WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

PROPOSED
Salmon Recovery Funding Board Meeting Agenda

December 8, 2011
Natural Resources Building, Room 172, Olympia, WA 98504

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: Rebecca Connolly, Board Liaison at the address above or at rebecca.connolly@rco.wa.gov.

Special Accommodations:
If you need special accommodations to participate in this meeting, please notify us by December 3, 2010 at 360/902-3086 or TDD 360/902-1996.

THURSDAY, DECEMBER 8

OPENING AND WELCOME

9:00 a.m. **Call to Order** *Chair*
- Determination of Quorum
- Review and Approval of Agenda ***(Decision)***
- Approval of August/September Meeting Minutes ***(Decision)***

MANAGEMENT AND PARTNER REPORTS (Briefings)

9:05 a.m. **1. Management Status Report**
a. Director's Report *Kaleen Cottingham*
- Summary of Director's Efforts in Washington, DC
- Update on PCSRF 2012

b. Financial Report
c. Policy and Legislative Report *Steve McLellan*
- Update from Special Legislative Session

d. Work Plan and Performance Update (Written report only)

9:20 a.m. **2. Salmon Recovery Management Reports**
a. Governor's Salmon Recovery Office and Monitoring *Megan Duffy*
- Update on Funds for Monitoring from PCSRF, FFY 2011

b. Grant Management *Brian Abbott*
- Considerations for Projects on State-Owned Aquatic Lands
- Follow-up to August Discussion Regarding Fish Passage

10:00 a.m.	**3. Reports from Partners**	
	a. Council of Regions Report	*Jeff Breckel*
	• COR Priorities for Remainder of Year	
	b. Lead Entity Advisory Group Report	*Cheryl Baumann*
	c. Regional Fisheries Enhancement Groups	*Lance Winecka*
	• RFEG Funding Issues	
	d. Board Roundtable: Other Agency Updates	*SRFB Agency Representatives*
	General Public Comment: *Please limit comments to 3 minutes*	
10:50 a.m.	**BREAK**	

BOARD DECISIONS

11:00 a.m.	**4. Adopt Board Meeting Schedule for 2012**	*Rebecca Connolly*
11:05 a.m.	**5. Addressing General Fund Budget Reductions**	*Megan Duffy*
	• Roles and responsibilities of lead entities and regions	
	• Lead entity and regional organization reduction exercise	
	• Effect of backfilling lead entity budgets with federal funds	
	• Comments from representative lead entities and regions	
Noon	**WORKING LUNCH**	
12:20 p.m.	**6. 2011 Grant Round**	
	a. Overview	*Brian Abbott*
	b. Review Panel Comments	*Kelley Jorgenson, Tom Slocum*
	c. Regional Area Comment Period to Discuss Project Selection and Projects of Concern *(Optional, 10 minutes per region, conference call option available)*	
	• Snake	*Steve Martin*
	• Middle Columbia	*Alex Conley*
	• Upper Columbia	*Julie Morgan*
	• Lower Columbia	*Jeff Breckel*
	• Coastal Region	*Miles Batchelder*
	• Hood Canal	*Scott Brewer*
	• Puget Sound	*Jeanette Dorner*
	• Northeast	*Joe Maroney*
	d. Public Comment on Grant Funding and Projects: Please limit comments to 3 minutes	
2:45 p.m.	**BREAK**	

3:00 p.m.

e. Board Decisions: 2010 SRFB Grant Funding by Region ***(Decisions)***
- Snake
- Middle Columbia
- Upper Columbia
- Lower Columbia
- Coastal Region
- Hood Canal
- Puget Sound
- Northeast

3:15 p.m. **7. Manual Changes for 2012 Grant Cycle**

a. Manual 18 Administrative Changes *Brian Abbott*

b. Manual 18 Updates to Appendix B

c. Manual 19: Lead Entity/Regional Organization Manual (Briefing only) *Megan Duffy*

BRIEFINGS

4:15 p.m. **8. Data Results Associated with Forest and Fish Agreement Funded with PCSRF Funds** *Brian Abbott* *Jim Hotvedt, DNR*

5:00 p.m. **ADJOURN**

The Council of Regions will present their update at the Salmon Recovery Funding Board meeting.

There are no advance materials.

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board
Briefing Memo
Item 1A

Meeting Date: December 2011

Title: Director and Agency Management Report

Prepared By: Kaleen Cottingham, Director

Proposed Action: Briefing

To minimize duplication, some items that might normally be included in the director's report have been deleted here and included in other memos throughout the notebook (such as the policy director's report, legislative update, and the grant manager's report).

Salmon Section Update

Salmon Section staff has been busy compiling the grant round funding report, which was released November 21. There were 167 projects submitted for the 2011 grant round. In December, the board will be asked to approve the 2011 grants and to update Manual 18. More information is in items 6 and 7.

New Staff

- **Keith Dublanica** has joined the Governor's Salmon Recovery Office as the new science coordinator. Keith comes most recently from the Mason County Conservation District where he was a habitat biologist and environmental specialist, working on numerous projects including the Skokomish estuary restoration. Before that, Keith was with the Skokomish Tribe for 14 years; seven as the director of natural resources.

IT Priority Projects

Information Technology (IT) staff continue to be very busy with a wide array of projects. Staff recently completed the annual portfolio's investment plan, security plan, and disaster recovery plan. Now, they are completing the Office of Financial Management's total cost of IT ownership study with assistance from IT, finance, and administrative staff. Staff also has built an FTP site that will make sharing large documents for public disclosure easier for the public and staff. Staff has also upgraded most of the agency's computers from XP to Windows 7. Scott Chapman has kicked off development of the PRISM online series of Web applications including sponsor, compliance, and billing workbenches. Section managers have scheduled the next two years of PRISM development to minimize impacts on staff. Several new developers are on board with Rudeen & Associates for that effort. In addition, Scott is working at the Department of Ecology a

few hours each week to develop a pilot program so the agency can test using PRISM for its grants.

Budget Impacts on RCO

We are only a few days away from a special legislative session (due to start November 28) on the state budget. Sharp declines in state revenue will require lawmakers to cut $2 billion from the budget adopted earlier this year. The Governor has released a proposed supplemental budget just this week. RCO was classed as a "small agency" and assigned a 5 percent general fund cut with the specifics chosen from lists of cut options we submitted earlier this year.

Of course, we also have significant interest in the capital budget. On that front, the latest information is that the decline in state revenue has reduced the safety margin left when the budget was passed earlier this year, but that it has not deteriorated to the point where major cuts are needed. That could change in the coming months and all granting agencies are being advised to ensure that projects are under contract and moving promptly.

More information is in item 1C.

Recreation and Conservation Grant Streamlining

With staff reductions this past summer and requests from grant applicants for a simpler system, RCO has been looking at ways to streamline the application and review process for recreation and conservation grants. Executive management has approved staff working groups to proceed on six different fronts, which includes potential changes to project review, application workshops, written evaluations, internal processes, external tools, and advisory committees.

Upcoming activities include an application workshop Webinar, online tools such as a short video on how to enter an application in PRISM, and a communications plan to make sure all applicants know the deadlines and understand the importance of submitting a complete application!

Board Updates

Recreation and Conservation Funding Board (RCFB): The RCFB met November 14 and 15. It discussed meeting practices, approved a ranked list of Land and Water Conservation Fund projects, and toured the Center for Urban Waters (offices for the Puget Sound Partnership) to learn about the green building techniques that are in place. RCFB also talked about the Partnership's priorities and initiatives with Martha Kongsgaard, chair of the Partnership's Leadership Council. RCFB closed day one with a tour that includes Kandle Park and Snake Lake Nature Center. On day two, the RCFB awarded grants in the Recreational Trails Program, approved several proposals to streamline the grant process, including written evaluations and changes to criteria. The board ended the day by thanking member Steven Drew for his service; his second terms ends on December 31, 2011.

In September, the RCFB adopted a new policy on encouraging increased sustainability in grant-funded projects. While sustainability has long been a consideration, the new policy makes it more explicit by having sponsors provide more details on sustainable project elements in order to qualify for full evaluation points. The specifics of the changes and the public support for them can be found here. The new policy affects the Land and Water Conservation Fund, Washington Wildlife and Recreation Program's local parks and state parks categories only at this time. We will implement the changes for this grant cycle, evaluate the results, and see if changes or expansion are warranted before the next cycle.

Washington Invasive Species Council: Staff met with several regional enhancement fisheries groups in Puget Sound to discuss invasive species concerns and training the regional fisheries enhancement groups on invasive species prevention protocols. Staff also presented the results of the regional "Don't Move Firewood" outreach campaign at the Continental Dialogue on Non-Native Forest Insects and Diseases; prepared and presented at the state weed meeting in Yakima on the council's invasive species prevention work.

Habitat and Recreation Lands Coordinating Group: The Habitat and Recreation Lands Coordinating Group held a quarterly meeting to finalize the "Biennial State Land Acquisition Monitoring Report." The report compares state agency acquisition project proposals with their current results. It will be published on the lands group web site in November. The lands group also developed recommendations to the Legislature on whether the group should continue past its sunset date of July 31, 2012. The RCFB will submit final recommendations on whether the lands group should continue to the appropriate legislative committees by January 1, 2012.

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board
Briefing Memo
Item 1B

Meeting Date: December 2011

Title: Management Status Report: Financial Report

Prepared By: Mark Jarasitis, Chief Financial Officer

Approved by the Director: Kaleen Cottingham

Proposed Action: Briefing

Summary

The attached financial report reflects Salmon Recovery Funding Board (board) activities as of October 31, 2011. The available balance (funds to be committed) is $53 million. The board's balances are as follows:

Fund	Balance
Funds Awarded by the Board	
Current state balance	$9,382,898
Current federal balance – Projects	$12,935,216
Current federal balance – Activities[1]	$11,024,598
Puget Sound Acquisition and Restoration (PSAR) and Puget Sound Restoration (PSR)	$13,209,115
Puget Sound Critical Stock	$421,290
Other Funds	
Family Forest Fish Passage Program (FFFPP) – Awarded by DNR	$1,554,696
Estuary and Salmon Restoration – Awarded by DFW	$4,664,920
Lead Entities	$280,644

Attachments

A. Salmon Recovery Funding Board Budget Summary

[1] Hatchery/Harvest and monitoring activities as defined in PCSRF application, but not yet awarded by RCO

Salmon Recovery Funding Board Budget Summary

For the Period of July 1, 2011 - June 30, 2013, actuals through 10/2011 (fm04); reported 11/04/2011
Percentage of biennium reported: 16.6%

	BUDGET	COMMITTED		TO BE COMMITTED		EXPENDITURES	
	new & reapp. 2011-13	Dollars	% of budget	Dollars	% of budget	Dollars	% of comm
GRANT PROGRAMS							
State Funded 03-05	$829,178	$695,199	84%	$133,979	16%	$5,259	1%
State Funded 05-07	$1,992,436	$1,631,295	82%	$361,141	18%	$220,587	14%
State Funded 07-09	$3,337,100	$3,337,100	100%	$0	0%	$31,674	1%
State Funded 09-11	$4,919,460	$4,919,460	100%	$0	0%	$1,926,570	39%
State Funded 11-13	$9,760,140	$872,362	9%	$8,887,778	91%	$141,427	16%
State Funded Total	20,838,314	11,455,416	55%	$9,382,898	45%	2,325,517	20%
Federal Funded 2007	$6,635,952	$6,594,801	99%	$41,151	1%	$1,769,195	27%
Federal Funded 2008	$11,272,515	$10,993,906	98%	$278,609	2%	$1,419,756	13%
Federal Funded 2009	$11,189,547	$11,051,050	99%	$138,497	1%	$1,417,110	13%
Federal Funded 2010	$24,028,172	$18,889,510	79%	$5,138,662	21%	$651,180	3%
Federal Funded 2011	$24,728,261	$6,365,366	26%	$18,362,895	74%	$301,173	5%
Federal Funded Total	77,854,447	53,894,633	69%	$23,959,814	31%	5,558,414	10%
Lead Entities	$6,170,832	$5,890,188	95%	$280,644	5%	$719,353	12%
Puget Sound Acquisition and Restoration	37,592,542	24,383,427	65%	$13,209,115	35%	2,895,129	12%
Estuary and Salmon Restoration	9,544,047	4,879,127	51%	4,664,920	49%	179,391	4%
Family Forest Fish Passage Program	5,168,397	3,613,701	70%	1,554,696	30%	1,359,541	38%
Puget Sound Critical Stock	3,916,491	3,495,201	89%	421,290	11%	136,866	4%
Subtotal Grant Programs	**$161,085,070**	**$107,611,694**	**67%**	**$53,473,376**	**33%**	**$13,174,212**	**12%**
ADMINISTRATION							
SRFB Admin/Staff	$4,441,686	$4,441,686	100%	-	0%	$528,158	12%
Technical Panel	598,477	198,477	33%	400,000	67%	107,206	54%
Subtotal Administration	**$5,040,163**	**$4,640,163**	**92%**	**$400,000**	**8%**	**$635,364**	**14%**
GRANT AND ADMINISTRATION TOTAL	**$166,125,233**	**$112,251,857**	**68%**	**$53,873,376**	**32%**	**$13,809,576**	**12%**

Note: Activities such as Smolt Monitoring and Regional Funding are combined with projects in the state and federal funding lines above.

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board
Briefing Memo
Item 1C

Meeting Date: December 2011

Title: Policy and Legislative Report

Prepared By: Steve McLellan, Policy Director

Approved by the Director: Kaleen Cottingham

Proposed Action: Briefing

The following are some policy, budget, and legislative highlights. Staff will provide an update at the meeting of the Salmon Recovery Funding Board (board).

November 2011 Legislative Special Session/2012 Regular Session

Governor Gregoire has called a 30-day special legislative session beginning November 28 to deal with a sharp decline in state revenues. Overall, the Office of Financial Management (OFM) and legislative budget writers estimate that $2 billion in spending reductions and/or revenue increases are needed to balance the budget and leave an adequate reserve. Large portions of the budget are protected by the state constitution, so $2 billion represents about 23% of the unprotected amount. The Governor is offering an "all cuts" budget proposal with a separate proposal to ask voters to raise the sales tax half a cent to buy back cuts in K-12 funding, higher education, corrections, long-term care, and services for the developmentally disabled. Under her plan the proposed tax increase would go to voters in March.

The Governor's proposed budget reduction for RCO represents a 5% general fund cut (consistent with other small agencies). The specifics differ from those submitted by RCO earlier in the summer. Overall the Governor's proposal for RCO would cut lead entity funding by $25,000. The remainder of the money would be made up through salary shifts, cost savings on the State of the Salmon report, and vacancy savings. The effect on salmon programs is addressed in more detail in Item 5.

The drop in general fund revenues also has implications for the capital budget since debt service is constitutionally limited. The best estimate remains that the revenue decline has eliminated the capacity to pass a supplemental capital budget and that the budget passed last session may need to be slightly trimmed. While November's revenue forecast dropped slightly, it was offset by better than expected interest rates so this assessment of the capital budget situation remains accurate.

The 2012 regular session begins January 9. The agenda is in flux, depending on how far lawmakers get in resolving budget issues during the special session. A major issue is likely to be the Discover Pass. There is legislative interest in changing some provisions (e.g., the transferability of the pass) and early results indicate the pass may not be generating as much

revenue as projected. This has implications for the departments of Fish and Wildlife and Natural Resources, which receive a portion of Discover Pass funds. We also expect that Senator Parlette will propose extending the Habitat and Recreation Lands Coordinating Group which RCO coordinates. Without an extension, that group will sunset at the end of July 2012.

Debt Limit Commission

The Commission on State Debt, which was chartered last session and is chaired by the State Treasurer, has been meeting to hear expert testimony on state debt trends and options to limit or restructure state borrowing. A significant focus has been on how to smooth out cycles in capital spending. To date, there has been a tendency to take on more debt when economic times are good with sharp cutbacks during contractions. A number of Debt Commission members are interested in ways to boost capital spending during downturns and to bank excess capacity during better times. The Commission is required to report recommendations before the end of the year for possible consideration during the 2012 regular session. We will provide an update on any proposals at the board meeting.

Puget Sound Action Agenda Update

The Puget Sound Partnership is finalizing draft strategies for updating the Puget Sound Action Agenda. The drafts will be available for public comment in December 2011. The Puget Sound Partnership Leadership Council is expected to make a final decision on the revised Action Agenda in February 2012.

In September, staff attended stakeholder workgroups to assess how draft Puget Sound strategies and actions will relate to board policies and programs. In October, staff reviewed the draft strategies and provided comments to the Partnership. Staff comments included the following general observations:

- Several of the draft near-term and ongoing actions could affect programs managed by RCO, but it is not yet clear whether any changes to board policies will be needed.
- RCO will be expected to provide regular performance reports on several actions. We have urged that performance reporting be managed to ensure consistency and accuracy, and to avoid duplicative reporting.
- Several draft strategies that are not yet available for review could relate to board programs. These include the land development, upland restoration, salmon recovery, and public access strategies.

Staff will continue to monitor development of the Action Agenda update and keep the board informed.

Update on Agricultural Outreach Work Group

At its December 2010 meeting, the board asked staff to identify (a) how the agricultural community is involved in the project review process in certain areas, (b) whether the responders believed agricultural community involvement is adequate, and (c) challenges and opportunities for improving agricultural community involvement. In April, a workgroup composed of Governor's Salmon Recovery Office (GSRO), State Conservation Commission, and RCO staff surveyed lead entities, conservation districts, and others to respond to the questions. The survey indicated that some areas of the state might benefit from a closer look at the communications between salmon recovery effort and the agricultural community.

The workgroup considered a variety of options to engage in a closer review and implement potential improvements, , including existing mechanisms and tools. They determined that the lead entities' existing contractual requirements for regional outreach and communications plans might provide the best opportunity to improve communications between salmon recovery organizations and the agricultural community. This approach would allow for tailored outreach designed to meet the specific challenges and opportunities of individual areas. Staff will provide support for this effort as needed, and will update the board on progress at future meetings.

Update on Changes to the Allowable Uses Policy by the Recreation and Conservation Funding Board

A subcommittee of the Recreation and Conservation Funding Board is developing policy regarding allowable uses of RCO project sites. The policy will help make more consistent and streamlined decisions about whether certain uses are compatible with grant funding. It will give sponsors and staff a clearer understanding of RCO's expectations of how project sites should be used. The changes also will apply to Salmon Recovery Funding Board grants.

The subcommittee will recommend policies that address whether (and under what circumstances) the following uses of RCO project sites are allowable or conversions:

- Livestock grazing;
- Forest practices
- Project maintenance;
- Conveyances of property interests;
- Temporary uses; and
- Communications facilities;

In addition, the subcommittee will recommend a "grey areas" framework for addressing other uses. Later in 2012, staff will bring the policy proposals to both funding boards after the public has an opportunity to comment.

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board
Briefing Memo
Item 1D

Meeting Date: December 2011

Title: RCO Work Plan and Performance Measures Update: Salmon

Prepared By: Rebecca Connolly, Board Liaison and Accountability Manager

Approved by the Director: Kaleen Cottingham

Proposed Action: Briefing

Summary

The Recreation and Conservation Office (RCO) uses performance measures to help the agency reduce reappropriations and improve the way we do business. This memo provides highlights of agency performance related to the projects and activities funded by the Salmon Recovery Funding Board (board).

Analysis

These measures are among those that help us to check our processes at several points in the grant management cycle. All data are for salmon grants only, as of November 1, 2011. Additional detail is shown in the notes on page two and in the charts in Attachment A.

Measure	Target	FY 2012 Performance	FY 2012 Indicator
Percent of salmon projects closed on time [1]	70%	57%	↓
Percent of salmon projects closed on time and without a time extension [2]	50%	53%	↑
% salmon grant projects issued a project agreement within 120 days after the board funding date [3]	75%	n/a	n/a
% of salmon grant projects under agreement within 180 days after the board funding date [3]	95%	n/a	n/a
Cumulative expenditures, salmon target [4]		Data Unavailable	
Bills paid within 30 days: salmon projects and activities [5]	100%	72%	⇔
Percent of anticipated stream miles made accessible to salmon [6]	100%	100%	↑

Data Notes:

1. Since the beginning of the fiscal year, the salmon section has closed 47 projects on time or earlier. In the same period, 35 projects have entered the backlog. A major factor in

performance on this measure is that many projects were due to close at the end of October – a time when both grant managers and project sponsors were busy with the review of new projects for the 2011 grant round.

2. Of those that closed, about half needed a time extension beyond the original grant agreement.

3. This will be measured after the grants are awarded in December.

4. Reports for this measure are not yet available.

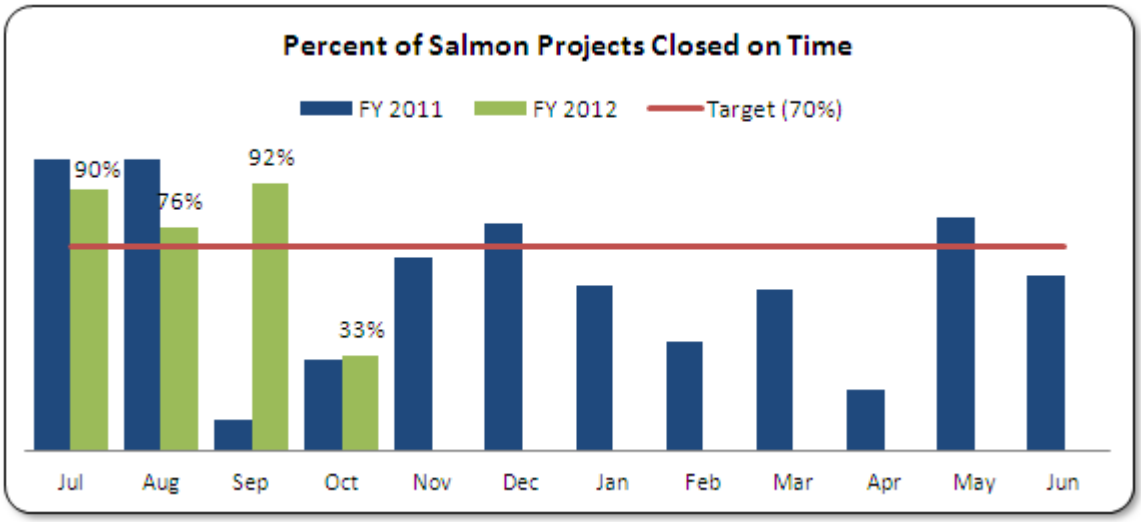
5. "Bills paid on time" continues to be a difficult measure for the RCO to calculate. Factors in this measure include the additional documentation required, whether the invoice from the sponsor is complete, and RCO staff workload. This measure includes those invoices that were delayed because the sponsor did not provide complete documentation with the bill.

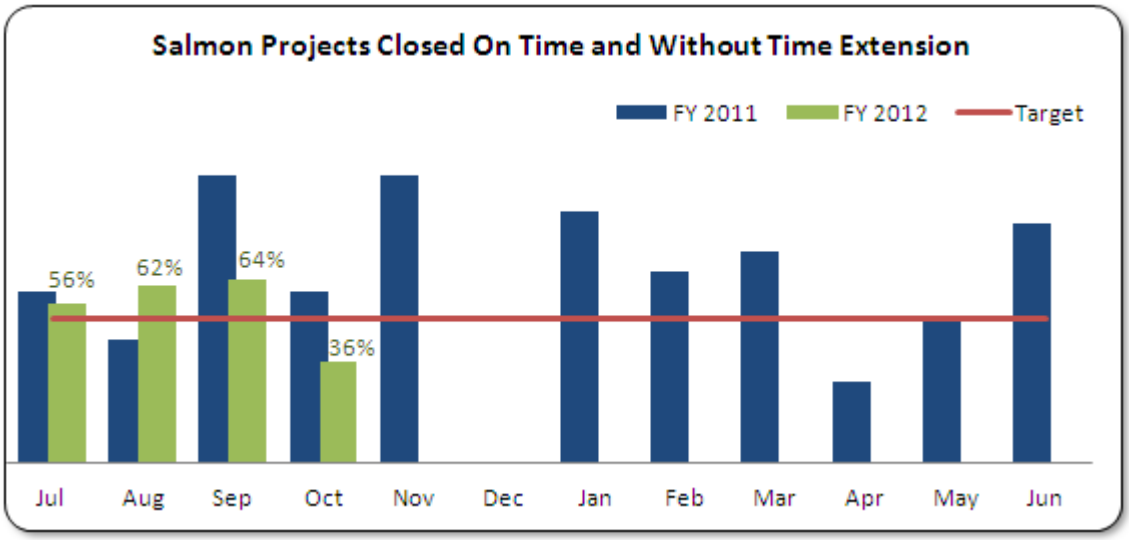
6. Sponsors anticipated and achieved making 18.2 stream miles accessible during the first quarter.

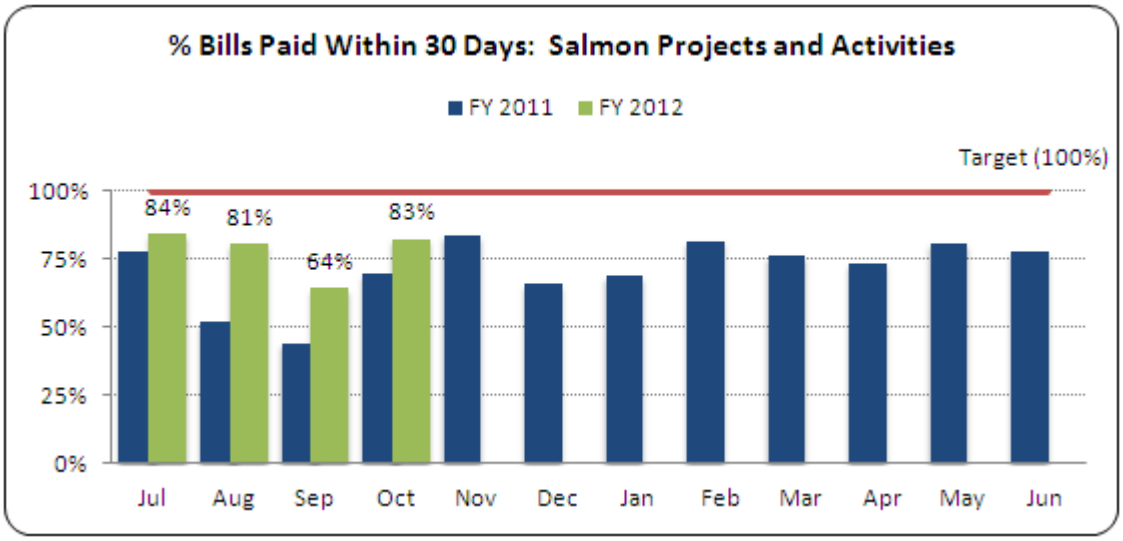
Attachments

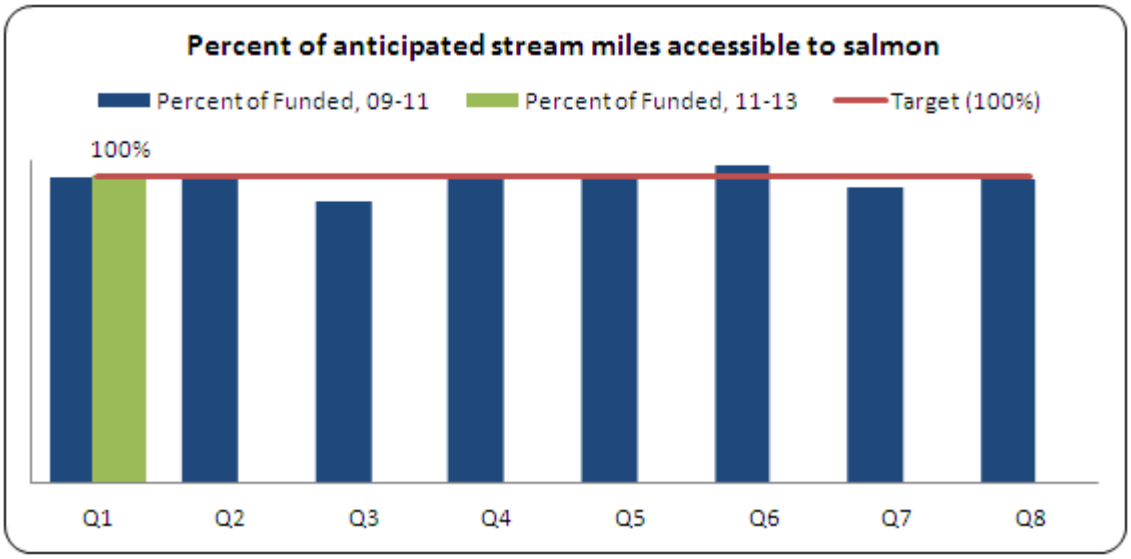
A. Performance Measure Charts

Performance Measure Charts








Percent of anticipated stream miles accessible to salmon
Percent of Funded, 09-11
Percent of Funded, 11-13
Target (100%)
100%
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Governor's Salmon Recovery Office

Salmon Recovery Funding Board
Briefing Memo
Item 2A

Meeting Date: December 2011

Title: Management Report, Governor's Salmon Recovery Office

Prepared By: Megan Duffy, Executive Coordinator

Approved by the Director: Kaleen Cottingham

Proposed Action: Briefing and Decision

Highlights of Recent Activities - GSRO

Science Coordinator Position

The Governor's Salmon Recovery Office (GSRO) has hired Keith Dublanica as its new science coordinator. Keith comes to GSRO from the Mason County Conservation District where he was a habitat biologist. Prior to the Conservation District, Keith worked with the Skokomish Indian Tribe for 14 years; he served as the Natural Resources Director for seven of those years. He has significant experience with salmon protection and restoration efforts, including tracking, monitoring, and adaptive management. His responsibilities within GSRO will include participation in the development of the State of the Salmon Report, tracking monitoring efforts, assessing data to measure progress in salmon recovery efforts, managing monitoring contracts, and translating data to inform policy discussions.

Salmon Recovery Information and Reporting Initiatives

GSRO is working with a team of lead entities, Recreation and Conservation Office (RCO) staff, and system designers to improve the user experience and data quality within PRISM and Habitat Work Schedule. While several features of the PRISM/Habitat Work Schedule interface are up and running, there is a need to refine some of these features and to adjust both data flows and system user workflows.

GSRO also is meeting with the regional recovery organizations and several agencies to (1) gather and synthesize feedback about which data to report and how to report it, (2) define workplans, (3) develop web templates, and (4) create work teams for the 2012 State of the Salmon in Watersheds Report.

2010 Regional Performance Reviews

GSRO conducted annual performance reviews for all seven regional salmon recovery organizations in October and November 2011. These reviews (1) acknowledge recent major accomplishments; (2) identify obstacles or delays to key milestones; and (3) review expectations and milestones identified in current scope of work. GSRO will be preparing a summary of these reviews.

Steelhead Efforts in Puget Sound

GSRO is working closely with the Puget Sound Partnership to determine how to most effectively distribute the $250,000 awarded by the Salmon Recovery Funding Board (board) for Steelhead Planning in Puget Sound. The Puget Sound Steelhead Technical Review Team (TRT) produced its draft Population Identification document at the end of October, and anticipates completing draft viability criteria by the end of 2011. Both of these documents will provide guidance in how to target the funds. Additionally, the Partnership will be convening a small group of experts to discuss — in light of recent marine studies, the TRT's work, and the WDFW Steelhead Action Plan (produced in response to a request by the Governor) — the most critical needs for steelhead. That work will provide direction on the best way to invest the $250,000. GSRO will be closely involved with the Partnership in these efforts.

Update on Monitoring Funds from PCSRF, FFY 2011

Tetra Tech Effectiveness Monitoring - Decision

The Tetra Tech contract for the board's effectiveness monitoring program expires April 30, 2012. The board has provided funding for this program since 2004. The intent of the monitoring is to determine the efficacy of projects in achieving intended restoration, and for some categories, whether localized salmon and steelhead abundance has increased[1]. The program, which was originally planned as a 12-year effort, is currently in its seventh year.

In order to begin effectively preparing for the 2012 field season, Tetra Tech will need to be under contract no later than March 1, 2012. As the board is not scheduled to meet until April 2012, staff is requesting that the board approve funding at this time. Staff will request that Tetra Tech provide a briefing to the board in April on the current status and findings of the program.

Proposed Motion Language

Move to approve $287,000 for continuation of the board's Effectiveness Monitoring Program.

[1] A summary of the program and results from analyses of the monitoring data is available on the web at http://www.rco.wa.gov/documents/monitoring/2010Report.pdf. Reports can also be found on the Habitat Work Schedule site.

Remaining FFY 2011 PCSRF Funds

GSRO is working with a group to determine the how best to allocate the remaining/unobligated 2011 Pacific Coastal Salmon Recovery Funds (PCSRF) dedicated to monitoring. This group includes representatives from the regional organizations, Northwest Indian Fisheries Commission, Washington Department of Fish and Wildlife (WDFW), the Department of Ecology, and RCO staff. Potential monitoring projects presented to the group include:

1. Expand the current project effectiveness monitoring program to increase the number of floodplain enhancement and instream structure projects monitored. For this study, additional specifically selected (i.e., not randomly selected) project sites would be added to the current pool of effectiveness monitoring projects.

2. Evaluate opportunities to combine and analyze data generated by monitoring programs using different sampling protocols. There are currently several large data collection programs funded by public dollars (e.g., CHaMP, Ecology Status and Trends, UCSRB monitoring, etc.). The results of these programs could be "crosswalked," and disparate data may (or may not be able to) be integrated.

3. Identify existing estuarine and nearshore protocols, indicators, and metrics for the State of the Salmon Report and to inform restoration approaches. This effort would investigate available information, share that information with lead entities and regional organizations, and convene experts to recommend preferred nearshore protocols, indicators, and metrics.

4. Expand the 2010 pilot on high resolution change detection in salmon recovery regions. This effort would expand a successful pilot tested in Puget Sound in 2010 to use high-resolution aerial imagery to detect changes in land cover from 2006 to 2009. This project would look at a specific watershed in each of the remaining salmon recovery regions to detect transitions from forest land cover to human dominated land cover.

5. Develop an implementation monitoring pilot study to develop draft protocols and methodologies for comprehensive, standardized implementation monitoring. Implementation monitoring tracks the location, description, magnitude, quality, effect, and continued function through time of habitat restoration and protection projects. Results from implementation monitoring could assist in the evaluation and reporting of progress towards recovery goals by providing consistent, standard measures of project magnitude and quality, and would facilitate the long-term stewardship of restoration by monitoring the continued function of projects.

These proposals are consistent with the monitoring section of the 2011 PCSRF grant application and will be considered in light of project review criteria originally developed by

the Monitoring Forum. At the board's April meeting, staff will present the final recommended proposals and request approval to create and enter contracts to implement the recommended monitoring efforts.

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board
Briefing Memo
Item 2B

Meeting Date: December 2011

Title: Management Report: Salmon Recovery Grant Management

Prepared By: Brian Abbott, Section Manager

Approved by the Director: Kaleen Cottingham

Proposed Action: Briefing

Grant Management

Before the regional area meetings that were held September 26 through 29, the Review Panel identified 27 projects for more discussion with the sponsors and lead entities. As a result of the meetings, most of the issues were resolved. As of this writing, there are only two projects of concern and fourteen "conditioned" projects. Recreation and Conservation Office (RCO) staff posted the *SRFB Grant Funding Report* to the web on November 21 for comment. Staff will brief the Salmon Recovery Funding Board (board) on any changes at the December meeting.

Considerations for Projects on State-Owned Aquatic Lands

Earlier this year, RCO staff was contacted by the Washington Department of Natural Resources (DNR) to discuss notification of, and the process for authorizing, board-funded projects on state-owned aquatic lands. State-owned aquatic lands are defined as public lands that lie beneath our state's navigable waters, including coasts, lakes, rivers, and Puget Sound marine areas. DNR is the steward of Washington's state-owned aquatic lands; they act as the landowner, managing these lands to provide a balance of public benefit for all citizens.

To fulfill their obligation to manage these lands, they have recently established a non-regulatory process to cover use of the property. If DNR authorizes a project, the sponsor will have to sign a legal contract with DNR that documents terms and conditions of the use, which may include performance bonds, insurance, and rent where applicable.

RCO and GSRO staff members continue to work with DNR to ensure DNR is contacted appropriately and to lay out an easy process for sponsors to follow should their project be on state-owned aquatic lands. Manual 18 revisions include direction to project sponsors to contact DNR if they think their projects may lie within state-owned aquatic lands. DNR will ultimately determine if a project is on state-owned aquatic lands.

Additionally, to aid our understanding of the potential effect on board-funded projects, RCO staff asked DNR to identify 2011 grant round projects they believe to be on state-owned aquatic lands. DNR reviewed the project list and indicated 10 projects that are definitely on state-owned

aquatic lands and 15 that may be. RCO staff will provide a brief update at the December board meeting regarding the current status of these projects and any potential policy implications.

Follow-up to August Discussion Regarding Fish Passage

In August, RCO staff gave a briefing on the Family Forest Fish Passage Program (FFFPP). After the presentation, board members requested information on the FFFPP projects in the Columbia Basin.

In response, RCO staff and the WDFW Fish Passage Program provided a list of 225 potential FFFPP projects in the Columbia Basin. WDFW also is working to provide a list of potential barrier projects from their fish barrier database for the Columbia Basin.

RCO and WDFW staff met with board member Mike Barber, Washington Department of Transportation, to brainstorm ideas to coordinate fish passage programs and align priorities to achieve the greatest benefit to the resource. One result was agreement to restart the Fish Passage Workgroup and reach out to regional organizations and lead entities. The goal is to coordinate efforts and share information on barrier correction projects and align priorities.

Closed Projects – New feature in Grant Management Report

The move to provide board meeting materials electronically and the new SnapShot feature in PRISM have presented a great opportunity to share recently closed projects. A closed project means all expenditures have been billed and those eligible expenses have been reimbursed, a final report has been received and accepted, and all required documents have been submitted.

The list below is projects that have closed within the last two months. To view information about a project, click on the blue project number[1]. You can open and view the project attachments (e.g., design, photo, map, and final report). You also will find a project search feature on the RCO website at Project Search to query additional projects

[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	Closed On
08-1983	Baar- Barr Creek R6	Lower Elwha Klallam Tribe	FFFPP Grants	10/3
08-2132	Middle Skagit River Project Development	Skagit Watershed Council	PSAR	10/3
08-2056	Lower Tolt River Floodplain Reconnection 08	Seattle Public Utilities	PSAR	10/3
09-1468	Skagit Bay Nearshore Restoration Design	Whidbey Camano Land Trust	Salmon Federal Projects	10/4
05-1594	Klickitat Floodplain Restoration Phase 2	Columbia Land Trust	Salmon Federal Projects	10/4
06-2221	Hamma Hamma River Estuary Restoration	Hood Canal SEG	Salmon State Projects	10/7
10-1862	Snohomish Sustainable Lands Strategy	Puget Sound Partnership	PSAR	10/11
05-1616	Influence of Carcass Analogs	Lower Columbia Fish Recov Bd	Salmon Federal Projects	10/12
07-1660	Tarboo-Dabob Bay Acquisition and Restoration	Northwest Watershed Institute	PSAR	10/17
09-1533	Siebert Ecosystem Habitat Protection Phase II	North Olympic Land Trust	PSAR	10/17
07-1844	WRIA 14 Beach Seine Project Development	Squaxin Island Tribe	PSAR	10/19
07-1821	WRIA 13 Beach Seine Project Development	Squaxin Island Tribe	PSAR	10/19
09-1742	Tucannon River Off-Set Dike Assess and Design	Columbia Conservation Dist	Salmon State Projects	10/20
08-2043	Ingebright- Jordan Creek R6	Stillaguamish Tribe of Indians	FFFPP Grants	10/20
08-1733	NF Lewis RM 13.5	Lower Columbia River FEG	Salmon Federal Projects	10/20
09-1724	South Fork Stillaguamish Broodstock Support Proj.	Stillaguamish Tribe of Indians	Salmon Federal Activities	10/22
02-1518	Regional Culvert Inventory, Phase 1	Clark Conservation District	Salmon State Projects	10/25
02-1658	Regional Culvert Inventory, Phase 2	Lower Columbia Fish Recov Bd	Salmon State Projects	10/25
08-2087	Walla Walla from Frog Hollow Bridge to Last Chance	Walla Walla Co Cons Dist	Salmon Federal Projects	10/26
08-2039	Coppei Creek Assessment & Design	Walla Walla Co Cons Dist	Salmon Federal Projects	10/26
08-2040	Mill Creek Assess and Design - OR border to RM 16	Walla Walla Co Cons Dist	Salmon Federal Projects	10/26
07-1533	Issaquah Creek WaterWays – Squak Valley Park Acq	Issaquah City of	PSAR	10/27
07-1703	Beaconsfield on the Sound: Acquisition	Cascade Land Conservancy	PSAR	10/27
07-1705	Smith Island Restoration - Design & Permit	Snohomish County of	PSAR	10/28
07-1751	SF Stillaguamish Chinook Supplementation	Stillaguamish Tribe of Indians	PSAR	10/28
07-1902	Tenmile Bridge Project	Asotin Co Conservation Dist	Salmon State Projects	10/28
07-1736	Lower Pilchuck Instream & Riparian Restoration	Stillaguamish Tribe of Indians	PSAR	10/31
07-1915	Dosewallips & Duckabush ELJ Design	Wild Fish Conservancy	PSAR	11/2
07-1538	Forest and Fish #7	Natural Resources Dept of	Salmon Federal Activities	11/2
06-2190	Riverview Park Restoration	Kent City of	Salmon State Projects	11/7
07-1810	Coppei Creek Karl Conservation Easement	Blue Mountain Land Trust	Salmon Federal Projects	11/9
09-1531	Valley Creek Restoration Phase 3 Design	Port Angeles City of	PSAR	11/9

Grant Administration

The table on the next page shows the progress of the Salmon Recovery Funding Board in funding and completing salmon recovery projects since 1999. Information is current as of November 20, 2011.

Funding Cycle	Fiscal Year	Active Projects	Pending Projects (approved but not yet active)	Completed Projects	Total Funded Projects
Governor's Salmon Recovery Office Federal 1999	1999	0	0	94	94
Interagency Review Team (Early Action grant cycle) State 1999	1999	0	0	163	163
SRFB - Early (State) 2000	2000	0	0	90	90
SRFB - Second Round 2000	2001	0	0	147	147
SRFB - Third Round 2001	2002	0	0	132	132
SRFB - Fourth Round 2002	2003	1	0	88	89
SRFB – Fifth Round 2004	2004	3	0	105	108
SRFB – Sixth Round 2005	2006	6	0	102	108
SRFB – Seventh Round 2006	2007	8	0	86	94
SRFB – 2007 Grant Round *(includes PSAR)*	2008	80	0	141	221
SRFB – 2008 Grant Round	2009	51	0	55	106
SRFB – 2009 Grant Round *(includes PSAR)*	2010	208	0	39	247
SRFB – 2010 Grant Round *(Oct and Dec)*	2011	112	3	4	119
*Family Forest Fish Passage Program	To Date	26	0	155	181
** Estuary Salmon Restoration Program	To Date	9	0	0	9
Totals		**504**	**3**	**1,401**	**1,908**
	Percent	*26.4%*	*.0015%*	*73.4%*	

Table Notes:

* FFFPP projects landowners that have applied to the program and are waiting to become a high priority for funding. These projects are not included in totals.

** Shows ESRP projects either under contract with the RCO or approved for RCO contracts. Older projects are under contract with the Department of Fish and Wildlife.

Lead Entity Advisory Group

Report to the Salmon Recovery Funding Board
November 22, 2011

Lead Entities continued their work both individually and collectively advancing salmon restoration efforts in their respective local watersheds since the August 2011 meeting of the Salmon Recovery Funding Board (SRFB). During this time period, many lead entities are working with the Review Panel and project sponsors to finalize the 2011 grant round.

We had a very strong turnout at the Friday, Sept. 30, 2011 meeting of the Lead Entity Advisory Group (LEAG) in Roslyn, WA. Agenda topics included a budget presentation by Lloyd Moody of the Governor's Salmon Recovery Office (GSRO), including an overview of 2009-2011 Lead Entity Grant Expenditures. This was followed by a discussion of a collective LEAG response to the SRFB's requested 5% and 10% budget reduction exercise and subsequent work needed on this issue. LEAG issued its response to the GSRO as requested and encouraged individual lead entities to do the same.

We are in support of the RCO's recommendation to SRFB to approve a 5% set-aside to maintain lead entity program funding in order to these allow these local, collaborative efforts to continue advancing restoration in their watersheds.

Lead Entities were also briefed on what has been called "Lead Entity Issues in Need of Clarification" which has to do with lead entity composition, citizen committee representation, roles and responsibilities of the lead entity in respect to public outreach for particular projects, etc. This will be an ongoing topic of discussion and work during the next few months.

The meeting also included an update on Monitoring by Jennifer O'Neal of Tetra Tech and GSRO's Jennifer Johnson. The meeting also included a trip to the nearby Cle Elum River where sockeye were spawning and education was provided about local recovery efforts. LEAG is forming a committee which will work on the issue of whether monitoring can be used as match for SRFB projects with the hopes of bringing that back to SRFB for consideration.

A LEAG Training Committee is working on organizing a Lead Entity Training Retreat. It will be March 21 through March 23, 2012 at Alderbrook Resort along Hood Canal. The committee includes Darcy Batura of the Yakima Lead Entity, John Foltz of the Klickitat Lead Entity, Karen Bergeron of WRIA 9 Lead Entity, and LEAG Chair and Vice Chair Cheryl Baumann of North Olympic LE and Jennifer Goodridge of Chelan LE. Potential topics include: Avoiding and managing controversy, building community support through public outreach, large project coordination issues and exploring new funding strategies.

LEAG Members met by phone and Web-Ex on Nov. 9th. Topics included updates, proposed changes to Manual 18 by Brian Abbott of the Recreation and Conservation Organization (RCO), discussion with RCO's Susan Zemek on the handling of press releases involving the Dec. SRFB project awards, and responses to a LEAG Member Survey regarding potential Conflict of Interest issues.

LEAG Members decided to hold an in-person meeting on the afternoon of Wed. Dec. 7th, prior to the Dec. 8th SRFB Meeting in Olympia. More work will be done on the Lead Entity Issues in Need of Clarification, a presentation by the Aquatic Lands Division of the Department of Natural Resources, and other issues.

Thank you for this opportunity to provide an update on the ongoing efforts of the Lead Entity Advisory Group.

Respectfully Submitted by:

Cheryl Baumann, LEAG Chair

Regional Fisheries Enhancement Groups (RFEG's)

SRFB Meeting December 8, 2011

RFEG Projects:

- RFEG's Complete roughly 20-25% of RCO Projects and Funds Spent (SRFB/FFFPP)
  - RFEG's collaborate with partners & stakeholders including WDFW and Lead Entities
  - 400 RCO projects since 1999
  - RCO has invested $67 million since 1999
  - 3,100 RFEG projects since 1995
  - Total RFEG investment in salmon recovery is over $150 million since1995
  - RFEG's Leverage funds and opportunities to complete projects
    - Educate thousands of kids & community members

RFEG Overhead:

- RFEG's consistently implement diverse projects with low overhead
- Typical organizational overhead is around 10-15% per group
  - RFEG's take pride in completing on-the-ground projects effectively and efficiently
  - RFEG's operate with much less than other agencies and/or programs
  - RFEG's are always searching for innovative ways to become more effective

RFEG Economic Value:

- 63 RFEG FTE's
- 51 Intern FTE's
- Hundreds of volunteers and thousands of donated hours per year
- Over 1 million volunteer hours since 1995
- Construction Services: (average per year)
  - $6 million per year (on-the-ground)
  - Over 100,000 hours of construction activities
  - Additional 53 FTE's for construction employees
  - 800,000 hours of Professional Services
    - Engineers, Surveyors, Accountants, Scientists etc.

RFEG Funding:

- Each RFEG receives ~$90k per year from Federal USFWS (Dept of Interior)
- Each RFEG receives ~$40k per year from WDFW (non general fund): License sales and Egg and Carcass revenue
- "Base" funds are leveraged 15:1 to accomplish a tremendous amount of salmon restoration across the entire state
  - All of RFEG capacity is supported by $130k Base Funds
- Federal funds <u>ARE NOT</u> secured beyond 2013
  - RFEG's are currently working on a sustainable funding plan to *possibly* fill the gap
  - Without federal funds RFEG capacity is greatly reduced

Example of RFEG Projects:

Riparian Planting

Nearshore Habitat

In-Stream Habitat

Assessments

Education

Fish Passage

Salmon Recovery Funding Board
Briefing Memo
Item 4

Meeting Date: December 2011

Title: Board Meeting Schedule for 2012

Prepared By: Rebecca Connolly, Board Liaison

Approved by the Director: Kaleen Cottingham

Proposed Action: Decision

Summary

The Salmon Recovery Funding Board (Board) meets four to six times per year to award grant funding and provide policy direction for the grant programs and planning activities. Statute requires the board to establish its regular meeting schedule and notify the Code Reviser of the dates and locations before January 1 of each year. Board members have indicated availability on the dates suggested by staff, and are therefore asked to approve the proposed schedule.

Staff Recommendation

Recreation and Conservation Office (RCO) staff recommends that the board adopt the proposed meeting schedule and locations for 2012.

Dates	Location
April 18 – 19	Olympia
June 7	Olympia
August 23	Conference Call
September 19-20	Olympic Peninsula
December 6-7	Olympia

Proposed Motion Language

Move to adopt the 2012 meeting schedule as presented, with the September meeting to be held on the Olympic Peninsula.

Background

The Open Public Meetings Act requires state agencies to identify the time and place they will hold their regular meetings and to publish their schedule in the Washington State Register. The agency must notify the code reviser of that schedule before January of each year. Accordingly, the board typically has approved its meeting schedule for the next year in October.

Analysis

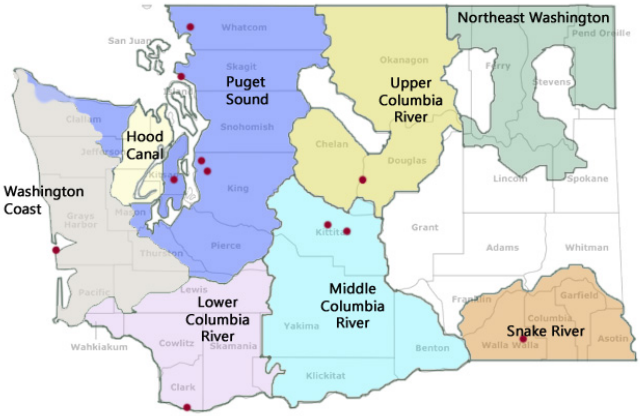
Meeting Dates

Staff believes that the board can accomplish its work in five meetings. If needed, the chair may call for an additional special meeting, which could be conducted by phone. Further, the two-day meetings may be reduced to one day each, depending on the topics to be addressed.

Locations

Staff considered projects that could be of interest to board members, as well as the locations of previous meetings, to determine meeting sites in 2012. The board has traveled to the following locations in recent history:

Year	Travel Locations
2005	Seattle, Tukwila,
2006	LaConner, Seattle, Walla Walla
2007	Cle Elum, Bremerton
2008	Wenatchee, Westport
2009	Camas
2010	Bellingham
2011	Ellensburg



If the board wishes to travel during 2012, staff recommends that they select a location on the Olympic Peninsula. The Coast Region will be completing the draft Salmon Conservation Plan in 2012. If the board selects this option, staff would work with the region to determine the best location to maximize public participation and allow the board to see the salmon recovery work.

Next Steps

Staff will plan meetings for 2012 and make the required notifications. Dates or locations for regularly scheduled meetings can be altered, with sufficient notice. The chair may call special meetings at any location or time in compliance with the notice provisions of the Open Public Meetings Act.

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Governor's Salmon Recovery Office

Salmon Recovery Funding Board
Briefing Memo
Item 5

Meeting Date: December 2011

Title: Addressing General Fund Budget Reductions

Prepared By: Megan Duffy, GSRO Executive Coordinator

Approved by the Director: Kaleen Cottingham

Proposed Action: Decision

Summary

At its August 2011 meeting, the Salmon Recovery Funding Board (board) directed lead entities to engage in a 5 and 10 percent budget reduction exercise focused on the state general fund portion of each lead entity budget. This direction came in light of likely budget reductions and directions from the Office of Financial Management for state agencies to provide 5 and 10 percent budget reduction scenarios.

Board staff also requested that lead entities indicate what services or functions would most likely be reduced, curtailed, or eliminated if budget reductions were implemented. In light of likely reductions in federal fiscal year 2012 Pacific Coastal Salmon Recovery Fund (PCSRF) funding, staff also requested that regional organizations engage in a similar budget reduction exercise.

Since then, Governor Gregoire has released her budget reduction alternatives. In that document, the Office of Financial Management identified a $25,000 cut to lead entity state general fund dollars. This represents a cut of about 2.5 percent to the lead entity state general fund dollars. As of November 18, PCSRF in included in the Congressional Budget for federal fiscal year 2012 at $65 million. It is uncertain if NOAA will take any additional administrative reductions from that amount before it allocates funds to each state.

At its December 2011 meeting, the board will consider how best to address any potential cuts in lead entity state general fund dollars.

Staff Recommendation

Staff recommends that the board backfill any cuts up to 5 percent in lead entity state general fund dollars.

Staff further recommends that the board have a more detailed discussion regarding funding levels for regional organizations, lead entities, and habitat restoration and protection projects at its April meeting. At that time, staff hopes to know the outcomes of the state legislative session and any potential cuts to the state capital budget. Staff will hopefully know the final target from NOAA for the Pacific Coastal Salmon Recovery Funding level for federal fiscal year 2012.

Proposed Motion Language

Move to adopt that any cuts up to 5 percent in lead entity state general fund dollars in the current biennium be backfilled with returned federal PCSRF funds.

Background

Salmon Recovery Funding Board strategic plan

The board's strategic plan includes the following funding strategy:

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.

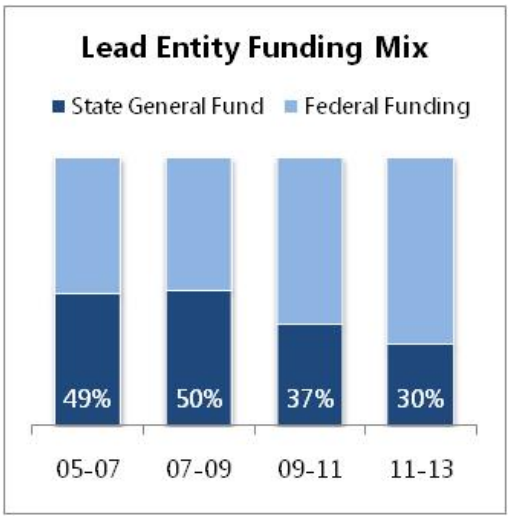
- Provide funding for the following:
  - Projects that produce measureable and sustainable benefits for salmon
  - Monitoring to measure project implementation, effectiveness, and the long-term results of all recovery efforts
  - Human capital that identifies, supports, and implements recovery actions
- 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

Funding for human capital supports the roles and responsibilities of the lead entities and regions as described in Attachment A.

Historical lead entity funding and state budget reductions

The board has addressed funding reductions several times in the recent past; resolving issues with state funding cuts by reallocating returned funds. "Returned funds" refers to money previously allocated to a specific grant agreement that is then not used. Reasons can include projects coming in under budget or unable to be implemented because of unforeseen developments.

In previous years, the lead entity state general fund dollars[1] have been reduced in total by about $615,000 (38%). In the 09-11 budget, the lead entity state general fund dollars were reduced by about $411,000 and backfilled with returned funds. For the 11-13 biennium, the state appropriation was reduced again by about $204,000. The board supported continuation of status quo funding for the lead entities and regional organizations. The funds were reallocated from returned funds, reducing the amount of money available for cost overruns and project grants. The effect has been to keep the lead entities funded at the same level as in 1999.



Current state funding and budget reduction exercise

In 2011, the Office of Financial Management requested that the Recreation and Conservation Office (RCO) prepare a 5 and 10 percent budget reduction exercise in anticipation of fewer state general fund dollars. As a result of the cuts taken in the past two biennia, all of RCO's remaining general fund support is related to salmon. The RCO director consulted with the executive management team, the chief financial officer, the GSRO executive coordinator, and the salmon section manager about possible scenarios that would support the funding strategy in the board's strategic plan. Based on these discussions, the RCO developed its response to OFM's request. This response assumed that the cut would include a five percent reduction across the board.

In October, Governor Gregoire released budget reduction alternatives. In this document, the RCO was directed to take a 5 percent cut. The Governor's recommended approach, however, takes a lower cut in lead entity funding and a higher cut in other areas supported by the general fund, as shown in this table.

Table 1: Five Percent Reduction Scenario

Item	Reduction	Percent Cut
Governor's Salmon Recovery Office • Delay filling science coordinator position • Reduce resources used to produce State of Salmon Report	$33,000	
Reduce funding for salmon recovery administration	$40,000	
Reduce Lead Entity Funding	$25,000	2.5%
Total Reduction	**$98,000**	

[1] Lead entities receive board funding from the state general fund and from the Puget Sound Acquisition and Restoration funds. Only the general funds, which are allocated statewide, are the subject of discussion at this time.

Analysis

Lead entity and regional organization responses to reduction exercise

In response to the request to engage in a 5 and 10 percent budget reduction exercise, seven regional organizations and 21 lead entities submitted information regarding which services or functions would most likely be reduced or eliminated if budget reductions were implemented.

The responses to a five or ten percent reduction included the following approaches:

- Potential loss of the lead entity program in some areas, particularly those lead entities impacted by reductions in county budgets
- Loss of staff, up to one FTE
- Reduction in staff hours and/or salary
- Reduction in quality of and delays in completing deliverables
- Reduction of outreach and training efforts
- Reduction in Habitat Work Schedule efforts, including the inability to completely populate database, validate projects, and update proposed projects for out year planning
- Overall reductions in tracking and reporting on plan implementation
- Reduction of external support such as accounting, technical, and legal services
- Reduction in statewide planning and recovery efforts

Several regions and lead entities asked that their contractual scopes of work be revised if a budget reduction were implemented. The implementation of such a reduction would result in an inability to meet current deliverables.

Effect of backfilling lead entity budgets with federal funds

Covering up to a 5 percent cut to lead entity state general fund dollars could reduce the board's returned funds by $49,253. In previous years, these returned dollars have been used for potential cost overruns to projects and rolled into the next project grant round.

The total of returned funds in 2011 is approximately $3.8 million. Backfilling the lead entity dollars would result in an approximately 0.65 percent cut in the total returned funds.

Next Steps

Future Budget Discussion – April 2012

RCO staff anticipates that the board will need to revisit budget allocations at its April 2012 meeting. At that time, staff hopes to know (1) the results of the state legislative session and any impacts of that session on the capital budget and (2) the NOAA funding levels for federal fiscal year 2012 Pacific Coastal Salmon Recovery Funding (PCSRF) dollars.

As of November 18, PCSRF has been approved by both the House and the Senate at $65 million. It is uncertain whether there will be any further administrative reductions to that amount based on final NOAA budgets. Funding at $65 million represents a $15 million reduction from the current $80 million mark, and will have implications for the total amount of funding received by Washington State for salmon recovery purposes.

The board will need to consider the impact on project funding levels as well as lead entity and regional recovery organization operation dollars. The board may consider options such as:

- Reducing the overall project funding dollars available for the 2012 grant round
- Reducing project funding dollars and regional and lead entity operational dollars
- Reducing regional and lead entity operational dollars
- Revising policies and practices to assist in filling any budget gaps. These could include revising the practice of saving a portion of return dollars for cost increases and eliminating the practice of paying for cost increases with SRFB dollars or eliminating the policy to pay up to 10 percent over appraised value

Staff will monitor the state legislative process and budget discussions, as well as track any additional Pacific Coastal Salmon Recovery Fund (PCSRF) discussions at the federal level. Based upon budget information known in advance of the April board meeting, staff will prepare an analysis of past and current funding levels and of potential options for addressing budget reductions. Staff will prepare a briefing memo for the board's April 2012 meeting to consider how best to absorb any reductions.

If a state budget is passed resulting in a cut in state general funds to the lead entity organizations, staff will implement the board's decision regarding the use of returned funds to backfill the reduction.

Attachments

A. Roles and responsibilities of regions and lead entities

Attachment A: Roles and responsibilities of regions and lead entities

Regional Organizations

Generally, the seven regional organizations perform many of the same functions, but their areas of focus vary. These functions include:

- Refining and managing salmon recovery plans
- Coordinating implementation of the plan, tracking and reporting progress
- Coordinating monitoring and adaptive management
- Supporting collaborative decision-making in a variety of forums
- Communicating with public, tribes, agencies and others
- Developing a financing plan and seeking other salmon recovery funding
- Tracking and addressing emerging issues affecting salmon recovery statewide and within regions

Lead Entities

The twenty-seven lead entities build and sustain salmon recovery capacity at the watershed level to:

- Develop and rank high quality, locally supported salmon habitat protection and restoration projects;
- Garner community and public support for salmon recovery; and
- Be strategic and engaged in implementation of regional salmon recovery plans.

In meeting these objectives, each of the 27 lead entity organizations defines its core functions somewhat differently, depending upon a variety of factors such as local partners, culture, geography, and funding. There are several lead entity functions that are defined statutorily in RCW 77.85 or contractually. These include:

- Maintaining a lead entity organization
- Developing a project list
- Maintaining an updated project list and reporting on progress
- Developing a local strategy

Additionally – among other activities - lead entities seek additional funding sources, support regional and statewide salmon recovery coordination, engage in outreach to their local communities and help ensure that projects get done.

Salmon Recovery Funding Board
Briefing Memo
Item 6

Meeting Date: December 2011

Title: 2011 Grant Round Overview

Prepared By: Brian Abbott, Section Manager

Approved by the Director: Kaleen Cottingham

Proposed Action: Decision

Summary

The 2011 Grant Round Funding Report, which was released on November 18, is included with this memo for review by Salmon Recovery Funding Board (board members).

This report serves as the basis for the funding decisions. The projects under consideration are listed in the report by region and by lead entity. Applicants submitted their projects for board consideration through the application process described in board Manual #18, Section 3. The report also summarizes information that the regional organizations and lead entities submitted to the Recreation and Conservation Office (RCO) regarding their local funding processes. Finally, the report also accounts for the work completed by the board's Review Panel and provides the panel's collective observations and recommendations on the funding cycle.

The report is structured in three main parts:

- Introduction and overview of the 2011 grant round,
- Discussion of the Review Panel and their findings, and
- Region-by-region summary of local project selection processes.

Project Approval

The board will consider each region's list at its meeting on December 8, 2011, and will make funding decisions by regional area. The tables that the board will be asked to approve are at the end of the funding report. Each region will have ten minutes at the board meeting to discuss the project selection process and any projects of concern.

The board set a target funding amount and the percent allocated to each regional area at the start of the grant round in January. The board approved a final funding amount of $18 million at its May 2011 meeting, but did not change the regional allocations.

Each regional area and corresponding lead entities prepared its list of projects with the available funding in mind. Several lead entities also identified "alternate" projects on their list. These projects must go through the entire lead entity, region, and board review process. Project alternates within a lead entity list may be funded only within one year from the original board funding decision, if another project on the funded portion of the list falls through.

The funding report is available on the web at:
http://www.rco.wa.gov/documents/salmon/2011FundingReport.pdf

Salmon Recovery Funding Board
Briefing Memo
Item 7A

Meeting Date: December 2011

Title: Proposed Administrative Changes to Manual 18 for 2012 Grant Cycle

Prepared By: Brian Abbott, Section Manager

Approved by the Director: Kaleen Cottingham

Proposed Action: Decision

Summary

Recreation and Conservation Office (RCO) staff proposes the Salmon Recovery Funding Board (board) approve administrative revisions to *Salmon Recovery Grants Manual 18: Policies and Project Selection*. These revisions incorporate comments submitted by lead entities in their semi-annual progress reports, suggestions from the board's technical review panel, and board staff suggested clarifications and updates.

Adopting these revisions into Manual 18 at this time would allow lead entities and regions to use a final version of the manual for developing their projects and processes from the start of the 2012 grant round.

Staff Recommendation

Staff recommends that the Salmon Recovery Funding Board (board) adopt the Manual 18 administrative changes, beginning with the 2012 grant round.

Proposed Motion Language

- Move to adopt the Manual 18 administrative changes as presented.

Background and Analysis

The administrative changes that staff recommends (Attachment A) are the result of input gathered from a variety of stakeholders including regional organizations.

- Lead entities recommended changes in their semi-annual progress reports.
- The board's 2011 technical review panel made recommendations based on the recent grant round.
- RCO staff provided suggestions based on their experiences during the 2011 grant round.

The most significant changes will be in the grant round schedule (see Attachment B) and in *Appendix D, Restoration Design Phases and Deliverables*.

- The changes to the grant round schedule will provide more time for RCO staff and the Review Panel to complete their work, and the full Review Panel will be able to select projects they would like to hear more information on at the Regional Area Meeting. The changes also will streamline the process by eliminating one feedback loop after final applications.
- The update to Appendix D will clarify project deliverables for design and restoration projects.

Potential Policy Changes

Staff also is proposing that the board adopt policy changes to *Appendix B, SRFB Amendment Request Authority Matrix*, as described in memo 7B.

Staff also would like the board to be aware of two other issues that may require action in 2012, as follows.

- Monitoring – Lead entities asked that the board consider allowing monitoring to be considered as match. After more discussion, lead entities decided to form a small workgroup and develop detailed recommendations in 2012.
- State Owned Aquatic Lands – The Washington Department of Natural Resources is working with RCO to develop a process for working with sponsors who have projects on state owned aquatic lands.

Next Steps

Staff will highlight some of the proposed changes at the December board meeting. If the changes are approved by the board, staff will update the manual accordingly, and make it available for use beginning on January 6, 2012.

Attachments

A. 2012 Manual 18 Update – Summary Sheet

B. 2012 Grant Round Schedule

Attachment A: Manual 18 Updates For 2012 Grant Round – Summary Sheet

Section of Manual	Issue	Notes
Schedule	Update timeline for 2012 - Application due date August 24th. • The schedule keeps the optional early submittal date of August 10, which was added last year. RCO staff review the application for missing elements or incomplete information and provide feedback before the application deadline. • Another key change is that the timing of the review panel and regional meetings has changed (see next item).	Attached "A" is the proposed schedule from Manual 18. Adjustments to the schedule might be made following a review with lead entities and regions.
Schedule; Regional Area Meeting	During the last two grants rounds, the short timeline has made it difficult for RCO staff and the review panel to process all of the applications and select which projects should be discussed in greater detail at the Regional Area Meeting. To fix this, we moved the review panel meeting back to October 1 and 2 and moved the regional area meeting ahead by four weeks to the week of October 22.	
Section 1	Update staff contact list	Update
Section 1	Informational Workshops – Add Web X meeting option. Also added same information in later sections.	Update
Section 2	Update Aquatic Habitat Guidelines (AHG) web site address	Update
Section 2 State Owned Aquatic Lands	Provide background on state-owned aquatic lands and the process for obtaining permission from WDNR to implement restoration projects on their lands	Needed to clarify new process and responsibilities.
Section 2 New requirement	Require previously-funded deliverables to be completed at the time of technical review. For example, if a design grant was funded and the construction phase is being applied for, then the completed product from the design grant must be in-hand.	Lead entity suggestion
Section 4 Evaluation Proposal	For restoration projects, add additional questions about project design, construction supervision, and plan for as-built drawings where applicable. Additional detailed provided will help local and the state Review Panel understand in more detail how the sponsor plans to implement the project.	This will reduce duplication in some of the questions; for example, we would eliminate the project summary, which is already in the PRISM project description field.

Section of Manual	Issue	Notes
Section 6	Habitat Work Schedule – Update Manual 18 language to reflect the procedure for entering projects in the HWS and PRISM.	
Section 7	Update contacts in Permits section.	Update
Appendix A	Update Salmon Recovery Contacts	Update
Appendix B	SRFB Amendment Request Authority Matrix – Update the 2005 matrix and streamline decision making. RCO staff is proposing that the SRFB delegate decision making to the RCO Director, retain the subcommittee in an appellate role or to address complex issues at the discretion of the director.	RCO staff working on some options and will bring this policy issue to the board
Appendix D	Rewrite Appendix D to clarify the requirements on project deliverables and provide guidance for conceptual design, preliminary design, final design, and construction management. These deliverables would apply to all projects designing or implementing restoration work.	
Appendix P	Puget Sound Acquisition and Restoration Funds – Working with PSP to update and include policy on returned funds.	Clarify how PSAR returned funds are redistributed
Appendix R Checklist	If changes are made to Appendix D, the checklist will need to be updated.	
PRISM Application Questions (not in manual, but key part of process)	Clarify existing questions and add new questions in the PRISM application tab called "questions." • Cultural resources (Clarify) • State Owned Aquatic Lands (Add) • Match timing (Clarify) • Restoration – Designer and Construction Management (Add)	Questions will be added to help identify State Owned Aquatic Lands. Questions will be added to provide more detail on the sponsors plan for design and construction management (two key elements to a successful project)
PRISM Questions	Add a question in PRISM where the applicant identifies the recovery plan priority actions addresses by the proposed project. (Note this question is currently in the project evaluation proposal)	Lead entity suggestion. Staff will analyze whether this question should be in PRISM rather than the project evaluation proposal.

Attachment B: 2012 Grant Schedule

Date	Phase	Description
January–June 15	Technical review (required)	Recreation and Conservation Office (RCO) staff and review panel members meet with lead entities and grant applicants to discuss project ideas and visits sites. Scheduling starts January 16th. Please reserve and confirm your dates early. Site visits must be completed before June 15, 2012.
January–June 1	DUE DATE: Project pre-application materials due (required)	Project sponsors enter project review materials in PRISM for the SRFB Review Panel. This step should be completed as early as necessary to fit lead entities' schedules. Complete project review materials are required to secure a site visit by the review panel. Complete or near complete PRISM applications are recommended.
February–June	Application workshops (on request)	RCO staff offer application workshops or web-based meeting/ conference call, on request, for lead entities. The lead entity coordinator shall schedule with the appropriate RCO grants manager.
February–June 30	SRFB review panel completes initial project review forms	Two weeks after visiting projects, the review panel will post comments in SharePoint for lead entities and grant applicants. The review panel will "flag" projects that it believes would benefit from additional review at the regional area project meeting.
July 6	DUE DATE: Response to initial project review forms due	Grant applications updated to address Review Panel concerns from initial site visit and review. Sponsors attach their responses to review panel comments in PRISM.
July 12	Review panel meeting	Review panel discusses "flagged" projects and updates the review forms. Panel will meet either in person or via conference call to provide full panel feedback on "flagged" projects.
July 26	SRFB review panel updates project review forms	Two weeks after the July 6th review panel meeting, the review panel will post comments in SharePoint for lead entities and grant applicants. Grant applicants should update their applications to address any review panel concerns and attach their responses to review panel comments in PRISM with their application.
August 10	Optional early due date	Lead entities may choose an early submittal option of August 10th. This will allow RCO staff more time to review applications and more time for the Review Panel to do its work.
August 24	DUE DATE: Applications due Lead entity submittals due	Application materials, including attachments, must be submitted via PRISM by August 24. Lead entities without regional organizations submit responses to the information questionnaire. (Appendices N and O)

Date	Phase	Description
August 24-September 7	Grant manager review	All applications are screened for completeness and eligibility. If applications are submitted in PRISM before August 24, RCO staff can make them available to the review panel earlier.
September 7	Application materials made available to review panel in SharePoint and Habitat Work Schedule	RCO staff forwards all application information to review panel members for evaluation.
September 14	DUE DATE: Regional submittal	Regional organizations submit their recommendations for funding and responses to the information questionnaire. (Appendices N and O)
October 1-2	SRFB review panel meeting	Review panel meets to discuss projects. They will consider application materials, site visits, and all received responses to comment forms in order to complete the post-application status of each project.
October 5	SRFB review panel updates project review forms	After the October 1st meeting, the review panel will post comments in SharePoint for lead entities and grant applicants. Projects identified as "conditioned" or "POC" are recommended to provide responses to the review panel and have further discussion at the regional area meeting.
October 18	DUE DATE: Response to comment forms	For projects that are "conditioned" or identified as a "POC" the grant applicant should provide a final response to review panel comments. Grant applicants should post their responses on PRISM or send them to their grant manager.
October 22-25	Regional area project meetings	Regional organizations and lead entities present all projects on the list to the review panel, with a key emphasis on projects identified as "conditioned" or "POC" by the review panel.
October 31	Review panel finalizes comment forms	The review panel will finalize comment forms by considering application materials, site visits, sponsor's responses to comments, and presentations during the regional area meeting.
November 16	Final 2011 grant report made available for public review	The final funding recommendation report is available for public review.
December 6-7	Board funding meeting	Board awards grants. Public comment period available.

Salmon Recovery Funding Board
Briefing Memo
Item 7B

Meeting Date: December 2011

Title: Appendix B: SRFB Amendment Request Authority Matrix

Prepared By: Tara Galuska, Senior Grants Manager and Brian Abbott, Section Manager

Approved by the Director: Kaleen Cottingham

Proposed Action: **Decision**

Summary

Recreation and Conservation Office (RCO) staff has prepared three options for the Salmon Recovery Funding Board (board) to consider for updating Manual 18 Appendix B Amendment Authority Matrix. The matrix was developed and approved in 2005 and has never been updated. Staff has developed three options for the SRFB to consider.

Staff is making this proposal as part of the updates to Manual 18 in an effort to streamline the process. Many of the amendments that go to the subcommittee have been routine in nature.

Staff Recommendation

Staff recommends that the board approve one of three options being presented. While there are advantages and disadvantages to each, staff is not offering a specific recommendation other than to choose one of the three.

Proposed Motion Language

- Move to adopt Option __ as presented.

Background

Appendix B: SRFB Amendment Request Authority Matrix was adopted by the board in June 2005. This matrix describes when contract amendments can be approved by the director, by the subcommittee, or by the entire board. The matrix is used by RCO staff, sponsors, and the board to guide contract amendment decisions for projects.

Prior to Appendix B, amendment information and signature authority was found in several different manuals. Appendix B was created to consolidate that information in one place and to give sponsors of salmon projects, the board, and staff an overview of the amendment process and signature authority.

Since 2005, staff has found that the majority of the amendments requested are straightforward and non-controversial. Some of these non-controversial amendments have been approved by

the director and some have been, because of the matrix requirements, presented to the subcommittee. Only a handful of amendment requests have gone to the full board.

It often takes additional effort to prepare materials for the subcommittee and time to schedule conference calls or meetings. This additional time can cause delays to projects. Therefore, staff is proposing options to streamline the process and give additional delegation authority to the RCO director. In all options, the RCO director can refer decisions on amendments to the board. In addition to the increased delegation of authority, staff has proposed several clarifying amendments to the matrix that are consistent across all three options.

Analysis

RCO staff has prepared three options for the board to consider for revising Appendix B for the 2012 Manual 18 update. In all three options, the RCO director retains the ability to submit any amendment request to the full board or the subcommittee.

Clarifying Edits for All Options

The following changes to the Authority Matrix are proposed for all three options to clarify process

- The "close short" amendment is removed from the matrix, because it does not require advance approval and is a standard fiscal amendment.
- The statement "available to review change" has been added to the board's Technical Review Panel, so that RCO staff and the board may submit any amendment to the Review Panel for their review.
- Clarifies that the subcommittee may either approve or recommend most amendments; the current Appendix B appears to limit the subcommittee's option to recommend and refer an amendment to the full board.

Option 1 – Use existing Appendix B matrix and process.

This option keeps *Appendix B: SRFB Amendment Request Authority Matrix* unchanged, other than clarifying edits. In addition, this option retains the process that has been used since 2005 for approving amendment requests from project sponsors.

Under the existing matrix, some amendment requests can be handled by the director, but many others are subject to approval by the board's subcommittee. For example, the director may approve cost or scope changes up to 20 percent, but the subcommittee approves greater changes. The director also may approve an acquisition project site change to a contiguous location, but the subcommittee approves non-contiguous acquisitions and site changes for other project types.

Amendments approved by the director are managed with internal meetings as need. The subcommittee typically meets by conference call about once each quarter as needed. If the

status quo is retained, staff would schedule regular quarterly conference calls with the subcommittee.

Option 2 – Update Appendix B. Add appeals process.

This option gives the RCO director broader authority to make decisions regarding project amendments. The director keeps the ability to refer any amendment to the board subcommittee for further review and decision. The subcommittee would be used at the director's discretion for requests that are complex, controversial, or outside the normal range.

This option also adds a process so that a sponsor could appeal decisions about amendments. Appeals about a decision made by the director would be reviewed by the subcommittee, while an appeal of a decision of the subcommittee or board would be reviewed by the full board. Appeals by sponsors will not be part of the consent agenda.

Option 3 – Use existing Appendix B, but move to consent agenda format for decision making. Add appeals process.

This option uses the existing Appendix B with no changes (except for clarifying edits), but uses a consent calendar process for decisions on amendments. A consent agenda is voted on as a single item with no discussion by the board. All amendments placed on the consent agenda will have the director's recommendation for approval. Board members receive the consent calendar items with their other meeting materials for review. If a board member disagrees (in advance of the board meeting) with the director's recommendation to approve, the amendment would be pulled from the consent agenda and submitted to the board subcommittee for review and decision.

This option also adds a process so that a sponsor could appeal decisions by the director not to refer an amendment to the board for consent. Director decisions would be reviewed and decided upon by the subcommittee.

Advantages and Disadvantages of the Options

	Advantages	Disadvantages
Option 1	• Has been in place since 2005 and sponsors and staff are accustomed to the process. • Director has authority to recommend any decision to the board.	• Referral to sub-committee is time consuming and cumbersome. Not the most efficient process or timeline for sponsors. • Not a streamlined approach. • No appeals process identified, just assumed.
Option 2	• Streamlines decision process. • Timeline would be faster so projects can move forward. • Director retains authority to recommend any decision to the board. • Could lessen the time board has to spend on amendment review. • Record of director decisions could be added to the Salmon Section Manager Board report.	• Board would not review director decisions unless appealed.
Option 3	• Streamlines decision process for some amendments. • Director has authority to recommend any decision to the board.	• Timeline is delayed due to board meeting schedule. This can delay projects several months. • Full board would review all amendments coming out of Appendix B., rather than just the subcommittee.

Next Steps

Staff will highlight some of the proposed changes at the December board meeting. If the changes are approved by the board, staff will update the manual accordingly, and make it available for use beginning on January 6, 2012.

Attachments

A. Appendix B for Options 1 and 3

B. Appendix B for Option 2

Attachment A: Option 1 and 3 for Appendix B SRFB Amendment Request Authority Matrix

Adopted June 9, 2005, Proposed update December 2011

Changes from current version are shown in strikethrough and underline.

Amendment Request	Lead Entity	RCO Director	SRFB Subcommittee	SRFB Technical Review	SRFB	Example
All Project Types						
1. Increase project funds due to project overruns[1]	Consult[3]	May approve up to 20 percent of the total project cost[2]	May approve or recommend over 20 percent of the total project costs[2]	Available to Review Change	May approve over 20 percent	The site had different soil types than expected and it cost more than anticipated to do the geotechnical analysis, design, and install the culvert. The sponsor now requests an increase in SRFB funds.
2. Increase/ decrease project scope (no funding change)	Consult	May approve up to 20 percent scope change	May approve or recommend scope change over 20 percent	Available to Review Change	May approve scope change over 20 percent	Sponsor planted 3,000 trees and shrubs on 3 acres of riparian habitat, as outlined in the contract. Funds remain and the sponsor wants to plant an additional 100 trees and shrubs on adjacent acres. Sponsor plans to replace two barrier culverts. After designing the project, the sponsor realizes he only has funds to install one culvert. He requests a scope reduction, but still needs to use all the funds.
~~3. Project closes short~~		~~May approve~~				~~Sponsor completes all elements of a restoration project as outlined in the agreement under budget. The sponsor closes the project, and the funds are available to SRFB for redistribution.~~

[1] Cost increases only may be granted if funding is available.
[2] Change is limited to the dollar amount.
[3] Consult means the lead entity obtains a decision from its technical and citizens committees.

Amendment Request	Lead Entity	RCO Director	SRFB Subcommittee	SRFB Technical Review	SRFB	Example
4. Change project type	Consult	Recommend	May approve or recommend	Available to Review Change	May approve	Sponsor proposed to purchase floodplain or riparian habitat and reconnect a side channel on a portion of the site. The sponsor now proposes to only purchase the land.
5. Transfer sponsorship	Consult	May approve				Original sponsor is unable to start or complete the work and requests a different sponsor finish the project.
6. Reduce match	Consult	May approve up to 20 percent	May approve or recommend over 20 percent	Available to Review Change	May Approve	Sponsor received $75,000 from SRFB and provided $33,000 (30 percent) in match for a total project cost of $108,000. Later, he realized he only could raise a match of $14,000 (15 percent) for a total project cost or $89,000. The sponsor requests a match reduction of 57 percent ($19,000/$33,000) and corresponding scope reduction.
Acquisition Projects						
7. Change site to a contiguous site	Consult	May approve site add / change		Available to Review Change		Sponsor proposed to purchase six parcels. One of the parcels is not available, and the sponsor asks to buy a different contiguous site.
8. Change site to a non-contiguous site	Consult	Recommend	May approve or recommend site add / change	Available to Review Change	May approve	Sponsor proposed to purchase four parcels. One of the parcels is not available, and the sponsor asks to buy a different site on a different part of the river.
9. Pay more than fair market value (no increase in funding)		May approve up to 10 percent	May approve 10-20 percent		May approve over 20 percent	Sponsor and landowner negotiate a purchase price above the fair market value.

[1] Cost increases only may be granted if funding is available.
[2] Change is limited to the dollar amount.
[3] Consult means the lead entity obtains a decision from its technical and citizens committees.

Amendment Request	Lead Entity	RCO Director	SRFB Subcommittee	SRFB Technical Review	SRFB	Example
Restoration Projects						
10. Significant change in the project location	Consult	Recommend	May approve or recommend	Available to Review Change	May approve	Sponsor is unable to replace a culvert at the proposed location and asks to replace a culvert on another river, WRIA, or to benefit different fish.
Studies/Assessments Projects						
11. Significant change in the location of study	Consult	Recommend	May approve or recommend location change	Available to Review Change	May approve	Sponsor proposed to inventory barriers on a specific river and later asks to inventory another river, WRIA, or to benefit different fish.
12. Change type of study	Consult	Recommend	May approve or recommend	Available to Review Change	May approve	Sponsor proposed to do an assessment on forage fish but after more research determines an inventory of barriers is more important.

[1] Cost increases only may be granted if funding is available.
[2] Change is limited to the dollar amount.
[3] Consult means the lead entity obtains a decision from its technical and citizens committees.

Attachment B: Option 2, Appendix B –SRFB Amendment Request Authority Matrix

Adopted June 9, 2005, Proposed update December 2011

Changes from current version are shown in strikethrough and underline.

Sponsor may appeal any decision to the SRFB.

Amendment Request	Lead Entity	RCO Director	SRFB Subcommittee	SRFB Technical Review	SRFB	Example
All Project Types						
1. Increase project funds due to project overruns[1]	Consult[3]	~~May approve over 20 percent of the total project costs~~[2] May approve or recommend	May approve or recommend-~~over 20 percent of the total project costs~~[2]	Available to Review Change	May approve ~~over 20 percent~~	The site had different soil types than expected and it cost more than anticipated to do the geotechnical analysis, design, and install the culvert. The sponsor now requests an increase in SRFB funds.
2. Increase/decrease project scope (no funding change)	Consult	~~May approve up to 20 percent scope change~~ May approve or recommend	May approve or recommend-~~scope change over 20 percent~~	Available to Review Change	May approve ~~scope change over 20 percent~~	Sponsor planted 3,000 trees and shrubs on 3 acres of riparian habitat, as outlined in the contract. Funds remain and the sponsor wants to plant an additional 100 trees and shrubs on adjacent acres. Sponsor plans to replace two barrier culverts. After designing the project, the sponsor realizes he only has funds to install one culvert. He requests a scope reduction, but still needs to use all the funds.
~~3. Project closes short~~		~~May approve~~				~~Sponsor completes all elements of a restoration project as outlined in the agreement under budget. The sponsor closes the project, and the funds are available to SRFB for redistribution.~~

[1] Cost increases only may be granted if funding is available.
[2] Change is limited to the dollar amount.
[3] Consult means the lead entity obtains a decision from its technical and citizens committees

Amendment Request	Lead Entity	RCO Director	SRFB Subcommittee	SRFB Technical Review	SRFB	Example
4. Change project type	Consult	~~Recommend~~ May approve or recommend	May approve or recommend	Available to Review Change	May approve	Sponsor proposed to purchase floodplain or riparian habitat and reconnect a side channel on a portion of the site. The sponsor now proposes to only purchase the land.
5. Transfer sponsorship	Consult	May approve				Original sponsor is unable to start or complete the work and requests a different sponsor finish the project.
6. Reduce match	Consult	~~May approve up to 20 percent~~ May approve or recommend	May approve or recommend ~~over 20 percent~~	Available to Review Change	May approve	Sponsor received $75,000 from SRFB and provided $33,000 (30 percent) in match for a total project cost of $108,000. Later, he realized he only could raise a match of $14,000 (15 percent) for a total project cost or $89,000. The sponsor requests a match reduction of 57 percent ($19,000/$33,000) and corresponding scope reduction.
Acquisition Projects						
7. Change site to a contiguous site	Consult	May approve site add / change		Available to review change		Sponsor proposed to purchase six parcels. One of the parcels is not available, and the sponsor asks to buy a different contiguous site.
8. Change site to a non-contiguous site	Consult	~~Recommend~~ May approve or recommend	May approve or recommend ~~site add/change~~	Available to review change	May approve	Sponsor proposed to purchase four parcels. One of the parcels is not available, and the sponsor asks to buy a different site on a different part of the river.

[1] Cost increases only may be granted if funding is available.
[2] Change is limited to the dollar amount.
[3] Consult means the lead entity obtains a decision from its technical and citizens committees

Amendment Request	Lead Entity	RCO Director	SRFB Subcommittee	SRFB Technical Review	SRFB	Example
9. Pay more than fair market value (no increase in funding)		May approve up to 10 percent	May approve ~~10-20~~ over 10 percent		May approve over 20 percent	Sponsor and landowner negotiate a purchase price above the fair market value.
Restoration Projects						
10. Significant change in the project location	Consult	~~Recommend~~ May approve or recommend	May approve or recommend	Available to review change	May approve	Sponsor is unable to replace a culvert at the proposed location and asks to replace a culvert on another river, WRIA, or to benefit different fish.
Studies/Assessments Projects						
11. Significant change in the location of study	Consult	~~Recommend~~ May approve or recommend	May approve or recommend ~~location change~~	Available to review change	May approve	Sponsor proposed to inventory barriers on a specific river and later asks to inventory another river, WRIA, or to benefit different fish.
12. Change type of study	Consult	~~Recommend~~ May approve or recommend	May approve or recommend	Available to review change	May approve	Sponsor proposed to do an assessment on forage fish but after more research determines an inventory of barriers is more important.

[1] Cost increases only may be granted if funding is available.
[2] Change is limited to the dollar amount.
[3] Consult means the lead entity obtains a decision from its technical and citizens committees

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Governor's Salmon Recovery Office

Salmon Recovery Funding Board
Briefing Memo
Item 7C

Meeting Date: December 2011

Title: Revising Manual 19 for Future Grant Rounds

Prepared By: Megan Duffy, Governor's Salmon Recovery Office

Approved by the Director: Kaleen Cottingham

Proposed Action: Briefing

Summary

This memo discusses potential administrative changes to the *Manual 19: Regional Organizations and Lead Entity Guidance* document. While this is an administrative document and does not require board approval, staff wanted to inform the Salmon Recovery Funding Board (board) of key issues and topics being considered.

Staff is working closely with lead entities on potential revisions and anticipates that Manual 19 will be revised by the board's April meeting.

Background

The lead entity program was moved into the RCO in 2009. Manual 19 was developed to guide expectations of lead entities. Since that time, a number of lead entity related issues have arisen that would benefit from new or clarified guidance. Some of these issues have been identified by lead entities and staff; others have been identified as a result of specific project experiences. Issues relate to roles and responsibilities in the both the board's grant process and the lead entities' business practices. Some key issues needing guidance include:

- Avoiding any conflicts of interest, particularly when a lead entity is acting as project sponsor.
- When public outreach is required on specific projects and what responsibility does a lead entity have versus a project sponsor or others?
- The role of a lead entity in submitting the project list to the board.
- Defining appropriate representation on a lead entity citizens' committee.
- Thresholds for defining a quorum.

These are several of the issues that staff will be addressing with the lead entities that may justify incorporation into Manual 19. Staff began discussions with the lead entities at the September 30 LEAG meeting and will continue to do so, particularly at a follow-up LEAG meeting in March.

Next Steps

Staff will continue to work with the lead entities to develop Manual 19 revisions and provide a briefing to the board at its April 2012 meeting.

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

Salmon Recovery Funding Board
Briefing Memo
Item 8

Meeting Date: December 2011

Title: Forest and Fish Project Briefing

Prepared By: Brian Abbott, Section Manager

Approved by the Director: Kaleen Cottingham

Proposed Action: Briefing

Summary

In the 1990s, various entities began forest practice negotiations focused on four key goals:

- to provide compliance with the Endangered Species Act for aquatic and riparian-dependent species on non-federal forestlands;
- to restore and maintain riparian habitat on non-federal forestlands to support a harvestable supply of fish;
- to meet the requirements of the Clean Water Act for water quality on non-federal forestlands; and
- to keep the timber industry economically viable in the state of Washington. The best available science was to be used to approach these issues.

The result was the 1999 Forests and Fish Report, which recommended, among other things, ongoing research and monitoring associated with the adaptive management part of the agreement. Some of that research and monitoring was funded by a dedicated portion of the federal Pacific Coastal Salmon Recovery Fund (PCSRF) awarded to Washington State. The Department of Natural Resources (DNR) created the Forest Practices Adaptive Management Program to conduct the work.

Since 2000, the RCO has entered into seven contracts with the DNR covering $25.5 million in grant funds to fund the research and monitoring (Attachment A, page 21). The RCO entered into an additional contract for about $800,000 to support development of a statewide, programmatic Habitat Conservation Plan (HCP), which was another major part of the Forest and Fish agreement.

The DNR completed the Forest and Fish monitoring and research work covered by these grants earlier this summer. The purpose of this presentation is to identify how the PCSRF funds were used and what was accomplished. Jim Hotvedt from DNR will join RCO staff at the December Board meeting to present the results and answer questions.

Attachments

A. Final Report: 2000-2011 Forests and Fish Agreement Implementation Funding by the Pacific Coastal Salmon Recovery Fund

NATURAL RESOURCES

Final Report

2000-2011 Forests and Fish Agreement Implementation Funding by the Pacific Coastal Salmon Recovery Fund

Through the
Washington State Salmon Recovery Funding Board
Washington State Recreation and Conservation Office

By the

Adaptive Management Program
Forest Practices Division
Washington State Department of Natural Resources

July 2011

WASHINGTON STATE DEPARTMENT OF
Natural Resources
Peter Goldmark - Commissioner of Public Lands

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Introduction/Background

In 1974, the Washington State Legislature passed the Forest Practices Act. The Forest Practices Act sought to balance the protection of Washington's resources with the maintenance of a viable forest industry through the regulation of certain timber industry operations including logging and silviculture practices. The Forest Practices Act also established the Washington Forest Practices Board (the Board) as an independent state agency. The Forest Practices Act charged the Board with the responsibility of adopting forest practice rules, as well as protecting public resources while maintaining a viable timber industry. However, reaching this balance proved a challenging task.

Over time, the forest practices rules and associated guidance were more fully developed through a number of collaborative multi-stakeholder agreements. The first of these collaborative agreements, the Timber Fish and Wildlife (TFW) Agreement of 1987, was negotiated between Washington State, Washington treaty tribes, the timber industry, and environmental groups as an alternative to on-going litigation between the timber industry and tribes.

Since the Timber, Fish and Wildlife (TFW) Agreement of 1987, the state of Washington's Forest Practices regulatory program has taken a unique approach to the protection of fish, wildlife and water quality. Rather than creating rule and policy through litigation, the TFW Agreement laid the foundation for cooperative management of public resources on the state's forestlands. Agencies, tribes, landowners and conservation groups decided to work cooperatively to protect and restore public resources.

Significant program accomplishments and a long-term commitment of the participants resulted in the 1999 Forest and Fish Report, leading to permanent forest practices rules adopted in 2001 and subsequent approval of the first habitat conservation plan (HCP) in the nation to cover a state-wide regulatory program for over nine million acres of state and private forestland. The HCP is a critical pillar of the state's salmon recovery strategy and is key to the overall effort of recovering listed salmon. In consultation with the United States Environmental Protection Agency, the Washington State Department of Ecology also granted federal Clean Water Act assurances (CWA assurances) as part of the 1999 Forests and Fish Report. The HCP and accompanying Clean Water Act assurances provide regulatory stability for forest landowners and the timber industry - a multi-billion dollar industry in the state.

Timber, Fish, and Wildlife Agreement

The political climate of Washington State through the 1970s and 1980s provided the impetus for the development of the TFW process. The 1974 "Boldt" decision (U.S. vs. Washington, 384 f.Supp.312) held that all tribes that signed treaties in 1855 with the federal government in what is now Washington State were entitled to harvest 50% of fisheries production in off-reservation fishing grounds in the state. Phase II of the Boldt decision required state protection of hatchery fish and aquatic habitats that support fisheries, and led to uncertainty regarding the extent of the

tribes' authority in resource management. The issues (e.g., rights to hatchery fish and habitat protection) continued to be litigated for many years. Through negotiation, the tribes and industry agreed that joint implementation of the Phase II decision was in their best interests and they agreed to forgo further litigation.

In 1986, the Washington State Forest Practices Board proposed new regulations concerning riparian zone protection and cumulative effects, resulting in contentious disputes between many stakeholders. The success of the negotiations between the tribes and the state's major industries inspired other interests to consider collaborative problem solving to discuss the potential for collaborative negotiation to resolve the state's forest resources conflicts. In 1986, the leaders of these organizations decided to work together in a collaborative TFW process. Representatives of the environmental groups, timber interests, and the Departments of Natural Resources, Wildlife, Game, and Ecology were interested in avoiding litigation and eager to take part in what was then still a new collaborative problem-solving approach.

Stakeholder groups requested that the Forest Practices Board delay its new rules until they could work out the TFW Agreement and the Board agreed with an expected deadline of December 1986. In July of 1986, the "timber, fish, and wildlife" negotiations opened between Washington treaty tribes, the timber industry, environmental groups and state governmental agencies. An agreement was finalized in 1987 and called the Timber, Fish, and Wildlife Agreement. The Washington State Legislature then accepted the recommendations of the negotiation and amended the Forest Practices Act to follow the recommendations made in the Timber, Fish, and Wildlife Agreement.

The collaborative approach to dispute resolution for natural resources management was a pioneering effort. The TFW Agreement to this day has greatly influenced environmental problem solving in Washington State and elsewhere. The collaborative processes served as a model for other processes such as the 1999 Forests and Fish Report.

Forests and Fish Report

Three issues emerged in the mid-1990s that led to the creation of emergency rules, as well as permanent rule changes, in Washington forest practices regulations. First, an increasing number of streams in Washington did not meet the water quality standards of the Federal Clean Water Act. By 1998, the U.S. Environmental Protection Agency and Washington State Department of Ecology had placed more than 660 streams on the 303(d) list because they did not meet the standards outlined in the Clean Water Act.

The second issue arose over the accuracy of water typing maps. Water typing base maps were used to establish fish presence or absence in order to implement appropriate forest practice rules. In the early 1990's biologists with tribes and environmental groups reported sightings of fish further upstream than maps recognized.

The third issue was the pending listing of several species of salmonids in Washington State as threatened or endangered under the Federal Endangered Species Act. In 1991, the federal

government officially listed Pacific Chinook salmon as endangered under the act. Over the next several years, the federal government also listed coho, chum, pink, and sockeye salmon and steelhead trout as either threatened or endangered in rivers and streams across the Northwest. By 1999, the National Oceanic and Atmospheric Administration National Marine Fisheries Service and the United States Fish and Wildlife Service had listed seven species of salmonids as either threatened or endangered. As a result of these listings, new standards would likely be required in the state of Washington to protect these species from further decline.

In response to water quality and aquatic endangered species issues, the Washington State Forest Practices Board adopted emergency water typing rules in 1996 and salmonid emergency rules in 1998. In addition, in 1997 the governor formed a Joint Natural Resources Cabinet and charged it with creating a salmon recovery plan for Washington State by June of 1998. A "Salmon Recovery Strategy" developed by the state called for the protection of salmon habitat through forest, agriculture and urban modules.

The Joint Natural Resources Cabinet turned to the TFW organization to develop recommendations for the forestry module. The module would result in a set of recommendations to the Forest Practices Board and the Governor's Salmon Recovery Office to respond to fish listings and water quality problems in Washington state covering about 12 million acres of private and state-owned forestland. This module later became the 1999 Forests and Fish Report.

The primary result of the first meeting to launch the forestry module, in May 1997, was the establishment of the forests and fish process, based in large part upon the TFW process. The TFW Policy Group decided a collaborative approach, like that used in the TFW Agreement, was better than a top down approach for determining the recommendations of the forestry module. Therefore, the TFW Policy Group decided to use their group as a forum to address the forestry module.

In addition to the original members of the TFW Policy Group, two new caucuses were invited to participate. The federal caucus comprised of the U.S. Fish and Wildlife Service, the U.S. National Marine Fisheries Service, and the U.S. Environmental Protection Agency would represent federal organizations and address federal environmental protection requirements, in particular the listing of threatened and endangered species and 303(d) regulation. A local government caucus would represent local governments regarding issues of implementation and coordination at the local level.

The negotiation focused on four key goals: (1) to provide compliance with the Endangered Species Act for aquatic and riparian-dependent species on non-federal forestlands; (2) to restore and maintain riparian habitat on non-federal forestlands to support a harvestable supply of fish; (3) to meet the requirements of the Clean Water Act for water quality on non-federal forestlands; and (4) to keep the timber industry economically viable in the state of Washington. The best available science was to be used to approach these issues.

All participants recognized that the goals of Washington's statewide Salmon Recovery Strategy could not be fully met by contributions from any single sector of the economy. The Forests and Fish Report reflected the commitment of the forestry sector to contribute to the recovery of

salmon and certain other riparian and aquatic species and to the restoration of related riparian ecosystems. The authors of the report agreed to support efforts to secure comparable contributions from all sectors of Washington State and to do so in a way which equitably apportioned the additional burdens and costs associated with recovering salmon, bull trout and other aquatic and riparian species among these sectors.

The participants also recognized that the tribes must be involved in forest management decisions that affect the aquatic resources upon which their treaty fishing rights depend. Accordingly, the Forests and Fish Report provided for tribal participation in all phases of the regulation of forest practices including, without limitation, the development of forest practices rules by the Forest Practices Board; watershed analysis; restoration, compliance, effectiveness and validation monitoring; scientific research; and the implementation of rules and forestry prescriptions through such mechanisms as interdisciplinary teams.

The authors agreed to use all reasonable efforts to support the expeditious implementation of the recommendations contained in the Forests and Fish Report. The authors' commitments, however, were subject to the Washington State Legislature's adoption of a statutory package providing for implementation of the report prior to July 1, 1999; to the Forest Practices Board's adoption of permanent rules implementing the recommendations of the report; to the provision of adequate funding for the implementation of the recommendations contained in the Forests and Fish Report; to the receipt of federal assurances relating to the Endangered Species Act and the Clean Water Act; and to continued support from the authors for the completion of the tasks and implementation of the provisions specified in the report.

The authors of the 1999 Forests and Fish Report included the United States Fish and Wildlife Service, the National Oceanic and Atmospheric Administration (NOAA) through the National Marine Fisheries Service, the United States Environmental Protection Agency, the Office of the Governor of the State of Washington, the Washington State Department of Natural Resources, the Washington Department of Fish and Wildlife, the Washington State Department of Ecology, Indian tribes and tribal organizations, the Washington State Association of Counties, the Washington Forest Protection Association, and the Washington Farm Forestry Association.

Washington State Forest Practices Rules

The earliest version of Washington State's forest practices standards and rules appeared in the Forest Practices Act of 1974. These were later revised through a number of collaborative multi-stakeholder agreements, the first being the TFW Agreement of 1987.

Using the recommendations provided in the Forests and Fish Report, the Washington State Legislature passed the 1999 Salmon Recovery Act, also called the "Forest and Fish Law," and directed the Forest Practices Board to adopt rules consistent with the report. The Forest Practices Board adopted emergency rules in January 2000 and permanent rules became effective in May 2001. The rules apply to approximately 9.3 million acres of private, state, and local government land.

The authors of the 1999 Forests and Fish Report recognized that current scientific knowledge fell short of providing definitive scientific answers to all of the water quality and fish habitat resource questions. Gaining answers to some of these questions in a timely manner and having confidence that new rules would respond to new scientific findings was a critical element for the federal and state agency agreement on the provisions of Forests and Fish Report. Consequently, the Forests and Fish Report recommended creation of an adaptive management program. Indeed, in the adoption of permanent rules, the 1999 Legislature directed the Forest Practices Board to incorporate the scientifically based adaptive management process described in the 1999 Forests and Fish Report. Further, Washington State law requires that any changes to the permanent rules and any new rules covering aquatic resources adopted by the Forest Practices Board be consistent with recommendations resulting from the scientifically based adaptive management process established by the board, unless otherwise made by order of a court or through legislation (RCW 76.09.370).

Adaptive Management

At the start of the TFW process, Stewart Bledsoe, leader of the timber industry, was purported to state, "We will go where the truth takes us", meaning that science would guide decision-making about forest practices and resource protection. This approach represented a transition by the technical experts and scientists who provided research upon which the forest practices policy discussions were based. This landmark "ground up" approach worked especially well with the science-based forest resource issues on the negotiating table. The goal of the process was to develop a management plan for timber, fish, wildlife, water quantity and quality, and cultural resources in Washington state.

The TFW Agreement called for the use of adaptive management as a framework for managing forest practices. This landmark approach to natural resource management required the use of best available scientific data from monitoring and evaluation of forest practice activities. The agreement established a Cooperative Monitoring, Evaluation and Research Committee (CMER) to implement the adaptive management program.

CMER was formed to address ongoing scientific questions and to conduct ongoing research and monitoring using the best available science. From 1988 to 1997 CMER implemented the monitoring, evaluation, and research goals of TFW and submitted reports to the Forest Practices Board recommending actions for improving forest practices. Between 1988 and 1997, CMER focused its activities on TFW goals, and from 1997 until today, it has focused on the goals and recommendations of the 1999 Forests and Fish Report.

Uncertainty was an issue throughout the Forests and Fish Report negotiations. It was not possible in the brief span of the negotiations to resolve all the issues of scientific uncertainty facing negotiators. Therefore, Forests and Fish Report recommendations, many of which later became regulations, were based on limited scientific information. Forests and fish negotiators documented these areas of uncertainty in an appendix to the Forests and Fish Report known as Schedule L-1, which forms the base of the adaptive management research and monitoring program.

In addition, the U.S. Fish and Wildlife Service and NOAA Fisheries require an adaptive management strategy for HCPs that pose a significant risk to Endangered Species Act listed species. The federal agencies define adaptive management as "a method for examining alternative strategies for meeting measurable biological goals and objectives and then, if necessary, adjusting future conservation management actions according to what is learned". The Forest Practices Adaptive Management Program was therefore created to ensure that programmatic changes will occur as needed to protect resources; to ensure that there is predictability and stability in the process; and to ensure that there are quality controls applied to scientific study design, project execution and the interpreted results.

Washington State Forest Practices Habitat Conservation Plan and Clean Water Act Assurances

Developing a habitat conservation plan was one of the implementation measures resulting from the 1999 Forests and Fish Report. The federal Endangered Species Act (ESA) prohibits the take of endangered and threatened species. Because of the direct impact of Washington forest practices on salmon and other aquatic species listed under the ESA, Washington forest practices regulations required the approval of two federal agencies, the United States Fish and Wildlife Service (USFWS) and NOAA Fisheries. Section 10(a)(1)(B) of the ESA allows applicants to submit a habitat conservation plan (HCP) to ensure that the proposed actions are also in compliance with federal regulations. If the HCP is approved, a permit may be issued that allows for the incidental take of a listed species while conducting otherwise lawful activities. This permit is known as an Incidental Take Permit. The Washington State Department of Natural Resources (DNR) therefore created and submitted an HCP for the Washington forest practice rules negotiated during development of the Forest and Fish Report and implemented through permanent rules in 2001 in order to ensure the regulations were also in compliance with the ESA and Clean Water Act. After developing an Environmental Impact Statement, NOAA Fisheries and the USFWS issued Incidental Take Permits to Washington State for listed aquatic species based on the protective measures described in the Forest Practices HCP. The permit was issued June 5, 2006 and is intended to last for 50 years.

The purpose of the federal Clean Water Act (CWA) is to restore and maintain the nation's water quality. The Washington State Water Pollution Control Act designates the Washington Department of Ecology (Ecology) as the agency responsible for carrying out provisions of the Federal Clean Water Act on behalf of the Environmental Protection Agency within the state of Washington. In order to gain assurances under the CWA, a representative of Ecology serves on the Forest Practices Board and facilitates Ecology's co-adoption of the Washington forest practices rules that apply to water quality, and ensures that all current and future forest practice rules are consistent with state and federal water quality standards.

The Forest Practices HCP is characterized as a "programmatic" habitat conservation plan. Unlike most habitat conservation plans, which cover a defined land base and ownership, the Forest Practices HCP is linked to Washington's forest practices regulatory program, which regulates forest practices activities on primarily non-federal and non-tribal forestlands in the state. Forest

practices activities on these lands must comply with the state's Forest Practices Act (chapter 76.09 RCW) and rules (title 222 WAC). The purpose of the Forest Practices HCP is to assure those conducting forest practice activities, covered by or subject to the DNR's Forest Practices regulatory program, will also be in compliance with the Endangered Species Act for covered threatened and endangered species.

Funding

The 1999 Forests and Fish Report contained an extensive adaptive management program intended to provide research and monitoring to address uncertainties related to the effects of forestry practices on salmon habitat and water quality. Over the last decade, the Washington Forest Practices Adaptive Management Program has received federal funding to support the adaptive management program essential to implementing the agreement that all parties, including federal agencies, agreed to. In addition to funding development of the Forest Practices HCP, the information in the following two chapters provides a comprehensive summary of key Forest Practices Adaptive Management components funded through the federal program.

Washington State Forest Practices Adaptive Management Program

The authors of the 1999 Forests and Fish Report recognized that current scientific knowledge fell short of providing definitive scientific answers to all of the water quality and fish habitat resource questions raised during negotiations. Gaining answers to some of these questions in a timely manner and having confidence that new rules would respond to new findings was a critical element for the federal and state agency agreement on the provisions of Forests and Fish Report. Consequently, the Forests and Fish Report recommended an adaptive management program to address

- The effectiveness of the forest practices prescriptions in meeting resource objectives,
- The validity of the resource objectives for achieving the overall goals, and
- Basic scientific uncertainties in the ecological interactions among managed forests, in-stream functions, and fish habitat.

The 1999 Legislature referenced the 1999 Forests and Fish Report in the Salmon Recovery Bill (Engrossed Substitute House Bill 2091), in which it directed the Forest Practices Board to adopt rules that were consistent with the recommendations of the Forests and Fish Report. Pursuant to that direction, the Forest Practices Board adopted an adaptive management program, a formal science-based program. The purpose of the Forest Practices Adaptive Management Program is to

> "provide science-based recommendations and technical information to assist the board in determining if and when it is necessary or advisable to adjust rules and guidance for aquatic resources to achieve resource goals and objectives" (Washington State Forest Practices Rules, WAC 222-12-045).

The goal of the program is to affect change when it is necessary or advisable to adjust rules and guidance to achieve the goals of the Forests and Fish Report. Three desired outcomes of the Forest Practices Adaptive Management Program include

- Certainty of change as needed to protect targeted resources;
- Predictability and stability of the process of change so that landowners, regulators and interested members of the public can anticipate and prepare for change; and
- Application of quality controls to study design and execution and to the interpreted results.

The Adaptive Management Program envisioned in the Forests and Fish Report contains all of the important elements for successful adaptive management:

- Stakeholders came together to use data, information, pertinent literature, and baseline measures in deciding on management recommendations in the Forests and Fish Report;

- The Forests and Fish Report developed overall performance goals and policy objectives, resource objectives, and measurable performance targets (See Schedule L-1, Appendix A);
- The Forests and Fish Report recommended that protocols and standards be developed and used in study designs, statistical sampling, testing hypotheses, and independent peer review;
- Implementation of the Forests and Fish Report relies on a number of models to describe relationships and predict outcomes important to the protection of fish habitat and water quality;
- Recommendations include effectiveness monitoring to determine if the implementation of rules is meeting the resource objectives and validation monitoring to test the resource objective against achievement of overall goals of the Forests and Fish Report; and
- The Forests and Fish Report included a systematic process based on science and policy oversight to revise objectives, targets, and protection measures.

The Forest Practices Adaptive Management Program envisioned in the 1999 Forests and Fish Report includes planning, budgeting, and project management; technical and policy review; and dispute resolution. It also provides a formal process for making adjustments to performance targets and forest practices as appropriate and practical for achieving the resource goals. The recommendations placed final authority in the hands of the Forest Practices Board.

Program Biological Goals

Under the 1999 Forests and Fish Report recommendations, forest practices rules are designed to meet specific biological goals within the context of maintaining the sustainable, economic viability of the timber industry. The biological goals were establish at the outset of forests and fish discussions: "Forest practices, either singly or cumulatively, will not significantly impair the capacity of aquatic habitat to:

- Support harvestable levels of salmonids;
- Support the long-term viability of other covered species; or
- Meet or exceed water quality standards (protection of designated uses, narrative and numeric criteria, and antidegradation)."

Research and Monitoring

Monitoring is a key component of the Forest Practices Adaptive Management Program.

> Compliance monitoring is intended to answer the question*: Are forest practices being conducted in compliance with the prescriptions contemplated in the Forests and Fish Report?* The Washington State Department of Natural Resources continues to conduct compliance monitoring as part of it's responsibility to administer forest practices rules.

Effectiveness monitoring and research is intended to answer the questions*: Will the recommended prescriptions produce forest conditions and processes that achieve resource objectives within the context of natural spatial and temporal variability inherent to forest ecosystems? And are there less costly alternative prescriptions that would be effective in producing conditions and processes that meet resource objectives?* Effectiveness monitoring is intended to be conducted over a sufficient time period to account for forest development toward target conditions.

Validation monitoring and research is intended to answer the question: *Are the resource objectives appropriate to achieve the overall performance goals?* Research and monitoring will be designed to validate or verify the assumptions underlying the resource objectives.

Adaptive Management Program Elements

The Forests and Fish Report recommended a well-organized structure for conducting adaptive management. The Forest Practices Board established the Forest Practices Adaptive Management Program by rule, designating the required elements. The Board sets resource objectives and priorities for action, recommends budgets, and provides fiscal and management oversight of the program. The board is also the final step of dispute resolution among stakeholders (subject to legal appeal) and is responsible for enacting necessary forest practices rule changes.

The Forest Practices Adaptive Management Program elements adopted by the board include "key questions" and resource objectives, participants, a research and monitoring proposal process, an independent scientific review process, and a dispute resolution process, among others.

Key Questions and Resource Objectives

Based upon recommendations from the Forests and Fish Policy committee (Policy), the Forest Practices Board established key questions and resource objectives (See Schedule L-1, Appendix A). Projects are designed to address the key questions in the order and subject to the priorities identified by the Board.

Resource objectives are intended to meet the overall performance goals. Individual resource objectives are defined for each key aquatic condition or process affected by forest practices such as water temperature, large woody debris or fish passage. Resource objectives consist of functional objectives and performance targets. Functional objectives are broad statements regarding the major watershed functions potentially affected by forest practices. Performance targets are measurable criteria that define specific, attainable forest conditions or processes for each resource objective. Final resource objectives and performance targets were agreed upon by stakeholders and recommended to the board during early implementation of the 1999 Forest and Fish Report (see Schedule L-1, Appendix A).

Resource objectives are intended for use in adaptive management, rather than in the regulatory process. Best management practices, as defined in the rules and manual, apply to all forest practices regardless of whether or not resource objectives are met at a given site.

Participants

Initially, the Forest Practices Board identified the following entities to participate in the program: The Cooperative Monitoring, Evaluation and Research Committee (CMER), a policy committee, the adaptive management program administrator, and other participants as directed to conduct the independent scientific peer review process. Additional participants in the program include a CMER coordinator, research and monitoring project managers, a contract specialist, and CMER scientific staff.

CMER

The Board established a Cooperative Monitoring, Evaluation and Research (CMER) Committee to impose accountability and formality of process, and to conduct research and validation and effectiveness monitoring to facilitate achieving the resource objectives. The purpose of CMER is to advance the science needed to support adaptive management. CMER may also continue research and education in terrestrial resource issues.

CMER is made up of members that have expertise in a scientific discipline that enables them to be most effective in addressing forestry, fish, wildlife, and landscape process issues. Members represent timber landowners, environmental interests, state agencies, county governments, federal agencies, and tribal governments and organizations from a scientific standpoint.

CMER's charge is to conduct objective scientific inquiry into questions posed by the Board and Policy and to provide technical information and consensus-based recommendations to the Board. In fulfilling this charge, CMER

- Develops and maintains a work plan to accomplish the tasks assigned by Policy and the Board,
- Recommends research priorities and spending requests to Policy and the Board,
- Establishes a set of protocols and standards for CMER research and monitoring,
- Carries out the research and monitoring specified in the work plan through the use of internal CMER resources and the external contracting authority of DNR,
- Uses generally accepted scientific and statistical techniques,
- Evaluates cause-and-effect relationships between forest practices and detectable effects on public resources,
- Summarizes monitoring results into periodic reports to Policy and the Board,
- Synthesizes research results into coherent analysis of rule effectiveness, and
- Evaluates impacts of any alternative prescriptions tested during effectiveness research.

The scientific inquiry CMER conducts falls into the following categories:

- Testing the effectiveness of the forest practices rules for the protection of aquatic resources,
- Testing the validity of the resource objectives for aquatic resources,
- Monitoring the condition of aquatic resources on lands governed by forest practices rules, and
- Conducting other forest-practices-related research as directed by the Forest Practices Board.

CMER does not make policy recommendations. As part of scientific synthesis, however, CMER identifies the policy implications (e.g., scientific certainty, potential resource risks, management scale) of its research and monitoring results in a report. A report may include an analysis of the likely effects that various levels of resource protection would have on the resource. Such analyses are intended to inform Policy and the Board in the determinations they must make of acceptable levels of resource and management risk.

POLICY COMMITTEE

The Forest Practices Board established a collaborative forum managed by a policy committee (Policy). Policy membership includes representatives of the following caucuses: timber landowners (industrial and nonindustrial private landowners); environmental community; tribal governments; county governments; state departments (including fish and wildlife, ecology, and natural resources); and federal agencies (including National Marine Fisheries Service, U.S. Fish and Wildlife Service, and U.S. Environmental Protection Agency). Caucus representatives are committed to consensus-based decision making and a willingness to support and implement the 1999 Forests and Fish Report recommendations. Policy recommends resource objectives; recommends CMER research priorities and associated funding; and forwards CMER research and other reports to the Board with recommendations.

ADAPTIVE MANAGEMENT PROGRAM ADMINISTRATOR

The Forest Practices Board created an independent program administrator to oversee the program and support CMER. The program administrator typically has credentials as a program manager, scientist, and researcher.

The Adaptive Management Program Administrator is a DNR employee assigned full time to the forest practices adaptive management program. In conjunction with the responsibility for managing the full adaptive management program, the Adaptive Management Program Administrator is the lead administrator for CMER. Working within the consensus decision-making process of CMER, the program administrator is responsible for managing an efficient, unbiased research and monitoring program.

In addition to other responsibilities related to the Adaptive Management Program, the Adaptive Management Program Administrator transmits CMER reports and funding recommendations to Policy; transmits CMER reports and Policy recommendations to the

Forest Practices Board; manages the adaptive management program, including research and monitoring projects, contracting, budgets, and work plans; ensures the scientific integrity of the program, including appropriate scientific peer review; and coordinates website postings and manages the content of the site with the assistance of the CMER coordinator.

SCIENTIFIC REVIEW COMMITTEE

The Forest Practices Board established a scientific peer review process, which uses an independent Scientific Review Committee, to determine if the scientific studies that address program issues are scientifically sound and technically reliable; and to provide advice on the scientific basis or reliability of CMER's reports. The Scientific Review Committee is currently coordinated through the University of Washington. Final reports of CMER funded studies must go through independent scientific peer review. Other products typically reviewed include, but are not limited to, study designs.

CMER COORDINATOR

A CMER coordinator is employed by the Department of Natural Resources. The coordinator schedules regular monthly meetings and arrange locations, distributes correspondence and information to the CMER committee, assists CMER co-chairs and the Adaptive Management Program Administrator with agenda development, gathers and distributes all background materials relating to the agenda, records meeting minutes and decisions and distributes them, assists with CMER meeting management, assists in scheduling the CMER annual science conference, maintains records of all CMER and Policy meetings and any SAG distributions that are important for the record or CMER activities, and assists with website postings and content management of the site.

PROJECT MANAGERS

Project managers (currently two) are employed by the Department of Natural Resources to manage CMER research and monitoring projects. Project managers maintain project accountability, communication, and facilitate CMER administrative tracking.

The project managers monitor the performance of all project participants and cooperators in implementing and completing project tasks; communicate project progress, problems, and problem resolution to CMER; develop RFPs or RFQQs, review contractor proposals, monitor contract performance, and provide input on budgeting, schedule, and scope changes; work with CMER, CMER scientific advisory groups (SAGs), and principal investigators to resolve technical issues; facilitate coordination among scientists and landowners; facilitate and monitor all technical reviews and response to those reviews; and facilitate archiving of all data and documents.

CONTRACT SPECIALIST

CMER contracts are administered through the Department of Natural Resources and managed by a contract specialist. Contracts are subject to a multitude of statewide Washington State Office of Financial Management requirements, DNR policies, and other legal constraints. The contract specialist ensures that all requirements are strictly followed in order to develop legally sound contracts.

The contract specialist implements DNR and Washington State Office of Financial Management contracting procedures, including determining appropriate types of contracts, conducting the bidding process, handling out-of-scope work or contract amendments, managing the process for closing out a contract once it is completed, and maintaining records.

CMER STAFF

CMER staff located in the Northwest Indian Fisheries Commission provides scientific staff support for CMER research and monitoring projects. CMER staff may work with SAGs to manage projects, assist in study scoping and design, conduct literature reviews, and help in project implementation and data analysis. CMER staff also assists with annual revisions to the CMER work plan and other general scientific tasks under the direction of the Adaptive Management Program Administrator. CMER staff currently includes two riparian ecologists and a geomorphologist.

Research and Monitoring Proposal Process

A process has been established by the Forest Practices Board for managing adaptive management proposals and approved projects, which include proposal initiation; proposal approval and prioritization by CMER, Policy and the Forest Practices Board; CMER implementation of the proposal; independent scientific peer review**;** CMER committee technical recommendations to Policy; and Policy petitions to the Forest Practices Board for amendment, if appropriate.

The adaptive management process is a continuous loop. It involves the Forest Practices Board, Policy, the Adaptive Management Program Administrator, CMER, and a process for independent scientific peer review. The process begins with policy questions about the effectiveness of the forest practices rules in meeting established resource objectives, the validity of the resource objectives for achieving the Forests and Fish Report goals, or other forest practices matters. The board raises these policy questions itself or draws them from Policy or public comment. After receiving recommendations from Policy or the general public, the Board prioritizes questions that require scientific investigation and refers them to CMER, which responds by developing a work plan of scientific investigation and a budget. CMER recommends the work plan and budget to Policy, which in turn recommends to the Board a funding package for individual research projects. The Board is responsible for allocating state and federal adaptive management funds to specific research projects.

CMER is responsible for completing the necessary scientific investigations, securing peer review through an independent scientific review process, and synthesizing the results into reports for Policy and the board. Reports include technical analysis and evaluation of implications for resources and operations. By using research results to analyze risk and uncertainty, CMER seeks to inform Policy and the Board of the potential consequences of policy action or inaction. All final reports are available to the general public.

Policy has the opportunity to review CMER reports, consider the political and economic elements of the Forest Practices Act and the Board's goals, and develop consensus recommendations to the Board for rule or guidance changes.

The Adaptive Management Program includes a dispute resolution process in the event there is a failure to reach timely agreement at any stage of the process. Under the Forest Practices Act, the Board is ultimately responsible for establishing forest practices rules that are "consistent with sound policies of natural resource protection" and that "recognize both the public and private interests in the profitable growing and harvesting of timber" (RCW 76.09.10). Consequently, the Board is ultimately responsible for responding to monitoring and research findings and making changes in rules that may be necessary to meet the goals that the Board has established.

CMER program review

Another element of the Forest Practices Adaptive Management Program established by the Forest Practices Board is the CMER program review process. A peer review process is expected to be established every five years to review all work of CMER and other available, relevant, data, including recommendations from the CMER staff. Such a review was conducted by Stillwater Sciences in 2009.

Dispute resolution process

If consensus cannot be reach through the adaptive management program process, participants can have their issues addressed through a dispute resolution process adopted by the Board. Potential failures include, but are not limited to, the inability of Policy to agree on research priorities, program direction, or recommendations to the Board for uses of monitoring and/or research after receiving a report from CMER; the inability of CMER to produce a report and recommendation on schedule; or the failure of participants to act on Policy recommendations on a specified schedule.

CMER Work Plan

CMER follows a comprehensive work plan to guide its research and monitoring activities. The purpose of the CMER work plan is to present an integrated strategy for conducting research and monitoring to provide credible scientific information to support the Forest Practices Adaptive Management Program. The plan is revised annually in response to research findings of CMER or the scientific community, changing technology, changes in policy objectives and priorities, and funding.

The work plan describes the organization of the CMER research and monitoring strategy and the approaches used to address research and monitoring questions relevant to forest practices adaptive management. It also provides an overview of CMER's research and monitoring program. After CMER, Policy, and subsequent Forest Practices Board review and approval, the work plan presents the annual work plan activities, including project prioritization, scheduling, and budget allocations.

The FY2012 CMER Work Plan consists of over 90 projects covering a range of topics related to the forest practices rules. These projects are at various stages of development or completion. Approximately 32 projects have been completed and 24 projects are ongoing (i.e., undergoing study design development or currently being implemented or reviewed). The work plan is organized in a hierarchical format consisting of rule groups, programs, and projects.

Organization

At the highest level, the CMER work plan is organized by forest practices "rule groups." A rule group is a set of forest practices rules relating either to a particular resource, such as wetlands or fish-bearing streams, or to a particular type of forest practice, such as road construction and maintenance. The 11 rule groups are 1) Stream typing, 2) Type N riparian prescriptions, 3) Type F riparian prescriptions, 4) Channel migration zones, 5) Unstable slopes, 6) Roads, 7) Fish passage, 8) Pesticides, 9) Wetland protection, 10) Wildlife, and 11) Intensive watershed-scale monitoring to assess cumulative effects. Although the rule group divisions are somewhat arbitrary, they provide a useful framework for developing a research and monitoring strategy.

Critical research and monitoring questions are identified at the rule group level to address information gaps related to scientific uncertainty and resource risk associated with the rules. Once research and monitoring questions are identified, research and monitoring programs are developed to address them. Programs consist of one or more related projects designed to strategically address a set of related scientific questions. Thirty-two (32) programs containing multiple projects at various stages of development are identified in the FY2012 CMER Work Plan. A description of each current program, including its purpose and objectives and the strategy for accomplishing them, is in the work plan.

One or more projects comprise a program within the rule group structure. A CMER project is defined as one research or monitoring task resulting in a final report or product. Each project is often comprised of several steps including scoping paper, literature review, study plan, implementation plan, field and data management, in-progress reporting, and final reporting. Federal funding discussed later in this report has supported work in each of these steps.

Programs

CMER research and monitoring programs utilize a variety of approaches that address critical questions at different spatial and temporal scales. The work plan incorporates an integrated research and monitoring approach that includes effectiveness monitoring to evaluate prescription effectiveness at the site or landscape scale; extensive status and trend monitoring to evaluate status and trends of resource condition indicators across forest lands regulated by forest practices; and intensive/validation monitoring to identify causal relationships and document cumulative effects at the watershed scale. CMER also conducts rule implementation tool projects to develop, refine, or validate science-based management tools necessary for implementing the rule(s) (e.g., predictive models, protocols, etc.) or for establishing performance standards. These approaches are summarized below:

> *Effectiveness Monitoring:* Effectiveness monitoring programs are designed to evaluate the performance of the prescriptions in achieving resource goals and objectives. Effectiveness monitoring differs from the other approaches in that it is directed at prescription effectiveness, primarily at the site scale.
>
> *Extensive Status and Trends Monitoring:* Extensive monitoring programs evaluate the current status of key watershed input processes and habitat condition indicators across Forest Practices HCP lands and document trends in these indicators over time as the forest practices prescriptions are applied across the landscape. Extensive monitoring provides a statewide, landscape-scale assessment of the effectiveness of forest practices rules to attain specific performance targets on Forest Practices HCP lands. Extensive monitoring is designed to provide report-card-type measures of rule effectiveness (i.e., to what extent are Forest Practices HCP performance targets and resource condition objectives being achieved on a landscape scale over time) that can be used to determine the degree to which progress is consistent with expectations.
>
> *Intensive Monitoring (Cumulative Effects) and Validation Monitoring:* Intensive monitoring is designed to evaluate cumulative effects of multiple forest practices at the watershed scale. Analysis of these effects improves our understanding of the causal relationships and effects of forest practices rules on aquatic resources. Intensive monitoring integrates the effects of multiple management actions over space and through time within the watershed. Evaluation of monitoring data requires an understanding of the effects of individual actions on a site and the interaction of those responses through the system. Evaluating biological responses is similarly complicated, requiring an understanding of how various management actions and site conditions interact to affect habitat conditions and how aquatic resources respond to these habitat changes. Taken

together, these evaluations will address the Adaptive Management Program's objectives for validation monitoring. This sophisticated level of understanding of physical and biological systems is expected to be achieved with an intensive, integrated monitoring effort.

Rule Implementation Tool Development: Rule implementation tool projects are designed to develop, refine or validate tools used to implement the forest practices rules. Methodology tool development projects develop, test, or refine protocols, models, and guidance that are designed for the identification and location of forest practices rule–specified management features, such as the Last Fish/Habitat Model, landslide screens, Np/Ns breaks and sensitive sites, or the achievement of specified stand conditions, such as the desired future condition (DFC) basal area target. Target verification projects consist of studies designed to verify assumptions and targets developed during Forests and Fish Report negotiations that authors identified as having a weak scientific foundation (such as the DFC basal area targets for Type F streams), or that have been established in the methodology tool development projects.

Rule implementation tools differ from tools needed to implement a specific monitoring program or project. For example, the Road Surface Erosion Model (commonly known as WARSEM) is a tool necessary to implement several projects in the Roads Rule Group Effectiveness Monitoring Program. Monitoring implementation tools are typically included with the effectiveness monitoring programs.

As stated earlier, the FY012 CMER Work Plan is organized by rule groups. For each rule group, the work plan contains one or more of the programs described above.

Project Prioritization

CMER's long-term goal is to address the full range of critical questions identified in the FY2012 CMER Work Plan (or subsequent revisions), while recognizing that availability of funding, time, and human resources limit the number of projects that can be developed and implemented each year. In order to focus effort and resources on the most critical issues for forest practices adaptive management, CMER prioritizes proposals for research and monitoring at both the program and project levels. Establishing priorities allows CMER to pursue the most pressing research and monitoring issues in an orderly manner over time.

The first step in CMER's initial prioritization process was to rank the relative importance of proposed programs in meeting Forest Practices HCP goals and objectives. The program prioritization strategy was to rank effectiveness/validation monitoring and extensive status and trend monitoring programs on the basis of scientific uncertainty and risk to aquatic resources, to evaluate the importance of rule implementation tool programs by consulting with DNR and then establishing priorities on a project basis, and to defer integration of the intensive monitoring program into the work plan until further scoping and coordination with other efforts occurs.

Effectiveness monitoring and extensive status and trend monitoring programs were ranked initially by CMER in 2002 by asking two questions: 1) How certain are we of the science and/or assumptions underlying the rule? And 2) how much risk is there to aquatic resources if the science or assumptions underlying the rule are incorrect?

These questions were selected as the criteria to rank programs, because the need for scientific information to inform adaptive management is most critical when there is a high level of scientific uncertainty concerning the interaction between forest practices, watershed processes, and aquatic resources; and where the sensitivity of the processes and aquatic resources to potential disturbance creates the greatest risk of resource impacts. Policy accepted the rankings and instructed CMER to use them as the basis for prioritizing effectiveness/validation and extensive status and trend monitoring projects.

The second stage of prioritization occurs at the project level in order for CMER to make annual recommendations to Policy and the Forest Practices Board concerning scheduling and allocation of funding among the projects developed by CMER. Projects are prioritized based on (1) the extent to which projects are deemed essential to inform the Forest Practices Adaptive Management Program, (2) input from DNR on their importance in improving implementation of forest practices rules, (3) status of projects relative to Policy decisions on adaptive management, and (4) the need to follow through and complete work already underway.

While Policy has in past years approved CMER's work plan priorities, Policy must also consider annual/biennial state budget fluctuations and other factors associated with meeting milestones in accordance with the Forest Practices HCP and/or Clean Water Act assurances. Policy made a decision in 2009 to prioritize CMER projects according to whether or not they were answering critical questions associated with meeting the Clean Water Act assurances.

Federal Funding

As mentioned earlier, the authors – including the federal services - agreed to use all reasonable efforts to support the expeditious implementation of the recommendations contained in the 1999 Forests and Fish Report. The authors' commitments were, in part, subject to the provision of adequate funding. To support the Forest Practices Adaptive Management Program, the Washington State Department of Natural Resources received seven federal grants funded through the Pacific Coastal Salmon Recovery Fund administered by the Washington State Recreation and Conservation Office Salmon Recovery Funding Board to carry out adaptive management and other tasks essential to implementing the Forests and Fish Report that all parties including NOAA Fisheries, U.S. Fish and Wildlife Service, and U.S. Environmental Protection Agency require. Over the past ten years this federal funding has supported adaptive management and other tasks essential to implementing the historical 1999 Forests & Fish Report.

Pacific Coastal Salmon Recovery Fund

The Pacific Coastal Salmon Recovery Fund (PCSRF) was established through a federal FY2000 appropriation to provide grants to the states and tribes for the purpose of assisting state, local and tribal salmon recovery efforts. The PCSRF was requested by the President and the governors of the states of Washington, Oregon, California and Alaska in response to listings of coastal salmon and steelhead runs under the Endangered Species Act and the need to form lasting partnerships with state, local, and tribal governments and the public for saving Pacific salmon and their important habitats.

Congress appropriated $58 million dollars for the PCSRF in FY2000 to be used for 1) salmon habitat restoration; 2) salmon stock enhancement; 3) salmon research; and 4) implementation of the Pacific Salmon Treaty Agreement and related agreements. Of the $58M PCSRF appropriation, $50M was distributed to the states, $6M to Pacific coastal tribes, and $2M for Columbia River tribes. Of the $50M PCSRF for the states, $18M was distributed to Washington state.

In accordance with the FY2000 Appropriations Conference Report (H. Rept. 106-479), the $18 million PCSRF funds provided to the Washington State Salmon Recovery Funding Board were distributed for salmon habitat projects, other salmon recovery activities, and to implement the "Washington Forests and Fish Agreement" authorized by the Washington State Legislature. The Salmon Recovery Funding Board was created by the Washington state legislature in 1999 to effectively invest state and federal funds for salmon recovery projects. The Washington State Salmon Recovery Funding Board entered into an MOU with National Marine Fisheries Service through its administrative office, the Washington State Interagency Committee for Outdoor Recreation, a state agency (sense renamed the Washington State Recreation and Conservation Office, or RCO).

The Washington State Salmon Recovery Funding Board provided $4.0M of the PCSRF funds to DNR to support Washington's Forest and Fish Report in accordance with the Conference Report (H. Rept. 106-479). The DNR used these initial PCSRF funds to design and construct hydrography and forest roads databases, map upland slopes and update landslide inventories, increase staffing capacity for field work to implement new Forest and Fish rules, and improve public access and review of proposed forest practice activities.

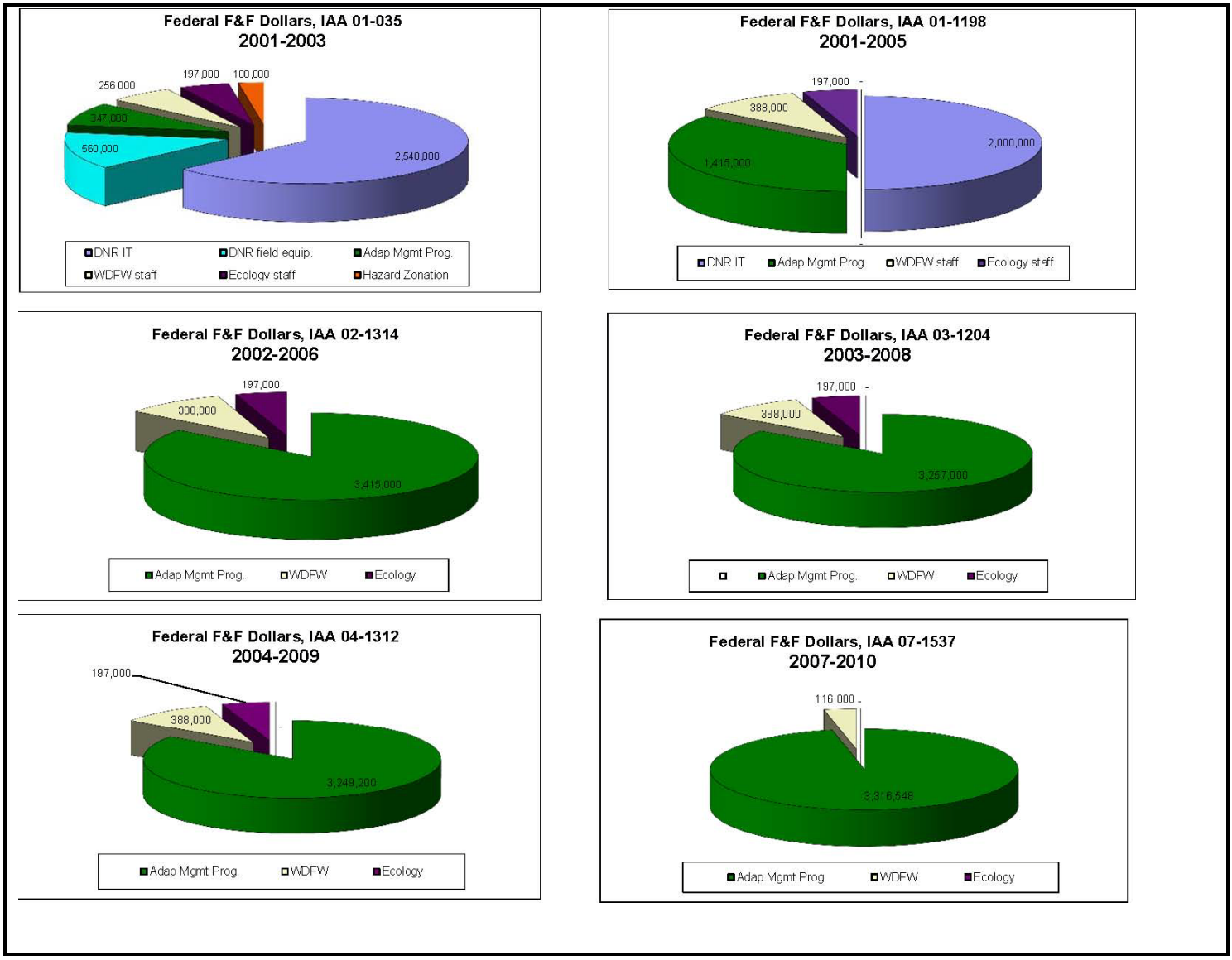
Federal Grants

Over the last decade (2000-2011), over $25 million in federal funding has been spent to support implementing the 1999 Forests and Fish Report, including funding for development of an Adaptive Management Program, a multi-landowner Forest Practices Habitat Conservation Plan, and information systems; for designing and implementing research and monitoring projects, workshops, and science conferences; and for field implementation of forest practices rules related to aquatic resources.

The first of the seven interagency agreements between the Recreation and Conservation Office and the Department of Natural Resources was fully executed as of June 6, 2000 and the seventh terminated as of April 15, 2011. The primary method for implementing the research and monitoring components of the Adaptive Management Program has been to contract with private consultants, non-profit interest-based organizations, tribes and tribal organizations and state agencies. Contracts covered project management, field work, research and monitoring studies, and independent peer reviews of the research projects. Approximately 130 contracts have been administered to execute ninety projects that cover a range of topics related to the forest practices rules and that are at various stages of development or completion. Approximately 32 projects have been completed and 24 projects are ongoing (i.e., undergoing study design development or currently being implemented or reviewed). (See previous chapter on the CMER work plan.)

The bulk of the federal funds have supported the science component of the Adaptive Management Program through the Cooperative Monitoring Evaluation and Research Committee (CMER). CMER represents members from federal and state agencies, tribes, private landowners, environmental groups, and other stakeholders. Forests and fish research and monitoring programs in the state are coordinated through CMER. Information flowing from the Adaptive Management Program has been widely distributed throughout the scientific and forestry communities for use in forest management throughout the nation.

A total of $25,558,748 was granted to support implementation of the responsibilities related to forest practices rules for aquatic resources in support of the Forests Practices Adaptive Management Program. Figure 1 illustrates the allocated funding levels among the seven federal grants spanning ten years.



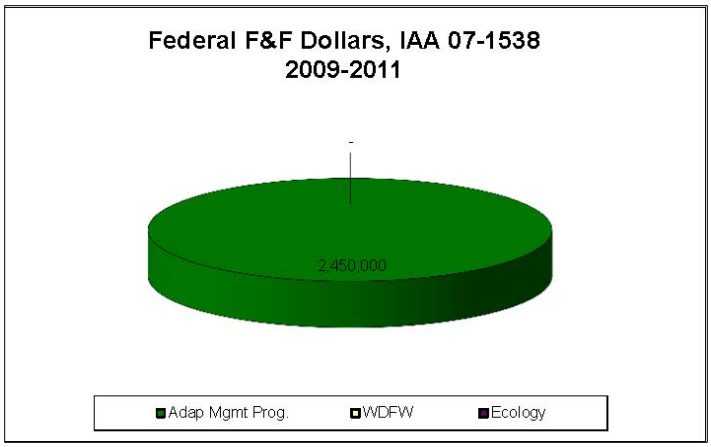


Figure 1. Federal Forests & Fish Grants

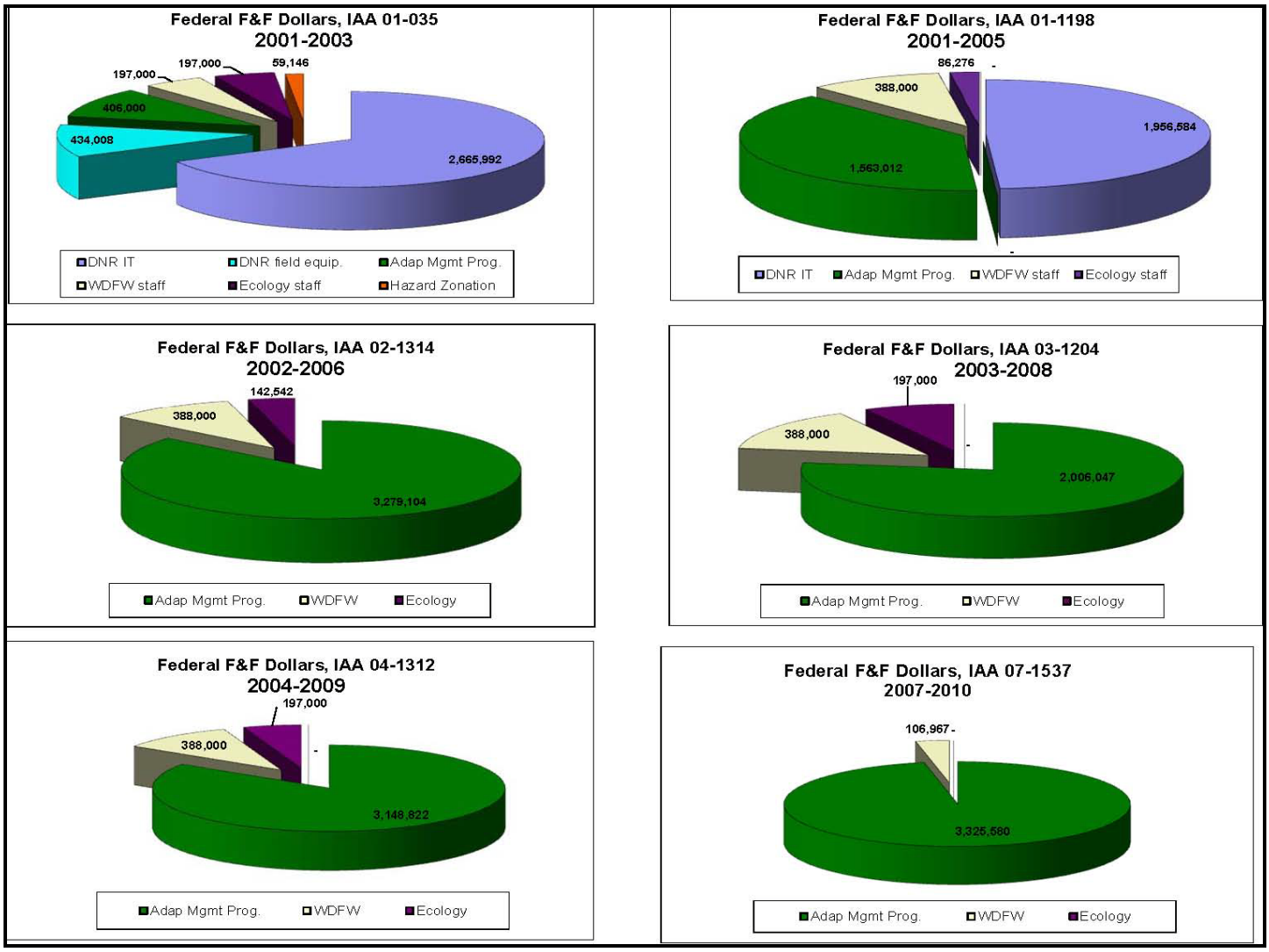
Note: Landslide Hazard Zonation has been incorporated into the Adaptive Management Program.

The Department of Natural Resources expended all but $872,646 of the federal grants. These funds have been spent on adaptive management ($17,043,003), development of information systems ($4,881,911), field implementation ($2,317,829), and field equipment ($443,360). Table 1 reflects these federal expenditures by state fiscal year (July 1 through the following June).

Table 1 – Forests & Fish Grant Expenditures
By State Fiscal Year (July 1 – June 30)

Funded Activity	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total
Hydrolayer Database /Water Typing	$250,000	$1,213,175	$674,363	$572,077	$257,020	$185,039						$3,151,674
GIS /Forest Roads Layer		$309,000		$66,910								$375,910
Forest Practices Permit System (FPARS)	$803,824	$291,168										$1,094,992
Field Work Equipment DNR	$418,254	$15,458	$296	$3,020					$6,332			$443,360
Forests &Fish Implementation DFW	$197,000		$89,000	$164,530	$318,223	$271,943	$120,529	$100,166	$101,885	$5,082		$1,368,359
Forests &Fish Implementation DOE	$106,875	$79,554	$96,847	$21,003	$304,825	$54,563	$221,497	$64,306				$949,470
Hazard Zonation Mapping		$29,941	$17,146	$146,285	$63,247		$2,717					$259,335
Forests & Fish Adaptive Management Program /DNR				$247,227	$389,880	$537,190	$326,430	$393,300	$341,259	$21,077	$6,420	$2,262,781
CMER Research and Monitoring Program Areas	$63,632	$867,527	$530,257	$1,247,184	$872,534	$972,139	$870,912	$2,405,968	$2,515,229	$1,194,561	$289,156	$11,829,098
CMER Staff (NWIFC)	$102,368	$145,000	$343,000	$391,141	$304,825	$343,004	$364,625	$378,474	$456,498		$122,188	$2,951,124
Total	$1,941,953	$2,950,823	$1,750,909	$2,859,376	$2,510,553	$2,363,878	$1,906,709	$3,342,214	$3,421,203	$1,220,719	$417,764	$24,686,102

Figure 2 illustrates the actual expenditures among the four major activity functions (adaptive management, development of information systems, field implementation, and field equipment) across the seven federal grants. The research and monitoring products generated from the funding are described in detail in the following chapter.



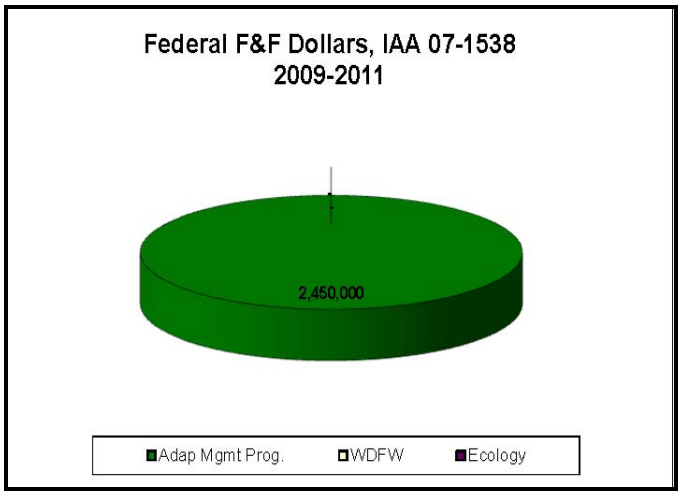


Figure 2. Federal Forests & Fish Grant Expenditures

Note: Landslide Hazard Zonation has been incorporated into the Adaptive Management Program.

Adaptive Management Program Products

The previous chapter summarized ten years of funding history for Forest and Fish Report implementation by the Pacific Coastal Salmon Recovery Fund through the Washington State Recreation and Conservation Office acting on behalf of the Salmon Recovery Funding Board. Approximately $17.0 million was spent on the adaptive management program, $4.9 million on information management systems, $2.3 million on field implementation, and $0.4 million on field equipment.

Table 2. CMER Projects, Objectives, and Targets provides a comprehensive summary of 97 CMER projects associated with the Adaptive Management Program. For each project, the table displays the status; the task type; forests and fish goals; and resource objectives and performance targets addressed by the project. Definitions and other information can be found notes at the bottom of the table.

For example, the first project listed is "Last Fish/Habitat Prediction Model Development". The status is "complete" and the task type is "RIT" (rule implementation tool). The project addressed forests and fish goals centered around fish by directly ("D") measuring in-stream/wetland habitat objectives/targets, including fish and amphibian habitat identification, substrate, and flow ("In-Str/Wet Hab").

A number of questions can be answered by referring to this table. For example, how many projects are planned and what is their status? Which projects directly address forests and fish goals related to fish, amphibians, or water quality? Which projects directly or indirectly address any particular L-1 performance target, such as riparian/wetland shade? Which projects are related to effectiveness monitoring, intensive monitoring, or extensive status and trends monitoring? And, which projects address multiple resource objectives and performance targets? For an example of the latter question, the Type N Experimental Buffer Treatment in Hard Rock Lithologies project directly measures the three forests and fish goals (fish, amphibians, and water quality) and directly measures nine resource objectives and targets. In addition it addresses two other issues – windthrow and intermittent flow.

Of the 97 projects list in Table 2, 27 are related to rule tools, 61 to effectiveness monitoring, 7 to extensive monitoring and 2 to intensive monitoring. Thirty two (32) of the 97 projects have been completed. Of the 32 completed projects, 15 were related to development of rule tools, 11 were "research and development" projects related to effectiveness monitoring programs, 5 were effectiveness projects, and 1 was an extensive status and trends monitoring design project. Of projects soon to be completed, 3 are effectiveness monitoring and 2 are extensive status and trends monitoring projects.

Field Implementation (Field implementation - $2.3 million)

Federal funding was provided to support start-up and other costs for field staff in the Department of Natural Resources and Washington Department of Fish and Wildlife to assist landowners in implementing and ensuring compliance with the new forest practice rules resulting from the 1999 Forests and Fish Report. DNR hired staff, including small forest landowner educational assistance foresters, to implement the forest and fish rules. Salaries and benefits were covered by state funding; however, one-time equipment costs were covered by federal funds.

The Washington Department of Fish and Wildlife also hired staff to enable the department to implement its responsibilities for aquatic resources under the forest and fish rules. Staff hired by the department were field positions, located in various locations throughout the state. Examples of responsibilities associated with these positions included reviewing and providing comments on forest practices applications regarding compliance with the aquatic habitat protection stands of the forest and fish rules; participating in multi-agency development and review of forest road maintenance and abandonment plans, conducting reviews of landowner proposed alternate plans to protect aquatic resources which deviated from standard rules, conducting bull trout habitat field reviews, conducting stream type verification, and identifying and reporting suitable in-channel and off-channel fish habitat enhancement sites. Support through federal funding lasted from 2000 through 2007, after which support came from state funds.

Field Equipment (Field equipment - $0.4 million)

As stated in the field implementation section above, one-time equipment costs were covered by federal funds. These equipment costs included vehicles, computers and other equipment required by staff hired by the Department of Natural Resources to implement the forest and fish rules. Costs associated with all other equipment purchases were integrated with the total costs of individual projects, such as the rule tool projects discussed under the rule tool section below.

Rule Tools (Information Management Systems -$4.9)

The earliest projects associated with implementing key components of the 1999 Forest and Fish Report and subsequent RCWs and WACs supported through the Pacific Coastal Salmon Recovery Fund were rule implementation tool projects to develop, refine, or validate science based management tools necessary for implementing the rule(s) (e.g., predictive models, protocols, etc.) or for establishing performance standards. The products of these projects were classified as “rule tools.”

Two types of rule tool projects were identified. The first type were methodology tool development projects to develop, test, or refine protocols, models, and guides that allow the identification and location of forest practices rule-specified management features, such as the Last Fish/Habitat Model, landslide screens, Np/Ns breaks and sensitive sites, or the achievement of specified stand conditions, such as the desired future condition (DFC) basal area targets. The second type of rule tool projects were riparian and other functional target verification projects

consisting of studies designed to verify performance targets developed during forests and fish negotiations that authors identified as having a weak scientific foundation, such as the DFC basal areas targets for Type F streams.

The first two contracts with the Recreation and Conservation Office (at that time called the Interagency Committee for Outdoor Recreation) Salmon Recovery Funding Board included funding for three rule tool programs. The first was to build accurate, up-to-date geographic information systems to show streams and fish habitat on private and state forestland so fish habitat could be better protected and monitored (the "hydro" data layer). Another rule tool development program was to improve the public's *ability* to *review* and comment on proposed forest practice *activities* on private and state forest land ("forest practices *permit* system", or FPARS). Finally, a third rule tool development program was to map unstable slopes ("landslide hazard zonation" mapping) to reduce landslides into streams resulting from forest practices.

Improved maps with new water type classifications to identify fish use for planning forest practices was released for Western Washington in 2005 and for Eastern Washington in 2006. A new online forest practices application review system (FPARS) was implemented in 2002. FPARS allows forest practice permit applicants to access application forms from the web. The new internet-based computer system improved both the processing of state forest practices applications and the public's ability to review proposed forest operations that require a permit. Finally, screening tools were developed, including GIS-based maps, to assist in the identification of potentially unstable landforms. These projects were managed by the Washington Department of Natural Resources directly, rather than through CMER.

The rule tool discussion above provides examples of rule tool projects supported by the federal Pacific Coastal Salmon Recovery Fund. Other rule tool projects developed by the Forest Practices Adaptive Management Program can be found in Table 2 (see projects labeled "RIT" in column labeled "Task Type"). The table contains 27 rule tool projects; however, it does not include the substantial early effort developing the hydro layer and FPARS system, which were not CMER projects, per se. Of the 27 rule tool projects listed in Table 2, 15 have been completed. For more information on the rule tool projects under the various forest practices rule groups, see the FY2012 CMER Work Plan.

Research and Monitoring (Adaptive Management - $17.0 million)

In addition to other objectives for implementing the Forest and Fish Report, funding was provided to the Forest Practices Adaptive Management Program to evaluate the effectiveness of the new forest and fish rules to protect salmon habitat and to adopt "adaptive management" to improve protection as needed. The Department of Natural Resources oversees adaptive management research and monitoring through CMER.

In addition to the Forest Practices Adaptive Management Program, funding was provided to the Washington State Department of Ecology's Environmental Assessment Program to plan and implement field monitoring programs to measure the effectiveness of the forest and fish rules. Staff were provided to assist CMER in implementing the Forest Practices Adaptive Management

Program research and monitoring program, including scoping and prioritization of research and monitoring projects, development of study designs, and oversight assistance on specific research and monitoring projects. Examples of specific projects on which staff at the Department of Ecology provided major oversight included three extensive monitoring studies: the Extensive Riparian Status and Trend Monitoring – Temperature, Type F/S Westside; the Extensive Riparian Status and Trend Monitoring – Temperature, Type F/S Eastside; and the Extensive Riparian Status and Trend Monitoring – Temperature, Type Np Westside.

Initially, a major effort was placed by CMER into developing research projects and schedules that would validate performance targets and assess the effectiveness of rules in achieving resource objectives based on the Forest and Fish Report's research priorities. Products of federal funding for research and monitoring projects included research and monitoring reports, per se; scoping documents; study designs; quality and assurance (QA/QC) plans; field data collection manuals; literature reviews; technical guidelines and protocols; model validation; workshops; and science conferences. Most of the literature reviews, technical guideline and protocol development projects, model validation projects, and workshops were precursors to projects directly related to either effectiveness or extensive monitoring. The FY2012 CMER Work Plan contains detail about the purpose and status of these projects, as well as their links to adaptive management. (See CMER Work Plan under "Files" on the Forest Practices page on the DNR web site http://www.dnr.wa.gov/BusinessPermits/Topics/FPAdaptiveManagementProgram/Pages/fp_am_program.aspx).

An early product of the research and monitoring program was development of a plan entitled "Monitoring Design for the Forestry Module of the Governor's Salmon Recovery Plan." The report provided an overall design of the monitoring program for the new forest practice rules based on the 1999 Forest and Fish Report. The monitoring design team's charge was to develop an integrated monitoring approach that provided a framework for collecting new information to support the Adaptive Management Program. The plan contained three distinct but related components: prescription monitoring (or effectiveness monitoring), extensive monitoring (or status and trends monitoring), and intensive monitoring (or cumulative effects monitoring of multiple forest practices and validation monitoring). This plan has served as a pivotal reference document in developing the CMER work plans.

Of the 97 CMER projects listed in Table 2, 70 are related to effectiveness, extensive or intensive monitoring program. Of those, 17 have been completed, 3 have completed drafts that have gone through the Independent Scientific Peer Review Process (ISPR) and are now awaiting finalization, 1 has a completed draft currently in the ISPR process, 1 has a completed draft soon to be sent through the ISPR process, 18 are in progress (study designs complete and either currently in or ready for field implementation), 8 are currently being scoped, and 26 have been "delayed".

Although all projects in Table 2 were identified by Policy and CMER as needed, the "delayed" projects are those that were initially classified as lower priority; whose priorities changed after initial scoping; whose priorities were lowered based on results from other, related completed or nearly completed studies; that are awaiting completion of other, related studies that are likely to

provide intellectual content to the study; that are waiting for available funding or human resources; and similar reasons.

Table 3. Selected Forest Practices Adaptive Management Program Products lists many of the research and monitoring related products developed by the Forest Practices Adaptive Management Program. The list is grouped into categories of products: draft publication manuscripts, draft reports, edited documents, manuals, manuscripts, protocols, reports, scoping papers, study plans, and study proposals. The list is not comprehensive, although great effort was placed into looking back through ten years of files, both paper and electronic, for all final reports (or draft reports if final reports were not completed and sent through the formal CMER review process). Fifty three (53) reports were completed between 2000 and 2011, either wholly or partially funded by the federal Pacific Coastal Salmon Recovery Fund through the Washington State Recreation and Conservation Office Salmon Recovery Funding Board. An additional 5 reports should be completed within the next year: 1) Evaluation of the effectiveness of the current TFW shade methodology for measuring attenuation of solar radiation to the stream; 2) Results of the Westside type N buffer characteristics, integrity, and function study; 3) Extensive riparian status and trends monitoring program – stream temperature Phase 1: Eastside type F/S monitoring report; 4) Extensive riparian status and trends monitoring program – stream temperature Phase 1: Westside type F/S/N monitoring report; and 5) The mass wasting effectiveness monitoring project: a post-mortem examination of the landslide response to the December 2007 storm in Southwestern Washington.

Most of the reports listed in Table 3 can be found on the Forest Practices web page on the Washington State Department of Natural Resources web site, or http://www.dnr.wa.gov/BusinessPermits/ForestPractices/Pages/Home.aspx under links to TFW Research Publications or Completed Cooperative Monitoring, Evaluation and Research Projects. All the documents listed in Table 3 are contained on electronic discs forwarded to the Washington State Recreation and Conservation Office along with this report.

Public Outreach

CMER holds regular monthly meetings attended by CMER members, Scientific Advisory Group (SAG) co-chairs, and other interested parties. SAGs meet on a monthly basis. Completed CMER research is forwarded to a Policy, also made up of members representing the stakeholder groups. As with CMER, they meet monthly to consider CMER studies and other forest practices issues and to make recommendations to the Washington Forest Practices Board. The Washington Forest Practices Board is an independent state agency, chaired by the Commissioner of Public Lands, which sets minimum standards for forest practices. In all cases, meetings are open to the public and meeting dates and agendas are posted on the Meetings & Events section of the Forest Practices page on the Washington State Department of Natural Resources web site, or http://www.dnr.wa.gov/BusinessPermits/ForestPractices/Pages/Home.aspx. Other examples of public outreach include science conferences and workshops.

Science conferences

CMER hosts annual science conferences as an avenue for sharing scientific research results to the public. The science conferences focus on progress made or completed projects designed to answer Adaptive Management Program key questions from the 1999 Forests and Fish Report. The adaptive management key questions of interest are related to the effectiveness of the forest practices rules at producing conditions that achieve resource objectives and performance targets, and whether the objectives and targets are the right ones to achieve forests and fish performance goals. CMER has hosted seven science conferences since 2004. Typically these are held all day in the Olympia area with specific sessions dedicated to CMER funded scientific projects. The last four science conferences have been videotaped and can be found at the following link: http://www.dnr.wa.gov/AboutDNR/BoardsCouncils/CMER/Pages/Home.aspx.

CMER sponsored workshops

A remote sensing workshop for riparian studies was held in 2006 at the University of Washington. This workshop was held to share the evaluation of the most suitable instrumentation and imagery to use for evaluating the potential accuracy of a suite of riparian variables that address CMER extensive, prescription effectiveness, and intensive watershed scale monitoring questions. The accuracy, cost, and feasibility of the different resolutions of remotely sensed data and other non-aerial photographic remote methods were discussed and compared with an audience of experts. A link to the videotaped workshop follows: http://www.ruraltech.org/video/2006/wadnr_remote_sensing/index.asp.

A workshop on the review of available literature related to wood loading dynamics in and around eastern Washington was held in 2004 with DNR and CMER representatives in order to reassess the project plan and provide a preliminary review of the sources and availability of numeric information. The workshop included discussions of the preliminary draft literature database and answers to four (4) questions addressed by the CMER review.

Outcomes of Funding by the Pacific Coastal Salmon Recovery Fund

The outcomes generated from the federal funding for establishment and support of the Forest Practices Adaptive Management Program via the federal Pacific Coastal Salmon Recovery Fund have been extensive, from development of annual CMER work plans and a CMER Protocols and Standards Manual to a Forest Practices Habitat Conservation Plan to rule-tool development to specific research and monitoring projects.

A significant outcome of the federal funding was the establishment and implementation of a formal Forest Practices Adaptive Management Program covering aquatic species on state and private forestlands in Washington State, a program that involves an official state rules making body, a policy committee and a science committee. As significant as the program itself, a unique model of collaborative decision-making was used – and continues to be used – in development of the program. In addition, an independent scientific peer review process was established to ensure the rigor and integrity of the adaptive management research and monitoring projects and reports.

Development of the 1999 Forests and Fish Report and subsequent Washington state laws and forest practices rules were based on the best available science at the time. Both the report and the rules were developed in a collaborative, transparent process, with many stakeholders involved. That open, transparent, collaborative process continues to be used in the Adaptive Management Program to review and revise forest practices rules on state and private lands based on research and monitoring projects and other information supported by the Pacific Coastal Salmon Recovery Fund.

The Washington State Forest Practices Habitat Conservation Plan was prepared as part of an ongoing process to provide protection of aquatic species while also providing a regulatory climate conducive to a viable forest products industry. The habitat conservation plan covers over 9 million acres of state and private forestland and represents a unified and coordinated conservation effort among state, federal, tribal and local governments, environmental interests, and small and large forest landowners. The plan will help preserve healthy forests and clean streams for wild salmon and other aquatic species, provide for a healthy forest products industry, and secure the sustainable and responsible management of our forests, now and for future generations.

Federal funding also supported forest and fish implementation by the Washington State Department of Fish and Wildlife. These funds were used to support agency field staff to assist landowners in implementing and ensuring compliance with the new forest practice rules. These funds supported such responsibilities as reviewing and providing comments on forest practices applications regarding compliance with the aquatic habitat protection standards of state forest practices forest and fish emergency rules and the subsequent permanent riparian protection rules, participating in multi-agency development and review of forest road maintenance and

abandonment plans (RMAPs), conducting reviews of landowner proposed alternate plans to protect aquatic resources which deviated from stand rules, conducting bull trout habitat filed reviews, conducting stream type verification, and identifying and reporting suitable in-channel and off-channel fish habitat enhancement sites.

The Washington State Department of Ecology was also supported through the federal funds to implement forest and fish implementation. The department developed a monitoring program designed to measure the effectiveness of the forest and fish rules at large spatial scales. Department scientists also participate in CMER.

Another significant outcome of the federal funding was early emphasis on the development of rule tools. Rule tool development projects were designed to develop, refine or validate tools used to implement the forest practices rules promulgated by the Forest Practices Board in support of the 1999 Forests and Fish Report. Methodology tool development projects developed, tested, or refined protocols, models, and guides that allowed the identification and location of forest practices rule-specified management features, such as the Last Fish/Habitat Model, landslide screens, or the achievement of specified stand conditions, such as the desired future riparian condition basal area target (DFC). Target verification projects were designed to verify riparian function performance targets developed during Forests and Fish Report negotiations that authors identified as having a weak scientific foundation, such as the DFC basal area targets for Type F streams.

While initial funding from the Pacific Coastal Salmon Recovery Fund was supporting development of the Adaptive Management Program organizational structure and early rule tool development, funding was also being used to develop a comprehensive, integrated research and monitoring program, applying the concepts of adaptive management. CMER developed a comprehensive work plan, now updated annually, as well as a CMER Protocols and Standards Manual designed to provide information and guidelines concerning the role, structure, governance, and activities of CMER. The work plan contains over 90 identified priority projects, organized by forest practices rule group.

A report entitled Monitoring Design for the Forestry Module of the Governor's Salmon Recovery Plan July 2002 was commissioned by Forest and Fish Policy to "develop a comprehensive framework for collection, analysis and interpretation of data related to effectiveness monitoring" for rules derived from the Forest and Fish Report (1999). The report is a conceptual framework for a coordinated monitoring plan with specific examples of how specific types of monitoring may be conducted. The report provides a collective vision for how an effective monitoring program could be structured. The vision of the authors was that this report will continue to change as new components are developed, methods are tested, modified and improved, new technologies become available, and the availability of resources changes over the years.

Another outcome of providing funding for establishment and support for the Forest Practices Adaptive Management Program is the continued participation by multiple stakeholders in the program, including tribes and tribal organizations, state agencies, federal agencies, landowner groups, counties, and the conservation caucus. Participation is at both the policy and science

levels. Although the various stakeholders come to the table with different values and interests, they continue to talk and collaborate in setting Adaptive Management Program agendas and priorities.

Although only a few stakeholder representatives may actively participate at Policy or in CMER, maintenance of Forest Practices Adaptive Management Program web pages provide transparency and information to both participants and the general public about the program, including meeting dates, locations, and agendas; meeting notes or minutes; completed research and monitoring reports; information on active projects; and more.

As state earlier, the purpose of the Forest Practices Adaptive Management Program is to "provide science-based recommendations and technical information to assist the board in determining if and when it is necessary or advisable to adjust rules and guidance for aquatic resources to achieve resource goals and objectives." Although the permanent forest practices "forest and fish" rules adopted by the Forest Practices Board in 2001 were based on the best available science at the time, there were gaps in the science, leading to uncertainty in the science underlying a rule, including the causal relationships underlying the conceptual foundation for the prescriptions and assumptions about prescription effectiveness and resource response when the prescription is applied on the ground. The current 2012 CMER Work Plan contains over 90 projects either completed, on-going, or planned to address these issues.

Finally, the Forest Practices Adaptive Management Program research and monitoring efforts funded through the Pacific Coastal Salmon Recovery Fund have already led to revisions in the Washington state forest practices rules and in guidance to small forest landowners. For example, the rules containing the target threshold for the riparian desired future conditions basal area target has been revised, and a small landowner fixed-width buffer template has been developed in cooperation with small landowner representatives and added to the Forest Practices Board Manual.

Table 2: CMER Projects, Objectives, and Targets

				Direct Measure of FFR Goals			Direct or Indirect Measurement[1] of Objectives & Targets (D = direct; I = indirect; L = literature; ? = probable if implemented in future)												Other Important Issues		
Rule Group/ Program	CMER Projects	Status	Task Type	Fish	Amphib	WQ	In-Str Temp	Rip/ Wet Shade	Rip/ Wet Stand[2]	In-Str/ Wet LWD	Rip/ Wet Litter	In-Str/ Wet Hab[3]	Strm Bnk ELZ[4]	Mass Wast-ing	Rd Sed Runoff	Peak Flow	Wet-land	Fish Passage	Wind-throw	Ground-water	Intermit Flow[5]
Stream Typing Rule Group																					
Stream Typing Program (Rule Tool)																					
	Last Fish/Habitat Prediction Model Development	complete	RIT	yes	---	---	---	---	---	---	---	D	---	---	---	---	---	---	---	---	---
	Annual/Seasonal Variability	complete	R&D	yes	---	---	---	---	---	---	---	D	---	---	---	---	---	---	---	---	---
	Last Fish/Habitat Prediction Model Field Performance	complete	RIT	yes	---	---	---	---	---	---	---	D	---	---	---	---	---	---	---	---	---
Type N Riparian Prescriptions Rule Group																					
Type N Delineation Program (Rule Tool)																					
	Perennial Initiation Point Survey: Pilot Study	complete	RIT	---	---	---	---	---	---	---	---	D	---	---	---	---	---	---	---	---	D
Sensitive Site Program (Rule Tool)																					
	SAA Sensitive Sites Identification Methods	complete	RIT	---	yes	---	---	---	---	---	---	D	---	---	---	---	---	---	---	---	---
	SAA Sensitive Sites Characterization	complete	RIT	---	yes	---	---	---	---	---	---	D	---	---	---	---	---	---	---	---	D
Type N Riparian Effectiveness Program																					
	Westside Type N Buffer Characteristics, Integrity, and Function (BCIF)	in prog	EFF	---	---	---	I	D	D	D	---	I	D	---	---	---	---	---	D	---	---
	Type N Exp Buffer Treatment Feasibility Study	complete	R&D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Type N Exp Buffer Treatment in Hard Rock Lithologies	in prog	EFF	yes	yes	yes	D	D	D	D	D	D	D	---	D	D	---	---	D	---	D
	Type N Exp Buffer Study in Soft Rock Lithologies	in prog	EFF	---	---	yes	D?	D?	D?	?	?	?	D?	---	D?	D?	---	---	D?	I	I?
	Windthrow Frequency, Distribution, and Effects	delayed	EFF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	D?	---	---
	Eastside Type N Buffer Characteristics, Integrity, and Function (BCIF)	delayed	EFF	---	---	yes	D?	D?	D?	D?	---	---	D?	---	---	---	---	---	D?	---	---
	Eastside Type N Forest Hydrology	in prog	RIT	---	yes	yes	I	---	I	---	---	---	---	---	---	---	---	---	---	I	D
	Eastside Type N Riparian Effectiveness	delayed	EFF	---	yes	yes	D	D	D	D?	D	D	D	---	D?	D?	---	---	D	---	D
Type N Amphibian Response Program (Effectiveness)																					
	SAA Detection/Relative Abundance Methodology	complete	R&D	---	yes	---	---	---	---	---	---	D	---	---	---	---	---	---	---	---	D
	Type N Exp Buffer Treatment in Hard Rock Lithologies[6]	in prog	EFF	yes	yes	yes	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Tailed Frog Literature Review	in prog	R&D	---	yes	---	L	L	L	L	L	L	L	L	L	L	---	---	L	---	L
	Tailed Frog Meta-Analysis	in prog	R&D	---	yes	---	---	---	---	---	---	I	---	---	---	---	---	---	---	---	I
	Tailed Frogs and Parent Geology	scoping	R&D	---	yes	---	---	---	---	---	---	D?	?	?	?	---	---	---	?	---	?
	Dunn's Salamander	complete	R&D	---	yes	---	---	D	D	---	D	---	---	---	---	---	---	---	---	---	---
	Buffer Integrity - Shade Effectiveness	in prog	EFF	---	yes	yes	D	D	---	---	---	D	---	---	---	---	---	---	I	---	---
	Amphibian Recovery	complete	EFF	---	yes	yes	D	D	D	D	---	D	I	---	---	---	---	---	D	---	I
	Amphibians in Intermittent Streams	scoping	R&D	---	yes	---	?	?	---	?	---	D?	---	---	---	?	---	---	---	---	D?
Extensive Riparian Status and Trendss Monitoring Program																					
	Extensive Riparian Status and Trends Monitoring - Temperature, Type Np Westside	in prog	EXT	---	---	yes	D	D	I	D	---	D	D	---	---	---	---	---	---	---	---
	Extensive Riparian Status and Trends Monitoring - Temperature, Type Np Eastside	in prog	EXT	---	---	yes	D	D	I	D	---	D	D	---	---	---	---	---	---	---	---
	Extensive Riparian Status and Trends Monitoring - Vegetation, Type Np Westside and Eastside	scoping	EXT	---	---	---	?	?	?	---	?	---	---	---	---	---	---	---	?	---	---

(Table cont. next page; see final page for notes)

(Table 2: CMER Projects, Objectives, and Targets cont.)

				Direct Measure of FFR Goals			Direct or Indirect Measurement[1] of Objectives & Targets (D = direct; I = indirect; L = literature; ? = probable if implemented in future)												Other Important Issues		
Rule Group/ Program	CMER Projects	Status	Task Type	Fish	Amphib	WQ	In-Str Temp	Rip/ Wet Shade	Rip/ Wet Stand[2]	In-Str/ Wet LWD	Rip/ Wet Litter	In-Str/ Wet Hab[3]	Strm Bnk ELZ[4]	Mass Wast-ing	Rd Sed Runoff	Peak Flow	Wet-land	Fish Passage	Wind-throw	Ground-water	Intermit Flow[5]
Type F Riparian Prescriptions Rule Group																					
DFC Validation Program (Rule Tool)																					
	DFC Target Validation	complete	RIT	---	---	---	---	---	D	---	---	---	---	---	---	---	---	---	---	---	---
	DFC Plot Width Standardization (scoping)	delayed	R&D	---	---	---	---	---	?	?	---	?	---	---	---	---	---	---	---	---	---
	FPA Desktop Analysis (includes field analysis)	complete	RIT	---	---	---	---	---	D	---	---	---	---	---	---	---	---	---	---	---	---
	DFC Site Class Map Validation (scoping)	delayed	RIT	---	---	---	---	---	?	---	---	---	---	---	---	---	---	---	---	---	---
	DFC Trajectory Model Validation	delayed	R&D	---	---	---	---	---	?	?	---	---	---	---	---	---	---	---	---	---	---
	DFC Aquatic Habitat	delayed	R&D	---	---	---	---	---	?	?	---	?	---	---	---	---	---	---	---	---	---
	Pathways of Riparian Stand Development to Maturity	delayed	R&D	---	---	---	---	---	?	---	---	---	---	---	---	---	---	---	---	---	---
	Red Alder Growth and Yield Model (coop. contribution)	in prog	R&D	---	---	---	---	---	D	---	---	---	---	---	---	---	---	---	---	---	---
Eastside Type F Riparian Rule Tool Program																					
	Eastside Disturbance Regime Literature Review	complete	R&D	---	---	---	---	L	L	L	L	---	---	L	---	---	---	---	L	---	---
	Eastside LWD Literature Review	complete	R&D	---	---	---	---	L	L	L	L	L	---	---	---	---	---	---	L	---	---
	Eastside Temperature Nomograph	incomplete	RIT	---	---	yes	D	D	---	---	---	---	---	---	---	---	---	---	---	---	---
	Eastern WA Riparian Assessment (Phase 1)	complete	R&D	---	---	---	---	D	D	D	D	D	---	---	---	---	---	---	D	---	---
	Eastside Type F Channel Wood Characterization	scoping	R&D	---	---	---	---	D	I	D	I	D	---	---	---	---	---	---	D	---	---
Bull Trout Habitat Identification Program (Rule Tool)																					
	Bull Trout Presence/Absence Protocols	complete	RIT	yes	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Bull Trout Habitat Prediction Models	complete	RIT	yes	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Yakima River Radiotelemetry	in prog	R&D	yes	---	---	---	---	---	---	---	D	---	---	---	---	---	---	---	---	---
Westside Type F Riparian Effectiveness Program																					
	Westside Type F Riparian Prescription Monitoring	scoping	EFF	---	---	---	?	?	?	?	---	?	?	---	---	---	---	---	?	---	---
	Type F Experimental Buffer Treatment	delayed	EFF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Type F Performance Target Validation	delayed	EFF	---	---	---	---	---	?	?	---	?	?	---	---	---	---	---	---	---	---
Eastside Type F Riparian Effectiveness Program																					
	Eastern Washington Riparian Assessment (Phase 2)	in prog	EFF	---	---	---	---	I	D	I	---	---	---	---	---	---	---	---	I	---	---
	BTO Temperature (Eastside Riparian Shade/Temperature)	in prog	EFF	---	---	yes	D	D	D	---	---	---	---	---	---	---	---	---	---	---	D
	Solar Radiation/Effective Shade	in prog	EFF	---	---	---	I	D	---	---	---	---	---	---	---	---	---	---	---	---	---
	Eastside Type F Riparian Effectiveness Monitoring (BTO add-on)	in prog	EFF	---	---	---	---	---	D	D	---	I	D	---	---	---	---	---	D	---	---
	Groundwater Conceptual Model	incomplete	R&D	---	---	---	I	---	---	---	---	---	---	---	---	---	---	---	---	I	---
Hardwood Conversion Program (Effectiveness)																					
	Riparian Hardwood Conversion	in prog	EFF	---	---	---	---	---	D	---	---	---	---	---	---	---	---	---	?	---	---
	Riparian Hardwood Conversion - Temperature Component	in prog	EFF	---	---	yes	D	D	---	---	---	I	---	---	---	---	---	---	---	---	---
	Annotated Bibliography: Riparian Hardwood Conversion	in prog	R&D	---	---	---	?	---	L	---	---	---	---	---	---	---	---	---	---	---	---
	WDOE Water Temperature Modeling	complete	R&D	---	---	---	I	I	I	---	---	---	---	---	---	---	---	---	---	---	---
Extensive Riparian Status and Trends Monitoring Program																					
	Extensive Riparian Status and Trends Monitoring - Temperature, Type F/S Westside	in prog	EXT	---	---	yes	D	D	I	D	---	D	D	---	---	---	---	---	---	---	---
	Extensive Riparian Status and Trends Monitoring - Temperature, Type F/S Eastside	in prog	EXT	---	---	yes	D	D	I	D	---	D	D	---	---	---	---	---	---	---	---
	Extensive Riparian Status and Trends Monitoring - Vegetation, Type F/S Westside and Eastside	scoping	EXT	---	---	---	?	?	?	---	?	---	---	---	---	---	---	---	?	---	---
Intensive Monitoring/Cumulative Effects Program: No projects yet identified.																					

(Table cont. next page; see final page for notes)

(Table 2: CMER Projects, Objectives, and Targets cont.)

				Direct Measure of FFR Goals			Direct or Indirect Measurement[1] of Objectives & Targets (D = direct; I = indirect; L = literature; ? = probable if implemented in future)												Other Important Issues		
Rule Group/ Program	CMER Projects	Status	Task Type	Fish	Amphib	WQ	In-Str Temp	Rip/ Wet Shade	Rip/ Wet Stand[2]	In-Str/ Wet LWD	Rip/ Wet Litter	In-Str/ Wet Hab[3]	Strm Bnk ELZ[4]	Mass Wast-ing	Rd Sed Runoff	Peak Flow	Wet-land	Fish Passage	Wind-throw	Ground-water	Intermit Flow[5]
Channel Migration Zone Rule Group																					
CMZ Delineation Program																					
	CMZ Screen and Aerial Photo Catalog and CMZ Boundary Identification Criteria	delayed	RIT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Consistency and Accuracy of CMZ Boundary Delineations	delayed	RIT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CMZ Validation Program: No projects yet identified.																					
Unstable Slopes Rule Group																					
Unstable Landform Identification Program (Rule Tool)																					
	Shallow Rapid Landslide Screen for GIS (Westside)	complete	RIT	---	---	---	---	---	---	---	---	---	---	I	---	---	---	---	---	---	---
	Shallow Rapid Landslide Screen for GIS (Eastside)	delayed	RIT	---	---	---	---	---	---	---	---	---	---	?	---	---	---	---	---	---	---
	Technical Guidelines for Geotechnical Reports	complete	RIT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Regional Unstable Landforms Identification (Deep-Seated Screen)	complete	RIT	---	---	---	---	---	---	---	---	---	---	I	---	---	---	---	---	---	---
	Landform Hazard Classification System and Mapping Protocols	complete	R&D	---	---	---	---	---	---	---	---	---	---	I	---	---	---	---	---	---	---
	Landslide Hazard Zonation (priority 1 and 2 watersheds)	complete	RIT	---	---	---	---	---	---	---	---	---	---	D	---	---	---	---	---	---	---
	Landslide Hazard Zonation (priority 3 watersheds)	incomplete	RIT	---	---	---	---	---	---	---	---	---	---	D	---	---	---	---	---	---	---
Glacial Deep-Seated Landslides Program (Rule Tool)																					
	Model Evapo-Transpiration in Deep-Seated Landslide Recharge Areas	complete	RIT	---	---	---	---	---	---	---	---	---	I	I	---	---	---	---	---	I	---
	Evapo-Transpiration Model Refinement	delayed	R&D	---	---	---	---	---	---	---	---	---	---	I?	---	---	---	---	---	---	---
	Landslide Classification	delayed	RIT	---	---	---	---	---	---	---	---	---	---	I?	---	---	---	---	---	I	---
	Groundwater Recharge Modeling	delayed	R&D	---	---	---	---	---	---	---	---	---	---	I?	---	---	---	---	---	D	---
	Board Manual Revision	delayed	RIT	---	---	---	---	---	---	---	---	---	---	I?	---	---	---	---	---	I	---
Mass Wasting Effectiveness Monitoring Program																					
	Testing the Accuracy of Unstable Landform Identification (aka Accuracy and Bias)	scoping	EFF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Mass Wasting Effectiveness Monitoring (aka Post-Mortem)	in prog	EFF	---	---	---	---	---	---	D	---	I	I	D	D	I	---	---	---	---	---
	Mass Wasting Landscape-Scale Effectiveness Monitoring	delayed	EFF	---	---	---	---	---	---	---	---	---	---	D?	---	---	---	---	---	---	---
	Mass Wasting Buffer Integrity and Windthrow Assessment	delayed	EFF	---	---	---	---	---	---	---	---	---	---	?	---	---	---	---	?	---	---
Mass Wasting Validation Program (Intensive)																					
	Method to Assess Harmful Cumulative Sediment Inputs	delayed	RIT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Roads Rule Group																					
Road Sub-Basin-Scale Effectiveness Monitoring Program																					
	Road Sub-Basin-Scale Effectiveness Monitoring (Phase 1)	complete	EFF	---	---	I	---	---	---	---	---	---	---	---	D	I	---	I	---	---	---
	Road Surface Erosion Model Update	complete	RIT	---	---	---	---	---	---	---	---	---	---	---	D	---	---	---	---	---	---
	Road Surface Erosion Model Validation/Refinement	delayed	R&D	---	---	---	---	---	---	---	---	---	---	---	?	---	---	---	---	---	---
Road Prescription-Scale Effectiveness Monitoring Program																					
	Effectiveness of RMAP Fixes	delayed	EFF	---	---	---	---	---	---	---	---	---	---	---	D?	---	---	---	---	---	---
	Road Prescription-Scale Effectiveness Monitoring	delayed	EFF	---	---	---	---	---	---	---	---	---	---	---	D?	I	---	I	---	---	---
Roads Validation Program and Cumulative Sediment Effects																					
	Intensive Watershed-Scale Monitoring to Assess Cumulative Effects	delayed	INT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

(Table cont. next page; see final page for notes)

(Table 2: CMER Projects, Objectives, and Targets cont.)

				Direct Measure of FFR Goals			Direct or Indirect Measurement[1] of Objectives & Targets (D = direct; I = indirect; L = literature; ? = probable if implemented in future)												Other Important Issues		
Rule Group/ Program	CMER Projects	Status	Task Type	Fish	Amphib	WQ	In-Str Temp	Rip/ Wet Shade	Rip/ Wet Stand[2]	In-Str/ Wet LWD	Rip/ Wet Litter	In-Str/ Wet Hab[3]	Strm Bnk ELZ[4]	Mass Wast-ing	Rd Sed Runoff	Peak Flow	Wet-land	Fish Passage	Wind-throw	Ground-water	Intermit Flow[5]
Channel Migration Zone Rule Group																					
CMZ Delineation Program																					
	CMZ Screen and Aerial Photo Catalog and CMZ Boundary Identification Criteria	delayed	RIT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Consistency and Accuracy of CMZ Boundary Delineations	delayed	RIT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CMZ Validation Program: No projects yet identified.																					
Unstable Slopes Rule Group																					
Unstable Landform Identification Program (Rule Tool)																					
	Shallow Rapid Landslide Screen for GIS (Westside)	complete	RIT	---	---	---	---	---	---	---	---	---	---	I	---	---	---	---	---	---	---
	Shallow Rapid Landslide Screen for GIS (Eastside)	delayed	RIT	---	---	---	---	---	---	---	---	---	---	?	---	---	---	---	---	---	---
	Technical Guidelines for Geotechnical Reports	complete	RIT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Regional Unstable Landforms Identification (Deep-Seated Screen)	complete	RIT	---	---	---	---	---	---	---	---	---	---	I	---	---	---	---	---	---	---
	Landform Hazard Classification System and Mapping Protocols	complete	R&D	---	---	---	---	---	---	---	---	---	---	I	---	---	---	---	---	---	---
	Landslide Hazard Zonation (priority 1 and 2 watersheds)	complete	RIT	---	---	---	---	---	---	---	---	---	---	D	---	---	---	---	---	---	---
	Landslide Hazard Zonation (priority 3 watersheds)	incomplete	RIT	---	---	---	---	---	---	---	---	---	---	D	---	---	---	---	---	---	---
Glacial Deep-Seated Landslides Program (Rule Tool)																					
	Model Evapo-Transpiration in Deep-Seated Landslide Recharge Areas	complete	RIT	---	---	---	---	---	---	---	---	---	I	I	---	---	---	---	---	I	---
	Evapo-Transpiration Model Refinement	delayed	R&D	---	---	---	---	---	---	---	---	---	---	I?	---	---	---	---	---	---	---
	Landslide Classification	delayed	RIT	---	---	---	---	---	---	---	---	---	---	I?	---	---	---	---	---	I	---
	Groundwater Recharge Modeling	delayed	R&D	---	---	---	---	---	---	---	---	---	---	I?	---	---	---	---	---	D	---
	Board Manual Revision	delayed	RIT	---	---	---	---	---	---	---	---	---	---	I?	---	---	---	---	---	I	---
Mass Wasting Effectiveness Monitoring Program																					
	Testing the Accuracy of Unstable Landform Identification (aka Accuracy and Bias)	scoping	EFF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Mass Wasting Effectiveness Monitoring (aka Post-Mortem)	in prog	EFF	---	---	---	---	---	---	D	---	I	I	D	D	I	---	---	---	---	---
	Mass Wasting Landscape-Scale Effectiveness Monitoring	delayed	EFF	---	---	---	---	---	---	---	---	---	---	D?	---	---	---	---	---	---	---
	Mass Wasting Buffer Integrity and Windthrow Assessment	delayed	EFF	---	---	---	---	---	---	---	---	---	---	?	---	---	---	---	?	---	---
Mass Wasting Validation Program (Intensive)																					
	Method to Assess Harmful Cumulative Sediment Inputs	delayed	RIT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Roads Rule Group																					
Road Sub-Basin-Scale Effectiveness Monitoring Program																					
	Road Sub-Basin-Scale Effectiveness Monitoring (Phase 1)	complete	EFF	---	---	I	---	---	---	---	---	---	---	---	D	I	---	I	---	---	---
	Road Surface Erosion Model Update	complete	RIT	---	---	---	---	---	---	---	---	---	---	---	D	---	---	---	---	---	---
	Road Surface Erosion Model Validation/Refinement	delayed	R&D	---	---	---	---	---	---	---	---	---	---	---	?	---	---	---	---	---	---
Road Prescription-Scale Effectiveness Monitoring Program																					
	Effectiveness of RMAP Fixes	delayed	EFF	---	---	---	---	---	---	---	---	---	---	---	D?	---	---	---	---	---	---
	Road Prescription-Scale Effectiveness Monitoring	delayed	EFF	---	---	---	---	---	---	---	---	---	---	---	D?	I	---	I	---	---	---
Roads Validation Program and Cumulative Sediment Effects																					
	Intensive Watershed-Scale Monitoring to Assess Cumulative Effects	delayed	INT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

(Table cont. next page; see final page for notes)

(Table 2: CMER Projects, Objectives, and Targets cont.)

				Direct Measure of FFR Goals			Direct or Indirect Measurement[1] of Objectives & Targets (D = direct; I = indirect; L = literature; ? = probable if implemented in future)												Other Important Issues		
Rule Group/ Program	CMER Projects	Status	Task Type	Fish	Amphib	WQ	In-Str Temp	Rip/ Wet Shade	Rip/ Wet Stand[2]	In-Str/ Wet LWD	Rip/ Wet Litter	In-Str/ Wet Hab[3]	Strm Bnk ELZ[4]	Mass Wast-ing	Rd Sed Runoff	Peak Flow	Wet-land	Fish Passage	Wind-throw	Ground-water	Intermit Flow[5]
Fish Passage Rule Group																					
Fish Passage Effectiveness/Validation Monitoring Program																					
	No projects listed under this program.																				
Extensive Fish Passage Monitoring Program																					
	Extensive Fish Passage Trends Monitoring (Design)	complete	EXT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	I	---	---	---
Pesticides Rule Group																					
Forest Chemicals Program (Effectiveness): No projects yet identified.																					
Wetlands Protection Rule Group																					
Wetland Mapping Tools Program (Rule Tool)																					
	DNR GIS Wetlands Data Layer	delayed	RIT	---	---	---	---	---	---	---	---	---	---	---	---	---	I	---	---	---	---
	Hydrogeomorphic Wetland Classification System	delayed	RIT	---	---	---	---	---	---	---	---	---	---	---	---	---	I	---	---	---	---
	Overlay Project	delayed	R&D	---	---	---	D?	D?	D?	D?	D?	D?	---	D?	D?	D?	D?	D?	D?	I?	D?
Forested Wetlands Effectiveness Program																					
	Forested Wetlands Literature Review and Workshop	complete	R&D	---	---	---	L	L	L	L	L	L	---	L	L	L	L	L	L	L	L
	Forest Practices and Wetlands Systematic Literature Review	scoping	R&D	yes	yes	yes	L	L	L	L	L	L	---	L	L	L	L	L	L	L	L
	Statewide Forested Wetlands Regeneration Pilot	complete	EFF	---	---	---	---	---	D	---	---	---	---	---	---	---	D	---	---	---	---
	Wetland/Stream Water Temp Interactions	delayed	EFF	---	---	yes	D?	D?	D?	---	---	---	---	---	---	---	D	---	---	D?	---
	Wetlands Hydrologic Connectivity	delayed	EFF	yes	yes	yes	D?	D?	D?	---	---	D?	---	---	D?	D?	D?	D?	---	D?	D?
Wetlands Mitigation Program																					
	Wetlands Mitigation Effectiveness (Pilot Study)	delayed	EFF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Wetlands Mitigation Effectiveness (Phase 1)	delayed	EFF	---	---	yes	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Wetlands Mitigation Effectiveness (Phase 2)	delayed	EFF	yes	yes	yes	D?	D?	D?	?	?	I?	---	D?	D?	I?	D?	I?	D?	I?	D?
Wetland Management Zone Effectiveness Monitoring Program																					
	Wetland Management Zone Effectiveness Monitoring	delayed	EFF	yes	yes	yes	D	D	D	D	D	D	D	D	D	I?	D	D	D	I?	D?
Wetland Intensive Monitoring Program																					
	Wetlands Intensive Monitoring	delayed	INT	yes	yes	yes	D?	D?	D?	D?	?	D?	?	D?	D?	D?	D?	D?	D?	D?	?
Wildlife Rule Group																					
Wildlife Program																					
	RMZ Resample	in prog	EFF	---	yes	---	---	---	D	---	---	---	---	---	---	---	---	---	---	---	---
Intensive Watershed-Scale Monitoring to Assess Cumulative Effects																					
	No programs or projects yet identified.																				

NOTES

Status:

In Progress: Site selection, data collection, analysis, or report writing (in prog)

Complete: Final CMER approved report (complete)

Scoping: Currently being scoped (scoping)

Delayed: Planned, but not yet scoped; or delayed due to funding, prioritization, etc. (delayed)

Task Type:

Monitoring Type: Effectiveness (EFF); Intensive/Cumulative Effects (INT); Extensive Status and Trends (EXT)

Rule and Project Tools: Rule Implementation Tools (RIT) needed to correctly implement the rules; includes accurately delineating prescription boundaries
Research & Development (R&D) includes literature reviews and development of research protocols

[1] Direct or Indirect Measurement: Direct = actual field measurement; Indirect = modeling/correlations, etc.

[2] Riparian/Wetland Stand Objectives/Targets include windthrow, potential LWD recruitment, DFC basal area targets, and other stand conditions, etc.

[3] In-Stream/Wetland Habitat Objectives/Targets include fish and amphibian habitat ID, substrate, flow, etc.

[4] Stream Bank/Equipment Limitation Zone (ELZ) includes bank erosion, delivery of sediment from the ELZ

[5] "Intermit Flow" refers to spatially intermittent flow below the uppermost point of perennial flow in Type Np streams.

[6] Type N Exp Buffer Treatment in Hard Rock Lithologies: This project is repeated in three programs (Type N Effectiveness, Amphibian Response, and Wildlife); however, the designation of functions is shown only once in order to not overdesignate projects that address those functions. The functions are designated under the Type N Effectiveness Program.

Table 3. Selected Forest Practices Adaptive Management Program Research and Monitoring Products

Product type	Product
Draft manuscript	Terrestrial salamander wood utilization in managed landscapes: implications for forestry - draft. 2008. Hayes, M.P. et al. CMER (no number)
Draft report	Draft case study reports, hardwood conversion study. 2010. Duck Creek Associates. CMER (no number)
Draft report	Riparian survey - draft. 2000. M McGowan and D. Smith. TFW (no number)
Draft report	Summary of Dunn Salamander (*Plethodon dunni*). Hayes, M.P. CMER (no number)
Draft report	Water typing consolidation for last fish/last habitat data in nine Western Washington basins - draft. White, M.L. TFW (no date)
Edited document	Fiscal Year 2012 CMER Work Plan. 2011.
Edited document	Mass wasting prescription-scale effectiveness monitoring project (post-mortem) study design. 2008. Dieu, J. et al.
Edited document	Pacific Northwest forested wetland literature survey synthesis paper. 2005. Cooke Scientific Services, Inc. CMER 04-406
Field manual	Mass wasting prescription-scale effectiveness monitoring project (post-mortem) field manual. (No date) Phillips, J. et al.
Manual	Washington road surface erosion model (WARSEM) manual. 2004. Dube', K. et al. CMER (no number)
Manuscript	Amphibian use of seeps and stream reaches in non-fish bearing stream basins of Southwest Washington state, USA. (No date). Hayes, M.P. et al.
Protocol	Landslide hazard zonation project protocol, version 2.1. 2006. UPSAG. CMER (no number)
Report	2003 Last fish surveys for Eastern Washington water typing model development final report. 2003. Cole, M.B. et al. CMER 02-197
Report	A field analysis of riparian site attribute and stand inventory data from approved forest practices applications along west-side type F streams. 2010. McConnell, S.P. and J. Heimburg. CMER 10-1003
Report	A review and synthesis of available information on riparian disturbance regimes in Eastern Washington. 2002. Concurrent Technologies Corporation. CMER 02-205
Report	Amphibian use of seeps and stream reaches in non-fish bearing stream basins in Southwest Washington - a preliminary analysis - year 2000 annual report. 2002. Hayes, M.P. et al. TFW-LWAG9-02-001

Table 3. Selected Forest Practices Adaptive Management Program Research and Monitoring Products

Product type	Product
Report	An overview of the DFC model and an analysis of Westside Type F riparian prescriptions and projected stand basal area per acre. 2007. McConnell, S.P. CMER 07-701
Report	An overview of the DFC model and an analysis of Westside type F riparian prescriptions and projected stand basal area per acre. 2010. McConnell, S.P. CMER 10-1002
Report	Analysis of factors affecting stream temperature to assist the development of hardwood conversion guidelines for small forest land owners. 2007. Nicoleta, C. and J. Janisch.
Report	Analysis of movement patterns of stream-dwelling salmonids in response to three survey methods. 2003. Peterson, J.T., et al. CMER 01-104
Report	CMER/RSAG temperature workshop - 2001 summary report. 2002. EDAW, Inc. and Mason, Bruce and Girard, Inc. CMER 02-213
Report	Comparison of GIS-based models of shallow land sliding for application to watershed management. 1999. Shaw, S.C. and L.M. Vaugeois. TFW-PR10-99-001
Report	Comparison of three methods for surveying amphibians in forested seep habitats in Washington. 2007. O'Donnell, R.P. et al. CMER 04-402
Report	Comparison of Two Techniques for surveying headwater stream amphibians. 2007. Hayes, M. et al. CMER 01-101
Report	Cooperative monitoring, evaluation, and research committee (CMER) review of science. 2009. Stillwater Sciences
Report	Data collection for development of Eastern Washington water typing model. 2002. Terrapin Environmental. CMER 01-178
Report	Development of bull trout sampling efficiency models. 2004. Thurow, R.F. et al. CMER 01-105
Report	Dispersion of coastal tail frog (*Ascaphus truei*): a hypothesis relating occurrence of frogs in non-fish-bearing headwater basins to their seasonal movements. 2006. Hayes, M.P. et al. CMER 05-500
Report	Eastern Washington last fish variability characterization resurvey final report. 2003. Cole, M.B. and J.L. Lemke. CMER 02-211
Report	Eastern Washington Type F riparian assessment project, phase 1. 2008. Mason, Bruce and Girard. CMER (no number)
Report	Estimation of multi-season evapotranspiration in relation to vegetation cover for regions with rainy-winter/dry-summer climate. 2003. Sias, J. TFW-UPSAG-01-001
Report	Evaluation of sampling methods for amphibians in headwater basins of non-fish bearing streams: a preliminary analysis - year 2001 annual report. 2002. Hayes, M.P. TFW-LWAG8-02-001
Report	Evaluation of the effectiveness of the current TFW shade methodology for measuring attenuation of solar radiation to the stream - interim report. 2008. Bonoff, M. et al.
Report	Evaluation of the effectiveness of the current TFW shade methodology for measuring attenuation of solar radiation to the stream - draft final report. 2010. Bonoff, M. et al.

Table 3. Selected Forest Practices Adaptive Management Program Research and Monitoring Products

Product type	Product
Report	Evaluation of Western gray squirrel nesting activity on forest practice sites subsequent to harvest in Klickitat County, Washington. 2001. Haegen, M.V. et al. TFW-LWAG4-00-001
Report	Extensive riparian status and trends monitoring program-steam temperature, phase 1: Eastside Type F/S monitoring project. 2010. Ehinger, W. and J. Janisch. CMER 10-1001
Report	Forested wetland regeneration pilot study summary report. 2004. Washington Dept. of Ecology and WetSAG. CMER 03-303
Report	Headwater fishes and their uppermost habitats: a review as background for stream typing. 2000. Trotter, P.C. TFW-ISAG-00-001
Report	Integrated headwater stream riparian management study and recovery of amphibian and invertebrate communities in recently logged coastal range headwater streams. 2003. Jackson, C.R. et al. TFW-LWAG9-01-001
Report	Landscape use and ranging patterns of hairy woodpeckers in the managed forests of Western Washington, preliminary report of field results. 2000. Ripper, D. et al. TFW-LWAG3-00-001
Report	Mass wasting prescription-scale effectiveness monitoring project (post-mortem) quality assurance /quality control (QA/QC) report. 2009. Miskovic, T. and J. Powell
Report	The Mass Wasting Effectiveness Monitoring Project: A Post-Mortem examination of the landslide response to the December 2007 storm in Southwestern Washington - draft final report. 2011. Dieu, J. et al.
Report	Models to predict suitable habitat for juvenile bull trout in Washington state - final report. 2001. Dunham, J.B. and G.L. Chandler. CMER 01-103
Report	Monitoring design for the forestry module of the governor's salmon recovery plan. 2002. Benkert, K. et al. CMER report (no number)
Report	Pacific Northwest forested wetland literature survey synthesis paper. 2005. Cooke Scientific Services, Inc. CMER 04-406
Report	Phase one: intermittent streams (Pd-Pc) available from previous study. 2008. Washington Department of Fish and Wildlife.
Report	Predictive habitat models for the occurrence and abundance of the Olympic tailed frog, Ascaphus truei Stejneger 1899 and the Rocky Mountain tailed frog, Ascaphus montanus (Mittlemand and Myers) 1949: a pilot meta-analysis. 2001. Sutherland, G.D., et al. TFW-LWAG7-01-001
Report	Random selection of predicted end of fish validation points. 2005. EarthRes.I
Report	Review of the available literature related to wood loading dynamics in and around streams in Eastern Washington forests. 2004. Herrera Environmental Consultants Inc. CMER 03-308
Report	Status, distribution, and ecology of the Olympic tailed frog, *Ascaphus truei*, Stejneger 1899 and the Rocky Mountain tailed frog, *Ascaphus montanus*, (Mittleman and Myers) 1949: a literature review. 2001. Wahbe, T.R. et al. CMER (no number)
Report	Suitability of aerial photography for riparian buffer monitoring. 2007. Grotenfendt, R.A. CMER 06-604

Table 3. Selected Forest Practices Adaptive Management Program Research and Monitoring Products

Product type	Product
Report	Survey methods for stream-associated amphibians in Washington: results of a workshop. 2000. Irwin, L.L. TFW (no number)
Report	The development and assessment of the preliminary model for identifying fish habitat in Western Washington. 2003. Conrad, R.H. et al. CMER 03-313
Report	The hydrologic impacts of roads at varying spatial and temporal scales: a review of published literature as of April 2004. 2004. Coe, D. CMER 04-410
Report	Type N experimental buffer treatment study: baseline measures of genetic diversity and gene flow of three stream-associated amphibians. 2011. Spear, S. et al. CMER 06-605
Report	Type N feasibility study. 2008. McIntyre, A.P. et al.
Report	Type N stream demarcation study, phase 1: pilot results. 2005. Palmquist, R. CMER (no number)
Report	Validation of the Western Washington riparian desired future condition performance targets in the Washington state forest practice rules with data from mature, unmanaged, conifer-dominated riparian stands. 2005. Schuett-Hames, D. et al. CMER 05-507
Report	Washington road sub-basin scale effectiveness monitoring first sampling event (2006-2008) report. 2010. Dube', A.S. et al. CMER 08-801
Report	Washington road sub-basin scale effectiveness monitoring, phase 1: 2006 field sampling report. 2006. Watershed Professionals Network
Report	Water temperature evaluation of hardwood conversion treatment sites data collection report. 2010. Hunter, M.A. CMER 05-513
Report	Water temperature evaluation of hardwood conversion treatment sites. 2007. Hunter, M.
Report	Water typing model field performance assessment approach and procedures. 2004. Terrapin Environmental. CMER 02-212
Report	Water typing model field performance assessment pilot study. 2005. Terrapin Environmental. CMER 03-312
Report	Westside RMZs and the DFC model: documentation of their conceptual and methodological development. 2001. Fairweather, S.E. TFW-RSAG1-01-001
Scoping paper	DNR GIS wetlands data layer project scoping - phase 1. 2006.
Study plan	Development of protocol for monitoring riparian vegetation and trends using remote sensing pilot study plan. 2009. Grotefendt Photogrammetric Services, Inc.
Study plan	Eastside type F riparian assessment project phase 1 study plan. 2006. Mason, Bruce and Girard.
Study plan	Eastside type N characterization project forest hydrology study design. 2009. Miller, D.
Study plan	Mass wasting prescription-scale effectiveness monitoring project study design (post-mortem). 2008. Dieu, J. et al.

Table 3. Selected Forest Practices Adaptive Management Program Research and Monitoring Products

Product type	Product
Study plan	Status and trend monitoring for fish passage in Washington fish passage in Washington forestlands: methodology review and preferred study design. 2005. Price, D.M. et al.
Study plan	Status and trend monitoring for fish passage in Washington forestlands: methodology review and preferred study design. 2005. Price, D.M. et al.
Study plan	Study plan for the type N experimental buffer treatment study: addressing buffer effectiveness on stream-associated amphibians, riparian inputs and water quality, and exports to and fish in downstream (type F) waters in basaltic lithologies of the coastal areas and the South Cascades of Washington state. 2005. Hayes, M.P. et al.
Study proposal	Literature review and scoping for a meta-analysis of the tailed frog (*Ascaphus truei*) - a proposal. 2000. Sutherland, G.

Note: Products partially or wholly paid for by the federal Pacific Coastal Salmon Recovery Fund through the Washington State Salmon Recovery Board, Recreation and Conservation Office

APPENDIX A

SCHEDULE L-1

KEY QUESTIONS, RESOURCE OBJECTIVES, AND PERFORMANCE TARGETS FOR ADAPTIVE MANAGEMENT

[This schedule contains implementation details and will be subject to further revisions and clarifications as the provisions of the agreement are implemented through rule, statutes and programs.]

Overall Performance Goals: Forest practices,[1] either singly or cumulatively, will not significantly impair the capacity of aquatic habitat to:

a) Support harvestable levels of salmonids;
b) Support the long-term viability of other covered species; or
c) Meet or exceed water quality standards (protection of designated uses, narrative and numeric criteria, and antidegradation).

Resource Objectives are defined below for the key aquatic conditions and processes affected by forest practices. These resource objectives are intended to meet the overall performance goals. Resource objectives consist of:

- **Functional Objectives**, which are broad statements of objectives for the major watershed functions potentially affected by forest practices; and
- **Performance Targets**, which are the measurable criteria defining specific, attainable target forest conditions and processes.

Resource objectives are intended for use in the Forest Practices Board's adaptive management rather than in the department's regulatory process.

Key Questions. The key questions driving adaptive management can be summarized as follows:

1. *Are forest practices being conducted in compliance with the prescriptions contemplated in the Forest Practices Board's rules?*

   Compliance monitoring will answer this question. Compliance monitoring will be conducted by DNR and is outside the scope of this adaptive management process.

2. *Will the rules produce forest conditions and processes that achieve resource objectives as measured by the performance targets, while taking into account the natural spatial and temporal variability inherent in forest ecosystems?*

[1] "Forest practices" are defined in the Forest Practices Rules (76.09.010 RCW) and include road construction, timber harvesting, reforestation, brush control, etc.

Effectiveness monitoring and research will answer this question. Performance targets are not attainable in all places, even under natural conditions. The adaptive management process will take into account the extent to which a given performance target can actually be achieved given the natural spatial and temporal variability within forest ecosystems.

In addition, reasonable timeframes to achieve targets will be part of the process. There will be identification of performance targets that can be met within short (0-10 years), mid (10-50 years) and long-term (50-200 years) ranges of time measured at the landscape scale. There will also be consideration for the time required for the quantity of prescriptions to be applied on the ground to ensure adequate sample sizes for implementing adaptive management. Effectiveness monitoring and research should also test whether less costly alternative prescriptions would be effective in producing conditions and processes that meet resource objectives or where more conservative prescriptions may be necessary.

3. Are the resource objectives the right ones to achieve the overall performance goals?

Validation monitoring and research will answer this question. Validation monitoring and research should be designed to validate or verify the assumptions underlying the resource objectives. Resource objectives must work to achieve the overall performance goal, yet also be attainable within the context of a viable forest products industry. Current targets are those the Forest Practices Board believes will be met by the rules. Progress towards achieving resource objectives within appropriate timeframes will be tracked through time. Changes to targets should be guided by evaluating two general questions aimed at defining the appropriate level of accuracy needed to change targets: (1) what level of statistical significance, scientific confidence or trend analysis is the monitoring effort intended to achieve and was it achieved; and (2) what level of significance for biological or habitat change is expected?

Heat/Water Temperature

Functional objective: Provide cool water by maintaining shade, groundwater temperature, flow, and other watershed processes controlling stream temperature.[2]

Measures	Performance targets	Time-Frame
Stream temperature	Water quality standards—current and anticipated in next triennial review (e.g., for bull trout[3]).	***(Note--need to be completed by scientific advisory groups)***
Groundwater temperature	To be developed.	
Shade	• Type F & S streams, except Eastside bull trout habitat: that produced by shade model or, if model not used, 85-90% of all effective shade. • Westside and eastside high elevation, Type N streams: shade available within 50' for at least 50% of stream length. • Eastside: all available shade within 75' of designated bull trout habitat per predictive model.	

<u>LWD/Organic Inputs</u>

Functional objective: Develop riparian conditions that provide complex habitats for recruiting large woody debris and litter[4].

Measures	Performance targets	Time-Frame
Riparian condition	• Westside and high elevation Eastside habitats: riparian stands are on pathways to meet Desired Future Condition (DFC) targets (species, basal area, trees per acre, growth, mortality). • Eastside (except high elevation): DFC; current stands on pathways to achieve Eastside condition ranges for each habitat series.	
Litter fall	• Westside Type N[5]: at least 50% of recruitment available from within 50'.	

[2] Stream temperature is affected by the interaction of a complex set of factors, including shade, air temperature, pool depth and frequency, flow, and groundwater influences. These factors are addressed in resource objectives for other conditions or processes (e.g., hydrology, sediment, LWD) in addition to the targets selected for stream temperature.
[3] Bull trout temperature standards are expected to be an outcome of DOE's triennial review of water quality standards.
[4] Litter is defined to include leaves, needles, twigs, branches, and other organic debris that is recruited to aquatic systems and riparian forest floor.

Measures	Performance targets			Time-Frame
	• Eastside Type N: at least 70% of recruitment available from within 50'.			
Pool frequency	< 2 channel widths per pool.			
In-stream LWD	Westside: • Streams <20 m (or 65.6 ft.) bankfull width: > 2 pieces (total wood) per channel width • Streams <10 m (or 32.8 ft.) bankfull width: >0.30 key pieces per channel width • Streams >10 m (or 32.8 ft.) bankfull width: >0.50 key pieces per channel width Eastside: (To be developed.)			
Residual pool depth	Mean Segment Bankfull Width in meters and (feet)	Minimum Unit Size in meters and (feet)	Minimum Residual Pool Depth in meters and (feet)	
	0 to <2.5 (>0 to 8.2 ft.)	0.5 (5.4 ft.)	0.10 (0.33 ft.)	
	∃2.5 to <5.0 (≥ 8.2 to 16.4 ft.)	1.0 (10.8 ft.)	0.20 (0.66 ft.)	
	∃5.0 to <10.0 (≥ 16.4 to 32.8 ft.)	2.0 (21.5 ft.)	0.25 (0.82 ft.)	
	∃10.0 to <15.0 (≥ 32.8 to 49.2 ft.)	3.0 (32.3 ft.)	0.30 (0.98 ft.)	
	∃15.0 to <20 (≥ 49.2 to 65.6 ft.)	4.0 (43.1 ft.)	0.35 (1.15 ft.)	
	∃20 (≥ 65.6 ft.)	5.0 (53.8 ft.)	0.40 (1.31 ft.)	

Sediment

Functional objective: Provide clean water and substrate and maintain channel forming processes by minimizing to the maximum extent practicable, the delivery of management- induced coarse and fine sediment to streams (including timing and quantity) by protecting stream bank integrity, providing vegetative filtering[6], protecting unstable slopes, and preventing the routing of sediment to streams.

[5] Targets for Westside and Eastside Type S and F streams are a low priority because adequate leaf litter is expected to be a by-product of riparian stand conditions.
[6] Vegetative filtering can be measured by riparian vegetation, which is covered under the target for riparian condition under LWD.

Measures	Performance targets	Time-Frame
Mass wasting sediment delivered to streams	• Road-related: virtually none is triggered by new roads; favorable trend on old roads. • Timber harvesting-related: no increase over natural background rates from harvest on a landscape scale on high risk sites.	
Road sediment delivered to streams	• New roads: virtually none.	
Ratio of road length delivering to streams / Total stream length (miles/mile)	Old roads: Not to Exceed: Coast (Spruce) 0.15-0.25 — West of Crest 0.15-0.25 — East of Crest 0.08-0.12	
Ratio of road sediment production delivered to steams/Total stream length (tons per year/mile)	Old roads: Not to Exceed: Coast (Spruce) 6-10 T/yr — West of Crest 2-6 T/yr — East of Crest 1-3 T/yr	
Streambank/ equipment limitation zone disturbance (caused by forest practices)	• Type S&F: no streambank disturbance outside road crossings. • Type N: ≤10% of the equipment limitation zone.	
Fines in Gravel	Less than 12% embedded fines (<0.85 mm).	

<u>Hydrology</u>

Functional objective: Maintain surface and groundwater hydrologic regimes (magnitude, frequency, timing, and routing of stream flows) by disconnecting road drainage from the stream network, preventing increases in peak flows causing scour, and maintaining the hydrologic continuity of wetlands.

Measures	Performance Targets	Time-Frame
Road run-off	Same targets as road-related sediment.	
Peak flows	West side: Do not cause a significant increase in peak flow recurrence intervals resulting in scour that disturbs stream channel substrates providing actual or potential habitat for salmonids, attributable to forest management activities.	
Wetlands	No net loss in the hydrologic functions of wetlands	

Chemical Inputs

Functional objective: Provide for clean water and native vegetation (in the core and inner zones) by using forest chemicals in a manner that meets or exceeds water quality standards and label requirements by buffering surface water and otherwise using best management practices.

Measures*	Performance targets	Time-Frame
Entry to water	No entry to water[7] for medium and large droplets; minimized for small droplets (drift).	
Entry in RMZs	Core and inner zone: levels cause no significant harm to native vegetation.	

Stream Typing and Fish Passage

Functional objective (stream typing): Type "fish habitat" streams to include habitat which is used by fish at any life stage at any time of the year, including potential habitat likely to be used by fish which could be recovered by restoration or management, and including off-channel habitat, by using a multi-parameter, field-verified, peer reviewed, GIS logistic regression model using geomorphic parameters such as basin size, gradient, elevation and other indicators.

Functional objective (fish passage): Maintain or restore passage for fish in all life stages and provide for the passage of some woody debris by building and maintaining roads with adequate stream crossings.

Measures	Performance targets	Time-Frame
Accuracy of predictive models	Fish habitat model: statistical accuracy of +/- 5%, with line between fish and non-fish habitat waters equally likely to be over and under inclusive.	
Access barriers	Eliminate road-related access barriers over the time-frame for road management plans.	

[7] Targets are for forest chemicals other than Bt and fertilizer. BMPs for both are not priorities for adaptive management.

* These measures and performance targets are not intended to override label requirements.