

Oregon Plan Implementation Report 1999.

State and Federal Agencies have modified existing programs, established new programs, and identified new measures that rectify factors that have contributed to the decline of salmon populations. As part of their commitment to accountability, agencies have prepared the following progress reports on the implementation of their programs and measures.

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STATE AGENCY IMPLEMENTATION REPORTS

OREGON DEPARTMENT OF FISH AND WILDLIFE

Introduction

The Oregon Department of Fish and Wildlife is mandated by the Oregon Legislature through the Wildlife Policy (ORS 496.012) to manage fishery resources to prevent the serious depletion of any indigenous species and to provide optimum recreational and aesthetic benefits for present and future generations of citizens. Prevention of serious depletion of indigenous species is the agency's overriding obligation, which thereby enables provision of the mandated recreational and aesthetic benefits. To accomplish its mandate, ODFW has been granted specific authority to control use and harvest through seasons, bag limits, license and tag requirements, restrictions on gear, area and time closures, etc., and to rear and distribute fish. ODFW plays a major role in the Oregon Plan for Salmon and Watersheds through measures that address its responsibility in

- managing harvest of fish in Oregon waters and working within fishery regulatory frameworks (such as the Pacific Fishery Management Council) to influence the harvest of Oregon fish migrating beyond Oregon waters,
- managing release of hatchery fish in Oregon waters produced by ODFW and other public and private hatcheries,
- managing other fish and wildlife in Oregon that affect indigenous fish and working within external regulatory frameworks to influence management of species when ODFW authority is superseded (such as National Marine Fisheries Service authority over marine mammals),
- monitoring the status of indigenous fish populations and their habitat and assisting other agencies and entities with complementary monitoring,
- providing technical review and assistance to other agencies, landowners, and the general public on protection and restoration of fish habitat,
- assisting water diverters screen fish from entering diversions, and
- keeping everyone informed about the opportunities for environmental, cultural, and economic benefits from Oregon's fish, problems and threats to these opportunities, and potential solutions to the problems and threats.

The preponderance of "Tasks ongoing" compared with "Tasks completed" and "Tasks underway" listed below and summarized in the table at the end reflects that many ODFW measures consist of ongoing tasks that assist with salmon and watershed restoration on an annual and even daily basis. Many individual actions are completed under these measures and tasks on a daily basis to implement the Oregon Plan for Salmon and Watersheds.

ODFW Measures on Population Abundance Goals

IA1 - Establish New Coho Spawning Escapement Criteria

Tasks completed.

- Disaggregate the old OCN aggregate into four sub-aggregates. (ODFW also completed conversion of historic spawning escapement indexes for each aggregate to equivalents compatible with the new spawning escapement estimate methods used since 1990)
- Establish escapement targets for each sub-aggregate to serve as fishery adjustment criteria and achieve Pacific Fishery Management Council (PFMC) approval of the new approach.

Tasks underway, with projected completion dates.

- Establish basin specific escapement targets and monitoring plans. (Date unknown; completed for grouped basins in ODFW's five coastal Gene Conservation Groups and for 14 major basins listed in Amendment 13 of the Pacific Fishery Management Council plan, but not for all individual basins; PFMC review process starting January 2000 may lead to further refinement, but not for all individual basins)

IA1S - Establish Population Health Goals for Wild Steelhead

Tasks underway, with projected completion dates.

- Work with Tribal co-managers (as appropriate for the geographic area) and NMFS to develop goals for adult escapement or other measures of wild steelhead population health for a representative sample of populations in each ESU.
 - Klamath Mountains Province ESU: November 1999; depends on NMFS and CDFG
 - Snake River Basin and Middle Columbia ESUs: December 2000; depends on US vs Oregon process for revising Columbia River Fisheries Management Plan, potential legislation and legal actions)
 - Other Oregon ESUs: July 2000; depends on funding from Legislature

ODFW Measures on Inventory and Monitoring

IB1 & IB1S - Assess Adult Escapement and Juvenile Production of Wild Coho and Steelhead

Tasks ongoing.

- Conduct annual coho escapement surveys utilizing stratified random sampling (SRS) approach to estimate total coho return to the Oregon coast basins, as an aggregate.
- Expand the number of SRS surveys of coho escapement to allow estimation of coho returns to the four sub-aggregate areas and to individual river basins.
- Conduct coho escapement surveys in the standard index areas to continue the long-term escapement trend information until a total of 10 years of dual surveys have been completed.

- Collect locally important juvenile coho abundance data in some ODFW fish districts.
- Develop and conduct a sampling program to estimate juvenile coho abundance in selected representative sites coast wide.
- Collect critical information on the status and distribution of wild adult steelhead escapement and juvenile steelhead production.
- Maintain population data for coho and steelhead in a geographically based format.

IB2 & IB2S - Inventory and Monitor Wild Coho and Steelhead Habitat and Distribution

Tasks ongoing.

- Monitor the habitat condition and record fish species presence in coastal streams, and accumulate the data over time.
- Update estimates of maximum potential coho production for each major coastal basin based on estimates of habitat quantity and quality. (Updates should be every 5 years starting in 2003; depends on funding of the preceding task above)
- Monitor habitat and fish distribution in all Oregon steelhead streams. (Extent of monitoring depends on funding)
- Identify specific stream reaches where habitat quality has been degraded and restoration is needed.
- Maintain records of habitat condition from surveys and watershed assessments carried out by watershed councils and other OPSW partners.
- Provide habitat information on surveyed streams to landowners and OPSW cooperators, utilizing GIS and other appropriate data formats.
- Recommend specific restoration approaches for areas in degraded condition.
- Maintain records of all habitat restoration activities carried out in coastal watersheds. (ODFW maintains records of own projects and provides them to GWEB where records of all activities are maintained).
- Monitor abundance of juvenile salmonids in representative stream reaches in all coastal basins.
- Initiate habitat assessment and monitoring in specific identified coho core areas in conjunction with monitoring of coho production, as funding becomes available.

IB3 - Habitat Restoration Evaluation

Tasks ongoing.

- Maintain an inventory of habitat restoration projects. (ODFW maintains records of own projects and provides them to GWEB where records of all activities are maintained)
- Determine the production capacity of various habitat features and effectiveness of habitat restoration techniques through research.
- Monitor results of restoration projects through pre/post photo monitoring, spawner counts, and on-site evaluation by district staff.
- Evaluate effectiveness of a sub-sample of habitat restoration projects to document the resultant response of salmonid populations.

IB4 - Inventory Artificial Barriers

Tasks completed.

- Conduct an inventory of state and county road culverts that impede fish passage in coastal basins.
- Expand inventory of state and county road culverts impeding fish passage statewide.

Tasks underway, with projected completion dates.

- Complete a database of other structures that impede fish passage on coastal salmonid streams. (Complete for dams December 2001; depends on funding)
- Complete inventory of structures impeding fish passage within interior Oregon basins. (Complete for dams December 2003; depends on funding; completed for city culverts in Portland and Gresham)

Tasks ongoing.

- Coordinate with forest management agencies, landowners, and forest industry groups in conducting assessments of culverts on forest roads in coastal basins, and maintaining a database on culverts.

IB5 - Inventory Water Diversions

Tasks underway, with projected completion dates.

- Based on already completed inventories of water diversions and their fish screens along the Willamette River, contact water right holders to inform them of screening requirements as a means of increasing voluntary compliance with water laws and screening requirements, and introducing the Fish-screening Cost-share Program to users. (Complete December 1999)

ODFW Measures on Predators

IC1 - Policy on Management of Salmonid Predators

Tasks underway, with projected completion dates.

- Develop an assessment report on the potential impacts from other predator species, particularly introduced fishes. (Complete December 2001; depends on funding; report on introduced fishes completed in relation to Measure IC4)
- Develop an ODFW policy on marine mammal predation, in conjunction with the National Marine Fisheries Service and the states of California and Washington. (Complete June 2002)
- Develop an ODFW policy on cormorant and other avian predation, in conjunction with the U.S. Fish and Wildlife Service and the other Pacific Northwest states. (Complete December 2002)

IC2 (a-c) – Determine Predator Impacts

Tasks ongoing.

- Initiate research proposals on predation effects on salmon and steelhead and locate funding to conduct the research.
- Determine the magnitude of impacts to depressed salmon and steelhead populations from avian predators, primarily cormorants.
- Determine the magnitude of impacts to depressed salmon and steelhead populations from marine mammals.
- Determine the magnitude of impacts to depressed salmon and steelhead populations from predation by introduced fishes.
- Provide existing data needed by other entities conducting predation research.

IC3 - Predator Management

Tasks ongoing.

- Reduce marine mammal predation on salmonids where seals and sea lions take advantage of concentrations of salmonids at specific locations, using non-lethal approaches such as exclusion devices, hazing, or relocation.
- Continue the experimental hazing of cormorants feeding on coho smolts in three estuaries on the North Coast, as authorized by the Oregon Legislature.
- Identify and respond appropriately to incidences of predation in specific areas of concentration.

IC4 – ODFW and NMFS Joint Workshop on Exotic Predacious Fish

Tasks completed.

- Cosponsor a scientific workshop with NMFS to review all pertinent scientific information on the abundance and distribution of introduced fishes and interactions of introduced fishes with indigenous anadromous salmonids.

ODFW Measures on Volunteers

ID1 - Use of Volunteers

Tasks ongoing.

- Request assistance from formal volunteer programs (such as STEP) where appropriate to conduct specific actions in the OPSW (e.g. collection of wild broodstock, habitat restoration projects, and data collection projects). (Many of these actions completed every month)
- Recruit new volunteers and form new volunteer groups.
- Refocus existing volunteer efforts toward priority OPSW measures, where feasible.
- Investigate and develop other means of obtaining low cost work crews to support OPSW actions.

ODFW Measures on Protection of Wild Genetic Resources

IIA1 & IIA1S - Implement Wild Fish Management Strategies for Coho and Steelhead

Tasks completed.

- Implement the Wild Fish Management Policy (WFMP) strategies for coastal coho salmon as approved by the Oregon Fish and Wildlife Commission in 1994.
- Implement the Wild Fish Management Policy strategies for coastal steelhead as approved by the Oregon Fish and Wildlife Commission in 1994.

Tasks underway, with projected completion dates.

- Develop strategies to bring steelhead hatchery programs into compliance with Hatchery Guidelines in the current WFMP in the interior basins of Oregon in a cooperative process with Tribal co-managers, funding entities, and the public. (Complete December 2004; depends on potential revisions to the WFMP by July 2000 as directed by the Governor's Oregon Plan Executive Order, funding, and potential legislative and legal actions)

Tasks ongoing.

- Modify release numbers and locations for hatchery smolts as needed to reduce potential of hatchery fish straying to natural spawning areas at levels exceeding standards in the current WFMP.
- Remove hatchery origin fish that would exceed standards in the current WFMP in natural spawning areas using traps at hatcheries and fish ladders.
- Implement other WFMP strategies as needed. (Progress made as part of IIA3 and IIA3S)

IIA2 & IIA2S - Reduce Releases of Hatchery Steelhead Smolts and Coastal Hatchery Coho Smolts

Tasks completed.

- Reduce coastal hatchery coho smolt releases from 6.4 million in 1990 and 3.4 million in 1997, to 2.3 million by 1998.
- Phase out parts of summer and winter steelhead stocking programs in the Lower Columbia and Upper Willamette ESUs.

Tasks ongoing.

- Continue the restrictions on coho and steelhead smolt releases that are in place now and continue to monitor the need for reductions statewide.
- Work with Tribal co-managers (as appropriate for the geographic area), funding entities, and the public to achieve agreement on any reductions in coho and steelhead smolt releases.

IIA3 & IIA3S - Develop Management Objectives for Steelhead and Coastal Coho Hatchery Programs, Including Genetic Guidelines

Tasks underway, with projected completion dates.

- Write a framework document to guide development of management objectives and operation guidelines for hatchery programs. (Complete July 2000 in concert with creation of a Rehabilitation Policy and revisions to the WFMP under IIA1 and IIA1S; draft of framework document has been completed)
- Develop specific management objectives and operation guidelines for each hatchery coho salmon program in coastal basins to conserve genetic resources and minimize risks to wild fish while maintaining harvest opportunities. (Complete December 1999; now complete for Cole Rivers Hatchery and initiated for several others)
- Develop specific management objectives and operation guidelines for each hatchery steelhead program to conserve genetic resources and minimize risks to wild fish while maintaining harvest opportunities. (Complete December 2002; first ones by December 1999)

IIA4 & IIA4S - Mark All Hatchery Coho and Steelhead

Tasks ongoing.

- Begin externally marking all Oregon coho smolts (and fed fry as possible) prior to release by removal of the adipose or other fin, or by some other tagging method.
- Continue to externally mark all Oregon hatchery steelhead prior to release as smolts using the adipose finclip as the mark except in special circumstances.

IIA5S - Manage Salmon Hatchery Programs to Avoid Impacts on Wild Steelhead

Tasks ongoing.

- Work with Tribal co-managers (as appropriate for the geographic area) to review any programs that may cause substantial potential for hatchery salmon to impact wild steelhead.
- Continue to remove coho at the Siletz Falls trap and limit coho smolt stocking programs to areas well below the falls as part of the restoration program for Siletz summer steelhead.
- If funds can be obtained, further study risks and impacts of salmon hatchery programs on wild steelhead.

ODFW Measures on Reintroduction or Rebuilding of Depressed Populations

IIB1 & IIB1S - Assess Effectiveness of Using Hatchery Production to Reintroduce or Rebuild Depressed Wild Coho and Steelhead Populations

Tasks underway, with projected completion dates.

- Develop the conceptual framework for the use of hatchery coho production to supplement depressed wild populations and design a program plan for conducting

experimental application of the approach on a test case basis. (Complete September 2002; first experimental programs [Siuslaw and Umpqua Basins] designed by December 1999; may be affected by creation of a Rehabilitation Policy and revisions to the WFMP under IIA1 and IIA1S)

- Develop approaches to re-establish wild steelhead populations above dams in the Deschutes, Willamette, and other basins. (Complete June 2003; first experimental program [Hood Basin] designed by December 1999; may be affected by creation of a Rehabilitation Policy and revisions to the WFMP under IIA1 and IIA1S)

Tasks ongoing.

- Continue the practice and evaluation of incorporating wild broodstock into the hatchery program for the depressed winter steelhead population of the Hood River. (Progress made as part of IIA3S)

IIIA1 – Develop Management Strategy that Minimize Ocean Fishery Related Impacts on OCN Coho Stocks and Provide for Future Harvest Opportunities

Tasks completed.

- Obtain formal recognition and adoption of the OPSW plan and its fishery management plan by the Pacific Fishery Management Council (PFMC). (A risk assessment of using the amended PFMC plan with respect to extinction and recovery probabilities for OCN coho was also completed)

IIIA2 - Manage Estuary and River Salmon Fisheries to Minimize Impact on Wild Coho

Tasks ongoing.

- Manage impacts on OCN coho in Oregon coastal estuary and river salmon fisheries as part of the overall OCN exploitation rate to ensure attainment of the OCN spawner escapement rebuilding criteria defined in the OPSW. (Estuary and river fisheries for healthy populations of chinook salmon and hatchery coho salmon have been modified as needed)

IIIA2S - Manage Steelhead Fisheries to Minimize Impact on Wild Steelhead

Tasks ongoing.

- Continue to maintain catch and release regulations for wild steelhead in all rivers except harvest of 1 wild steelhead per day and 5 wild steelhead per year allowed in selected south coast streams.

IIIA3 - Manage Trout Fisheries to Reduce Ecological Interactions and Mortality on Juvenile Salmonids

Tasks completed.

- Complete the elimination of trout stocking from coastal streams with anadromous salmonid populations.
- Complete the transfer of hatchery trout production from coastal streams with anadromous salmonid populations to standing waters.

Tasks ongoing.

- Maintain recent changes in fishing regulations to reduce the incidental catch of coho salmon smolts and other juvenile anadromous salmonids. (ODFW's last changes became effective 1999, including a ban on using bait when angling for trout in those anadromous salmonid streams left open to trout angling, except bait may be used for adult salmon and steelhead in some streams provided baited hooks are large enough to avoid hooking juveniles)
- Maintain late May opener for trout angling, maintain closure in steelhead rearing streams, maintain reduced level of stocking, effectively communicate rationale to angling public, and consider further restrictions in trout fisheries if necessary to protect wild steelhead.
- Inform the public of the recent changes in trout stocking and fishing regulations.

IIIA4S - Manage Non-steelhead Fisheries in the Columbia River to Minimize Bycatch of Wild Steelhead

Tasks underway, with projected completion dates.

- Develop Genetic Stock Index sampling program to improve ability to manage fishery impacts on various steelhead ESUs migrating through the Columbia River. (December 2000)

Tasks ongoing.

- Continue to work with co-managers of Lower Columbia River commercial estuary and river net fisheries to maintain time, area, and gear restrictions that minimize bycatch of wild steelhead.

ODFW Measures on Selective Fisheries for Hatchery Fish

IIIB1 - Develop Selective Ocean Coho Harvest Opportunities

Tasks completed.

- Establish ocean selective fisheries based on meeting the OCN coho spawning escapement rebuilding criteria under the OPSW plan.
- Initiate field studies to test the potential and feasibility of selective coho fisheries as they are implemented.

Tasks ongoing.

- Continue to provide ocean fishing opportunity on hatchery marked (finclipped) coho as allowed under Oregon's new fishery management regime and harvest criteria.

IIIB1S - Maintain Selective Harvest Opportunities on Hatchery Steelhead

Tasks ongoing.

- Continue to finclip all hatchery steelhead and stock them in selected streams with good angler access.
- Review need for acclimating smolts in each situation and eliminate or pursue adding acclimation as needed.
- Continue to recycle hatchery steelhead downstream where effective for angling.

IIIB2 - Develop Opportunities for Terminal Area Recreational Coho Fisheries

Tasks ongoing.

- Develop coho recreational angling opportunities that focus on marked hatchery coho.
- Implement a terminal area coho harvest strategy encompassing the OCN coho spawning escapement rebuilding and overall harvest exploitation rate criteria established in the OPSW.
- Evaluate the potential for non-selective terminal area recreational coho fisheries when OCN coho stocks are restored.
- Evaluate terminal marked hatchery coho fisheries for actual impacts on OCN coho stocks.

ODFW Measures on Technical Information and Monitoring

IIIC1- Develop an Improved Adult OCN Coho Abundance Predictor

Tasks underway, with projected completion dates.

- Develop an accurate pre-season OCN abundance prediction with a level of accuracy necessary to be effective in setting harvest management strategies and attaining the OCN spawning rebuilding goals. (Complete February 2000; involves the Pacific Fishery Management Council Salmon Technical Team; although spawning escapement in previous years has more impact on setting harvest regulations under the Oregon Plan, this prediction is still helpful in setting the regulations)

IIIC2 & IIIC2S - Evaluate Hook and Release Mortality on Wild Coho and Steelhead

Tasks ongoing.

- Further study the impact on caught and released coho in ocean salmon fisheries, both commercial troll and recreational. (ODFW is also starting to use the “double-index tag” data from hatchery coho to assess hooking mortality on non-finclipped coho in freshwater selective fisheries for finclipped hatchery coho)
- Monitor and assess studies done on steelhead elsewhere to see if they raise new concerns regarding catch and release mortality on wild steelhead, investigate feasibility of doing evaluations in Oregon and then develop proposals to seek funding. (ODFW recently completed one hooking mortality study on trout caught and released in hatchery ponds)

IIIC3 & IIIC3S - Monitor Marine Survival of OCN Coho Salmon and Wild Steelhead

Tasks completed.

- Evaluate a study plan, potential study sites, site preparation costs, equipment needs, and personnel requirements for establishing an OCN coho smolt outmigration and adult escapement evaluation at selected sites along the Oregon Coast.

Tasks ongoing.

- Establish and operate the initial study sites to monitor coho smolts and adults.
- Apply ocean survival factors to future OCN coho abundance predictors.
- Continue and expand steelhead smolt trapping operations associated with adult return sampling in the same watershed to provide more accurate assessment of ocean conditions and marine survival of smolts to adults for wild steelhead in selected Oregon index streams. (No expansion possible without new funding)

IIIC4 & IIIC5- Monitor Salmon Bycatch in the Pacific Whiting Shoreside Fishery and the Groundfish Trawl Fishery

Tasks ongoing.

- Monitor salmon bycatch in the coast-wide Pacific whiting shoreside fishery through limited industry-funded observer program with a coverage goal of 10% of landings at shore-based processors plus salmon and steelhead turned over to the State from all landings. (Goal is being exceeded; about 14% coverage being achieved)
- Monitor salmon bycatch in the coast-wide groundfish trawl fishery through combined industry, state and federal funding of observers with a coverage goal of 10% of all landings. (Apparently near goal, but difficult to assess percent coverage in this multi-faceted program)

ODFW Measures on Enforcement

IIID1 & IIID1S - Emphasize Restoration of Wild Coho and Steelhead in Annual Cooperative Enforcement Planning Process with Oregon State Police

Tasks ongoing.

- Annually conduct a joint Cooperative Enforcement Planning (CEP) process with the Oregon State Police at the ODFW Region and District level to coordinate fishery monitoring and sampling activities and to establish enforcement priorities that emphasize restoration of wild coho and steelhead.

ODFW Measures on Habitat Protection

IIV1 - Provide Technical Assistance to Regulatory Agencies for Habitat Protection

Tasks ongoing.

- Provide information and guidance to other agencies in their decisions that affect fish habitat which will either avoid or minimize adverse effects.
- Provide technical assistance, data sharing, review and comment on rule making, plans, permits and NEPA documents and direct participation in interagency planning efforts.
- Conduct subwatershed landowner seminars providing information on habitat protection.

IVA3 - Apply for Additional Instream Water Rights

Tasks ongoing.

- Obtain funding and staff necessary to collect flow requirement information and prepare applications for new Instream Water Rights. (Funds requested from Oregon Legislature)
- Identify streams with reduced flows that are limiting coho salmon production. (Some progress made through Measure IVA8)
- File for instream water right protection on streams where salmon production is being impacted or that are vulnerable to such decreased production. (No progress without funds for first task listed above)
- Work with WRD to support protection of instream flows.

IVA4 - Request Water Resources Commission to Administratively Close Fill and Removal Areas

Tasks ongoing.

- Consult with DSL, WRD and DOGAMI to determine critical spawning and rearing areas for salmonids at risk from fill and removal activities and if other management approaches prove insufficient, seek to administratively close these areas.
- Seek incentives to attract gravel miners away from streams to upland sources.

IVA5 - Prevent Large Wood Removal

Tasks completed.

- Work with other cooperating Oregon Plan partners to develop and promote legislative concepts to prohibit the removal of large wood from streams and estuaries that is providing salmonid habitat value. (Oregon Legislature is now considering this legislation)

Tasks ongoing.

- Work with agencies and landowners to promote alternatives to wood removal, such as moving "problem" wood to another location where it will still benefit salmonids, and concepts that provide economic incentives for leaving large wood in streams and estuaries.

IVA6 - Promote and Assist Voluntary Habitat Protection Actions

Tasks ongoing.

- With available staff, provide as much technical assistance as possible to private landowners, watershed councils, and other cooperators to promote and guide protection of high priority salmonid habitat areas on forest, agriculture and other lands.
- Increase the amount of technical assistance ODFW is able to provide for habitat protection activities by securing and maintaining additional funding.

IVA7 - Landowner Stewardship Award

Tasks completed.

- Implement the Fish and Wildlife Steward Award for Forest Lands program to provide recognition and incentives to forest landowners who improve fish and wildlife habitat. (Awards have been issued annually since 1996)

Tasks ongoing.

- Select recipients and present Fish and Wildlife Steward Awards for Forest Lands annually.

IVA8 - Identify Instream Flow Priorities

Tasks completed.

- Identify and prioritize areas where coho habitat in coastal basins is most dependent on restoration of streamflows and establish a schedule for annual incremental restoration of flows over time.

Tasks underway, with projected completion dates.

- Identify and prioritize areas where steelhead habitat is most dependent on restoration of streamflows and establish a schedule for annual incremental restoration of flows over time. (Complete June 2000; GWEB and OWRD are funding ODFW to complete this task)

IVA9 – Update Priority Area Designations for Salmon and Steelhead

Tasks underway, with projected completion dates.

- Updated maps, tables, definitions, and descriptions of priority areas for salmon and steelhead and a short document explaining the effect of priority area designations on management programs. (September 1999)

IVA10 – Peak Flow Protection

Tasks ongoing.

- Work through the Peak Flow Working Group to advise the Water Resources Department on how to protect peak flows as permit decisions are made, and to

recommend changes in the existing joint WRD/ODFW policy addressing peak flows when implementing WRD Division 310 and Division 33 rules.

ODFW Measures on Habitat Restoration

IVB2 - Promote Habitat Restoration

Tasks ongoing.

- Promote the need for increased habitat restoration among OPSW partners and cooperators.
- Support habitat restoration through technical assistance to cooperators.
- Guide restoration efforts to assure that they address the critical factors limiting salmon production in each given location through preparation of restoration guides and through direct technical advice.
- Conduct and support development of habitat restoration projects through direct participation and financial support, when possible (e.g., through R&E funds and Sport Fish Restoration).
- Continue to secure and maintain funding for STEP and Habitat Biologist positions.

IVB3 - Promote Use of Beavers to Restore Salmonid Habitat

Tasks completed.

- Develop outreach materials explaining the value of beavers to coho habitat and describe appropriate beaver management approaches to control beaver damage while encouraging increased beaver populations. (In addition to a brochure, ODFW developed maps and met with trappers to show our areas of concern regarding the removal of beavers)

Tasks ongoing.

- Actively promote beavers through media contacts, coordination with watershed councils and cooperative habitat restoration groups, and interaction with landowners and agricultural and timber industry groups.
- Coordinate with Wildlife Division regarding trapping in relation to desired abundance and distribution of beaver populations. (ODFW has engaged trappers in cooperative efforts to minimize beaver removal in mapped areas of concern and report their harvest as to how much was inside versus outside these areas).
- Disseminate information on beaver management and the value to salmon habitat through existing industry support programs and educational channels, such as ODF, NRCS and the Soil and Water Conservation Districts and the Agriculture Extension Service.
- Work with BLM and USFS to identify locations on federal lands where salmonid habitat can benefit from transplanting "problem" beavers to benefit fish habitat.

IVB4 - Use Hatchery Carcasses to Increase Wild Salmonid Production

Tasks completed.

- Develop an expanded carcass placement and monitoring plan for experimental placement of carcasses beginning Fall of 1997.
- Obtain DEQ approval (NPDES permit) for placement of surplus carcasses in selected streams and request their commitment to water quality monitoring.

Tasks ongoing.

- Obtain MOAs each year from DEQ to place carcasses in specific basins.
- Obtain and distribute carcasses in selected stream reaches. (Expanded to many additional reaches each year so far)
- Conduct follow up evaluations, including carcass distribution and retention, and production changes in test and control streams.

IVB5 - Restore Instream Flow Through Instream Transfers and Leases

Tasks ongoing (some progress is being made on these two tasks by ODFW District-level staff).

- Identify opportunities to acquire existing out-of-stream water rights on priority streams.
- Work with potential donors and CSRI partners and cooperators to secure funds for purchase or lease of out-of-stream water rights on priority streams.

IVB6 - Fish Habitat Improvement Tax Credit Program

Tasks completed.

- Support reauthorization of ODFW's Fish Habitat Improvement Tax Credit Program to provide incentives for restoration of fish habitat on private land. (Oregon Legislature did not re-authorize the program in 1997 but is considering ODFW request this session)

IVB7 - ODFW Job Rotations

Tasks completed.

- Explore the interest in and opportunities for job rotations into other state agencies to provide technical assistance in restoring salmonid habitat.
- Initiate job rotations.

Tasks ongoing.

- Continue to pursue job rotation opportunities for ODFW fishery biologists in other state agencies.

ODFW Measures on Barriers and Screens

IVC1 - Cooperative Removal of Barriers

Tasks underway.

- Hire an engineer specializing in fish passage and screening to assist owners and operators with design of modifications to provide fish passage. (Complete October 1999 if Oregon Legislature approves the funding)

Tasks ongoing.

- Pursue removal of artificial fish passage barriers or the establishment of adequate fish passage at these barriers, including those at ODFW fish hatcheries.
- Work cooperatively with the owners or operators of structures that do not pass fish to make modifications necessary for them to comply with legal fish passage requirements.
- Request OSP assistance to initiate legal enforcement of the passage laws where cooperative approaches are insufficient to accomplish the provision of passage.

IVC2 - Screen Diversions Less Than 30 cfs

Tasks ongoing.

- Continue using Oregon's Fish Screening Cost Share Program that started in 1991 to screen water diversions less than 30 cfs to prevent entrainment of salmonids.
- Identify diversions which need screens, contact water users, enroll water users who wish to participate in the cost-share screening program, and install screens.

IVC3 - Utilize Watershed Health Funds For South Coast Fish Screening Needs

Tasks completed.

- Screen diversions in critical coho and steelhead streams in the South Coast drainages with the remaining Watershed Health Funds.

IVC4 - Screening of Water Diversions Greater Than 30 cfs

Tasks completed.

- Site inventory large water diversions and notify water users of legal requirements and current fish screening criteria.
- Secure funding for a fish screening and passage engineer.

Tasks ongoing.

- ODFW and OSP will continue to identify and work with water users to encourage screening compliance.
- Provide specific technical assistance to water users for screening large diversions.

IVC5 – Enhancing Compliance with Fish Screening Statutes

Tasks ongoing.

- Assist water diverters meet their legal requirement to provide necessary maintenance of fish screening devices on their diversions by fully informing them and the community of the legal requirements, providing diverters with maintenance manuals, and working to develop devices with minimal maintenance requirements.

- Monitor compliance through periodic checks of screening devices and interviews with diverters.

IVC6 - Enhancing Compliance with Fish Passage Statutes

Tasks ongoing.

- Counsel landowners about possible sources of funding and technical assistance for modifying or removing artificial obstructions to fish passage.
- Monitor compliance through periodic checks of passage facilities and interviews with landowners.

ODFW Measures on Dams and Hydro

IVD1 - Petition FERC to Expedite Licensing Powerdale Project

Tasks ongoing.

- Work with other state agencies to petition FERC to expedite new license processing and accelerate existing license expiration date of March 1, 2000, for PacifiCorp's Powerdale Dam project on the Hood River to expedite installation of juvenile fish screens by December 2000. (ODFW is working with other state and federal agencies and PacifiCorp to move the licensing process and screen installation along quickly, and will not seek to petition FERC)

IVD2 - Solicit Congressional Support for Construction of Steelhead Collection System and Transport around Green Peter Reservoir and Dam

Tasks ongoing.

- Work with the Army Corps Portland District staff to solicit congressional funding for construction of a surface collection system at the head of the reservoir to transport steelhead and other salmonids around the reservoir and dam on the Middle Fork Santiam River.

IVD3 - Enforce Fish Screening Statutes at Lake Oswego Corporation River Intake

Tasks ongoing.

- Continue dialog with Lake Oswego Corporation regarding the need to screen its diversion from the Tualatin River into Lake Oswego, but communicate clearly to the corporation the legal requirement to screen the intake.

ODFW Measures on Outreach

VA1 - Conduct an Outreach Program

Tasks completed.

- Hire additional staff to expand ability to develop, distribute, and present informational materials.

Tasks ongoing.

- Continue preparation of informational leaflets, news releases, Oregon Wildlife articles and other informational vehicles to promote participation in habitat restoration and other Oregon Plan activities, provide technical guidance for landowners and watershed councils on how to conduct various kinds of restoration, and inform a broad spectrum of Oregonians on how to fit human activities into the landscape without excessive impact on fish and wildlife.
- Integrate ODFW's Strategic Operations Plan to guide the investment of staff time and resources, including an emphasis on partnering with watershed councils and landowners, and increasing outreach to schools, new residents in growing urban areas and civic/local organizations.
- Work cooperatively with other OPSW partners to prevent duplication and deliver efficient services.

Summary of Task Status for ODFW's Oregon Plan Measures

ODFW Measure	Tasks completed	Tasks underway	Projected completion	Tasks ongoing
<i>IA. Population Abundance Goals</i>				
IA1 - Establish New Coho Spawning Escapement Criteria	2	1	Date unknown	0
IA1S - Establish Population Health Goals for Wild Steelhead	0	3	November 1999 July 2000 December 2000	0
<i>IB. Inventory and Monitoring</i>				
IB1& IB1S - Assess Adult Escapement and Juvenile Production of Wild Coho and Steelhead.	0	0		7
IB2 & IB2S - Inventory and Monitor Wild Coho and Steelhead Habitat and Distribution	0	0		10
IB3 - Habitat Restoration Evaluation	0	0		4
IB4 - Inventory Artificial Barriers	2	2	December 2001 December 2003	1
IB5 - Inventory Water Diversions	0	1	December 1999	0

ODFW Measure	Tasks completed	Tasks underway	Projected completion	Tasks ongoing
<i>IC. Predators</i>				
IC1 - Policy on Management of Salmonid Predators	0	3	December 2001 June 2002 December 2002	0
IC2 (a-c) – Determine Predator Impacts	0	0		5
IC3 - Predator Management	0	0		3
IC4 – ODFW and NMFS Joint Workshop on Exotic Predacious Fish	1	0		0
<i>ID. Volunteers</i>				
ID1 - Use of Volunteers	0	0		4
<i>IIA. Protection of Wild Genetic Resources</i>				
IIA1 & IIA1S - Implement Wild Fish Management Strategies for Coho and Steelhead	2	1	December 2004	3
IIA2 & IIA2S - Reduce Releases of Hatchery Steelhead Smolts and Coastal Hatchery Coho Smolts	2	0		2
IIA3 & IIA3S - Develop Management Objectives for Steelhead and Coastal Coho Hatchery Programs, Including Genetic Guidelines	0	3	July 2000 December 1999 December 2002	0
IIA4 & IIA4S - Mark All Hatchery Coho and Steelhead	0	0		2
IIA5S - Manage Salmon Hatchery Programs to Avoid Impacts on Wild Steelhead	0	0		3
<i>IIB. Reintroduction or Rebuilding of Depressed Populations</i>				
IIB1 & IIB1S - Assess the Effectiveness of Using Hatchery Production to Reintroduce or Rebuild Depressed Wild Coho and Steelhead Populations	0	2	September 2002 June 2003	1
<i>IIIA. Protection of Wild Fish from Over-harvest</i>				
IIIA1 – Develop Management Strategy that Minimize Ocean Fishery Related Impacts on OCN Coho Stocks and Provide for Future Harvest Opportunities	1	0		0
IIIA2 - Manage Estuary and River Salmon Fisheries to Minimize Impact on Wild Coho	0	0		1
IIIA2S - Manage Steelhead Fisheries to Minimize Impact on Wild Steelhead	0	0		1

ODFW Measure	Tasks completed	Tasks underway	Projected completion	Tasks ongoing
IIIA3 - Manage Trout Fisheries to Reduce Ecological Interactions and Mortality on Juvenile Salmonids	2	0		3
IIIA4S - Manage Non-steelhead Fisheries in the Columbia River to Minimize Bycatch of Wild Steelhead	0	1	December 2000	1
<i>IIIB. Selective Fisheries for Hatchery Fish</i>				
IIIB1 - Develop Selective Ocean Coho Harvest Opportunities	2	0		1
IIIB1S - Maintain Selective Harvest Opportunities on Hatchery Steelhead	0	0		3
IIIB2 - Develop Opportunities for Terminal Area Recreational Coho Fisheries	0	0		4
<i>IIIC. Technical Information and Monitoring</i>				
IIIC1 - Develop an Improved Adult OCN Coho Abundance Predictor	0	1	February 2000	0
IIIC2 & IIIC2S - Evaluate Hook and Release Mortality on Wild Coho and Steelhead	0	0		2
IIIC3 - Monitor Marine Survival of OCN Coho Salmon and Wild Steelhead	1	0		3
IIIC4 & IIIC5 – Monitor Salmon Bycatch in the Pacific Whiting Shoreside Fishery and the Groundfish Trawl Fishery	0	0		2
<i>IIID. Enforcement</i>				
IIID1 & IIID1S - Emphasize Restoration of Wild Coho and Steelhead in Annual Cooperative Enforcement Planning Process with Oregon State Police	0	0		1
<i>IVA. Habitat Protection</i>				
IVA1 - Provide Technical Assistance to Regulatory Agencies for Habitat Protection	0	0		3
IVA3 - Apply for Additional Instream Water Rights	0	0		4
IVA4 - Request Water Resources Commission to Administratively Close Fill and Removal Areas	0	0		2
IVA5 - Prevent Large Wood Removal	1	0		1
IVA6 - Promote and Assist Voluntary Habitat Protection Actions	0	0		2
IVA7 - Landowner Stewardship Award	1	0		1

ODFW Measure	Tasks completed	Tasks underway	Projected completion	Tasks ongoing
IVA8 - Identify Instream Flow Priorities	1	1	June 2000	0
IVA9 – Update Priority Area Designations for Salmon and Steelhead	0	1	September 1999	0
IVA10 – Peak Flow Protection	0	0		1
<i>IVB. Habitat Restoration</i>				
IVB2 - Promote Habitat Restoration	0	0		5
IVB3 - Promote Use of Beavers to Restore Salmonid Habitat	1	0		4
IVB4 - Use Hatchery Carcasses to Increase Wild Salmonid Production	2	0		3
IVB5 - Restore Instream Flow Through Instream Transfers and Leases	0	0		2
IVB6 - Fish Habitat Improvement Tax Credit Program	1	0		0
IVB7 - ODFW Job Rotations	2	0		1
<i>IVC. Barriers and Screens</i>				
IVC1 - Cooperative Removal of Barriers	0	1	October 1999	3
IVC2 - Screen Diversions Less Than 30 cfs	0	0		2
IVC3 - Utilize Watershed Health Funds For South Coast Fish Screening Needs	1	0		0
IVC4 - Screening of Water Diversions Greater Than 30 cfs	2	0		2
IVC5 – Enhancing Compliance with Fish Screening Statutes	0	0		2
IVC6 - Enhancing Compliance with Fish Passage Statutes	0	0		2
<i>IVD. Dams and Hydro</i>				
IVD1 - Petition FERC to Expedite Licensing Powerdale Project	0	0		1
IVD2 - Solicit Congressional Support for Construction of Steelhead Collection System and Transport around Green Peter Reservoir and Dam	0	0		1
IVD3 - Enforce Fish Screening Statutes at Lake Oswego Corporation River Intake	0	0		1
<i>V. Outreach</i>				
VA1 - Conduct an Outreach Program	1	0		3

WATER RESOURCES DEPARTMENT

Introduction

The Oregon Plan measures which the Water Resources Department is committed to implementing address three major areas: (1) maintaining and restoring streamflows, (2) ensuring fish passage at all instream structures, and (3) protecting against salmonid mortality. Within the constraints of the prior appropriation doctrine, these activities are intended to provide sufficient streamflows and other habitat conditions to support fish recovery.

WRD is continuing to review all applications for new permits to use or store water to ensure that the proposed uses of water will not be detrimental to fish and fish habitat. When potential issues associated with water quantity, passage, or screening are raised during the application review process, staff work with the appropriate ODFW district biologist to address the issues. WRD also is working with ODFW staff to ensure that potential injury to instream water rights is identified and prevented when existing water rights are transferred.

In 1998, WRD and ODFW completed work on identifying the high priority areas for streamflow restoration in the five coastal basins. WRD is focusing implementation of its Oregon Plan measures which relate restoration of streamflows and removal of instream impediments to fish passage on these high priority areas. By June 1999, watermasters and other field staff in the five coastal basins will have completed plans outlining the efforts which they will undertake in these areas during the coming years. WRD also has initiated a similar process for identifying high priority areas in Columbia River tributary basins and expects to complete that effort in early 2000.

WRD has approved water right leases and transfers to instream uses totaling nearly 150 cubic feet per second (cfs) of water. More than 100 cfs has been dedicated to instream water rights through permanent transfers. Another 4 cfs has been temporarily transferred under long-term leases and, in 1998, almost 40 cfs was dedicated to instream uses through short-term leases. The priority dates of the instream water rights which have been established through transfers are as early as 1857 on Sucker Creek in the Rogue Basin and 1885 on Squaw Creek in the Deschutes Basin.

WRD has developed two separate approaches to address water use efficiency. Additional guidance has been provided to field staff in enforcing against the waste of water—the diversion of quantities of water which are excessive and which can be addressed through reasonable diligence in the management and use of water. Under a separate process, staff will work with watershed councils on regional efficiency projects intended to identify methods for conserving water. In cooperation with WRD, the Little Butte Creek Basin Watershed Council has initiated discussions of an efficiency project.

Staff are continuing to participate in interagency efforts to resolve fish passage and other problems associated with diversion or “push-up” dams. An extensive public information

effort has been conducted and owners were given an opportunity (along with financial support) to voluntarily resolve push-up dam passage problems. Remaining structures that continue to pose fish passage concerns are being addressed in a more structured, regulatory approach that is coordinated and prioritized by involved agencies based on fishery concerns. Agency staff have met regularly with the watershed councils, water users, and other organizations to provide information and assistance on point-of-diversion transfer procedures and other water right issues associated with the replacement of the dams.

The Water Resources Department has been involved in implementation of Oregon Plan measures since March 1997. As staff have pursued work on several of the measures, changes in the original approaches have been identified. In addition, some modifications in completion dates have been adopted. Staff are confident that these changes are consistent with the objectives of the Oregon Plan and the recovery of salmonids. Following are the Oregon Plan measures to which the Water Resources Department has committed, the associated tasks which staff currently are working to implement, and the projected completion date for each of the tasks:

Agency Measure Number and Name

WRD 1 – Public Interest Review to Protect Salmonids

Tasks completed.

- Begin providing ODFW district offices with the WRD initial review and the water right application map for all surface water applications, hydraulically connected ground water applications, and reservoir applications. (May 1997)

Tasks ongoing.

- Review all applications for new uses of water under OAR 690-310-120. (ongoing)

WRD 2 – Water Right Transfer Review for Fish Concerns

Tasks completed.

- Begin soliciting input from ODFW district biologists on all transfers to ensure that instream rights are being protected and to determine if fish screen or bypass facilities are needed. (April 1997)

Tasks underway, with projected completion dates.

- Formalize through an interagency agreement the process for soliciting input from local fish biologists.¹ (July 1999)

¹ The original completion date was February 1, 1998. WRD and ODFW are continuing to work cooperatively to develop a formal agreement. Pending the agreement, WRD is soliciting input from district biologists on all transfers.

WRD 3 – Coordinated Agency Field Meetings

Tasks ongoing.

- Participate in regular coordination meetings of the region managers of other state natural resource agencies. (ongoing)

WRD 4 – Issuance of Instream Water Rights

Tasks underway, with projected completion dates.

- Conduct an assessment to identify all protested instream water rights in ESAs with threatened or endangered anadromous fish and in areas which are high priorities for streamflow restoration. (July 1999)
- In cooperation with ODFW, establish a strategy and schedule for resolving pending instream water right applications.² (September 1999)

WRD 5 – Water Availability Model

Tasks completed.

- Review and recast the water availability model to reflect actual instream water right amounts. (March 1997)

Tasks ongoing.

- Maintain and regularly update the water availability model to reflect all new allocations of water to instream and out-of-stream water rights. (ongoing)

WRD 6 – Identify Unmet Instream Flow Needs

Tasks completed.

- Evaluate water availability and instream deficits for coastal basin streams. (June 1997)
- In cooperation with ODFW, establish streamflow restoration priorities in coastal basins. (October 1997)
- Evaluate water availability and instream deficits for Columbia River tributaries with anadromous fish. (November 1998)

Tasks underway, with projected completion dates.

- Develop streamflow restoration plans for high priority areas in coastal basins. (April 1999)
- In consultation with ODFW, establish streamflow restoration priorities for Columbia River tributaries with anadromous fish.³ (May 1999)

² When preparing the Steelhead Supplement, WRD anticipated resolving the major of the protests of issuance of instream water rights by January 1999. Negotiations on the protests have taken longer than expected. The revised tasks reflect the longer timeframe and provide a process to resolve protests on critical streams first.

³ The tasks listed incorporate elements of ODFW IV A 8 to restore streamflows in high priority areas. Because of funding limitations, ODFW has not been able to maintain an intensive involvement in the establishment of priorities and the develop of restoration plans. ODFW district biologists are continuing to provide review and comment on the prioritization and planning efforts of watermasters. The original completion date for establishment of streamflow restoration priorities in Columbia River tributaries was January 1999.

WRD 7 – Coordinated Enforcement Plan

Tasks completed.

- Enter into an enforcement plan with OSP that formally identifies the scope of services that OSP officers will provide to WRD field programs. (October 1997)

Tasks ongoing.

- In cooperation with OSP region managers, annually review the effectiveness of work efforts during the past year and establish enforcement priorities for the upcoming year. (ongoing)
- Conduct regular meetings and training sessions with OSP to improve coordination between agency staffs. (ongoing)

WRD 8 – Increased Distribution and Enforcement

Tasks completed.

- Open branch offices in Newport and Florence to increase water use monitoring and enforcement on coastal streams. (June 1996)
- Add a watermaster position headquartered in Tillamook to increase water use monitoring and enforcement on North Coast streams. (June 1998)

Tasks underway, with projected completion dates.

- Identify resources needed to increase water use monitoring and enforcement in high priority streamflow restoration areas in coastal basins.⁴ (October 1999)

WRD 9 – Installation of Monitoring Stations

Tasks completed.

- Identify gaging stations needed to adequately monitor flows in high priority areas in coastal basins. (June 1998)
- Develop funding proposals for the installation, operation and maintenance of the gaging stations in coastal basins. (October 1998)

Tasks underway, with projected completion dates.

- Identify gaging stations needed to adequately monitor flows in high priority areas on Columbia River tributaries with anadromous fish.⁵ (June 2000)

WRD 10 – Inventory Water Diversions

Tasks completed.

- Digitize water right maps identifying the location of all permitted water diversions in the South Coast and Klamath Basins and update computerized information to reflect recent changes in the rights. (January 1999)

⁴ The original completion date was June 1998. WRD will use the streamflow restoration plans developed under WRD 6 to better assess resource needs.

⁵ WRD has requested funding in the 1999-2001 budget for gaging stations statewide. The original completion date for identification of additional gaging needs on Columbia River tributaries was April 1999. WRD will use the streamflow restoration plans developed under WRD 6 to better assess gaging needs.

- Digitize water right maps identifying the location of all permitted water diversions in the Rogue Basin and update computerized information to reflect recent changes in the rights. (April 1999)

Tasks underway, with projected completion dates.

- Develop a program to inventory priority areas for streamflow restoration in Columbia River tributaries with anadromous fish and identify funding alternatives to implement the program. (December 1999)
- Update computerized water rights maps in the Willamette Basin to reflect recent changes in the rights. (January 2000)
- Complete work on digitizing and updating water right maps identifying the location of all permitted water diversions in the Hood, John Day, and Umatilla Basins.⁶ (July 2000)

Tasks ongoing.

- Survey streams in coastal streams which are high priorities for flow restoration to identify water uses and points of diversion. (ongoing)
- Maintain computerized water right maps as current in each basin in which digitization and updating have been completed. (ongoing)

WRD 11 – Dissemination of Streamflow Data

Tasks completed.

- In consultation with ODFW, develop a plan to improve the dissemination of streamflow data to the public and other agencies. (October 1997)
- Provide access to the permanent streamflow records in WRD's hydrographic database via the Internet. (February 1998)
- Provide access to near real-time streamflow data currently available via the Internet. (September 1998)

Tasks underway, with projected completion dates.

- Provide access to near real-time streamflow data from any WRD stations with telemetry. (October 1999)

WRD 12 – Improving Efficiency and Prohibiting Waste

Tasks completed.

- Adopt a strategy for developing regional efficiency goals and regulating against waste. (May 1998)
- Develop guidelines for use by watermasters on how to identify wasteful water use practices and to initiate enforcement against waste. (December 1998)
- Initiate discussions with a watershed council on a regional efficiency project in Western Oregon.⁷ (February 1999)

⁶ Work on digitizing water rights was delayed because of budget reductions. WRD now anticipates completion of digitizing by July 2001. The original completion date for development of a program to inventory diversion in Columbia River tributaries was June 1999. WRD will use the streamflow restoration plans developed under WRD 6 to aid in development of the inventory program.

Tasks underway, with projected completion dates.

- Initiate discussions with a watershed council on a regional efficiency project in Eastern Oregon. (October 1999)

WRD 13 – Agricultural Water Conservation Program

Tasks completed.

- Determine if preparation of water management and conservation plans by irrigation water users in coastal basins will yield increased streamflows for restoration of key habitat. (April 1998)
- Initiate a cooperative program with irrigation water users in coastal basins where conservation will yield increased streamflows to develop water conservation plans. (April 1998)
- Evaluate and prioritize where preparation of water management and conservation plans by irrigation water users on Columbia River tributaries will yield increased streamflows for restoration of key habitat. (June 1998)
- Initiate work with the three irrigation districts in the Rogue Basin to prepare voluntary water conservation plans, and evaluate the feasibility of conservation measures. (January 1999)

Tasks ongoing.

- Work with the Bureau of Reclamation in identification and implementation of water conservation projects to increase instream flows for salmon in Bear Creek. (ongoing)

WRD 14 – Municipal Water Management Program

Tasks completed.

- Determine which municipalities have water rights in coastal basin core areas. (April 1997)
- Contact municipalities with water rights in coastal basin core areas to explore their willingness to prepare voluntary water management plans. (October 1997)

Tasks ongoing.

- Conduct annual workshops for municipalities to aid in the preparation of water management and conservation plans. (ongoing)

WRD 15 – Instream Transfers and Leases

Tasks ongoing.

- Work with water right holders in high priority areas for streamflow restoration by providing information on, encouraging and assisting with the leasing of existing water rights to instream use. (ongoing)

⁷ The measure and the associated completion dates have been revised based on the recommendations of a consultant retained to assist the Department in assessing how best to accomplish the agency's commitments to address efficiency and waste.

WRD 16 – Water Right Forfeiture

Tasks completed.

- Identify a sample of water rights in core habitat areas as potentially subject to forfeiture for non-use and send letters to the landowners requesting voluntary cancellation. (January 1998)
- Develop a process to identify water rights which are subject to forfeiture for non-use in high priority areas for increasing streamflows and institute cancellation proceedings. (June 1998)

Tasks underway, with projected completion dates.

- Identify coastal basin areas which are high priorities for streamflow restoration in which there are large numbers of unused rights and include in restoration plans efforts to secure cancellation of any forfeited rights. (May 1999)

Tasks ongoing.

- Seek voluntary transfers or leases to instream use when water rights which are nearing the five-year period of non-use are identified. (ongoing)

WRD 17 – Public Outreach and Information

Tasks completed.

- Introduce revised and enhanced on-line water right information and services to the public. (February 1997)
- Produce an educational brochure for livestock management in riparian areas and use of off-stream water supplies. (February 1997)
- Become a member of Oregon Trout's "Salmon Watch" program. (June 1997)
- Explore partnering with the Bureau of Reclamation in the "Agricultural Water Conservationist of the Year" award for irrigation districts. (April 1998)
- Develop education materials for the public on instream leasing, allocation of conserved water, and the agricultural and municipal conservation programs. (April 1998)

Tasks ongoing.

- Assist in developing a compendium of salmon-based educational providers and programs. (ongoing)
- Work cooperatively with the League of Oregon Cities and the Oregon Water Resources Congress to develop programs recognizing cities and irrigators excelling in water conservation activities. (ongoing)

WRD 18 – Ground Water Studies

Tasks completed.

- Complete a ground water monitoring plan and scope of work according to salmon recovery priorities in the Rogue and South Coast Basins. (February 1999)

Tasks underway, with projected completion dates.

- Complete a study of the ground water resources of the Deschutes Basin cooperatively with the US Geological Survey to provide information on the impacts of ground water use on flows in the Deschutes River.⁸ (November 1999)
- Complete a study of the ground water resources of the Willamette Valley cooperatively with the US Geological Survey to provide information on the impacts of ground water use on flows in the Willamette River. (December 2000)

Tasks ongoing.

- Review new applications for ground water rights for their effect on surface water. (ongoing)
- Maintain existing ground water monitoring sites and add new monitoring sites as funds become available. (ongoing)

WRD 19 – Off-Stream Storage

Tasks completed.

- Reorganize the Resource Management Division to provide increased assistance to field staff and watershed councils. (June 1997)

Tasks ongoing.

- Work closely with watershed councils on streamflow restoration alternatives including the development of off-stream storage, voluntary efficiency goals, water measurement and reporting, and water right transfers and leases. (ongoing).

WRD 20 – Serious Water Management Problem Areas

Tasks completed.

- Complete an evaluation of whether Serious Water Management Problems Areas (SWMPA) designations would provide an effective method for increasing streamflows in high priority areas. (March 1998)

Tasks ongoing.

- Provide recommendations to the Water Resources Commission on adoption of rules based on any site specific proposals for the development of SWMPAs which are submitted to WRD. (ongoing)

WRD 21 – Peak Flow Protection

Tasks completed.

- Develop a policy with ODFW on implementation of WRD Division 310 and 33 rules to ensure that peak flows are available for fish needs. (September 1997)

Tasks underway, with projected completion dates.

- In consultation with the Peak Flow Working Group, complete a Peak Flow discussion paper to provide information and ideas on how to protect peak flows for fish populations and habitat in a systematic, scientifically based manner as permit decisions are made. (June 1999)

⁸ The original completion date was December 1998.

Tasks ongoing.

- Review applications for reservoir permits consistent with peak flow needs. (ongoing)
WRD 22 – Modification or Replacement of Diversion Dams

Tasks completed.

- Through an interagency effort, pursue a pilot project targeting the Illinois River Drainage to resolve fish passage problems associated with diversion or “push-up” dams, as well as other concerns such as erosion, stream channel changes, and disruption of spawning and riparian habitat. (June 1996)
- Complete and submit to NMFS, an “Interagency Action Plan—Southwest Region Push-Up Dams” report. (March 1997)

Tasks underway, with projected completion dates.

- In cooperation with DSL, OSP, ODFW, ODA, and DEQ, develop a proposed implementation schedule for the priority basins in conjunction with local watershed councils. (September 1999 or as funding permits)

WRD 23 – Require Fish Passage on Ponds

Tasks completed.

- Issue mitigation orders on ponds filed under House Bills 2153 and 2376 where there was a “detrimental impact to an existing fishery” as substantiated in ODFW comments. (February 1998)

WRD 24 – Protection Against Direct Habitat Loss

Tasks ongoing.

- Review all applications for new storage projects under Divisions 33 and 310. (ongoing)

WRD 25 – Compliance Rate Monitoring

Tasks underway, with projected completion dates.

- Evaluate measures to assess the rate of compliance with seasonal conditions using statistically valid sampling methods. (December 1999)

Tasks ongoing.

- Monitor the rate of compliance with state water law based on stream surveys. (ongoing)
- Monitor the rate of compliance with state water law based on regulation and distribution. (ongoing)

WRD 26 – Reservations

Tasks underway, with projected completion dates.

- Complete basin program revisions for reservations for multi-purpose storage in the John Day and Powder Basins.⁹ (November 1999)

⁹ The original completion date was June 1999.

WRD 27 – Water Development Loan Fund

Tasks completed.

- Complete two brochures to increase public awareness of the Water Development Loan Program. (November 1997)
- Develop a legislative proposal for introduction during the 1999 session to increase the Water Development Loan Program's utility for fish protection and watershed enhancement projects proposed by private entities. (September 1997)

Tasks underway, with projected completion dates.

- In cooperation with the Oregon Water Resources Congress and GWEB staff, evaluate the feasibility of packaging a large number of applications from districts each of which is required to install fish screening devices at diversion points. (June 2000)

Tasks ongoing.

- Continue outreach efforts to promote the Water Development Loan Program as a funding source for fish protection and watershed enhancement projects. (ongoing)

WRD 28 – Identify Need for Geomorphic Evaluations

Tasks ongoing.

- Identify which hydroelectric facilities need a geomorphic analysis as part of the environmental evaluation in preparation for state reauthorization of these facilities. (ongoing)

WRD 29 – Amend Current Licenses to Improve Fish Passage

Tasks ongoing.

- With input from ODFW and DEQ, identify projects where changes in fish passage and minimum flows would benefit steelhead runs and work to establish a voluntary program wherein project owners may amend the terms and conditions in their state licenses. (ongoing)

WRD 30 – Expedite Handling of Application for Change in Water Releases

Tasks underway, with projected completion dates.

- Work with PacifiCorp and ODFW in the development and review of a proposed new application for increased winter diversion and decreased summer diversion amounts from the Hood River at Powerdale Dam. (after receipt of an application)

WRD 31 – Coordinate Federal Willamette Basin Project Releases

Tasks ongoing.

- Annually coordinate state agency input regarding development of operation plans for Willamette Basin Projects to benefit of fish and wildlife. (ongoing)

WRD 32 – Coordinate Federal Umatilla Basin Project Releases

Tasks ongoing.

- Annually coordinate state agency input regarding development of operation plans for McKay and Willow Creek Reservoirs to benefit of fish and wildlife. (ongoing)
- Manage and protect streamflows in the Umatilla River under the Umatilla Basin exchange project. (ongoing)

WRD 33 – Coordinate Federal Rogue Basin Project Releases

Tasks ongoing.

- Annually coordinate state agency input regarding development of operation plans for Lost Creek and Applegate Reservoirs. (ongoing)

WRD 34 – Work with GPID to Resolve Fish Passage Problems

Tasks underway, with projected completion dates.

- Cancel the permit for additional water which was issued to GPID because of the failure of the district to exercise due diligence in complying with the conditions of the permit.¹⁰ (July 2000)

WRD 35 – Restoring and Maintaining Streamflows

Tasks ongoing.

- Work cooperatively with the National Marine Fisheries Service to document the amounts of water (streamflow) conserved by WRD measures, over time. (ongoing)
- Work to incorporate amounts of streamflow conserved into the reporting structure on WRD measures by providing periodic quantification of flow restoration, wherever possible. (ongoing)

¹⁰ The original task was to continue to work with GPID to ensure that the district resolved fish passage problems. Under the measure, no certificate would be issued until the district complied with all permit requirements for addressing fish passage.

Water Resources Department Summary Table

Agency Measures	Tasks completed	Tasks underway	Projected completion	Tasks ongoing
WRD 1 - Public Interest Review to Protect Salmonids	1		ongoing	1
WRD 2 - Water Right Transfer Review for Fish Concerns	1	1	July 1999	
WRD 3 - Coordinated Agency Field Meetings			ongoing	1
WRD 4 – Issuance of Instream Water Rights		2	Sept. 1999	
WRD 5 - Water Availability Model	1		ongoing	1
WRD 6 – Identify Unmet Instream Flow Needs	3	2	May 1999	
WRD 7 - Coordinated Enforcement Plan	1		ongoing	2
WRD 8 - Increased Distribution and Enforcement	2	1	Oct. 1999	
WRD 9 – Installation of Monitoring Stations	2	1	June 2000	
WRD 10 – Inventory Water Diversions	2	3	July 2000	2
WRD 11 – Dissemination of Streamflow Data	3	1	Oct. 1999	
WRD 12 – Improving Efficiency and Prohibiting Waste	3	1	Oct. 1999	
WRD 13 – Agricultural Water Conservation Program	4		ongoing	1
WRD 14 – Municipal Water Management Program	2		ongoing	1
WRD 15 – Instream Transfers and Leases			ongoing	1
WRD 16 – Water Right Forfeiture	2	1	Apr. 1999	1
WRD 17 – Public Outreach and Information	5		ongoing	2
WRD 18 – Ground Water Studies	1	2	Dec. 2000	2
WRD 19 – Off-Stream Storage	1		ongoing	1
WRD 20 – Serious Water Management Problem Areas	1		ongoing	1
WRD 21 – Peak Flow Protection	1	1	June 1999	1
WRD 22 – Modification or Replacement of Diversion Dams	2	1	Sept. 1999	
WRD 23 – Require Fish Passage on Ponds	1		Feb. 1998	
WRD 24 – Protection Against Direct Habitat Loss			ongoing	1
WRD 25 – Compliance Rate Monitoring		1	Dec. 1999	2
WRD 26 – Reservations		1	Nov. 1999	
WRD 27 – Water Development Loan Fund	2	1	June 2000	1
WRD 28 – Identify Need for Geomorphic Evaluations			ongoing	1
WRD 29 – Amend Current Licenses to Improve Fish Passage			ongoing	1
WRD 30 – Expedite Handling of Application for Change in Water Releases		1	after receipt of an application	
WRD 31 – Coordinate Federal Willamette Basin Project Releases			ongoing	1
WRD 32 – Coordinate Federal Umatilla Basin Project Releases			ongoing	2

WRD 33 – Coordinate Federal Rogue Basin Project Releases			ongoing	1
WRD 34 – Work with GPID to Resolve Fish Passage Problems		1	July 2000	
WRD 35 – Restoring and Maintaining Streamflows			ongoing	2

DEPARTMENT OF ENVIRONMENTAL QUALITY

The Department of Environmental Quality has 33 Measures in the Oregon Plan for Salmon and Watersheds, including the Steelhead Supplement of 1998. DEQ's Oregon plan work is focused on the Coastal, Rogue, Umpqua, Willamette, Hood River (lower Columbia ESU) and Grande Ronde basins. While many tasks have been completed, many more are underway. Some tasks have been delayed. Primarily this has been due either to the necessary funding not yet being available. In some cases, technical issues need to be resolved or the process is simply taking longer than originally estimated. Some tasks need to be revised or updated, as will occur over the next several months in accordance with the Governor's Executive Order on implementing the Oregon Plan.

DEQ1S (*DEQ2 & DEQ11*)- Implementation of Recently Revised Water Quality Standards for Temperature, Dissolved Oxygen, and Sedimentation

Tasks Completed

- Guidance for developing nonpoint source TMDLs or water quality management plans. (The development of temperature management plan guidance was incorporated into this task).
- Guidance for point sources on the water quality standard for dissolved oxygen.
- Guidance for incorporating the temperature standard into point source permits.
- The formation of staff teams for restoring and protecting water quality.
- Develop a standardized method for measuring IGDO and apply the methods in screening surveys in the N Coast Basin.
- Revised NPDES permits for the City of Union and City of La Grande domestic water facilities with Mutual Agreement and Orders for plant upgrades to eventually meet the TMDLs.
- Identification of point sources of domestic waste water pollution in the Umpqua basin that are or may be contributing to a depression in dissolved oxygen.
- Develop draft dissolved oxygen TMDL for the South Umpqua River.
- Market the State Revolving Fund program to eligible communities and facilities in the Umpqua basin.

Tasks Underway and On Schedule

- Develop TMDLs for the Hood River basin.
- 401 certification for the Powerdale hydroelectric project in the Hood River basin.
- Develop TMDLs for bacteria, nitrate, temperature and sedimentation, and modify permits in the Umatilla basin.
- Develop TMDLs for appropriate pollutants in the Grande Ronde basin, including temperature, dissolved oxygen, phosphorus and pH.
- Develop dissolved oxygen TMDL for Calapooya Creek in the Umpqua basin, according to new TMDL prioritization and schedule.
- Reduce sediment entering waters of the Willamette basin from agricultural and forestry areas by providing technical assistance and education to agricultural and

forestry operators and through the development of ODA and ODF water quality management plans and TMDLs.

- Develop water quality based NPDES permits to achieve water quality standards in the North Coast watersheds. These will be done following the development of TMDLs for the Tillamook, Nestucca and Nehalem subbasins in 1999, 2000 and 2001, respectively.
- Implement current TMDLs in the Pudding River, Coast Fork, Tualatin and Rickreall Creek - sources in compliance with TMDL limits.
- Implement current TMDLs in Bear Creek – point sources (City of Ashland) in compliance with TMDL limits.

Tasks Underway but Behind Original Schedule

- Natural conditions guidance was drafted but is delayed or discontinued pending development of a national policy by EPA.
- Implementation of IGDO guidance for point source permitting and in coastal stream nonpoint source related test cases.
- Develop final dissolved oxygen TMDL for the South Umpqua River.
- Develop water quality management plans for stream temperature in the Umpqua basin.
- Develop Water Quality Management Plans for priority Coastal and Willamette subbasins for temperature, inter-gravel dissolved oxygen and water column dissolved oxygen.
- Develop water quality based NPDES permits to achieve water quality standards for temperature, chlorine and dissolved oxygen in the Willamette basin. This will be done following the development of TMDLs. Positions requested but not yet provided.
- Incorporate temperature and water column dissolved oxygen standards into NPDES permits in temperature limited coastal basins.
- Implement current TMDLs in Coquille – point sources (cities of Coquille and Myrtle Point) in compliance with TMDL limits

Tasks that are Underway and are Ongoing Activities

- Assessing forestry, agricultural and federal plans against DEQ's nonpoint source TMDL guidance to determine which plans meet the criteria for becoming a TMDL.
- Revise NPDES permits for domestic and industrial waste facilities and other point sources.
- Information sharing between point and nonpoint source activities to integrate efforts in the DEQ regional offices.
- Using the nonpoint source Water Quality Management Plan guidance, assess forestry, agricultural and federal plans to determine whether they meet the criteria for TMDLs.
- Develop surveys for measuring IGDO, sediment and other water quality parameters for the north Coast.
- Reduce the sediment entering the basin from construction sites and urban areas with NPDES permits. Some, but not all of the deliverables are completed. This is an ongoing activity.

Tasks Not Yet Begun

- Appendix to nonpoint source TMDL guidance for dissolved oxygen.
- Revise NPDES permits for domestic waste facilities on the S Umpqua River. This is on hold pending development of final TMDLs.
- Incorporate IGDO into NPDES permits in coastal basins that are water quality limited for dissolved oxygen.

DEQ2S (*DEQ3*)- Development of 303(D) List and Identification of Priorities for TMDL Development

Tasks Completed

- Maintain and update the 303d list of waters that do not meet state water quality standards (1998 list completed).
- Develop a process for prioritizing and targeting waterbodies on the 303d list.
- Prioritize the 1998 303d list and target water bodies for TMDL development.

Tasks that are Underway and are Ongoing Activities

- Maintain and update the 303d list of waters that do not meet state water quality standards.
- Prioritize the 303d list and target water bodies for TMDL development.

DEQ3S (*DEQ4* & *DEQ12*)- Watershed Council Support

Tasks Completed

- Develop and implement a volunteer monitoring program in the N Coast. Implementation will be ongoing.
- Staff are actively working with the Hood Basin local watershed councils and have assembled a local technical advisory committee to assist with water quality monitoring and TMDL development in the basin. It was decided that a formal MOU with the watershed councils was not necessary.

Tasks Underway and On Schedule

- Draft plans with the Rogue and South Coast basins watershed councils to reduce summer instream temperatures. Monitoring and assessments are in progress, portions are completed. DEQ assistance and funding are being provided.
- DEQ staff are working with watershed councils in the Rogue and S. Coast basins to maximize the effectiveness of the collective efforts in the basins by assisting with implementation, monitoring and assessment of projects.
- DEQ staff are working with the Umpqua Basin Watershed Council by assisting with implementation, monitoring, and assessment of projects. Also, DEQ staff provide technical assistance through the Technical Advisory Committee.

Tasks Underway and Ongoing

- Staff have and continue to assist Watershed Councils with the development of technically sound implementation proposals and projects and with obtaining funding from diverse sources, including 319 funds.
- Implement 319 funded projects.
- Participate in Watershed Council activities and technical advisory teams.
- Provide technical assistance to councils on the water quality factors affecting beneficial uses and the identification of point and nonpoint sources of pollution.
- Develop monitoring plans and monitor the effectiveness of Watershed Council actions and the effectiveness of water quality Management Plan measures.

Tasks Underway but Behind Original Schedule

- Staff are supporting Watershed Council efforts to prepare water quality management plans that will reduce summer instream temperatures.
- Development of a manual for watershed councils in the Rogue and S. Coast to use for writing nonpoint source TMDLs. (Note: DEQ's general nonpoint source guidance for nonpoint source TMDLs under Measure 1 is completed.)

DEQ4S (*DEQ5 & DEQ13*)- Enhanced 401 Certification for Fill and Removal Operations

Tasks Completed

- Develop a database of projects to track cumulative impacts of projects in a subbasin.
- Ensure that salmonid protection is incorporated into the state's review of the US Army Corps of Engineer's nationwide permit review.

Tasks Underway and Ongoing

- Develop water quality certifications reflecting conditions for the protection of coho and steelhead salmon.
- Field verification that water quality certifications are being complied with. Project site visits are occurring, but not regularly.
- Report those project sites not complying with 401 conditions to the US Army Corps of Engineers and/or DSL as appropriate.
- Coordinate with the Environmental Cleanup Program to assure controls needed to contain hazardous waste are included in 401 certifications for dredging or disposal of waste in the Lower Columbia and Lower Willamette basins.
- Develop 401 certification for channel dredging operations and other projects in the Lower Columbia and Lower Willamette basins.

DEQ5S (*DEQ7*)- Revise Water Quality Standard for Sediment

Tasks Underway but Behind Original Schedule

- A sediment TMDL issue paper was completed January, 1999. The remainder of the sediment standard issue paper is delayed due to the delay of the standards review cycle.

Tasks Not Yet Begun

- All the tasks under this measure are delayed due to the delay of the triennial water quality standards review. We expect to begin the next standards review cycle during the summer of 1999.

DEQ6S (*DEQ8*)- Implement Antidegradation Water Quality Standard

Tasks Completed

- DEQ has provided financial assistance to ODA to develop Agriculture Water Quality Management Plans and we will provide additional funding in the future as well.

Tasks Underway and Ongoing

- Provide technical assistance to ODF for monitoring, evaluation and development of forest practices rules to protect water quality and beneficial uses and to implement antidegradation policies.
- Provide technical assistance to ODF in the development of water quality management plans. DEQ and ODF signed a Memorandum of Agreement that outlines how TMDLs will be completed for state and private forest land and provides a schedule for the evaluation of forest practices on water quality and DEQ staff are currently working with ODF staff to complete some TMDLs for temperature.
- Provide technical assistance to the USFS and BLM in monitoring, evaluation and implementation of measures to protect water quality and beneficial uses and implement antidegradation provisions.
- Federal documents have been and will continue to be reviewed for adequacy as water quality management plans. A watershed analyses alone is typically an assessment of the basin rather than a management plan and, therefore, is not sufficient by itself to be a water quality management plan.

Tasks Underway but Behind Original Schedule

- Technical assistance to ODA on implementation of antidegradation in agricultural water quality management plans.

Tasks Not Yet Begun

- DEQ review of Agricultural Water Quality Management Plans to ensure antidegradation standard is implemented. No plans were submitted for DEQ review.

DEQ7S (*DEQ9*)- Apply for Instream Water Rights on Streams with TMDLs

Tasks Underway but Behind Original Schedule

- Coordinate with the Water Resources Department to implement a system to ensure that 303d listed waters are adequately addressed in water right allocations. The system has been developed but is currently being only partially implemented.

Tasks that are Ongoing

- Application for instream water rights in conjunction with TMDL development. DEQ has applied for instream water rights in the past and will again in the future, although no applications were made in 1998.

Tasks Not Yet Begun

- Apply for instream water rights for the South Umpqua River in conjunction with TMDL development. The TMDL is not yet completed so the water right application has not yet been made.
- Develop a guidance document outlining a methodology for determining the instream flows necessary to protect water quality where nonpoint source TMDLs are established.

DEQ8S (*DEQ10*)-Review and Revise Water Quality Standards during Triennial Review Process

Tasks Not Yet Begun

- The Triennial water quality standards review process was delayed and will begin this year.

DEQ9S (*DEQ14*)- Implement Water Quality Standards for Biological Criteria, Nutrients, Toxics and pH

Tasks Completed

- Develop biological monitoring procedures and provide training to local volunteer monitoring programs.
- Form DEQ basin teams for the Mid-Coast, South Coast, Umpqua, Rogue, Lower Columbia and Willamette basins.
- Waterbody assessments for pH/eutrophication for the Umatilla, S. Umpqua and Grande Ronde subbasins.

Tasks Underway and On Schedule

- Waterbody assessment for toxics, pH, eutrophication and biological condition in the N Coast basins.
- Develop TMDLs for the North Coast, submit to EPA for approval, and incorporate into SB1010 plans, citizen watershed plans and other applicable efforts.
- Develop basin assessments and action plans for biological criteria pH and toxics in the Mid-Coast, South Coast, Umpqua and Rogue basins.
- Incorporate pH and toxics standards into NPDES permits in the Mid-Coast, South Coast, Umpqua and Rogue basins.

- Complete TMDLs for appropriate pollutants in the Hood and Upper Grande Ronde Basins.
- Evaluate potential pH concerns in the Wallowa Subbasin.
- Develop management plans to implement the TMDLs in the Umatilla basin using an advisory committee.

Tasks Underway and Ongoing

- The implementation of water quality standards through permit writing and TMDL development is an ongoing process.

Tasks Underway but Behind Original Schedule

- Develop TMDLs and identify management objectives for addressing pH concerns in the Umatilla Basin.

Tasks Not Yet Begun

- Develop guidance related to biological criteria, pH and toxics.
- Incorporate biological criteria, pH and toxics standards into NPDES permits in coastal basins. Completion dates in 2004 and 2007.
- Finalize nonpoint source Water Quality Management Plans for biological criteria, pH and toxics for affected Coastal, Willamette and lower Columbia basins.

DEQ10S - Develop Water Quality Standards for Wetlands

Tasks Not Yet Begun

- Work on this measure has not yet begun. This is a Phase 2 measure that remains unfunded. In addition, the triennial water quality standards review process has not yet been initiated.

DEQ11S - Revise Water Quality Standards for Nutrients

Tasks Not Yet Begun

- Work on this measure has not yet begun. This is a Phase 2 measure that remains unfunded. In addition, the triennial water quality standards review process has not yet been initiated.

DEQ12S - Designation of Salmon Critical Habitat as Outstanding Resource Waters

Tasks Underway but Behind Original Schedule

- Explore policy options related to Outstanding Resource Waters to decide which would provide the best protection for critical habitat areas.
- Implement the ORW nomination and designation process as described in the “Outstanding Resource Waters Implementation Plan.”

DEQ13S - Implementation of SDWA Source Water Protection Program

Tasks Underway and Ongoing

- Provide resources to assist local communities in their efforts to foster more community citizen involvement.

Tasks Underway but Behind Original Schedule

- Determine surface water source areas.
- Conduct inventory of potential contaminants.
- Provide technical assistance to communities who are voluntarily developing or implementing drinking water protection plans in their area.

DEQ14S - Management of Point Source Discharges through NPDES Permits

Tasks Completed

- In Coos, Curry, Douglas, Josephine and Jackson counties, inspect 20% of minor NPDES permits and 100% of major permits each calendar year. After 1998, this will continue as an ongoing activity.

Tasks Underway and On Schedule

- In the Grande Ronde basin, upon expiration of existing NPDES permits or during review of new proposed NPDES permits, DEQ will evaluate the facility discharge for potential impact on steelhead habitat and structure the permits to eliminate that potential.
- In the Hood River basin, renew or modify NPDES permits to incorporate waste load allocations.

Tasks Underway and Ongoing

- In Coos, Curry, Douglas, Josephine and Jackson counties, issue new NPDES permits within 180 days of receipt of complete application and issue permit renewals within 120 days of receipt of complete application. These timelines are not being met in all cases, the position to assist with this work was not provided.
- In the Hood River basin, ensure that new permits are issued consistent with DEQ's antidegradation standard.

Tasks Underway but Behind Original Schedule

- Reduce NPDES permit renewal backlog in the Rogue, S Coast, Coos, Coquille and Umpqua basins. Position not provided.

DEQ15S - Management of Storm Water Discharges through NPDES Permits

Tasks Underway and Ongoing

- Issue Phase 1 storm water permits within 90 days of application for new sources and 60 days for renewals. Stormwater permits for industrial sources and construction are processed as needed.

- Complete desk audit of 50% of Phase 1 storm water permit annual reports each calendar year.
- Review storm water permit benchmark exceedences and storm water pollution control plan revisions for the Grande Ronde and Umatilla basins.

Tasks Not Yet Begun

- Implement Phase 2 storm water program within 6 months of delegation to Oregon. Phase 2 delegation has not yet occurred.

DEQ16S - Revise SRF Loan Criteria to Help Protect Salmon

Tasks Underway but Behind Original Schedule

- Revise SRF loan criteria to help protect salmon

Tasks Not Yet Begun

- Revise State Revolving Fund rules (OAR 340-54) to allow funding of nonpoint source projects undertaken and owned by either public or private entities. DEQ currently lacks the authority to fund projects undertaken by private entities.

DEQ17S - Implement On-Site Program to Control Nutrient Loads to Surface Waters

Tasks Completed

- Work with other agencies to identify cost-effective means to deal with the domestic wastewater treatment needs of small, rural communities. Plan and carry out a Rural Communities Wastewater Options Workshop.
- Participate in Community Solutions Team meetings, provide input to a revision of Goal 11 and coordinate with DLCD to address cumulative effects from increased density.

Tasks Underway and Ongoing

- Work with regional staff to eliminate on-site sources of pollution to surface water, groundwater and the land from failing on-site systems in identified and potential health hazard areas.

Tasks Underway but Behind Original Schedule

- Review the need to require inspection of on-site systems prior to the sale of a home in steelhead ESUs. Develop a rule proposal to require inspections of on-site systems serving homes in the Coastal Zone whenever a home is sold.
- Conduct a feasibility and performance test of de-nitrification techniques available for use with on-site systems. Report on the relative success and cost effectiveness of various denitrification techniques available for on-site systems.

DEQ18S - Implement Groundwater Protection Act to Prevent Adverse Impacts to Salmonid-Bearing Watersheds

Tasks Underway and On Schedule

- In Coos, Curry, Douglas, Josephine and Jackson Counties, review existing large on-site systems operating under current WPCF permits and list the systems needing preliminary groundwater characterization.

Tasks Underway but Behind Original Schedule

- In Coos, Curry, Douglas, Josephine and Jackson Counties, where needed, negotiate a time-certain schedule with existing large on-site systems operating under current WPCF permits identified in Task 1 to plan, conduct and complete a preliminary groundwater characterization. May not be completed by 12/31/00.
- Review existing geologic and hydrogeologic information for surface water bodies of interest to determine areas of concern where groundwater is discharging to surface water.
- Identify nonpoint sources, on-site system densities, and land use activities of concern in groundwater discharge areas.
- Review GWMA action plans to determine if the plans will be effective in minimizing impacts to surface water from groundwater discharge. Work with GWMA Advisory Committee to revise plans where needed.
- Identify point sources discharging to groundwater in the areas of concern for groundwater discharge to surface water. Determine if the identified point sources have adequate groundwater quality protection programs and/or monitoring.

Tasks Not Yet Begun

- For facilities not having an adequate groundwater quality protection program, work with the facility to develop a groundwater quality protection program and monitoring, as needed. Revise permits and compliance schedules to develop hydrogeologic characterizations and groundwater monitoring plans.
- For facilities having a groundwater monitoring program review the data to determine impacts to groundwater and contaminant loading to surface water. Modify permits as needed.

DEQ19S - Water Quality Monitoring and Assessment

Tasks Completed

- Select random monitoring and reference sites within the Coastal ESU and map.
- Analyze field data and produce summary report on stream conditions for the Coast ESU.

Tasks Underway and Ongoing

- Provide technical assistance to watershed councils on monitoring plans and field work.

- Implement field monitoring activities. (Except in the Snake River ESU, which is unfunded.)

Tasks Underway but Behind Original Schedule

- Select random monitoring sites and reference within the Lower Columbia and Upper Willamette ESUs and map.
- Analyze field data and produce summary report on stream conditions for the Lower Columbia and Upper Willamette ESUs.

Tasks Not Yet Begun

- Select random monitoring sites and reference sites within the Snake River ESU and map. Unfunded.
- Analyze field data and produce summary report on stream conditions for the Snake River ESU. Unfunded.

DEQ20S (*DEQ1*)- Coastal Nonpoint Pollution Control Program

Tasks Underway but Behind Original Schedule

- Construction site erosion control program. (Advisory committee report and rule language recommendation to the Environmental Quality Commission.)
- Road bridge construction, maintenance and operation program for local governments.

Tasks Not Yet Begun

- Develop monitoring program and submit to NOAA and EPA.

DEQ21S (*DEQ6*)- Tillamook Bay National Estuary Program

Tasks Completed

- Historical water quality background report for problem assessment.
- Technical guidance to the NEP on monitoring protocols and model development.
- Kilchis Watershed Assessment.

Tasks Underway but Behind Original Schedule

- Serve on management and policy and technical advisory committees developing the Coordinated Conservation Management Plan (CCMP) and a monitoring strategy. The CCMP is near completion.
- Develop TMDLs. A problem assessment is drafted for temperature, and is under development for bacteria.

DEQ22S - Coastal Nonpoint Pollution Control Program in Columbia River Estuary

Tasks Completed

- Determine the appropriate 6217 management area boundary in the Columbia Basin.

DEQ23S - Lower Columbia River Estuary Program

Tasks Underway and On Schedule

- Provide technical assistance in the development of the management plan for the lower Columbia River.

Tasks Underway and Ongoing

- Provide management support to the LCREP.

DEQ24S - Implementation of Portland CSO Consent Order

Tasks Completed

- Renewal of Columbia Boulevard Wastewater Treatment plant NPDES permit which incorporates Columbia Slough CSO control facilities.

Tasks Underway and Ongoing

- Coordination and monitoring of enforcement order compliance.
- Review of facilities plans and engineering plans of proposed CSO control facilities. This is ongoing but milestones have been met.
- Periodic modification and renewal of NPDES permits to incorporate operational and treatment requirements of CSO control facilities. Requirements for the Willamette River CSO control facilities will be incorporated into the permit during the next renewal.
- Evaluation of treated and untreated CSO discharges to ensure compliance with water quality standards. Columbia Slough TMDLs are completed and incorporate CSO discharges. Data collection and analysis is underway.
- Permit compliance inspections and discharge data monitoring.

DEQ25S - Implementation of Three Basin Rule in Clackamas, North Santiam and McKenzie River Basins

Tasks are included under measures DEQ1S, DEQ9S and DEQ14S.

DEQ26S - Development of TMDLs for Temperature and TDG on Lower Columbia and Lower Snake Rivers

Tasks Underway and On Schedule

- Participate in the development of temperature and total dissolved gas TMDLs.

Tasks Not Yet Begun

- Track implementation of the TMDLs to insure timeliness and evaluate effectiveness.

DEQ27S - Willamette River Basin Project

Tasks Completed

- Create an ongoing structure such as a Basin Council that would develop and implement the Basin Strategy Plan.
- Draft Health of the River Report Card.

Tasks Underway but Behind Original Schedule

- Develop a joint State and Federal Agencies' Willamette Initiative Budget Proposal for the next budget cycle. This is underway by the Willamette Restoration Initiative.
- Develop a Basin Strategy Plan, develop Watershed Action Plans with the 21 councils, and develop and implement a DEQ Watershed Approach Plan for the basin.
- Undertake studies to identify problems, pollution sources and require actions to control or eliminate sources to restore the health of the Willamette River basin.

Tasks Not Yet Begun

- Develop and implement a multi-agency watershed health monitoring and data management plan.
- Provide public outreach, education and technical assistance to agencies, watershed councils and land owners for the basin.
- Organize a DEQ, state and federal agencies Willamette River Basin Action/Cleanup Task Force to clean-up point and non-point sources of pollution.

DEQ28S - Gas Abatement Plan for Hydropower Projects on Mainstem Columbia River

Tasks Underway and On Schedule

- Complete a dissolved gas abatement study: Investigations of Gas Abatement Alternatives. Primarily a task of the US Army Corps of Engineers.

Tasks Not Yet Begun

- Implement structural modifications to dams to reduce TDG levels. Primarily a task of the US Army Corps of Engineers.

DEQ29S - Section 401 Review of Powerdale Hydropower Project on Hood River

Tasks Underway and On Schedule

- Review the application for 401 certification and determine whether to certify as proposed, certify with conditions or deny the application. This task is underway but the applicant has withdrawn the application to allow more time to coordinate conditions.

DEQ30S - Section 401 Review of Hydropower Projects on Snake River

Tasks Not Yet Begun

- No activity has begun on these projects because the fees to finance the review activity have not been received.

DEQ31S - 401 Certification of Grazing leases on Federal Lands

This Measure is discontinued due to a decision of the Ninth Circuit Court of Appeals.

DEQ32S - Evaluate and Require Mitigation for the Impacts of Dams and Hydroelectric Projects on Water Quality During Re-licensing or Reauthorization

Tasks Completed

- Develop proposed budgets for projects that are within 5 ½ years of re-licensing or reauthorization and hire staff to participate in the re-licensing or reauthorization process. This is completed for some projects, but will be an ongoing task as additional projects come up for re-licensing.

Tasks Underway and Ongoing

- Participate as a member of appropriate interagency review teams by commenting on study design, data analyses and proposed mitigation.

Tasks Not Yet Begun

- Monitor implementation of mitigation activities that appear in the new license or water right. Once new licenses or water rights are issued this will become an ongoing activity.

DEQ33S - Evaluate and Require Mitigation for the Impacts of Dams and Hydroelectric Projects on Water Quality During Development of TMDLs

Tasks Completed

- Inventory hydroelectric facilities in the Rogue, Umpqua and S Coast basins.
- GIS data layer for the Rogue, Umpqua and S Coast basins.

Tasks Underway and Ongoing

- Share water quality data between 401 certification and TMDL staff. Include load allocations for hydroelectric projects in TMDLs where appropriate.
- Operational Impact Document Review in the Rogue, Umpqua and S Coast basins. Provide comments to headquarters staff.

Tasks Underway but Behind Original Schedule

- Inspections in the Rogue, Umpqua and S Coast basins. Headquarters developed matrices for evaluation of small projects. This will be an ongoing activity.

Tasks Not Yet Begun

- TMDL load allocations for hydroelectric projects in the Rogue, Umpqua and S Coast basins where appropriate and scientifically supported. Will be an ongoing activity.
- TMDLs for all dams and hydroelectric projects within DEQ's Eastern Region, providing additional resources are obtained. Not funded.

DIVISION OF STATE LANDS

The Division of State Lands submitted a total of 39 measures in support of the Oregon Plan for Salmon and Watersheds, including four measures to be carried out by the South Slough National Estuarine Research Reserve and two measures from the Oregon Natural Heritage Program. As discussed below, many of these tasks are complete; most of the remainder are on schedule toward completion.

Removal-Fill Program Measures:

DSL1: Develop standardized permit conditions reflecting Best Management Practices for removal-fill activities

Complete tasks:

- Best Management Practices (BMPs) for commercial gravel removal in the Umpqua Basin.

Tasks underway but the schedule has been extended:

- Commercial gravel removal BMPs for other basins statewide and for other removal-fill activities: All BMPs will be developed by DSL with the assistance of an agency and stakeholder advisory group. Work is now scheduled to begin in Summer 1999 following adoption of revisions to essential salmon habitat administrative rules (DSL3, DSL31). This task is behind schedule due to revisions in the scope (major expansion due to state sensitive species listing for steelhead) and schedules for related tasks.

DSL2: Limit commercial gravel removal from individual bars to annual recruitment

Complete tasks:

- Revise all coastal basin gravel removal permits.
- Revise all gravel removal permits in other basins.

Tasks underway and on schedule:

- Review whether limiting removal to annual recruitment provides adequate protection for fluvial geomorphology and other aquatic resources. Assigned to the Independent Multidisciplinary Science Team.

DSL3: Revise administrative rules on essential salmonid habitat

Complete tasks:

- Final administrative rules adopted February 1999.
- Revised maps of essential habitat adopted February 1999 (see also DSL31).

DSL4: Strengthen interagency coordination in removal-fill permitting

Tasks that are ongoing and will continue indefinitely:

- Improved interagency coordination at the field level through discussions with Oregon Department of Fish and Wildlife and Department of Environmental Quality and through development of Memoranda of Agreement with those agencies.
- Coordination among region managers: DSL's Western and Eastern Region Managers participate in the regular region management meetings.

Tasks underway and on schedule:

- DSL is working on a joint state-federal enforcement program with the Army Corps of Engineers as part of the proposed State Program General Permit (see DSL26).

DSL5: Revise the General Authorization for road construction to enhance habitat protection

Complete tasks:

- Initial GA revision was completed in July 1996.

Tasks underway and on schedule:

- Further GA revision will begin after the BMPs (DSL1) and habitat restoration guidelines (Executive Order) are final.

DSL6: Revise the GA for erosion control to enhance habitat protection

Complete tasks:

- Initial GA revision was completed in July 1996.

Tasks underway and on schedule:

- Further GA revision will begin after the BMPs (DSL1) and habitat restoration guidelines (Executive Order) are final.

DSL7: Revise the GA for fish habitat enhancement to improve habitat values

Complete tasks:

- Initial GA revision was completed in July 1996.

Tasks underway and on schedule:

- Further GA revision will begin after the BMPs (DSL1) and habitat restoration guidelines (Executive Order) are final.

DSL8: Facilitate more wetland restoration and enhancement projects

Complete tasks:

- Initial GA revision was completed in July 1996.

Tasks underway and on schedule:

- Further GA revision will begin after the BMPs (DSL1) and habitat restoration guidelines (Executive Order) are final.

DSL9: Develop guidelines for issuing individual permits rather than GAs

Tasks underway but the schedule has slipped:

- Draft guidelines are under internal review. This measure is behind schedule due to DSL staff workload.

DSL10: Conduct monitoring and outreach on recreational and small-scale placer mining in essential habitat

Complete tasks:

- Adopt permanent administrative rules.
- Revise the rules to reflect changes enacted by the 1997 Legislature (SB 343 and HB 2409).

Tasks ongoing that will continue indefinitely:

- Conduct compliance monitoring and outreach: Completed for 1996 and 1997 field seasons, including preparation of formal reports documenting findings and recommendations. Will continue at least through the 1999 operating season.

DSL11: Assist in the replacement of push-up dams that interfere with fish passage

Complete tasks:

- Participate in 1996 Illinois Valley Pilot Project.

Tasks ongoing that will continue indefinitely:

- Participate in the development and implementation of work plans in other basins (see WRD22). DSL staff helped produce a brochure about push-up dams and alternatives.

DSL12: Analyze a payment-in-lieu of mitigation approach for commercial gravel removal with the revenue dedicated to habitat restoration and enhancement

Complete tasks:

- Analysis was completed for 1997-99 biennium.

DSL13: Target compensatory wetlands mitigation to salmon habitat projects

Tasks ongoing and will continue indefinitely:

- Implement riparian zone mitigation projects. Ongoing as opportunities arise; will continue indefinitely (also being implemented through payment to provide mitigation, DSL16).

DSL14: Work with other agencies to clarify jurisdiction over removal of large woody debris

Task underway for which schedule has changed:

- Discuss issues with other affected agencies. Discussions began in 1996 but were complicated by issues related to flood recovery, including FEMA funding and multiple state-federal agency jurisdiction. Now anticipate completion in 1999 through legislative action.

DSL15: Increase field presence in coastal essential salmonid habitat

Tasks underway and on schedule:

- Two temporary staff were hired for 1997 – one to conduct monitoring and outreach with recreational and small-scale placer miners and one to work on removal-fill violations. Both have been continued through June 1999 to work on compliance monitoring and outreach (see DSL30, DSL33). The Division's 1999-01 budget request would convert these to permanent positions focusing on outreach and compliance monitoring.

DSL16: Develop administrative rules for mitigation banking and for payment or protection in lieu of mitigation

Complete tasks:

- Final administrative rules were adopted in February 1997.

Tasks underway that will continue indefinitely:

- Fish-friendly implementation: Funds paid in lieu of compensatory mitigation are deposited in the Wetlands Mitigation Bank Revolving Fund (WMBRF). DSL makes grants from the WMBRF for wetland restoration and enhancement projects, including projects that benefit riparian habitat.

DSL26: Analyze and implement regulatory streamlining options

Tasks underway that will continue indefinitely:

- The Division will continue to analyze and implement streamlining options indefinitely, as new options are identified. Milestones in 1998-99 include implementation of the pilot State Program General Permit in Linn and Douglas counties, streamlining of the General Authorization application process in areas designated essential salmonid habitat, and adoption of a General Authorization for cleaning ditches behind tidegates.

DSL27: Add permanent field staff in coastal basins

Complete tasks:

- A new field staff person was hired in August 1997.

DSL28: Reclassify Field Operations Administrative Staff

Complete tasks:

- Support staff were reclassified in July 1997. This allowed field staff to spend more time on site visits, including outreach and technical assistance.

DSL29: Implement Information Resource Management Plan to enable tracking of cumulative impacts

Tasks underway and on schedule:

- Implementation of the Plan was approved by the 1997 Legislature, with expenditure limitation for implementation provided at the January 1998 Legislative Emergency Board.

DSL30: Redistribute staff workload to increase field presence in Central and Northeastern Oregon

Complete tasks:

- The Division has transferred field responsibility for Jackson and Josephine counties to the Salem office, allowing the Bend office to focus work in the Snake River and Middle Columbia ESUs.

DSL31: Extend essential salmonid habitat designations to include steelhead

Complete tasks:

- Revised essential habitat designations and maps were adopted by the State Land Board in February 1999.

DSL33: Develop and implement a compliance monitoring plan

Complete tasks:

- Initial monitoring plan was completed in November 1997.
- Field testing of the monitoring plan was completed in March 1998.
- In April 1988, the Division fine tuned the monitoring plan based on results of field testing.

Ongoing tasks that will continue indefinitely:

- The Legislative Emergency Board authorized DSL to hire two limited duration field staff and one-half limited duration data entry staff to implement the monitoring plan through July 1, 1999. Funding for continued implementation of the compliance monitoring plan is in our 1999-01 budget request.

Wetlands Program Measures:

DSL17: Promote coordination of wetland inventories with other natural resource planning efforts

Complete tasks:

- In 1997, the Division revised the criteria for awarding grants to include coordination of wetland planning with other efforts.

DSL18: Develop administrative rules on locally significant and outstanding state wetlands

Complete tasks:

- Rulemaking on locally significant wetlands was completed in January 1977.
- Rulemaking on outstanding state wetlands was completed in April 1997.

DSL19: Continue implementation of Oregon's Wetland Conservation Strategy

Tasks underway that will continue indefinitely:

- Implementation of Oregon's Wetland Conservation Strategy began in 1995.

Proprietary Measures:

DSL20: Reduce water pollution from waterway leases

Complete tasks:

- The Division revised its standard waterway lease form to require compliance with onsite disposal and other laws and regulations related to water quality in 1996.

Tasks ongoing and on schedule:

- The revised standard lease form is being implemented statewide as leases come up for renewal.

DSL21: Evaluate the habitat potential of scattered coastal tracts

Tasks underway and on schedule:

- The evaluation of habitat potential and development of appropriate conservation strategies are being conducted as part of the Oregon Department of Forestry's development of a management plan and Habitat Conservation Plan for the forest lands they manage in Western Oregon.

DSL22: Work with ODF to improve fish habitat on the Elliott State Forest

Tasks ongoing that will continue indefinitely:

- The Division and the Oregon Department of Forestry will continue to identify and implement habitat restoration projects on the Elliott State Forest.

DSL32: Evaluate the habitat potential of tracts in Central and Eastern Oregon

Complete tasks:

- In cooperation with grazing lessees and other interested parties, DSL has completed the 34 Rangeland Management Plans (RMP) required for our 44 large leaseholds, and four of the five needed for our large wetland agricultural leases (the remainder of the rangeland and agricultural leases are not subject to the RMP process, either because they are included in Bureau of Land Management Allotment Management Plans or Coordinated Resource Management Plans, or are in a transitional stage due to change in ranch ownership). These large leaseholds include some 10-15 miles of riparian area. There are no riparian areas on the remaining DSL rangeland, which consists of small isolated parcels.

Outreach and Education Measures:

DSL23: Update public education materials on removal-fill projects

Ongoing tasks that will continue indefinitely:

- Update public education tools. In 1998 the Division, in cooperation with the Oregon Department of Fish and Wildlife, Department of Environmental Quality, National Marine Fisheries Service and Army Corps of Engineers, developed a presentation for local public works, road, and planning departments and their engineers and contractors regarding the Removal-Fill Law, Endangered Species Act and land use notifications on wetlands.

DSL24: Develop information packets for watershed councils

Complete tasks:

- The initial standard information packet was completed in August 1997.

Ongoing tasks that will continue indefinitely:

- The Division will update its standard information packet for watershed councils as new outreach materials are developed. The Division also will ensure the information is provided to new watershed councils as they are formed.

DSL25: Help develop removal-fill education materials for contractors

Tasks underway and on schedule:

- Initially satisfied by current efforts on DSL23. The education materials will be refined following development of BMPs (DSL1) and habitat restoration guidelines (Executive Order).

DSL - South Slough National Estuarine Research Reserve

SSNERR1: Restore estuarine habitat in the South Slough estuary

Complete Tasks:

- Hidden Creek restoration: The primary goal of the Hidden Creek project is to reestablish a diverse coastal forest, functional riparian area and viable forested wetlands within a 15-acre parcel of the Hidden Creek watershed sub-basin. This is a demonstration project to illustrate links among land-margin habitats (upland forest, riparian areas, freshwater wetlands, salt marshes, estuary). Construction was completed in Summer 1996; monitoring will continue indefinitely.
- Kunz Marsh restoration: SSNERR removed and/or breached an 80-year old dike along the Winchester Creek arm of South Slough to restore tidal marsh habitat. At Kunz Marsh, long-term research focuses on the most effective way of restoring tidal marsh. The heavily compacted peaty soil was divided into four cells before the dike was removed. Three experimental cells were contoured at different elevations in stairstep fashion, with each about 6 inches higher than its neighbor; the fourth was left at its historically diked level. Construction was completed in August 1996. Long-term research focuses on monitoring changes in geomorphology, water quality, vegetation and wildlife as the site recovers essential habitat characteristics. Nearby natural tidal marshes are used as a reference site.
- Cox Canyon restoration: At Cox Canyon, a culvert and road were removed and historically “straightened” tidal creek channels were returned to their natural meandering configuration to provide habitat for anadromous fish. Construction completed in 1997; monitoring of water quality, channel morphology and wildlife will continue indefinitely.

SSNERR2: Develop partnerships for improved estuarine habitat management

Complete tasks:

- SSNERR developed Memoranda of Understanding and Interagency Agreements with various state and federal agencies and private entities to: (1) reestablish functional salt marsh at a former coastal wetland site used for dredge spoils disposal at the Millicoma Marsh, (2) conserve wetland habitat and restore riparian habitat conditions in cooperation with the Coos Watershed Association, and (3) enhance coastal wetland habitats within 21 acres of Barview Wayside. Those agreements will provide the framework for an integrated coastal wetlands program to improve resource stewardship, conduct onsite research and monitoring of critical habitats, and provide opportunities for public education and interpretation. All agreements were completed in 1997; implementation will continue indefinitely.

SSNERR3: Conduct research on estuarine habitat

Ongoing tasks that will continue indefinitely:

In addition to research on estuarine habitat restoration (SSNERR1 and SSNERR4), ongoing research at SSNERR includes fish use of estuarine areas, especially eelgrass beds, and investigations of physical and biotic links between the estuary and the nearshore ocean (research cruises aboard the NOAA ship *McArthur*).

SSNERR4: Continue to implement the SSNERR Conservation Strategy

Complete tasks:

- Four additional estuarine habitat restoration sites were constructed during Summer 1998. Two are designed to assess tidal channel use by anadromous fish, and two will enhance tidal flushing to create new off-channel refugia. Two additional projects will restore coho habitat in brackish and freshwater areas by removing dikes and culverts and stepping down the streams. Other restoration efforts at SSNERR in 1998 include enhancement of wetlands to provide off-channel refugia, watershed restoration in a stream degraded by logging to provide instream complexity and overwintering habitat, and erosion control through restoration of abandoned logging roads.

Ongoing tasks that will continue indefinitely:

- Provide technical assistance to local non-governmental organizations, including watershed councils, on habitat restoration.
- Research and monitoring: In addition to research on effective means of restoring estuarine habitat and continued monitoring of previously restored areas, SSNERR will continue research on anadromous fish use of estuarine habitats and physical and biotic links between the estuary and the nearshore ocean. Also, SSNERR completed construction of its new research laboratory in 1999. Other research efforts are underway as part of the NOAA/Pacific Northwest Coastal Ecosystem Research Study – PNCERS. New research projects begun in 1998 assess use of tidal channels and eelgrass beds by resident and anadromous fish, and document the basis of the estuarine food web for cutthroat trout. Current proposals (not yet funded) would update habitat information on Oregon's estuaries and assess cumulative impacts on submerged aquatic vegetation in tidal creeks.
- Conservation and acquisition of land within the SSNERR watershed: SSNERR currently is developing plans for habitat conservation and acquisition with a Cooperative Plan for Watershed Conservation. The Plan will include two discrete components: (1) A landscape assessment that will help the SSNERR Management Commission identify key habitats within the South Slough watershed that support SSNERR restoration, research and educational efforts association with salmon population recovery; and (2) A watershed conservation implementation plan that will identify specific opportunities for addressing the recommendations resulting from the landscape assessment and recommend suitable implementation mechanisms, including cooperative agreements, conservation easements, fee-simple purchases, partnerships, multi-party exchanges and other appropriate actions.
- Education and outreach: This is a major element of SSNERR's mission.

DSL - Oregon Natural Heritage Program (ONHP)

ONHP1: Add fisheries information to the Natural Heritage Data Bank

Tasks underway and on schedule:

- Funding for adding fisheries information to the Natural Heritage Databank is in the Division's 1999-01 budget request (Ballot Measure 66 funds).
- Add information to the data bank: Dependent on funding.

ONHP2: Complete the biodiversity data layer

Completed tasks:

- ONHP completed the GIS layer showing the contribution of designated lands to the maintenance of fish, wildlife and other components of biodiversity in Oregon in Spring 1998. Database maintenance will continue indefinitely.

OREGON DEPARTMENT OF FORESTRY

Following is the Oregon Department of Forestry's bulleted report on progress and change in regard to ODF Salmon Plan activities and desired outcomes

Wild Fish

Abundance: **Juvenile and adult wild fish will be at abundance levels sufficient to survive short-term environmental disturbance and long-term environmental variation.**

Accomplishments:

- Through 1998 Oregon Department of Forestry State Forests have provided funding and FTE to either operate or assist in the operation of 5 smolt traps in coast range streams.

Improvements needed:

- Full development of goals and objectives for continued operation of the traps and assessment for additional traps.
- Long range funding to operate traps.

Distribution: **Juvenile and adult wild fish populations will be present within and among watershed basins similar to historic distributions.**

Accomplishments:

- Through 1998 the department and cooperators have surveyed and mapped approximately 20 percent of Oregon's streams for fish use creating a baseline of fish distribution that can be evaluated over time. (ODF 25S, 32S, 46S).

Improvements needed:

- Eighty percent of Oregon's streams are un-surveyed for fish use. Funding is needed to complete surveys on non-forest lands.
- Funding for the development of a GIS data layer.

Habitat

Fish passage: **Instream structures will allow passage of adult and juvenile fish below natural barriers**

Accomplishments:

- Through 1998 ODF has implemented 28 management measures that contain elements to improve fish passage. Fourteen are statewide measures and the rest apply to regional areas of the state or are site specific.
- In 1998 forest landowners reported upgrading 217 road crossings improving adult and juvenile fish passage. This represents 78% of all road crossings improvements made.
- Through 1998 the department and cooperators have surveyed approximately 20 percent of Oregon's streams for fish use and identifying both natural and non-natural blockages on these streams.
- ODF has implemented BMP compliance monitoring for installation of stream crossing structures (ODF 23S).
- Guidance and training has been developed for operator installation of culverts to provide fish passage (ODF 16S, 53S).
- Operator training sessions have been conducted for installation of culverts to provide fish passage, additional sessions are planned.
- The Board of Forestry has formed the Forest Practices Advisory Committee to review the FPA and make recommendations for needed changes if any are identified. Review will include evaluation of fish passage issues (ODF 63S).
- The State Forest's Northwest Forest Management Plan scheduled to be completed spring 2000 will include standards for stream crossings to allow passage of adult and juvenile fish below natural barriers.
- Road surveys are nearly completed in all state forests. These surveys identify maintenance projects and timelines for repair. These projects include stream crossings to allow passage of adult and juvenile fish below natural barriers.

Improvements Needed:

- Eighty percent of Oregon's streams are unsurveyed for fish use and non-natural blockages. Funding is needed to complete surveys.
- Acceptable fish passage guidelines need to be adopted and applied for all land uses.
- Establish statewide grant priority system to assure grant funds are awarded to highest priority projects.
- NMFS collaboration to recognize that road crossing projects completed to the standards of the state restoration guide should be exempt from take.
- Landowner permission to gain access to their property to complete fish presence surveys.
- Increased participation by landowners to report voluntary restoration activities.
- Complete fish use and habitat surveys on State Forests
- Complete road surveys, and schedule repairs for stream crossings needed for fish passage.

Stream Channels: Stream channels will provide habitat that support adult and juvenile fish and watershed health

Accomplishments:

- Through 1998 ODF has fully implemented 6 statewide landowner/operator voluntary measures to provide short term and long term large wood to stream channels (ODF 8S, 19S, 20S, 21S, 22S, 63S).
- In 1998 private forest landowners completed 150 instream projects to provide an immediate source of large wood to improve habitat.
- In 1998 State Forests completed 44 instream projects to provide an immediate source of large wood to improve habitat.
- ODF has played a lead role in conjunction with the GNRO to develop the states restoration guidelines ensuring that restoration activities that occur in stream channels follow appropriate guidelines.
- Forest practices BMPs are in place to protect channels, beds and banks and to prevent the removal of large wood.
- The Board of Forestry has formed the Forest Practices Advisory Committee to review the FPA and make recommendations for needed changes if any are identified. Review includes forest practices that protect stream channels, beds and banks (ODF 63S).

Improvements Needed:

- Consistent application of proper guidelines for in-stream habitat projects.
- Consistent restoration reporting.
- Similar practices or standards implemented across all landuses to protect and restore stream channels, beds and banks.
- Measure regulating the removal of large wood from streams across all landuses.
- Increased participation by landowners to report voluntary restoration activities.

Landscapes and riparian areas: Landscapes will be managed to maintain riparian function and the sediment, hydrologic and disturbance regimes that support adult and juvenile fish and watershed health.

Accomplishments:

- All ODF measures impacting riparian areas and upslope activities have been implemented statewide where appropriate.
- Forest practices BMPs are in place to protect riparian functions and to minimize disturbance across the forested landscape.
- The Board of Forestry has formed the Forest Practices Advisory Committee to review the FPA and make recommendations for needed changes if any are identified. Review includes forest practices that regulate commercial forest activities that could affect riparian function (ODF 63S).
- In 1998 through the application of ODF measures ODF 19S, 22S and 62S forest landowners completed 138 projects retaining additional trees in harvest units along 47

miles of streams. On state forest lands, 7 projects retained additional trees along 4.4 miles of streams in harvest units.

- In 1998 through the application of ODF measure 20S additional snags and downed wood were retained along 12.3 miles of Type N stream.
- In 1998 riparian conifer restoration (ODF 8S) occurred along 4.3 miles of stream on private lands and 1.2 miles of stream on state lands.
- In 1998 ODF continued development of the Northwest Forest Management Plan and Western Oregon Habitat Conservation Plan (HCP) strategies. These strategies describe how state forest landscapes will be managed to maintain aquatic and riparian functions. These functions include maintenance and recruitment of large wood through development or protection of riparian areas, sediment routing and storage, protection of sensitive aquatic sites and temperature control through shading. The plan is scheduled to be completed spring 2000.

Improvements Needed:

- Failure of the NMFS to participate with the state in the recognition and development of the states restoration guide may have negatively impacted riparian restoration measures such as measures ODF 8S Riparian Conifer Restoration, and ODF 21 Active Placement of Large Wood.
- Implementation of meaningful riparian area management measures across all landuses.
- Completion of Northwest Forest Management Plan and Western Oregon HCP.

Estuarine and wetland areas: **Estuarine and wetland areas will provide habitat for adult and juvenile fish and will support watershed health.**

Accomplishments:

- Through 1998 ODF has implemented 29 management measures that directly or indirectly support estuarine and wetland protection and restoration.
- Forest practices BMPs are in place to protect estuarine and wetland functions in regard to commercial forest operations.
- The Board of Forestry has formed the Forest Practices Advisory Committee to review the FPA and if needed make recommendations for changes to the FPA. Review includes forest practices that regulate commercial forest activities that could affect estuarine and wetland functions (ODF 63S).

Improvements Needed:

- Implementation of meaningful riparian area management measures across all landuses.

Water

Water quality: Water quality factors in rivers and streams will support juvenile and adult wild fish and watershed health.

Accomplishments:

- Through 1998 ODF has implemented several management measures to monitor and to protect water quality.
- Forest practices BMPs are in place to protect water quality.
- The Board of Forestry has formed the Forest Practices Advisory Committee to review the FPA and if needed make recommendations for FPA changes that will assure protection of water quality standards (ODF63S).
- ODF through the development of the Western Oregon Habitat Conservation Plan is developing strategies that describe how state forest landscapes will be managed to provide for water quality and quantity and watershed health.
- ODF and DEQ have completed an MOU establishing process to address water quality limited streams.

Improvements Needed:

- Implementation of resource protection measures for water quality factors across all landuses.

People and policy

Citizen participation: Oregonians will share responsibility for the status of fish and watershed health, and will participate in achieving solutions to these challenges.

Accomplishments:

- Oregon's forest industry has taken a leadership role in the application of voluntary measures on forestland for increased levels of riparian protection and restoration.
- The Board of Forestry has formed the Forest Practices Advisory Committee to review the FPA and if needed make recommendations for changes to the FPA. Review includes forest practices that regulate commercial forest activities that could affect estuarine and wetland functions (ODF 63S).
- Forest operators have participated in training sessions for proper installation of stream crossings for fish passage and to learn how to apply voluntary riparian improvement measures.
- Many forest landowners participate on watershed councils both as members and as sources of funding, labor and materials.

- As part of developing the State Forests Western Oregon HCP the department formed a Public Involvement Committee (PIC) with many diverse interests to review and provide comment to the department on the HCP.

Science and Adaptive Management

Science and Adaptive Management:

Trends in fish populations, watershed health and management actions will be monitored to assess change, evaluate the effectiveness of actions, and indicate opportunities for improvement. Collaboration at all levels will facilitate implementation of needed change.

Accomplishments:

- Through 1998 ODF has implemented several monitoring measures to test effectiveness of forest practices BMP's these include:
 1. Measure ODF 12S – to evaluate effectiveness of BMPs to protect water quality during aerial applications of pesticides.
 2. Measure ODF 11S – to evaluate effectiveness of BMPs to maintain riparian functions of large wood recruitment and shade.
 3. Measure ODF 14S – to evaluate effectiveness of BMPs to maintain stream temperature.
- Measure ODF 15S to evaluate sediment delivery from roads to stream channels has been completed, a final report will be available.
- Measure ODF 13S, Storms of 1996 Monitoring Project has been completed, final report available April 23rd.
- In 1998 ODF has implemented measure ODF 23S to test compliance with harvest and road related BMPs.
- Fish presence/absence surveys been creating better data on distribution of fish.

Improvements Needed:

- Increased resources to enable larger sample sizes that reflect statewide trends.
- Increased coordination across agencies

Fp/action/salmon/99 Accomplishments2

- 1998 Fish Presence Surveys (ODF32S): 598 miles of stream were surveyed. 403 miles were newly identified as fish bearing while, 69 miles of stream previously identified as fish-bearing were determined to be non-fish bearing. 195 impassable culvert were identified.
- Storm Monitoring Study (ODF13S): Study evaluated the effects of the February and November 1996 storms on landslide density and channel impacts, particularly as they

relate to forest management. Final report available in May 1999. Preliminary results indicate aerial photographs underestimate landslide density and erosion rates in all stand ages. The underestimation is most severe in mature forests. This creates a bias to over predict increases in landslide frequencies due to harvesting. Landslide densities were lower in mature forests than in 0-10 year old stands. However, landslide densities lower in 10-30 year old stands than in mature forests. Road-related landslides were less common than other landslides, but they tended to have a greater influence on channel impacts. Stream channels affected by debris torrents showed shade reductions.

- Stream Temperature (ODF14S): Four basins and 7 reach-level studies. During the summer of 1999 ODF will produce a white paper discussing current state of knowledge on management effects on temperature as well as utility of models in predicting effects. Developing new project to address TMDL proposals for shade.
- Road Sediment (ODF15S): Final report is available and BMP guidebook is available in 1999. Findings indicate that stream crossing, over any other road feature, still exhibit the greatest potential for sediment delivery to streams. Management practices that reduce connectivity or maximize filtering of water from the road help reduce potential sediment delivery to streams. BMP compliance findings indicate 99.9% compliance rate with filtering practices.
- Chemical Applications (ODF12S): 20 sites monitored in Fall and Spring of 1997 and 1999. Preliminary report available. Preliminary findings indicate that water quality is protected during aerial application of herbicides. Will complete water quality sampling spring 99. Work by OSU will help to quantify effects of triclopyr and carbaryl on macroinvertebrates.
- Riparian Function (ODF11S): 30 sites monitored before and after harvesting. Preliminary results indicate that riparian stand structure in riparian areas is highly variable across stream sizes and georegions. Results indicate that conifer presence within the first 20 feet of the stream is higher than was assumed. Data will provide sound basis for detecting trends, but limited ability to assess specific prescriptive scenarios. Results will aid in improving future monitoring efforts. Final report available in spring 1999. Developing new project to address DEQ TMDL proposals for shade.
- Compliance Monitoring Project (ODF23S): 52 harvest-unit sites monitored. Focus is on unit-level rules regarding water protection. Pilot study complete, report available in May 1999. Implementation of core study has begun January 1999 with site selection process and development of UAS.
- Fish Passage and Stream Crossing Compliance Monitoring (ODF1): 59 stream-crossing sites monitored. Supplement to above project with focus on stream crossings for fish passage and 50-year streamflow event. Pilot study complete, report

available in May 1999. Implementation of core study has begun January 1999 with site selection process and development of UAS.

- Review and Revise Strategic Monitoring Plan: Completed in 1998 will repeat again in 1999.
- Promote Coordinated Monitoring: Water Quality Monitoring Guidebook will be completed by spring of 1999 for use by all state agencies and volunteer groups.

Oregon Department of Forestry Implementation Summary

Measure	Description	Status	Priority	New
ODF 01S	Road erosion and risk project	Ongoing	High	No
ODF 02S	State forest lands road erosion/risk project	Ongoing	High	No
ODF 03S	Technical and policy review of rules/admin processes - slope stability	Ongoing	High	No
ODF 04S	Stream habitat assessments	Ongoing	High	No
ODF 05S	North Coast Salmonid Habitat Restoration Project	Ongoing	High	No
ODF 06S	Mid-coast Restoration Project	Ongoing	High	No
ODF 07S	Fund 7 fish biologists technical assistance for salmonid habitat restoration	Ongoing	High	No
ODF 08S	Riparian conifer restoration	Ongoing	High	No
ODF 09S	NW State Forest Lands Management Plan	Ongoing	High	No
ODF 10S	Forest practice monitoring program	Ongoing	High	No
ODF 11S	Monitoring RMA's under the Forest Practices Act	Ongoing	High	No
ODF 12S	Monitoring effectiveness of BMPs in protecting water quality during pesticide applications	Ongoing	High	No
ODF 13S	Storms of 1996 monitoring project	Complete	High	No
ODF 14S	Monitoring water temperature protection BMPs	Ongoing	High	No
ODF 15S	Evaluation of road and timber harvest BMPs to minimize sediment impacts	Complete	Low	No
ODF 16S	Evaluation of adequacy of fish passage criteria	Complete	Low	No
ODF 17S	Site specific vegetation retention within RMAs on State Forests	Complete	Low	No
ODF 18S	Wildlife tree placement on state forest lands	Complete	Low	No
ODF 19S	Additional conifer retention along fish-bearing streams in core areas	Ongoing	High	No
ODF 20S	Limited RMA for small type "N" streams in Core Areas	Ongoing	High	No
ODF 21S	Active Placement of LWD during forest operations	Ongoing	High	No
ODF 22S	25% in-unit leave tree placement and additional voluntary retention	Ongoing	High	No
ODF 23S	BMP Compliance Audit Program	Ongoing	High	No
ODF 24S	State Forest lands stream habitat assessment and instream projects	Ongoing	Med.	No
ODF 25S	Fish presence/absence surveys and fish population surveys	Ongoing	High	No
ODF 26S	Elliott State Forest habitat conservation plan	Complete	Low	No
ODF 27S	Increased riparian protection	Complete	Low	No
ODF 28S	Protection of significant wetlands, including estuaries	Complete	Low	No
ODF 29S	Chemical protection rules increased buffers	Complete	Low	No

Measure	Description	Status	Priority	New
ODF 30S	Large woody debris recruitment incentives	Complete	Low	No
ODF 31S	Large wood debris placement guidelines	Complete	Low	No
ODF 32S	Fish presence survey (OAR 629-635-200(11))	Ongoing	High	No
ODF 33S	Increase number of streams and stream miles protected	Complete	Low	No
ODF 34S	Improve fish passage BMPs on stream crossing structures	Complete	Low	No
ODF 35S	Increase stream crossing design for larger flows	Complete	Low	No
ODF 36S	Upgraded road construction and fill requirements	Complete	Low	No
ODF 37S	Upgraded skid trail construction and fill requirements	Complete	Low	No
ODF 38S	Clearcut limitations	Ongoing	Low	No
ODF 39S	Lobster creek whole-basin coordination restoration project	Ongoing	High	No
ODF 40S	Upper Siuslaw enhancement (Weyerhaeuser)	Ongoing	High	No
ODF 41S	South Siletz monitoring (Boise)	Ongoing	High	No
ODF 42S	North Fork Coquille monitoring assessment (Menasha)	Ongoing	High	No
ODF 43S	South Fork Coos river monitoring assessment (Menasha)	Ongoing	High	No
ODF 44S	Coos River mainstem monitoring assessment (Menasha)	Ongoing	High	No
ODF 45S	Coquille, Siletz and Sixes watershed monitoring (Georgia Pacific)	Ongoing	High	No
ODF 46S	Fish passage surveys (Weyerhaeuser)	Ongoing	High	No
ODF 47S	Coos, Milliacoma and upper siuslaw rivers watershed analysis (Weyerhaeuser)	Ongoing	High	No
ODF 48S	South Fork Siletz watershed analysis (Boise Cascade)	Ongoing	High	No
ODF 49S	Ecola creek watershed analysis (Willamette Industries)	Ongoing	High	No
ODF 50S	Kelchis watershed analysis	Complete	Low	No
ODF 51S	Palmer creek acclimation ponds (Georgia Pacific)	Complete	Low	No
ODF 52S	South Coast Technical Advisory Team	Ongoing	High	No
ODF 53S	Oregon Professional Logger Program	Ongoing	High	No
ODF 54S	Forest Resource Trust Program	Ongoing	Med.	No
ODF 55S	Stewardship Incentive Program (SIP)	Ongoing	Med.	No
ODF 56S	Landowner Stewardship Award	Ongoing	Med.	No
ODF 57S	Enhancement of ODF Monitoring Program	Ongoing	High	No
ODF 58S	Liability limits for fish enhancement projects	Complete	Low	No
ODF 59S	Integrated forest assessment	Ongoing	Med.	No
ODF 60S	Additional forest products harvest tax	Complete	Low	No
ODF 61S	Analysis of "RACK" concept for debris flows	Complete	Low	No
ODF 62S	Voluntary no-harvest riparian management areas	Ongoing	High	Yes
ODF 63S	Ad Hoc Forest Practices Advisory Committee	Ongoing	High	Yes

OREGON DEPARTMENT OF AGRICULTURE

ODA Task #1: Senate Bill 1010 Activities

ODA will develop and begin implementation of Agricultural Water Quality Management Plans for key basins by 1999 and for entire state by 2001.

Completed tasks

- Enforcement Specialist began work March 9, 1998.
- Agronomist began work March 23, 1998.
- Hydrogeologist began work March 30, 1998.
- Hydrologist/Monitoring Specialist began work April 10, 1998.
- Outreach Specialist began work July 1, 1998.

Willamette Basin

- Mollala/Pudding/French Prairie subbasin
- Marion SWCD recruited as Local Management Agency (LMA)
- Local Advisory Committee (LAC) approved

- Clackamas subbasin
- Clackamas SWCD recruited as LMA
- LAC approved

- Yamhill subbasin
- Yamhill SWCD recruited as LMA
- LAC approved

- Lower Columbia/Sandy subbasin
- Clackamas SWCD recruited as LMA
- LAC approved

North Coast Basin

- Tillamook SWCD recruited as LMA
- LAC approved

Rogue and Klamath Basins

- Greater Rogue
- Jackson SWCD recruited as LMA
- LAC approved

- Klamath Headwaters subbasin
- Klamath SWCD recruited as LMA
- LAC approved

South Coast and Umpqua Basins

- Coos/Coquille subbasins

Coos SWCD recruited as LMA
LAC approved

Umpqua subbasin
Douglas SWCD recruited as LMA
LAC approved

Eastern Oregon

Grande Ronde
Union SWCD recruited as LMA
LAC approved

Malheur
Malheur SWCD recruited as LMA
LAC approved

Umatilla/John Day Basins

Umatilla subbasin
Umatilla SWCD recruited as LMA
LAC approved

North and Middle Forks John Day River subbasin
Monument SWCD recruited as LMA
LAC approved

Central Oregon

Lost River subbasin
Klamath SWCD recruited as LMA
LAC approved

Lower Deschutes subbasin
Wasco SWCD recruited as LMA
LAC approved

Middle Deschutes subbasin
Jefferson SWCD recruited as LMA
LAC approved

Tasks underway and on schedule

The process of creating Agricultural Water Quality Management Area Plans (AWQMAPs) has begun in 26 of 69 planning basins.

AWQMAPs and their associated Administrative Rules are being developed in:

Willamette Basin

Mollala/Pudding/French Prairie subbasin

Clackamas subbasin
Yamhill subbasin
Lower Columbia/Sandy subbasin

North Coast Basin

Rogue and Klamath Basins

Greater Rogue (excludes Bear Creek subbasin)
Klamath Headwaters subbasin

South Coast and Umpqua Basins

Coos/Coquille subbasins
Umpqua subbasin

Eastern Oregon

Grande Ronde
Malheur

Umatilla/John Day Basins

Umatilla subbasin
North and Middle Forks John Day River subbasin

Central Oregon

Lost River subbasin
Lower Deschutes subbasin
Middle Deschutes subbasin

ODA Task #2: Confined Animal Feeding Operations Program (CAFO)

ODA will develop, implement, and maintain a statewide regulatory program for CAFOs that includes permit issuance, inspection, and enforcement for noncompliance with the permit.

Completed tasks

Enforcement Specialist hired

Tasks completed and ongoing

Implemented ongoing educational outreach program to CAFOs.

Tasks underway and on schedule

Implemented compliance monitoring program to visit every permitted CAFO in Oregon within three years. In 1999 ODA completed 208 inspections of approximately 610 CAFOs in Oregon.

ODA Task #3: Education/Outreach/Incentives

ODA will provide assistance to Soil and Water Conservation Districts (SWCDs) as

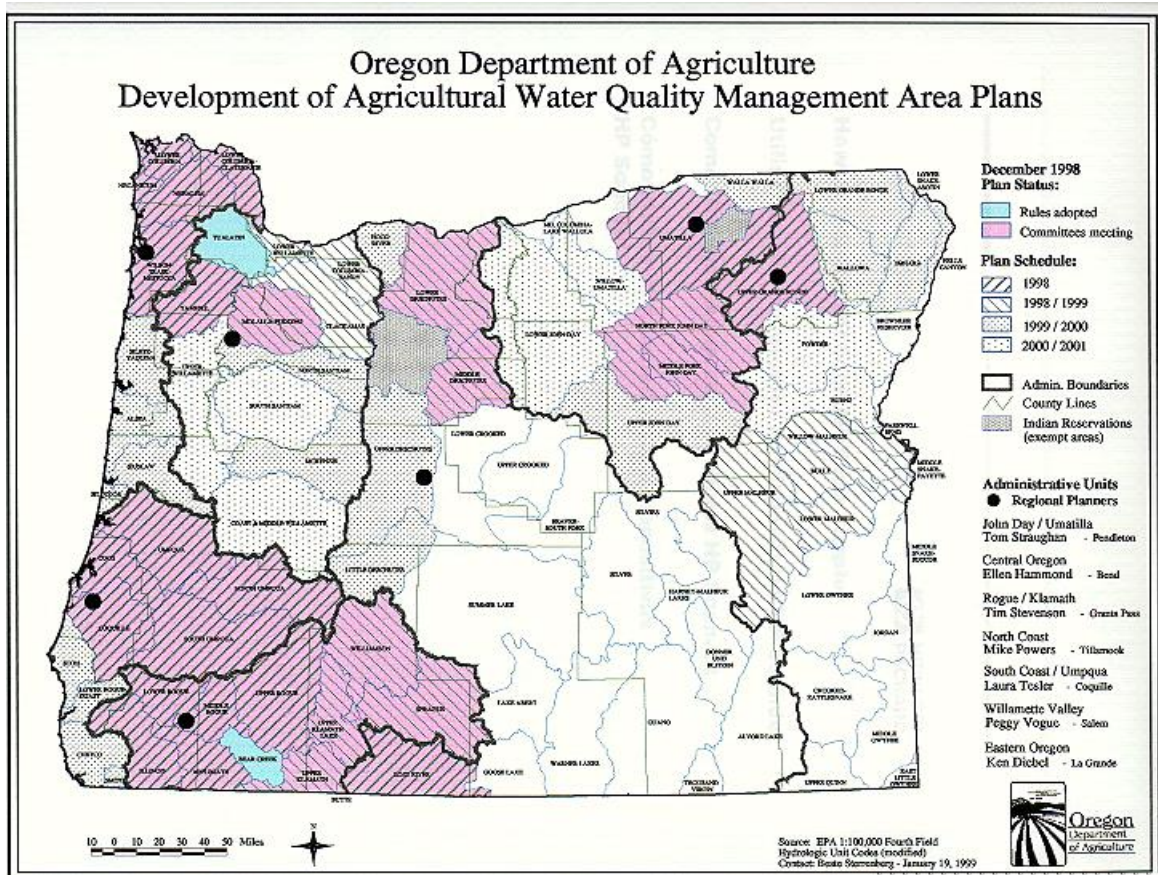
needed to insure Agricultural Water Quality Management Area Planning occurs and is implemented for key basins in 1999 and for the entire state by 2001.

Completed tasks

Coordinated and administered program to provide resources for SWCDs to hire 37 Watershed Technical Specialists to provide assistance and outreach to landowners.

Tasks underway and on schedule

Watershed Technical Specialists assistance to individual landowners.
 SWCD outreach to landowners. In 1998 SWCDs provided:
 310 educational workshops and meetings,
 62 field tours,
 26 educational newsletters, and
 33 news articles written for media distribution.



OREGON MARINE BOARD

Increase number of streams adopted through Adopt-a-River (AAR) program.

In 1998, the Marine Board continued to work with SOLV to increase efforts to gain adoption of stream and rivers, particularly source and recovery reaches. In the past year, an additional 40.25 miles were adopted along the coast, with 27 projects on adopted sections. In May 1998, a total of 197 volunteers removed 18,494 pounds of debris (natural and man-made) from coastal streams during the annual Down by the Riverside cleanup and enhancement day. On this intensive, one-day effort coastal volunteers removed trash such as tires and refrigerators, cleared invasive brush, and did bank erosion control projects. A north coast group cleaned up a major illegal dump site.

Increase number of boat waste pump-outs and dump stations.

In 1998, seven new pumpouts were installed: two each at Jantzen Bay Marina and Hayden Bay Marina, and one each McCuddy's Marina, Donaldson's Marina, and Boones Ferry boat ramp.

Three new potty dump stations were installed in 1998: one each at Hayden Bay Marina, McCuddy's Marina, and Boones Ferry boat ramp.

New pumpouts planned, designed and permits initiated in 1998 to be constructed in 1999 are:

two at Charleston Marina in Coos Bay and one each at City of Rainier Marina, Newport South Beach Marina, and Port of Hood River Marina.

New dump stations planned, designed and permits initiated in 1998 to be constructed in 1999 are:

one each at City of Rainier Marina and Port of Hood River Marina.

One new floating restroom was planned, designed and permits initiated in 1998, to be constructed in 1999, will be at Fern Ridge Reservoir.

Enforce outfitter/guide laws.

More training on guide enforcement was added to the marine law enforcement academy in 1998. Law enforcement contracts contain expectations for enforcing outfitter/guide laws. Marine certification training and program managers conferences included presentations on outfitter/guide law enforcement. In 1998, marine deputies in coastal counties spent 9,762 hours patrolling the ocean and coastal bays and rivers. Coastal deputies also made checks of 53 outfitter/guides.

Increase marine law enforcement efforts on bays and coastal streams.

Law enforcement contracts contain expectations for enforcing existing boating state regulations. Marine certification training and program managers conferences included presentations on enforcing laws to help protect coho salmon. In 1998, marine deputies in coastal counties spent 9,762 hours patrolling the ocean and coastal bays and rivers,

issuing 553 citations for boating law violations.

Review existing boating regulations on bays and coastal rivers.

An internal review of source and recovery stream segments was completed and found the vast majority of segments are either not boatable or little used.

Acquire early review and coordination on construction projects.

The Marine Board continued early review and coordination of all in-water projects with ODFW and NMF's as part of the DSL and COE fill, removal and structure in-water permits. Additional consultation was performed on projects in Essential Fish Habitat streams. OSMB staff screened projects and aided facility owners/operators in meeting environmental permitting needs and requirements.

OSMB has applied to COE to reauthorize Regional Permit for Boating Projects.

Involve ODFW biologists in process of permitting marine events.

An internal agency policy was established and in full use for 1998 events.

Incorporate information about coastal salmon restoration measures in information kiosks at bays and coastal rivers.

The systematic inventory of information kiosks has been completed. OSMB is now determining whether and how to use these sites to convey information. (At some locations, missing or damaged kiosks will have to be replaced.)

Increase compliance with polystyrene foam encapsulation law.

Law enforcement basic training contracts contain expectations for enforcing foam regulations. Training sessions and program managers' conference included presentations on polystyrene foam encapsulation.

The Marine Board held a foam-recycling day for free disposal of 20 cubic yards of used foam (removed from waterways).

Facilities staff met with installers and developed streamlined encapsulation process to ensure program compliance. Draft rules were developed and released for public comment, with revised encapsulation rules adopted by OSMB Board on Jan. 21, 1999.

In 1998, the agency certified 122 projects for encapsulated foam installation. The agency continued to work with foam contractors/installers to increase encapsulation reporting.

Marine Board outreach efforts:

Facilitated the 1998 National Clean Boating Campaign in Oregon with special focus on clean boating methods to include boat waste, litter, boat washing, bilge and fueling practices. Planning is underway for National Clean Boating Campaign in Oregon for

1999.

Created and maintain a link to Oregon Plan from OSMB website.

Created and update a new web subpage Clean Boating, Clean Water posting CVA (Clean Vessel Act program) locations and clean water info such as best maintenance practices. It contains a link to National Clean Boating site.

Created and update a web subpage on Oregon Adopt-A-River (AAR) and link to SOLV site.

Developed packet of clean boating materials and sent them to 125 public and private marinas/moorages. In addition, mailed 75 packets to individuals, boating clubs, and agencies for dissemination to boaters. Materials were also available in agency lobby for customers.

Sent out news releases to Oregon media about Clean Boating Week in July, 1998 and Earth Day environmentally friendly boating.

Promoted special river events such as Down By the Riverside, Portland's waterfront festival and semi-annual beach cleanups on agency web page and on *Oregonian* Inside Line.

Distributed Adopt-A-River info externally at boat and sportsmen's shows; promoted internally at LE conferences and through agency's internal newsletter. Agency has adopted a section of the Willamette and does an annual cleanup.

Promoted AAR, CVA in annual newsletter to boaters again in 1998; newsletter sent to 170,000 boat owners. Included information in newsletters to special constituent groups, such as facility providers, law enforcement and registration agents.

Distributed CVA, oil spill, and good boating practice information at boat and sportsmen's shows.

Incorporated AAR and CVA materials into publications, presentations and press releases.

Provided information to the Governor's Office for boating-related materials.
Provided schools, boaters and environmental groups with information.

DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

The Department of Geology and Mineral Industries participates in the Oregon Plan for Salmon and Watersheds (OPSW) through the Mined Land Reclamation Program (MLR) which regulates upland mining. The purpose of the program is to ensure reclamation is accomplished upon the completion of mining and no significant adverse impacts occur offsite during mining. There are approximately 850 mines sites regulated by the program within the OPSW area. The most likely source of negative impact to water quality at these sites is sediment moving offsite into waters of the state.

In 1998, the MLR signed a Memorandum of Understanding (MOU) with the Department of Environmental Quality to share resources to implement general stormwater discharge permitting at mine sites. Stormwater runoff is the most likely pathway for sediment to reach waterways. Part of the MLR program effort will be to build a data base to record sampling data collected per the stormwater permit which is described in the Compliance Rate Data Section.

DOGAMI Measure 1 – Sediment Management at Mine Sites

Tasks completed.

- Expect to complete 1,760 inspections of mine sites throughout the OPSW area during the 1997-99 biennium.
- Completed aerial photography of 90 percent of the sites within the OPSW area. Aerial photography provides an excellent way of presenting the baseline condition of a site.
- Additional inspections under this measure resulted in enforcement actions to address illegal stormwater discharges.

Tasks ongoing.

- Continue work on particular mine sites to address water quality impacts, including sites near the Kilchis, Rogue and Applegate Rivers.
- Continue mine site inspections statewide.

DOGAMI Measure 2 – Mine Operators Assistance to Watershed Councils

Task(s) completed.

- Roseburg Lumber donated rock and logs to an Oregon Department of Fish and Wildlife stream enhancement project to improve habitat on Wolf Creek.

Tasks ongoing.

- On-going work with the Applegate Watershed Council, the Santiam Watershed Council, and the Molalla Irrigation District on collaborative data collection and the production of a training manual to facilitate the transfer of such knowledge to other similar organizations.
- Continue work with watershed councils and mine operators statewide.

DOGAMI Measure 3 – Salmon Enhancement Award

Tasks completed.

- Jan Perttu, Coordinator of the Applegate Watershed Council, was presented the second annual MLR Salmon Enhancement Award in July 1998.

Task(s) ongoing.

- Applications have been accepted and are being reviewed for the 1999 Salmon Enhancement Award.

DOGAMI Measure 4 – Best Management Practices Manual

Task(s) completed.

- Conducted three workshops for aggregate miners to explain the permitting process and best management practices for controlling stormwater at mine sites. When possible, workshops include a site visit to provide an opportunity for discussion of what works and what doesn't work at an actual mine site. A majority of workshop attendees have been aggregate miners. The workshops are very well received.
- Participated in the Willamette Basin Confluence.
- Staff completed a white paper on potential positive and negative effects of floodplain sand and gravel mining on salmonids. Paper will be published in the proceedings of the Society of Mining Engineers' annual meeting in March 1999.

Task(s) ongoing.

- Continue work with miners at various locations to implement best management practices.
- Continue holding workshops to inform miners on best management practices.

DOGAMI Measure 5 – Stormwater Management at Mine Sites

Tasks completed.

- Signed Memorandum of Understanding with Department of Environmental Quality (DEQ) to share responsibility for stormwater permitting at mine sites.
- Completed aerial photography of coastal and eastern OPSW area. Photos are digitized and given to mine operators to use in planning for stormwater control.

Tasks underway, with expected completion date.

- Continue aerial photography of non-coastal OPSW area. Interns digitizing maps for use by mine operators.

Task(s) ongoing.

- Continue working with DEQ to reduce costs and improve effectiveness of stormwater control program.
- Continue field inspections to assess effectiveness of stormwater control measures at mine sites.

- Continue working with mine operators to employ best management practices to control stormwater runoff.
- Began receiving reports from permittees who hold 1200 A stormwater permits. The response rate is low and staff have begun developing strategy to improve reporting.

DOGAMI Measure 6 – Chemical Management at Mine Sites

Note: There are no chemical mine sites currently operating within the State of Oregon. Therefore, the Department has taken no action on this measure.

Tasks completed.

- Not applicable.

Tasks underway, with expected completion date.

- Not applicable.

Tasks ongoing.

- Not applicable.

DOGAMI Measure 7 – Physical Habitat/Channel Morphology and Substrate Changes in Streams

Tasks completed.

- In August 1998, staff conducted an intensive data collection effort along 15 miles of the Applegate River and 1.5 miles of the Clackamas River. The data provide information about physical channel morphology and flow velocity at river sites where there have been elusive events and aggregate mines are present. The Applegate sampling effort was supported by the Applegate Watershed Council and the Bureau of Land Management. The Clackamas effort included support from consultants, Clackamas County, and a promise of funding support from a mining company. To be effective, this effort needs to be continued on yearly basis. Additional resources would make it possible to extend such data collection to other rivers of similar size.

Tasks underway, with expected completion date.

- Four mine operators have worked with DOGAMI to begin a channel morphology study at the confluence of the Willamette and McKenzie Rivers. DOGAMI is providing facilitation and coordination support to this effort.

Tasks ongoing.

OREGON DEPARTMENT OF TRANSPORTATION

The Oregon Department of Transportation (ODOT) developed 19 action items as part of the Coastal Salmon Restoration Initiative. These action items were originally characterized as high or lower priority. The ODOT plan has evolved since the original publication of the CSRI, and action items have been modified, regrouped, or deleted as appropriate for ODOT.

High Priority Action Items

ODOT 1: Hire Salmon Recovery Program Manager: completed 1996

ODOT2: Culvert Inventory, Assessment and Remediation

Tasks completed

- ODFW completed culvert inventories in the Deschutes River, Umatilla River and John Day River basins.
- 54 culverts modified or replaced along coastal streams

ODOT 3: Maintenance Management Maps (Resource Map) (Formerly Responding to Sources of Sediment, incorporates ODOT 5 Master Plan for Surplus Property)

Tasks completed

- Inventories of natural resources attached and/or adjacent to ODOT rights of way in the Southern Oregon Northern California (SONC) Evolutionarily Significant Unit (ODOT Region 3)
- Negotiations on restricted activities and modified maintenance activities in SONC (ODOT Region 3)
- Request for Proposal for consultant services to conduct resource inventory developed for roads within the northern coast and Upper Willamette River basin (ODOT Region 2)
- Mapping budget submitted for 1999-2001 biennium
- Negotiated with Oregon Department of Forestry to incorporate the slide probability model into the resource maps
- Coordinated with ODOT Right of Way to identify and preserve surplus ODOT property sites for slide debris disposals site in high risk slide areas

ODOT 4 Participate in Watershed Councils:

Tasks completed:

- District Managers, Area Maintenance Managers or Region Environmental staffs have connected with watershed councils throughout the state, and continue to work with the councils.

ODOT 5 Master Plan for Surplus Properties

Incorporated into ODOT 3

ODOT 6 Environmentally Sensitive Design

Tasks completed:

- ODOT/Department of Environmental Quality steering team developed to provide direction on water quality treatment master planning
- Technical advisory team created to develop policy, guidelines and standards for water quality treatment facilities

Tasks underway:

- Design manuals and project development manuals being revised and incorporating environmental issues
- Culvert design classes held around state

ODOT 7 Storage and Disposal Plan for Woody Debris

Tasks completed:

- Sites identified for disposal of woody debris throughout state

Lower Priority Action Items

ODOT 8 Statewide Erosion Control Handbook

Tasks underway:

Construction erosion control manual is being revised
Erosion control field handbook for field inspectors being prepared

ODOT 9 Review and Development of a Geographically Appropriate Program for Winter Maintenance Activities and Sidecast Sweeping

Task completed

- Water quality monitoring of winter maintenance anti-icing chemical initiated

ODOT 10 Aggregate Permit Review

Deleted from plan, permits managed by DOGAMI/DEQ

ODOT 11 Integrated Pest Management (deleted as action because this is an active program for ODOT, tasks completed as program)

Tasks completed:

- Modified spray program as appropriate to reduce impacts
- Developed District Integrated Pest Management plans
- Coordinated noxious weed control program with Oregon Department of Agriculture

ODOT 12 Education

Task completed:

- Developed video on winter maintenance anti icer
- Convened team to develop Erosion Control Training
- Conducted variety of training in Oregon and Washington on erosion control, the Oregon Plan for Salmon and Watersheds, culvert passage issues.

Tasks underway:

- A course tailored to ODOT construction designers and inspectors on erosion and sediment control is being developed
- In-water work training scheduled for early spring

ODOT 13 Preferential Use of Bioengineering Solutions

Task underway:

- Leadership and technical advisory teams created to provide agency guidance on stream stabilization design issues
- Best Management Practices and guidelines for use of riprap during emergency situations

ODOT 14 Burning in Riparian Areas

Task completed, March 1996

ODOT 15 Habitat for Fish in Wetland Mitigation

Tasks completed:

- 37 structures (off channel pools, large woody debris, boulder) installed in 8 construction projects

ODOT 16 Minimize Potential Impacts of Accident Spills

Task of identifying sensitive areas incorporated into ODOT 3

ODOT 17 Aquatic Pest Plant Management Plan

Action item deleted from ODOT plan: ODOT has no authority over water resources

Future Actions: requires change in state policy and/or legislative authority

ODOT 18 Retention of Surplus Property

No action on task: requires change to state policy and/or legislative change

ODOT 19 Mitigation Banking

Tasks underway:

- Mitigation site has been selected and confirmed
- Criteria has been proposed
- Negotiations continuing with the National Marine Fisheries Services

ODOT 20 Compliance Review

Tasks completed:

- Construction project sites selected for review in 1998 reviewed for permit compliance
- Projects selected for 1999 review

Most of the ODOT action items are ongoing, or are project specific, rather than specific tasks. Consequently, these action items will become part of standard operating procedures, rather than have a completion date. For this reason, it is difficult to organize the action items by task with assigned completion date.

Expansion of Oregon Plan Measures Statewide

In January 1999, Governor Kitzhaber signed Executive Order 99-01 directing state agencies to implement the Oregon Plan for Salmon and Watersheds across the state. The Oregon Plan for Salmon and Watersheds incorporates the Coastal Salmon Restoration Initiative, the Steelhead Supplement and the Healthy Streams Partnership. Each of the 16 ODOT districts include watersheds that support at least one specie proposed or listed as threatened or endangered under the federal Endangered Species Act.

OREGON ROADS

Crisscrossed through Oregon are over 84,000 centerline miles of roads that are open to the public and are managed by the federal government, the state of Oregon, Native American Tribes, counties, cities and individual landowners.

The total miles of roads open to the public change annually. According to the 'Oregon Mileage Reports', in 1984, there were 135,489 miles of roads open to the public, compared with 84,920 miles in 1996. During this twelve-year period, the US Forest Service and the Bureau of Land Management reclassified or decommissioned much of the federal road system. In 1996, county, local access roads and city streets accounted for 50% (42, 221 miles) of the total 84,920 miles.

The Oregon Department of Transportation (ODOT) is responsible for the maintenance and operation of 7,483 miles of the state and interstate road system, approximately 10% of the entire road network available to the public. Since 1984, the total centerline miles of roads managed by ODOT has remained constant, or decreased as ODOT has transferred ownership of roads to other agencies. The majority of the ODOT roads (51%) are located in western Oregon. Today, the focus for ODOT is to maintain and preserve the existing State and Interstate Highway system.

ODOT SALMON RECOVERY PLAN

The Oregon Department of Transportation (ODOT) component of the Oregon Plan is based on its role as state highway authority. The state highway system parallels, or runs perpendicular, to the major rivers of Oregon, the Columbia River and the Pacific Ocean. As such, the maintenance, operations and construction of these roads have the potential to impact the physical habitat and life cycle needs of anadromous fish species.

In early 1996, a team of ODOT staff representing environmental, design, hydraulics, maintenance and operations developed an agency plan that looked at impacts to watersheds and fishery resources from ODOT functions: design, construction, maintenance and operation of the state highway system. ODOT chose to look at the watershed and fisheries resources as a whole, rather than identify individual species' impacts. Looking at ODOT functions within a watershed allowed ODOT to initially develop a statewide program.

ODOT identified 7 goals to direct the agency in salmon recovery:

- Remove barriers, where appropriate, to adult and juvenile fish passage caused by state transportation authorities' activities and structures.
- Identify and minimize transportation impacts on fisheries habitat and water quality.
- Enhance fish habitat where and when feasible.
- Protect habitat by preserving right-of-way on property where appropriate.
- Participate in watershed planning.
- Partner with other agencies, local governments, and stakeholders.
- Develop an informed work force on the needs and requirements of salmon.

The agency team reviewed existing programs and identified a number of enhancement actions that would improve conditions for fishery resources. ODOT has five existing programs that support the agency goals in implementing salmon recovery:

- National Pollutant Discharge Elimination System (NPDES)
- Endangered Species Act compliance
- Integrated Pest Management
- Hazardous Materials Program
- Clean Water Act- 401 certification.

In addition to these existing programs, ODOT identified a series of action items that provide additional direction to meet the goals of the agency. Many of the action items have been completed, or are well into implementation. Most of the ODOT action items are ongoing, or are project specific; consequently, these action items will become part of standard operating procedures, rather than have a completion date. These action items have been realigned since the initial publication of the Oregon Plan:

- Hire a salmon recovery program manager (completed).
- Perform a culvert inventory, assessment and develop a remediation program, as appropriate (ongoing).
- Develop resource management maps that locate riparian areas, wetlands, sources of sediment, surplus properties available for mitigation or slide material disposal (ongoing).
- Participate in local watershed councils (ongoing).
- Integrate environmental components, including bioengineering, into project designs (ongoing).
- Develop a storage and disposal plan for woody debris materials collected following storm events and during construction (ongoing).
- Develop and distribute a statewide erosion control handbook (developed, out for review).
- Review sanding practices, winter maintenance activities and sidecast sweeping activities for western Oregon and develop a geographically appropriate program for these activities (completed).
- Increase awareness of fish issues through a variety of activities including internal and external training, information sessions, and meetings (ongoing).
- Include habitat for fish in wetland mitigation in project design as appropriate (project specific).
- Develop a credit/debit system for wetland mitigation/fish enhancement with regulators (a site has been selected and approved, criteria for the program has been proposed).
- Allow ODOT to retain ownership of surplus lands that have natural resource value for the purpose of conserving the resources, rather than sell the properties (requires legislative change).

1998-99 Successes and Controversies

ODOT has had many successes in 1998. Each of the five ODOT regions has accomplished many specific projects that benefit water quality and fish habitat: bank

stabilizations, ditch modifications, culvert modifications, partnerships with stakeholders, etc. These regional accomplishments are on file in the ODOT Salmon Recovery Program Office. Three specific ODOT actions need to be highlighted as successes for 1998.

Fish Passage

The largest issue facing ODOT, and the largest contribution ODOT can make to the Oregon Plan for Salmon and Watersheds is to modify or replace culverts that do not provide adequate fish passage.

The fish passage issue facing the agency is extraordinary. The Oregon Department of Transportation has entered into an Intergovernmental Agreement with the Oregon Department of Fish and Wildlife (ODFW) to inventory and prioritize state and county culverts that do not adequately provide fish passage. Fish passage problems may be caused by partial blockages, providing passage only at certain times of the year or life stage, or complete blockage, providing no passage at any time of year to any life stage.

To date, ODFW has inventoried the coastal basins, the Rogue River, the Umpqua, the Grande Ronde River, the Imnaha Rive, the Lower Columbia River, the Willamette River, the John Day River, the Umatilla River, and the Deschutes River. The ODFW prioritized the culverts needing to be addressed as 'high', 'medium', or 'low' based upon local understanding of the quality, and quantity, of habitat available to fish above the culvert. The inventory has examined over 5000 state and county culverts for fish passage.

There are 634 ODOT culverts that do not provide adequate fish passage located in these basins:

Basin	Number of Culverts to be addressed
Coast, Roque, Umpqua	396
Grand Ronde/Imnaha	18
L. Columbia/L. Willamette	56
Upper Willamette	141
John Day	42 (inventory completed in 1998)
Umatilla	161 (inventory completed in 1998)
Deschutes	57 (inventory completed in 1998)

ODOT staff and contractors have already addressed 54 fish passage issues around the state. A tide gate was removed and culverts were replaced or retrofitted to aide passage, at a total expected cost of \$1,865,000. Access to over 139 miles of habitat was restored or enhanced, at approximately \$14,000 per habitat mile.

In 1998, an ODOT engineer developed a mold for creating plastic baffles to use in retrofitting existing culverts for fish passage. This extruded plastic baffle is cheaper, more light weight and easier to install than steel, which had been used for manufacturing baffles. Plastic baffles were installed in several ODOT culverts in southern Oregon.

Maintenance Activities

An ODOT team representing maintenance, environmental, bridge and management staff evaluated all maintenance activities that had the potential to have a negative impact on riparian habitat, or water quality. ODOT invited the Association of Oregon Counties to join ODOT in the review. The team produced the “Oregon Department of Transportation Maintenance Water Quality Best Management Practices Guide” which incorporates best management practices for each maintenance practices, as well as a description of the training, documentation, and monitoring for ODOT. This document served as the basis for negotiations with the National Marine Fisheries Service (NMFS) on road maintenance activities and impacts to species listed as threatened or endangered. If county road authorities, or other state road authorities choose, the ODOT manual is easily adapted to local conditions.

Maintenance Management Maps were developed to assist ODOT maintenance personnel in implementing the best management practices. These maps provide direction to ODOT by identifying the location of natural resources, and identifying the maintenance activities that may be modified because of potential impact to the natural resources. There are two maps: a resource map that depicts the location of natural resources, riparian areas and wetlands, and other pertinent information; and a restricted activity zone map that depicts the negotiated agreements between maintenance staff and biologists on where maintenance activities may need to be modified. The team that worked to develop these maps received a Departmental Excellence Award for the work.

ODOT Interagency Partnerships and Technical Teams

The Oregon Department of Transportation has entered into intergovernmental agreements with regulatory and resource agencies to provide technical advice and direction to ODOT in implementing the Oregon Plan for Salmon and Watersheds. Teams have been developed to provide ODOT staff the leadership and technical direction needed as ODOT balances its commitments to the Oregon Plan for Salmon and Watersheds while meeting its mission to provide a safe and effective transportation system.

The Department of Environmental Quality and ODOT have partnered to develop a statewide ODOT stormwater permit. ODOT currently holds a variety of stormwater permits such as Municipal Separated Storm Sewer System (MS4) permits, regional industrial construction activity permits and aggregate sites. ODOT hopes to wrap as many of the stormwater requirements as practical and appropriate into a single permit.

A steering team leads the partnership, and a technical team works toward resolution of the many design questions facing ODOT. In addition to the statewide permit, this partnership is working toward a master plan that integrates the DEQ priorities for water quality limited streams with the ODOT project development program, and developing processes for how to include DEQ in the appropriate ODOT programs.

In 1996, ODOT entered into an intergovernmental agreement with the Oregon Department of Fish and Wildlife to provide technical assistance to ODOT staff on how to incorporate the needs of fish into ODOT activities. The fish biologist, funded by ODOT, has been involved with each culvert modification design and construction, provides advice to maintenance personnel on day to day routine activities, and has coordinated ODFW responses to ODOT issues. This partnership has proven so successful that ODOT is renewing and expanding the partnership to include a second biologist providing technical assistance to ODOT. This second biologist will be providing timely reviews and technical assistance to the project development program in the Portland metropolitan area, and to providing assistance on culvert modifications in eastern Oregon.

The National Marine Fisheries Service and ODOT have also entered into a partnership to provide technical advice to ODOT in implementing Endangered Species Act compliance for project development and maintenance activities.

Controversies

In the 1997 Annual report, ODOT listed three controversies facing the agency:

- Conflicts between ensuring public safety, and protecting and enhancing natural resources
- Appropriateness of expending very limited gas tax dollars on required natural resource needs when transportation needs are so great
- Disagreements and conflicts between, and among, scientists and regulators on best management practices

ODOT has worked hard this past year in resolving these conflicts. The partnerships with regulators and resource agencies have provided valuable interagency understanding on the needs of ODOT, and the needs of the natural resources. Technical teams are working to provide direction on incorporating natural resource concerns into design and safety decision-making processes. However, not all these controversies have been resolved.

Conflicts between ensuring public safety, and protecting and enhancing natural resources

ODOT is continually faced with determining the best, most cost-effective method for providing a safe and effective transportation system, and now, must add the impact to natural resources into the decision making process. All tools and techniques involved with winter maintenance activities have a potential impact to natural resources. Climatic conditions and geography dictate the tools to be used. Conflicts can arise on which tool or technique provides the best winter maintenance, and the impact to natural resources.

ODOT maintenance personnel pride themselves on, and are committed to, winter road maintenance. This conflict between effective winter maintenance and natural resource impacts is the greatest conflict facing the maintenance forces.

Appropriateness of expending very limited gas tax dollars on required natural resource needs when transportation needs are so great

The Oregon Plan for Salmon and Watersheds includes the Endangered Species Act and elements of the Clean Water Act. Both of these federal laws have requirements for monitoring water quality and impacts to listed species.

ODOT is a gas tax dedicated funding agency, charged with maintaining a safe and effective transportation system. ODOT believes that monitoring water quality and impacts to listed species is the responsibility of resource agencies, rather than a transportation agency. ODOT has developed, and will continue to develop research programs that gauge the effectiveness of the best management practices for maintenance. In addition, ODOT is monitoring hydraulic flow in culverts that have been modified for fish passage. (An expanded discussion on the ODOT monitoring program can be found later in this report).

It has been determined that certain monitoring of water quality and impacts to listed species is a legal use of gas tax. However, ODOT struggles to identify dedicated gas tax dollars for monitoring programs for natural resource issues when transportation needs far exceed available revenues.

ODOT will continue to meet its legal responsibilities, and will be partners with other agencies wishing to do monitor water quality or species within ODOT rights of way.

Disagreements and conflicts between, and among, scientists and regulators on best management practices

ODOT spends a great deal of effort trying to identify environmentally appropriate practices to minimize its activities. ODOT invites regulators and scientists to participate in these efforts. Occasionally ODOT finds itself as the mediator between the different agencies and perspectives.

Compliance Review

Each agency participating in the Oregon Plan is developing a strategy to determine compliance to environmental laws and regulations. ODOT is not a regulatory agency, and does not enforce environmental laws. However, ODOT is responsible to meet environmental laws enforced and administered by other agencies, and to determine compliance to ODOT permits.

ODOT is responsible for several National Pollutant Discharge Elimination System construction permits issued by the Department of Environmental Quality. ODOT is required to audit the permit and identify how well ODOT meets the conditions of the permit.

In 1998, ODOT staff developed a strategy that identified randomly selected construction projects around the state that were to be reviewed in accordance with criteria identified in the DEQ permits. ODOT erosion control staff evaluated the sites and graded the project on its adherence to the conditions of the permit. Many project managers requested voluntary compliance reviews.

ODOT staff evaluated 19 construction projects in 1998 for compliance to the ODOT permits. Two of the 19 projects were determined to not meet the NPDES permit requirements. Actions were immediately taken to rectify those situations.

MONITORING

As part of this plan and in order to comply with requirements of the Clean Water Act and the Endangered Species Act, ODOT has initiated a number of monitoring projects to determine the environmental impacts of highways on Oregon waterways. The following is a summary of the various monitoring efforts ODOT has completed directly related to the Oregon Plan and improving salmon habitat and watershed health across the state.

- *Research Monitoring*

The ODOT Research Unit investigates issues and recent developments related to highway technology, materials, and management practices. Pollutant and water quality monitoring has been completed as a component of several current ODOT research projects.

- *Pollutant Characterization Monitoring*

ODOT has completed water quality and pollutant characterization monitoring to determine pollutant levels associated with specific ODOT highway facilities or highway activities. This characterization monitoring is used to develop effective management strategies for these facilities or activities.

- *Culvert Effectiveness Monitoring*

ODOT has modified highway culverts to improve fish passage. ODOT is working with Oregon Department of Fish and Wildlife (ODFW) to monitor the effectiveness of these culvert modifications.

Monitoring Program Budget and Activities

ODOT spent a total of \$134,000 on monitoring for the Oregon Plan last year. Of this budget, \$119,000 was spent on research monitoring and \$15,000 was spent on pollutant characterization monitoring. ODOT culvert effectiveness monitoring was not tracked as a separate monitoring budget since it was incorporated into the work of ODOT staff.

The following is a summary of ODOT monitoring completed this year directly related to the Oregon Plan for Salmon and Watersheds.

Research Monitoring

Roadwaste Project

This project investigates disposal and reuse options for waste materials that are generated from the maintenance of the State's highway system. Primary waste materials that are being investigated include street sweepings and catch basin clean-out material.
3-year project - \$165,000 allocated

1998 work completed:

- Completed a literature search for existing data on roadwaste pollutant levels.
- Published a Phase 1 Summary Report that included summaries of existing data and identified highway pollutants of concern.
- Identified and developed 4 pilot study monitoring projects.
- Implemented one of the 4 pilot study projects.
- Began data collection on pollutant levels associated with ODOT street sweepings and catchment clean out materials.

Herbicide Study

This project determines the extent that herbicides are carried by surface water runoff from ODOT highway right of way to adjacent waterways. The project is investigating typical herbicide concentration levels found in ODOT surface water runoff and determining if those levels negatively impact adjacent waterways or their aquatic

organisms. ODOT is working with the United States Geological Survey (USGS) on this project.

3-year project - \$100,928 allocated

1998 work completed:

- Completed a literature search for existing data documenting the migration of herbicides through surface water runoff.
- Completed a Phase 1 summary report on existing studies and data.
- Developed a pilot study project that will begin collecting data specific to ODOT herbicide use and water runoff beginning April 1999.

Calcium Magnesium Acetate (CMA) Study

This project investigates the impacts of CMA on algal and/or benthic invertebrate communities found in rivers or streams that are adjacent to highways or bridge structures where CMA is used as an anti-icer. ODOT is working with US Geologic Survey on this project.

2 year project – \$100,000 allocated

1998 work completed:

- Initiated a literature search for existing data documenting effects of CMA on surface water runoff and receiving streams.
- Developed a monitoring project to measure concentrations of CMA associated with highway stormwater runoff and an adjacent waterway.
- Began collection of data on CMA concentrations and water quality parameters that were a direct result of ODOT anti-icing activities.

Characterization Monitoring

Stormwater facility investigation

ODOT has installed a number of stormwater facilities that are acting as sedimentation ponds. The ponds treat stormwater generated from high traffic urban highways in the Portland area. ODOT has been testing pollutant levels associated with these ponds for the last 5 years to determine water quality impacts and to develop management strategies for the ponds.

1998 work completed:

- Sediment and water samples were collected for 5 sedimentation facilities. Data documenting water quality parameters and sediment pollutant levels was generated.

Snowmelt characterization monitoring project

ODOT has been monitoring pollutants and water quality parameters associated with snowmelt from the Mt Hood Highway (Hwy26) over the last 4 years. This monitoring is

performed to determine if negative impacts to water quality are resulting from ODOT winter highway maintenance practices.

1998 work completed:

- Snowmelt water samples were collected from 5 ODOT highway locations in the Mt. Hood study area. Data documenting water quality parameters and pollutants associated with highway snowmelt was generated.

Culvert Effectiveness Monitoring

ODOT has developed a culvert monitoring program that measures the effectiveness of culvert modifications made for fish passage. This monitoring program does not examine fish passage directly. The program monitors hydraulic parameters of the culvert and the flowing stream. Hydraulic parameters that are monitored include: maximum water velocities, minimum depths at low flow discharge, maximum vertical jump heights, and swimming distances associated with water velocities.

1998 work completed:

- ODOT worked with regulators and technical support staff to develop monitoring parameters.
- ODOT worked with ODFW and National Marine Fisheries Service (NMFS) to select representative culverts to monitor. The culverts are located in ODOT Regions 1,2, and 3 (western Oregon).
- ODOT has scheduled and initiated hydraulic monitoring January – June (1999).

ODOT plans to continue its monitoring program in order to meet monitoring requirements as defined in the Oregon Plan and various environmental water quality regulations. A total of \$365,000 ODOT dollars has been allocated for ODOT research projects through the year 2000. These projects will continue to monitor environmental impacts of ODOT highways and activities. ODOT will adjust this monitoring program as needed to develop more efficient and effective Best Management Practices (BMPs) that will reduce negative impacts that state highways could potentially have on salmon and Oregon watersheds.

SALMON PROGRAM BUDGET

The ODOT Salmon Recovery Program was allocated one million dollars from the Maintenance Limitation for the 1997-99 biennium. This money funds the day to day expenses of the program, and provides a funding source for some culvert modifications and stream restoration projects. In addition, money has been allocated for developing the resource and restricted activity maps.

Program Expenditures 1997-99

Culvert Inventory, Assessment and Remediation:	\$167,441
Stream Restoration: erosion control, bank stabilization, culvert modification	\$510,870
Technical Assistance: ODFW, DEQ, ODOT	\$205,000

Resource Maps/Restricted Activity Map	\$303,202
Total	\$1,186,513

Fifteen of the sixteen ODOT districts have submitted requests for funds in 1998. Forty-five projects were funded throughout the state. The projects are to improve water quality or fish passage on ODOT rights of way. The money is allocated on a first come, first serve basis with priority given to projects modifying or correcting fish passage problems. This money is separate from the money allocated to the Culvert Program by the Oregon Transportation Commission. Routine maintenance projects are not funded with Salmon Recovery Program money.

SUMMARY

The challenges facing ODOT continue with each new water quality or resource requirement. ODOT continues to work toward an integrated, statewide approach to many of the issues, while developing guidelines and direction for project development.

ODOT is a minor player in the Oregon Plan for Salmon and Watersheds. ODOT believes that the solutions developed for ODOT can be easily modified for use by public works authorities, contractors, and developers.

DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT

Revised DLCD-1: Coordinate Implementation of the Coastal Nonpoint Pollution Control Program (CNPCP)

DLCD-1 only applies in coastal basins.

The Coastal Nonpoint Pollution Control Program (CNPCP) is a federal requirement of the *Coastal Zone Act Reauthorization Amendments of 1990* (CZARA). Section 6217 of CZARA requires states with federally-funded coastal programs to implement enforceable nonpoint source pollution control measures for land use activities in the coastal zone and in basins that have significant impact on the state's coastal waters. States have until 2007 to adopt enforceable authorities to implement 56 nonpoint source pollution control management measures contained in EPA's *Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters* (EPA Document 840-B-92-002). In Oregon, development of the CNPCP is the joint responsibility of DEQ and DLCD.

Oregon submitted its CNPCP to NOAA and EPA for review in July 1995. In 1996, DLCD, along with other agencies, developed measures to restore native coho salmon populations in coastal basins. Continued work on the CNPCP was a significant portion of DLCD's salmon recovery commitment; the original goal, objectives, and schedule for DLCD-1 in the *Coastal Salmon Recovery Initiative* in large part reflect the priorities, momentum, and commitments made in Oregon's 1995 program submittal.

In January 1998, NOAA and EPA finally completed their review of Oregon's program submittal. Like most state CNPCP programs, Oregon's program was *conditionally approved* by EPA and NOAA. NOAA and EPA's findings for their approval identify thirteen CNPCP components which need further development before the state's program can be *fully approved*. The revised goal, objectives, and schedule for DLCD-1 now largely reflect the need to meet the federal conditions for program approval.

The fundamental purpose of the CNPCP is to implement adequate controls to significantly mitigate the water quality impacts of land and resource use activities in coastal watersheds. In particular, the CNPCP is intended to address nonpoint sources of pollution that are not covered under other state and federal water quality programs and regulations. Since authority over such activities rests with several state agencies, DEQ and DLCD must maintain partnerships with ODA, DSL, WRD, ODOT, ODF, and the Marine Board to coordinate implementation of the CNPCP. As coordinators, DEQ and DLCD will provide technical assistance, financial support where possible, and guidance as needed for implementing appropriate nonpoint source pollution control measures.

In the absence of any other program to methodically identify chronic nonpoint source pollution problems and develop adequate measures to address them, the comprehensive approach in the CNPCP appears to be reasonable, although both financially and politically expensive. Where there *are* such programs, an independent CNPCP would be redundant. Since Oregon developed its CNPCP submittal, two fundamental changes have occurred to significantly expand the scope of the state's framework for addressing nonpoint source pollution. First, Oregon has developed the *Oregon Plan for Salmon and Watersheds*, a comprehensive approach to restoring native anadromous fish populations.

And second, the salmon plan is being accomplished in part by the development of Water Quality Management Plans under section 303 of the Clean Water Act. These developments mean that the independent or parallel development of a Coastal Nonpoint Pollution Control Program would be duplicative.

As such, DLCDC does not anticipate developing new authorities for implementation of the CNPCP. Rather, the main emphasis in implementing the CNPCP will be to foster integration of the CNPCP management measures into other water quality and watershed restoration programs.

Implementation of the urban components under existing authorities of the state's land use program is addressed in DLCDC-5 below.

Goal: Coordinate implementation of the remaining elements of the CNPCP identified in NOAA and EPA's conditional approval of Oregon's CNPCP program submittal.

Objectives: Continue to work with DEQ to develop implementation strategies, to make policy clarifications, and to establish program priorities.

Assist other state agencies in implementing elements of the CNPCP to which they are committed under the Oregon Plan.

Work with DEQ and appropriate state agencies to determine the need for "Critical Coastal Areas" under the CNPCP.

Develop a basis for implementing the urban management measures through existing state authorities and programs to address water quality, specifically DEQ's authorities under the Clean Water Act and DLCDC's authority under Statewide Planning Goals 5 and 6 (see DLCDC-5).

Responsibilities:

In collaboration with DEQ, Oregon Coastal Management Program staff will continue to coordinate implementation of the CNPCP.

Results: A *fully approved* state coastal nonpoint pollution control program by 2002.

Funding: Federal grant to the state under CZARA Section 6217; one FTE.

Schedule: Secure confirmation by EPA and NOAA that the CNPCP boundary be maintained at Puget Island in the Columbia Basin; June 1999.

Work with partner CNPCP agencies to integrate CNPCP commitments into OPSW measures, and to report on progress implementing CNPCP measures as part of agency OPSW reports: January 1999

Formally submit information to EPA and NOAA to satisfy the CNPCP conditions related to the following measures:

Watershed Protection management measure: April, 1999.

Hydromodification Management Measures (guidelines for restoration in modified channels, and exemptions under the state's removal fill law): April 1999

Roads, Highways, and Bridges Management Measures (for state and federal highways): April, 1999

Marinas and Recreational Boating Management Measures (five measures): August; 1999

DLCD-2: Riparian Area Technical Assistance

Measure completed in 1997; refer to the 1998 *Oregon Plan for Salmon and Watersheds* Annual Report.

Revised DLCD-3: Identify Estuarine Restoration Opportunities

In 1996, DLCD successfully applied for a two-year fellowship from the NOAA Coastal Services Center (CSC). The fellow's project, which was developed jointly by DLCD and the prospective fellow, was to develop a prototype estuary management information system. The project resulted, in mid-1998, in a prototype Dynamic Estuary Management Information System (DEMIS), for the Coos Bay estuary.

Under DLCD-3, DLCD will address the need to identify estuarine restoration opportunities by expanding the DEMIS project to include five Oregon estuaries -- the Nehalem, Siletz, Siuslaw, Coos, and Coquille. This measure will accumulate, customize, and standardize digital data relevant to estuarine processes and functions, with an emphasis on data layers needed to identify restoration sites. Finally, the project will result in an analytical method which can be used to update inventories of potential restoration sites within the rest of Oregon's estuaries.

Goal: Identify areas that are appropriate for restoration to estuarine habitats and functions.

Objectives: To create a user-friendly, dynamic information system which can aid in 1) restoration site identification, and 2) decision making processes essential to a deliberate net increase in estuarine wetland habitats.

Responsibilities:

The NOAA Coastal Services Center fellow will implement the digital data collection, processing, and restoration site inventory analysis, and consult with local governments and watershed councils to determine estuary-specific user needs.

Results: Identification of lands that are suitable for restoration to estuarine habitat. Expansion of DEMIS as a community level, GIS technology-based, estuary management information system. Establishment of an Oregon coast-wide Estuary Information World Wide Web site capable of providing DEMIS derived products, information and results.

Funding: NOAA Coastal Services Center funding through September 2000.

Schedule: Selection of priority DEMIS expansion estuaries (completed 12/98).

Launch of coast-wide estuary information World Wide Web site: April 1999.

Local consultations, data collection, processing and restoration site inventory analysis: April 1999 through June 2000.

Completed expansion and packaging of DEMIS products for Nehalem, Siletz, Siuslaw, and Coquille estuaries, and designation of subsequent priority DEMIS expansion estuaries: July 2000 through September 2000.

Revised DLCD-4: Healthy Streams Partnership Grant Program

DLCD-4 was originally titled *Implement New Goal 5 Rules for Riparian Protection*. Since implementation of the revised rules (see below) relies largely on the availability of grants to local governments, the measure is being renamed *Healthy Streams Partnership Grant Program*.

More substantively, DLCD is revising this measure to expand the Healthy Streams Partnership (HSP) grant program from its original focus on coastal basins to a statewide program. Revision of DLCD-4 will have no effect on the original goals and objectives of the measure (see below).

DLCD-4 was originally developed under the *Coastal Salmon Recovery Initiative* (CSRI), and hence applied to areas within Oregon's coastal coho recovery plan. The CSRI did not involve the Columbia River or basins draining into the Columbia. After the OPSW Steelhead Supplement was produced, DLCD awarded a few HSP grants to jurisdictions in the Willamette basin; however, DLCD did not specifically revise the measure at that time.

In the 1999-2001 biennium, eligibility for HSP grants will be expanded to all areas of the state. Priority will be given to jurisdictions that are subject to a listing of an aquatic species under the federal Endangered Species Act.

This task is intended to implement the Goal 5 administrative rules to protect riparian corridors and wetlands inside riparian corridors, which were amended in 1996. The amended rule requires local jurisdictions to adopt programs in compliance with the new rules before or at the next regularly-scheduled periodic review of their comprehensive plans. DLCD will use funding provided under this measure to supplement resources available for periodic review grants to local governments, and to therefore emphasize the high priority of implementing the new Goal 5 rules. In addition, DLCD will consult with jurisdictions whose periodic reviews are not scheduled until after 2001 to attempt to get the rules implemented sooner, outside the framework of periodic review.

Goal: Increase protection for riparian corridors and riparian wetlands; exclude from riparian corridors uses and activities that impair riparian and riparian wetland vegetation, structure, and function.

Objectives: Adopt stronger provisions for protecting riparian areas and wetlands in riparian buffers in local comprehensive plans and implementing ordinances.

Responsibilities:

DLCD field staff will manage grants and ongoing consultations through a local jurisdiction's process of adopting new riparian and wetland protection provisions.

Results: Local comprehensive plan amendments to protect riparian corridors.

Funding: Program Option Package 302 in DLCD's 1999-2001 budget.

Schedule: HSP grant application, criteria, and draft grant agreement: September 30, 1999

Complete first round of grant agreements to local jurisdictions: March 30, 2000

Revised DLCD-5: Implement CNPCP Urban Management Measures

This task is a component of DLCD-1, and likewise only applies in coastal basins.

Under the coastal coho and steelhead recovery plans, DLCD anticipated implementation of the CNPCP Urban Management Measures by working with DEQ and local governments to develop rules, provide technical assistance, and provide grants to local governments to adopt measures to reduce nonpoint source pollution from urban activities.

In revising DLCD-5, DLCD is taking advantage of both the greater flexibility in federal guidance for implementation of the CNPCP (see DLCD-1 above) and the state's evolving framework for reducing nonpoint source pollution. Oregon's dominant approach for addressing nonpoint source pollution problems is to develop TMDLs and Water Quality Management Plans (WQMPs) under section 303 of the Clean Water Act. The development of WQMPs may preclude the need for new administrative rules to implement the CNPCP Urban Management Measures.

Under the revised DLCD-5, DLCD is working with DEQ to identify opportunities to implement the CNPCP Urban Management Measures using authorities and processes to implement the Clean Water Act, the Endangered Species Act, and Oregon's Statewide Planning Program. Although it is possible that administrative rules may need to be amended to implement CNPCP Urban Management Measures, the authority for incorporating Urban Management Measures into local planning activities likely exists in state and federal statutes and rules for waters and areas listed under the Clean Water Act and Endangered Species Act, respectively.

Under DLCD-5, DLCD -- in partnership with DEQ -- will provide technical assistance and grants to local governments to implement the CNPCP Urban Management Measures.

Goals: Implement the CNPCP Urban Management Measures through the Water Quality Management Planning process administered by DEQ under section 303 of the Clean Water Act.

Provide technical assistance to local governments on how to implement measures to reduce the hydrologic effects of development and reduce the pollutant load from urban land use and development activities.

Objectives: Reduce peak runoff volumes from newly developing urban areas.

Improve consideration of hydrographic and water quality effects in land use decisions.

Reduce the exposure of pollutant sources to storm water.

Reduce the impact of road and highway operation and maintenance on water quality and aquatic habitat.

Draft a model code provisions to protect water quality.

Responsibilities:

OCMP staff will review DLCD policies related to urban development to identify water quality implications, and foster a protective approach to the resource.

OCMP staff will work with DEQ to develop an outreach program for local governments which will include presentation materials, a Water Quality Model Development Code, and possibly grants to assist with the cost of amending local comprehensive plans.

Results: Local comprehensive plan provisions and ordinances to implement management measures to reduce the effects on water quality and hydrology from newly developed areas.

Funding: Grant awarded under section 319 of the Clean Water Act by DEQ; possibly Healthy Streams Partnership grant program (DLCD-4).

Schedule: Presentation Materials: October 1999
Water Quality Model Code: December, 1999
Grant Program to local governments: October 1999

New Measures:

New DLCD-6: Update Estuary Habitat Maps (POP 102)

DLCD-6 is intended to provide data to local governments and other estuary managers to update local estuary management plans. Today's estuary management plans, developed over twenty years ago to implement Statewide Planning Goal 16- *Estuarine Resources*, were based on the best estuarine habitat and substrate data available at the time. Since the data were acquired in the early 1970s, there has been a considerable level of resource development in coastal watersheds. While we are certain that a quarter-century of watershed development has resulted in changes to estuarine systems, there is no data available to help determine exactly *what* those changes have been. Further, the same data that could be used to quantify and characterize changes to the estuaries in the last 25 years is the same kind of data that would be needed to revise estuary management plans developed under Goal 16.

DLCD-6 will develop and apply a methodology to acquire habitat data in the Oregon estuaries governed by an estuary management plan.

Goal: Acquire and distribute data needed to update estuary management plans

Objectives: To develop a cost-effective methodology to acquire data on estuarine habitats
To acquire habitat data in selected estuaries
To make new data available to local governments and other estuary managers to support revisions to estuary management plans and programs

Responsibilities:

DLCD's coastal division staff will manage this project, including developing a complete project design; soliciting proposals for contract work; contract management; and technical and peer review.

Results: Methodology for defining, identifying, and mapping estuary habitats
Maps of estuarine habitat units in selected estuaries

Funding: Program Option Package 102 in Governor Kitzhaber's 1999-2000 budget request for DLCD.

Tentative schedule (to be reviewed upon receipt of funding):

September 1999: Draft project work scope
November 1999: Publish Request for Proposals to develop and test habitat mapping methodology. Select pilot estuaries
March 2000: Begin field investigations and data acquisition
January 2001: Compare new habitat maps with original estuary habitat maps, develop report on documented changes.
June 2001: Publish methodology, maps, and report on documented estuary changes.

New DLCD-7: Local Government Salmon Recovery Work Group

The *Oregon Plan for Salmon and Watersheds* has been developed principally from the perspective of state and federal agencies. Participation by local governments has been through a variety of processes and mechanisms, principally through water quality planning, comprehensive plan amendments, and participation in watershed councils. However, DLCD has observed that understanding of and participation by local governments in salmon recovery planning is widely mixed. Further, especially since ESA listings could potentially affect all local governments in a variety of ways, it has become clear that state and federal agencies could improve coordination of their programs, measures, and initiatives that could affect both local government perceptions of the salmon recovery issue and local government operations.

This measure is intended to provide a forum and mechanism to develop a consistent message and common understanding of what species recovery means for local governments in Oregon.

Goal: To provide a forum for state and federal agencies and local governments to clarify their responsibilities under the Oregon Plan, how they affect

local governments, and how they can improve the capacity of local governments across the state to participate in salmon recovery activities.

Objectives: Develop a consistent message about how salmon recovery affects local government responsibilities and activities.

Resolve local government's questions and concerns about various salmon recovery planning activities of state and federal agencies.

Responsibilities:

DLCD intends to convene the work group and facilitate meetings until the group becomes self-perpetuating.

Results: Improved understanding of local government capacities, desires, limitations, information and resource needs, and potential commitments to salmon recovery.

Clarification of the relationship between various water quality planning processes, initiatives, and mandates, local comprehensive planning responsibilities, and species recovery planning at the local level.

Funding: Task to be integrated into work program supported by DLCD's present base level budget until July 1, 1999. Future funding dependent on 1999-2001 budget resources.

Schedule: April, 1999: Convene a scoping group to identify and clarify the need for a local government work group on salmon recovery. Identify participants and initial goals and objectives.

July 1999: Convene first meeting of the Work Group (contingent on funding).

New DLCD-8: Outreach/Education for members of local planning commissions and watershed councils

DLCD wants to foster improved interaction between local planning commissions and watershed councils. Our observation is that, while the two kinds of bodies often have complementary objectives, each is not well aware of the other's concerns, objectives, and mechanisms for aquatic resource conservation and protection. We believe planning commissions need basic information about salmon life history needs and recovery measures, and watershed councils need information about the opportunities, limitations, history and effect of Oregon's Statewide Planning Program.

Goal: Increase consideration of the effects on aquatic habitat of land use activities in local land use decisions

Objectives: To provide basic information to planning commissions about anadromous fish habitat needs and the effect of land use activities on aquatic habitat

To provide basic information about Oregon's land use program to watershed councils

Responsibilities:

DLCD coastal division staff will identify sources of funding to conduct pilot workshops for planning commissions and watershed councils, and will revise the curriculums for the workshops based on feedback and results..

Results: Improved communication and shared language by planning commission members and watershed council members.

Funding: Source not yet identified.

Schedule: By January 2000: Identify funding source to develop workshop materials for planning commissions.

By March 2000: Identify pilot communities and watershed councils.

By June 2000: Select consultant to provide workshops to three planning commissions and three watershed councils in pilot communities.

December 2000: Report on workshops, revised curriculum, feedback summary from participants.

New DLCD-9: Scoping Changes to the Statewide Planning Goals for Water Quality and Aquatic Habitat

Oregon's Statewide Planning Goals are the basis in law for developing local comprehensive land use plans by every city and county in the state. The goals are based on the fundamental complementary objectives of conserving resource lands for resource uses and directing growth to clearly delineated urban areas. The goals also address transportation, housing, public facilities, and coastal resources. The goals also contain several provisions that potentially affect land use activities which in turn affect both water quality and salmon populations. In 1996, goal provisions related to the protection of various natural resources -- including riparian corridors and wetlands -- were revised to improve the protection of such resources through local plans. The revised requirements need to be assessed to ensure they are the most effective possible, considering other comprehensive planning priorities. In addition, various other goal provisions related to water quality and aquatic habitat have been implemented at the local level to only a very small degree, principally because those goal provisions are only very general statements, and because they were crafted at a time when the main water quality and aquatic habitat problems were thought to be attributable to point source pollution problems.

The purpose of this task is to undertake a joint effort with other state agencies to review goal provisions and administrative rules that relate to the improvement and protection of water quality and aquatic habitat.

Goal: Identify revisions to the Statewide Planning Goals that could result in improvements in water quality and aquatic habitat.

Objectives: To provide a comprehensive policy analysis and framework for considering revisions to the Statewide Planning Goals

To increase consideration of the effects of land use activities and land use decisions on water quality and aquatic habitat

Responsibilities:

DLCD will either hire or provide staff to convene a technical working group consisting of state agency staff, local planning officials, and other participants as necessary. This staff will provide an analysis of the goals as they relate to water quality and aquatic habitat, facilitate the group's discussion of potential improvements, and document the basis for and nature of suggested goal revisions.

Results: A comprehensive analysis of goal provisions related to water quality and aquatic habitat, a summary of their local implementation, improvements that could be implemented through local plans, and goal changes that would result in such local plan improvements.

Funding: Federal coastal management grant, starting July 1, 1999 and running through June 30, 2000.

Schedule: By July 30, 1999: appoint staff; draft work scope; identify working group members and schedule.

December 30, 1999: Water quality and aquatic habitat analysis of the goals.

June 30, 2000: Draft report on Statewide Planning Goal Improvements for Protection of Water Quality and Aquatic Habitat.

Phase 2 Measure**New DLCD-10: Revising Statewide Planning Goals to Improve Protection of Water Quality and Aquatic Habitat**

This measure is a "Phase 2" companion to DLCD-9, and can only be implemented with new resources to the agency. DLCD-9 will produce a comprehensive analysis of Statewide Planning Goal changes that could be made to improve protection of water quality and aquatic habitat.

DLCD-10 will use the report produced in DLCD-9 as a basis for drafting goal and rule changes -- and, where necessary, alternatives -- to improve protection of water quality and aquatic habitat. The legal, institutional, and programmatic framework for revising the goals includes new stormwater regulations for small cities under Phase II of the NPDES stormwater permit program; requirements to protect drinking water supplies under the Safe Drinking Water Act Amendments of 1996; anadromous fish listings under the Endangered Species Act, and the development of ESA section 4(d) rules; and the development of nonpoint source water quality management plans under section 303 of the Clean Water Act.

Goal: Statewide Planning Goals and administrative rules that provide greater protection for water quality and aquatic habitat.

Objectives: Clarify and improve the effect of the Statewide Planning Goals on local comprehensive plans and the land use decisions made under those plans.

Responsibilities:

DLCD will convene an advisory committee for water quality rule revisions consisting of state agency staff, local planning officials, and other participants as necessary. DLCD will facilitate and manage the group's development of goal and rule revisions for consideration by the Land Conservation and Development Commission.

Results: Draft goal and administrative rule revisions related to water quality and aquatic habitat.

Budget: Staff: One FTE, NRS 4 or NRS 5; ½ FTE Administrative Assistant; 1/4 FTE Attorney General Consultation; S&S (~\$150+K/yr for 2 years?)

Funding: Funding source not yet identified.

Schedule: Startup: July 1, 2000

By September 30, 2000: appoint staff; draft work scope; identify advisory group members and draft project schedule.

December 30, 2001: Draft Statewide Planning Goal and Oregon Administrative Rule revisions for consideration by the Land Conservation and Development Commission.

FEDERAL AGENCY IMPLEMENTATION REPORTS

ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA Measure Number 1 - Alignment of Water Quality Recovery Priorities with Salmon Recovery

- With the Department of Environmental Quality and other agencies, we will identify and develop water quality recovery priorities and approaches that closely support salmon recovery efforts. Both the selection and sequencing of geographic priorities and the clustering of water quality parameters into a watershed-based approach will better support coastal salmon life history needs. The Performance Partnership Agreement (PPA) with Oregon provides a sound framework to more fully integrate water quality and salmon recovery efforts.

Status: Salmon recovery is jointly identified by EPA and DE as a top priority in the Performance Partnership Agreement (PPA) between the two agencies. Consistent with the initial emphasis on coastal watersheds the PPA has emphasized the Tillamook, Rogue, Umpqua, and South coast basins in terms of both financial and technical resources. With the expansion of the Oregon Plan's geographic scope, the PPA responded by maintaining and building upon investments in the Grand Ronde, Umatilla, and Willamette basins.

The recent interagency Clean Water Action Plan (CWAP) and Unified Watershed Assessment (UWA) efforts are aimed at coordinating state and federal resources at the state and regional level to support watershed restoration efforts in priority basins and sub-basins. This process was recently used for prioritizing watersheds for targeting supplemental nonpoint pollution control funds. The CWAP and UWA approaches might provide the needed comprehensive process for ensuring that the basic categories of technical and financial assistance needed to support watershed protection and restoration approaches are coordinated and sequenced in a coherent way across the basins of the state. The categories or topics for coordinated staffing and financial support for implementing watershed protection approaches could be expanded to include such things as:

- information development
- technical assessments
- action planning processes
- project design assistance
- implementation funding
- and monitoring assistance.

EPA Measure 2 - Development of Water Quality Standards that more Closely Match Salmon Life History Needs

- Work with the National Marine Fisheries Service and Department of Environmental Quality to develop instream habitat guidelines for eventual inclusion in the Clean Water Act water quality standards. This effort will help to ensure that the water quality standards fully protect beneficial uses, specifically including salmon life history needs. Resulting measures will provide a basis to judge both existing conditions and trends over time and the landscape.

Status: The technical report on the feasibility of using habitat indicators for assessing water quality standards compliance and for developing more narrative water quality recovery targets will be released in the spring of 1999 - the literature review having been completed in 1998. General findings of the report include that: a) the prospects are encouraging regarding the use of more narrative habitat-oriented water quality criteria in addition to the current numeric water column quality criteria such as temperature and dissolved oxygen; b) such channel and habitat criteria cannot be uniformly determined at the larger state and regional scales, but rather need to be tailored to more localized ranges of natural variability; and c) channel and in-stream habitat indicators must be linked to the upland input parameters that affect channel and habitat conditions. Copies of the report can be obtained after June, 1999 by phoning the EPA information service center at 1 800 424-4EPA and requesting the stream habitat indicators report.

EPA Measure 3 - Monitoring and Evaluation of Best Management Practices

- EPA will work with Oregon Department of Environmental Quality to track implementation and effectiveness of the current water quality standards in protecting aquatic resources and beneficial uses. Monitoring is needed specifically to support the assumption that Best Management Practices (BMP) are effective in preventing incremental loss of aquatic resource integrity, such as that resulting from altered stream temperature and sedimentation regimes. EPA will work with the Oregon Department of Environmental Quality on strategies to provide the monitoring output needed to evaluate the effectiveness of the best management practices in maintaining and recovering water quality and the associated beneficial uses of Oregon's waters. EPA will also work with NMFS and USFWS to assist in designing Habitat Conservation Plan monitoring and implementation tracking strategies so that they concurrently address requirements of both the Endangered Species Act (ESA) and the Clean Water Act (CWA).

Status: EPA has been working with DE and other federal, state, and local agencies to design a strategy for basin assessments and monitoring. A template for basin risk assessment was developed in the Rogue and Umpqua Basins. Similar efforts are underway in the Willamette and North Coast basins which EPA supports. EPA also actively supports GWEB's 5th field watershed

assessment process. These assessments will help establish the basis for system scale monitoring and adaptive management. These approaches identify key factors inherent to the landscape that determine how the basin/watersheds respond to human management activities. As such, the state and local watershed councils will be better able to evaluate the effectiveness of BMPs and other management activities to protect and restore riverine systems.

Additionally, EPA has participated on the Aquatic and Riparian Effectiveness Monitoring Committee of the Northwest Forest Plan. Critical issues that we have represented and ensured integration into the strategy include: (1) collaboration with the state to identify linkages between the federal and state monitoring efforts, (2) compliance with the state's water quality standards program, and (3) incorporation of approaches developed in the Rogue and Umpqua Basins and by GWEB. Our goal was to ensure that the two programs were complimentary rather than duplicative or unrelated. EPA has also initiated a two-year process involving EPA, DE, NMFS, and USFWS to collaborate on water quality standard review thereby facilitating ESA/CWA integration. To further move integration forward, EPA has worked extensively with NMFS to define a strategy for TMDL/HCP integration. To support this effort, we have worked with NMFS to share methodologies and experiences related to basin assessments. Pilot integration efforts are underway a number of regional, state, and local forums including the Rogue Valley's Applegate Watershed.

EPA Measure 4 - Technical Assistance

EPA will work with Federal, state, and local groups to provide greater technical assistance to the Oregon Plan in the following ways:

- Work with other agencies and local watershed groups to provide more compatible data layers for integrated watershed assessments.

Status: Data integration support is being provided in the Rogue, Umpqua, South coast, Coos and Coquille, Willamette, and North coast Basins. In addition, EPA staff have been working with GWEB on watershed assessment guidance and information development.

- Continue to work with local watershed groups to use both basin and watershed scale assessments for aligning restoration efforts and sequencing geographic and risk-based priorities in a watershed context, somewhat irrespective of land ownership patterns. This approach should advance our collective ability to more effectively address the large number of impaired waters listed by Oregon under Clean Water Act, Sec. 303(d).

Status: In FY 98, EPA focussed staff and information resources for this type of work in the Rogue, Umpqua, Tillamook, Grand Ronde, and Umatilla Basins. In

FY 99, EPA is planning data development and technical assessment work in the Deschutes Basin through our EMAP program.

- Work with Oregon to identify programmatic and geographic areas where more effective methods and approaches are needed to control nonpoint source pollution and support development of those methods and approaches.

Status: DE and EPA are targeting federal and state grant funds to implement BMP demonstration projects and to support a range of watershed assessment, monitoring, and watershed council work in the Grand Ronde, Umatilla, Tillamook, Nehalem, Rogue, and South Coast Basins. These efforts will engage landowners and local communities in land management activities such as riparian area improvements and dairy manure management. Much of this work will directly support development and implementation of watershed management plans that are designed to achieve water quality standards.

- Continue to fund two full-time staff to work in Oregon Department of Environmental Quality to help develop technical TMDL's in selected basins such as the Tillamook, Grand Ronde, and the Umpqua mainstem.

Status: Two EPA staff people to assist with TMDL work were assigned to DE via the Intergovernmental Personnel Act in early FY97, one to the Northwest Regional Office and the other to DE Headquarters. These positions will continue to be funded through FY 99.

- Commit Northwest Forest Plan Province Coordinators to engage the involvement of the Provincial Advisory and Interagency Executive Committees to support the Oregon Plan in more specific and concrete terms. Work on these issues in these forums will help integrate strategies for federal and private lands.

Status: Western Oregon Province Interagency Executive and Advisory Committees (PIEC & PAC's) have been kept involved in the development and implementation of both Northwest Forest Plan and Oregon Plan issues. The coordination of the NWFP and the Oregon Plan largely has been maintained as a major topic of work in these committees. Integration of activities relating to federal and non-federal lands will require an ongoing effort.

EPA Measure 5 - Funding Assistance

Continue to provide coordinated financial support and continue to explore other funding opportunities, such as the State Revolving Funds for implementing the watershed protection and restoration approaches described within the Oregon Plan.

Summary Table EPA 1998 funding in support of the Oregon Plan

Estimates of FY98 project funding summaries for Oregon. This summary does not include base funding to states via Section 106 funds to support CWA programs. Only project titles related to the categories provided were included (e.g. only ~75% of 319 funds were included).

EPA FY'98 Funding

Watershed Council Support

(\$319, \$104, For Sake of Salmon Grant, Sustainability Challenge Grant)
\$545,000

Interagency Coordination

National Estuary Projects, \$319, \$104, Regional Geographic Initiatives
\$353,000

Watershed Planning/ Assessment (NEP, Wetlands, \$319, \$104, RGI)

\$531,300*

Water Conservation and Source Protection (SDWA)

\$100,000**

Watershed Restoration (\$319, Wetlands, Sustainability Challenge Grant)

\$698,000

Research & Tech Training (\$319, CERL)

\$146,000*

Monitoring and Evaluation (Wetlands, CERL, \$104)

\$213,000*

Education and Outreach (\$319, Wetlands, \$104, NEP, RGI)

\$152,000

Available State Revolving Funds

?

Totals

~8fte

\$2,738,000

Example List of Projects Funded:

- *Development and dissemination of Best Management Practices's for Intensive Crop Production in the Willamette Valley (\$25k)*
- *Roca Creek Restoration Projects -Rogue Bear Creek Sub-basin (\$25k)*
- *South Umpqua Restoration Demonstration Funds (\$20k)*
- *South Umpqua Basin Volunteer Monitoring Project (\$10k)*

- *Urban Streams Stewardship/ Education and Technical Assistance Lower Willamette (\$20k)*
- *Lower Nehalem Watershed Assessment Monitoring Plan and Equipment (\$4k)*
- *Long Term Watershed Assessment Program for Evaluating BMP's in the Grand Ronde (\$73k)*
- *McCoy Meadows Restoration Project Grand Ronde (\$50k)*
- *Workshops on Erosion Control for Coastal Building Contractors for Coastal Oregon (\$32k)*
- *South Coast/ Rogue Watershed Enhancement and Restoration Program (\$130k)*
- *Culvert Design Training North Coast (\$10k)*
- *Lower Columbia Wetlands Restoration and Evaluation (~\$30k)*
- *Coos Bay South Slough Wetland Restoration Design and Evaluation Techniques (~\$25k)*
- *Applegate Watershed Restoration Planning / CWA/ESA Integration Pilot (\$25k)*

ADDITIONAL STEELHEAD MEASURES

EPA 6 - Attaining Water Quality Standards for Temperature and Total Dissolved Gas

- EPA will work with the Corps of Engineers, the Bureau of Reclamation (BR), the Public Utility Districts (PUDs) and Canada to develop and implement a long term gas abatement plan with the goal of meeting the 110% water quality standard for total dissolved gas (TDG) in the Columbia and Snake Rivers under all spill scenarios.
- EPA will work with the Corps, BR and PUDs on mainstem maximum water temperature issues and with the states, federal land management agencies, tribes, and local watershed councils on tributary maximum water temperature issues with the goal of meeting water quality standards for temperature throughout the basin. Water quality standards for temperature and total dissolved gas were established at current levels to protect salmon, steelhead and other forms of aquatic life. Water that meets water quality standards is a basic need for the recovery and protection of steelhead.

Status: The second Columbia/Snake River mainstem water temperature workshop was held in Portland December 4th and 5th, 1998 to provide a continuing forum to seek solutions for connecting tributary and mainstem restoration and mitigating high water temperatures. The status of EPA work on the mainstem water temperature model and preliminary model results was presented at the workshop. This work, to be completed in early 1999, will be the precursor of a temperature TMDL for the Columbia River mainstem.

EPA has a full time Columbia Basin Coordinator focusing on water quality issues and participating regularly in Technical Management Team, Implementation Team and System Configuration Team meetings associated with ESA concerns. The explicit purpose of the EPA coordinator is to work to ensure that water quality standards, particularly for maximum water temperature and total dissolved gas are achieved in the mainstem. Water quality standards are designed to protect aquatic life and are therefore a fundamental requisite for the recovery of endangered fish species.

EPA, other relevant federal and state agencies, tribes and Columbia Basin project owner/operators have formed a Transboundary Committee with their Canadian counterparts. The adopted goal of this group is “Reduce system wide total dissolved gas to levels not harmful to all aquatic life in the most cost-effective manner possible”. This committee and various work groups met several times during 1998 and early this year and are currently assembling a study plan to answer the basic questions of what information is currently available, what work needs to be done to fill information gaps, how long will it take the various needed tasks to be completed and how much will each effort cost? When the study plan is assembled this spring, funding will be sought from both US and Canadian sources to implement the plan.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NOAA-NMFS1 - Hire-the-Fisher Habitat Restoration Program and Fishery Data Program

Task completed.

- Hire-the-Fisher Program was concluded.

Tasks funded and completed coastwide.

- Sea lion tagging study by ODFW
- Columbia River test fishing program by ODFW
- Hooking mortality and gear selectivity studies by NRC

Tasks underway coastwide

- Some projects funded by NMFS but administered through Pacific States Marine Fisheries Commission are still in progress; a final report will be submitted in the fall of 1999
- Fishery Data Program was extended through June, 1999, using the balance of the \$2.65 million awarded in 1996

NOAA-NMFS2 - Watershed Council Support

Tasks concluded.

- Funded several watershed workshops conducted in 1998 by For the Sake of the Salmon
- Funded technical support to the "Five Counties" working on a coho Salmon Conservation Plan in the coho ESU shared with Southern Oregon
- Funded watershed coordinators for Nehalem Watershed Council and City of Lakeside (\$94 thousand)

Tasks underway.

- Funded Willamette Basin watershed work for 1999 (\$100 thousand)
- Funded Rogue Valley Council of Governments watershed efforts (\$15 thousand)

NOAA-NMFS4 - Habitat Matrix

Task concluded.

- A matrix of habitat requirements of salmon, developed by NMFS, is now being used to assist watershed councils, agencies and others to evaluate the impacts of proposed actions to listed species

NOAA-NMFS5 - Northwest Forest Plan (NFP)

Task completed.

- Participated in a Department of Interior review of the NFP and helped draft an MOU to guide five more years of NFP implementation

- Completed surveys of summer and winter fish, habitat, and large woody debris in 30 stream reaches at 15 separate restoration projects on state, private and federal lands

Tasks underway and on schedule coastwide.

- Providing a part of the national support and oversight for the NFP through participation on the Regional Interagency Executive Committee, and participating in regional policy development and coordination through the Regional Interagency Executive Committee and its Intergovernmental Advisory Committee
- Supporting coastal and southwest Oregon local NFP implementation, technical deliberations and collaborative watershed restoration through participation on Provincial Interagency Executive Committees and their Provincial Advisory Committees
- Studying with ODFW and Bureau of Land Management (BLM) the effectiveness of instream restoration projects in the North Coast province

NOAA-NMFS6 - Regional Ecosystem Office

Task underway and on schedule.

- Continuing to fund a full-time natural resource specialist at the REO, to provide leadership in addressing aquatic issues related to regional salmon conservation
- Continuing to help develop a plan to monitor the effectiveness of NFP in maintaining and restoring aquatic and riparian habitats essential to salmon

NOAA-NMFS6s - Irrigation Screening and Fishways

Tasks completed in the Snake River.

- Funded \$1.96 million through the Mitchell Act to construct and replace irrigation diversion screening and fishways, and to operate and maintain existing screens and fishways in Oregon

Task underway in the Willamette River.

- To ensure efficient fish passage into Willamette Basin, provided \$4.8 million to repair the flood-damaged Willamette Falls fishway; a total of \$8.2 million will have been spent when construction is complete in 2002

NOAA-NMFS7 - Coastal Terminal Fisheries

Task terminated and funds reprogrammed.

- Provided \$50 thousand to ODFW to survey Oregon coast to identify terminal fisheries opportunities; project was dropped and funds were used for the more pressing need of obtaining information on the effects of selective fishing on listed coho salmon (see NOAA-NMFS Measure 8, Selective Fisheries).

NOAA-NMFS7S - Exotic Fishes

Task completed and task underway.

- Co-hosted a joint workshop with ODFW to examine effects of exotic fish species on anadromous and resident salmonids; Proceedings will soon be published.
- Developing policy guidance arising from the workshop for exotic fish management

NOAA-NMFS8 - Selective Fisheries

Tasks underway.

- Funded \$50 thousand for research on the catch-and-release mortality associated with coho fishing on the Rogue River, to help manage future fisheries on the coast in a manner compatible with recovery of listed coho salmon
- Provided \$300 thousand to mark Oregon hatchery coho salmon in the Columbia River, to allow selective coho fisheries for sport fishers on the Columbia and possibly in the ocean in 1999--with minimal mortality to listed coho
- Providing \$140 thousand to mark hatchery spring chinook at Clackamas Hatchery to provide for future selective chinook fisheries in the Willamette Basin

NOAA-NMFS9 - Supplementation

Tasks completed.

- Evaluated and approved a prototype Hatchery and Genetic Management Plan from ODFW for Cole Rivers Hatchery, to allow the hatchery to operate its coho program and associated selective fisheries in a manner compatible with recovery of listed coho
- Provided \$3.72 million to ODFW and \$627,000 to the U.S. Fish & Wildlife Service to operate Oregon fish hatcheries
- Worked with ODFW to substantially reform lower Columbia River Basin hatchery steelhead programs and associated selective fisheries to minimize adverse effects to listed populations; local broodstocks are being reared to replace hatchery populations that may adversely affect wild stocks

NOAA-NMFS10 - Hatchery and Population Research

Tasks completed.

- Completed reviews of the coast-wide status of seven species of Pacific salmon
- Provided 167 adult spawners (broodstock) of listed Snake River spring/summer chinook, raised in captivity in seawater at NMFS' Manchester Laboratory, to ODFW; these salmon produced over 57,000 eggs for use in recovery efforts in Oregon

Tasks ongoing.

- Rearing chinook from brood-years 1994,1995 and 1996 for future recovery efforts
- Developing guidelines for monitoring genetic characteristics of wild and hatchery fish
- Identifying and evaluating salmon supplementation projects coastwide

- Studying the consequences of inbreeding within hatchery populations and outbreeding among hatchery populations of salmon

NOAA-NMFS11 - Section 404/10 Actions

Tasks completed.

- Completed over 200 ESA section 7 consultations

Tasks underway.

- Continuing ESA consultations with the Corps of Engineers on diverse actions
- Working with the Division of State Lands to monitor success of the State Programmatic General Permit (SPGP) pilot project in Douglas and Linn Counties and on establishment of the SPGP statewide

NOAA-NMFS12 - Highway Projects

Tasks underway.

- Continuing to fund an ODOT IPA to work on ESA consultations for OR projects

NOAA-NMFS13 - Hydropower Facilities

Tasks underway.

- Continuing to work on relicensing processes for facilities throughout Oregon

NOAA-NMFS14 - Non-Hydropower Facilities

Task completed.

- Prepared Biological Opinion on removal of Elk Creek Dam; removal awaits funding and is scheduled for summer of 2000
- Prepared Biological Opinion on removal of Jackson Street Dam in Medford, resulting in restored fish passage and stream habitat

Task underway.

- Working with Corps of Engineers on identifying ways to minimize impacts of Willamette Basin flood control projects on listed salmon
- Continuing to discuss Savage Rapids Dam removal with Grants Pass Irrigation District

NOAA-NMFS16 - Fish Passage Research

Tasks underway.

- Study to evaluate the performance and effects of diversion screens and other fish guidance equipment on dams on the Snake and Columbia Rivers
- Study of survival of salmon through spillways and spill patterns at dams to help select appropriate project operations to enhance survival and passage of juvenile

migrants

NOAA-National Ocean Service, 19 - Coastal Management and Nonpoint Source Programs

Tasks completed.

- Provided \$1.158 million to Oregon for the coastal zone management program, many elements of which benefit salmon conservation
- Provided \$54 thousand to Oregon to implement the section 6217 coastal nonpoint source water quality program
- Provided about \$100 thousand for Salmon Coordinator tasks and local land-use plan updates

NOAA-National Ocean Service-20 - South Slough National Estuarine Research Reserve

Tasks completed.

- Completed restoring full tidal flushing to 55 acres (six sites) of diked estuarine wetlands
- Published series titled Estuarine Resource Management Issues, which includes topics related to salmonid use of estuaries

Tasks underway and on schedule.

- Enhancement of 185 acre Bull Island is underway
- Enhancement of 60 acre Davis Slough by replacing culvert/tidegate is underway
- Restoration of tidal flushing and fish passage at two sites (50 acres) is underway
- Monitoring of restoration techniques and benefits is underway in multiple projects
- Collaborated with Coast Net and Hatfield Marine Science Center to develop and implement a curriculum for high school students; currently 30 coastal high schools are learning about water quality monitoring, watershed functions and related research
- On-site interpretive activities are offered

NOAA-Charleston Coastal Service Center, 21 - GIS Analysis of Coos Bay Estuary

Tasks completed.

- Conducted training in use of the compact disk (cd) for Coos Bay Estuary, with 150 layers of Geographic Information System (GIS) data, which was developed last year
- Distributed copies of the cd to Coos Bay teachers and trained them in using it
- Developed an inventory of potential estuary restoration sites in Coos Bay

Tasks underway and on schedule.

- Funded and assigned a new marine science “fellow” to work with Oregon
- Compiling GIS data layers for four more estuaries: Nehalem, Siletz, Siluslaw, and Coquille.

- Inventorying potential estuary restoration sites in the above four estuaries

NOAA-Office of Oceanic and Atmospheric Research 22 - Sea Grant Program

Task completed.

- Annually, NOAA provides nearly \$2 million to Oregon State University to provide public education, technical assistance and research in ocean and estuary functions; many projects have direct or indirect benefits to salmon conservation and recovery

NOAA-Pacific Northwest Coastal Ecosystem Research Study (PNCERS)-23

Task completed.

- Conducted a workshop “Protecting and Restoring Pacific NW Estuaries: The Task Before Us” in Troutdale in December, to inform estuary “practitioners” about PNCERS and discuss scientific studies needed in next five years to better protect and restore estuaries

Tasks underway.

- Study of factors that affect salmon survival in nearshore marine regions of the Pacific Northwest
- Study of changes to bottom habitats in Tillamook and Coos Bay estuaries as related to changes in fish and wildlife populations; the study will also provide information to help plan for the restoration of degraded sites

NOAA-NMFS24 - Genetics

Tasks underway and on schedule.

- Examined genetic relationships among populations of summer- and winter-run steelhead within the Alsea, Siletz, Umpqua and Coquille Rivers
- Studied and compared genes from wild and hatchery steelhead in Willamette River, and from resident and migratory (anadromous) populations of steelhead
- Studied genetic relationships among steelhead populations in the Deschutes, John Day and Umatilla Rivers, and among other inland populations

NOAA-NMFS26 - Estuarine and Ocean Ecology Research

Task completed.

- Scientific report on seal and sea lion populations on the West Coast
- In response to M/V New Carissa oil spill, a study of baseline conditions in estuaries at risk, to allow assessment of impacts to outmigrant juvenile salmon if the spill spread

Tasks underway and on schedule.

- Studies on salmon life cycle and factors controlling productivity

- Studies on the abundance and availability of prey
- Studies on environmental changes in the Columbia River plume, in relation to the growth and health of juvenile salmon
- Study to determine if predation by large marine fishes has contributed to the recent decline in ocean salmon survival
- Study of health of juvenile salmon in relation to human impacts to estuary water quality, habitat quality and natural environmental conditions

NOAA- Coastal Ocean Program -27-GLOBEC

Tasks completed.

- Land cover classification and change detection analysis for the Columbia River coastal drainage south to Tillamook Bay, with a focus on wetlands

Tasks underway and on schedule.

- Studies on coastal and ocean ecosystems of the Northwest
- The multiagency “Global Ocean Ecosystems Dynamics” research program, with a focus on effects of climate shifts and changes in the California current system, including El Nino, on salmon survival

NOAA-NMFS29 - For the Sake of the Salmon

Tasks underway and on schedule coast wide.

- Contributed \$180 thousand to support the fy99 work of this intergovernmental organization which is working to restore salmon coastwide

NOAA-NMFS30 - Snake River Recovery Plan

Task redefined and redirected; no longer a plan promulgated solely by NMFS.

Tasks underway in the Snake and Columbia River Basins.

- NMFS created and provides staff support to the Regional Forum, an intergovernmental body to implement the 1995 Biological Opinion and 1998 Supplement on Operation of the Federal Columbia River Power System, as it affects listed salmon
- Forum oversees the Corps of Engineers’ capital improvements to facilities, valued at \$100 million annually
- Forum oversees in-season management of flow augmentation, spill of water at dams to enable passage of fish, and transportation of juvenile salmon downstream past dams
- Forum oversees the analysis of potential future configurations of Snake River dams (including drawdown), a process called PATH
- NMFS also participates in the Columbia Basin Fish and Wildlife Authority, which each year prioritizes and manages the direct fish and wildlife program budget funded by the Bonneville Power Administration, valued at over \$100 million

- annually
- NMFS participates with Oregon and other state, federal and tribal entities in the Columbia River Basin Forum, developed to coordinate authorities and responsibilities so as to strengthen and improve fish and wildlife and related habitat management in the basin
 - NMFS participates with the states, tribes and other federal agencies in a program called the Multi-Species Framework Project to develop additional analyses of broad ecosystem recovery plans in the Snake and Columbia River Basins
 - NMFS is consulting under section 7 of the ESA with the Bureau of Reclamation on the operation of 22 major water storage facilities and several smaller reservoirs and diversion works in the Snake River above Lower Granite Dam.
 - NMFS is consulting under section 7 of the ESA with the Federal Energy Regulatory Commission (FERC) on Interim Protection Plans for listed species of salmon proposed by three public utility districts on the Mid-Columbia, pending review of other longer term commitments to protect salmon
 - NMFS is evaluating a biological assessment submitted by FERC on the proposed operation of the Hells Canyon Complex under the existing FERC license; a formal consultation may be required

Tasks completed.

- Biological consultations on the following: 1) Operations of the FCRPS, 1998 Steelhead Supplement; 2) Installation of a prototype spillway deflector at Wanapum Dam; 3) Upper Columbia River Northern Squawfish Management Program

NOAA-National Ocean Service, Ocean Research Conservation and Assessment-35-Hazardous Materials Response and Assessment

Tasks completed.

- Provided scientific support to the Unified Command throughout the emergency response to the grounding and oil spill from the M/V New Carissa
- Damage Assessment Center participated in determining risk of injury to fisheries during response to oil spill from New Carissa
- Conducted annual Rapid Assessment Program training in Hood River in September, to teach personnel to evaluate environmental damage from oil and chemical spills

Task underway.

- Helping develop the Portland Harbor Sediment Management Plan, a remedial strategy for lower Willamette River, to address contaminated sediments which may affect salmonids and other aquatic life

NOAA-NMFS40- MOU with NRCS and Oregon on ESA and Agriculture Issues

Tasks completed or underway.

- Signed an MOU with Oregon, NRCS, FWS, and EPA to streamline and improve

- the process for landusers and NRCS to comply with the ESA and contribute to the conservation of species of concern and their habitats
- Formed a Management Committee and Technical Team which are meeting frequently
 - Established priorities for MOU implementation
 - Initiated review of the NRCS Field Operations Technical Guides to identify enhancements needed to address conservation of species

NOAA-NMFS41 - Integration of ESA with Water Quality Management Planning

Tasks completed or underway and on schedule.

- Provided recommendations to the Oregon Department of Agriculture on addressing salmon habitat requirements in SB1010 Agricultural Water Quality Management Plans
- Provided \$15 thousand to the Rogue Valley Council of Governments to help support their work to integrate the ESA with the Clean Water Act in watershed planning
- Established stronger coordination with the EPA and the USFWS in the section 7 consultations on proposed revisions to state water quality standards that affect listed fish
- Collaborated with the EPA and USFWS to identify and resolve policy, regulatory and technical barriers to integration of the Clean Water Act and the ESA, in order to streamline the regulatory process and offer “one-stop shopping” to agencies and the public seeking to comply with both statutes

U.S. FISH AND WILDLIFE SERVICE

Introduction

The U.S. Fish and Wildlife Service (USFWS or Service) is located within the Department of the Interior. Its mission is to conserve, protect, and enhance fish and wildlife and their habitats for the continuing benefit of the public. Its legal mandates cover migratory birds, endangered and threatened species, certain marine mammals, anadromous fish, and the National Wildlife Refuge System. A major function of the USFWS is the identification and recovery of endangered species. With respect to salmonids, the USFWS is responsible for resident fishes (such as bull trout), while NMFS is responsible for anadromous species (such as coho salmon).

The Service helps implement the Oregon Plan through several initiatives that provide funding for habitat restoration on private lands. These include the Jobs-in-the-Woods Program, the Partners for Wildlife Program, and the Greenspaces Program. USFWS also provides limited funds to support watershed council-related activities. The USFWS provides technical assistance for restoration planning; watershed groups; local, regional and state planning activities; and for responses to floods such as the one in February 1996. The Service has key responsibilities in land and water development regulatory processes, such as those related to hydropower and dredge and fill. Other activities, such as conservation planning, Northwest Forest Plan implementation assistance, and biological opinions, lead to improved aquatic, riparian and upland conditions. The following report describes progress during the period October 1, 1997 to September 30, 1998 (federal fiscal year 1998).

Contact person for additional information about the role or activities of the USFWS: Willa Nehlsen (503-231-6179).

USFWS1 - Jobs-in-the-Woods Program

Tasks completed.

Funded sixteen projects to employ four to twenty workers each from timber-dependent communities for periods ranging from one week to one year. Of the 16:

- 5 contain an upland component, restoring 26 acres.
- 5 contain a wetland component, restoring/enhancing 22 acres.
- 9 contain a riparian component, restoring/enhancing 137 acres.
- 9 contain an instream component (placement of boulder and large woody debris structures) restoring/enhancing 26 miles.
- 7 contain a fish passage component, re-opening 42 miles of stream.
- 3 contain a road improvement component, improving 6 miles of road.
- 8 livestock stream crossings and 15 off-channel livestock watering facilities were installed.

USFWS2 - Habitat Conservation Plan Development

Tasks underway.

Working with National Marine Fisheries Service (NMFS), continuing to negotiate Habitat Conservation Plans (HCPs) to protect aquatic species including anadromous fish; HCPs with Oregon Department of Forestry (primarily Tillamook and Clatsop state forests), and Weyerhaeuser (upper Willamette area holdings) are in progress.

USFWS3 - Aquatic Conservation Agreement Development and Conservation Activities

Tasks ongoing.

- Working with BLM, ODFW, and the Roaring Springs Ranch to implement the Catlow Basin conservation agreement (completed last year) to reduce threats to Catlow redband trout and Catlow tui chub.
- Improvement in riparian condition already has been observed as a result of the agreement.
- USFWS and BLM working with EPA and DEQ to obtain recognition of agreement as part of fulfilling Clean Water Act requirements.

USFWS4 - Technical Assistance on 1996 and 1997 Floods and New Year's Floods

Tasks completed.

- Assisted Federal Emergency Management Agency (FEMA), Corps of Engineers, Natural Resource Conservation Service (NRCS) and several state agencies in evaluating flood damages and repair and restoration alternatives for approximately 50 proposals for work in Oregon's rivers and streams.
- Assisted NRCS floodplain easement program to restore 300 acres of floodplain habitat in the Rogue and Willamette Valleys.

Tasks underway.

- Tillamook Bay Watershed flood systems analysis project funded by the Service and the U.S. Environmental Protection Agency, in partnership with the Corps of Engineers, to identify alternative strategies to address floods and flood prone areas while protecting fish and wildlife values.

Tasks ongoing.

- Technical assistance continues to focus on protection and restoration of riparian, wetland and other floodplain habitats with emphasis on private lands.

USFWS5 - Partners for Fish and Wildlife Program

Tasks completed.

Funded projects to:

- Restore/enhance 1326 acres of wetland at 9 sites.

- Rehabilitate 385 acres of native grass and seed 251 acres of native grass to benefit native grassland/prairie upland at 6 sites.
- Restore/enhance 8 miles of riparian habitat in 13 contiguous bank reaches.
- Restore/enhance 27 miles of instream habitat over 4 contiguous stream reaches.
- Removed 4 fish passage barriers to re-open 10 miles of stream.

USFWS6 - Greenspaces Program

Tasks completed.

Contributed funding to 8 habitat restoration, 11 environmental education, and 9 salmonid education and enhancement projects to:

- Restore/enhance 4.5 acres of wetland at 5 sites.
- Restore 21.7 acres of riparian over 7 contiguous bank reaches.
- Restore .3 miles of instream habitat at 1 site.
- Restore 27.25 upland acres at 3 sites.
- Environmental and salmonid education projects to promote natural resource conservation.

USFWS7 - Assistance to Watershed Councils

Tasks completed.

- Funded projects to provide information to watershed councils for watershed assessments, including species distributions, uniform maps, 10 M DEM units, Oregon coast and Willamette data layers, and Umpqua cutthroat science team (\$43,000).
- Helped fund Southwest Oregon data integration, and Southwest Oregon Endangered Species Act/Clean Water Act integration coordinator (\$24,000).
- Helped fund Oregon Salmon Plan outreach coordinator (\$15,000).
- Provided financial assistance directly to watershed councils (\$2,000). Donated 18 excess computers to watershed councils.
- Neawanna Acquisition and Restoration. Provided \$170,000 and technical assistance for project to allow acquisition and restoration of 115 acres of Neawanna River wetlands in partnership with GWEB, the North Coast Land Conservancy, the Neawanna Community Advisory Group, and the City of Seaside. Project includes program for public education and outreach for the local community and visitors to the Seaside area.

Tasks underway.

- The Service is working with EPA, NMFS, DEQ, ODA, and local interests to develop a method to integrate Endangered Species Act and Clean Water Act planning efforts into one effort so that water quality management planning documents will also address Endangered Species Act recovery objectives; it is providing assistance to watershed councils for pilot projects in the Applegate and Lower Smith River watersheds.

Tasks ongoing.

- Several USFWS staff provide ongoing technical assistance to watershed councils, and other staff provide specific types of assistance to councils as needed.

USFWS8 - Northwest Forest Plan Implementation Assistance

Tasks completed.

- Participated in four watershed analyses encompassing about 616,000 acres. Participated in four late-successional reserve assessments, in which aquatic conservation strategy objectives are addressed, totaling about 1,342,000 acres.
- Provided input to one adaptive management area plan.
- Provided technical assistance on Enchanted Valley stream habitat restoration project on Siuslaw National Forest.
- Provided comments on proposed BLM Nestucca Road project that would affect salmon habitat and water quality.

Tasks underway.

- Participating in three watershed analyses, encompassing about 218,000 acres.
- Participating in two late-successional reserve assessments totaling about 63,900 acres.

USFWS9 - Biological Opinions to Prevent or Reduce Impacts to Listed Species

Tasks completed.

- Issued 230 biological opinions, including formal consultations, informal consultations, and technical assistance; up to 25% of these (depending on the category) involved wetlands and riparian habitats or riverine and deep water habitats.
- Provided biological opinions to federal agencies for activities such as timber harvest, grazing allotments, wetland fill, and watershed restoration.
- Completed several large programmatic consultations for the entire fiscal year's program of activities for the Forest Service and Bureau of Land Management under the umbrella of the Northwest Forest Plan.
- Completed plan-level consultation on effects to bull trout from continued implementation of federal land and resource management plans and resource management plans as amended by the Interim Strategy for Managing Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, Western Montana and Portions of Nevada (INFISH), and the Interim Strategy for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (PACFISH).

Tasks underway.

- Continuing plan-level consultation on effects to bull trout from continued implementation of federal land and resource management plans as amended by the Northwest Forest Plan.

Tasks ongoing.

- Basin-level consultations on effects to bull trout of federal land management.

USFWS10 - Fish and Wildlife Coordination Act Reports on Federal Projects

Tasks underway.

- Working with Bureau of Reclamation (BOR), NMFS, ODFW and irrigation districts to design and implement new screening and fish passage facilities at water diversions in Rogue Basin; contributed \$10,000 to help fund BOR engineer to assist private landowners and other partners design and implement alternatives to push-up dams in Rogue Basin.
- Working with the Corps of Engineers to design and conduct field studies and habitat assessments for Columbia River channel deepening.
- Working with Oregon Water Resources Department and the Corps on feasibility study of thirteen Corps projects in Willamette Basin, addressing issues of water delivery and supply to irrigation and municipal interests and providing summer flows for fish.

Tasks ongoing.

- Working with the Corps, NMFS, and ODFW on project operations in Willamette, Columbia, and Rogue systems to achieve fish objectives.

USFWS11 - Comments and Prescriptions on Federal Energy Regulatory Commission Hydropower Projects

Tasks underway.

- Participate in planning and review of numerous non-federal hydroelectric projects, including the Stayton Project (endangered Oregon chub is present near the project area, and the project may affect coho salmon), The North Umpqua Project (the Service is addressing impacts to several species of anadromous fish, a listed bird, and a listed mammal that may be affected by the project), the Pelton-Round Butte Project (which prevents sockeye, chinook, steelhead, Pacific lamprey, bull trout and resident fish from passing to or from the Upper Deschutes, Metolius, and Crooked rivers), and the Jim Boyd Project (the Service is working to rectify several compliance problems).

USFWS12 - Acquisition and Restoration of Coastal Wetlands for National Wildlife Refuges

Tasks completed.

- Acquired 125 acres for Oregon Coast refuges at cost of \$421,000, and restored salmon habitat (\$8,000).
- Contributed \$315,000 to acquiring and restoring 400 acres for Tualatin NWR; completed riparian restoration project (\$68,000).
- Completed Finley NWR aquatic habitat restoration (\$25,000).

USFWS13 - Review of Dredge and Fill Projects

- Conducted preliminary examination of approximately 600 permit applications, for which 8500 acres of wetlands were affected by fill, excavation, or impoundment; 5,000 acres of other waters were affected by dredging for navigation or other purposes.
- Provided formal comments on approximately 60 permit applications.
- Provided technical assistance in 15 enforcement cases.

USFWS14 - Response to Oil and Hazardous Substance Spills

Tasks completed.

- Responded in the field to 3 oil spills and 0 hazardous substance spills.

USFWS15 - Natural Resource Damage Assessment

Tasks completed.

- Negotiated settlement for Yaquina River oil spill that includes \$50,000 toward tidal wetland restoration near Toledo, OR.

Tasks underway.

- Developing restoration plan for Yaquina River oil spill settlement; the plan as proposed will reflood 25 acres of tidal wetlands on the Yaquina River that is currently diked and drained.
- Continuing to work on restoration projects from John Day Acid Spill settlement, possibly including large-scale conservation easement package along Middle Fork John Day, proposed by Umatilla Confederated Tribes.
- Initiating Natural Resource Damage Assessment for Portland Harbor.

USFWS16 - Technical Assistance for Planning

Tasks completed.

- Participation in Metro (Portland) Water Resources Policy Advisory Committee leading to completion of “Water Quality and Floodplain Management” section of the Urban Growth Management Functional Plan, and an associated *Model Ordinance* and *Policy Analysis and Scientific Literature Review*; policies were adopted by the Metro Council and are to be implemented by local jurisdictions in the Metro area by December 1999.
- Participation on Metro’s Greenspaces Technical Advisory Committee, leading to completion of the Parks chapter of the Regional Framework Plan adopted in December 1997.

Tasks underway.

- Participating on Metro’s Goal 5 Technical Advisory Committee, working to develop regional fish and wildlife conservation policies to implement Statewide Planning Goal 5 and expedite response to salmon listings under the Endangered Species Act; completion is expected by March 2000.

- Assisting Metro's Greenspaces Technical Advisory Committee with inventory of remaining natural areas, to be mapped on GIS, for use in developing strategies for protecting fish and wildlife habitat; completion expected in June 1999.

USFWS17 - Adopt-A-River and SalmonWatch Programs

Tasks completed.

- Provided \$10,000 for the Adopt-A-River program.
- Provided technical assistance, including field trips, to Salmon Watch.

USFWS18 - Support to Ongoing Educational Programs (Outdoor School and Salmon Camp)

Tasks completed.

- Provided \$10,000 for Outdoor School (Northwest Regional Education Service District and Multnomah Education Service District)
- Provided \$10,000 for Salmon Camp.

USFWS19 - Natural Resource Education and Community Awareness of Aquatic Resources

Tasks completed.

- Worked with Astoria High School students to develop and implement plant community monitoring protocols for coastal wetlands at the Astoria Airport Mitigation Bank at the mouth of the Lewis and Clark River.
- Participated in numerous community activities promoting awareness of fish and wildlife, including Salmon Festival (Oxbow Park), Earth Day (Portland), Oregon State Fair, Oregon Zoo Cascades Exhibit opening, and Wintering In (Sauvie Island).

USFWS20 - National Estuary Program

Tasks ongoing.

- Served on Science and Technical Advisory Committee for the Tillamook Bay National Estuary Project (TBNEP) and on the Science and Technical Advisory and Management committees for the Lower Columbia River Estuary Program (LCREP). Provided technical assistance to both programs.

USFWS21 - Conservation Strategy for Bull Trout

Tasks completed.

- Provided funding to US Forest Service for educational materials in Hood River basin.

Tasks underway.

- Working with ODFW and other state agencies on bull trout recovery plan.

- Final conservation strategies for Hood, Deschutes, and Willamette basins and Odell Lake being completed (work groups are implementing the actions in the draft plans).
- Draft conservation strategies for Umatilla and Walla Walla Basins being developed.

Tasks ongoing.

- Providing funding for biological studies in Deschutes and Hood basins and Odell Lake.

USFWS22 - Avian Predator Management

Tasks completed.

- Reviewed and commented on Corps Environmental Assessment for caspian tern relocation project.
- Reviewed and commented on Oregon Department of Fish and Wildlife avian predation policy.
- Provided \$20,000 toward creating tern habitat on East Sand Island (FY 1999).

Tasks ongoing.

- Serve on interagency caspian tern working group; provide technical assistance on migratory bird issues.
- Provide input to ongoing research.

USFWS23 - Environmental Contaminant Investigations

Tasks underway.

- Working with USGS-Biological Resources Division (BRD), provided field support for Biomonitoring of Environmental Status and Trends (BEST) Program's Columbia River Basin monitoring project, including sampling fish at sites in Oregon and collecting various chemical and biological data.
- Also worked with USGS-BRD in study to measure organochlorines in the water column, and an estrogenic effects river otter study on the Columbia and Willamette Rivers; data will allow further characterization and management of impacts to aquatic species from industrial and agricultural activities.
- Working with US Environmental Protection Agency and Oregon DEQ to review existing water quality standards; developed draft Biological Opinion to support new water quality standards.

Tasks ongoing.

- Provide technical assistance to various efforts to avoid or minimize contaminant impacts. In 1998 these efforts included Columbia River channel deepening, Tongue Point dredging, Ross Island dredge disposal in Willamette River, and Lower Columbia River Estuary Program proposed actions.

BUREAU OF LAND MANAGEMENT

Habitat Components: BLM expended over \$5,600,000 dollars in habitat restoration and protection activities in FY98 that directly benefited aquatic and riparian resources. The Northwest Forest Plan continues to function as the cornerstone for recovery of watershed systems.

Fish Passage:

Progress: Westside districts replaced over 44 culverts within the Northwest Forest Plan Area, as part of an overall effort to enhance fish passage for both adult and juvenile life forms.

Change Needed: No change needed. BLM is on track given existing staffing and funding limitations.

Riparian Function:

Progress: 14 direct riparian restoration projects were implemented, and numerous grazing allotments were modified to improve riparian function.

Change Needed: Additional funding and staffing for eastside BLM districts can increase the number of direct restoration actions.

Instream Channel Function:

Progress: 6 miles of instream habitat were restored as a result of direct in-channel restoration projects.

Change Needed: No change needed at this time.

Up-Slope Function:

Progress: 50 miles of roads and 130 miles of road stabilization were accomplished across the state.

Change Needed: BLM is completing Transportation Management Plans which set road management objectives and are used to prioritize road segments for treatment or decommissioning. Once plans are completed, a systematic process for evaluating road system effects will be in place.

Water Components: Over \$116,000 dollars were committed to developing Water Quality Management Plans across the state. One plan was completed, and 4 other efforts are underway.

Water Quality Related to Fish:

Progress: All actions implemented on BLM lands are consistent with broad scale aquatic conservation strategies, and as part of project design, integrate state accepted Best Management Practices.

Change Needed: The present schedule of Water Quality Management Plans can be accelerated with the addition of staffing and funding.

Water Quality Related to People:

Progress: Technical staff serve on the state committee to develop a Source Water Assessment and Protection Program.

Change Needed: No changes needed at this point.

People and Policy Components: Over \$2.0 million dollars was invested in work with watershed councils, watershed analysis, and education/outreach to support increased understanding of natural resource systems.

Citizen Ownership and Understanding:

Progress: BLM is currently working with about 54 watershed councils, associations, or groups in developing understanding of whole basin restoration/management needs.

Change Needed: Increased efficiencies in Endangered Species Act consultations for actions on federal lands so that limited staff resources can be re-directed to support multi-agency whole basin restoration efforts.

Growth and Land Use Planning

Progress: Watershed analysis has been completed on about 70% of its lands in western Oregon and provides the empirical basis for this work.

Changes Needed: None at this time.

Science and Adaptive Management: BLM has expended over \$1.5 million dollars in research, inventory and monitoring association with Bureau programs across the state.

Scientific Understanding:

Progress: Research is being conducted on restoration, flood related effects, and biological benefits of treatments to aquatic and riparian dependent resources. We continue to complete and update watershed analysis to refine project context and design.

Changes Needed: No changes needed at this time.

Monitoring Resource Status:

Progress: District level monitoring programs, such as habitat inventory, smolt monitoring, spawning surveys, and temperature monitoring have been coordinated with State monitoring programs to ensure consistency and compatibility of data.

Changes Needed: A re-assessment of information which is “must have” vs “nice to know” within all the various monitoring programs, so that information gathering and assessment actions not directly contributing to the Oregon and Northwest Forest Plans can be de-emphasized if funding resources become limited. Also need to enhance inter- and intra-agency communication to ensure that existing relevant data are quickly shared between the stakeholders.

BLM's 1998 Accomplishments Towards the Oregon Plan for Salmon and Watersheds

The Bureau of Land Management (BLM) has played an important role in the development and implementation of the Oregon Plan for Salmon and Watersheds. BLM and the Forest Service (FS) manage about one third of the salmon habitat within the Northwest Forest Plan area and about 50% of salmon habitat on the eastside of the Cascade Mountains. The aquatic conservation strategies in the Northwest Forest Plan (west of the Cascades) and PACFISH (east of the Cascades) are considered by the state to be the cornerstone of habitat restoration under the Oregon Plan.

The following summarizes accomplishments for each of the 15 measures committed to by the BLM. Key elements have been catalogued by each of the "Desired Outcomes" and is presented in the executive summary.

1. Interagency and Tribal Coordination: *Work with other federal, state, and county agencies and tribal governments to ensure coordination and sharing of information between the involved entities.*

BLM has spent \$357,000 providing staff time for various interagency and tribal coordination efforts during the last year. At state office level, BLM is participating in several interagency Oregon Plan teams (Strategy, Implementation, Monitoring and Outreach) as well as the Three Sovereigns Governance Process for the Columbia River Basin. At both the district and the state office level, BLM staff have spent about 60 work months consulting with the National Marine Fisheries Service (NMFS) and Fish and Wildlife Service (FWS), to ensure that BLM's land management actions affecting listed fish species comply with the Endangered Species Act (ESA).

2. Watershed Council Support and Coordination: *Work with watershed councils to ensure a high degree of coordination for actions on public and private lands. Share technical expertise and, where possible, provide other forms of support to help the councils effectively plan and implement priority restoration projects.*

BLM support for and participation in watershed councils varies greatly depending on council "maturity" and federal ownership in the watershed. BLM in Oregon and Washington is currently involved with 54 watershed councils, associations, or groups. In FY 1998, it is estimated that BLM supplied about \$315,000 of technical support provided by its biologists, engineers, hydrologists and other specialists, and donated about \$100,000 for cooperative projects using the authority of the Wyden Amendment.

3. Inventories: *Continue to collaborate with the state in improving consistency and accomplishing inventory on priority watersheds and critical lands, and to share the data collected.*

About \$380,000 were spent on relevant inventories in FY 1998, including contracting with ODFW to do 200 miles of stream inventory on the west side and 50 miles on the east side which will, in many cases, complement surveys on private lands. On the east

side, BLM districts are completing Proper Functioning Condition (PFC) inventories as part of the range management program.

4. Planning and Assessment: *Continue to plan for the restoration and maintenance of riparian and aquatic health in all federal planning processes. Also, seek to expand opportunities for state and watershed council involvement in watershed analysis and continue to share results of these analyses with all interested and involved parties.*

By the end of FY 1997, BLM had completed watershed analysis on approximately 70% of BLM lands in western Oregon. During FY 1998, BLM spent \$1,870,000 on completing additional watershed analyses. BLM is also participating in a river basin assessment sponsored by the SW Oregon Provincial Advisory Committee and is contributing \$25,000 to the Willamette River Restoration Initiative.

5. Clean Water Act Section 303(d) Compliance: *Work with the Environmental Protection Agency (EPA), and Oregon Departments of Environmental Quality (DEQ) and Agriculture (DOA) to implement the joint BLM/FS strategy on compliance with section 303(d) of the Clean Water Act (CWA).*

During FY 98, BLM spent about \$116,000 on the development of Water Quality Management Plans, working very closely with the state and EPA to design a process for their development. BLM has recently submitted a WQMP for the South Steens area to DEQ that should serve as a prototype for the east side, and the Siuslaw NF is in the process of completing a west side prototype. Other BLM WQMPs are proceeding in Tillamook, Prineville, Coos Bay and Klamath Falls.

6. Watershed/Habitat Restoration: *Continue implementation of comprehensive watershed restoration and protection programs including the Jobs-in-the Woods program, roads and campground construction and reconstruction, direct fish habitat improvement, riparian area silviculture, and other management programs. Using the Wyden Amendment authority, pursue cooperative watershed restoration projects on private lands if they directly benefit fish and wildlife resources on public lands.*

Over the past year, BLM in Oregon spent about \$5,600,000, for 180 watershed restoration projects, including 44 culvert replacements, 14 riparian restoration projects, more than 50 miles of road decommissioning, 130 miles of road stabilization, and more than 6 miles of stream restoration. In general, districts have made limited use of Wyden Amendment authority, but a number of cooperative projects are occurring in the Coos Bay, Medford and Eugene.

7. Research: *BLM will work with local watershed councils, Oregon Department of Fish and Wildlife personnel, universities, the Pacific Northwest Region Experimental Station (PNW) and the USGS Biological Research Division (BRD) to improve coordination, integration, and information sharing on key research topics.*

BLM is providing more than \$240,000 for research that supports the protection and restoration of critical aquatic and riparian ecosystems. BLM is providing \$150,000 to the PNW for flood related research and \$40,000 to support research by the National Marine

Fisheries Service on the biological benefits of habitat restoration projects. In addition, the BRD in Corvallis has hired an aquatic ecologist and is emphasizing aquatic issues of concern in research projects that will be used to improve BLM management programs. BLM has also given more than \$50,000 to the Biological Research Division budget for the Cooperative Forest Ecosystem Research program, which focuses on aquatic and riparian ecosystems.

8. Monitoring and Evaluation: *Continue to monitor the accomplishment of objectives under the Northwest Forest Plan relating to aquatic system and riparian health. Share the findings with relevant state agencies and watershed councils.*

In FY 1998, BLM transferred \$38,000 directly to the state to support Oregon Plan monitoring efforts, and allocated \$500,000 to BLM field offices for smolt trapping, temperature and flow measurements, etc. Staff hours at the state office level include another \$70,000. Last year, west side districts completed 45 miles of spawning surveys, constructed 14 smolt traps, initiated 9 other projects to estimate juvenile and adult populations, established 220 temperature monitoring sites, and collected more than 157 macroinvertebrate samples. Other monitoring efforts include the Regional Implementation Monitoring Team, which found a 95% compliance rate with Northwest Forest Plan standards and guidelines for timber sale in 1997, and similar compliance for timber sales, road construction and watershed projects in 1998.

9. Technical Training: *Continue to coordinate technical training of resource management personnel to ensure that a high level of competency is available in defining restoration and recovery treatments.*

In FY 98, BLM spent approximately \$164,000 on training related to riparian issues, and \$143,000 on training related to fisheries issues. Technical training for resource management personnel has included training in Geographic Information Systems, in using Aquatic Resources Information Management System (ARIMS), and, in coordination with the state, in updating the Hydro layer. In addition, the BLM and FS National Riparian Service Team is providing PFC training to land owners and watershed group members.

10. Cooperative Funding: *Continue to seek opportunities to cost-share resource assessments, restoration prescriptions and treatments across whole watersheds, regardless of ownership, with the state and watershed councils.*

Many cooperative efforts are occurring, including \$392,000 in Challenge Cost Share projects that benefit aquatic, riparian and salmonid resources. Of these cooperative efforts, \$210,000 went to riparian resources, \$25,700 to riparian and aquatic wildlife resources, \$102,000 to fisheries resources, and \$14,800 to riparian and aquatic threatened and endangered species. In addition, BLM provided \$30,000 to For Sake of the Salmon, a nonprofit organization that provides technical support and funding for watershed groups. Using the Wyden Amendment Authority, BLM field offices are also providing about \$100,000 to support cooperative restoration projects with local watershed councils (also mentioned under the second commitment).

11. Education/Interpretation/Outreach: *Work with the state and watershed councils to expand ongoing cooperative outreach and environmental education programs, and to develop new efforts targeting all publics, especially school groups.*

In FY 1998, BLM expended more than \$70,000 in support of such aquatic and salmonid educational efforts as the Salmon Festival (\$5,000), Cascade Stream Watch and Wolftrac (\$40,000), and the Clackamas and Sandy Stewardship Fund (\$25,000). In addition, BLM supports activities such as the Hatfield Marine Science Center dedication as a Coastal America Learning Center, and the Salmon Scouts. BLM also assisted outreach efforts of watershed councils by sponsoring tours, assisting in publishing newsletters, and providing meeting rooms.

12. Natural Disaster Coordination: *Continue to work cooperatively with the state and watershed councils in the assessment and prioritization of actions taken in regard to natural disturbances and disasters, including flood damage repair and watershed restoration, and wildland fire suppression and rehabilitation prescriptions.*

In FY 1998, BLM spent \$10,449,000 on flood restoration efforts. All of these restoration projects directly or indirectly benefit anadromous fish, as they reduce the amount of sediment from damaged roads and other lands within a watershed, and often involve repairing or replacing culverts that impede fish passage.

13. Key Aquatic Habitat Acquisition: *Continue to work within existing policies to acquire key aquatic habitats.*

During FY 1998, BLM spent about \$300,000 on all ongoing land exchanges that will bring key aquatic and riparian resources under its management. One important exchange in progress is the NE Oregon Land Exchange on the North Fork of the John Day River. This exchange will result in a net gain of fifty miles of anadromous and resident fish habitat, including fifteen miles of winter habitat for bull trout. Among the acquisitions completed in the last year are the Criterion Ranch on the Deschutes River, and the Wildwood exchange in Salem, the latter of which includes key habitat for coho salmon and steelhead trout.

14. Hydropower Licensing and Relicensing Coordination: *Increase coordination on hydropower licensing and relicensing projects to ensure that BLM's respective authorities are fully exercised.*

During FY 98, BLM allocated approximately \$50,000 to working on hydropower issues and their collaborative resolution. Some districts such as Prineville are already engaged with the new FERC relicensing process, a more collaborative process than the older one, and Oregon State Office staff are also starting to track the issue. BLM's continued participation in this issue has a potentially high payoff.

15. Municipal Water Supply/Safe Drinking Water Act Implementation: *Assemble information about the location of public water source areas for digitizing into GIS, and work to establish and strengthen relationships with public water users and purveyors.*

BLM has spent at least \$29,000 on these issues. BLM staff have been serving on the state committee to develop a Source Water Assessment and Protection Program for Oregon. Public affairs has also recently finished a joint communication strategy with the Forest Service for municipal water supply issues that has been disseminated to the BLM districts. An important part of this strategy is for BLM to begin building closer relationships with water purveyors at the district level.

USDA FOREST SERVICE

Four National Forests are located within the OCSRI area, the Siuslaw, Umpqua, Rogue River, and Siskiyou. They all provide priority management for riparian and aquatic resources through implementation of the Aquatic Conservation Strategy of the Northwest Forest Plan.

Specific accomplishments, for FY 1998, are summarized by Forest and major activity area.

Contact persons, for additional information, are:

Regional Office:	Dave Heller (503-808-2994) Jeff Uebel (503-808-2847)
Siuslaw NF:	Mike Clady (541-750-7053) Bob Metzger (541-750-7055)
Umpqua NF:	Jeff Dose (541-957-3301)
Rogue River NF:	Randy Frick (541-858-2270)
Siskiyou NF:	Dan Delany(541-471-6533)

USFS 1 Watershed Restoration

The goals of the watershed restoration program are to provide long-term benefits to salmon and steelhead habitat and ensure fully-functioning, healthy watersheds. It is a critical component of the Aquatic Conservation strategy of the Northwest Forest Plan. Emphasis is on Key watersheds - refuges for the variety of fish stocks at risk. Restoration prescriptions are developed after completion of watershed analysis. Strong efforts are made to integrate activities (upslope and instream, federal and private land) for whole watershed restoration.

SIUSLAW N.F.

1. Habitat Improvement for Anadromous Fish	- 10 miles
2. Road Obliteration/Decommissioning	- 38 miles
3. Riparian Vegetation Treatment	- 514 acres
4. Off-Channel Habitat Improvement	- 2 projects
5. Large Wood Introduction Projects	- 2 projects
6. Flood Damage Repair	- 6 projects
7. Instream Structures, Repaired/Replaced	- 56 structures
8. Road Crossing Improvement	- 2 sites
9. Road Stabilization	- 144 miles
10. Upslope soil and water resource improvement	-220 acres
11. Noxious weed treatment	-280 acres

UMPQUA N.F.

- | | |
|--|--------------|
| 1. Habitat Improvement for Anadromous Fish | - 9.0 miles |
| 2. Road Decommissioning/Obliteration | - 22.9 miles |
| 3. Road Stabilization | - 37.3 miles |
| 4. Upslope soil and water resource improvement | - 254 acres |
| 5. Riparian Vegetation Improvement | - 2 acres |
| 6. Noxious weed treatment | - 744 acres |

ROGUE RIVER N.F.

- | | |
|--|-----------------|
| 1. Habitat Improvement for Anadromous Fish | - 10.0 miles |
| 2. Road Decommissioning/ Obliteration | - 12 miles |
| 3. Roads-Fish Passage Improvement | - 1 site |
| 4. Upslope soil and water resource improvement | - 156 acres |
| 5. Riparian Vegetation Improvement | - 74 acres |
| 6. Landslide Stabilization | - 20 acres |
| 7. Instream Structures Repaired/Replaced | - 15 structures |
| 8. Instream fish habitat improvement | - 2.0 miles |
| 9. Roadside vegetation | -137 acres |
| 10.Road surface upgrade | - 1 mile |
| 11.Lake fish habitat improvement | - 20 acres |
| 12.Noxious weed treatment | - 50 acres |

SISKIYOU N.F.

- | | |
|---|--------------|
| 1. Habitat Improvement for Anadromous Fish | - 15 miles |
| 2. Road Decommissioning/Obliteration | - 14 miles |
| 3. Soil and water resource improvement | - 641 acres |
| 4. Flood Repair Projects | - Ongoing |
| 5. Instream Habitat Improvement | - 8 projects |
| 6. Road Crossing Repaired/Replaced | - 15 sites |
| 7. Riparian Vegetation Improvement | - 514 acres |
| 8. Lower Rogue Coop. Salmon Restoration Project | - 1 project |
| 9. Noxious weed treatment | -306 acres |

USFS 3&4 Inventory and Monitoring

The activities in this category provide the basic resource information used in the other categories, particularly characterizing and assessing ecological conditions that drive planning and implementation of aquatic restoration activities. Additionally, this information is critical in the process of planning and assessing the effects of other Forest activities such as timber sales, road construction, and recreational developments so that adverse impacts to fish and their habitat can be eliminated or minimized.

SIUSLAW N.F.

- | | |
|---|---------------|
| 1. Level II Stream Survey | - 90 miles |
| 2. Level III Instream Structure Monitoring | - 5 projects |
| 3. Outmigrant Trapping | - 5 sites |
| 4. Spawning/Redd Surveys | - 2 streams |
| 5. Upstream Migrant Trapping | - 2 sites |
| 6. Tenmile Whole-Basin Restoration Effectiveness Monitoring | - 1 watershed |
| 7. Water Temperature Monitoring | - 80 sites |
| 8. Aquatic Biota Inventory | -15 miles |
| 9. Forest Plan Monitoring Report | -1 report |

UMPQUA N.F.

- | | |
|----------------------------------|------------|
| 1. Level II Stream Survey | - 61 miles |
| 2. Outmigrant Trapping | - 1 sites |
| 3. Macro-invertebrate Monitoring | - 44 sites |
| 4. Water Temperature Monitoring | - 45 sites |
| 5. Forest Plan Monitoring Report | - 1 report |

ROGUE RIVER N.F.

- | | |
|----------------------------------|------------|
| 1. Level II Stream Survey | -35 miles |
| 2. Level III Stream Survey | -8 sites |
| 3. Water Temperature Monitoring | -50 sites |
| 4. In-stream Structure Inventory | -2 streams |
| 5. Spawning Surveys | -6 streams |
| 6. Forest Plan Monitoring Report | -1 report |

SISKIYOU N.F.

- | | |
|--------------------------------------|-------------|
| 1. Level II Stream Survey | - 75 miles |
| 2. Level III Stream Inventory | - 8 sites |
| 3. In-Stream Structure Inventory | - 3 streams |
| 4. Smolt Trapping/Juvenile Abundance | - 4 sites |
| 5. Temperature Monitoring | - 50 sites |
| 6. Spawning Surveys | - 6 sites |
| 7. Forest Plan Monitoring Report | -1 report |

USFS 5 Planning and Assessment

This category includes a number of activities that provide the context and direction to guide management and restoration. The protection and recovery of aquatic resources, including anadromous fish, through conscientious implementation of the Aquatic Conservation Strategy (ACS) is a major emphasis item in the Northwest Forest Plan. An integral part of the ACS is Watershed Analysis. These activities occur at multiple hydrologic scales. Activities associated with the legal requirements of the Endangered Species Act such as consultations, preparation of Biological Assessments, and the development of an Analysis Matrix are now done on most projects. Project planning includes planning for timber sales, road construction, mining and planning for watershed restoration activities targeting key watershed recovery on the Forest.

SIUSLAW N.F.

- | | |
|---|------------------|
| 1. Project Planning (non-restoration) | - All watersheds |
| 2. Restoration Project Planning | - All watersheds |
| 3. Watershed Analysis | - 5 analyses |
| 4. Biological Evaluations/Matrix | - 20+ B.E.'s |
| 5. Adaptive Management Area Planning | - 1 area |
| 6. Coordinated Resource Management Planning | - 20+ streams |

UMPQUA N.F.

- | | |
|---|------------------|
| 1. Project Planning (non-restoration) | - All watersheds |
| 2. Restoration Project Planning | - 1 watersheds |
| 3. Watershed Analysis (20-200 mile sq.) | - 3 analyses |
| 4. Biological Evaluations | - 44 B.E.?s |
| 5. Hydropower Re-licensing | - 1 project |

ROGUE RIVER N.F.

- | | |
|---|------------------|
| 1. Project Planning (non- restoration) | -All watersheds |
| 2. Watershed Restoration Planning | -4 watersheds |
| 3. Watershed Analysis | -4 analyses |
| 4. Biological Evaluations | -50 B.E.s |
| 5. Post Flood Assessments | -8 subwatersheds |

SISKIYOU N.F.

- | | |
|--|-------------------|
| 1. Project Planning (non- restoration) | - All watersheds |
| 2. Watershed Restoration Planning | - 3 watersheds |
| 3. Watershed Analysis | - 2 analyses |
| 4. Biological Evaluations | - 70 B.E.?s |
| 5. Post Flood Assessments | - 6 subwatersheds |

USFS 8 Education and Interpretation

Information and education is an important part of the overall Forest aquatic resource program. Audiences range from internal decision-makers to local schoolchildren to periodical readers. Technical assistance to local Watershed Councils was a major work activity in 1998 as is continuation of the outstanding environmental education program SalmonWatch. Another subject area under this category is participation in professional workshops.

SIUSLAW N.F.

- | | |
|---|--------------------|
| 1. Watershed Council-Technical Team | - 9 watersheds |
| 2. SalmonWatch | - 20 trips |
| 3. Reedsport Salmon Fest (Tsalila W?shed Exp.) | - 1 event |
| 4. Alsea Forest Camp | - 200 students |
| 5. Elderhostel Presentations | - 15 presentations |
| 6. National Fishing Week | - 4 events |
| 7. Cooperative Presentations with Corvallis Research Community (ODFW, OSU, PNW, COPE) | - 4 presentations |
| 8. Media Requests, local and regional | - All watersheds |
| 9. Local Schools, various presentations | - 10 presentations |
| 10. Local elected officials, briefings | - 5 briefings |

UMPQUA N.F.

- | | |
|--|--------------------|
| 1. Watershed Council-Technical Team | - All watersheds |
| 2. Umpqua Fishwatch | - 8 trips |
| 3. Professional Presentations/lectures | -10+ presentations |
| 4. Briefings-elected Officials | -10 briefings |
| 5. School Presentations | - 8 presentations |
| 6. National Fishing Week | -1 event |

ROGUE RIVER N.F.

- 1. Watershed Council-Technical Team - 5 watersheds
- 2. SalmonWatch - 15 trips
- 3. School Programs/Presentations -12 presentations
- 4. Workshops/Training Sessions - 4 sessions
- 5. National Fishing Week - 3 events
- 6. Videos/Slide/Lecture Presentations -10 presentations

SISKIYOU N.F.

- 1. Watershed Council Support - 6 watersheds
- 2. National Fishing Week - 3 events
- 3. SalmonWatch - 10 trips
- 4. School Presentations -50 presentations
- 5. Professional Lectures/Presentations -10 presentations

MISCELLANEOUS

SISKIYOU N.F.

- 1. Land Acquisition to Benefit Fish - 1 parcels acquired
- 2. Stream Miles Acquired (Anadromous Fish) - 0.5 miles

Watershed Analysis

The four National Forests within the Oregon Plan area completed 14 watershed analyses in Fiscal Year 1998. This brings the total completed to 152 since implementation of the Northwest Forest Plan (Table 1). Watershed analysis is the process used by interdisciplinary teams to find out what makes a watershed tick, that is, how its main features (flow patterns, slopes, streams forests, etc.) and processes (weather patterns, fires, erosion, plant succession, etc.) are working together to produce what we refer to as an ecosystem. This sets the stage for a variety of management activities, including watershed restoration.

Table 1. Watershed Analyses Completed for Northwest Forest Plan National Forests in Oregon.

Fiscal Year	1994	1995	1996	1997	1998	TOTAL
No. Completed	14	48	50	26	14	152

Watershed Restoration (Jobs-in-the-Woods)

Watershed restoration is an integrated program designed to improve the health of Key watersheds. These watersheds are critical for the conservation and recovery of many wild fish stocks. Primary restoration activities include road treatments (decommission, obliteration, drainage improvement, etc.) upland improvements (slide stabilization, reconstruction, etc.), riparian restoration and stream channel/bank restoration.

The four National Forests within the Oregon Plan area implemented a number of watershed restoration projects in Fiscal Year 1998. Table 2 summarizes the types of projects and accomplishments.

Table 2. Forest Service Ecosystem Restoration under the Northwest Forest Plan for FY 1998 in Oregon.

Culverts & Bridges (sites)	Road Improvement <u>1/</u> (miles)	Noxious Weed Treated (acres)	Road Decommissioned (acres)	Riparian Treatment <u>2/</u> (acres)	Stream (miles)	Watershed Improvement (acres)
18	182	1,380	87	1,104	37	1,271

1/ Stabilization, Revegetation, resurfacing, drainage improvements.

2/ Thinning, Planting, etc.

LOWER COLUMBIA RIVER ESTUARY PROGRAM

Current summary of measures:

LCREP 1 - Lower Columbia River Comprehensive Conservation and Management Plan

Development of a comprehensive management plan for the lower Columbia River with 43 specific actions to address identified problems related to habitat loss and modification, toxic and conventional pollutants, stewardship, institutional constraints, biological integrity and the impacts of human activity. The draft is completed, the final plan will be completed in June 1999 with implementation to follow.

LCREP 2 - Aquatic Ecosystem Monitoring Strategy

Development of a strategy for implementing a long term monitoring program for the lower river. Its key components include routine monitoring for conventional pollutants and toxic contaminants in the water column, tissues, and sediment. Monitoring to assess habitat function and health and to evaluate the impacts of exotic species on the ecosystem are also proposed. Other components include a coordination structure, a data management strategy, and quality assurance. The final plan will be completed with the management plan in June 1999 with implementation to follow.

LOWER COLUMBIA RIVER ESTUARY PROJECT ACTION, PLANNING, DEMONSTRATION PROJECTS

On a regular basis, the Lower Columbia River Estuary Program has awarded grant money to local entities to undertake projects to improve the estuary environment. To date the program has awarded approximately \$200,000 to fund 18 projects listed below (note that not all the contracts awarded were carried out— money not used was transferred forward to the next funding cycle). The following types of projects were solicited:

- Action Projects – projects that immediately address and remediate an environmental problem
- Demonstration Projects – projects that physically demonstrate a particular approach or method for addressing one of the environmental problems in the lower river.
- Planning Projects – projects that use a land use or environmental planning tool to address one of the problems.

In all cases, projects selected had to address one of the Estuary Program's seven priority issues. A particular emphasis was placed on projects that involved students.

ACTION NOW DEMONSTRATION PROJECT GRANTS AWARDED - 1997

The following is a brief summary and status report of the six Action Now Demonstration Grants that were selected for funding in 1997 by the Action Now Work Group.

APPLICANT: Clatsop Community College - Marine Environmental Research and Training Station - Astoria, Oregon
AMOUNT AWARDED: \$10,000
DESCRIPTION: Develop, advertise and deliver a two-day conference of educational stakeholders on the future health and productivity of the lower Columbia River.
PRIORITY ISSUES: Public Awareness / Stewardship and Institutional Constraints
STATUS: The conference was held on in February 23-24, 1998 at Skamania Lodge in Skamania, Washington. The conference was well attended and deemed very successful by the attendees. Project complete.

APPLICANT: City of Portland-Parks and Recreation - Portland, Oregon
AMOUNT AWARDED: \$4292
DESCRIPTION: Sedimentation testing and project design for the restoration of the stormwater conveyance and retention capacity of the East Delta Park Slough.
PRIORITY ISSUES: Toxic Contaminants, Habitat Loss / Modification, Public Awareness / Stewardship
STATUS: Project complete. Funding not needed, reallocated to November 98 projects.

APPLICANT: The Nature Conservancy of Oregon - Portland, Oregon
AMOUNT AWARDED: \$13,000
DESCRIPTION: Support a stewardship project using students to enhance habitat, ecological functions, and plant diversity, reduce recreational conflicts, and develop partnerships emphasizing user education and information for 6.5 miles of the Sandy River.
PRIORITY ISSUES: Habitat Loss / Modification, Biological Integrity, Public Awareness / Stewardship
STATUS: The kiosks and signs are up, habitat work finished. Project complete

APPLICANT: Oregon Association of Clean Water Agencies - Portland, Oregon
AMOUNT AWARDED: \$10,000
DESCRIPTION: Project to develop a stormwater pollution prevention manual and associated training program focused on voluntary reduction of pollutants from stormwater activities under the direct control of the municipality.
PRIORITY ISSUES: Toxic Contaminants, Conventional Pollutants, Public Awareness / Stewardship
STATUS: Draft manual completed, final presented on June 22, 1998. Project complete. Tool box is available on the web at: <http://www.oracwa.org>

APPLICANT: Cathlamet FFA/Wahkiakum High School - Cathlamet, Washington
AMOUNT AWARDED: \$1,800
DESCRIPTION: Project to provide stream overflow protection for a jointly operated salmon rearing facility on Birnie Creek in Cathlamet, Washington.
PRIORITY ISSUES: Conventional Pollutants, Habitat Loss / Modification, Public Awareness / S Stewardship
STATUS: Project suspended pending results of Washington Fish and Wildlife assessment. Funds reallocated to 1998 projects.

APPLICANT: Sea Resources - Chinook, Washington
AMOUNT AWARDED: \$10,000
DESCRIPTION: Project to complete the first phase of a river restoration plan for the Chinook River to include collecting data and developing plan.
PRIORITY ISSUES: Habitat Loss / Modification, Public Awareness / Stewardship
STATUS: Contract never signed. Funds reallocated to 1998 projects.

TOTAL FUNDS AWARDED: \$49,092.00

ACTION NOW DEMONSTRATION GRANTS AWARDED IN MARCH 1998

The following is a brief summary and status report of the four Action Now Demonstration Grants that were selected for funding in March, 1998 by the Action Now Work Group.

APPLICANT: The Wetlands Conservancy - Tualatin, Oregon
AMOUNT AWARDED: \$17,302
DESCRIPTION: Project will assess changes in Columbia Slough water quality as a result of habitat and streambank restoration projects and to restore and replant an additional 5 acres of shoreline.
PRIORITY ISSUES: Habitat Loss / Modification, Conventional Pollutants, Public Awareness / Stewardship
STATUS: Contract signed, project underway.

APPLICANT: Ses Resources - Chinook, Washington
AMOUNT AWARDED: \$15,000
DESCRIPTION: Project will undertake restoration of the Chinook River for Salmon and as part of class room project for the Ocean Beach School District.
PRIORITY ISSUES: Habitat Loss / Modification, Public Awareness / Stewardship
STATUS: Contract signed, project began in April 1998

APPLICANT: Coastal Studies and Technology Center - Seaside, Oregon
AMOUNT AWARDED: \$2,600
DESCRIPTION: Project will undertake a cooperative project with scientists from Columbia River Intertribal Fish Commission, students and volunteers to study the Caspian Tern population on Rice Island in Washington and its impacts on juvenile salmon.
PRIORITY ISSUES: Declines and Loss of Species, Public Awareness / Stewardship
STATUS: Contract signed, project to began in May 1998

APPLICANT: Columbia Soil and Water Conservation District - St. Helens, Oregon
AMOUNT AWARDED: \$12,000
DESCRIPTION: The project will conduct public workshops to develop storm water management plan and ultimately an ordinance for Columbia County.
PRIORITY ISSUES: Institutional Constraints, Public Awareness / Stewardship
STATUS: Project turned over to Columbia County, contract signed in August 1998, project underway.

TOTAL FUNDS AWARDED: \$46,902.00

ACTION NOW DEMONSTRATION GRANTS AWARDED IN MAY 1998

The following is a brief summary and status report of the four Action Now Demonstration Grants that were selected for funding in May, 1998 by the Action Now / Science Work Group

APPLICANT: Ecotrust - Tualatin, Oregon
AMOUNT AWARDED: \$10,000.00
DESCRIPTION: Ecotrust will implement a Teachers Watershed Restoration Workshop to train local teachers in how to initiate a watershed planning process and its implementation. Successful participants may receive up to \$1000 to start a program in their school.
PRIORITY ISSUES: Public Awareness / Stewardship, Habitat Loss, Impacts of Human Activities
STATUS: Project underway

APPLICANT: Wahkiakum School District - Cathlamet, Washington
AMOUNT AWARDED: \$8,089.00
DESCRIPTION: The Wahkiakum School District will implement the planning phase of a Corps of Estuarial Discovery project which will utilize all students in the district to conduct an interdisciplinary investigation of the estuary. The project will produce a Base Map and Base Book to assist in estuary management decisions.
PRIORITY ISSUES: Public Awareness / Stewardship
STATUS: Contract signed and project underway.

APPLICANT: Lower Columbia River Watershed Council - Clatskanie, Oregon
AMOUNT AWARDED: \$10,000.00
DESCRIPTION: The grant will provide seed money for a large project aimed at removing a dam between Westport Slough and the Clatskanie River which will restore historic water flows, improve degraded fish habitat, provide renewed fish access to 8 streams, and provide access to the Lewis and Clark Water Trail.
PRIORITY ISSUES: Habitat Loss, Public Awareness / Stewardship, Impacts of Human Activities
STATUS: Awaiting completion of Corps of Engineers Feasibility Study. Will contract with Columbia County parks to fund youth service corps restoration efforts.

TOTAL FUNDS AWARDED: \$28, 089.00

ACTION NOW DEMONSTRATION GRANTS AWARDED IN NOVEMBER 1998

The following is a brief summary and status report of the four Action Now Demonstration Grants that were selected for funding in Maovember 1998 by the Action Now / Science Work Group

APPLICANT: US Forest Service, Columbia River Gorge National Scenic Area. Hood River, Oregon.
AMOUNT AWARDED: \$14,500.00
DESCRIPTION: The Project would restore 15 acres of riparian forest to the Sandy River delta in an area which has been extensively cleared and invaded by undesirable species. Funds will be used to buy plant materials, work will be done primarily by volunteers.
PRIORITY ISSUES: Habitat Loss, Public Awareness / Stewardship
STATUS: Contract signed in January 1999, project underway

APPLICANT: Sea Resources, Inc Chinook, Washington
AMOUNT AWARDED: \$15,000.00
DESCRIPTION: Project will continue student restoration efforts of the Chinook River watershed for the natural production of salmonids. LCREP had previously funded this project to help get it started.
PRIORITY ISSUES: Habitat Loss, Public Awareness / Stewardship
STATUS: Contract signed in January 1999, project underway

APPLICANT: Wahkiakum School District, Cathlamet, Washington
AMOUNT AWARDED: \$26,865.00
DESCRIPTION: District plans to conduct an interdisciplinary investigation of the estuary involving the entire student body grades 6 – 12. We had previously funded the planning of this project with a general commitment to fund implementation based on the success of their planning efforts.
PRIORITY ISSUES: Public Awareness / Stewardship
STATUS: Contract signed in January 1999, project underway

APPLICANT: Headwaters to Ocean (H2O), Portland, Oregon
AMOUNT AWARDED: \$10,915.00
DESCRIPTION: The project will bring a floating classroom opportunity for lower Columbia communities. Project will provide students with an on the water learning experience focused on the environment. Project will take a program that has been quite successful on the Willamette and bring it to communities on the lower Columbia.
PRIORITY ISSUES: Public Awareness / Stewardship
STATUS: Contract to be signed in March 1999, project to begin in April.

APPLICANT: Clatsop Diking Improvement Company #7, Astoria, Oregon
AMOUNT AWARDED: \$12,012.00
DESCRIPTION: The Project would improve many miles of salmonid habitat by replacing existing iron tide gate with fish friendly aluminum gate and replace 18” culvert with 48” culvert to provide enhanced water circulation
PRIORITY ISSUES: Habitat Loss
STATUS: Contract signed in February 1999, project to begin in June..

TOTAL FUNDS AWARDED: \$79, 292

BUREAU OF RECLAMATION

Bureau of Reclamation (BOR) Pacific Northwest Region water resource programs which contribute to the goals of Oregon's Coastal Salmon Restoration Initiative are administered and implemented by the Lower Columbia Area Office (LCAO) located in Portland, Oregon. The LCAO jurisdiction in Oregon includes all areas from the John Day Basin west to the coast, excluding the Klamath River basin which is within the jurisdiction of BOR's Mid-Pacific Region. The LCAO manages the following water projects with local irrigation districts: Rogue River Basin Project in southern Oregon; Tualatin Project in northwest Oregon outside of Portland; and Deschutes, Crooked River, Crescent Lake, Arnold, and Wapinita Projects in central Oregon.

BOR measures fall under three general program measures: 1) **General Investigation (GI) Program (BOR1, BOR2)** which provides for general study activity and technical assistance. Facilities cannot be constructed under it, but BOR can provide assistance on a wide range of water resource issues both related and unrelated to its own authorized projects; 2) **Water Management and Conservation Program (BOR3, BOR4)** is part of the Operation and Maintenance appropriation. This program allows BOR to provide specific technical and financial assistance to irrigation districts associated with BOR projects for preparing water conservation plans and implementing conservation actions; and 3) The **Endangered Species Implementation Program (BOR5)** is part of the Construction appropriation. BOR can construct facilities on its projects and do certain other actions such as design and some investigative work. This program is intended to help BOR deal with the effects of ESA listings of species on Federal BOR projects.

BOR1 - General Investigations (GI) Program

BOR measure completed:

BOR1a - Hydrologic Model for Bear Creek and Little Butte Creek Watersheds

BOR will continue to develop a hydrologic model of the Bear Creek and Little Butte Creek watersheds. This model will help decision makers assess the consequence of proposed actions which would change water use or timing of runoff. BOR will assist the Rogue Valley Council of Governments and local irrigation districts with implementing the model.

BOR1b - Funding for Oregon Water Resources Department

BOR has funded OWRD to install four stream gages and a precipitation gage in the New River area to supplement data from a precipitation gage and evaporation pan BOR has near Bandon, Oregon. BOR is also funding the county to maintain the gages and develop the records. Information will be used for surface and ground water studies.

BOR measure in progress/on schedule:

BOR1c - Technical Assistance for Watershed Council Activities

BOR is proposing to initiate an Oregon statewide program in fiscal year 2000 that would provide technical assistance for watershed council activities.

BOR1d - Water Budget for Illinois Valley Watershed Assessment

BOR recently prepared a water budget for the Illinois River in a cooperative effort with the Natural Resources Conservation Service and others. Future activities may include the development of a hydrologic model to help assess the consequences of proposed actions that would change water use and timing of runoff.

BOR1e - Surface Water Budget for the New River Area

BOR is preparing a surface water budget for the New River area in the Coquille River basin to assist in evaluating the availability of water resources for multiple purposes to include regulatory control by the Oregon Water Resources Department, protection of natural resources, and water resource development opportunities. This is a cooperative effort with the Bandon Cranberry Water Conservancy District, State, county, Bureau of Land Management (BLM), and others.

BOR1f - Water Conservation in the Bear Creek Drainage

BOR is completing a study of water conservation opportunities in the Bear Creek drainage. The purpose of these studies is to improve streamflows in Bear Creek, improve water quality in Bear Creek, and improve the reliability of irrigation water supplies.

BOR2 - General Investigations (GI) Program

BOR measures completed:

BOR2a - Funding Rogue Basin Watershed Managers

BOR has helped to fund the Rogue Basin project managers by funding the Illinois Valley Watershed Coordinator for several years and providing funds for the Umpqua Watershed Coordinator in FY 97. BOR is working on an FY 99 agreement with RVCOG to fund a Rogue Basin Project Manager who will work with local Watershed Councils and private landowners to 1) identify and line up fish passage improvement projects throughout the basin and 2) seek potential funding sources to implement such projects on the ground. BOR's funding for the Rogue Basin Project Manager is expected to continue through FY 2002.

BOR2b - Funding RVCOG South Coast Technical Team

BOR provided FY 1996 and FY 1997 funding for the South Coast Technical Team through the RVCOG. The Technical Team completed the South Coast Coho habitat restoration guidance document and prepared a Steelhead habitat restoration guidance document for the Rogue and South Coast region in 1997.

BOR2c - Technical Assistance for Rogue Basin Watershed Councils

BOR continues to co-fund a full-time watershed engineer position located in southern Oregon. This BOR position was created in 1997 to provide technical assistance on solving anadromous fish passage (i.e., alternatives to gravel push-us dams) and water conservation problems on primarily non-Federal land in the Rogue River Basin. BOR entered into an partnership with the U.S. Fish and Wildlife Service (FWS), BLM, and U.S. Forest Service, GWEB, and RVCOG to cost share on funding this position for 3 years. BOR will be initiating discussions with its partners to extend this cost-share agreement for another 3 years. BOR has also initiated discussions with GWEB to potentially establish a similar position in eastern Oregon.

BOR2e - Technical Assistance to Eagle Point Irrigation District/Upper Rogue WC

BOR provided technical assistance to the Eagle Point Irrigation District (EPID) and Upper Rogue Watershed Council to develop a preliminary engineering design plan for improving the district's fish screen and bypass facility on Big Butte Creek in the upper Rogue basin. The Big Butte Creek watershed is core habitat for coho salmon populations. EPID and the Upper Rogue Watershed Council will use the engineering plan in an attempt to secure funding needed to construct the new fish screen facility.

BOR measure in progress/on schedule:

BOR2d - Improving Fish Migration at Savage Rapids Dam

BOR is currently assessing potential actions to improve fish migration at Savage Rapids Dam on the Rogue River by working with the Savage Rapids Task Force, Governor's Office, and Grant Pass Irrigation District. BOR will be initiating a study in 1999 to examine the impacts of releasing sediments trapped behind the privately owned dam. This work builds upon previous work completed by BOR (1995) and the Sport Heritage Foundation (1998). The study will 1) involve additional sediment sampling to test for toxic materials and to learn the physical nature of the sediments, and 2) result in a computer model to predict how sediments released from the reservoir would move and deposit downstream.

BOR2f - Funding for John Day Basin Fish Passage Program Liaison

BOR is providing funds to the Confederated Tribes of the Warm Springs Reservation to support a liaison position in the John Day basin. This liaison works with agencies and landowners to identify projects for improving fish passage and obtaining funds and technical assistance needed to implement the projects.

BOR2g - Funding for Pilot Study to integrate Clean Water and Endangered Species Acts

BOR is providing funding for a multi-agency project seeking to integrate the requirements of the Federal Clean Water and Endangered Species Acts in the Rogue River Basin. The pilot project, coordinated by RVCOG, is initially being applied in the Applegate River watershed.

BOR3 - Water Management and Conservation Program

BOR measures in progress/on schedule:

BOR3a - Technical Assistance to Irrigation District on Federal Projects

BOR is providing technical assistance to irrigation districts on Federal projects to prepare and implement water conservation plans and monitoring programs.

BOR3b - Funding for Water Measurement Equipment

BOR is providing funds to OR Department of Water Resources to implement a water measurement grant program enabling irrigators to purchase and install water measurement equipment.

BOR3c - Funding for Equipment and Analysis on Bear Creek

BOR is providing funds to purchase water measuring equipment, install and calibrate gauges, and gather and analyze data on Bear Creek.

BOR3d - Funding for Water Quality Survey on Bear Creek

BOR is providing funds to implement a water quality survey of drainage from the Federal project in Bear Creek. This should help to identify the quality of water leaving the Federal project, how that water affects Bear Creek, and it should set the stage for discussing potential remediation actions if required.

BOR3e - Funding for Upper Rogue Basin Conservation District

BOR is providing financial assistance to Upper Rogue basin irrigation districts on the Federal project to implement water conservation measures. Such measures should result in improved stream flows and/or improved water quality.

BOR4 - Water Management and Conservation Program

BOR measure in progress/on schedule:

BOR4a - Development of Fish Kill Remediation Strategies

BOR is working with the OWRD, OR Department of Fish and Wildlife (ODFW), and OR Department of Environmental Quality on fish kill remediation strategies that would result in permanent habitat improvement.

BOR4b - Upper Rogue River Wetland Demonstration and Restoration Project

BOR is working in partnership with U.S. Forest Service, RVCOG, and Medford and Rogue Valley Irrigation Districts on a demonstration project to construct/restore wetlands on the J. Herbert Stone Nursery in Central Point, Oregon. The major goal of the project is show the potential benefit of constructed wetlands in treating irrigation return flows in order to improve water quality in Jackson Creek, a tributary to Bear Creek which is a water quality limited stream in the upper Rogue River. A 3.5 acre site has been selected and the wetland is scheduled to be constructed in fall 1999. The demonstration program includes a 10-year monitoring program which will be implemented to assess changes in water quality parameters. BOR's constructed wetland program is targeted to be expanded on a larger scale in the upper Rogue River basin in FY 2000.

BOR5 - Endangered Species Implementation Program

BOR measures completed:

BOR5a - Engineering for Off-Channel Anadromous Salmon Rearing Pond

BOR completed preliminary engineering design plans for an off-channel anadromous salmon rearing pond to benefit coho salmon and steelhead in the Illinois River basin in FY 1995. This was a project identified by the Illinois River Watershed Council but has yet to be implemented by private landowners.

BOR5b - New Fish Ladder Facility at Antelope and Bear Creeks

BOR completed construction of new fish ladder facilities at its Antelope Creek and Oak Street diversions (on Bear Creek) in summer 1997 and 1998 respectively. These projects were implemented as part of BOR's Rogue River Fish Passage Improvement Program.

The new ladders now meets State and Federal criteria for safe adult fish passage and replace sub-standard fishways. Antelope and Bear Creeks are important steelhead spawning and rearing tributaries in the upper Rogue River basin.

BOR5c - New Fish Protective Screens in the Upper Rogue River Basin

BOR has successfully constructed new fish screen facilities, under its Rogue River Fish Passage Improvement Program, at the Oak Street diversion (Talent Irrigation District) on Bear Creek, the Antelope Creek diversion (Rogue River Valley Irrigation district) on Antelope Creek, and the Phoenix Diversion (Medford Irrigation Diversion) on Bear Creek. The new screens now meet State and Federal criteria for safe downstream passage of juvenile anadromous fish. The Antelope facility was operational beginning in 1998 and the Oak Street and Phoenix facilities will be operational in 1999. The Oak Street fish screen was constructed through a partnership with TID, enabling the project to be on the ground 2-years ahead of BOR's original construction schedule.

BOR5d - Funding for John Day Basin Water Conservation Demonstration Program

In 1994 BOR initiated water conservation demonstration projects in the John Day basin under the recommendation of the Northwest Power Planning Council's Fish and Wildlife Program. BOR has provided funds and technical assistance to State, local, Federal, and Tribal partners to implement projects that improve fish passage and fish habitat. The local Soil and Water Conservation District has successfully implemented several projects over the last 5 years, including removal and replacement of gravel push-up dams, diversion consolidation, gated pipe, gravity pipeline, tailwater reuse, drainage projects, and field leveling. The demonstration program and funding authority under the Northwest Power Council's program will end in FY99.

BOR measures in progress/on schedule:

BOR5d - New Fish Ladders at Phoenix Diversion on Bear Creek

BOR is continuing to design and construct fish passage and protective facilities at the Phoenix Canal Diversion Dam as part of BOR's Rogue River Fish Passage Improvement Program. The new fish ladders are scheduled to be constructed in summer 1999.

BOR 5e - New Fish Protective Facilities in the Tualatin River Basin

BOR initiated its Tualatin River Fish Passage Improvement Program in spring 1999. BOR is currently working on engineering design plans to upgrade fish passage facilities at its Patton Valley and Spring Hill pumping plants on the Tualatin River. BOR's schedule is to construct new screens/bypass facilities at the Patton Valley pumping plant in fall 1999 and Spring Hill pumping plant in summer 2000. The new screens will be designed to meet current State and NMFS design standards established to protect juvenile fish from being entrained into irrigation canals.

BOR 5f - New Fish Protective Facilities in the Deschutes and Crooked River Basins

BOR initiated its Central Oregon Fish Passage Improvement Program in spring 1999. BOR will start work on preparing engineering design plans to upgrade fish passage facilities at the Bend Field Canal on the upper Deschutes River and the Crooked River diversion near Prineville, Oregon. The new screens and ladders will be designed to meet current State criteria established to protect juvenile fish from being entrained into irrigation canals. The species of interest in Central Oregon are native redband trout, which have been petitioned for listing under the Endangered Species Act.

BOR5g - Technical Assistance for Improved Fish Passage Facilities in the Rogue Basin

BOR's Rogue Fish Passage Program will be ending in 1999 unless new authority is granted to construct new fish passage facilities at non-BOR projects. The Rogue River Fish Passage Technical Committee, comprised of BOR, NMFS, FWS, ODFW, State agencies, water users, and Watershed Councils, have expressed considerable interest to have this fish passage team continue to function once Reclamation's authorized fish passage program is completed. There are a tremendous number of fish passage problems and issues in the basin, and, typically what is lacking to resolve them is technical engineering assistance. Technical Committee members all believe that fish passage technical expertise and engineering support would be a valuable and needed function for the Committee to continue to perform in the future. The Technical Committee could continue to function in the role of a technical advisor or consultant to agencies and Watershed Councils, and, could operate in a commentary, advisory, review, or in some instances, even an engineering design capacity.

BOR is proceeding with discussions to develop a proposal for the continued operation of this Fish Passage Technical Committee in the future. BOR will carry the proposal forward and present it to the Rogue Basin Coordinating Council for approval in 1999. BOR is currently evaluating its internal capability to provide vastly needed engineering design service to further support the activities of the Technical Committee should it continue to function in the future.

BOR measures in progress/not on schedule:

BOR 5h - Technical Assistance for Improved Fish Passage Facilities on South and North Fork Little Butte Creeks.

BOR provided technical assistance to Rogue River Valley and Medford Irrigation Districts and in 1997 developed preliminary engineering design plans for improving fish passage facilities (ladder/screens) at diversions on South Fork and North Fork Little Butte Creek. These tributaries are important habitat areas for listed coho and steelhead populations. BOR does not at this time have specific project authority to construct these urgently needed fish passage improvements on South and North Fork Little Butte Creeks.

A bill was introduced in last year's 105th Congressional session which would have given BOR the authority to construct such facilities, but it was never passed. The same bill is expected to be re-introduced in the 1999 106th Congress.

BOR 5i - Technical Assistance for Improved Fish Passage Facilities in Oregon

BOR is working internally and externally with partners to expand its construction program to correct fish passage problems at non-BOR facilities located on Federal land and at non-Federal diversions located on private land. This would require a new Congressional authorization to enable BOR to assist in fish recovery efforts on a broader scale in the Rogue River and potentially other Oregon basins. Currently, key decision makers believe BOR lacks sufficient authority to allow it to seek appropriations for that purpose. BOR can currently provide engineering design assistance on non-BOR facilities, but it cannot provide construction money without additional authority.

CORPS OF ENGINEERS

Coastal Plan:

COE1 - Larson Slough Restoration (near North Bend, Oregon)

Status: This project has been terminated because the non-Federal local sponsor has withdrawn support. The Corps is seeking a new partner to continue the project.

COE2 - Chetco River (Port of Brookings, Oregon)

Status: Proceeding with a planning assistance to states study to reduce algae production and increase dissolved oxygen in the sports basin. Developing a discharge management plan and aeration system to improve water circulation and increase dissolved oxygen. This basin provides holding habitat for juvenile salmonids and other species in the absence of estuarine conditions at the mouth of the Chetco River.

COE3 - Elk Creek Lake (tributary to Rogue River)

Status: The plan to modify the partially completed Elk Creek Dam for passive fish passage has been postponed due to insufficient funds. The Corps believes the proposal to modify the dam remains the most cost-effective and biologically sound method of providing fish passage in its unfinished state. The schedule for future actions for long-term fish passage will depend on funds availability, consultation with the NMFS and ODFW on operation of the existing trap and haul facility, and potential guidance from Congress. The Corps announced its intention to complete the work by October 2000 in the Administration's 00 budget submission to Congress.

COE4 - Participation in Pacific Northwest Forest Plan Case Study

Status: The Corps continues to participate in the NW Forest Plan, by providing environmental technical assistance and ecosystem restoration support to the other federal, state and tribal agencies, and local watershed councils involved in implementing the Northwest Forest Plan. In addition to technical advice, the Corps will have completed several other needed projects, e.g. preparing GIS layers of forest age classes surrounding the Crater Lake National Park, assessing hydrological capacity of culvert and tidal flows, and preparing GIS data base of pre-1900 habitat conditions for the Willamette Valley. Participation is expected to continue beyond FY1999.

Steelhead Supplement:

COR1 - Develop Annual Operating Plan for Corps Willamette River Basin Dams

Status: This is an ongoing annual action. The 1999 plan is being developed with State agencies.

COR2 - Determine Feasibility of Reallocating Reservoir Storage

Status: Delayed. The feasibility study is continuing but completion has been delayed at least six months (to September 2000), and possibly longer, due to uncertainties regarding reservoir operations associated with the listing by NMFS of upper Willamette steelhead and spring Chinook as threatened under ESA. The study team, including the local sponsor, Oregon Water Resources Department (OWRD), believes it is critical that the Willamette Basin Review address the range of potential operational measures that may come out of the ESA Recovery Plan effort and the impact that those measures may have on the ability of the Corps reservoirs to meet other future water supply needs in the basin. To that end, informal coordination with NMFS and Oregon Department of Fish and Wildlife (ODFW) was undertaken beginning in October 1998 in an attempt to incorporate operating criteria for fish recovery into study alternatives. The study team has not been successful to date in clearly defining those criteria and is currently considering delaying the study pending completion of the Biological Opinion by the Corps and Biological assessment by NMFS

COR3 - Develop Operational Agreement for Low Flow Years

Status: This measure is being addressed through the feasibility study process (measure COR2).

COR4 - Undertake Willamette Basin Floodplain Restoration Study

Status: Reconnaissance phase study was initiated in April 1998 and is scheduled for July 1999. The draft Section 905(b) analysis concluded that the Willamette Floodplain Restoration Study provides an opportunity for the Corps to work cooperatively with other Federal, state and local agencies and entities that have placed a high priority on restoring the health of the watershed. The Corps has the technical and planning expertise and capability to assist in the development of an integrated restoration strategy for the basin. Such participation is consistent with Federal law, regulation and policy. Federal Interest in participating in the study is warranted. A detailed study plan (PSP) and feasibility cost -sharing agreement (FCSA) are scheduled to be completed by July 1999. Fifty percent local financing will be required during the feasibility study.

COR5 - Control Surface Water from Foster Dam (April - May)

Status: Action is ongoing and has been coordinated with State agencies.

COR6 - Solicit Congressional Support for Green Peter Dam and Reservoir

Status: Actions to correct fish mitigation problems will be funded through the Corps of Engineer's Operations and Maintenance Program. However, funding to implement those actions has not been available in recent annual operating budgets.

Willamette River temperature control

Status: The project is in the pre-construction engineering and design phase. The feature design memorandum for the Cougar Lake portion of the project was completed in July 1998. Plans and specifications for supply and construction contracts for Cougar have been initiated and will be completed in FY 99. Award of supply and construction contracts will be subject to future funding.

New Measures:

Willamette Mission State Park (North of Salem)

Status: Proceeding with a feasibility study to examine reestablishing year around flows to a secondary channel of the Willamette River and improve water quality in what is now Mission Lake. The secondary channel would provide rearing and raftage for salmonids.

Bowers Rock State Park, Albany Oregon

Status: Proceeding with a feasibility study to examine a direct hydraulic connection between the Willamette River and an existing 50 acre gravel pit. The proposed project would also connect the gravel pit to the Little Willamette and replace culverts that currently impede fish passage on the Little Willamette downstream of the connection to the gravel pit. The expected outputs are rearing and holding habitat for Juvenile salmonids.

Upper Rogue Basin Habitat Restoration

Status: A feasibility study will be initiated in April to improve fish passage and habitat conditions in the upper rogue basin. The study will examine fish passage, streambank stability and erosion and riparian areas along approximately 10 miles of stream. The focus will be on restoration of riparian and aquatic habitat for coho and other salmonid species

Fox Creek, Rainier, Oregon

Status: Completing plans and specifications for a project to daylight 650 feet of Fox Creek at its confluence with the Columbia River. Fish passage is currently limited to a small range of river elevations due to erosion around the culvert at the Columbia River. The project will return the stream to approximately its former course and gradient.

Clatskanie, Westport Slough

Status: A feasibility study will be initiated in April to examine the benefits of removing a blockage to Westport Slough at its confluence with the historic channel of the Clatskanie River. Opening the slough at this location would provide fisheries access to approximately 9 miles of slough and stream habitat as well as improve water quality in

the system.

Richardson Park, Fern Ridge Lake, Eugene, Oregon

Status: Project will be completed as "Combined Planning and Design Phase". Initiated Plans and Specifications, Environmental Assessment, and determination of project outputs (fish and wildlife habitat and/or ecosystem restoration benefits) and cost effectiveness and incremental cost analysis. The study considers restoration of Richardson Creek to about its original streambed in order to attain more efficient fish passage and restore instream and riparian habitat. Richardson Creek, from its confluence into Fern Ridge Reservoir for about 750 feet upstream, was encased in a 72-inch by 44-inch corrugated metal pipe (CMP) during construction of Fern Ridge Project. Access to upstream areas of Richardson Creek for fish (e.g. cutthroat trout) are effectively precluded. Restoring the waterway's creek characteristics and ensuring fish passage through any remaining culverts will significantly improve fish and wildlife habitat in the lower reaches of the waterway and increase the potential for upstream cutthroat trout movement within the waterway.

Trout Creek, Madras, Oregon Taunja

Status: A planning and Design effort will be initiated in April. Trout Creek is the uppermost tributary of the Deschutes River below the Pelton/Round Butte dam complex near Madras, Oregon. Human activities within the basin have resulted in severe watershed, stream, and fishery degradation. The stream is still extensively channelized; the restoration of the natural sinuosity of the main channel and the rehabilitation of the floodplain would entail removal of approximately 33,500 feet of levees, dikes, and push-up dams along a 25-30 mile length of the stream.