the multiple IMWs in Washington State (funded by both the SRFB and NOAA-PSMFC) have been slow in development and seemingly informal in past execution.

Thus, IMWs began with a strong scientific mission and have executed varying levels of scientific analysis, but they have no influence of the funding priorities and so they can't actually answer the

questions they were designed to answer (indeed, key questions for salmon recovery that *only* they are able to answer).

The Effectiveness Monitoring Program, in principle, aligns more closely to the adaptive management cycle depicted above, and its widespread support undoubtedly derives in part from its consistency and coherence within that framework. Its foundation was also established by the strategic assessment of monitoring needs in the early 2000's, with hypotheses, plans, and treatments all implemented within a few years under the overarching auspices of the SRFB monitoring program. However, we have seen only modest efforts to analyze the data so collected, and even less of an attempt to add to a "knowledge base" that could inform, except on an *ad hoc* basis, the development of new understanding and (ultimately) better projects.

In the case of the Effectiveness Monitoring Program, this disconnection has not been a result of a diffusion of responsibility across multiple entities, as in the case of IMWs, but rather a lack of any credible impetus to "drive" the adaptive management cycle forward. Although monitoring was first (2000) argued as necessary to provide accountability to funding agencies and the public, who were expected to demand some demonstration that the funds were creating a genuine, measurable improvement in salmon habitat and salmon populations, this has not happened in fact. We see few substantive calls today for accountability from either the PCSRF, which distributes money to the SRFB provided by an annual Congressional allocation; or from the public, who sees little reason to complain about a distantly funded program that provides jobs and a sense of nominally beneficial actions—an attitude reinforced by publications such as the State of the Salmon, which combine such broad metrics of "miles of stream treated" and 'dollars spent" with high-level indictors as "number of fish in Puget Sound" that no credible inferences can be drawn about the actual effectiveness of state-funded recovery actions. Making those causal linkages should be the role of the IMWs, but they have not been implemented in a fashion that actually serves this purpose.

Consider, by way of contrast, the Regional Stormwater Monitoring Program (RSMP), in the early phases of implementation under the current round of Phase 1 and Phase 2 NPDES permits. In many ways the RSMP is analogous to the Effectiveness Monitoring Program of the SRFB (although it was built from the bottom up [i.e., by the affected jurisdictions themselves], not the top down [i.e., from the state or federal regulators]): local entities pool resources, centralize the development of a monitoring strategy that results in a few individual, "characteristic" projects being monitoring by a centralized entity, with results being used to inform all. In our view, its fundamental differences from the SRFB Effectiveness Monitoring Program stem from the regulatory context in which they are each embedded: for the RSMP, a feedback loop is already established (DOE has demonstrated a history of upgrading 5-year permit requirements based on the information collected in previous permits). Contrast this with the SRFB Effectiveness Monitoring program, which was developed under a concern for accountability that has never truly materialized, and for which permit requirements (presumably under the ESA) are diffuse and largely unconnected from the agencies conducting the work. We also note, however, that full implementation of the RSMP has not yet occurred, and successful "closure" of the adaptive management cycle is by no means guaranteed here, either.

In summary, local examples are available to demonstrate a successful implementation of the adaptive management feedback: in the case of stormwater monitoring, the work of measurement and analyses are done by the regulated permittees, who are required by their permits to come to management conclusions. In turn, the subsequent permits are changed substantially every cycle based on what has been learned in past permit cycles, through the implementation by technically knowledgeable Ecology staff. Curiously, we note that this process been more successful for

stormwater than for salmon recovery. We speculated that in large measure this likely reflects the more litigious environment of Clean Water Act regulations, and perhaps the greater financial resources (over $1M for the annual implementation of stormwater effectiveness monitoring); despite the distant regulatory threat of the Endangered Species Act, there has been little impetus for concerted action with respect to habitat monitoring. In addition, the chain of accountability is much shorter for stormwater: ongoing support for the NPDES permit program is provided by the permittees themselves, whereas the monitoring programs of the SRFB have seen continued, annual funding by the US Congress.

2.4 Thematic Issues, Concerns, and Needs

2.4.1 Cross-cutting issues

Project implementation in IMW watersheds need to be accelerated, or the IMW(s) need to be abandoned. This recommendation was made by the ISP in 2006, and it is as true today as it was 7 years ago. As presently implemented, the IMWs are unlikely to provide useful management information or compelling accountability for the expenditure of SRFB funds. To prioritize the implementation of these projects, however, would require a change in the SRFB's present approach to the regional allocation of funds, with the selection and sequencing of projects largely determined by the lead entities. This "regional" approach, no matter how supportive of other SRFB priorities, is simply inconsistent with implementing a successful IMW program. Thus, a clear policy-level decision needs to be made about how best to reconcile these competing priorities to avoid the continued inefficiencies and loss of opportunity inherent in the current approach.

Effectiveness monitoring needs to better demonstrate its value to salmon recovery. Because this type of monitoring is so intuitive, and the program's execution has been so competent, it has escaped some of the closer questions that should be raised with any such effort: What do we learn by monitoring changes in habitat and vegetation resulting from stream projects? What's the scientific question that drives the data collection? How are the results being used to design and select better projects? Until these questions can be answered, the focus of this program should be on how to make it better, not larger.

Every monitoring program should identify specific time frames for delivering meaningful results. All monitoring should be initiated with an explicit statement, ideally based on statistical analysis or prior experience, of the likely duration of monitoring needed to return meaningful results that can be used to demonstrate outcomes or provide guidance to future projects. Although such preliminary estimates should always be subject to revision as new data are collected, establishing clear expectations for monitoring should be a recognized component of any new data-collection initiative.

Monitoring programs should evaluate the quality of the data being collected with respect to specific monitoring objectives. Although important, it is insufficient to consider the geographic location, species and frequency of monitoring efforts. The SRFB should require that monitoring programs evaluate the quality of the data being collected and explicitly tie the evaluation to clearly articulated monitoring objectives. Without such a linkage, it is quite possible that monitoring efforts will not advance the goal of salmon recovery.

SRFB-funded monitoring should demonstrate accountability beyond implementation. "Accountability" includes reporting on monitoring effectiveness, collaboration, and adaptive

management. Improvement is needed in each of these areas for all types of monitoring (although some more than others). A systematic process of documenting such information would significantly advance the monitoring benefits.

Communication is essential, and presently inadequate. The majority of monitoring data is accessible to only a minority of people. With limited time and resources, valuable monitoring data are not being appropriately disseminated; as such, any potential for adaptive management cannot function as intended.

SRFB monitoring should substantively engage with the Pacific Northwest Aquatic Monitoring Partnership (PNAMP) to advance collaborative opportunities and benefit from the collective efforts of the region. PNAMP is a forum to facilitate collaboration around aquatic monitoring topics of interest, promote best practices for monitoring, and encourage coordination and integration of monitoring activities as appropriate. The forum's activities are conducted by participant working groups and teams as endorsed by the partner-based steering committee. Participation in PNAMP is voluntary, but widespread. Signatory partners include BPA, California Department of Fish and Wildlife, Columbia River Inter-Tribal Fish Commission, Colville Confederated Tribes , Idaho Department of Fish and Game, NOAA, Northwest Power and Conservation Council, Northwest Indian Fisheries Commission, Oregon Watershed Enhancement Board, Pacific States Marine Fisheries Commission, Bureau of Land Management, Environmental Protection Agency, United States Army Corps of Engineers, United States Bureau of Reclamation, United States Forest Service, United States Geological Survey, Washington State Department of Ecology, WA GSRO/RCO, WDFW.

2.4.2 Specific questions from the workplan

Which of the monitoring programs of the seven regional recovery plans are "appropriate" for SRFB funding, given the Board's mission and mandate (Task 2 of workplan)?

The seven regional recovery plans have varying levels of ongoing monitoring, as summarized in Table 3. This element of the workplan was not assigned a high priority, and thus our evaluation consisted only of a cursory review of readily available recovery plan documents.

Table 3. Monitoring elements in the regional recovery plans.

Recovery plan	Program element	Level of monitoring (low to high, 0 to 3)
Lake Ozette	Status & Trends	0*
	Implementation & Compliance	0
	Effectiveness	0
	Validation	0
Lower Columbia	Status & Trends	2
	Implementation & Compliance	1
	Effectiveness	2
	Validation	1

Recovery plan	Program element	Level of monitoring (low to high, 0 to 3)
Middle Columbia	Status & Trends for Steelhead	2
	Implementation & Compliance	0
	Effectiveness	0
	Validation	0
Upper Columbia	Status & Trends	3
	Implementation & Compliance	0
	Effectiveness	3
	Validation	0
Puget Sound	Monitoring varies by sub-watershed	
Hood Canal	Status & Trends	1
	Implementation & Compliance	2
	Effectiveness	1
	Validation	0
Snake River	Status & Trends	3
	Implementation & Compliance	1
	Effectiveness	3
	Validation	0

* Ozette sockeye are the only ESA listed species in this region; therefore, PCSRF money is limited.

Any expansion of funding in support of regionally-focused monitoring as suggested by this workplan element, however, should be predicated on the assumption that such monitoring data flowing from the efforts of the regional recovery boards would amplify, support and expand on and at the scale of the existing triad of programmatic monitoring efforts currently supported by the SRFB. Given our assessment that the three existing SRFB-funded monitoring components as currently organized lack a common set of objectives, lack sufficient analysis of results, and have not been well-integrated with each other, it is premature to recommend further funding of regional monitoring efforts. Additional support for regional efforts that focus on understanding how specific restoration actions might vary by geographic context, while laudable, can only be useful when there exists an organized and coherently designed overall monitoring program that addresses a common set of objectives, and that yields complimentary and relevant evidence in support of adaptive management. If monitoring results have yet to become relevant to management decisions, there is little justification to expand efforts to collect data. That said, we do note that the importance of regional recovery efforts and the SRFB's desire to increase collaboration with the regions and maximize monitoring potential. The proposed improvement to link SRFB-funded monitoring to management decisions, particularly for IMWs, is an example of one such opportunity that would provide beneficial information to the recovery regions..
In summary, this question highlights a more fundamental issue with the current SRFB-funded monitoring efforts. If the institutional capacity does not exist to use the monitoring results to

improve decisions on how to spend scarce restoration dollars on the most effective restoration actions, then the first step must be to address this critical shortcoming in existing monitoring efforts. Expansion is a question for a later date.

Are relative funding levels appropriate and commensurate with the utility and application of the results (Task 5 of the workplan)? In particular, should additional effectiveness monitoring project sites be added (Task 7 of the workplan)?

In recent years, funds for SRFB monitoring have followed a relatively steady pattern ($2.2–2.8 million from 2011-2013). This reflects the NOAA minimum mandatory requirement that at least 10% of PCSRF funds to be allocated to monitoring. In general, IMWs receive half or more of the annual allotment, reflecting the variety of monitoring activities conducted in the IMW watersheds, and the need for detailed annual information if their scientific objectives are ever to be achieved. We have not conducted a detailed audit of monitoring expenditures across the four SRFB-funded IMWs; as noted previously, the disconnection between project implementation and IMW timelines is far more critical an issue than any details of how monitoring funds are allocated.

Of the two other SRFB-funded monitoring components being addressed in this review, effectiveness monitoring is the next largest cost item (~20%). Although the most successful of the components to date, at least as evaluated by our four criteria with respect to the monitoring themes of the SRFB Strategic Plan, its utility within the framework of statewide monitoring is ultimately limited—the statewide uniformity of hypotheses, study questions, methodology, and metrics is defensible from a statistical-power perspective, but the limitations of such an approach are also clear given the diversity of aquatic systems across the state. The current Effective Monitoring Program has not demonstrated that the statewide amalgam of projects into presumably homogenous "types" has generated results any more useful than those being executed more regionally and with a more targeted set of questions (e.g., King County, or the estuary program of the Skagit [i.e., the Skagit IMW]), and its own 2012 Annual Report recommends greater stratification and regionalization of monitoring sites. Thus, nothing in the execution to date of this program suggests that its further expansion as a statewide program would produce commensurate benefits.

We note that other, more regionally focused effectiveness monitoring programs are being explored or established. The SRFB could have a relevant interest in providing support for these regional efforts, but without clear indications that the lessons of the present program have been fully incorporated into any new framework—particularly the importance of systematic data analysis, meaningful synthesis of results for future management application, and a clear feedback between monitoring results and future management actions—such an additional investment would not be likely to translate into greater utility or applicability.

Are opportunities for additional program value being missed through insufficient opportunities for funding (either out-of-cycle or competitive funding opportunities) (Task 6 of the workplan)?

Although we have neither seen nor heard any direct communications about such alternatives, the existence of a standing funding source will always invite consideration of changes to the *status quo* for allocating resources. There is ample precedent for alternate methods of funding allocation in both state and federal agencies (for example, the National Science Foundation issues both directed solicitations to researchers for targeted, multi-year investigations and open-ended "calls for proposals"): they all reflect an effort to balance the relative benefits of steady, predictable

funding vs. new initiatives that can yield benefits well beyond (or, for that matter, well below) their tangible cost. We have seen documentation of only one such process for the SRFB (a December 2011 workgroup convened to allocate about $800,000 of previously uncommitted monitoring funds, as referenced in a Salmon Recovery Funding Board "Briefing Memo" for the April 2012 Board Meeting, Item 7), but we also recognize that the interest in such possibilities reach well beyond this one-time event.

In general, we recognize the potential for high benefits accruing from even a modest expansion of the funding mechanisms available for monitoring. The greatest difficulty that we see is in providing systematic, technical review at the state level for such requests coming into the SRFB—such a mechanism does not appear to be readily available, but without it such a program would risk becoming another region-based allocation of funds without adequate assessment or oversight. We have seen evidence of poor results from "local" monitoring, because it is commonly subject to shortcomings of no accountability, no meaningful results, and ultimately no outcomes. However, we also see clear indications that some local entities are creating highly functional, useful monitoring programs: for example, the Snake River Region could provide a useful case study for how to "build" a new IMW from the ground up; multiple project examples demonstrate that King County knows how to do (and use) effectiveness monitoring.

These examples suggest the potential benefit of a SRFB-sponsored "initiative fund," subsequently used as examples to move the entire statewide monitoring enterprise forward. Without adequate in-house technical review capacity available to the Board (and subsequent follow-up accountability imposed on the grantees), however, any such program risks repeating the failed examples of the past—which have, in turn, led to the program as currently implemented.

In addition to considering an open-ended competitive allocation of some funds, the most commonly articulated "missing" component of SRFB-funded monitoring is habitat status-and-trend monitoring. Should this be a SRFB concern? Many say "yes," from the perspectives of both tracking ultimate success (because fish numbers may be too variable to draw meaningful conclusions) and because it is likely to achieve a rapid level of public understanding. Such evaluations were already expressed in the State of our Watersheds (2012) report from the Northwest Indians Fisheries Commission (http://nwifc.org/publications/sow/), but the information there is presented more anecdotally than systematically. The SRFB should have an interest (and potentially a significant role) in supporting a systematic, scientifically based effort along these same lines. However, implementing such a program would need to override the current approach of strict Region-based funding, since only a centrally coordinated, pooled approach would be likely to produce useful results with adequate scientific and statistical rigor. This type of effort appears to be growing in certain regions (Puget Sound, Columbia Basin) without SRFB assistance, and as with more regional efforts at effectiveness monitoring this may be the best (and perhaps only) way to move such an initiative forward.

3 THE INTERRELATIONSHIP OF SRFB MONITORING ACTIVITIES TO OTHER REGIONAL MONITORING

Based on a review of published material, steering committee discussions and the interviews conducted for this study, SRFB monitoring has an insufficient level of engagement with other regional monitoring activities (e.g., USEPA, BPA, NOAA, WDOE, WDFW). We acknowledge the challenge faced by diverse monitoring programs (e.g. different goals, funding cycles, regulatory requirements and constraints), nevertheless a lack of coordination can result in funding

inefficiencies, misguided monitoring efforts and a lack of knowledge transfer (e.g. a disconnect between fish and habitat monitoring). That said, there have been efforts to coordinate the programs such as:

- The "Skamania process", developed for the Columbia River, prioritized monitoring gaps and led to funding from both the SRFB and BPA. This evolved to the point where BPA is currently implementing an Action Effectiveness Monitoring program based on part on SRFB monitoring
- Northwest Power & Conservation Council's Fish and Wildlife program, which collaborates with BPA, CRITFC, the ISRP, state and federal fish and wildlife managers, tribes, and others.
- The Integrated Status and Trends Monitoring (ISTM) Demonstration Project, a PNAMP based project intended to demonstrate the approaches and utility of integrating the collection of information in the bi-state lower Columbia (LC) river demonstration area to address multi-scale questions about the status and trends of fish (salmon, steelhead, and potentially bull trout), and physical, chemical, and biological attributes in stream networks. WDFW's annual process for prioritizing gaps in status and trends monitoring (Table 1), being done at the request of the SRFB using the monitoring criteria (juvenile monitoring in at least one primary population per major population group per ESU) defined in the "Washington State Framework for Monitoring Salmon Populations Listed under the Endangered Species Act" document.
- Development of standardized regional monitoring protocols, which enables the SRFB monitoring to integrate with other regional monitoring (e.g., UCSRB, OWEB, BPA), thereby expanding the sample size without additional effort or funds.
- The Skagit River IMW, which has done an exemplary job integrating habitat restoration and fish monitoring from the outset
- A recent review of SRFB effectiveness monitoring sites by TetraTech, which identified additional sampling needs that are now being funded by BPA.

These examples suggest a continued value in supporting and expanding the SRFB's efforts to continually seek for ways to improve the effectiveness of their funding. One such opportunity is to identify monitoring efforts funded by other entities. Such coordination can provided value added support between monitoring programs. In some cases coordinated efforts will expand the sample population; in others, it may identify overlapping efforts or unnecessary sampling.

4 INFORMATION TRANSFER

Successful monitoring requires the effective dissemination and active exchange of monitoring results (Task 3 of the workplan). Doing so can highlight (although not ensure) a level of accountability. Depending on the information exchanged, it can also communicate critical information regarding project effectiveness (e.g., IMW findings that may be applicable to other, similar watersheds and listed species).

Information transfer is one of the major shortcomings of the present monitoring framework in the state, and particularly with those programs directly funded by the SRFB. Although a substantial amount of SRFB-funded monitoring is occurring, only a select group has access to the resulting information: those implementing the work, those who know where to find key reports, those who

attend monitoring workshops. In our advanced digital age, information transfer should be operating at a much higher level.

Two web-based systems are presently in place that focus on project tracking, implementation and performance: PRISM and the Habitat Work Schedule (HWS). PRISM, a grant management system employed by RCO and used to apply for SRFB grants (http://www.rco.wa.gov/prism_app/about_prism.shtml), provides publically available information to apply for grants, review information on funded grants, and produce reports about projects. The HWS (http://hws.ekosystem.us/), a primary tool of the Effectiveness Monitoring program, is a "*mapping and project tracking tool that allows Lead Entities to share their habitat protection and restoration projects with the public… By mapping projects, linking them to each other and recovery goals, and making it all available on the web, the HWS system makes salmon recovery more accessible to partners, potential funders, and the public."* PRISM and HWS are both useful frameworks for achieving public project accounting and displaying project-specific performance, but neither provides meaningful guidance for future efforts, which should be generated from analyses of monitoring results. As such, these tracking systems are both potentially useful tools, but neither presently supports critical adaptive management needs.

Without regulatory drivers, statutory or contractual requirements, and/or public/agency accountability for funding, these programs (both the monitoring, and the underlying project implementation itself) will continue whether anyone is paying attention or not. Tangible examples of constructive feedback between monitoring results and future management actions are few and far between, and there is scant appreciation of the inherent inefficiencies and lost opportunities that result from a sole reliance on informal, *ad hoc* interactions.

Information transfer is an essential component of an effective monitoring program, but also a daunting mission. PNAMP has facilitated the transfer of monitoring information for other entities funding similar regional monitoring efforts (e.g., BPA). Although SRFB monitoring has engaged with PNAMP on an informal basis, we encourage the SRFB to formalize this relationship in order to significantly expand the current information transfer.

5 CONCLUSIONS

5.1 Opportunities and Limitations of the Present Program

The SRFB faces a laudable, but challenging, set of goals. Thanks to the dedication and groundbreaking work of innumerable scientists and policy makers, there is a wealth of guidance documents, monitoring programs, and monitoring data collected to date. That said, there is also significant need for improvement in SRFB-funded monitoring programs. The most commonly posed question is this: are we sampling the right things, in the right places, using the right methods, at the right time? However, we believe that this question, although important, does not focus on the key challenges facing the SRFB monitoring program, because it addresses the *mechanics* of monitoring but not the underlying purpose for collecting monitoring data and ultimate use of the results.

At the forefront of these potential improvements, the SRFB needs to provide clear and specific leadership to guide the monitoring of salmonid habitat and populations. It is currently not fulfilling that need, nor is anyone else. We respectfully assert that the real issue facing the SRFB is not the need to reallocate monitoring funds, but rather the need to articulate a common set of objectives, a plan to implement those objectives, and a strategy to integrate the results of ongoing

monitoring programs, all under the auspices of its centralized leadership. First and foremost, the SRFB needs an explicit framework and process of decision-making with a clear definition of roles and responsibilities to ensure its timely implementation. That framework is the SRFB Strategic Plan, which offers broad goals but currently lacks adequate specificity in the form of clear, measurable objectives, reporting requirements (beyond implementation) and a feedback mechanism based on monitoring results. Such an absence of guidance, evaluation, a timeline (with milestones) and performance metrics creates a void for decision-makers who currently have no clear road map for making decisions.

As an example of the specificity that is currently lacking, consider the fundamental differences between "goals" and "objectives." Both are necessary to mapping out a successful strategy but they are not synonymous. Goals are "broad, general statements of what the program, course, or activity intends to accomplish" (from http://assessment.uconn.edu/primer/goals1.html, as just one example). Management "questions" are commonly presented in the form or goals. In contrast, objectives are "SMART": **S**pecific, **M**easurable, **A**ttainable, **R**elevant, and **T**ime-bound (see, for example, Doran, 1981, Management Review, Volume 70, Issue 11, pp. 35–36). They describe the tangible path forward towards the attainment of articulated goals. Contrast this framework, however, with the "Objectives" in the *Washington Comprehensive Monitoring Strategy and Action Plan for Watershed Health and Salmon Recovery* (2002): as an example, Objective 1A states "Measure status and track trends of the numbers of spawning salmon by stock in each Salmon Recovery Region. Evaluate whether numbers are improving." This is neither attainable nor time-bound, and as such provides no real guidance about how to structure a monitoring program nor what activities are the most important to pursue first. Thus, despite the voluminous and carefully thought-out literature of the last decade that provides the intellectual foundation for the SRFB monitoring programs, it has provided insufficient concrete direction or clear criteria against which to evaluate success.

The second overarching limitation of the present program is ambiguity in the appropriate and effective role of the SRFB. Tough technical evaluations and decisions are required to move beyond compliance monitoring, but should the SRFB be making these technical decisions, or should they instead focus on programmatic requirements, coordination and collaboration while seeking scientific input from a technical advisory board (e.g., an ISP)? We observe the later has been a successful approach for other regional monitoring programs (e.g., BPA) and is worth careful consideration by the SRFB. This was a concern/recommendation that was raised in virtually all interviews conducted for this assessment.

5.2 Levels of Funding vs. Value Provided

Given the relative levels of funding for the three components being reviewed here, this is fundamentally a question of the relative cost/benefit of the most costly component—Intensively Monitored Watersheds—relative to the Effectiveness Monitoring and Status and Trends programs. We agree with the judgment expressed in multiple documents surrounding the formation of the Monitoring Program in general, and the IMWs in particular, that only such a program can answer the fundamental question of any recovery program: Are our efforts doing any good? If this question cannot be answered, it is difficult to justify *any* long-term expenditure on restoration or monitoring; and for the current implementation of salmon recovery in Washington State, IMWs are the only vehicle with the hope of providing an answer.

The current execution of IMWs, however, is not positioned to answer this question, which raises the policy decision of whether the Board considers this to be an important question to answer. If it

is, then a secondary issue is raised: is it worth waiting yet another decade with the existing panel of watersheds to learn these answers, or should the Board funding should be redirected or consolidated to other, ongoing IMWs or to an entirely new set. In either case, the Board would need to support funding of projects in those watersheds, independent of any local priorities. The Adaptive Management cycle (and common sense) argues that without a commitment to project funding within these watersheds, there is no sense in providing monitoring funds and effort. The "policy question," and one that cannot be answered by this review, is thus whether the Board's interest in scientific understanding and long-term accountability trumps the principle of Regional allocations.

5.3 Recommended Improvements

To develop recommendations for the SRFB Monitoring Program, it is essential to recall the primary drivers for monitoring – *accountability*, to show value for the cost of habitat-restoration projects; and *adaptive management*, to drive continued improvement in future projects. These reflect two distinct, but complementary purposes of monitoring: "looking backward," to document what has been accomplished through the expenditures of public funds; and "looking forward," to improve the value and effectiveness of future efforts. It is not sufficient to be successful in just one realm in the absence of the other. Thus, the next step in advancing a "successful" monitoring program for salmon recovery in the State of Washington must be to define and implement revisions to the current program that clearly document the expenditures being made on salmon restoration, inform improvement in restoration design, and guide future resource allocation based on monitoring results. There has been good progress towards these overarching goals but much remains to be done.

To be truly effective, these fundamental drivers of accountability and adaptive management must be well integrated and executed at multiple geographic scales, because salmon recovery seeks to achieve population-scale benefits primarily through the collective benefits accrued from localized treatments. So, for example, the Project Effectiveness Monitoring Program supports regional accountability but cannot tell us whether salmon populations are actually increasing; Intensively Monitored Watersheds (IMW) support centralized adaptive management by testing credible hypotheses about limiting factors through multiple integrated actions and broad-scale evaluation of results; status and trends monitoring of fish can both document the integrative biological response within individual watersheds and provide a statewide context to gauge overall improvements and variability in salmon populations. As recognized in the original 2002 strategic documents for monitoring, each of these drivers has a critical role to help guide progress towards recovery and sustainability of salmon populations.

Based on the information compiled herein and subsequent work with select members of the SRFB and GSRO, we identified six recommendations and associated rationale to improve the quality of SRFB-funded monitoring (Lando et al. 2013b). The recommendations are summarized below:

1. **Establish (or restate) the SRFB goals with respect to monitoring**

   SRFB Monitoring Goals (from the SRFB Strategic Plan):
   Be accountable for board investments by promoting public oversight, effective projects, and actions that result in the economical and efficient use of resources.

   Embraced by these goals are four elements that Lando et al. (2013) termed "themes", also articulated by the SRFB Strategic Plan:

> *"Provide **accountability** for board funding by ensuring the implementation of board-funded projects and assessing their **effectiveness**, participate with other entities in supporting and **coordinating** state-wide monitoring efforts, and use monitoring results to **adaptively manage** board funding policies."*

These themes set a foundation for a monitoring program that not only documents past efforts but also guides future resource allocation. Both are essential, but as stated herein, the former has been emphasized far more than the latter.

The SRFB needs to clarify their role in salmon recovery and monitoring. This should consist of an updated and explicit statement of goals; an explicit, time-bounded plan to implement those goals; and a clear framework for integrating the results of the ongoing monitoring programs to achieve the fundamental needs of accountability (backward-looking) and adaptive management (forward-looking).

Each of the monitoring components funded by the Board (effectiveness monitoring, IMWs, and fish status and trends) should demonstrate annual fulfillment of these strategic goals, acknowledging their specific role(s) in the overall monitoring strategy, in order to receive continued funding. The SRFB should require this information in a consistent and publically-accessible format. For this approach to be successful, however, the monitoring components must each be told what is expected—what role does each component play in the overall strategy, and how is it best suited to support these four themes?

2. Develop a functional adaptive management program

A focus of SRFB-funded monitoring to date has been accountability; however, that alone will not direct the effective use restoration and monitoring funds for salmon recovery. In order to move beyond accountability monitoring and strategically guide future salmon recovery efforts, an adaptive management program is essential. To be functional rather than cumbersome, such a framework must be streamlined, transparent, and efficient. It should incorporate two key elements: (1) a policy element, whereby key management questions or concerns are articulated and an administrative body with the capacity to act upon new information to change management actions; and (2) a science element that can help translate those management questions into objectives that form the basis for the design of specific monitoring efforts. Results from the combination of monitoring elements would provide information relevant to the policy group so that improvements in their decisions can be based on relevant and reliable information.

As such, we recommend the formation of an Adaptive Management Board to establish an explicit framework, set of expectations and process for timely implementation (Year 1). In years to follow the AMB will work with input from the Independent Science Advisory Board (ISAB) to verify accountability by each monitoring component and integration of their findings into future decisions.

3. Establish an Independent Science Advisory Board

Develop a 5-member independent review panel with strong scientific credentials and explicit monitoring expertise is needed to evaluate the degree to which the monitoring themes are being fulfilled by annual reporting. They should also provide ongoing programmatic guidance as needed to support the adaptive management program. A successful evaluation of

each monitoring component by this review board should affect the likelihood of future funding for that component.

4. Provide specific requirements of each monitoring component

The SRFB, with support from an Independent Science Advisory Board (see #3 above), should provide specific requirements of each monitoring component, a framework for reporting, and a performance assessment for each SRFB themes. Only the SRFB themes in greatest need of improvement (i.e., rated 3 or lower in Table 2) are listed below with suggested improvements. Unless otherwise specified, the reporting timeframe for each theme should be as part of an annual, written summary.

Effectiveness Monitoring

a. **Project effectiveness**: as a central focus of the Effectiveness Management Program, this theme is well-supported by the present reporting framework for conveying key information: each visit to a project site is documented in a report of observations and data, with annual summaries across all projects for each of the habitat-restoration project "types." However, as documented herein, these reports have limited interpretation beyond some basic statistical tests for "significance" and almost no exploration of the implications for future project design and implementation. An improved annual reporting framework for the EM Program will therefore need the additional analytical and reporting elements listed in recommendation #2, above.
b. **Adaptive management**: see recommendation #2 for an integrated approach to this theme, including specific recommendations to improve the analysis and reporting of the Effectiveness Management Program to support this theme.

IMW

a. **Accountability**: post the monitoring sites, analyses and results to a centralized location. Identify attributes of a given IMW that would be transferable to other basins and increase the relevance of a particular IMW, recognizing that the long-term value of the IMW program is not in developing a watershed-specific understanding of limiting factors but rather in testing analytical approaches and prospective treatments that are more widely applicable.
b. **Project effectiveness**: analyze and report on project effectiveness with respect to salmon endpoints, with a particular focus on the response of hypothesized limiting factors within the IMW.
c. **Coordination**: seek additional funding and outreach opportunities to fill critical gaps. SRFB-funded IMWs need to collaborate with other IMWs to troubleshoot common challenges and increase program effectiveness. SRFB-funded IMWs should emphasize the degree to which findings from any individual IMW can be generalized to other IMWs, and thence to watersheds throughout Washington State and the PNW.
c. **Adaptive management**: see recommendation #2 for an integrated approach to this theme.

Status and Trends

a. **Accountability**: first determine if each SRFB IMW has adequate status and trend monitoring. This is fundamental to a successful monitoring program. Next, post the SRFB-funded monitoring sites, data and statistical analyses and results to a centralized location. Location and species are not sufficient; data analysis and

reporting on an annual basis are critical for this component of the SRFB Monitoring Program to provide value.

b. **Project effectiveness**: Status and Trend monitoring as it is currently reported does not provide analysis and results that adequately benefit SRFB goals. Status and Trend results need to be evaluated in the context of salmon recovery and adaptive management, with clear articulation of the value of specific Status and Trends monitoring for a given basin. This should be an ongoing effort with annual reporting.
c. **Coordination**: require recipients of SRFB monitoring funds to analyze and interpret the data with respect to salmon recovery efforts. Given the scale of Status and Trend monitoring, this will require coordination across multiple agencies.
d. **Adaptive management**: see recommendation #2 for an integrated approach to this theme.

5. Resolve the IMW implementation problem

Limit IMW funding to watersheds with the ability to implementing restoration projects in a timely manner and with an explicit tie between habitat restoration and fish monitoring. Consider IMW success to date, future potential of matching funds to support implementation and resolve delayed restoration schedules, integration/overlap with other non-SRFB-funded IMWs, and statewide value to salmon recovery in deciding which IMWs to maintain. If adequate progress is not determined by the ISAB in 2014, the IMW program should face funding reallocation.

According to review comments on the Stillwater report, matching funds have been supported IMWs to date: "*IMWs have partnered with ongoing fish monitoring programs in order to leverage those programs and their technical expertise. These partnerships have leveraged over $900k per year in existing monitoring resources and in-kind contributions of several hundred thousand dollars per year as well as technical expertise from NWFSC, Lower Elwha Tribe, Skagit River Cooperative, Weyerhaeuser Co., WDFW, and Ecology.*" This support notwithstanding, greater levels of financial support from either within or beyond the SRFB are needed to justify expenditures to date, and into the future. Although the need for a long-term commitment to IMWs was always recognized and affirmed, a completely unbounded commitment with no credible path to a successful outcome is also not warranted.

6. Identify how the SRFB can improve coordination with other statewide monitoring.

The following specific tasks would advance SRFB monitoring coordination efforts:

- Programmatic changes recommended above and resulting reports should be uploaded to the SRFB website.
- The SRFB would benefit from consultation and collaboration with Northwest Power and Conservation Council regarding their Fish and Wildlife monitoring program.
- The SRFB would benefit from an expanded engagement with the Pacific Northwest Aquatic Monitoring Partnership (PNAMP) to advance collaborative opportunities and benefit from the collective efforts of the region in the following ways: 1) Collaborate with PNAMP webtools to identify and post the location of all SRFB funded restoration and monitoring; 2) provide incentives for SRFB-funded monitoring programs to participate in PNAMP sponsored workshop and contribute to workshop products and documentation; 3) fund a SRFB representative to engage with PNAMP.

5.4 Next Steps

The focus of this report was to assess the three primary components of the SRFB monitoring program (effectiveness monitoring, intensively monitored watersheds, and status and trends monitoring). With this assessment and the development and discussion of targeted recommendations (December 5, 2013 SRFB meeting), the next step is to determine *how* best to implement the recommendations. Many of the observations and recommendations provided in this report have been raised in earlier forums (such as the 2006 ISP review of the IMW program), but moving beyond recommendations to action has not always occurred. We believe that a major impediment to action is a sense by some partners that the SRFB should play a larger role in overseeing salmon recovery. However, the legislature established the board as a funding board, not a centralized body to oversee statewide salmon recovery. That centralized role for oversight of the state's salmon recovery strategy is the Governor's Salmon Recovery Office. The SRFB should work closely with the GSRO to decide the means by which to implement those recommendations judged appropriate.

The SRFB could assist in minimizing the ambiguity by funding or supporting the development of a set of statewide policies, organizations, and scientific decision-making processes, one that would reflect a natural continuation of the statewide Monitoring Strategy advanced over a decade ago. An alternative approach appears to have developed in recent years, with stronger support by the SRFB for region-based salmon recovery—particular for the selection and funding of salmon restoration projects, but with inescapable consequences for monitoring efforts as well. As we have observed throughout this report, certain goals and initiatives of the SRFB—particularly IMWs, systematic analysis and dissemination of effectiveness monitoring results, and adaptive management—require an integrated approach without the distribution of responsibilities, authority, and scientific expertise amongst multiple groups (no matter how well coordinated they may be).

We also recognize the possibility of a hybrid option, wherein the SRFB and the GSRO together transparently and purposefully operate at both scales. In the case of monitoring, for example, two thirds (or more, or less) of the Board's annual monitoring funds could support the centralized statewide programs for guiding an overall monitoring framework, creating and enforcing adaptive management, and conducting critical science (IMWs, status and trend monitoring, and either an ISP or increased technical staff); the remaining funds could be allocated to regional programs, particularly to improve the region-specific value and feedback of project effectiveness monitoring. The first step, however, must be a clear expression of intent. Regardless of the decision made, it would advance the effectiveness of current SRFB funding and clarify the most appropriate use of resources.

Deciding upon the role of the SRFB and its relationship to the GSRO has significant consequences moving forward. We encourage this issue to receive careful consideration and the recommendations are being enacted.

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See Appendix A.

Appendices

Appendix A

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Appendix B

Steering Committee Members

STEERING COMMITTEE MEMBERS

Jen Bayer	Pacific Northwest Aquatic Monitoring Partnership, U.S. Geological Survey
Jeff Breckel	Lower Columbia Fish Recovery Board
Bruce Crawford	National Oceanic and Atmospheric Administration
Raquel Crosier	Northwest Power & Conservation Council (alternate)
Ken Currens	Northwest Indian Fisheries Commission
Bob Cusimano	Washington Department of Ecology
Ken Dzinbal	Puget Sound Partnership
Stacy Horton	Northwest Power & Conservation Council
Anne Marshall	Washington Department of Fish &Wildlife
Kathy Peters	Lead Entities
Timothy Quinn	Washington Department of Fish &Wildlife
Phil Rockefeller	Northwest Power & Conservation Council
Phil Rogers	Columbia River Inter-Tribal Fish Commission
Russell Scranton	Bonneville Power Administration
Derek Van Marter	Upper Columbia Salmon Recovery Board
James White	Upper Columbia Salmon Recovery Board
Lance Winnecka	South Puget Sound Salmon Enhancement Group

Appendix C

Interviews Conducted

INTERVIEWS CONDUCTED

Jennifer Bayer	Pacific Northwest Aquatic Monitoring Partnership, U.S. Geological Survey
Bruce Crawford	National Oceanic and Atmospheric Administration
Ken Dzinbal	Puget Sound Partnership
Bill Ehinger	Washington State Department of Ecology
Steve Leider	Washington State Governor's Salmon Recovery Office
Steve Martin	Snake River Salmon Recovery Board
Jenifer O'Neal	Tetra Tech
Tim Quinn	Washington Department of Fish &Wildlife
Phil Rockefeller	Northwest Power and Conservation Council/Salmon Recovery Funding Board
Bill Ruckelshaus	Salmon Recovery Funding Board (retired)
Russell Scranton	Bonneville Power Administration
Carol Smith	Salmon Recovery Funding Board
David Trout	Salmon Recovery Funding Board
Mara Zimmerman	Washington Department of Fish and Wildlife

Appendix D

Review Comments

The mission of the Upper Columbia Salmon Recovery Board is to restore viable and sustainable populations of salmon, steelhead, and other at-risk species through the collaborative, economically sensitive efforts, combined resources, and wise resource management of the Upper Columbia region.

11 Spokane Street, Ste. 101, Wenatchee, WA 98801 phone: (509) 662-4707 www.ucsrb.com

September 25, 2013

Keith Dublanica
Science Coordinator
Washington Governor's Salmon Recovery Office
Submitted via email: keith.dublanica@gsro.wa.gov

Dear Keith:

We developed the following comments in response to the Stillwater Sciences *Monitoring Investment Strategy for the Salmon Recovery Funding Board*. In the Upper Columbia we have a broad monitoring effort implemented by many different organizations and agencies. This effort is mostly funded and driven by Bonneville Power Administration and the local PUDs for the purpose of mitigation compliance tracking. With the exception of a handful of reach-scale effectiveness sites, very little of the monitoring in the Upper Columbia is funded by the SRFB. The UCSRB is currently going through an exercise similar to that conducted by Stillwater Sciences to evaluate the value of our existing monitoring information in the Upper Columbia, and what it tells us about our progress to date. In fact, we have organized a regional science conference for this fall, November 13-14, in Wenatchee. Details are at www.ucscience.org.

General Observations

The fundamental issue at the heart of this dialogue, regionally and statewide, is the marginal cost in monitoring investments versus the mariginal benefit in influencing future habitat treatments. The SRFB monitoring funding is principally in place to provide continual evaluation of federal and state funding on a portfolio of projects, *not to develop new science*. Regionally, we are spending significant effort on long-term monitoring information (e.g. Intensively Monitored Watershed). While promising, these long-term monitoring programs have not resulted in useful, timely information about habitat and fish that can help us evaluate completed actions and plan for future restoration efforts. In principal, the Stillwater report appears to come to a similar conclusion.

Even more important is the observation in the report of the disconnect between regional funding for habitat implementation and statewide direction and funding for monitoring (section on *Adaptive Management*). Recovery Plans were developed regionally for a reason: recovery occurs at an ESU scale. While the state has long been interested in economies of scale for monitoring efforts, the current investments in monitoring have not generated results that can influence habitat restoration. This is why we have long suggested that monitoring funding should, at least in part, be controlled by the regional boards that are in a place to

understand more intimately the types of monitoring most necessary to effectively influence future restoration goals.

Lastly, the Stillwater report falls short on a thorough description of the existing monitoring in the Upper Columbia, for obvious reasons. In a couple of cases, there are important ommissions. For instance, most of our monitoring is funded by the Action Agencies to the FCRPS Biological Opinion, rather than SRFB. We have used this funding to increase Tetra Tech monitoring sites under effectiveness monitoring to increase the statistical power of the information generated from that effort. We identified this need in 2009, and have been funding additional sites for the last 3 years. The following sections are a description of our existing monitoring efforts under each of the three categories in the Stillwater report: effectiveness, IMW, and status and trends. We include in each section our knowledge on what more is needed in our region under each of those types of monitoring.

Effectiveness Monitoring

The programmatic approach to effectiveness monitoring seems to be a cost effective way to get at these questions. However, fish monitoring under the current program is insufficient to answer questions related to fish response. The current monitoring is adequate to answer questions about fish presence/absence during one day of the year at the site scale. The fish monitoring component is not frequent enough and does not cover enough area to provide an accurate assessment of fish use of a site.

Sampling should be conducted across at least two seasons (summer and winter) throughout the sampling schedule. To put site-scale results into tributary and watershed contexts, monitoring should also be conducted consistent with other juvenile fish monitoring. Without expanding the fish monitoring component of the current program, the usefulness of the information is significantly reduced and that component should be dropped.

Intensively Monitored Watersheds

The Entiat sub-basin is an Intensively Monitored Watershed in the Upper Columbia. This design was established through a collaborative effort between monitoring personnel (ISEMP) and project implementers in 2008. The design calls for pulses of implementation every 3 years, starting in 2011 and ending in 2020. We will be executing our second pulse of implementation in 2014. Pre-implementation monitoring was an important component of the design, as is intense pulses of implementation in different reaches every 3 years. This monitoring effort is designed to tell us about the fish response at a population scale. We agree that IMWs need to have intensive implementation – in pulses or all at once – in order to make this investment worthwhile.

If the current SRFB funded IMWs cannot achieve that goal, investing that money in other monitoring needs is prudent. Given the current implementation and budget constraints of the IMWs, there are so many confounding factors (e.g. hatchery effects, fire, ocean conditions) that attributing cause of population-scale change to restoration activities appears unlikely.

Status and Trends Monitoring

Fish status and trends measure the ultimate outcome of habitat restoration efforts. This is the most important monitoring activity for implementation and adaptive management. Status and trends information can also inform life-cycle models that are being developed to provide answers to integrated management questions, including habitat effectiveness, to the recovery regions and Lead Entities. These programs in the Upper Columbia are primarily driven by hatchery effectiveness questions and do not necessarily analyse or report on results that could answer questions about habitat effectiveness, or influence habitat restoration activities. In

addition, their efforts often do not coincide with existing restoration activities in terms of where monitoring is conducted (e.g. location of rotary screw traps for juvenile monitoring).

Increasing investment in fish status and trends would be the most cost effective way for the SRFB to improve the quality and usefulness of information generated from its monitoring efforts. The most cost-effective way to do status and trends to get at effectiveness is the large-scale implementation of PIT tagging programs at the site, tributary, and watershed scales. This should include remote PIT tagging in priority restoration areas and reference tributaries. Any remote PIT tagging could provide additional site-scale effectiveness answers if interrogation arrays are placed at restoration sites.

Although the SRFB defines fish status and trends as "fish in/fish out," there is additional benefit from tracking fish throughout their freshwater life-cycle (e.g. parr and juvenile) to answer questions about individual life stage survival and performance as well as life history and habitat use. This information can be critically important to targeting the most appropriate restoration actions that will provide the greatest fish benefit.

We appreciate the opportunity to comment on the report, and GSRO's effort in this exercise. The report appears to have identified appropriate issues with the current funding scheme for monitoring. It is really useful to continually evaluate how we are doing, and to be willing to change course if the findings suggest doing so. We very much look forward to the dialogue and decision from this exercise, which is arguably the most important and most difficult step.

King Regards,

Derek Van Marter
Executive Director

TO: Keith Dublanica, RCO

FROM: Bruce Crawford, NOAA Fisheries

SUBJECT: Stillwater Report Monitoring Investment Strategy for the Salmon Recovery Funding Board

DATE: November 6, 2013

Thank you for the opportunity to provide input to the report prepared by Stillwater Science to the SRFB on the monitoring programs. Many of their insights and recommendations have been provided to the Board in the past and I am glad that they are also emphasizing them such as the need to have treatments funded in IMWs in a timely manner.

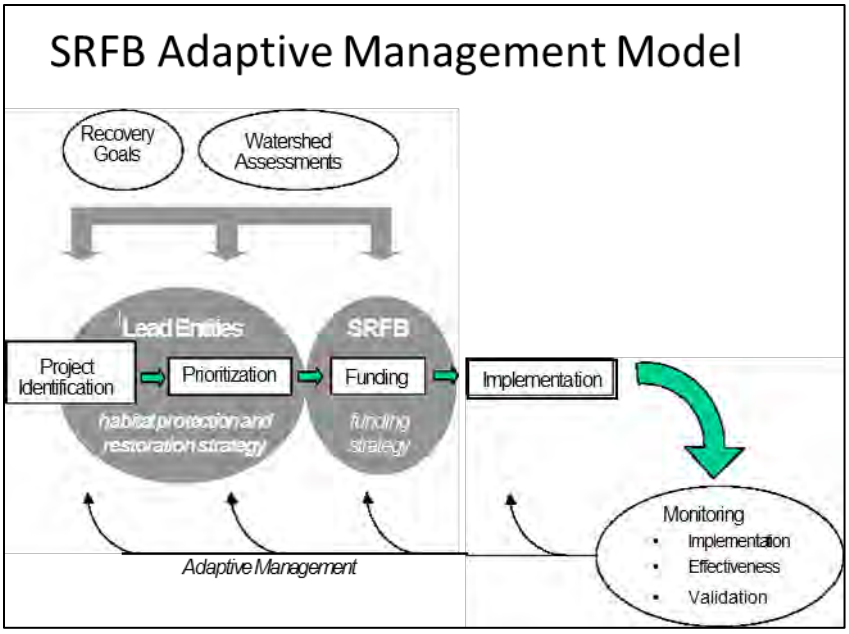
However, there are two areas I have taken some time to comment on and these are the questioned role of the SRFB in salmon recovery and monitoring and the second is the total absence of any recommendations concerning expanding habitat monitoring commitments to include watershed scale habitat status/trends. These comments have not been vetted with my supervisor and represent my own conclusions.

Comments

Following comments are provided in the spirit of assisting the Salmon Recovery Funding Board and the Recreation and Conservation Office in meeting their goals and obligations. As a former employee and active participant in establishing the monitoring programs at the SRFB I undoubtedly come with my own bias.

On page 2 the bullets apparently are the lenses through which Stillwater viewed their assignment and revealed their bias and focus for this report.

Bullet #1 Although the SRFB obviously does not have authority over hatcheries, harvest, and regulatory functions, they are and have been the chief source and designated lead for implementing habitat restoration and in monitoring the effects of their funding actions. This was clearly described in HB 2496. In addition, the state of Washington designated the RCO as the state channel for all federal grants for habitat restoration received from the Pacific Coastal Salmon Recovery Fund established as a result of the 1999 Pacific Salmon Treaty. The earliest adaptive management diagram produced by the IAC in 2000 for the SRFB clearly shows the perceived relationship between SRFB grants, Lead Entity implementation, and monitoring.



In addition, the federal government has clearly indicated that the PCSRF grant recipients have monitoring obligations for not only reporting implementation monitoring of project metrics such as acres of trees planted, but also in whether their restoration actions were effective. The SRFB state appropriations are also obligated by the PCSRF grant requirements . Following language from the 2010 Federal Register notice

> *"That funds disbursed to States shall be subject to a matching requirement of funds or documented in-kind contributions of at least thirty-three percent of the Federal funds:* Provided further, *that, in order to fulfill the matching requirement in the previous proviso, non-Federal contributions of funds pursuant to the previous proviso must be used in direct support of this program."*

The NOAA 2009 PCSRF Report to Congress stated:

> *"PCSRF grantees are required to allocate at least 10 percent of their project funding to monitoring and evaluation activities of individual and regional projects. These dedicated funds allow grantees to collect data on both listed and non-listed salmonids for multiple years during and after project completion. These data not only help to determine the status of populations, but also identify effective actions essential to species recovery and sustainability*"

On July 7, 2012 Mr. Scott Rumsey of NOAA Fisheries was invited to the SRFB meeting in Olympia to provide NOAA perspectives on PCSRF priorities. He provided the following guidance for monitoring:

- <u>Project-Level Effectiveness Monitoring</u>:
    - Focus programmatically on the effectiveness of various treatment types

    - Apply consistent design and methodology
    - Conduct sufficient pre-project monitoring given project type, response variables, geographic scope, etc.
    - Adequate sampling of each project type, ecoregions and species
    - Coordinated across funding entities
    - Regular analysis and dissemination of results to restoration community
- Intensively Monitored Watersheds:
    - Sufficient pre-treatment monitoring
    - Timely implementation of planned treatments of sufficient scale and intensity
    - Annual synthesis of results to inform adaptive implementation and monitoring
    - Coordination and information exchange with broader IMW community
- Population Status and Trends:
    - Inform population-scale viability assessments
    - Natural spawner abundance estimates for every population
    - Juvenile migrant estimates for at least one population per major population group
    - Annual dissemination of standardized data to NOAA and regional fish managers
    - VSP Prioritization and gap analysis recently completed for Puget Sound that will assist in prioritizing funding needs

Bullet #2 I disagree with the statement in the second bullet that *" imposition of uniform metrics and protocols (the most common implementation of "collaborative monitoring") rarely benefits all parties equally."* Experience at the SRFB and the US Forest Service shows that without the imposition of uniform metrics and protocols the results are rarely usable by anyone other than the local entity who designed them.

Page 10 Stillwater ignores the linkage with other IMWs in Washington and in the Columbia Basin in terms of the greater context of watersheds.

Page 13 Section 2.2.4

Stillwater refers to the three legged stool of monitoring but out of context with the original intent. The original intent was to show the need for three types of habitat monitoring, effectiveness, validation, and status/trends. The desire and need for broad scale and watershed scale habitat status/trends was identified in the Comprehensive Monitoring Strategy as the first Recommendation under "Trends in Environmental Conditions page 21 of the Executive Summary. It was also identified in the Washington Forum on Monitoring in its 2006 *"Report to the Office of Financial Management Concerning Monitoring Programs and Associated Databases"* as one of the two highest monitoring needs. It also is given emphasis in the Forum's *"Washington State Framework for Monitoring Salmon Populations Listed under the Federal Endangered Species Act and Associated Freshwater Habitats*". After three biennial budget tries, the Department of Ecology succeeded in obtaining the broad scale probabilistic habitat status/trend monitoring at the Salmon Recovery Region scale but not at the watershed scale.

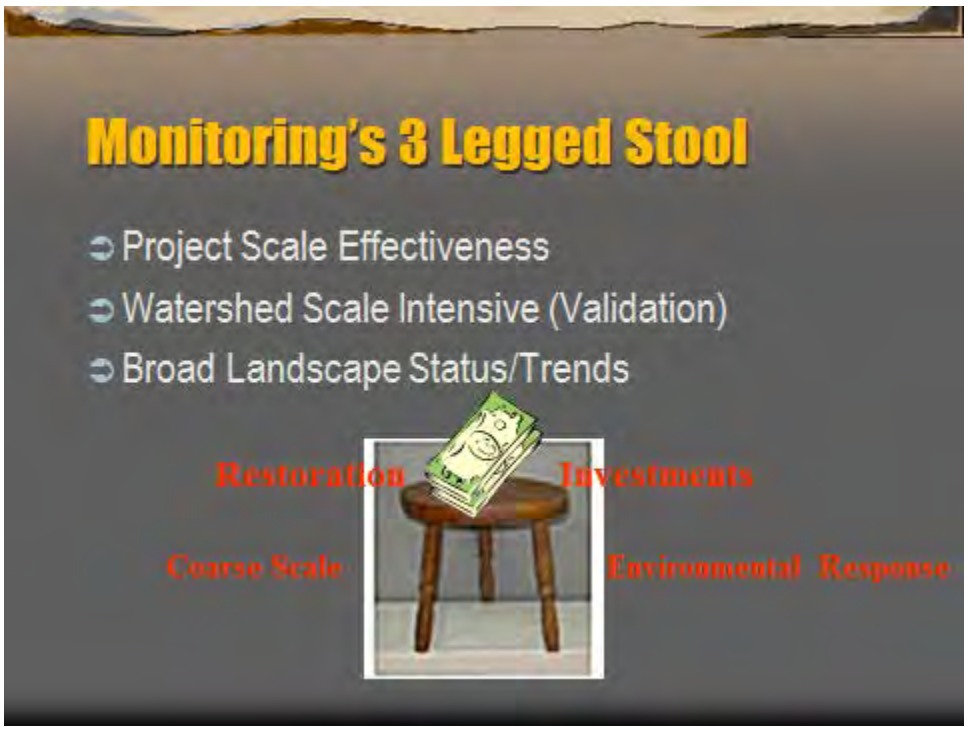


Figure 1. Slide taken from 2005 presentation to the Forum On Monitoring.

More recently NOAA's National Marine Fisheries Service provided specific guidance to the salmon recovery entities in Washington, Oregon, and Idaho in the *"Guidance for Monitoring Recovery of Pacific Northwest Salmon and Steelhead Listed under the Federal Endangered Species Act"* (Crawford & Rumsey, Guidance for Monitoring Recovery of Pacific Northwest Salmon and Steelhead Listed under the Federal Endangered Species Act, 2011). This document was designed to help prioritize monitoring associated with the recovery of listed salmonid species.

Additional emphasis has been placed on the need for a cohesive habitat monitoring approach through the *2011 Implementation Status Assessment Final Report* (Judge, 2011) and the tribal white paper *Treaty Rights at Risk* (Treaty Indian Tribes In Western Washington, 2011). In October 2011 the Regional Office of NOAA Fisheries announced the *Puget Sound Habitat Initiative* as a concentrated effort to address habitat loss in Puget Sound and how to monitor its status.

"Guidance for Monitoring Recovery of Pacific Northwest Salmon and Steelhead Listed under the Federal Endangered Species Act" (Crawford & Rumsey, 2011) called for the following components of habitat monitoring:

A. Implement a randomized geospatially tessellated stratified (GRTS) habitat status trend monitoring program incorporating on the ground protocols coupled with remote sensing of land use and land cover. Coordinate and correlate habitat status/trend monitoring with fish in and fish out monitoring wherever possible.

B. Reach scale action effectiveness monitoring should be conducted for various habitat improvement categories using a Before and After Control Impact (BACI) design whenever possible. Recovery entities should coordinate their monitoring to reduce costs and improve sample size, and wherever appropriate utilize the same protocols for conducting reach scale project effectiveness monitoring as those used in broad scale status/trends monitoring so that the results can be compared.

C. Implement at least one intensively monitored watershed (IMW) for each domain and address different limiting factors by coordinating IMW sites and designs across the Pacific Northwest utilizing a BACI design wherever possible. This type of validation monitoring is used to determine whether the sum of adaptive management actions taken in specific watersheds has resulted in increased salmon production.

Page 20 Stillwater is critical of the SRFB effectiveness monitoring program but they fail to give any real examples of other effectiveness programs of any broad scale significance. They also fail to mention that the Bonneville Power Administration is adopting the SRFB approach to monitoring categories of projects for projects they fund throughout the entire Columbia Basin because it is the most cost effective and produces scientifically valid results. They have hired Tetra Tech EC to assist them in implementing the process.

Thank you again for reviewing my thoughts on this important report.

WASHINGTON STATE'S REGIONAL SALMON RECOVERY ORGANIZATIONS

November 4, 2013

Keith Dublanica
Governor's Salmon Recovery Office
Recreation and Conservation Office
P.O. Box 40917
Olympia WA 98504-0917

Re: Comments on the draft Stillwater Monitoring Investment Assessment Report

The Council of Regions is pleased to see the SRFB taking a measured look at its monitoring investments. We believe that the report provided by Stillwater Associates provides an insightful overview of the status of current SRFB monitoring investments. The report also properly emphasizes the need to better align monitoring investments with specific management questions and ensure that the scales at which monitoring is conducted is consistent with the scale of management questions. However, the Council of Regions is concerned that the Stillwater report failed to give adequate consideration to monitoring needs at the ESU or recovery region level. While coordination on monitoring methods and protocols and data management on a statewide or multiple agency basis is appropriate, on-the-ground monitoring activities for salmon recovery typically occur on an ESU or recovery region level, not on a statewide level. The recovery regions have developed research, monitoring and evaluation plans, which identify key management questions and associated monitoring needs, approaches, and priorities. SRFB monitoring activities should be consistent and/or coordinated with regional monitoring programs to ensure maximum benefit for both SRFB and regional monitoring needs.

Fish in/out monitoring is a high priority in all regional recovery plans. It is being implemented around the state using a wide range of funding sources (with BPA and Mitchell Act funding as primary contributors). The SRFB has played an important role by helping to cover the costs of critical fish in/out monitoring not covered by these other sources. The regional directors encourage the SRFB to provide ongoing funding and/or work with partners to ensure adequate and secure ongoing funding sources for this critical work.

The recovery regions have generally supported ongoing project effectiveness monitoring. While this program has been generally successful in assessing the effectiveness of various project types, more needs to be done to strengthen the program and better link its results to key regional management questions.

In contrast, the recovery regions have seen limited benefit from current SRFB-funded IMW investments. Research questions are not well aligned with regional priorities, implementation of IMW treatments has been piecemeal, and to date, results have not been made available in a way that can inform management decisions. We understand the hard choice faced by the SRFB in determining whether to either fully fund implementation of IMWs it supports and the associated restoration actions or cut funding for some or all SRFB-funded IMW efforts. We look forward to participating in ongoing discussion about the future of the SRFB-funded IMW program and how it may be altered to better inform priority management questions. We do

want to emphasize that the fish in/out monitoring conducted as part of all IMWs may fulfill important monitoring needs identified in regional monitoring plans, and may merit continuation in some areas even if an IMW program were not present.

Discussions about how monitoring programs fit together at the state level have been hampered by the lack of any statewide process focused on evaluating monitoring investments. We have participated in, and appreciated the ad-hoc monitoring allocation discussions convened by SRFB staff in recent years, but note that a more robust approach to allocating monitoring funding is needed in the future in order to better align SRFB monitoring investments with statewide and regional monitoring priorities. The regional directors have previously put forth two specific proposals that could be incorporated into an improved allocation approach. We would like to reiterate these recommendations:

1. Annually, the SRFB should allocate a portion of the PCSRF 10% monitoring funds to the regional organizations to help meet high priority monitoring needs specific to each region. How these funds are distributed will be determined by the SRFB. Additional monitoring requests beyond the 10% should not be funded through returned funds.

2. Add monitoring as an eligible project type for proposals that could be funded as part of a region's project list using the current allocation formula (sponsored only regional organization or in partnership with a regional organization).

We look forward to participating in ongoing discussions about the SRFB monitoring program's future, and are committed to working together across the state to ensure that monitoring investments help address the critical uncertainties we need to resolve to successfully recovery Washington's listed and at-risk fish species.

Sincerely,

Miles Batchelder
WA Coast Sustainable Salmon Partnership

Alex Conley
Yakima Basin Fish and Wildlife Recovery Board

Jeff Breckel
Lower Columbia Fish Recovery Board
Chair, Council of Regions

Jeanette Dorner
Puget Sound Partnership

Scott Brewer
Hood Canal Salmon Recovery Board

Steve Martin
Snake River Salmon Recovery Board

Derek Van Mater
Upper Columbia Salmon Recovery Board

Cc: Brian Abbott
Kaleen Cottingham
David Troutt

Response to the October 2013 Draft Monitoring Investment Strategy for the Salmon Recover Funding Board from the IMW Science Committee

Bill Ehinger Dept of Ecology
Bob Bilby-Weyerhaeuser Co
Tim Quinn- Washington Dept Fish and Wildlife
Mara Zimmerman- Washington Dept Fish and Wildlife
Joe Anderson- Washington Dept Fish and Wildlife
Kirk Krueger- Washington Dept Fish and Wildlife
Correigh Greene- Northwest Fisheries Science Ctr-NOAA
Phil Roni- Northwest Fisheries Science Ctr-NOAA
Mike McHenry-Lower Elwha Klallam Tribe
Eric Beamer-Skagit River Systems Cooperative

November 2013

Overall, the report accurately describes the pros and cons of the three monitoring types funded by the SRFB: Project Effectiveness Monitoring, Status and Trends Monitoring, and IMW. Our comments provide additional context and detail about the IMWs, especially regarding the IMW's relationship to Project Effectiveness and Fish in Fish out monitoring, and we suggest edits to the Recommendations and Next Steps sections.

IMWs

1. *Funding for the implementation of the IMWs began in July 2004.*

The 2003 funding mentioned in the report was for a feasibility study that led to the funding and implementation of the IMWs in 2004.

2. *Lack of restoration projects in IMW streams.*

The portrayal of the 'lack of funding' for projects in the IMW basins is too stark. The issue is that projects were too few in some watersheds and delayed in others because there has been little effort to direct projects toward IMWs. Of the seven treatment streams and the Skagit estuary where restoration was needed, four (Little Anderson Creek, Skagit Estuary, East Twin River, and Deep Creek) have had extensive restoration implemented and, of these, Little Anderson Creek and the Skagit Estuary already show solid signs of a fish response to the restoration. Both Lower Columbia streams have ongoing watershed scale treatments testing the effects of salmon carcass analogs on fish growth and survival. The last distribution of carcass analogs will be spring 2014. Only Big Beef Creek and Seabeck Creek have not had a major habitat restoration project implemented recently. Seabeck Creek was a low priority because of road crossings that needed repair. Many are now repaired and habitat restoration can now be implemented. More detail for each complex is below:

- Skagit Estuary- Restoration projects are proceeding according to the ESA recovery plan. Restoration projects here take time because they are large, sometimes hundreds of acres, and often involve decommissioning old dikes and building of new ones.
- Straits-These watersheds have received extensive restoration because they were a high priority for the Lead Entity. The highest priority projects were completed by 2013. Additional restoration projects will probably not rank as high priority by the current selection process.
- Hood Canal-
    - Restoration of Little Anderson Creek via extensive LWD projects has largely been completed and success is apparent. We've seen a large increase in coho smolt production after a main stem culvert was replaced with a bridge and we may be seeing further increases in coho smolt production due to a recent LWD project.
    - Seabeck Creek- Based on a study completed in 2008 by Stillwater Sciences, fixing undersized road culverts was the top priority. Several problematic road crossings were fixed recently by local transportation agencies with more scheduled over the next few years. Habitat restoration projects can capitalize on these improvements to stream function.
    - Big Beef Creek has a large off-channel habitat restoration project recently submitted for SRFB funding for the second time. This project had been ranked relatively low, but the current design appears to correct previously identified shortcomings.
- Lower Columbia- Implementing restoration projects in this complex has been a concern in the past because few projects ranked high enough in the Lead Entity's prioritization process for SRFB funding. However, that has changed recently and restoration is underway.
    - Abernathy Creek has had several habitat restoration projects completed and more are being planned. In addition, in 2013 we (through the LCFEG) began a watershed-scale study of the effect of carcass analogs on fish growth and survival. The LCFEG has enough funding remaining to distribute analogs again in spring 2014.
    - Germany Creek-The LCFEG has distributed salmon carcass analogs since fall 2011 while we have monitored the effect on fish growth and survival. No additional restoration projects are currently planned for this watershed.

It should be noted that even before the IMW was funded the challenge of implementing multiple restoration projects in the IMW basins over a short time frame was brought to the SRFB's attention. It was discussed by the SRFB during the June 2004 meeting and was repeatedly brought to their attention over the years. However, our local partners have found means to implement many projects in the IMW basins using other funding sources or by waiting until these projects became high priority.

Relationship of IMWs to other monitoring types

1. *Funding*

Although the SRFB provides more funding for the IMW contract relative to Effectiveness and Status/Trends monitoring, the report should clearly describe what the IMWs are comprised of and the value of conducting monitoring in an integrated, paired-watershed, framework; thereby providing the most reliable and comprehensive results of the three monitoring types. Fish in Fish out monitoring alone comprises approximately 60% of the IMW monitoring funded by the SRFB. Although the report mentions that IMWs include both Fish in Fish out and Effectiveness monitoring, this important point is not discussed or accounted for in the cost estimates. Eliminating IMWs would result in a funding gap for populations included in the statewide Fish in Fish out monitoring framework and all of the Project Effectiveness monitoring that can be tied to a fish population response.

2. *Relative value of the monitoring types to the SRFB*

Recommendations from outside technical experts and the Comprehensive Monitoring Strategy identified IMWs as a research priority that underlies Effectiveness Monitoring. This topic was covered in detail by the SRFB in 2002-03 and is worth revisiting. In 2002 the Independent Science Panel (ISP) asked Dr. Peter Bayley of the Department of Fisheries and Wildlife at Oregon State University to review the scientific literature on the responses of salmon and trout to habitat changes. Dr. Bayley concluded that the then "current freshwater-based monitoring programs will either: (1) fail to indicate an improvement associated with stream habitat restoration in terms of smolt recruitment, returning adults, or population size increase at the watershed scale, or (2) indicate an improvement but fail to demonstrate which and how habitat changes were responsible so that subsequent restoration policy could be made more cost-effective" (http://digitalarchives.wa.gov/governorlocke/gsro/science/050802bayley.pdf). These are the questions the IMW was designed to answer.

In the July 14, 2002 Technical Memorandum 2002-2 summarizing Dr. Bayley's findings (http://www.rco.wa.gov/documents/gsro/panel_reviews/tech_memos/071502techmemo.pdf), the ISP reiterated a recommendation from an earlier report (ISP 2000-2). "Because sound bases do not seem to be readily available in the literature, we recommend that habitat restoration projects and other habitat altering activities be used to help define formal cause and effect relationships between habitat parameters and population change." These recommendations from outside technical experts were the basis for funding IMWs by the SRFB. We believe these reports would be informative for the current SRFB discussion.

In addition, the rankings in Table 2 are misleading because they do not take into account the relative value of each monitoring type.

3. *Collaboration*

Finally, it needs to be noted that the IMW has partnered with ongoing fish monitoring programs in order to leverage those programs and their technical expertise. These partnerships have leveraged over $900k per year in existing monitoring resources and in-kind contributions of several hundred thousand dollars per year as well as technical expertise from NWFSC, Lower Elwha Tribe, Skagit River Cooperative, Weyerhaeuser Co., WDFW, and Ecology. Such cooperative partnerships and contributions speak volumes about the perceived value of the IMW program.

Suggested Edits to Recommendations and Conclusions

The Conclusions contain several key issues, recommendations, or opinions that should be incorporated explicitly into the Recommendations section. These include:

- The need for the SRFB "to articulate a common set of objectives, a plan to implement those objectives and a strategy to integrate the results of ongoing monitoring programs…" should be the first action item for the SRFB.
- The question of "should the SRFB be making these technical decisions, or should they instead focus on programmatic requirements, coordination and collaboration while seeking scientific input from a technical advisory board (e.g. an ISP)?" should be emphasized in the Recommendations.
- The following statement is important if the SRFB's objective is to justify the restoration expenditures. "We agree with the judgment expressed in multiple documents surrounding the formation of the Monitoring Program in general, and the IMWs in particular, that only such a program can answer the fundamental question of any recovery program: Are our efforts doing any good? If this question cannot be answered, it is difficult to justify any long-term expenditure on restoration or monitoring; and for the current implementation of salmon recovery in Washington State, IMWs are the only vehicle with the hope of providing an answer."

Other

There were are many documents (technical memoranda, meeting minutes, etc) generated a decade ago as state agencies grappled with salmon recovery, habitat restoration, and monitoring needs that can provide some insight for the SRFB's upcoming discussions. It would help the current SRFB members if they understood the decisions made by their predecessors. These can be found at http://www.rco.wa.gov/doc_pages/other_pubs.shtml#gsro.

Response to the October 2013 Draft Monitoring Investment Strategy for the Salmon Recover Funding Board from the IMW Science Committee

Bill Ehinger Dept of Ecology
Bob Bilby-Weyerhaeuser Co
Tim Quinn- Washington Dept Fish and Wildlife
Mara Zimmerman- Washington Dept Fish and Wildlife
Joe Anderson- Washington Dept Fish and Wildlife
Kirk Krueger- Washington Dept Fish and Wildlife
Correigh Greene- Northwest Fisheries Science Ctr-NOAA
Phil Roni- Northwest Fisheries Science Ctr-NOAA
Mike McHenry-Lower Elwha Klallam Tribe
Eric Beamer-Skagit River Systems Cooperative

November 2013

Overall, the report accurately describes the pros and cons of each of the three monitoring types funded by the SRFB: Project Effectiveness Monitoring, Status and Trends Monitoring, and IMW. Our comments will focus on providing context and additional background detail about the IMWs, more detail regarding the IMW's relationship to Project Effectiveness and Fish in Fish out monitoring, and some suggested edits to the Recommendations and Next Steps sections.

IMWs

1. *Funding for the implementation of the IMWs began in July 2004.*

The 2003 funding mentioned in the report was for a feasibility study that led to funding and implementation of the IMWs in 2004.

2. *Lack of restoration projects in IMW streams.*

The portrayal of the 'lack of funding' for projects in the IMW basins is too stark. The issue isn't that no projects were implemented but that there were too few in some watersheds and delayed in others. Of the eight areas (seven treatment streams and the Skagit estuary) where restoration was needed, four (Little Anderson Creek, Skagit Estuary, East Twin River, and Deep Creek) have had extensive restoration implemented and, of these, Little Anderson Creek and the Skagit Estuary already show solid signs of a fish response to the restoration. Both Lower Columbia streams have ongoing watershed scale treatments testing the effects of salmon carcass analogs on fish growth and survival. The last distribution of carcass analogs will be in June 2013. Only Big Beef Creek and Seabeck Creek have not had a major habitat restoration project implemented recently. Seabeck Creek was a low priority because of the numerous road crossings that needed repair (and many of these have been completed via transportation funding). More detail for each complex is below:

- Skagit Estuary-Restoration projects here are large, sometimes hundreds of acres, and often involve decommissioning of old dikes and building of new ones. Projects of this magnitude simply take time, but they have been proceeding according to the recovery plan.
- Straits-These watersheds have received extensive restoration with the completion of the highest priority projects in 2013. These projects were a high priority for the Lead Entity. Additional restoration projects will probably not rank as high priority by the current selection process.
- Hood Canal-
    - Much of Little Anderson Creek has had LWD projects implemented on it. Most the stream reaches remaining are either owned by non-cooperating landowners or are relatively low value for restoration. We've seen a large increase in coho smolt production after a main stem culvert was replaced with a bridge and we may be seeing further increases in coho smolt production due to a recent LWD project.
    - Seabeck Creek- Based on a study completed in 2008 by Stillwater Sciences, fixing these culverts was the top priority. Several problematic road crossings were fixed recently by local transportation agencies with more scheduled over the next few years.
    - Big Beef Creek has a large off-channel restoration project that was recently submitted for SRFB funding for the second time. This project has been ranked relatively low in the past because of the presence of the fish-counting weir just downstream from the project.
- Lower Columbia-This complex was identified in the past because few projects ranked high enough in the Lead Entity's prioritization process for SRFB funding. However, that has changed recently.
    - Abernathy Creek has had several restoration projects completed and more are in the planning stages. In addition, in 2013 we began a watershed scale project to distribute salmon carcass analogs (through the LCFEG) in the late spring and evaluate the effect on fish growth and survival. The LCFEG has enough funding remaining to distribute analogs again in May 2014.
    - Germany Creek-The LCFEG has distributed salmon carcass analogs since fall 2011 while we have monitored the effect on fish growth and survival. No additional restoration projects are currently planned for this watershed.

It should be noted that finding a means to implement multiple projects over a short time frame in the IMW basins was brought to the SRFB's attention even before the IMW was funded, was discussed by the SRFB as early as the June 2004 meeting, and was repeatedly brought to their attention over the years. However, our local partners have found means to implement many projects in the IMW basins using other funding sources or by waiting until these projects became high priority.

Relationship of IMWs to other monitoring types

1. *Funding*

Although the report mentions that IMWs do include both Fish in Fish out and Effectiveness monitoring, this does not carry through to the discussion. Fish in Fish out monitoring alone comprises approximately 60% of the IMW monitoring funded by the SRFB. Eliminating IMWs would result in a funding gap for populations included in the statewide ~~eliminate the majority of the SRFB's~~ Fish in Fish ~~out monitoring~~monitoring framework and all of the Project Effectiveness monitoring that can be tied to a fish population response. The SRFB does provide more funding for the IMW contract relative to Effectiveness and Status/Trends monitoring but this should be presented in a way that recognizes what the IMWs are comprised of and the value of conducting monitoring in an integrated paired-watershed framework.

2. *Relative value of the monitoring types to the SRFB*

This topic was covered in detail by the SRFB in 2002-03 and is worth revisiting. In 2002 the Independent Science Panel (ISP) asked Dr. Peter Bayley of the Department of Fisheries and Wildlife at Oregon State University to review the scientific literature on the responses of salmon and trout to habitat changes. Dr. Bayley concluded that the then "current freshwater-based monitoring programs will either: (1) fail to indicate an improvement associated with stream habitat restoration in terms of smolt recruitment, returning adults, or population size increase at the watershed scale, or (2) indicate an improvement but fail to demonstrate which and how habitat changes were responsible so that subsequent restoration policy could be made more cost-effective" (http://digitalarchives.wa.gov/governorlocke/gsro/science/050802bayley.pdf). These are the questions the IMW was designed to answer.

In the July 14, 2002 Technical Memorandum 2002-2 summarizing Dr. Bayley's findings) http://www.rco.wa.gov/documents/gsro/panel_reviews/tech_memos/071502techmemo.pdf), the ISP reiterated a recommendation from an earlier report (ISP 2000-2). "Because sound bases do not seem to be readily available in the literature, we recommend that habitat restoration projects and other habitat altering activities be used to help define formal cause and effect relationships between habitat parameters and population change." These recommendations from outside technical experts were the basis for funding IMWs by the SRFB. We believe these reports would be informative for the current SRFB discussion.

In addition, the rankings in Table 2 are misleading because they do not take into account the relative value of each monitoring type.

3. *Collaboration*

Finally, it needs to be noted that the IMW has partnered with ongoing fish monitoring programs in order to leverage those programs and their technical expertise. These partnerships have leveraged over $900k per year in existing monitoring resources and in-kind contributions of several hundred thousand dollars per year as well as technical expertise from NWFSC, Lower Elwha Tribe, Skagit River Cooperative, Weyerhaeuser Co., WDFW, and Ecology.

Suggested Edits to Recommendations and Conclusions

The Conclusions contain several key issues, recommendations, or opinions that should be incorporated explicitly into the Recommendations section. These include:

- The need for the SRFB "to articulate a common set of objectives, a plan to implement those objectives and a strategy to integrate the results of ongoing monitoring programs…" could be the first action item for the SRFB.
- The question of "should the SRFB be making these technical decisions, or should they instead focus on programmatic requirements, coordination and collaboration while seeking scientific input from a technical advisory board (eg., an ISP)?" should be emphasized in the Recommendations.
- The following item should be a task for the SRFB and is part of articulating their objectives. "The policy question that cannot be answered by this review is thus whether the Board's interest in scientific understanding and long-term accountability trumps the principle of Regional allocations."
- The following statement is important if the SRFB's objective is to justify the restoration expenditures. "We agree with the judgment expressed in multiple documents surrounding the formation of the Monitoring Program in general, and the IMWs in particular, that only such a program can answer the fundamental question of any recovery program: Are our efforts doing any good? If this question cannot be answered, it is difficult to justify any long-term expenditure on restoration or monitoring; and for the current implementation of salmon recovery in Washington State, IMWs are the only vehicle with the hope of providing an answer."

Other

There were are many documents (technical memoranda, meeting minutes, etc) generated a decade ago as state agencies grappled with salmon recovery, habitat restoration, and monitoring needs that can provide some insight for the SRFB's upcoming discussions. It would help the current SRFB members if they understood the decisions made by their predecessors.

PugetSoundPartnership
LEADING PUGET SOUND RECOVERY

November 4, 2013

Keith Dublanica, Science Coordinator
Governor's Salmon Recovery Office
Recreation and Conservation Office
PO Box 40917
Olympia, WA 98504-0917

RE: Stillwater Monitoring Investment Assessment Report

Dear Keith,

Thank you for the opportunity to review the October 2013 draft report "Monitoring Investment Strategy for the Salmon Recovery Funding Board" prepared by Stillwater Sciences. I believe the authors of the report (Lando et al.) have provided a thoughtful and extremely valuable review, and I complement your efforts and the Governor's Salmon Recovery Office for bringing this work to fruition.

My comments (following) represent my individual review of this report, and not the official position of either the Puget Sound Partnership (PSP) (those comments will be provided separately) or of the Puget Sound Ecosystem Monitoring Program (PSEMP), for which I serve as the Senior Monitoring Program Coordinator. In full disclosure, I must also acknowledge that I was appointed to and participated in the Steering Committee established by the Recreation and Conservation Office (RCO) to help frame this review.

The following comments are not listed in any particular order of priority or importance:

1) The authors have done an excellent job of compiling and sorting through a great deal of current and historical information, and I believe the majority of their conclusions and recommendations are made in an appropriate context.

2) Linking habitat restoration to changes in fish populations is critically important. However, the report correctly identifies a number of problems related to the execution of existing IMWs, including the particular concern that delays in completing restoration projects have seriously compromised the value of some IMWs. In some cases, this most likely reflects that regional recovery priorities (and therefore restoration projects) are not focused on the IMW watersheds but instead target ESA listed populations in watersheds other than the IMWs. This is not the case in the Skagit, which is almost certainly a main reason why that IMW has been particularly successful. I agree that continued funding for other IMWs should be limited to watersheds that can commit to and demonstrate the capacity for completing their restoration

efforts, or the IMW designs should be adjusted appropriately to assure that the assumptions of the BACI approach will be fully met.

3) The report correctly identifies the significant disconnect between effectiveness monitoring and project planning. On page 19, this point is emphasized, and expansion of effectiveness monitoring is not recommended until such time as an effective adaptive management system can be developed. It should be noted, however, that building a truly integrated, adaptive management system that fully integrates science, monitoring, project planning, and implementation is not a trivial task, and there are relatively few good examples of a fully functioning adaptive management system (especially at a statewide scale). In defense of the current program, there are at least three good examples where the SRFB effectiveness monitoring approach has already helped save money by providing solid evidence of project effectiveness, thereby serving both to confirm the value of those investments and also saving money that might otherwise be unnecessarily spent on individual project monitoring (culvert replacement, irrigation screening, and riparian fencing). However, there are other project categories that have been evaluated by Tetra Tech and determined to require either significantly larger sample sizes, or significantly more years of monitoring before they are likely to produce useful results – and this point is not well addressed in the review. I would strongly suggest that – while a SRFB adaptive management system is developed – the effectiveness monitoring program be fully maintained with two conditions: A) effectiveness monitoring designs – and questions – should be refined based on updated power analyses, modeling, or other approaches to assure that meaningful results can be achieved with current sample sizes and funding capacity, and B) the recommendations to improve coordination with other regional programs (see pg 25) be fully supported as a means to potentially leverage additional monitoring and increase samples sizes where needed.

4) With regard to coordination opportunities (pg 25), I would certainly recommend adding the Puget Sound Ecosystem Monitoring Program as a key partner in the Puget Sound Salmon Recovery Region.

5) I fully agree that habitat status and trends, especially at the watershed scale, is a significant, high-priority monitoring gap that needs significant additional capacity. Habitat assessments should evaluate *net* change at the watershed scale and not be limited to evaluations of recovery efforts.

6) I agree with the recommendations to create some sort of technical advisory body to the SRFB, though I am undecided whether that needs to parallel (or could perhaps leverage?) the ISRP (pg 25). Earlier constructs (e.g. the Washington Forum on Monitoring Salmon Recovery and Watershed Health) had some ability to directly provide, or at least contract or coordinate, technical input on behalf of the SRFB and may be useful again. However, any such body requires funding to staff and support in order to be successful.

7) I think the key recommendation in the report (several places) is the recognition of the lack of strong linkage between monitoring and project planning/implementation. Adaptive Management is a term frequently used and much aspired to – but inadequately demonstrated in our current organizational structures. It might be a good idea to follow-up this review with a dedicated effort to create recommendations for how an adaptive management program might actually be created in the context of our current organizations, planning processes, state/federal/local/tribal laws, etc. I think this is a key problem and challenge for many – probably most – monitoring programs across the state. But the juxtaposition of the SRFB as a funding body focused on both restoration projects *and* monitoring, and the Governor's Salmon Recovery Office as a key coordinating body, offers opportunities certainly worthy of serious exploration.

Thank you again for the opportunity to review and comment on this report. I believe the recommendations contained in the report are worthy of serious consideration, and I appreciate the chance to weigh in with a few additional thoughts.

Very sincerely,

Ken Dzinbal

Ken Dzinbal
Senior Monitoring Program Coordinator
PUGETSOUNDPARTNERSHIP
360.464.1222 | ken.dzinbal@psp.wa.gov

Thank you for the opportunity to review and reflect upon the draft report on SRFB funded monitoring programs prepared by your selected consultants (Booth, Ralph, et.al.). I was very impressed with the consultant's analyses, observations and recommendations. I'm not intending to provide a detailed review and comment, but I would like to offer a few observations on the report's findings and recommendations.

1. It is noteworthy and I share the consultants' concerns on the lack of attention to status and trends monitoring for salmon habitat quality and conditions over time. Although such monitoring may be largely beyond the SRFB's specific funding capabilities and/or priorities, it is nevertheless a significant element of any monitoring approach to salmon recovery that is intended to provide the basis for adaptive management of salmon recovery plans. Therefore, efforts to implement the numerous and substantial recommendations of this report related to better coordination of monitoring efforts and more effective communication of monitoring information funded by the SRFB could also include meaningful consideration of and coordination with current programs to monitor habitat status and trends.
2. The points made about the IMW program seem particularly relevant and cogent. The report is clear that the IMW approach is conceptually sound and is the only current monitoring approach that can conceivably answer the key question of whether recovery projects and actions are materially contributing to recovery of fish populations. Given this conclusion, IMWs are potentially the key, along with credible status and trends monitoring of fish populations and habitat conditions, to adaptive management of recovery plan implementation. However, the consultants' point about timely and adequate funding for treatment projects in IMWs is pivotal. I suggest that the answers that only an IMW approach can provide are so critical to longer term support for salmon recovery funding, that an effective means of providing more timely funding for IMW treatment projects must be developed. This could be addressed through either fewer IMWs and/or a specific allocation of SRFB or other other available funding to treatment projects that are most critical for obtaining more timely value from the IMWs.
3. There is a common theme to many of the consultants' recommendations that I would characterize as a critical need for SRFB and GSRO to give considerably more attention to "connecting the dots". By "dots" I mean the key connections (e.g. coordination and communication) that are needed between and among: a) the three types of SRFB funded monitoring efforts/programs that were evaluated (as well as the habitat status and trends monitoring efforts that were not evaluated); b) the key "players" in those monitoring efforts; and c) the multiple scales (watershed, regional, statewide) of organizations and strategies/plans that would be served by improved interconnectedness. The consultants' strongly imply that GSRO could have a critical role in the level of statewide and regional coordination that will be required to achieve significant improvements in this "interconnectedness" among the various monitoring efforts and between monitoring efforts and the implementation and adaptive management of recovery plans. They also imply that GSRO, with SRFB and RCO (and Governor's Office?) support, is the only existing structure that could develop and maintain an effective balance between statewide and regional responsibility and accountability for coordination of monitoring efforts in support of both statewide and regional interests in salmon recovery and recovery plan implementation. Given this analysis, SRFB could enhance GSRO's capacity to address the consultants' recommendations related to improvements in monitoring coordination and communication/use of monitoring information . It seems the consultants are implying this could and should be a higher priority for use of SRFB monitoring funds or other available funds, than any expansion of existing monitoring efforts. The extensive efforts required of GSRO for it to

have a major role in responding meaningfully to the consultants' recommendations, including creation and liaison to any new technical review panel for monitoring programs and/or related projects, would seem to require and deserve added capacity within GSRO

The report does seem timely in terms of the challenges and opportunities facing the GSRO and the "Washington Way" for salmon recovery a this point in time. I appreciate the good work and intentions for salmon recovery that are reflected in this report and hope these comments are helpful.

Best Wishes,
Phil Miller

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November 4, 2013

Keith Dublanica, Science Coordinator
Governor's Salmon Recovery Office
Recreation and Conservation Office
PO Box 40917
Olympia, WA 98504-0917

RE: Stillwater Monitoring Investment Assessment Report

Dear Keith,

Thanks to you and your colleagues at GSRO for providing an opportunity to comment on Stillwater Science's recent review of the *Monitoring and Investment Strategy for the Salmon Recovery Funding Board*. This report clearly articulates many of our concerns about how monitoring funds are allocated and monitoring information is shared in the Puget Sound region. The comments in this letter are a combination of PSP Salmon Recovery Program staff thoughts as well as coordination with PSP Science Director Tracy Collier and his team. We agree with many of the authors' recommendations and our comments below focus on their most relevant points.

Connect monitoring to specific decisions. We agree that systematic, meaningful and clear connections are needed "between monitoring results and future management actions." We also agree that the scale of effectiveness monitoring needs to match the scale of project decision making. To strengthen this connection, we need to be more specific about which decisions the 10% allocation for monitoring is meant to inform. In Puget Sound, watersheds are the primary decision makers about which projects are priorities for funding. Monitoring designed to address watershed-scale questions could accelerate recovery within and across Puget Sound watersheds. The Puget Sound region is currently working with the watersheds to develop an intentional adaptive management system that will connect monitoring priorities with watershed and regional decision making.

Support monitoring of habitat condition. We agree that "the 'missing' component of SRFB-funded monitoring is habitat status and trend monitoring." Our partners and funders need information about the effectiveness of our habitat restoration actions as well as a way to measure net change in habitat condition. The Regional Stormwater Monitoring Program for Puget Sound is one model for a monitoring program derived from the recommendations of an independent stakeholder group, based on robust statistical survey methods, and designed to answer specific questions about habitat condition and the impact of management actions.

Share results from monitoring studies. We agree that results and data from IMW projects need to be made available as soon as possible and encourage the SRFB to insist on this. New databases are not

needed, these data should either be added to existing databases or made available as simple data files. Our partner scientists, project sponsors and funders need this information to set expectations for restoration projects, set targets for regional recovery, understand the relationships between habitat conditions and fish productivity, and use the data in regional effectiveness studies (e.g., meta-analysis) to integrate results across projects.

Support communication and learning across the system. We agree that communication is essential and inadequate and that there is "no evidence of any systematic feedback" for the results of monitoring. We agree that institutional capacity is critical to "use monitoring results to improve decisions" and that a better balance is needed between using restoration dollars to implement projects and using funding to learn and communicate which projects are most effective. In Puget Sound, we are implementing Monitoring and Adaptive Management Plans that include check points to connect decision points with monitoring results.

Best regards,

Jeanette Dorner
Local Ecosystem and Salmon Recovery Program Director
PUGETSOUNDPARTNERSHIP

RITT
psritt@gmail.com
Recovery Implementation
Technical Team

Keith Dublanica, Science Coordinator

Governor's Salmon Recovery Office

November 1, 2013

Dear Keith,

The Puget Sound Recovery Implementation Technical Team (PS RITT) is the regional technical team that supports implementation of the salmon recovery plan. The PS RITT advises the Puget Sound Salmon Recovery Council on technical issues.

The PS RITT appreciates the opportunity to review and comment on the recent report prepared by Stillwater Sciences entitled “Monitoring Investment Strategy for the Salmon Recovery Funding Board.” The RITT strongly believes that monitoring of salmon recovery projects and programs, such as the Intensively Monitored Watersheds, should be used to inform and improve upon projects and programs. It is critical that information collected from monitoring be used for adaptive management at the project, watershed, region, and state scale.

Sincerely,

Kirk Lakey

PS RITT Chair

Stillwater Sciences – SRFB Monitoring Strategy Review

Mara Zimmerman comments (IMW only)

p. 4 – I am pretty sure that IMWs were first funded in 2005 not 2003 (Bill Ehinger will know this).

p. 9 – The statement that the Skagit IMW is a Before-After design is incorrect. The Skagit estuary is divided into treatment (restoration) and reference (no restoration) channels and researchers are specifically comparing the fish densities between the two types.

I agree with statements that a major problem with the IMWs has been the lack of restoration treatments for Hood Canal and Lower Columbia (but not JDF or Skagit) and the inability of the scientific team to influence the funding of those restoration actions.

p. 24 – "Are our efforts doing any good? If this question cannot be answered, it is difficult to justify *any* long-term expenditure on restoration or monitoring; and for the current implementation of salmon recovery in Washington State, IMWs are the only vehicle with the hope of providing an answer." I agree strongly with this statement.

p. 24 – "The "policy question," and one that cannot be answered by this review, is thus whether the Board's interest in scientific understanding and long-term accountability trumps the principle of Regional allocations." Yes. This is the most important statement in the entire document with regards to the IMWs. This is the policy question which must be answered in order to come to a resolution on the continuation of IMW study. In my opinion, if the SRFB isn't going to push for the restoration to be completed, then the IMWs with restoration should develop an end game (define the number of years to conclusion) and the IMWs without restoration should cease.

p. 25 – "Recommendation: project design and management decisions should stem from monitoring results, and any such linkages (or their absence) should be disclosed." I agree that this would be productive – especially in the IMW watersheds where there is a lot of monitoring data available. Following this recommendation would force the connection and communication between entities proposing projects and agencies who are conducting the monitoring activities.

p. 26 - "Recommendation: limit IMW funding to watersheds with the ability to implementing restoration projects in a timely manner and with an explicit tie between habitat restoration and fish monitoring." I would add to this statement that this issue is tied to the policy decision above that the SRFB must wrestle with and decide whether they think that the scientific understanding and long-term accountability provided by the IMW should trump the principle of regional allocations.

WDFW response to the Stillwater Sciences' draft report "Monitoring Investment Strategy for the Salmon Recovery Funding Board" (October 2013)

In general, the report accurately describes the monitoring programs supported by Salmon Recovery Funding Board funding, described in the report as effectiveness monitoring, status and trend monitoring, and intensively monitored watersheds monitoring. Our perspective is that a third party, independent review of the monitoring programs adds value and we hope that the SRFB and RCO staff can effectively utilize and implement the information and recommendations contained in the report.

Suggested edits to Conclusions and Recommendations sections

The following statements appear to us to be key recommendations pertaining to the role of the SRFB and whether they have a policy or technical role. We suggest these be incorporated into the recommendations section. Currently, there are vague references to these already in the recommendations sections but suggest more clarity and more explicit reference. We also suggest that the recommendations be put at the front of the paragraphs to increase clarity.

- The question of the role of the SRFB is at the core of many issues as an example, "*At the forefront of these potential improvements, the SRFB needs to provide clear and specific leadership to guide the monitoring of salmonid habitat and populations. It is currently not fulfilling that need, nor is anyone else. We respectfully assert that the real issue facing the SRFB is not the need to reallocate monitoring funds, but rather the need to articulate a common set of objectives, a plan to implement those objectives, and a strategy to integrate the results of ongoing monitoring programs, all under the auspices of its centralized leadership. First and foremost, the SRFB needs an explicit framework and process of decision-making with a clear definition of roles and responsibilities to ensure its timely implementation*." These should be articulated as recommendations for consideration by SRFB.

- We believe that the SRFB should seriously consider empowering an independent technical body (e.g., ISRP) to help advise them with technical issues. "The SRFB should focus on programmatic requirements, coordination and collaboration while seeking scientific input from a technical advisory board (e.g., an ISP)?

- The following statement in the report should be captured as a recommendation, *"We agree with the judgment expressed in multiple documents surrounding the formation of the Monitoring Program in general, and the IMWs in particular, that only such a program can answer the fundamental question of any recovery program: Are our efforts doing any good?"* Our interpretation of this statement is that the SRFB should clearly state their objectives and set up programs to address their key questions.

- The following statement in the report should be captured as a recommendation, *"Are our efforts doing any good? If this question cannot be answered, it is difficult to justify any long-term expenditure on restoration or monitoring; and for the current implementation*

of salmon recovery in Washington State, IMWs are the only vehicle with the hope of providing an answer."

- The following statement in the report should be captured as a recommendation for the formation of a technical panel to inform the board, *"If the institutional capacity does not exist to use the monitoring results to improve decisions on how to spend scarce restoration dollars on the most effective restoration actions, then the first step must be to address this critical shortcoming in existing monitoring efforts."*

- The following statement in the report should be captured as a recommendation to the board: "The "policy question," and one that cannot be answered by this review, is thus whether the Board's interest in scientific understanding and long-term accountability trumps the principle of Regional allocations." This is the policy question which must be answered in order to come to a resolution on the continuation of IMW study. The findings lead to the conclusion in the report that SRFB needs to require regional boards to fund restoration projects in IMW watersheds, or find additional restoration funding that doesn't go through the boards, or decide these IMWs are no longer a priority and end the IMW focus.

We suggest that the report should acknowledge the large overlap between two monitoring programs it describes as somewhat separate efforts and in a confusing way: intensively monitored watersheds (IMW) and status and trends monitoring The report may be giving a misleading impression when it states that the SRFB budget is heavily skewed towards IMW.

"In general, IMWs receive half or more of the annual allotment, reflecting the variety of monitoring activities conducted in the IMW watersheds, and the need for detailed annual information if their scientific objectives are ever to be achieved."

This overlap between IMW and status and trends monitoring has important consequences for the report's conclusions. Approxiamtely 60% of IMW funding supports status and trend (fish in and fish out). This is important to remember when thinking about cost efficiencies of these studies and future decisions about the studies' funding. . Although the report aims to address return-on-investment questions of funding efficiency, the report does not appear to acknowledge the very large matching funds and/or additional project funds (e.g., Weyerhaueser, Skagit Cooperative, Lower Clallum Tribe, NOAA Fisheries Science Center) that makes IMW projects possible. We suggest this at least be acknowledged in the report.

Page-specific comments

p. 4 – We think IMWs were first funded in 2005 not 2003.

p. 4 – The characterization of the 'Fish-In Fish-Out' program could be more fully explained and clarified. Fish In/Fish Out data are typically collected at the population scale, not the regional

scale. Smolts are measured because they are the cumulative fish response to all freshwater conditions, starting with spawners, continuing through spawning and rearing habitat available, and ecological interactions with wild and hatchery fish in the river. 10% may be a high upper limit for proportion of SRFB's contribution to status and trends monitoring statewide.

p. 9 – The statement that the Skagit IMW is a Before-After design is incorrect. The Skagit estuary is divided into treatment (restoration) and reference (no restoration) channels and researchers are specifically comparing the fish densities between the two types.

p. 11 – the report states that a total of $3 million is spent annually on status and trend monitoring statewide. This figure seems like an under-estimate; for example, an annual budget of approximately $1.8 million exists for WDFW's Puget Sound smolt monitoring work, which represents about half of Puget Sound smolt monitoring.

p. 18 – We agree that that coordination of monitoring work is valuable. An example of a regional monitoring partnership working towards overall coordination is the Puget Sound Ecosystem Monitoring Program (PSEMP). It is important to acknowledge however that coordination takes time and money; without changing funding levels, resources allotted to coordination conceivably would cut into resources available to do the actual monitoring work, which may not be desirable.

p. 19 – We agree with this statement: "If the institutional capacity does not exist to use the monitoring results to improve decisions on how to spend scarce restoration dollars on the most effective restoration actions, then the first step must be to address this critical shortcoming in existing monitoring efforts." We suggest that such a shortcoming would be improved by a process that connects monitoring agencies (WDFW/tribes) with restoration agencies (regional recovery boards and their contractors), and by adequately staffing these agencies with scientists who can evaluate existing information and develop defensible and useful recommendations.

p. 22 – Correction on 4th bullet: "In the Puget Sound, NOAA evaluated the quality of monitoring data, identified data gaps and now the SRFB is funding those gaps". NOAA <u>did</u> evaluate the quality of monitoring data and identified data gap, but, to date, those gaps have <u>not</u> been funded. The SRFB does fund monitoring "gaps" in Puget Sound (e.g., Hood Canal summer chum) but these projects were considered funded by the SRFB in the NOAA review.

p. 22 – Suggest clarification on 5th bullet, "The annual prioritization process for status and trends monitoring (Table 1). Led by WDFW, this process identifies opportunities for SRFB funding. However it is unclear to what extent the WDFW gaps align with SRFB gaps. Addressing this uncertainty would be value added for the SRFB." WDFW's annual process for prioritizing gaps in status and trends monitoring is done at the request of the SRFB using the monitoring criteria (juvenile monitoring in at least one primary population per major population group per ESU) defined in the "Washington State Framework for Monitoring Salmon Populations Listed under the Endangered Species Act" document. In as much, this prioritization process is aligned with every definition of a monitoring gap that the SRFB has provided. The SRFB has not provided additional direction or criteria.

Reviewer Notes:
The SRFB Monitoring Sub-committee met on January 27th to begin the process of operationalizing the monitoring recommendations presented at the December SRFB meeting. A second meeting is scheduled for February 28th to review and further discuss these recommendations with the chairs of the Council of Regions and the Washington Salmon Coalition. The result will be a series of sub-committee recommendations for SRFB action at the March 20th meeting in Olympia.

Stillwater Sciences provided the SRFB a memo in December detailing six recommendations for improving the SRFB Monitoring Program. These recommendations are repeated verbatim in the description section of this document. Please focus on the **SRFB Sub-committee Recommendation for Board Action** section following each Stillwater recommendation when reviewing this report to the SRFB.

Recommendation #1 - Establish (or restate) the SRFB goals with respect to monitoring

Description:
The SRFB needs to clarify their role in salmon recovery and monitoring. This should consist of an updated and explicit statement of goals; an explicit, time-bounded plan to implement those goals; and a clear framework for integrating the results of the ongoing monitoring programs to achieve the fundamental needs of accountability (backward-looking) and adaptive management (forward-looking).

Each of the monitoring components funded by the Board (effectiveness monitoring, IMWs, and fish status and trends) should demonstrate annual fulfillment of these strategic goals, acknowledging their specific role(s) in the overall monitoring strategy, in order to receive continued funding. The SRFB should require this information in a consistent and publically-accessible format. For this approach to be successful, however, the monitoring components must each be told what is expected—what role does each component play in the overall strategy, and how is it best suited to support these four themes? Meeting this need is the intent of this first recommendation.

Sub-committee Recommendations for Board Action:

1. For the February 28th sub-committee meeting staff will draft language that amends the SRFB Strategic Plan. The revised strategic plan will include new statements on the three monitoring components, the establishment of a Monitoring Panel, and the inclusion of an adaptive management program. The sub-committee will finalize the language and bring it forward to the March 20th SRFB meeting for the board to consider in amending the SRFB Strategic Plan.

2. Update and finalize the SRFB's 2003 Draft Monitoring Strategy (link below). This task will be given to the newly formed Monitoring Panel with guidance and direction from GSRO and SRFB. This would be a basic update to clarify the SRFB role in monitoring, activities funded, reporting requirements, and opportunities for information exchange/adaptive management.

This would be one of the first tasks for the Monitoring panel to complete. This would be completed during an August – October timeline, if not sooner.

SRFB Monitoring Strategy 2003.

Recommendation #2 - **Develop a functional adaptive management program**

Description:

Form a 3-member Adaptive Management Board to establish an explicit framework, set of expectations and process for timely implementation (Year 1). In years to follow the AMB will work with input from the Independent Science Advisory Board (ISAB) to verify accountability by each monitoring component and integration of their findings into future decisions. To ensure close coordination, all three AMP members will serve on the ISAB (see recommendation #3 below)

Below are some key expectations for each monitoring component within such an Adaptive Management Program:

Effectiveness Monitoring Program:

- Improve the present annual reporting by project type, by expanding the depth of analysis to include attributes that would directly support adaptive management feedback: for example, generalized conclusions for most/least effective project types and specific designs, evaluation of regional differences in project performance/success for a given type, and discussion of implications that inform future project design or circumstances where certain types of projects are not appropriate
- Explicitly state the expected outcome of each project (for example, "improve habitat conditions [provide specifics] that current limit salmon survival and productivity for a given life stage")
- Evaluate regional differences in project performance/success for a given type (why did some projects fail and others seem to not?)
- Provide timeline for an update of the project design manual that incorporates EM findings
- Provide a peer review/revision cycle for all reports*

Intensively Monitored Watersheds (IMWs):

- For each IMW, restate the working hypotheses regarding limiting factors and working assumptions that are the target of a given suite of restoration actions; identify general types and specific locations of appropriate projects and a schedule that targets full implementation of such projects
- Assess credible likelihood and a working schedule of producing measurable change(s) from full project implementation
- Require annual report that documents hypotheses, treatments, progress, measured outcomes, and implications for basin-specific and transferrable approaches to identifying and correcting population-limiting factors
- Require integration/evaluation of relevant EM findings by each IMW in a written report to facilitate the cross-scale integration of these monitoring components
- Identify dedicated funding for treatments in any/all IMW watersheds. If funding cannot be realistically secured, identify a revised treatment strategy if IMW implementation is to continue being funded

Status and Trends:

- Make future SRFB-funding for fish in/fish out contingent on obtaining WDFW analysis of fish in/fish out data for each SRFB-funded IMW
- Integrate the cumulative restoration actions within a given basin (type, location, footprint, objectives, relative success) to evaluate possible correlation with smolt abundance, size and timing – WDOE responsibility
- Include evaluations of smolt trap performance and describe the implications for establishing confidence in correlations between investments in restoration actions and resulting increase in smolt abundance, size and timing – WDFW and WDOE responsibility

Sub-committee Recommendations for Board Action:

This recommendation clearly spells out expectations by monitoring activity for an adaptive management program. The Monitoring Panel will review the Stillwater adaptive management recommendations to help shape the adaptive management work. The Sub-committee recommends that a Monitoring Panel (recommendation #3) be charged with this work in addition to the tasks outlined in recommendation #3. The sub-committee did not agree with the Stillwater recommendation for creating a sub-panel to complete this task. The sub-committee did agree that this should be an explicit and separate task from the work described in recommendation #3. It is not practical to have a separate sub-panel dedicated to adaptive management, given limited resources.

Recommendation #3 - Establish an Independent Science Advisory Board
Description:

Create a 5-member independent review panel with strong scientific credentials and explicit monitoring expertise is needed to evaluate the degree to which the monitoring themes are being fulfilled by annual reporting. They should also provide ongoing programmatic guidance as needed to support the adaptive management program (see #2 above). A successful evaluation of each monitoring component by this review board should affect the likelihood of future funding for that component.
This issue was expressed by reviewers of the Stillwater report – "*We believe that the SRFB should seriously consider empowering an independent technical body (e.g., ISRP) to help advise them with technical issues. "The SRFB should focus on programmatic requirements, coordination and collaboration while seeking scientific input from a technical advisory board*."

Sub-committee Recommendations for Board Action:

1. The sub-committee recommends that a new panel be created and called the **SRFB Monitoring Panel**. The panel will fill four important roles. 1) Create a functional adaptive management framework and set of expectations and process for timely implementation; 2) Evaluate the performance of SRFB monitoring program by component and provide guidance and funding recommendations to the SRFB; 3) Review the project effectiveness and IMW monitoring results to recommend changes in policy or criteria for funding projects; 4) Compare and share monitoring results to see if lessons learned in other monitoring efforts could be applied to SRFB programs. The Monitoring Panel would be independent in nature and provide recommendations to the SRFB much like the SRFB's Technical Review Panel

2. Stillwater Sciences emphasized the Monitoring Panel must have the credentials and experience in salmon recovery monitoring to be effective. There also needs to be a mix of good communication abilities, people skills, and the ability to present recommendations to the SRFB that are comprehensible and actionable. The sub-committee emphasized the Monitoring Panel should be the crosswalk between the technical science of monitoring and the practical policy implications considering funding and resources. Staff will draft a recruitment announcement and route to the SRFB sub-committee for review before posting.

3. The sub-committee recommended the staff prepare a competitive and public recruitment announcement for monitoring panel members and be ready to advertise after the SRFB meeting in March. It would be the similar process used to create the current SRFB technical review panel. Members would be compensated for time and travel. The panel should be under contract by the middle of June. An evaluation team will be established made up of RCO staff, SRFB Monitoring Subcommittee, and others to select the qualified Monitoring Panel members from the list of interested applicants. The recruitment would look to private, state, federal,

BPA, tribal governments for scientific expertise in the appropriate disciplines that could serve in this independent and objective role. This approach has worked well in the past through similar processes. Staff will draft a recruitment announcement and route to the SRFB sub-committee for review before posting.

4. The sub-committee agreed an annual budget for the Monitoring Panel should start at $50,000. The panel would be 3-5 persons. The initial start-up may be three member panel to update the monitoring strategy and develop expectations (reporting requirements) for the three monitoring components.

5. GSRO Science Coordinator would staff the Monitoring Panel.

Recommendation #4 - Provide specific requirements of each monitoring component

Description:

The SRFB, with support from an Independent Science Advisory Board (see #3 above), should provide specific requirements of each monitoring component, a framework for reporting, and a performance assessment for each SRFB themes:

Effectiveness Monitoring

a. **Project effectiveness**: as a central focus of the Effectiveness Management (EM) Program, this theme is well-supported by the present reporting framework for conveying key information: each visit to a project site is documented in a report of observations and data, with annual summaries across all projects for each of the habitat-restoration project "types." As documented in Lando et al. (2013), however, these reports have limited interpretation beyond some very basic statistical tests for "significance" and almost no exploration of the implications for future project design and implementation. An improved annual reporting framework for the EM Program will therefore need the additional analytical and reporting elements listed in recommendation #2, above.

b. **Adaptive management**: see recommendation #2 for an integrated approach to this theme, including specific recommendations to improve the analysis and reporting of the EM Program to support this theme.

IMW

a. **Accountability**: post the monitoring sites, analyses and results to a centralized location. Identify attributes of a given IMW that would be transferable to other basins and increase the relevance of a particular IMW, recognizing that the long-term value of the IMW program is not in developing a watershed-specific understanding of limiting factors but rather in testing analytical approaches and prospective treatments that are more widely applicable.

b. **Project effectiveness**: analyze and report on project effectiveness with respect to salmon endpoints, with a particular focus on the response of hypothesized limiting factors within the IMW.

Coordination: seek additional funding and outreach opportunities to fill critical gaps. SRFB-funded IMWs need to collaborate with other IMWs to troubleshoot common challenges and increase program effectiveness. SRFB-funded IMWs should emphasize the degree to which findings from any individual IMW can be generalized to other IMWs, and thence to watersheds throughout Washington State and the PNW.

c. **Adaptive management**: see recommendation #2 for an integrated approach to this theme. Note of clarification: Approximately 60% of IMW funding supports status and trend (i.e., fish in/fish out) monitoring in the IMW watersheds.

Status and Trends

a. **Accountability**: first determine if each SRFB IMW has adequate status and trend monitoring. This is fundamental to a successful monitoring program. Next, post the SRFB-funded monitoring sites, data and statistical analyses and results to a centralized location. Location and species are not sufficient; data analysis and reporting on an annual basis are critical for this component of the SRFB Monitoring Program to provide value.

b. **Project effectiveness**: S&T monitoring as it is currently reported does not provide analysis and results that adequately benefit SRFB goals. S&T results need to be evaluated in the context

of salmon recovery and adaptive management, with clear articulation of the value of specific S&T monitoring for a given basin. This should be an ongoing effort with annual reporting.
c. **Coordination**: require recipients of SRFB monitoring funds to analyze and interpret the data with respect to salmon recovery efforts. Given the scale of S&T monitoring, this will require coordination across multiple agencies.
d. **Adaptive management**: see recommendation #2 for an integrated approach to this theme.

Sub-committee Recommendations for Board Action:

These recommendations are a great starting point for developing greater accountability, sharing results, coordinating resources, and driving future policy decisions surrounding the monitoring program. There is significant detail in these recommendations that will require the Monitoring Panel to help shape monitoring program requirements.

1. Monitoring Panel would develop monitoring program requirements and reporting requirements by monitoring component. This work would be accomplished the summer of 2014.

2. Program requirements, expectations, and reporting guidelines would be captured in an updated version of the Hatchery & Monitoring Manual currently being developed. The manual update would be completed by GSRO/RCO in the fall of 2014.

Recommendation #5 - Resolve the IMW implementation challenge

Description:

Limit IMW funding to watersheds with the ability to implementing restoration projects in a timely manner and with an explicit tie between habitat restoration and fish monitoring. Consider IMW success to date, future potential of matching funds to support implementation and resolve delayed restoration schedules, integration/overlap with other non-SRFB-funded IMWs, and statewide value to salmon recovery in deciding which IMWs to maintain. If adequate progress is not determined by the ISAB in 2014, the IMW program should face funding reallocation.

According to review comments on the Stillwater report, matching funds have been supported IMWs to date: "*IMWs have partnered with ongoing fish monitoring programs in order to leverage those programs and their technical expertise. These partnerships have leveraged over $900k per year in existing monitoring resources and in-kind contributions of several hundred thousand dollars per year as well as technical expertise from NWFSC, Lower Elwha Tribe, Skagit River Cooperative, Weyerhaeuser Co., WDFW, and Ecology."* This support notwithstanding, greater levels of financial support from either within or beyond the SRFB are needed to justify expenditures to date, and into the future. Although the need for a long-term commitment to IMWs was always recognized and affirmed, a completely unbounded commitment with no credible path to a successful outcome is also not warranted.

Sub-committee Recommendations for Board Action:

Staff put together several different options for the sub-committee to consider. The sub-committee recommends that the board implement its decision to move forward on implementing projects within the IMW's by funding up to $2 million a year over the next three years. This will require the board to revisit its principle that has historically maintained an annual grant round of at least $18 million from the PCSRF and State salmon capital funds. Funding projects in the IMW at $2 million per year over three years may cause the annual grant round to fall below $18 million.

1. The sub-committee agreed the best option for the SRFB to allocate funds for project within IMWs for the immediate future is to utilize "return funds". These are older year funds available for redistribution. This will result in less funding being available for the following grant round.

2. Ask the Puget Sound Partnership to consider utilizing —unobligated PSAR funds to complete projects within the Puget Sound/Hood Canal IMWs. The Skagit IMW is limited by landowner

participation in restoration projects. For this reason the SRFB Subcommittee recommends focusing IMW project funding in the Straits, Lower Columbia, and Hood Canal. Three of the four IMWs are in Puget Sound/Hood Canal. There are significant resources being dedicated to Puget Sound recovery. IMWs help answer the basic question – is restoration working?

3. In order to minimize the impact on available funds for the SRFB grant round, the SRFB through RCO will request additional funds the State Salmon Capital budget for the 2015-17 biennial budget. The SRFB sub-committee recommends a budget request be developed by June 2014.

4. The sub-committee recommends spending $6 million over the next three years with a maximum investment of $2 million per year for three IMWs (Lower Columbia, Straits, and Hood Canal). The sub-committee recommends that the Skagit IMW continue to garner landowner support and use available funds through their annual allocation to fund projects that are ready to proceed.

5. Require no-match from project sponsors implementing projects in a SRFB-funded IMW. The no-match requirement only applies to projects being implemented with SRFB IMW implementation funds set-aside by the SRFB. The purpose is to provide an incentive to project sponsors to complete this work quickly. Projects that have matching funds may be considered ahead of those that don't.

6. The sub-committee recommends GSRO/RCO utilize the existing SRFB grant round process to review projects proposed within the IMW. Projects proposed in IMW's must be constant with the IMW treatment plan and have cleared the SRFB Review Panel and be recommended by the IMW Scientific Oversight Committee. Up to $2 million a year will be dedicated to projects within three IMWs. A complete RCO grant application would be submitted to RCO by August 2014. Projects would be reviewed/cleared by the SRFB Review Panel and considered for SRFB approval at the 2014 September meeting.

Other Monitoring Related Issues the Sub-committee recommends:

1. The sub-committee recommends that the SRFB adjust their monitoring projects approval and make all funding decisions or program changes related to monitoring at the fall (September) board meeting. Aligning contract start dates (October 1 as per federal FY) with funding availability will eliminate confusion and streamline the overall SRFB monitoring program. This adjustment would be made in 2014.

Recommendation #6 - Identify how the SRFB can improve coordination with other statewide monitoring.

Description:

Post the programmatic changes recommended above and resulting reports to the SRFB website. Consult with Northwest Power and Conservation Council regarding their Fish and Wildlife monitoring program.

Substantively engage with the Pacific Northwest Aquatic Monitoring Partnership (PNAMP) to advance collaborative opportunities and benefit from the collective efforts of the region in the following ways: 1) Collaborate with PNAMP webtools to identify and post the location of all SRFB funded restoration and monitoring; 2) provide incentives for SRFB-funded monitoring programs to participate in PNAMP sponsored workshop and contribute to workshop products and documentation; 3) fund a SRFB representative to engage with PNAMP.

Sub-committee Recommendations for Board Action:

The Sub-committee made the following recommendations to advance the overall recovery monitoring needs for the SRFB and the regional recovery delisting requirements. GSRO will strive to be an advocate for salmon recovery in the various monitoring circles.

1. The Sub-committee recommends the annual reports for all monitoring components be posted on the RCO website and on the Habitat Work Schedule (HWS). The HWS site should be expanded to include IMW's and status and trends monitoring. Annual Monitoring Program evaluations and funding recommendations should also be posted on these sites.

2. The Sub-committee recommends that GSRO staff and Monitoring Panel consult with Northwest Power and Conservation Council regarding their Fish and Wildlife monitoring program and looks for ways to share results and learn from the collective monitoring efforts.

3. The Sub-committee recommends that the SRFB Monitoring program through the GSRO engage the Pacific Northwest Aquatic Monitoring Partnership (PNAMP) on the following outcomes:

A. Collaborate with PNAMP webtools to identify and post the location of all SRFB funded restoration and monitoring.
B. Provide incentives for SRFB-funded monitoring programs to participate in PNAMP sponsored workshop and contribute to workshop products and documentation.

Provide resources for either a GSRO staff or Monitoring Panel representative to attend quarterly PNAMP meetings to coordinate activities and share monitoring results.

4. The Sub-committee recommends that GSRO staff collaborate with PNAMP, WDFW, DOE and other monitoring partners on developing an educational video on salmon recovery monitoring programs. GSRO will be requesting funding at the March SRFB meeting for this effort.

5. The Sub-committee recommends working in collaboration with PNAMP to support an annual or bi-annual IMW workshop. The workshop may highlight progress in each IMW complex, lessons learned from project implementation within the complex, and response from fish to the habitat elements being implemented.

6. Finally, the sub-committee recommends GSRO staff, regional organizations, and Monitoring panel continually look for opportunities to coordinate and share monitoring information.

Salmon Recovery Funding Board Strategic Plan

In 1999, the Washington State Legislature created the Salmon Recovery Funding Board to provide grants for salmon habitat restoration and protection projects and other salmon recovery activities. The board is governed by Chapter 77.85 RCW and Title 420 WAC.

Mission

The Salmon Recovery Funding Board provides funding for elements necessary to achieve overall salmon recovery, including habitat projects and other activities that result in sustainable and measurable benefits for salmon and other fish species.

Values

The board supports a comprehensive approach to salmon recovery that reflects the priorities and actions of its local, regional, state, tribal, and federal partners.

- ***Recovery Goals:*** The board supports the goals in the regional salmon recovery plans approved by NOAA and recognizes the importance of integrating habitat restoration, hydropower operations, and hatchery and harvest management.
- ***Coordinated, Bottom-up Approach:*** Coordination across all levels of governmental and non-governmental organizations and geographic scales is necessary to balance diverse interests, build community support, and provide for the efficient use of resources to maximize the public investment.
- ***Science-based Decisions:*** The board believes that successful salmon recovery requires decisions and actions guided by science, and advocates for coordinated scientific support at all levels of salmon recovery.
- ***Community Priorities:*** The board considers community values and priorities in its decisions, and integrates public participation and outreach into its actions and those of its partners.
- ***Assessing Results:*** The board recognizes the importance of monitoring project implementation, project effectiveness, and the long-term results of all recovery efforts.
- ***Adaptive Management:*** The board supports adaptive management through reviewing the results of SRFB- monitoring programs and factoring what has been learned into future decisions thereby completing the adaptive management loop.
- ***Accountability:*** The board provides citizen oversight and accountability for the expenditure of public funds, and conducts its work with openness and integrity.

Goals and Strategies

The board values all aspects of salmon recovery, and provides funding and support based on its priorities, available resources, and emergent opportunities.

Goal 1: Fund the best possible salmon recovery activities and projects through a fair process that considers science, community values and priorities, and coordination of efforts.

> ***Allocation Strategy:*** Within the limits of the board's budget and priorities, fund projects, monitoring, and human capital in a way that best advances the salmon recovery effort.
>
> ***Process Strategy:*** Ensure that the processes to identify, prioritize, and fund projects are based on (1) regional salmon recovery plans, lead entity strategies, and tribal governments' salmon recovery goals, (2) sound science and technically appropriate design, and (3) community values and priorities.
>
> ***Funding Source Strategy:*** Identify gaps in current funding related to overall salmon recovery efforts and work with partners to seek and coordinate with other funding sources.

Goal 2: Be accountable for board investments by promoting public oversight, effective projects, and actions that result in the economical and efficient use of resources.

> ***Accountability Strategy:*** Conduct all board activities clearly and openly, and ensure that the public can readily access information about use of public funds for salmon recovery efforts.
>
> ***Resource Strategy:*** Confirm the value of efficiency by funding actions that result in economical and timely use of resources for projects, human capital, and monitoring.
>
> ***Monitoring Strategy:*** Provide accountability for board funding by ensuring the implementation of board-funded projects and assessing their effectiveness, participate with other entities in supporting and coordinating state-wide monitoring efforts, and use monitoring results to adaptively manage board funding policies.

Goal 3: Build understanding, acceptance, and support of salmon recovery efforts.

> ***Support Strategy:*** Support the board's community-based partner organizations in their efforts to build local and regional support for salmon recovery.
>
> ***Partner Strategy:*** Build a broad partner base by engaging a variety of governmental and non-governmental organizations to address salmon recovery from different perspectives.

Key Actions

Funding Allocation Strategy: Key Actions

Within the limits of the board's budget and priorities, fund projects, monitoring, and human capital in a way that best advances the salmon recovery effort.

- Provide funding for the following:
  - Projects that produce measureable and sustainable benefits for salmon
  - Monitoring to measure project implementation, effectiveness, and the long-term results of all recovery efforts
  - Human Capital that identifies, supports, and implements recovery actions
- Ensure funding practices reflect that a critical part of the board's mission is to fund the habitat

restoration and protection projects that constitute the foundation of salmon recovery.

- Support projects that meet regional salmon recovery goals and the goals of other related planning efforts.
- Inform budget decisions by establishing the minimum and maximum funding needed for each focus area (projects, monitoring and human capacity) necessary to support salmon recovery.
- Encourage projects and activities that find innovative ways to achieve goals and realize efficiencies.

Process Strategy: Key Actions

Ensure that the processes to identify, prioritize, and fund projects are based on (1) regional salmon recovery plans, lead entity strategies, and tribal governments' salmon recovery goals, (2) sound science and technically appropriate design, and (3) community values and priorities.

- Ensure that funded projects reflect the current federal, state, and tribal governments' salmon recovery goals.
- Ensure that the knowledge of habitat conditions, ecosystem processes, and trends in long-term factors (e.g., human population growth, climate change, and working land priorities) guide the type, complexity, location, and priority of proposed habitat protection and restoration.
- Fund projects that reflect community support and priorities, sound science, and that benefit salmon.
- Encourage actions and policies that optimize board investments by integrating with other restoration and protection tools and efforts(e.g., transfer of development rights, purchase of development rights, mitigation banking, and ecosystem services markets).
- Work with partners to evaluate and improve the board's funding process.

Funding Coordination Strategy: Key Actions

Identify gaps in current funding related to overall salmon recovery efforts and work with partners to seek and coordinate with other funding sources.

- Help to ensure that funding sources are coordinated to make the most effective and efficient use of board dollars.
- Recognize the importance of a full understanding of the roles of hatcheries, harvest, and hydropower, and communicate and coordinate with involved parties to ensure that funding decisions are in concert.

Accountability Strategy: Key Actions

Conduct all board activities clearly and openly, and ensure that the public can readily access information about use of public funds for salmon recovery efforts.

- Ensure that the public is aware of and has access to board meetings and materials and other elements of the funding process.
- Provide clear, comprehensive, and easily accessible information to the public about restoration and protection projects via electronic databases, the agency web site, and other communication tools.

- Meet all reporting requirements with consistent and consolidated information, including data and project examples that explain both salmon recovery efforts and results.

Resource Strategy: Key Actions

Confirm the value of efficiency by funding actions that result in economical and timely use of resources for projects, human capital, and monitoring.

- Facilitate information sharing among project sponsors and experts in the restoration/preservation community.
- Continue to sponsor workshops and policy forums for project sponsors, lead entities, regional organizations and other interested parties.
- Develop funding approaches that reward innovation and efficiency in areas such as project development and implementation, administration, technical review, and community outreach.

Monitoring Strategy: Key Actions

Provide accountability for board funding by ensuring the implementation of board-funded projects and assessing their effectiveness, participate with other entities in supporting and coordinating state-wide monitoring efforts, and use monitoring results to adaptively manage board funding policies. The board has two main monitoring objectives: 1) to answer the question-- does implementing on the ground projects lead to greater fish abundance and diversity; 2) to demonstrate the effectiveness of different types of board funded projects.

- *Support regional organizations by funding basic administrative functions so they can develop a customized approach to meet NOAA delisting monitoring requirements.*

- Conduct **implementation (compliance) monitoring** of every board-funded project to ensure the project has been completed consistent with pre-project design objectives and criteria.
- Conduct monitoring to determine the **effectiveness** of different types of Board-funded restoration and protection projects in achieving stated objectives.
- Support validation monitoring of selected **intensively monitored watersheds** to determine whether watershed health and salmon populations are responding to recovery efforts.
- Participate in **supporting status and trend monitoring.**
- Coordinate with the ~~Monitoring Forum~~ Pacific Northwest Aquatic Monitoring Partnership (PNAMP) to ensure consistency with ~~statewide~~ region wide monitoring goals while meeting SRFB monitoring goals and objectives.
- Ensure that projects identify objectives and use adaptive management principles to improve success by utilizing scientific experts to provide annual program evaluation and recommendations to the board.

- The SRFB Monitoring Panel will fill a key role in the implementation of a functional adaptive management program. The panel will verify accountability by each monitoring component and integrate their findings into future decisions and recommendations to the SRFB.

Support Strategy: Key Actions

Support the board's community-based partner organizations in their efforts to build local and regional support

for salmon recovery.

- Encourage public involvement in planning and implementation activities so that projects reflect a community's social, cultural, and economic values.
- Help ensure that lead entity and regional strategies include community values and priorities.

Partner Strategy: Key Actions

Build a broad partner base by engaging a variety of governmental and non-governmental organizations to address salmon recovery from different perspectives.

- Seek input from partners on key program and policy decisions such as fund allocation, monitoring, data sharing and special projects.
- Seek regular updates from partners to ensure that their actions and board actions are mutually supportive.
- Work with the Puget Sound Partnership to implement the Puget Sound Action Agenda.
- Engage more organizations in discussions of the effects of salmon recovery in Washington State.

Partners

The Salmon Recovery Funding Board recognizes that success in achieving its mission and meeting its goals requires important partnerships with the Legislature, Governor, state and federal agencies, tribes, and regional and local communities throughout the state. The board seeks to continually build new partnerships so that salmon recovery is addressed from multiple perspectives. Partners include, but are not limited to:

1) Lead Entities: Voluntary watershed-based organizations established by RCW 77.85 that select and submit projects to the Board for funding consideration. Lead entities have technical experts and citizen committees whose work ensures that their projects have both scientific and community support, and contribute to the lead entity's effectiveness.

2) Regional Salmon Recovery Organizations: Organizations that (1) develop and coordinate implementation of salmon recovery plans, which are required under the Endangered Species Act, or (2) coordinate salmon restoration projects across a region in areas where there are no ESA-required recovery plans. Regional organizations bring the public, tribes, and private interests together to collaborate on improving their watershed for fish. Regional organizations and lead entities together identify and prioritize habitat protection and restoration strategies and other salmon recovery activities.

3) Regional Fisheries Enhancement Groups (RFEGs): The fourteen RFEGs implement salmon recovery projects, including habitat protection and restoration, and participate with lead entities and regional salmon recovery organizations.

4) State Agencies and Programs
   a) Governor's Salmon Recovery Office: Coordinates and produces a statewide salmon strategy; assists in the implementation of regional recovery plans; helps secure funding for local, regional, and state recovery effort; and provides the Biennial State of Salmon report to the Legislature.

~~b) Washington's Forum on Monitoring Salmon Recovery and Watershed Health: Provides a multi-agency venue for coordinating technical and policy issues related to monitoring salmon recovery and watershed health. The forum makes recommendations to the Office of Financial Management, Salmon Recovery Funding Board, Governor's Salmon Recovery Office, the Puget Sound Partnership, and other state and federal agencies about monitoring issues.~~

c) Puget Sound Partnership: Addresses the health of Puget Sound by developing and implementing an action agenda for restoration.

d) Puget Sound Nearshore Partnership: Addresses priorities in the Puget Sound marine nearshore ecosystem (co-managed by the Washington Department of Fish and Wildlife and the Army Corps of Engineers). e)

e) Conservation Commission: Oversees conservation districts in the state, which are often SRFB grant recipients and habitat project implementers. The commission also administers conservation programs targeted at agricultural land, such as the Conservation Reserve Enhancement Program.

f) Washington Department of Fish and Wildlife: Provides technical assistance to project sponsors and lead entities, manages fish hatcheries and hatchery reform activities, regulates harvest, and takes the lead on working with the tribes on salmon recovery issues.

g) Washington Department of Natural Resources: Manages timber land and aquatic land, jointly manages the Family Forest Fish Passage Program, and addresses salmon recovery through its habitat conservation plans and the Forest and Fish Agreement.

h) Washington Department of Ecology: Manages monitoring efforts, including status and trends, and addresses water issues such as watershed planning, water rights, and water quality.

i) Washington State Department of Transportation: Addresses fish passage issues, including removing barriers to fish, such as highway culverts; manages stormwater runoff associated with DOT paved surfaces; mitigates for project impacts on wetlands and prevents erosion control associated with construction.

5) Tribes: Individual tribes, along with the Northwest Indian Fisheries Commission and the Columbia River Inter-Tribal Fish Commission, are involved in regional recovery organizations, lead entities, the Puget Sound and Nearshore Partnership, sponsor salmon recovery projects, and co-manage the state's fisheries.

6) Federal Agencies: Federal partners include the Army Corps of Engineers, National Oceanic and Atmospheric Administration (NOAA-Fisheries), the Environmental Protection Agency, U.S. Fish and Wildlife, U.S. Geological ~~and~~Survey and U.S. Forest Service.

7) Other Entities:

a) Northwest Power and Conservation Council: Maintains a regional power plan and a fish and wildlife program aimed at protecting and rebuilding fish and wildlife populations affected by hydropower development in the Columbia River Basin.

b) Nonprofit and non-governmental organizations: Play a variety of roles in salmon recovery, such as sponsoring habitat protection and restoration projects and promoting local activities and citizen involvement.

D R A F T 5/23/2003

MONITORING AND EVALUATION STRATEGY

For

Habitat Restoration And Acquisition Projects

Washington Salmon Recovery Funding Board

2003

This is a draft document and is available for public review and critique.

All contents are subject to change.

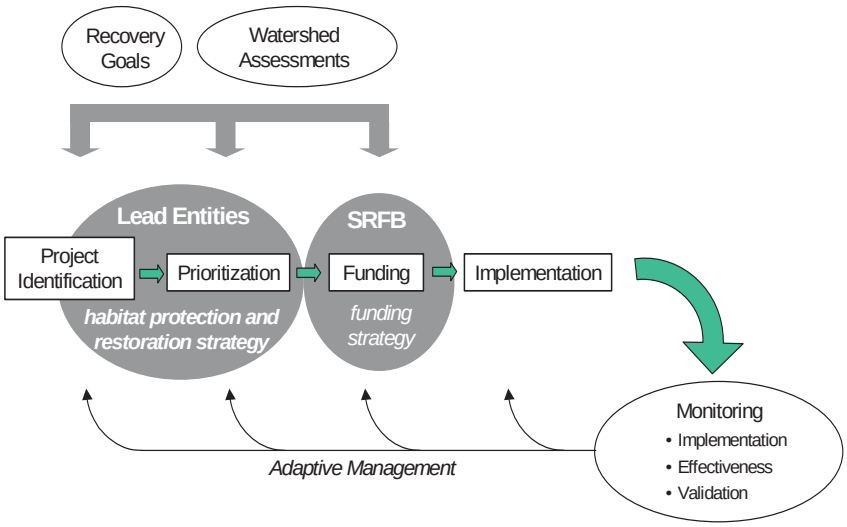
TABLE OF CONTENTS

OVERVIEW

The Salmon Recovery Funding Board (SRFB) was established in 1999 to fund salmon habitat restoration and protection projects and related activities. Starting in 2000, the SRFB established policies authorizing the types of projects eligible for funding and an evaluation process for selecting projects.

The SRFB, in their Policies and Guidelines, identified implementation, effectiveness, and validation monitoring as key components of their adaptive management model.

Figure 1. SRFB Adaptive Management Model



As part of past application processes, the SRFB has required applicants submit a monitoring plan that permitted up to 20 percent of the grant to be expended on monitoring.

This document is intended to address elements of Washington's Comprehensive Monitoring Strategy (CMS), and it provides:

- **Overall SRFB effectiveness and validation monitoring strategy;**
- **Prioritized monitoring by type and category;**
- **Estimated costs over the next ten years; and**
- **SRFB-NOAA Fisheries-OWEB-BPA agreed upon reporting metrics.**

Habitat restoration projects typically have a "nested hierarchy" of interrelated objectives and results. Projects individually operate at the site and reach scale, and when rolled up, operate at the watershed scale. This "nested hierarchy" also typically has associated monitoring at each level. For example, a riparian vegetation project might have the following series of objectives and associated levels of monitoring.

→Plant trees (Implementation monitoring Level 0)
→Did the trees live? (Level 1 design criteria)
→Increase shading of stream (Effectiveness monitoring Level 2)
→Reduce stream temperature (Effectiveness monitoring Level 2)
→Increase local salmon abundance (Effectiveness monitoring Level 3)
→Increase watershed salmon abundance (Validation [intensive] monitoring Level 4)

Implementation monitoring is related to project effectiveness monitoring, which in turn is related to validation monitoring. Doing one without the other would seriously limit the extent to which the SRFB could document whether the projects it funds have been effective in meeting SRFB goals.

Project Implementation (Compliance) Monitoring - Level 0

Implementation monitoring determines whether an action was implemented. It requires simply a yes/no answer and no environmental data. It is usually a low cost monitoring activity. Project monitoring is conducted by SRFB staff for all funded projects. The SRFB intends to monitor 100% of projects for implementation and compliance with pre-project design objectives and criteria.

Monitoring Effectiveness of Projects in Meeting Engineering and Design Criteria – Level 1

Many projects use design specifications that are intended to have benefits to fish. Over time, environmental or other circumstances can affect how well a project originally built to meet design criteria continues to meet those criteria. Projects for which engineering design criteria are utilized can be monitored to determine how well those criteria are achieved by the project over time. For example, fish passage projects involving culverts, weirs, dams, etc., are only effective as long as debris, floods, and other factors have not rendered an engineered solution ineffective. Therefore, the SRFB intends to monitor all categories of engineered projects to see how well they continue to meet their engineering and design criteria. Engineering and design criteria will be examined for the following monitoring categories:

- MP-1 Fish passage structures
- MP-2 Instream structures
- MP-3 Riparian plantings
- MP-4 Livestock exclusions
- MP-5 Constrained channels
- MP-6 Channel connectivity
- MP-7 Spawning gravel placement

- MP-8 Diversion screening
- MP-9 Estuarine habitat

Monitoring Effectiveness of Projects on Habitat – Level 2

Effectiveness monitoring measures environmental parameters to ascertain whether the actions implemented were effective in creating a desired outcome at the project site or reach scale. For example, did the planted trees produce shading for the stream is the first level of a cause and effect hypothesis? The entire hypothesis may be stated something like the following: If I plant trees near the stream, then they will grow and produce shade. The shade will help lower water temperature and stabilize the shoreline (Level 2 outcomes) and this will improve the fish habitat leading to more fish (Level 3 and 4 outcome). Project effectiveness monitoring is generally used to evaluate Level 2 outcomes, which are directly affected by the project. The relationships between the project and Level 2 and Level 3 and 4 outcomes are usually less direct. Watershed processes occurring upstream or upslope from the project increasingly influence higher-level outcomes. Outcomes not directly influenced by the project are usually best addressed at the watershed scale through validation (intensive) monitoring (Level 4). Most projects are implemented at a small scale, with defined sets of actions intended to protect or enhance specific habitat features or habitat-forming processes. An enhancement technique may be difficult to implement properly but very effective or, conversely, easy to implement but rarely effective. Implementation, effectiveness, and validation monitoring are necessary to evaluate specific projects or classes of projects. The SRFB intends to monitor effectiveness of projects on habitat by monitoring changes in habitat parameters for the following project categories;

- MP-2 Instream structures
- MP-3 Riparian plantings
- MP-4 Livestock exclusions
- MP-5 Constrained channels
- MP-6 Channel connectivity
- MP-7 Spawning gravel placement
- MP-9 Estuary restoration/creation
- MP-10 Habitat acquisitions

Monitoring Effectiveness of Projects on Local Fish Abundance – Level 3

Interest in evaluating the effectiveness of projects on fish abundance in the local project area is common to most restoration and funding entities. However, the current project effectiveness monitoring literature shows a wide variety of results in the ability to associate changes in fish abundance. Some studies have been unable to detect statistically significant changes in abundance in the project area after several years, while others have been able to show increases. As noted by the Independent Science Panel (ISP 2002) and others, detection of increased fish abundance at the project or reach level should not be interpreted to mean that overall abundance or productivity of the stream (e.g., smolt abundance) at the watershed scale has also increased. The

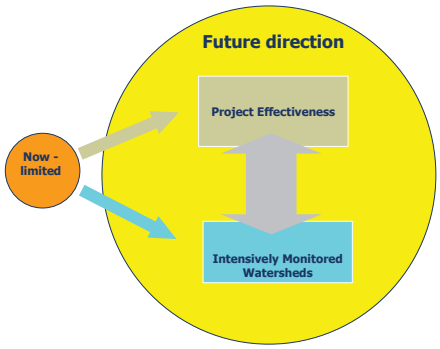
linkages to smolt production can only be done through validation monitoring in intensively monitored watersheds. The SRFB intends to monitor fish abundance at the project level for the following project categories:

- MP-1 Fish passage structures
- MP-2 Instream structures
- MP-6 Channel connectivity

The SRFB also intends that this level of project effectiveness monitoring (to determine local fish response) will be linked to level 4 (intensive) monitoring as outlined below to the extent possible.

Intensive (Validation) Monitoring Level 4

This type of monitoring is the only type of monitoring that can establish "cause and effect" relationships between fish, habitat, water quality, water quantity, and management actions. It operates at the watershed scale to evaluate projects and programs that conduct, promote, or regulate, activities meant to protect or enhance habitat, water quality, or fish production. As an example, one might study the impacts of categories of riparian habitat projects on a salmon in a specific stream. The common theme of these studies is to develop an understanding of the linkages between management actions and the responses in numbers of fish produced.



This type of monitoring is the most complex and technically rigorous, which often requires measuring many parameters to detect the variable affecting change. Counting juvenile and adult fish is essential. Once determined, the relationships between restoration actions and the numbers of fish produced in an intensively monitored watershed (IMW) may or may not be able to be directly extrapolated to other watersheds depending upon the strength of the information obtained. However, intensively monitored watersheds can be assumed to represent the overall responses of watersheds with similar characteristics and limiting factors to the same restoration impacts.

This part of the SRFB Monitoring Strategy pertains to monitoring that addresses how management and habitat restoration project activities, and their cumulative effects, specifically affect fish production. As is discussed in greater detail below, validation monitoring (or as termed here, intensive monitoring) is the only way this can be achieved (ISP 2002). Status and trends, effectiveness, and implementation monitoring are not able to determine causal relationships between management activities and fish production. Other types of monitoring are unable to answer questions like "to what extent did our recovery actions lead to more fish?"

The SRFB intends to support intensive monitoring in watersheds carefully chosen to allow efficient and meaningful results. Support will include initial development work in selected watersheds so that scientifically sound and integrated monitoring efforts can be most effectively linked to habitat project monitoring work in levels 2 and 3.

Compared to other types of monitoring, intensive or validation monitoring requires the greatest extent of scientific rigor and integration in monitoring design development and analysis of results, over a substantial time period. Interest in this type of monitoring has been expressed by various entities and opportunities for potential partnerships will be utilized.

EFFECTIVENESS MONITORING STRATEGY

Key Elements of the Strategy

Level 1-3 monitoring at the project or reach scale

- The Board staff will determine the overall sampling regime and sample size by project category.

- After the SRFB has selected projects to fund for a particular "Round", a subsample of the selected projects will be randomly selected by the staff for monitoring.

- The staff will use professional, qualified independent monitoring entities to field sample habitat restoration and acquisition projects at the reach or project level using Board adopted protocols, metadata, and procedures.

- The Board will use habitat assessment protocols developed by the nationally recognized Environmental Monitoring and Assessment Program administered by the U.S. EPA, as recommended in "*Washington's Comprehensive Monitoring Strategy*" and adopted by the Oregon Watershed Enhancement Board and the U.S. Forest Service (see "*SRFB Sampling Protocols*").

- The Board staff will be responsible for analyzing the results of monitoring from the monitoring entities, and to report to the Board and others the cumulative results of monitoring. In order to efficiently use monitoring dollars, a stratified random sample of projects by category will be taken. The sample will be sufficient to be 95% certain that the results of the projects sampled is within 5% of the true percentage of projects that are successful. Based upon past projects, approximately 68% of the projects by category should be sampled during Phase 1.

- Volunteers and project proponents may choose to monitor their projects as part of the sampling regime outlined in this Strategy. However, monitoring funded by the Board will meet requirements detailed under "*Required Elements For Locally Monitored Projects*" on page 23 of this Strategy.

- Not less than 5% of annually appropriated federal and state funds will be available to test effectiveness of projects designed to restore habitat and projects that protect habitat by acquisition at the site or reach scale.

- The Board staff will ensure that monitoring is "phased" so that future monitoring can be built upon knowledge gained from initial monitoring. Phase 1 monitoring will occur between 2003 and 2014. After 2014, results will be evaluated to determine what, if any, changes to the SRFB monitoring strategy are warranted.

Level 4 intensive monitoring at the watershed scale

- For long term intensive watershed scale monitoring, the Board will support development of IMWs in a few identified watersheds where the cumulative impacts of SRFB funded restoration projects can be assessed for their effects on total watershed salmon production and productivity.

- A portion of funded habitat restoration projects will be linked to and embedded in IMW designs. The number and kinds of projects placed in IMWs will be determined by the limiting factors identified in the IMWs and the monitoring design.

- Up to 5% of annually appropriated federal and state funds will be available for Board support of intensively monitored watersheds.

- Implementation of IMW efforts will use a phased approach. A team or consortium comprised of IMW partners and others will contribute to and help guide feasibility, design, implementation, analysis, and reporting activities. Key checkpoints will be identified based on experimental design timelines and frameworks for review of interim progress and results from IMW work.

Priorities for Project Effectiveness Monitoring

Table 1 is an adaptation from data provided by Roni et al. (2002). It captures the overall qualitative value of each category of SRFB projects in terms of response and certainty. SRFB files provide average costs associated with implementing the various projects. Monitoring efforts are prioritized using multiple considerations detailed in Table 3.

These considerations include response time, probability that monitoring will be definitive enough to determine effectiveness of the project type, earliest reporting date, and cost of monitoring. It is expected that not only will monitoring determine the overall effectiveness of each project, but it will provide data on the overall longevity of SRFB project habitat restoration types and the amount of variability in success of projects types both in terms of overall statewide, but in terms of geographic areas of the state.

Response time will determine the number of years required to monitor. A culvert replacement may have fish utilizing the project area within one year. For most fish passage projects, a measurable response is expected within 5 years. For projects such as riparian vegetation restoration, response time may take 5 to 20 years. Therefore, the Board will extend monitoring over a longer time span to determine effectiveness.

The last column in Table 1 provides monitoring priorities for different types of projects. Some project categories rank high based upon their overall ability to detect change in a timely manner. These rankings are not intended to reflect the funding priority of the project type for restoration. Some projects are not very conducive to monitoring and, therefore, rank low. Instream projects, although marked low in terms of certainty and response, are considered a high priority for monitoring because they are the second

most often funded restoration project category. Nevertheless, monitoring may show that they are one of the least effective types of projects over time.

Monitoring for some project types and parameters may be too costly for the information obtained. Conifer conversions, nutrient enhancement projects (carcasses and fertilization) are very difficult to monitor and take extensive investments in time and money. Therefore, the Board will not monitor these project categories for effectiveness.

Table 1. Project effectiveness monitoring time frames and priorities modified from Roni et al. (2002). Shading represents categories with relatively long overall response times and low probabilities of success. Crosshatching represents categories with medium overall response times and probabilities of success. Light shading represents categories with short overall response times and high probabilities of success. Monitoring priority in most cases reflects the composite of response times and success probabilities.

SRFB Category	Action	Response (years)	Longevity (years)	Success probability	Success variability	Cost of average project	Monitoring Priority
Fish Passage	Culverts, barriers	1-5 Score 10	10-50+ Score 10	H	L	$203,000 Opens 3.2miles $63,000/mile	H
	Off channel	1-5	10-50+	H	L	$508,000 Opens 1.4 miles 48 acres	H
	Instream diversion	1-5	10-50+	H	L	$170,000 Screens 8.4 diversion/project $17,000/screen	H
Estuarine	Habitat restoration	5-20	10-50+	M-H	M	$196,000	H
	Road removal	5-20	Decades-centuries	H	L	$196,000	H
	Road alteration	5-20	Decades-centuries	M-H	M	$196,000	H
Riparian vegetation	Fencing	5-20	10-50+	M-H	L	$261,000	H
	Riparian replanting	5-20	10-50+	M-H	L	$261,000	H
	Grazing strategies	5-20	10-50+	M	M	$261,000	L
	Conifer conver-sion	10-100	Centuries	L-M	H	$261,000	L
Instream habitat	Artificial log structure	1-5	5-20	M	H	$221,000	H
	Natural LWD	1-5	5-20	M	H	$221,000	H
	Artificial log jams	1-5	10-50+	M-H	M	$221,000	H
	Boulder placement	1-5	5-20	M	M	$221,000	H
	Gabions	1-5	10	M	M	$221,000	H
Nutrient enhanceme nt	Carcasses	1-5	Unknown	M-H	L		L
	Fertiliza-tion	1-5	Unknown	M-H	M		L
Create new habitat	Off channel	1-5	10-50+	M	H		H
	Estuarine	5-10	10-50+	L	H		H
Upland Habitat						$156,000	L

H= High, M= Medium. L= Low

Experimental Design And Statistical Design

The Board wishes to determine if there is a measurable change in the habitat and fish indicators in the area restored by the Board (Impact) compared to other areas (Control) where the Board has not taken action. We cannot measure the variance between the means of measurements in the Impact and the Control because we cannot assume the differences between the Impact and Control sections in each project will remain constant. The magnitude of the true difference between Impact and Control changes over time, thereby making it impossible to evaluate any times by location interactions.

Therefore, the Board will employ a "Before" and "After" Control Impact (BACI) design similar to one described by Stewart-Oaten et al. (1986). A BACI design samples the Control and Impact simultaneously at both locations at designated times before and after the impact has occurred. The object is to see whether the difference between Impact and Control abundances has changed as a result of the projects. The plan is to compare the before and after periods by a *t*-test for a difference between the mean of the before differences and the mean of the after differences for the projects sampled. The tests also assume that the observed differences calculated at different times are independent.

To implement the design, we will monitor the number of projects proposed for funding in each category based upon the calculated sample size needed to obtain statistically significant information in the shortest amount of time. If there are insufficient projects funded in any one year to obtain a proper sample size, then replicates of the design will be used in multiple years until the critical sample size is reached.

Each of the projects in each replicate will utilize one impact reach in the proposed project area and a paired control area near the project in an area with similar reach characteristics. In Year 0 (one year prior to project construction), (Before) sampling of the project Control and Impact reaches is completed. After the restoration project has been completed, the Control and Impact areas for each of the projects in each replicate will be sampled for three or more years (After) for changes in the selected habitat and/or fish abundance indicators. The variance associated with Impact and Control areas will not be known until sampling has occurred in Year 0 of both Impact and Control areas. After Year 0, a better estimate of the true sample size needed to detect change will be available. Cost estimates and sampling replicates may need to be adjusted at that time.

At the end of the effectiveness monitoring testing, there will be one year of "Before" impact information for all projects in each replicate for both Control and Impact areas, and multiple years of "After" impact information for the same Control and Impact areas for each of the projects within each replicate. Testing for significant trends for some projects can begin as early as 2005.

Depending upon circumstances, the results may also be tested for significance, using a linear regression model of the data points for each of the years sampled and for each of the indicators tested.

Table 2 contains a summary description of the project category, the indicator that will be used to measure a significant change in habitat or fish conditions, the metric used to measure the indicator, and the statistical rule in terms of confidence in the results. It also contains the decision criteria at which the Board will consider a change meaningful. For example, under MP-1 Fish Passage in the table, a statistically significant change of 5% in the juvenile population in the area upstream of the project may be observed, but would not be considered a meaningful change unless is was greater than or equal to 20%. The test type is the kind of statistical test that will be employed upon completion of the monitoring.

Table 2. SRFB Effectiveness monitoring statistical design table for habitat restoration/protection projects

SRFB Project Category	Monitoring Category	Level	Indicators	Metric	Test Type	Decision Criteria
Instream Passage	**MP-1 Fish Passage**	Level 1	Eng. Design	Yes/No	None	≥ 80% of projects are Yes by Year 5
		Level 3	Juvenile salmon	#/m^2	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 5
		Level 3	Adult salmon	#/mile; redds/mi	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 5
Instream Habitat	**MP-2 Instream habitat**	Level 1	Artificial Instream structures	#	None	80% or more remaining by Year 10
		Level 2	Mean residual pool vertical profile area	m^2	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
		Level 2	Mean residual depth	cm	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
		Level 3	Juvenile salmon	#/m^2	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
		Level 3	Adult salmon	#/mile; redds/mi	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
Riparian Habitat	**MP-3 Riparian plantings**	Level 1	# of plantings	#	None	50% or more remaining after 10 years
		Level 2	Mean percent canopy density at the bank Densiometer Reading	1-17 score	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10

SRFB Project Category	Monitoring Category	Level	Indicators	Metric	Test Type	Decision Criteria
		Level 2	3-layer riparian vegetation presence (proportion of reach)	%	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
Riparian Habitat	**MP-4 Livestock exclusions**	Level 1	Exclusion Area	Yes/No	None	Effective if 80% of projects are Yes
		Level 2	Mean percent canopy density at the bank Densiometer Reading	1-17 score	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
		Level 2	3-layer riparian vegetation presence (proportion of reach)	%	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
		Level 2	Actively eroding banks	%	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
Instream Habitat	**MP-5 Constrained channel**	Level 2	Mean residual pool vertical profile area	m^2	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
		Level 2	Mean residual depth	cm	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
		Level 2	Mean bank full cross sectional area taken from mean bank full width and height	Ave. m^2	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 5% change between impact and control by Year 10
Instream Habitat	**MP-6 Channel Connectivity**	Level 1	Reconnected channel	Yes/No	None	Effective if 80% of projects are Yes
		Level 2	Mean residual depth	cm	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
		Level 2	Mean residual pool vertical profile area	m^2	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
		Level 3	Juvenile salmon	$\#/m^2$	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10

SRFB Project Category	Monitoring Category	Level	Indicators	Metric	Test Type	Decision Criteria
		Level 2	Mean percent canopy density at the bank Densiometer Reading	1-17 score	BACI Paired T test	Alpha=0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
		Level 2	3-layer riparian vegetation presence (proportion of reach)	%	BACI Paired T test	Alpha=0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
		Level 3	Adult salmon	#/mile; redds/mi	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
Instream Habitat	**MP-7 Spawning gravel**	Level 1	Gravel placed in stream	acreage	None	Effective if 80% of gravel placed at projects remains by Year 10
		Level 2	Percent gravel embedded at mid-channel and margins	Percent	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
		Level 2	Percent substrate embedded	Percent	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
		Level 2	Percent substrate as fines	Percent	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
		Level 3	Adult salmon	#/mile; redds/mi	BACI Paired T test	Alpha =0.05 for one-sided test. Detect a minimum 20% change between impact and control by Year 10
Instream Diversion	**MP-8 Diversion Screening**	Level	Screen design criteria	Yes/No	None	Effective if 80% of screened diversions at projects meet design by Year 5
Estuarine/ Marine Nearshore	**MP-9 Estuarine Habitat restoration**	In progress				
Protection	**MP-10 Acquisitions**	In progress				

Estimated Costs

Project effectiveness monitoring (levels 1 - 3):

Annual costs will vary depending upon the number of projects by category and the level of monitoring sought. Level 1 monitoring of engineered structures and solutions is the cheapest effectiveness monitoring because it does not require extensive environmental measurements, but relies upon previous studies to document that the design is effective. Verification that the design remains functional is the sum of monitoring. Table 3 provides the estimated cost to monitor each category of project for Level 1, 2, and 3.

The third column in Table 3 displays the number of years that project monitoring will occur pre- and post-impact. The years sampled post impact may not be consecutive years, but may be staggered over a longer time span to allow for habitat response.

The column displaying sample size per replicate is based upon the number of randomly drawn samples needed to detect with certainty (a= 0.5) whether the projects in that category are effective. Since we do not know the overall proportion of projects expected to be effective ahead of time, for the purposes of estimating sample size, the proportion is assumed to be 0.5. Therefore, approximately 70% of the projects should be sampled initially until an estimate of the true proportion can be obtained.

Total cost for each of the levels was calculated by finding the product of the cost per project and the number of projects sampled.

Grand Total is the sum of each of the total costs for each monitoring Levels 1-3.

Average Cost Per Year shown in the last column is found by dividing the Grand Total by the number of years sampled.

Table 4 provides a tentative schedule over the next ten years. It reflects the need for multi-year monitoring (e.g. Fish Passage 1 and 2) to obtain sufficient numbers of projects to detect a statistically significant change in the indicator. Table 4 also reflects the estimated annual cost to monitor project effectiveness for the eight project categories completed to date.

Watershed intensive monitoring (level 4):
The SRFB's intensive watershed monitoring strategy evolved from initial work on Index Watershed Monitoring from funding by the Legislature and the Board to the departments of Fish and Wildlife and Ecology (Summers 2001; Seiler et al. 2002). The cost of Index Monitoring work totaled $1,263k per biennium, which provided concurrent water quality and smolt monitoring in five locations in the state. The Board's current monitoring strategy refines and transitions that previous investment into an intensive watershed monitoring approach. Further detail on the IMW approach, tasks, timelines, partners/contributions are described separately in the IMW plan. That plan identifies initial work to be performed in two groups of IMW streams in: (1) Hood Canal – Big Beef, Stavis, Anderson, Seabeck creeks; and (2) Lower Columbia– Abernathy, Mill, Germany creeks. A complementary effort by IMW partners is funded separately and will be performed on a group of North Coast streams. In addition, potential IMWs in eastern Washington and potential related funding partners are being explored. The present package of intensive monitoring continues work in the three Lower Columbia streams that were included as part of Index Watershed Monitoring in 2002. The cost for smolt monitoring in six of the seven IMW streams is roughly $300,000 per year ($600,000 per biennium); costs for the seventh stream are covered by other funding. The Board acknowledges that funding of smolt monitoring in the other streams for which SRFB funds were previously provided (roughly $500,000 per biennium) is desirable and consistent with the CMS, but is outside the scope of the IMW framework.

Table 5 illustrates the projected annual costs for the intensive watershed monitoring work outlined here. Total costs will ultimately depend on the number of IMWs implemented in the state. The Board's contribution to IMWs will include enumeration of fish in IMW streams ($300,000), and the contributions from partners (e.g., funding, in-kind). Costs will change as IMW work progresses through various stages from scoping/design, through implementation/data collection, to final analysis/reporting.

Table 3. Level 1 –3 project effectiveness monitoring estimated time frames and costs per replicate.

Action Effectiveness Monitoring	Number of years sampled. Total time to end of replicate	Sample Size per replicate	Cost per Project Level 1	Total Cost Level 1	Cost per Project Level 2	Total cost Level 2	Cost per Project Level 3	Total Cost Level 3	Grand Total per replicate	Ave. Cost per year
MP-1 Fish Passage Culverts, bridges, fishways, logjams, dam removal	4 sample years 6 years total	15	$2,700	$40,500	0	0	$25,288	$379,320	$419,820	$104,955
MP-2 Instream habitat Channels, deflectors, weirs, large wood	5 sample years 11 years total	15	$900	$13,500	$6,750	$101,250	$43,875	$658,125	$772,875	$154,575
MP-3 Riparian plantings	5 sample years 11 years total	10	$2,700	$27,000	$4,500	$45,000	0	0	$72,000	$14,400
MP-4 Livestock exclusions	5 sample years 11 years total	3	$3,100	$9,300	$4,500	$13,500	0	0	$22,8000	$4,560
MP-5 Constrained channel (dikes, rip-rap, fill, roads)	5 sample years 11 years total	2	$2,450	$4,900	$6,750	$13,500	0	0	$18,400	$3,680
MP-6 Channel Connectivity (Off channel habitat, wetlands)	4 sample years 6 years total	5	$1,800	$9,000	$5,400	$27,000	$43,875	$658,125	$694,125	$173,531
MP-7 Spawning gravel	5 sample years 11 years total	3	$900	$2,700	$6,750	$20,250	$27,000	$81,000	$103,950	$20,790
MP-8 Diversion Screening	4 sample years 6 years total	2	$2,700	$5,400	0	0	0	0	$5,400	$1,350
MP-9 Estuarine Habitat restoration	In progress	4								
MP-10 Acquisitions	In progress	14								
Total										

Annual Cost and Sampling Schedules

The following tables (Table 4) illustrates the schedules for sampling each level of monitoring for the major categories of projects for Level 1-3. Note – Table 5 identifies the costs and schedule for IMWs.

Table 4. Combined costs and schedule for Level 1- 3 monitoring.

Year	Sample	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
MP-1 Passage 1	15	$104,955	$104,955	$104,955			$104,955	Evaluate					
MP-1 Passage 2	15		$104,955	$104,955	$104,955			$104,955					
MP-2 Instream 1	15	$154,575	$154,575		$154,575		$154,575	Evaluate				$154,575	
MP-2 Instream 2	15		$154,575	$154,575		$154,575		$154,575					$154,575
MP-3 Riparian 1	10	$14,400	$14,400		$14,400		$14,400	Evaluate				$14,400	
MP-3 Riparian 2	10		$14,400	$14,400		$14,400		$14,400					$14,400
MP-4 Livestock 1	3	$4,560	$4,560		$4,560		$4,560					$4,560	
MP-4 Livestock 2	3		$4,560	$4,560		$4,560		$4,560					$4,560
MP-5 Constrained Channel	2	$3,680	$3,680		$3,680		$3,680					$3,680	
MP-5 Constrained Channel	2		$3,680	$3,680		$3,680		$3,680					$3,680
MP-6 Connect 1	3	$173,531	$173,531		$173,531		$173,531					$173,531	
MP-6 Connect 2	3		$173,531	$173,531		$173,531		$173,531					$173,531
MP-7 Spawning gravel	3	$20,790	$20,790		$20,790		$20,790					$20,790	
MP-7 Spawning gravel	3		$20,790	$20,790		$20,790		$20,790					$20,790
MP-8 Diversion 1	2	$1,350	$1,350	$1,350			$1,350						
MP-8 Diversion 2	2		$1,350	$1,350	$1,350			$1,350					
MP-9 Estuary 1	4												
MP-9 Estuary 2	4												
MP-10 Acquisition 1	14												
TOTAL		$476,491	$952,982	$581.446	$476,491,	$371,536	$476,491	$476,491	$0	$0	$0	$173,535	$347,066

Table 5. Costs and schedule for Level 4 intensive watershed monitoring. Total costs for two IMWs are included; they are not intended to reflect only the SRFB contribution.[1] Costs for fish sampling are noted separately for the first three years.

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Phase 1: pre-implementation	$300,000 (fish) $350,000 (other)										
Phase 2: initial implementation		$300,000 (fish) $250,000 (other)									
Phase 3: full implementation			**$400,000 (fish)** $500,000 (other)								
Total (for 2 IMWs)	**$650,000**	**$550,000**	**$900,000**	**$1,000,000**	**$1,000,000**	**$1,000,000**	**$1,000,000**	**$1,000,000**	**$1,000,000**	**$1,000,000**	**$1,000,000**

[1] Current partners include: CMER, UW/ONRC, EPA; in-kind contributions from NWFSC, EPA, BIA, tribes, local groups.

Monitoring and Reporting Metrics

The ability to communicate effectively the results of habitat restoration and acquisition projects and other salmon recovery activities is a continual challenge. Those individuals working closely with habitat and fish issues speak in technical terms and metrics not well understood by others. On the other hand, "decision-makers" at the highest levels of government, in the U.S. Congress and State Legislature want to know the answers

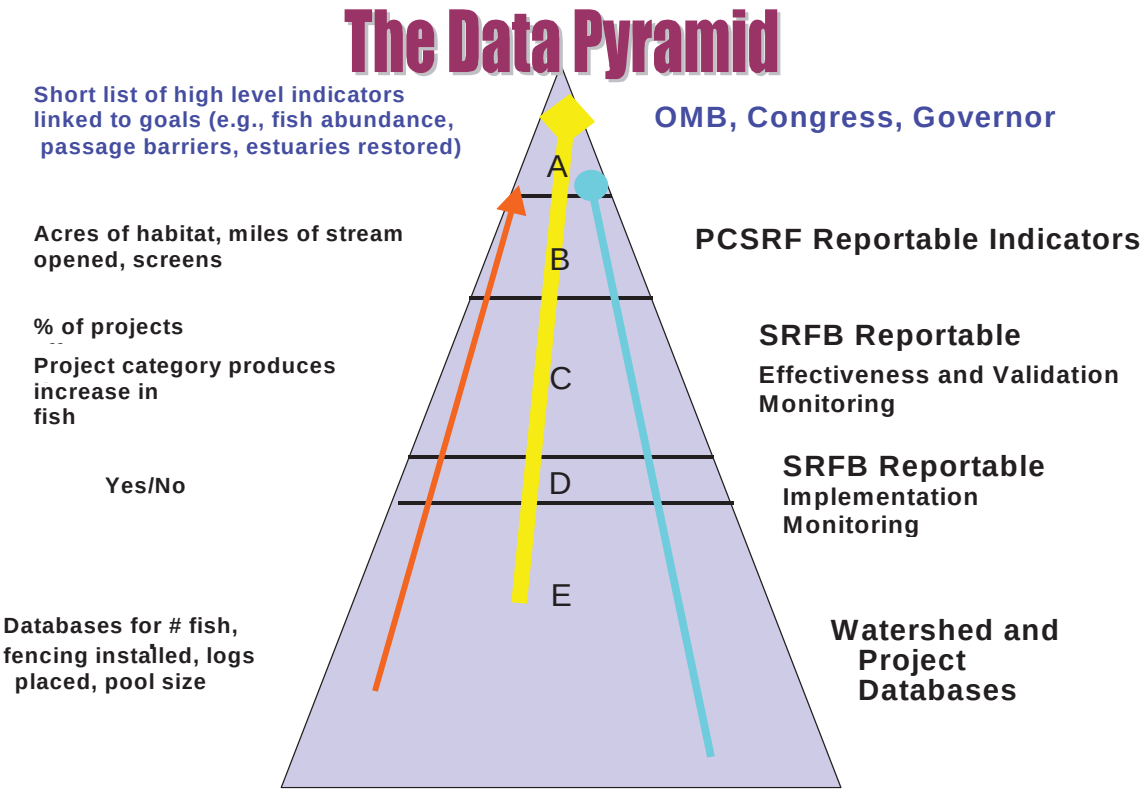


Figure 2. The Effectiveness Monitoring Data Pyramid

to basic accountability questions about the money they have appropriated to solve the salmon crisis. They seek answers to questions like: Have our efforts done any good? How many new fish have been produced? How much more money is needed? How much longer until we achieve success? These basic questions cannot be answered, unless a significant amount of existing and new information is obtained and rolled up in a manner that, to date, has typically not been done. To get answers to the most basic questions requires a variety of more detailed and complex underlying information. Figure 2 illustrates a data pyramid, reflecting the hierarchical nature of "information "chains that link detailed data up through intermediate layers to the highest level performance measures.

An effort is underway to reach agreement on common metrics designed to measure success in recovering habitat and salmon in the Pacific Northwest. Coordination is underway between the major funding entities including: Oregon Watershed Enhancement Board (OWEB), SRFB, Bonneville Power Administration, Northwest Power and Conservation Council, U.S Forest Service, and the Pacific Coastal Salmon Recovery Fund partners administered by NOAA Fisheries. Implementation monitoring metrics (Level D in the Pyramid) agreed upon to date are shown in Table 7 for habitat restoration projects. Additional work is underway to agree upon effectiveness monitoring metrics and the key few performance measures reportable to Congress, the Governor and the Legislature.

Category	SRFB	Implementation Monitoring
Fish Screening Projects	In-Stream Diversions	Number of screens installed Flow rate (cfs) of diversions treated Duty (quantity of water allowed) in acre-feet
In-Stream Habitat	In-Stream Habitat Restoration	# of miles treated
Fish Passage Improvements	Culvert replacement Dam removal Debris removal	# of blockages removed # of miles accessed
Riparian Habitat	Fencing exclusions	# of miles treated # of acres treated # of acres of invasive species controlled
Upland Habitat		# of actions # of acres treated
Roads		# of miles of road decommissioned, upgraded, closed
Water Quantity		Amount of water (cfs) # of gauges installed % of lease/purchases with gauges
Water Quality		Water Quality limitations addressed by project
Wetland Activity		# of acres restored # of acres created # of acres invasive species controlled
Estuarine	Estuarine/Marine Nearshore	# of acres restored # of acres created # of acres invasive species controlled
Land Acquisitions		# of acres protected # of miles of stream protected

Table 7. Implementation and effectiveness monitoring indicators of performance.

REQUIRED ELEMENTS FOR LOCALLY MONITORED PROJECTS

Lead Entities, Salmon Recovery Regions and others desiring to conduct monitoring for their proposed restoration projects as part of the Board's monitoring program shall meet the following requirements:

- Comply with and utilize SRFB "Sampling Procedures, Designs, and Projected Costs" manuals.
- Utilize applicable SRFB "Sampling Protocols".
- Submit a written monitoring plan detailing the timelines, costs, responsible organization, and plans for pre and post project monitoring.
- Report data in a timely manner to the PRISM database using required flat file format and metadata standards.
- Participate in QA/QC audits.
- Meet all reporting deadlines.

QUALITY CONTROL/QUALITY ASSURANCE

Field Sampling Audit

The SRFB will employ a consultant to annually report results from an audit of 25% of ongoing habitat effectiveness monitoring projects, randomly selected to determine how well they have implemented the monitoring design and field sampling Quality Assurance Protocols and Procedures.

Data Management Audit

The SRFB will employ a consultant to annually audit on a random basis 25% of ongoing habitat effectiveness monitoring projects to determine if they are following the procedures for entering data into PRISM.

REPORTS

Progress Reports

Entities involved in project effectiveness and intensive monitoring must present to the SRFB in writing progress reports after the sampling season for each monitoring year. These reports will indicate how the monitoring relates to the SRFB's project effectiveness monitoring program, and linkages between project effectiveness monitoring and intensive watershed monitoring. Intensively Monitored Watershed reports will be jointly prepared by monitoring parties.

Final Reports

Entities involved in project effectiveness and intensive monitoring must present to the SRFB a final report, in writing, after the sampling for all years is completed. Final

reports shall include monitoring objectives, assumptions, designs, field and statistical/analytical methods, results, and recommendations. Intensively Monitored Watershed reports will be jointly prepared by monitoring parties, and will describe linkages to project effectiveness monitoring. Final reports from all entities will include:

- Estimates of precision and variance for data collected
- Confidence limits for data collected
- Data and metadata required for PRISM database
- Determination of whether project met decision criteria for effectiveness
- Analysis of completeness of data, gaps, and sources of bias

The SRFB will periodically review results of monitoring during a regular meeting. PRISM database will be used as the repository of summarized monitoring information contained in Table 6, and will be reported and available over the Interagency Committee for Outdoor Recreation web site and the Washington Natural Resources Data Portal.

Monitoring Program Review

To facilitate information sharing and coordination, and to improve the effectiveness of the Board's monitoring program, entities receiving SRFB funds for project effectiveness and intensive monitoring will be prepared to participate in an annual or biennial monitoring program review convened by SRFB staff. This may involve oral presentation and discussion of monitoring results.

REFERENCES

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WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board Briefing Memo

Item **7B**

Meeting Date: March 2014

Title: Project Effectiveness Monitoring Contract – Tetra Tech

Prepared By: Keith Dublanica, Governor's Salmon Recovery Office Science Coordinator
Brian Abbott, Governor's Salmon Recovery Office Executive Coordinator

Approved by the RCO Director: Kaleen Cottingham

Summary

This memo presents background on the Salmon Recovery Funding Board project effectiveness monitoring program and requests the board fund project effectiveness monitoring efforts through September 30, 2014. This would continue project effectiveness monitoring efforts performed by contractor Tetra Tech while transitioning to the new timeline for funding monitoring projects in October of each year.

Board Action Requested

This item will be a:

- ☒ Request for Decision
- ☐ Request for Direction
- ☐ Briefing

Proposed Motion Language

Move to approve $225,463 to continue the existing project effectiveness program with Tetra Tech through September 30, 2014.

Background

The state of Washington applies for a federal Pacific Coastal Salmon Recovery Fund (PCSRF) grant each year to fund salmon recovery projects throughout the state. The PCSRF grant program requires that 10 percent of the overall state award be dedicated to monitoring efforts. One component of the Salmon Recovery Funding Board (board) monitoring project is project effectiveness monitoring conducted by Tetra Tech.

Stillwater Sciences provided the board a comprehensive evaluation of its monitoring program and a series of recommendations on how to improve. Based on these Stillwater Sciences

recommendations, the Salmon Recovery Funding Board Monitoring Subcommittee developed recommendations for the board to implement in 2014, as described in Memo 7A. One of the recommendations is to align the timing of monitoring funding decisions in the autumn of each year. To accomplish this, Recreation and Conservation Office (RCO) staff recommend transitioning in 2014 to a new timeline for project effectiveness monitoring.

Board Approach to Monitoring Allocations

The board allocates PCSRF dollars for salmon recovery projects and monitoring efforts. Monitoring funding is aligned with the priorities established by the National Oceanic and Atmospheric Administration (NOAA), as well as the state's strategies and priorities. Historically, the board has funded three large, long-term monitoring efforts (project effectiveness, fish-in/fish-out, and intensively monitored watersheds) and smaller, related efforts as funds are available. These efforts have historically been funded at different times throughout the year for a variety of program-specific reasons.

Effectiveness Monitoring

Staff from Tetra Tech will present information at the March 2014 board meeting about the scope and budget of the 2014 effectiveness monitoring program. The annual contract's funding request for project effectiveness monitoring varies depending on the year. The timing for this contract has historically been May 1 through April 30. Due to the timing of the board meeting, and the desire of the Salmon Recovery Funding Board Monitoring Subcommittee to align all monitoring contracts with the federal fiscal year commencing October 1, RCO staff are requesting the board extend the effectiveness monitoring contract through September 30, 2014.

Decision Requested

RCO staff are asking the board to allocate at its March board meeting $225,463 in return funds for project effectiveness monitoring, and to delegate authority to the director to amend the contract with Tetra Tech to extend their project effectiveness monitoring functions through September 30, 2014.

A proposed Tetra Tech Statement of Work is included as Attachment A.

Staff Recommendation for Monitoring Allocations

"Bridge funding" through September 30, 2014 would avoid a break in project effectiveness monitoring. Then, at the September 2014 board meeting, the board will be asked to fund all three long-term monitoring components (project effectiveness, fish-in/fish-out, and intensively monitored watersheds). The 2014 transition period will allow monitoring program components to align with annual funding decisions anticipated at the September meeting.

Staff recommend that the board approve $225,463 in return funds to fund project effectiveness monitoring conducted by Tetra Tech through September 30, 2014.

Next Steps

If approved, RCO staff will work with Tetra Tech to extend project effectiveness monitoring. Director Cottingham will amend the contract with Tetra Tech to add $225,463 and extend effectiveness monitoring through September 30, 2014.

Attachments

Attachment A: Tetra Tech Proposed Statement of Work, May-September 2014

Washington State Salmon Recovery Funding Board
Reach-Scale Effectiveness Monitoring Program

Statement of Work

May 1, 2014 through September, 2014

The Salmon Recovery Funding Board (SRFB) Reach-Scale Effectiveness Monitoring Program is an ongoing program to monitor the effectiveness of salmon restoration projects funded by the SRFB across Washington State, and a small number of additional projects funded outside the SRFB that relate to SRFB priorities for monitoring. Tetra Tech provides ongoing environmental consulting services in support of the program. During the timeframe of May 1, 2014 through September 30, 2014, the project will involve several tasks that are described below.

Task Descriptions

Task 1: Project Management, Meetings, and Presentations

Tetra Tech will continue to provide project management and support services during the specified timeframe. This includes management of the contract and billing, oversight of the project team through field work and data analysis tasks, attendance of required meetings in person and via conference call, and presentation of program status and results as needed.

Task 2: Administration

This task includes administrative time spent on contract setup, invoicing, billing, and related administrative tasks.

Task 3: Permitting

Staff time spent on permitting required by federal and state agencies is included in this task.

Task 4: Equipment

Time included under this task will cover staff time to procure equipment used during the field season, and to coordinate repair of non-disposal equipment (e.g., drysuit repairs).

Task 5: Training

Tetra Tech provides staff training prior to each field season to review field protocols, equipment use, safety procedures, data quality control measures, and other applicable topics. This time is critical in ensuring the safety and efficiency of all personnel during the field season.

Task 6: Data Setup and Management

Data collected in the field will be maintained in a MS Access database and managed under this task to ensure completeness and high quality of the data.

Task 7: Field Work

Field preparation includes efforts needed to ensure logistics and details of field sampling are figured out prior to arriving at the field sites and conducting monitoring. Time spent during field preparation includes contacting and coordinating with project sponsors to ensure proper sampling time and effort, preparing equipment and procuring field supplies, updating site information sheets including driving directions to sampling sites and site maps.

During the summer of 2014, seventeen (17) field sites will be monitored, including the following:

Instream Habitat:

- 02-1463 Salmon Creek
- 02-1561 Edgewater Park Off-Channel Restoration
- 07-1803 Skookum Reach Restoration
- 11-1315 Eagle Island Site C
- PA3 Tucannon River Project Area 3
- PA14 Tucannon River Project Area 14

Riparian Planting:

- 02-1446 Centralia Riparian Restoration project
- 02-1561 Edgewater Park Off-Channel Restoration

Livestock Exclusion:

- 02-1498 Abernathy Creek Riparian Restoration

Floodplain Enhancement:

- 02-1625 SF Skagit Levee Setback Acq & Rest.
- 06-2239 Fender Mill Floodplain Restoration - Phase I
- 06-2190 Riverview Park
- 12-1307 Billy's Pond – City of Yakima
- 10-1765 Eschbach Park
- PA 26 Tucannon River Project Area 26
- 12-1657 George Creek Wildlife Area

Acquisition:

- 04-1335 Piner Point on Maury Island

Monitoring of field sites will generally require 1-2 days of field time (10 hours per day) and a team of 2-4 field staff to evaluate both the control and impact reaches. For project categories that require juvenile fish monitoring, a team of two will conduct the snorkel or electrofishing survey, while the other team of two collects habitat data. For project categories that do not require juvenile fish monitoring, 2-3 field staff will generally conduct the entire survey. If the size or complexity of the site is extensive, however, additional staff and/or days may be needed to complete the survey.

Basic field equipment and personal safety gear required to carry out the SRFB protocols will be provided by Tetra Tech. Any specific equipment or consumable supplies needed to complete monitoring at one or more of the sites will be procured as necessary.

This task also includes data setup and management before field sampling. Data collected in the field will be maintained in a MS Access database and managed under this task to ensure completeness and high quality of the data.

Task 8: Per Diem & Vehicles

This task includes all per diem and rental vehicles that will be required for field work.

Task 9: Data Analysis & Lab Costs

Data collected during the 2014 field season will be analyzed to develop summary metrics for each of the ten (10) field sites visited. These metrics provide insight to the status of the project and allow comparison of conditions among monitoring years to evaluate whether project goals and objectives are being met. This data is also analyzed at the project category level to gain understanding of trends across monitoring categories and over time. No lab costs will be incurred during this contract period.

Task 10: Report Writing and Production

A brief site report for each of the monitoring sites in 2014 will be developed under this task, as well as a summary report. Some topographic data from field sites will be processed during the timeframe. Most of the reporting tasks will not occur within the timeframe described for this statement of work; however, some minimal level of effort may be spent in preparation for reporting during this time.

Deliverables

The following are deliverables that will be completed by Tetra Tech between May 1, 2014 and September 30, 2014.

- Field work for seventeen (10) sites in 2014:

Instream Habitat:

- 02-1463 Salmon Creek
- 02-1561 Edgewater Park Off-Channel Restoration
- 07-1803 Skookum Reach Restoration
- 11-1315 Eagle Island Site C
- PA3 Tucannon River Project Area 3
- PA14 Tucannon River Project Area 14

Riparian Planting:

- 02-1446 Centralia Riparian Restoration project
- 02-1561 Edgewater Park Off-Channel Restoration

Livestock Exclusion:

- 02-1498 Abernathy Creek Riparian Restoration

Floodplain Enhancement:

- 02-1625 SF Skagit Levee Setback Acq & Rest.
- 06-2239 Fender Mill Floodplain Restoration - Phase I
- 06-2190 Riverview Park
- 12-1307 Billy's Pond – City of Yakima
- 10-1765 Eschbach Park
- PA 26 Tucannon River Project Area 26
- 12-1657 George Creek Wildlife Area

Acquisition:

- 04-1335 Piner Point on Maury Island

Schedule

The tasks described in this statement of work will occur between May 1, 2014 and September 30, 2014.

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board Briefing Memo

Item **7C**

Meeting Date: March 2014

Title: Funding for Phase 2 of Monitoring Video

Prepared By: Brian Abbott, Governor's Salmon Recovery Office Executive Coordinator
Keith Dublanica, Governor's Salmon Recovery Office Science Coordinator

Approved by the RCO Director: Kaleen Cottingham

Summary

The Governor's Salmon Recovery Office staff are requesting that the Salmon Recovery Funding Board approve $32,000 for the development of a video to highlight board monitoring program goals and the role of monitoring in getting to a delisting decision.

Board Action Requested

This item will be a:

- ☒ Request for Decision
- ☐ Request for Direction
- ☐ Briefing

Background

The Governor's Salmon Recovery Office (GSRO) staff were successful in developing a nine minute video promoting salmon recovery in the State of Washington in 2013. The video complements the State of Salmon Report and explains Washington's response to Endangered Species Act (ESA) salmon listings in Washington.

The process of developing a video to explain monitoring began in 2013. Funds were used to take field footage of the different board-funded monitoring efforts. Staff are now requesting funds to develop a video that will educate stakeholders, decision-makers, project sponsors, and others tasked with the implementation of federally approved recovery plans about salmon recovery monitoring. Due to the restructuring of the Salmon Recovery Funding Board (board) monitoring program, resetting expectations is important. This can be accomplished by communicating the purpose and goals of the board monitoring program and the monitoring requirements for delisting endangered species. The intent of this educational video is also to increase support and understanding of the progress being made in salmon recovery and the complexity and difficulty of measuring that progress.

GSRO staff will develop a small team to further develop key messages with input from the Departments of Fish and Wildlife and Ecology. Staff will also work with the new Salmon Recovery Funding Board Monitoring Panel for guidance.

The monitoring video will be up to five minutes in length. Staff also intend to prepare four or five associated video clips, each 1-2 minutes long, to highlight elements of monitoring.

Project Message

The message of the video will reinforce the themes the board endorsed from the Stillwater Sciences Report. The video will highlight the basic premise for the intensively monitored watershed complexes funded by the board. Staff will also highlight the board's project effectiveness work, stating the goals and objectives and why the board made a commitment to monitoring project types. Status and trends monitoring will be explained and illustrated by the Washington Department of Fish and Wildlife's fish-in/fish-out program. This video will also explore the delisting requirements of recovery plans, a frequent gap in understanding for policy makers.

Project Goal

The goal of the video is to illustrate and educate the viewing audience on salmon recovery monitoring through field examples, expert insights, and a basic summary of monitoring components. The most important question the video will answer is why monitoring is important for salmon recovery.

Decision Requested

GSRO staff are requesting the board approve $32,000 for the development of a salmon recovery monitoring video.

Next Steps

If the board approves this request, GSRO staff will select a qualified contractor from the qualification list developed for the salmon recovery video. The contractor will be expected to complete the videos by December 31, 2014; the shorter video clips may be completed sooner.

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board Briefing Memo

Item **8A**

Meeting Date: March 2014

Title: Salmon Recovery Conference 2015 Funding Request

Prepared By: Brian Abbott, Governor's Salmon Recovery Office Executive Coordinator
Tara Galuska, Salmon Section Manager

Approved by the RCO Director: Kaleen Cottingham

Summary

The Salmon Recovery Funding Board (board) hosted project conferences in 2007, 2009, 2011, and 2013. Recreation and Conservation Office staff are asking the board whether it wants to continue sponsoring a salmon recovery conference (scheduled for 2015), and if so, to approve its location and budget. For the 2015 conference, staff have discussed a joint management approach to the conference with the Washington Department of Fish and Wildlife and Long Live the Kings.

Board Action Requested

This item will be a:

- ☒ Request for Decision
- ☐ Request for Direction
- ☐ Briefing

Background

The Salmon Recovery Funding Board (board) has funded and hosted four successful salmon recovery conferences since 2007. With over 1,968 projects funded at a public cost of $432 million,[1] these conferences are an important forum to collect and share lessons learned as we continue salmon recovery efforts. Lead entities, regional organizations, and project sponsors support continuing this event every two years.

Recreation and Conservation Office (RCO) staff would like to start the planning process for the fifth salmon recovery conference to be held in May or June 2015. Staff need sufficient time to

[1] Projects funded by state capital funds, Puget Sound Acquisition and Restoration funds, and the Pacific Coastal Salmon Recovery Fund.

secure a facility and plan logistics, so we are asking the board to approve the conference and location at the March 2014 board meeting. We are also exploring a slightly revised approach to managing the conference, which may involve contracting with a non-profit to carry out major components of the conference.

Conference Planning Proposal

RCO staff will use the 2013 conference evaluations and lessons learned to plan the 2015 event. Staff propose that the 2015 conference be up to a three-day event that highlights what has worked in salmon recovery, what has not, and how to improve the quality and cost effectiveness of projects.

New to the proposal this year is the idea of bringing in a different management approach to the conference and additional organizers, such as the Washington Department of Fish and Wildlife, with the intent of more fully exploring hatchery and harvest reform elements of salmon in the context of other recovery actions. We will also invite tribal entities to sponsor the conference. Additional sponsors of the conference may emerge during the conference planning process. We plan to use an organizing subcommittee to guide conference planning and agenda development. The subcommittee will potentially include the following members:

- RCO staff
- Representative from the Washington Salmon Coalition
- Representative from the Council of Regions
- Representative from the Lower Columbia Fish Recovery Board
- Representative from Columbia River Inter-Tribal Fish Commission
- Representative from Northwest Indian Fisheries Commission
- Representative from National Oceanic and Atmospheric Administration Fisheries
- Representative from the Washington Department of Fish and Wildlife
- Representative from Long Live the Kings

In general, speakers will likely be asked to present in one of seven categories: habitat restoration, nearshore, acquisition, assessments, monitoring, hatchery reform, and recovery plan progress.

Conference Costs

RCO staff recommend the board fund a portion of the salmon recovery conference. The funding requested is detailed in the following table. The cost of conference planning and registration services would be paid with registration fee revenue.

Board Funding Requested for 2015 Salmon Recovery Conference	
RCO conference planning staff	$8,000
Facility rental and meals	$82,000
Materials and advertising	$4,800
Video recording of conference sessions	$5,000
Estimated SRFB Contribution [1]	**$99,800**

[1] Does not include additional sponsorships which would lower the overall board contribution.

Conference Date and Location

Staff propose that the conference be held at the Vancouver Conference Center in Vancouver, Washington. The Vancouver Conference Center hosted the 2013 salmon recovery conference and is considered a publically owned facility operated by Hilton Hotels. The facility has sufficient breakout rooms and can accommodate up to 750 people. Previous conferences have been held in the Olympia area, the Shelton area, and Tacoma.

Staff recommend that the 2015 conference be held in late May (May 27-29) or early June (June 8-11).

Staff Recommendation

RCO staff recommend that the board fund a portion of the salmon recovery conference from the Pacific Coastal Salmon Recovery Fund. RCO staff suggest approval of up to $99,800 for a three-day event. The board contribution will cover the cost of RCO conference planning staff, the facility rental and meals, materials and advertising, and a video recording of conference sessions.

The staff also recommend that the conference be held in May or June 2015.

Staff are discussing a joint management approach to the conference with the Washington Department of Fish and Wildlife and Long Live the Kings. Staff will provide additional details at the March 20th board meeting.

Next Steps

If approved, staff will start conference planning with the formation of the conference organizing subcommittee.

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board Briefing Memo

Item **8B**

Meeting Date: March 2014

Title: Funding for Future of Our Salmon Conference

Prepared By: Brian Abbott, Governor's Salmon Recovery Office Executive Coordinator

Approved by the RCO Director: Kaleen Cottingham

Summary

The Columbia River Inter-tribal Fish Commission has requested Salmon Recovery Funding Board sponsorship of the Future of Our Salmon Conference scheduled for April 23-24 at the Oregon Convention Center in Portland, Oregon. The Governor's Salmon Recovery Office and Recreation and Conservation Office staff request the board consider sponsoring the conference at the $1,000 level.

Board Action Requested

This item will be a:

- ☒ Request for Decision
- ☐ Request for Direction
- ☐ Briefing

Background

The Columbia River Inter-tribal Fish Commission has requested Salmon Recovery Funding Board (board) sponsorship of the Future of Our Salmon Conference scheduled for April 23-24 at the Oregon Convention Center in Portland, Oregon. The Columbia River Inter-Tribal Fish Commission has hosted two successful conferences, in 2011 and 2012. Both conferences attracted nearly 300 participants. The conference will be held at the Oregon Convention Center in Portland, Oregon April 23-24, 2014. The conference will address the restoration of fish passage at all historical locations in the Columbia River Basin. The target audience will include tribes, First Nations, federal, state, provincial, and local government representatives; public utility districts; Indian, sport, and commercial fishers; environmental organizations, engineers, consulting firms, and the public.

Decision Requested

The Governor's Salmon Recovery Office and Recreation and Conservation Office staff are requesting the board approve $1,000 of returned Pacific Coast Salmon Recovery Fund (PCSRF) funds for sponsoring this conference. The $1,000 sponsorship level includes two complimentary registrations, logo and link on the conference website, logo in press releases and media outreach, and logo in the agenda booklet.

Next Steps

If the board approves this request, staff will submit a letter of sponsorship and payment to the Columbia River Inter-Tribal Fish Commission.

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board Briefing Memo

Item **8C**

Meeting Date: March 2014

Title: Reallocation of Lead Entity Funds to Support the Priorities of the Washington Salmon Coalition

Prepared By: Brian Abbott, Governor's Salmon Recovery Office Executive Coordinator
Lloyd Moody, Lead Entity Program Manager

Approved by the RCO Director: Kaleen Cottingham

Summary

The Washington Salmon Coalition Executive Committee has done extensive work to develop an action plan to build the strength and effectiveness of lead entities statewide. The Washington Salmon Coalition is proposing to reprogram underutilized lead entity funding to support action plan implementation.

Board Action Requested

This item will be a:

- ☒ Request for Decision
- ☐ Request for Direction
- ☐ Briefing

Background

The Salmon Recovery Funding Board (board) provides capacity grants for the state's twenty-five lead entities on an annual basis. Primarily because of lead entity coordinator vacancies and capacity related issues, RCO anticipates that not all lead entities will be able to fully utilize all of these capacity funds within their grant periods. Between 2009 and 2013, the annual unspent lead entity capacity fund balance was approximately $40,000, which is approximately 3 percent of total lead entity capacity grants.

Each lead entity is expected to participate as a productive member of the Washington Salmon Coalition (WSC), the statewide lead entity organization. The WSC provides a statewide forum to collectively discuss and address emerging issues in salmon recovery. A summary of its mission, structure, and Action Plan are included in Attachment A. WSC has developed an aggressive action plan to share best practices, improve communications and outreach, provide educational opportunities, and to create a mentoring environment for newer lead entity coordinators.

However, because lead entity coordinators already have full workloads in their own watersheds, finding time to actively participate in WSC is a significant and continuing challenge.

To better support WSC efforts and to make effective and efficient use of the anticipated unspent lead entity capacity funds, the state's lead entities propose to reprogram these anticipated unspent funds to implement the WSC Action Agenda and address other statewide lead entity needs.

WSC Proposal for Unspent Lead Entity Capacity Funds

The Washington Salmon Coalition requests that the board approve the use of up to $50,000 in anticipated unspent lead entity capacity funds between May 1, 2014 and June 30, 2015 to support its statewide efforts. The WSC recommends that the Governor's Salmon Recovery Office (GSRO)/Recreation and Conservation Office (RCO) contract with a consultant to accomplish this in an expeditious manner. WSC Executive Committee members will work with GSRO/RCO to develop a scope of work for the contracted work. In general, these funds would be used to assist in the implementation of WSC's mission and Action Plan. The specific duties of the contract would include assisting with communication, logistics, and other top priority efforts outlined in the WSC Action Plan.

Staff Recommendation

GSRO staff recommend that the board utilize unspent lead entity capacity funds to fund this effort. It is anticipated that lead entities will under spend in their current contracts due to end June 30, 2014. It is expected that funds returned to the SRFB from the lead entity contracts for FY 2014 will be greater than $50,000.

Next Steps

If approved, the GSRO will select a contractor from the existing communications Request for Qualifications and Quotations list and negotiate a scope of work based on input from the WSC Executive Committee.

Attachment

Attachment A: Washington Salmon Coalition Mission, Structure, and Action Plan

Approved 7-12-13 (Updated with WSC name 3/4/14)

Washington Salmon Coalition (WSC)
Mission, Structure, and Action Plan

Lead Entities

Lead Entities are watershed-based salmon recovery groups created by local communities in Washington State via RCW 77.85.050 to work directly with their communities to ensure that we are making smart investments in salmon recovery and that the top priority projects are funded. The outcome of this work to develop locally prioritized salmon recovery habitat project lists for their area that are consistent with a scientifically sound salmon recovery strategy and are supported by the local community. There are currently 25 state recognized Lead Entities contracted through Washington State's Recreation and Conservation Office (RCO) to facilitate the salmon habitat project identification and prioritization process for the watersheds that make up their local lead entity area. In addition to developing salmon habitat project lists, Lead Entities work with their local community to build support for local salmon recovery projects and work with local technical experts to develop and improve their science –based salmon recovery strategy. Lead Entities in a regional salmon recovery plan area also work with their region to ensure that their process and projects are consistent with that plan.

WSC Mission Statement

The mission of the Washington Salmon Coalition is to support and strengthen the 25 Lead Entities in Washington State in their endeavor to restore, enhance, and protect salmonids and their habitats in a scientifically-sound manner that engages local communities and supports our economy.

WSC History

This group was originally constituted to provide advice to the Department of Fish and Wildlife (WDFW) on current and emerging policy issues associated with salmon recovery. It was called the Lead Entity Advisory Group (LEAG). Over time, LEAG evolved to mainly support the Lead Entity Program by serving as a forum for discussing lead entity issues and improving communication with the Salmon Recovery Funding Board (SRFB), RCO, WDFW, the Governor's Salmon Recovery Office, other state agencies, the Council of Salmon Recovery Regions, and other interested groups. Education and coordination in general are a central focus and theme. In December of 2013, the group changed their name to the Washington Salmon Coalition. The roles of Lead Entities and of WSC should evolve with the needs of salmon recovery and the changing landscape of Washington State's economy.

WSC Goals

WSC seeks to effectively communicate as a unified voice representing the interests of Lead Entities and their communities statewide with our partners, provide a communication forum for discussing emerging Lead Entity issues, and develop strategies for addressing these topics. WSC seeks to foster relationships and share best practices amongst colleagues and provide educational opportunities for the 25 Lead Entities in Washington State. WSC communicates as a collective voice that salmon recovery the

"Washington Way" is yielding statewide results. WSC has the following goals; specific objectives can be found in Appendix A: WSC Action Plan.

Internal Goals:

1. Develop strategies to improve long-term stability of LE/WSC/Salmon Recovery funding

2. Periodically review and reaffirm WSC's identity and strategies

3. Encourage Lead Entity consensus on priority recommendations and communicate in a unified manner

4. Facilitate the interchange of information, relationship building, and mentoring amongst Lead Entities

5. Support professional development and training opportunities

External Goals:

1. Actively advise the Salmon Recovery Funding Board on local salmon recovery and Lead Entity issues

2. Promote the Lead Entity Program as the local, scientifically-based program for developing salmon habitat projects that fit within local community values

3. Increase Lead Entity efficacy and profile by engaging at regional, state, and national levels

WSC Membership:

WSC is made up of one representative from each of the Lead Entities across the state. Each lead entity shall appoint a WSC representative and alternate for their lead entity. Lead entity representatives and alternates can be, but are not limited to, lead entity coordinators, citizen committee members, technical committee members, or watershed stewards. WSC member positions will be filled as vacancies arise with names provided to the WSC Chair as requested.

Expectations and Requirements for WSC members:

- Members are expected to represent their local lead entity committees.
- Members are encouraged but not expected to attend all WSC meetings.
- Members are expected to review all WSC agendas and minutes to stay informed on what WSC is doing and to communicate to WSC about issues that are important to their lead entity.
- Members are expected to participate in the biennial training event and encouraged to participate in other development opportunities as they occur.

WSC Leadership:

WSC Executive Committee: This committee shall be composed of eight (8) of the WSC members. WSC Executive Committee members must include one member from each of three areas across the state (the

Coast, the Puget Sound and the Columbia Basin), a representative from the Northeast if that area desires representation and either four (4) or five (5) at-large members to bring the total to eight (8). At no time should the Executive Committee consist of more than four (4) members from any one area. WSC Executive Committee members serve one year terms.

Executive Committee members are nominated or self-nominated for any open positions by WSC members at the last WSC meeting of the state fiscal year. There must be, at minimum, a quorum (more than half) of the WSC membership voting and successful candidates must have a majority of votes to be elected. WSC members who cannot attend the election meeting can give their vote by proxy to another WSC member who will be present.

Expectations for WSC Executive Committee:

- Executive Committee members are expected to attend all WSC meetings. If two or more meetings in a year are missed, the WSC members may choose to nominate a replacement at any time using the same process outlined above.
- Executive Committee members may be called upon to assist the WSC Chair in developing a WSC recommendation that is necessary before the next WSC meeting.
- Executive Committee members are expected to try to represent the views of Lead Entities across the state.
- Just like all WSC members, Executive Committee members may be reimbursed for travel and per-diem costs out of their own Lead Entity contracts while attending WSC related functions.

WSC Officers: WSC shall have a Chair, Past Chair, Vice Chair, Communications Officer, and Logistical Coordinator. Each of these positions shall serve a one year term, at the discretion of WSC members. Elections for Chair and Vice-Chair will follow the election of the WSC Executive Committee on the last WSC meeting of the state fiscal year. Candidates for these positions should already be members of the WSC Executive Committee, though exemptions are accepted if the majority of a quorum agrees. To elect officers there must be, at minimum, a quorum of the WSC membership voting and successful candidates must have a majority of votes to be elected.

WSC's Chair is responsible for presiding over WSC meetings, developing WSC agendas (in consultation with other WSC members and RCO staff) and overseeing the development and issuance of WSC recommendations and action items. In public settings the Chair presents viewpoints consistent with policy and direction set by WSC and reports back to WSC members about the nature and content of presentations. The Chair has signatory authority for WSC opinions and other communications and is the default representative of WSC at SRFB meetings. The Chair is by default a member of any WSC subcommittee.

WSC's Vice-Chair is responsible for assuming Chair duties when the Chair is not available. The Vice-Chair will assist in review of summary minutes from WSC meetings. The Vice-Chair may also assist the Chair in agenda development and in overseeing WSC action items.

WSC's Past Chair is available for consultation from the current Chair and Vice-Chair and is responsible for ensuring there is continuity in WSC leadership and activities. The WSC Past Chair has the option to serve a one year term if the WSC Chair remains the same from one year to the next. In this case the

WSC Past Chair has the option to remain as a representative on the Executive Committee, or the position would become another at-large opening for election.

WSC's Communications Officer is responsible for ensuring summary meeting notes are prepared and disseminated. This responsibility involves coordinating with the Lead Entity Program Manager who creates the first draft summary notes.

WSC's Logistical Coordinator is responsible for arranging logistics for in-person WSC meetings and conferences, preferably by seeking volunteers on an as-needed basis.

Lead Entity Program Manager

The Lead Entity Program Manager is a RCO employee whose main responsibility is managing the Lead Entity program and their contracts, not WSC. However, the Program Manager shall provide input on the development of WSC agendas (working with the Chair, other WSC members, RCO staff and SRFB), create the first draft summary meeting notes, and manage the LE website on RCO's home page. The Program Manager may perform other duties as developed by RCO, including, but not limited to drafting reports, coordinating activities, disseminating information, facilitating communication and formulating issues.

WSC Meeting Guests

SRFB staff, as well as the Department of Ecology, Department of Natural Resources, Department of Fish & Wildlife, the Governor's Salmon Recovery Office, Department of Transportation, Department of Agriculture, and the Conservation Commission are encouraged to attend and participate in WSC meetings and activities. SRFB requests for WSC comments or input have a high priority in the agenda setting process. WSC functions are open meetings. Guests are welcome to attend and to participate in discussions.

Decision-making

A WSC recommendation on a topic relevant to lead entity business may be requested by the SRFB, RCO/GSRO, a WSC member, or other party. Such requests shall be in writing and submitted to the Chair at least two weeks in advance of a WSC meeting. The Chair, in consultation with other WSC members, shall decide whether to seek a WSC recommendation. A consensus based decision making process will be used as outlined below:

Any WSC member may suggest a recommendation for WSC to consider. Once a recommendation is suggested WSC will have a discussion about the recommendation then a call for consensus will be made by the WSC Chair. The following options will be available for each WSC member to express their opinion on the recommendation:

1. Endorsement (I like it)
2. Endorsement – with minor contention (I basically like it)
3. Agreement with reservations (I can live with it)
4. Stand aside (I don't like it but I don't want to stop it)
5. Block – I can't live with it.

A WSC recommendation will go forward with the number of 1's, 2's, 3's, and 4's noted in the meeting record unless a member chooses option 5 to block the recommendation. If a member wishes to block the recommendation the Chair and other WSC members must try to find a new recommendation that the member will not block. If no consensus can be reached on a WSC recommendation then Lead Entities may express their opinion but no WSC recommendation will go forward. WSC members may give their consensus vote by proxy to another WSC member that will be attending the meeting. However, WSC members may only block a recommendation at a WSC meeting if they are present at that meeting.

When the WSC Chair is communicating the results of a WSC recommendation to others they should include the number of WSC members who participated in making the recommendation and the number of 1's, 2's, 3's and 4's.

If a WSC recommendation is requested under a very short-time frame the WSC Chair may call on the Executive Committee to assist the Chair in formulating a recommendation. At least four of the Executive Committee members must be willing to allow the recommendation to go forward for it to become a WSC recommendation. Any Executive Committee member can choose to block the recommendation if they feel strongly about it. Every reasonable effort should be made by the WSC Chair and Executive Committee to solicit opinions from other WSC members before making a WSC recommendation.

For an official consensus decision to be made, a quorum must be established. A quorum consists of more than half of the Lead Entity Coordinators in Washington State. Preferably, members would be physically present at a meeting where a decision is made, however presence will be counted when a WSC member has phoned in and votes may be cast via phone. Note that the approval of minutes and the selection process for the WSC Executive Committee and officers will be conducted by a WSC member vote rather than by consensus.

WSC Agendas

The Chair, in consultation with WSC members and the LE Program Manager, decides upon the specific agenda items for a given meeting. The WSC Chair physically creates and distributes the draft agenda to all WSC members and other interested parties as an information service. Requests for agenda time for a particular WSC meeting should be at least two weeks in advance of the WSC meeting. Documents requiring review prior to the WSC meeting must be submitted to the WSC Chair at least two weeks before the meeting. WSC agendas shall designate between action/decision and discussion items. Draft agendas shall be approved by WSC consensus at the beginning of each meeting.

Appendix A: WSC Action Plan

Approved by Consensus on July 12, 2013 (updated with WSC name 3-4-14)

WSC seeks to effectively communicate as a unified voice representing the interests of Lead Entities and their communities statewide with our partners, provide a communication forum for discussing emerging Lead Entity issues, and develop strategies for addressing these topics. WSC seeks to foster relationships and share best practices amongst colleagues and provide educational opportunities for the 25 Lead Entities in Washington State. WSC communicates as a collective voice that salmon recovery the "Washington Way" is yielding statewide results.

The following WSC goals and objectives make up the yearly action plan, which is to be updated annually at the last meeting of the State fiscal year.

Internal Goals and Objectives:

1. Develop strategies to improve long-term stability of LE/WSC/Salmon Recovery funding
    a. Create and Utilize a WSC Advocacy Work Group to lead WSC members in accomplishing the following goals:

        Short-term approach:
        i. Write WSC letter to Congressional delegation thanking them for their support of PCSRF funding and reminding them of the value of Lead Entities and salmon recovery in terms of economic importance, cultural significance, and ecological gain. The letter should accompany copies of the Lead Entity directory
            1. Cheryl will draft letter
        ii. WSC will participate in watershed funding stakeholder process to develop consensus bill language by December 2013
            1. Amy Hatch-Winecka and John Foltz will participate in and track this process for WSC
        iii. WSC Chair and Vice Chair will participate in WDFW-sponsored dialogue with RFEGs and regional organizations on ways to increase/coordinate funding sources and identify new revenues for salmon recovery. The goal would be to develop a coordinated state funding package and messages by June 2014 for legislative consideration
        iv. Send Lead Entity Directory with a cover letter to state legislators
            1. Cheryl will draft letter
            2. Jason will develop list of recipients
            3. Nick Bean and Lloyd Moody will work on identifying resources to pay printing costs for additional copies of directory – printing needs to be done by June 30

        Long-term approach:
        i. Create state-wide marketing and communication strategy
        ii. Consider tracking and/or coordinating with SRFB effort
        iii. Work with other salmon recovery partners to develop common messages and coordinated approach, while keeping in mind WSC-specific needs
        iv. Create state-wide non-profit to advocate for salmon recovery and secure private funding
        v. By the July WSC conference call, Funding Advocacy Committee will work to gather additional information on options, pros/cons, and what would be necessary to establish a non-profit. Goal is to have this in place by the end of 2013

2. Periodically review and reaffirm WSC's identity and strategies
    a. Create a Mission Statement Work-Group
    b. Review and update WSC Mission, Structure, and Action Plan as needed
    c. Annually update Appendix A: Action Plan

i. Develop additional detail for the Action Plan in the future, including responsible parties and budget

d. Develop WSC Logo, Tagline, and Letterhead

3. Encourage Lead Entity consensus on priority recommendations and communicate in a unified manner
    a. Have four WSC quarterly meetings, with at least two in person meetings a year at which a quorum is present
    b. Present consensus findings on important matters (e.g. to SRFB)

4. Facilitate the interchange of information, relationship building, and mentoring amongst LEs
    a. Have four WSC quarterly meetings, with at least two in person meetings a year at which a quorum is present
    b. Put on a WSC training and education Conference at least each biennium at which nearly all coordinators are present
    c. Participate in SRFB sponsored events with all Lead Entities participating, including the Salmon Recovery Conference each biennium
    d. Maintain a Lead Entity Directory
    e. Create and Utilize WSC Information Exchange Work Group to lead WSC members in accomplishing the following goals:

        Short-term Approach

        i. Institute a new position/role on WSC Committee to foster the internal communications strategy
        ii. Create LE Coordinator Distribution List in Outlook ("WSC Internal Comms") that is kept current and sent to all LE Coordinators
        iii. Contact new LEC's with a "Welcome" and introduction to existing WSC via email.
        iv. Facilitate the opportunity for new LEC's to have an individual "seasoned" LE Coordinators who is geographically close to assist them in learning the position
        v. Update the "Lead Entity Guidance" document. Provide guidance on the LE position and how to reach out to others and what questions might be useful to. Include information on Habitat Work Schedule
        vi. Include the following in WSC meeting agendas:
            1. New digital tool or tech-related information; each meeting
            2. Hard-copy materials examples; in person meetings
            3. LE job-related methods and ideas (i.e. creative funding ideas, process to implement projects, innovative ideas for distributing technical assistance); distance meetings
        vii. Conduct semi-annual interviews with experienced LE's via a questionnaire and distributed through group sharing site (what would new LE Coordinators ask if sitting down for a coffee with those that have gone before us…); sent via email

        Long Term Approach Year 2 (2014-15):

        viii. Create a document library (housed on line)

1. Templates, forms and manuals and the like that could be modified for local use
2. Manuals that we all use (ie. HWS manual, WSC documents)
3. GIS files/overlays

ix. Create a photo library (housed on line)
1. A few at a time via email or a link on vimeo/google web albums/other
2. Create a facebook or LinkedIn page for WSC to share photos

x. Explore video conferencing abilities (WDFW and NWIFC may have resources)

xi. Determine feasibility and potentially develop a plan that will enable a WSC retreat and/or training every year
1. Continue to include site visits
2. Utilize specialized skill sets
3. Spread organizational duties across more people

5. Support professional development and training opportunities
   a. Put on a WSC training and education Conference at least each biennium at which nearly all coordinators are present
   b. Participate in SRFB sponsored events with all Lead Entities participating, including the Salmon Recovery Conference each biennium
   c. Provide additional training opportunities through at least two WSC sponsored professional development activities per year

External Goals and Objectives:

1. Actively advise the Salmon Recovery Funding Board on local salmon recovery and Lead Entity issues
   a. Prepare WSC meeting materials for SRFB meetings and solicit for Lead Entity specific information to share with the SRFB
   b. Invite necessary agencies to WSC meetings and training/education events
   c. Maintaining a network of salmon recovery professionals that can be called upon for questions and guidance

2. Promote the Lead Entity Program as the local, scientifically-based program for developing salmonid and salmonid habitat projects that fit within community values
   a. Utilize the WSC Outreach and Education Sub-Committee to develop education and outreach materials
      i. General public
      ii. Legislature
      iii. Congress
   b. Interact annually with legislative policy makers during legislative day opportunities or as opportunities arise

3. Increase Lead Entity efficacy and profile by engaging at regional, state, and national levels
   a. Serve as one of the only statewide groups for discussing and establishing consensus driven policy and funding advocacy for habitat/recovery project implementation.

b. Tee up specific regional, state, and federal level policy issues that should be addressed at higher scales
c. Invite necessary agencies to WSC meetings and training/education events
d. Foster stronger relationships at regional, state, and national levels