NORTHWEST POWER PLANNING COUNCIL

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July 9, 2003

MEMORANDUM

TO: Council Members

FROM: Steve Waste, Manager, Program Analysis and Evaluation

SUBJECT: Background Materials for Presentation on State/Tribal/Federal Collaboration on Regional Monitoring and Evaluation

This memo introduces three documents supporting the briefing, "State/Tribal/Federal Collaboration on Regional Monitoring and Evaluation."

1. Tribal-State-Federal Monitoring Partnership - Overview

2. Options and Implications for Aquatic Monitoring Coordination - Editor, Kelley Moore, Oregon Watershed Enhancement Board

3. Executive Summary Table - Editor, Dr. Steve Katz, NOAA Northwest Fishery Science Center

Tribal-State-Federal Monitoring Partnership - Overview

Meeting Date: July 16, 2003

Presenter/Sponsor: Steve Waste (Northwest Power Planning Council) and Dave Powers (EPA)

REO Contact/Phone: Steve Lannigan / 503-808-2261

Topic: Tribal-State-Federal Monitoring Partnership

Issue Statement: The objective is to brief the Northwest Power Planning Council on ongoing efforts to develop a Pacific northwest aquatic monitoring partnership.

Background: State and federal monitoring specialists have been meeting since Nov 2000 to explore how to better integrate/coordinate our respective watershed condition monitoring programs. Potential for integration has been identified in 3 general areas:

- Sample design that allows us to make inferences at different scales,
- Adoption of common field attributes and protocols,
- Data sharing, management, data analysis, interpretation and reporting

Although our original focus has been on watershed condition monitoring, future coordination efforts may expand to include fish population monitoring and project implementation monitoring. Opportunities also exit to better coordinate with tribal and other monitoring programs.

Discussion: The presentation will present an overview of our "informal" efforts to date, including:

- Overlap among agency mandates and geographical areas,
- Benefits of coordination,
- Steps needed to share data,
- Integration/coordination efforts to date, and
- Range of options for future integration of monitoring efforts.

A panel of state and federal specialists will provide a brief overview of current state and federal watershed condition monitoring efforts, including:

- Questions being addressed in each program,
- Sample design and basic protocols being used, and
- How data are being stored and shared.

Time for discussion and questions from IAC meeting attendees will be provided.

Organizational/Funding Implications: An integrated state-federal-tribal watershed condition monitoring effort would result in a greatly increased set of monitoring information, which would allow us to detect trends earlier and with more precision. An integrated program means that state, federal, and tribal agencies would use a similar random sampling design and common protocols for a core set of attributes. We would also be able to look at status and trend at various landscape scales. Common analysis tools would allow us to extend the use of the monitoring information across monitoring initiatives such as those for the Forest Plan, Interior Columbia Basin, and watershed and aquatic biota programs in Washington, Oregon, California, and Idaho.

Options and Implications for Aquatic Monitoring Coordination

Pacific Northwest Monitoring Coordination Workgroup

Kelly Moore (OWEB) – editor

7/9/03 - DRAFT

Coordination Level	Watershed Condition Monitoring	Effectiveness Monitoring	Fish Population Monitoring
Minimal – Status Quo	Independent watershed assessment and monitoring programs. Some common protocols and indicators. No shared analysis or application to landscape scale management or policy.	Evaluation of individual projects and management actions. Independent, potentially redundant, efforts to document program or policy effectiveness.	Fish population monitoring at many different spatial scales: stream reaches, index watersheds, sub-basins, and ESU's. No coordinated reporting or analysis.
Basic – Information Sharing, Improved Compatibility, Less Redundancy	Continue current "informal" coordination efforts: monitoring program representation from NW Forest Plan; Federal Caucus, States, CRITFIC, BPA, others. Activities include: • Identify active and developing monitoring programs in PNW-CA • Describe common monitoring attributes and associated protocols. • Work to improve coordination and sharing of data • Improve communication with coastal, Puget Sound, and Columbia Basin tribal monitoring programs • Identify common attributes of WA, OR, CA, and FHPS Bi-Op monitoring strategies.	Comprehensive Implementation Monitoring for Restoration Projects, Management Actions and Recovery Programs. • Independent tracking of restoration actions conducted by various entities. **But,** make commitment to create compatible data structures. • Establish timeframe and protocols for sharing information.	Optimize current and planned fish monitoring activities. • Develop templates for a regional hierarchical structure that may organize fish monitoring at population and spatial scales. • Coordinate reporting of fish research and monitoring activities.

Coordination Level	Watershed Condition Monitoring	Effectiveness Monitoring	Fish Population Monitoring
Medium – Agreement to coordinate complimentary implementation of monitoring activities and monitoring program development	Expand **Basic** level of coordination to all watershed condition monitoring within the Pacific Northwest: state, federal, and tribal organizations. Create ability to share data across all landscapes. Explore potential for interagency and intergovernmental agreements that commit to following: • Utilize probabilistic sampling designs adapted to individual program needs • Standardize protocols for core attributes, or develop "cross-walks" that combine data collected using different protocols. • Develop systems for sharing data in a timely manner	Project Effectiveness Monitoring Shared Protocols Development and Application of Experimental Designs Evaluation of project classes depending on different program and agency focus.	Expand current status and trend monitoring to Columbia Basin ESU's • Utilize probabilistic sampling designs adapted to individual program needs Develop network of watershed level population monitoring – start with existing programs • Sponsor biennial conference to share research and monitoring results • Link fish monitoring to project effectiveness monitoring.
High –	Expand **Medium** level of coordination for watershed condition monitoring to incorporate "nested" project effectiveness monitoring and long-term watershed-scale studies. • Use project level monitoring to help evaluate watershed condition • Work towards overall monitoring implementation plan that accommodates common information needs • Establish process for monitoring results to be shared and used at policy levels throughout the region.	Watershed Scale Effectiveness Cooperate on establishment of "Intensively Monitored Watersheds" Protocols Reporting etc.	Develop explicit working relationships between state programs, Columbia Basin Fish and Wildlife Authority (CBFWA), NW PPC, BPA, and Federal "Action" agencies

Executive Summary Table 5/28/03
Steve Katz - editor

	NW Forest Plan Aquatic & Riparian Effectiveness Monitoring Program (AREMP)	2000 FCRPS BO	PacFish - InFish (PIBO)	Northwest Power Planning Council (NWPPC)	Washington Comprehensive Monitoring Strategy	Oregon Plan for Salmon and Watersheds Monitoring Strategy	California Department of Fish and Game Coastal Watershed Assessment Program, and Restoration Monitoring and Evaluation Program (CRMEP)	Idaho	COMPARISON SUMMARY
What is the (legal) mandate for the monitoring program?	The *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* (*Strix occidentalis caurina*) (ROD), commonly known as the Northwest Forest Plan (Forest Plan or NWFP), requires watershed monitoring.	Endangered Species Act (ESA); Action 9 of the 2000 Federal Columbia River Power System (FCRPSBO); Federal Caucus Recovery Strategy and MOU as identified in "Conservation of Columbia Basin Fish: A Basinwide Salmon Recovery Strategy (All-H paper). Supplemental and less specific mandate under the Northwest Power Planning Act Fish and Wildlife Program.	The biological opinions for salmon, stealhead and bull trout within the interior Columbia River basin identified requirements for the USDA Forest Service and USDI Bureau of Land Management to develop a mechanism for accountability and oversight for activities that may influence habitat for these listed fish across the range.	<u>Legislative Action</u> Pacific Northwest Electric Power Planning and Conservation Act of 1980 established the Northwest Power Planning Council, an interstate compact agency of Idaho, Montana, Oregon and Washington. The Act directs the Council to prepare a program to protect, mitigate and enhance fish and wildlife of the Columbia River Basin that have been affected by the construction and operation of hydroelectric dams while also assuring the Pacific Northwest an adequate, efficient, economical and reliable power supply.	<u>Legislative Action</u> SSB 5637(2001) required by December 2002, creation of a Comprehensive Monitoring Strategy and Action Plan (CMS) for watershed health and salmon recovery, whose intent is to promote "a framework of greater coordination of existing monitoring activities most relevant to adopted local, state, and federal watershed health objectives; and [...] the exchange of monitoring information with agencies and organizations carrying out watershed health, salmon recovery, and water resources management planning and programs." Legislative and budgetary	<u>Legislative Action</u> HB 5042 (1997) Established funding for The Oregon Plan for Salmon and Watersheds (OPSW); SB 924 (1997) Established Legislative Oversight for Oregon Plan, Independent Multidisciplinary Science Team (IMST) and relationship between IMST and the Oregon Plan Monitoring Program; HB 3225 (1999) Established Oregon Watershed Enhancement Board (OWEB) as evolved from Governor's WEB to implement Measure 66 Lottery fund investments in watershed health; SB 945 (2001) Established OWEB's responsibility for monitoring and assessment of	<u>Legislative Action</u> AB951 (1981) began restoration of salmon and steelhead habitat along North California coast, including funding for restoration actions. Additional funds were subsequently provided by SB400, Prop 70 & 13, SB 271 (1997). The California DFG Coastal Fishery Restoration Grants Program (FRGP) administers funds under this mandate. Project monitoring is mandated as part of this legislation as accountability for restoration actions. In addition, the FRGP is required to secure US Corps of Engineers (COE) 404 Permits, and DFG 1600 Stream Alteration Permits. The FRGP is required to conduct	<u>Legistlative Action:</u> Idaho Code (67-818) charges the Governor's Office of Species Conservation (OSC) with coordinating all state entities with responsibilities affecting listed species; this includes coordinated monitoring. The same statute requires coordinated response to federal recovery plans, biological opinions, and other policies within the state and regionally. The coordinated state agencies include: Fish and Game, Lands, Agriculture, Soil Conservation Commission, Transportation, Water Resources, and Environmental Quality. Each of Idaho's natural resource	All programs have a legal mandate or obligation to perform some level of monitoring. However, there is no clear statement in any case what constitutes minimum performance standards for the monitoring program. For example, there are no statements within the legal mandates that monitoring programs will measure population status to +/-X% accuracy. Or indeed, that any feature of the monitoring program will be used to evaluate its performance.

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					implementation decisions associated with the CMS are pending. <u>Executive Action</u> In 1998, the legislature created the Governor's Salmon Recovery Office (GSRO) and required that the GSRO prepare a biennial State of Salmon report. The GSRO also prepares a biennial State Agencies' Action Plan and Salmon Recovery Scorecard to track commitments and activities of state agencies, and progress towards salmon recovery.	Oregon Plan; requires a biennial report on implementation and effectiveness of the Oregon Plan; SB 945 (2001) Established OWEB responsibility for coordinating information, data and data retrieval for state Natural Resource agencies. <u>Executive Action</u> NMFS/Oregon MOA (1997) details Oregon's responsibilities and commitments, including monitoring, for coastal coho recovery; Gov. Kitzhaber's Exec. Order 99-01 (1999) replaces MOA, extends salmon recovery and Oregon Plan statewide.	effectiveness monitoring on 10% of the projects implemented each year under these permits. In addition, under a State/Federal agency MOU, NMFS, as a term of its financial support through the PCSRF transfer of Federal funds to state agencies such as the FRGP, now also requires that effectiveness monitoring be conducted. This does not include the CALFED Central Valley Program In 2000 the CA Legislature created a multi-agency assessment program to conduct large scale basin assessments in order to focus DFG's restoration program.	agencies conduct monitoring pursuant to its agency mission and legislative mandate and meets state and/or federal standards and assists Idaho's effort to recover its anadromous stocks. For example, Title 36 Idaho Code mandates the Idaho Fish and Game Commission to "preserve, protect and perpetuate. . ." and the department monitors fish and wildlife population status to support that mandate.	

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What is the geographic area covered by the monitoring program?	The Northwest Forest Plan applies to lands administered by the USDA Forest Service, USDI Bureau of Land Management, and the US National Park Service within the range of the northern spotted owl. This is an area roughly defined as being “west of the Cascades” in Washington, Oregon, and northern California.	The "Anadromous Zone" within the Columbia River Basin. The Anadromous Zone is that portion of the entire CRB that is accessible to endangered anadromous fish, which does not include permanently inaccessible reaches but may include areas accessed by fish passage barrier removal actions. Exact definition of these areas is being evaluated by the Lower Columbia and Upper Columbia Technical Recovery Teams (TRTs).	All lands administered by the Forest Service in the range of PACFISH and INFISH, within the upper Columbia River basin, with the exception of three Forests located in the upper Snake River. All lands administered by the BLM within PACFISH and those lands outside PACFISH that contain bull trout.	The Columbia River Basin. The basin includes portions of seven states and British Columbia. The headwaters arise from Columbia Lake, British Columbia, 1,200 miles from the mouth of the river near Astoria, Oregon.	CMS - statewide	State of Oregon: private, public, federal, and tribal lands	All coastal anadromous watersheds are covered by both the assessment and monitoring programs within CRMEP. However, this does not include the Sacramento and San Joaquin drainages since they are under the purview of the CALFED Program.	All coastal anadromous watersheds are covered by both the assessment and monitoring programs within CRMEP. However, this does not include the Sacramento and San Joaquin drainages since they are under the purview of the CALFED Program.	There is extensive geographic overlap over all programs, but all programs do not share all overlap. In particular, states have significant overlap with federal programs, but none with other states (see maps). Therefore, it may become appropriate to establish some protocol for balancing the different needs of states that may not be conserved across the overlapping federal programs (e.g.. WA's need to adopt appropriate indicators to evaluate water for human recreation needs, or a sampling design for ID - who monitors anadromous fish in a small fraction of the state within which they monitor water quality).

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What is the primary question that this program will answer?	Is the NWFP Aquatic Conservation Strategy restoring and maintaining aquatic and riparian ecosystems to desired conditions on federal lands in the NWFP area?	Are Federal and state mitigation actions achieving the necessary survival changes identified in the All H Federal Caucus Program and the FCRPS BO for each ESU? This management question generates two technical questions: 1) What are the distributions, abundances, age structures, genetic diversity, and growth rates of Columbia River Basin (CRB) fish populations relative to the status of their habitat and also performance standards or objectives for both? and 2) What is the effect of specific categories of AA off-sight mitigation actions on the survival of ESA fish?	Are key biological and physical attributes, processes, and functions of upslope, riparian, and aquatic systems being degraded, maintained, or restored within the geographic range of PACFISH and INFISH?	Does the Columbia River ecosystem sustains an abundant, productive, and diverse community of fish and wildlife? Are mitigations for the adverse effects to fish and wildlife caused by the development and operation of the hydrosystem across the basin effective? Are there Sufficient populations of fish and wildlife for abundant opportunities for tribal trust and treaty right harvest and for non-tribal harvest? Are fish and wildlife affected by the development and operation of the hydrosystem that are listed under the Endangered Species Act recovering?	The CMS lists 23 key monitoring questions. These questions exist within the context of two CMS goals: 1) "measure changes, in terms of scientific certainty, in wild salmon populations in terms of abundance, diversity, and geographic and their causes due to trends in effects of harvest, hatcheries, ocean conditions, ecological interactions, and large hydropower"; and 2) "measure changes, in terms of scientific certainty, in water quality, water quantity, watershed health, salmon habitat, and their effects on salmon."	Are actions implemented under the OPSW (publicly or privately funded restoration efforts, voluntary measures, and resource management programs) improving watershed health and recovering salmon populations?	There are 3 big questions for CRMEP: 1) Are fish habitat restoration projects being carried out as proposed? 2) Assuming proper installation, are restoration projects having the intended beneficial effects on habitat?, and 3) Are anadromous fish and other aquatic organisms responding in a positive way to the restoration treatments? The program is intended to provide answers to 6 assessment questions at the basin and subbasin scales: 1) What are the history and trends of the size, distribution, and relative health and diversity of salmonid	The primary question for listed stocks is whether Idaho is doing its part in the region to restore and conserve the parts of the life cycle that occur within Idaho and meeting ESA requirements. This question is addressed with a multi-agency/multi-component monitoring program: fish populations and habitats (IDFG), habitats and land use practices (IDL, IDA/SCC, IDT), water management and diversion (IDWR), and water quality (DEQ). The State is also interested in the broader question of whether the regional recovery strategy is improving total life cycle survival. A key question is whether target	The largest area of overlap with respect to the questions being asked are: Are agency programs (NWFP, FCRPS-BO, OPSW) that are designed to address ESA or other conservation legislation achieving their goals of improving watershed health and endangered species recovery? This overlap includes the need to monitor both target species and habitat.

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							populations? 2) What are the current salmonid habitat conditions? How do these conditions compare to desired conditions? 3) What are the past and present relationships of geologic, vegetative, and fluvial processes to stream habitat conditions? 4) How has land use affected these natural processes? 5) Based upon these conditions, trends, and relationships, are there elements that could be considered to be limiting factors for salmon and steelhead production? 6) What watershed and habitat improvement activities would most	populations are increasing and whether that increase is linked to state/regional recovery actions.	

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							likely lead toward more desirable conditions in a timely, cost effective manner?		
Currency? (What is the "thing" that is driving the monitoring agenda?)	Watershed/Ecosystem health	Endangered Anadromous fish	Endangered Anadromous and Resident fish	Fish and Wildlife	Watershed Health/Salmon Recovery	Watershed Health/Salmon Recovery	Endangered anadromous fish	Watershed Health/Salmon Recovery	As above, currency for all programs includes both fish and habitat.
What management decisions are being made?	The NWFP comprehensive ecosystem management strategy involves land allocations, and ensures that all activities occurring on federal lands are consistent with the NWFP standards and guidelines. Like PIBO, while there are expectations that monitoring will contribute to an adaptive management framework, there is no explicit language that describes how that	The FCRPS BO is a contract based on balancing the negative impacts on fish survivorship due to the hydropower system and implementing fish habitat improvements as mitigation. Data from the monitoring program will inform management decisions about funding numerous habitat improvement actions as well as hydropower system operations. Ultimately, the program will inform	Monitoring is mandated for its own sake to meet the requirements of the USFWS and NOAA Fisheries Biological Opinions, with correlated expectations for reporting and accountability. There are generic expectations that monitoring data will contribute to management decisions within an adaptive management framework. However, there is no explicit language that	Monitoring and evaluation is a required programmatic element that will contribute to developing province and subbasin plans, and will be a basis for Council recommendations to the Bonneville Power Administration regarding project funding. Subbasin plans will contain a plan for monitoring and evaluation to assess whether the projects implemented under the subbasin plan are achieving	The CMS lists the following high priority management questions/decisions: - Are salmon populations healthy? - Is the state meeting requirements of the ESA and CWA? - Are human related activities consistent with salmon recovery? - Is the state's approach to cleaning polluted waters adequate to ensure clean water for watershed health and salmon recovery? - Are hatchery	Prioritization and funding of restoration actions. Fishery harvest and hatchery management. Forest Practices Act rules and BMP's. Water quality programs (CWA - TMDL's and Ag. Water Quality Mgmt. Planning). Oregon Native Fish Policy. Oregon Riparian Policy. ESA listing-delisting process support (exec. and tech. level w/ NOAA Fisheries). Watershed assessments - Sub-	Monitoring will provide the fundamental baseline data that will serve as the reference for measuring progress in all restoration program activities over time Monitoring data will provide limiting factors analysis and help design and prioritize restoration actions. Data will also provide assessment information and refugia analyses to help focus cooperative	State scale: Monitoring data feeds into evaluations for: control of fishery related mortality, implementation of conservation measures such as hatchery actions, habitat improvement projects, land-use regulations, water allocation, pollution reduction and the creation/direction of subbasin plans. Regional scale: The State conducts instate and out of state monitoring to	For all programs monitoring has been identified as a tool to measure programmatic progress and accountability - (e.g.. Are state and federally-funded habitat protection and restoration projects resulting in improvements in watershed health and salmon recovery?) For most programs there is an explicit link between monitoring data and prioritization and funding

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	adaptive feedback will occur.	decisions on the future of the hydropower system itself.	describes which management decisions will depend on the monitoring results, nor about how explicitly those results will be used in management decisions.	objectives, and will: 1) identify the monitoring and evaluation tasks related to the objectives; 2) identify who will do the evaluation and on what schedule; 3) explain what kind of independent review will be incorporated if appropriate; and 4) providing a budget for monitoring and evaluation.	operations consistent with salmon recovery? - Are state and federally-funded habitat protection and restoration projects resulting in improvements in watershed health and salmon recovery?	basin Planning. Adequacy of Federal Power System Bi-Op Implementation. (more)	interagency, nonprofit and private sector approaches to "protect the best" watersheds and streams through diverse programs; Monitoring data will also provide assessment information as required in implementation of legal mandates such as: State Forest Practice Act, Clean Water Act, and State Lake and Streambed Alteration Agreements.	determine if regional actions are sufficient for recovery.	decisions regarding state and federal funded restoration actions - (e.g.. [Monitoring] will be a basis for Council recommendations to the Bonneville Power Administration regarding project funding.)
What is the Budget for the Coordinated Monitoring Program? **Who contributes to that budget (State vs. Federal vs.**	$875,000 is AREMPs current funding level. This allows us to sample 20 HUCs each year. US Forest Service (Region 5 (CA) and Region 6 (WA and OR)., BLM, EPA, NOAA. PNW and	The monitoring activities of the BO are administered through the NWPPC.	The program is fully funded at ~1.2 million annually for 2003 – 2005. All Federal – OR/WA BLM, ID BLM, R1 FS, R4 FS, R6 FS Currently meets all requirements	The 2003 budget for the Bonneville Fish and Wildlife program is $139 Million, with no explicit identification of the fraction applied to monitoring. Each project may identify an allocation for monitoring, but the	The State Agency Action Plan identifies $54 Million/biennium of current monitoring activities that need to be maintained, and also identifies $115.6 Million of new monitoring that needs to be implemented. Of this new money,	The total OWEB allocation for the 2001-2003 biennium was $43.8 Million, with 4% (~1.75 Million) allocated to monitoring.	CRMEP has a $691K two year development contract from Federal funds via the FGRP. DFG staff and expenses are $120K annually. The Coastal Assessment Program from 2000 – 2003 had		

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Other dollars)? **What fraction of a complete budget required to completely meet program mandates (described above) does the current budget cover?**	USGS also contribute "in-kind" services (but no cash). Current budget is 50% of what is identified as "full funding" needed to sample 50 HUCs each year.			lack of access to the resulting data makes any identification moot. Further, the Federal Caucus RME workgroup identified gaps in all 20 monitoring RPA's indicating that of the dollars allocated for monitoring, none of it constitutes complete monitoring.	$19.9 Million is identified as "High Priority" and the remaining $95.7 Million is identified as "Medium Priority".		an annual 6.8 Million budget for multi-agency start up and operations. That State General Fund budget fell to zero July 1, 2003 except for efforts sustained by the individual agencies. Current multi-agency annual resource allocations total approximately 1.4 Million for staff and expenses.		
What coordination is occurring?	AREMP personnel are leading efforts to coordinate watershed condition monitoring efforts with state agencies and tribes, and federal monitoring efforts on the "east side of the Cascades" and within the Columbia River Basin.	Design of the monitoring program is conducted by a cooperative workgroup made up of the Federal Action Agencies (BPA, COE, BOR) and NMFS. This work has received review by the 9 member agencies of the Federal Caucus. Coordination includes participation in AREMP-State-Fed monitoring workgroup and the	Coordination occurs between the EM team and monitoring point persons at each field unit through frequent updates, annual reports, and annual meetings. Coordination also occurs regularly between the EM team, IIT Monitoring Core Team, and the Interagency Implementation Team that oversees requirements from the biological opinions.	The Council is working to foster coordination between the Federal, State, Tribal and other entities implementing or planning their own monitoring and evaluation programs.	SRFB and GSRO are coordinating project effectiveness and related validation monitoring with federal agencies and the NWPCC. The GSRO coordinates implementation monitoring as part of the biennial State of Salmon report. Coordination includes participation in AREMP-State-Fed monitoring workgroup.	Program and project coordination led by OWEB through OPSW Monitoring Team (state and federal monitoring program representatives, OSU, and IMST). Policy coordination through Governor's Natural Resources Cabinet and OPSW "Core" Team. (attachments) Coordination includes participation in AREMP-State-Fed	The Assessment and Monitoring programs are coordinating with each other, as well as with the FGRP, local assessment biologists, timber harvest review programs, DFG data managers, Pacific States Marine Fisheries Com., and with other involved agencies (Water Quality, Forestry, Geologic Survey, Conservation), and the landowners and	In the anadromous watersheds, agencies coordinate through the Upper Salmon Watershed Basin Project and the Clearwater Model Watershed Project in addition to statewide coordination through Governor's OSC.	There is an expectation that coordination will result in increased economy, but there are few commonalities with respect to actual cooperation. There are examples of cooperation between intra-state agencies, but few examples of inter-state cooperation. Both CBFWA and the NWPPC are examples of coordination entities that operate

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		Pacific Coast Salmon Recovery Funding policy group. Coordination with state and tribal fish agencies also occurrs under the NWPPCl's Fish and Wildlife Program.	Coordination includes participation in AREMP-State-Fed monitoring workgroup.			monitoring workgroup.	interest groups. Coordination also includes participation in AREMP-State-Fed monitoring workgroup		over a larger spatial scale, but neither have actually done any coordinated monitoring to address regional needs yet. Having said that, there is common agreement on the need for cooperation.

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What are the program milestones?	2004 - The success of the first 10-years of the NWFP (1994-2004) will be evaluated. Each Forest Supervisor shall review the conditions on the land covered by the plan at least every 5 years to determine whether conditions or demands of the public have changed significantly. (36 CFR 219.10(g)).	2003 - review to see if the programs defined by the RPA in the FCRPS BO are being implemented. 2005 - review of data produced by the program to see if the quantity and quality of data are sufficient to produce a satisfactory likelihood of programmatic success. 2008 - review of data to evaluate programmatic success of the FCRPS BO.	2001 - A three year pilot study resulted in the program being adopted by the land management agencies. 2003 - Subsequent results and feedback from field units have resulted in a commitment of full funding, and continuing to 2005 (3 years of commitment). 2004-2005 - assessments of M&E	The monitoring and evaluation will have two components: (1) biological performance, describing responses of populations to habitat conditions, described in terms of capacity, abundance, productivity and life history diversity, and (2) environmental characteristics, which describe the environmental conditions or changes sought to achieve the desired population characteristics. Objectives at the basin level are more qualitative, but objectives should become increasingly quantitative and measurable at the province and subbasin levels.	2000 and 2002 biennial State of Salmon reports and State Agencies' Action Plans. CMS - milestones are pending.	1998-Implementation of coordinated status and trend monitoring (EMAP) in all five Oregon Coast sub-basins. 1999-OPSW Monitoring Team Charter signed by NR Agency Directors. 2002-OPSW Monitoring Strategy adopted by NR Cabinet and OWEB Board, endorsed by IMST and NOAA Fisheries Science Center. First Annual report 1998, Annual Reports for 1999& 2000 Watershed Restoration Inventory Reports for 1998, 1999, & 2000 2003-First Biennial Report of the OPSW.	1981-AB951 provides $950K to restore salmonid habitat. 1995- Monitoring of restoration projects begins 1997-SB271 provides $7 M/yr from state funds to finance salmon habitat restoration. 2000- MOU w/ NMFS including $9M for salmon habitat restoration actions within the California Coastal area through the PCSRF. 2001-Existing grant through PCSRF was amended to $15 M for habitat restoration. 2001-Development of a comprehensive monitoring and evaluation program. 2001-Watershed Assessment began on the Mattole and Gualala rivers, and Redwood Creek.	1957: IDFG initiates index redd counts 1974: DEQ establishes Idaho Clean Water Act program 1985: IDFG begins juvenile snorkeling counts 1990: IDFG initiates PIT Tag survival studies 1992: Governor Andrus assigns Soil Conservation Commission duty to administer Lemhi Model Watershed 1999: Model Watershed expands to become Upper Salmon Basin Watershed Project 2000: Legislature creates and Governor organizes Office of Species Conservation 2002: DEQ completes installation of 876 BURP (Beneficial Use Reconnaissance Project) sites in the Upper Salmon Basin aimed at monitoring aquatic life, water chemistry, and habitat	The greatest commonality between programs is that in all cases (NWPPC and FCRPS BO plans excepted) someone is monitoring something and has been for some time. In some cases, these monitoring activities have been operating relatively independently and are only now being marshaled into a coordinated program. So even if the programs are newly constituted or only planned, there is an expectation that experience and expertise exists that can be capitalized upon within a coordinated state/federal monitoring program.

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What is the accountability mechanism?	Monitoring Program Managers provide recommendations to agency executives on whether the program is providing needed information.	Programmatic review of FCRPS BO implementation by NMFS. 2003 - review of programmatic implementation. 2005 - review of data to evaluate likelihood of programmatic success. 2008 - review of programmatic success.	No formal process. Informally, funding may be discontinued if commitments for the number of sites, reporting, and analysis are not accomplished.	The Council ensures the public accountability of program expenditures with a review of each project by the region's fish and wildlife agencies, tribes, the public, and an 11-member panel of independent scientists, the Independent Scientific Review Panel. Standard minimum criteria for project funding are made public.	GSRO coordinates implementation monitoring as part of the biennial State of Salmon report. SRFB coordinates project implementation and effectiveness review and monitoring.	Legislatively mandated IMST review of monitoring program and biennial reporting of implementation and effectiveness monitoring. OWEB Board review of monitoring proposals.	During development of CRMEP, ad hoc science panels composed of Department and other agency staff are periodically used to review and comment on the program's framework and proposed protocols. The program has also utilized formal scientific peer review. When the program is in place periodic reports to the legislature are anticipated.	State and federal law define accountability for administration of monitoring program with *ad hoc* reports as deliverables to OSC. Northwest Power and Conservation Council Fish and Wildlife Program proposal review provides accountability for scientific programs.	Accountability is largely ad hoc or informal. In those cases where some review is identified, there are few if any standards for performance of the monitoring program that are used explicitly in the accountability process.
What is the expected program duration?	There is no established end date. The expectation is that AREMP will continue to monitor watershed condition on federal lands regardless of how current land management plans evolve.	There is no established end date based on programmatic success. A mechanism exists to begin re-consultation and re-design of the program at any of the 2003, 2005 & 2008 check-ins based on a	There is no established end date. The program was designed to continue monitoring aquatic conditions regardless of changes in land management plans and aquatic conservation strategies.	The Northwest Power Act requires the Council to prepare a Fish and Wildlife program and to review the program at least every five years. The first Fish and Wildlife Program was developed in 1982. The last program	No established end date for State of Salmon reports. CMS - dates not established. Ongoing EPA-funded EMAP water quality and habitat status monitoring performed	No established end date. Measure 66 Lottery Fund for OPSW in effect 1999-2014. Status and Trend (EMAP) monitoring based on 27-year sampling frame.	CRMEP has no established end date; however, the Program is likely to continue as long the State is undertaking watershed restoration and anadromous species recovery efforts.	There is no established end date. Continuation, or expansion of the program to support expanded ESA objectives, is dependent on resources as the key limitation.	None of the programs have an explicit end date.

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		failure finding in the accountability process.		review led to a revision of the Fish and Wildlife Program in October 2000.	by the Department of Ecology is expected to be completed in 2005.				
Who is responsible for implementing the program?	Monitoring Program Managers provide direction to a multi-federal agency funded team working out of Corvallis OR. This team (AREMP) conducts all field surveys, data analysis and report writing.	The "Program" is currently a plan. The FCRPS BO sets out expectations for monitoring that are primarily implemented through BPA rate payer funded NWPPC Fish and Wildlife Program, and Corps and BOR Congressional appropriations. Monitoring is primarily performed under contracts to private firms and federal, state and tribal agencies.	The Interagency Implementation Team and USFS Fish and Aquatic Ecology Unit provide oversight and direction. Funding comes from the FS and BLM and the program is run by a centralized EM Team.	The Council does not do the actual work of project implementation. Rather, it administers a public process that includes scientific review to select projects for funding that will fulfill the Fish and Wildlife Program objectives. The Council develops and then monitors implementation of the Fish and Wildlife Program, which is implemented by the Federal Action Agencies and its licensees.	Other than a requirement for watershed planning units to implement appropriate components of the CMS, CMS implementation mechanisms are not established. Various ongoing monitoring efforts are directed by individual state agencies (e.g., Departments of Fish and Wildlife, Ecology, Natural Resources, Puget Sound Action Team). SRFB and NPCC are responsible for project effectiveness monitoring associated with funds they administer.	Monitoring Program is implemented through the coordinated actions of Oregon's NR agencies (Fish and Wildlife, Environmental Quality, Water Resources, Forestry, Agriculture, and State Lands), OWEB, and the Governor's Natural Resources Office. Monitoring projects funded by OWEB and conducted by Watershed Councils and SWCD's.	CRMEP is currently implemented through DFG's North Coast Watershed Improvement Center, Fortuna, CA with oversight by the Native Anadromous Fish and Watershed Branch, Sacramento, CA. Coastal Watershed Assessment Program, Department of Fish and Game, Fortuna CA.	Each team member agency implements their program and participates in the local and statewide coordination (e.g., USBWP and Clearwater Model Watershed).	Both state and Federal programs delegate the actual monitoring to local agents. In some cases, these are local managers within the same agency (e.g.. USFS), in others the monitoring is contracted out to independent local operators (e.g.. FCRPS-BO).

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Maturity of program	2000 - Pre-Pilot, 2001 - Pilot, 2002-Full implementation w/funding	2000 BO calls for a Research, Monitoring and Evaluation Program and a Plan has been developed.	1998-2000 pilot, 2001 first year of full implementation.		Comprehensive monitoring strategy is currently a plan only. SRFB and NPCC have	1994-1995 - REMAP, 1995-1998 - OWEB, 1998-2003 Oregon Plan (probibalistic sampling)	1995 - Monitoring of restoration projects begins. 2001 – A comprehensive	2001 - Start of Coordinated state monitoring program.	There is a wide variety of maturities across the programs. Indeed, even within the programs,

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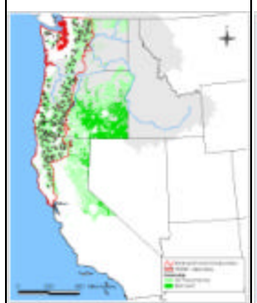
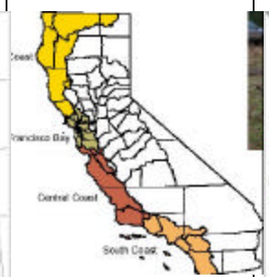
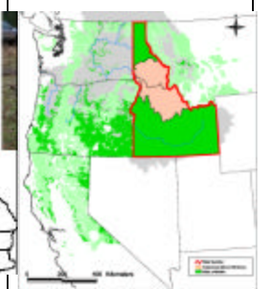
					some project effectiveness monitoring outside of CMS.		monitoring and evaluation program begins. 2001 – First Large-scale watershed assessment.		maturity of the monitoring may exceed the maturity of the programmatic coordination. Overall however, coordinated monitoring programs are less than 3-4 years old.
Maps of jurisdiction (Note: I currently have maps for PIBO, AREMP, the BIOPs, Washington and Oregon. I have the data for Idaho, but I have not finished the layout yet and I am working on acquiring the data for California. However, time is flying so I figured I would put these out for evaluation and say that I									

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will have Idaho ready by the 13th and I will try to get the info for California's programs as well.									