Year 2001 Report

on

Activities to Implement

Washington State's Water Quality Plan to Control Nonpoint Source Pollution

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Washington's Water Quality Management Plan to Control Nonpoint Source Pollution

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Department of Transportation (DOT)

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Part 1- Introduction

During the second year of implementing Washington's Water Quality Plan to Control Nonpoint Source Pollution, several milestones were reached that indicate successful momentum toward improving water quality. Improved communication and cooperation among state agencies, local government involvement, and increased monitoring and enforcement were hallmarks this year.

This report fulfills requirements under section 319 of the Clean Water Act, but it goes beyond that by reporting on other nonpoint activities, as much as practical, in Washington State. The target audience for this report are water quality managers, federal, state, and local decision makers, landowners, and others interested in improving water quality.

There has been tremendous history and effort to control nonpoint sources of pollution in Washington State. The plan was built, as much as possible, on capturing and documenting the many programs and activities already going on. The plan was designed to accelerate the implementation of these programs and activities through:

- Seeking opportunities for synergism between various state programs through increased inter-agency coordination,

- Providing opportunities for technology transfer of various successful methodologies between appropriate agencies and groups,

- Developing necessary infrastructure to streamline service delivery of programs to reduce nonpoint pollution,

- Supporting efforts for water quality improvement at the watershed level.

A major thrust of this years effort was to start linking with other state planning efforts. Increased coordination with the Puget Sound Plan and the state's Salmon Strategy happened, with an opportunity to link even more. We will build upon that impetus by trying to link with some federal programs; specifically with some Columbia Basin initiatives.

Federal consistency will take a more prominent role. Activities are underway to understand the full range of activities and programs by federal agencies that impact water quality, or help control nonpoint sources of pollution.

Compiling the range of local programs was a major undertaking this year. We improved Appendix A (Water Quality Summaries of the 62 Water Resource Inventory Areas of Washington State) was updated. 5000 letters requesting information, and numerous phone calls yielded a wealth of information about local programs.

Our annual year-end-report identifies, as best as possible, what has been done in the previous year to control nonpoint source pollution. This report follows the outline of Chapter 12 of the State's Nonpoint Plan. In Chapter 12 we ask the questions:

1. Is Water Quality Improving;
2. Are Programs Identified in the Plan Effective;
3. Is the Nonpoint Source Management Plan Effective;
4. What Changes in Strategy are needed to Improve Effectiveness.

The year-end report summarizes individual activities, but we are attempting to answer the question "is water quality improving." We are getting documentation that water quality is improving, but only at site specific locations. Our documentation is included as success stories. However, until the state fully develops a coordinated water quality monitoring program, and even after implementation begins, the larger question will still be unknown for some time.

In the meantime, partnerships, projects, financial assistance, and success stories are a part of this years report. Hopefully, in succeeding years, more time in this report will be spent on reporting successes.

Providing Grants and Loans for Local Control of Nonpoint Source Pollution

How much money is spent on nonpoint source pollution control? In 1999, we reported that the state spent around $45.8 million dollars for nonpoint source control, watershed restoration, and salmon recovery efforts. Federal expenditure was about $91.3 million. Of that, $49 million was for conservation reserve programs; and $25 million was for federal salmon recovery efforts. The remaining $17.3 million funded other local or state nonpoint control efforts.

One effort this next year will be to compile the full range of expenditures from all state and federal agencies. For this report though, we have only documented local grants and loans provided by Washington State's Department of Ecology.

Ecology's Grant and Loan Program

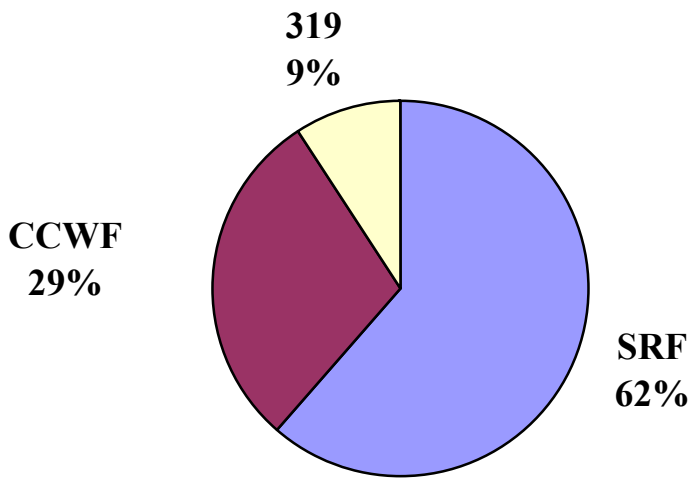
Ecology's Water Quality program administers three major funding programs that provide grants and low-interest loans for projects that protect and improve water quality in Washington State. Ecology acts in partnership with state agencies, local governments, and Indian tribes by providing financial and administrative support for their water quality efforts. As much as possible, Ecology manages the three programs as one; there is one funding cycle, application form, and offer list. The three programs share guidelines, a single application, and a common funding cycle.

The Centennial Clean Water Fund
CCWF provides grants and low interest loans to fund related activities to reduce nonpoint source pollution.

The State Revolving Fund
SRF provides low-interest loans for treatment facilities and related activities to reduce nonpoint sources of water pollution.

Section 319
319 grants provide funds to reduce nonpoint sources of water pollution

The FY2002 funding cycle provided the following percentages for nonpoint grants and loans:



The following grant and loan requests were funded in SFY02:

1. **Project Sponsor:** Adams Conservation District
   Project Title: Cow Creek Implementation
   Total Grant: $250,000
   Source of Funds: CCWF
   WRIA: 34

   Project Description: Develop and implement a program that would encourage farmers to "proactively" make management changes using available funding programs that would financially enhance riparian buffers, off site watering and other high priority best management practices to improve Cow Creek water quality.

2. **Project Sponsor:** Adams Conservation District
   Project Title: Fecal Coliform Base Line Project
   Total Grant $229,500
   Source of Funds: CCWF
   WRIA: 34

   Project Description: Establish a baseline for fecal coliform within Adams County to support environmental issues associated with the application of poultry nutrient material to agriculture fields before National Foods objective of producing 1,000,000 eggs daily is reached.

3. **Project Sponsor:** Adams Conservation District
   Project Title: Lower Palouse River Scoping Project
   Total Grant: $123,750
   Source of Funds: CCWF
   WRIA: 34

Project Description: Characterize the Palouse River portion south of Highway 26 including that effect from Willow Creek and Cow Creek contributions prior to direct entry into the Snake River. Determine and collect data that provides final analysis of all tributary influence at last public access point prior to Palouse Falls.

4. **Project Sponsor:** Almira Town of
Project Title: Almira WWTF Hydrogeologic Characterization Study
Total Grant/Loan: $40,500/$13,500
Source of Funds: CCWF & SRF
WRIA: 43

Project Description: The project will provide funding for the following: 1. Initial scope of work from Ecology review and comment. 2. Installation of three monitoring wells, a fourth may be required. 3. The ground water will be tested during a 24-month period. 4. Almira WWTF Hydrogeologic Characterization Study.

5. **Project Sponsor:** Bellingham City of
Project Title: Whatcom Watershed TMDL Study & Stormwater Mapping Project
Total Grant: $156,960
Source of Funds: CCWF
WRIA: 1

Project Description: The Whatcom Watershed Nonpoint Action Plan is an innovative, multifaceted, nonpoint pollution prevention program seeking to improve salmonid habitat, water quality and recreational uses of Whatcom Creek. The project takes a three pronged approach in preventing nonpoint pollution to Whatcom Creek and its tributaries by integrating a TMDL study, mapping of the stormwater system and a public education campaign.

6. **Project Sponsor:** Bellingham Port of
Project Title: Nonpoint Pollution Solutions
Total Grant: $246,964
Source of Funds: 319
WRIA: 1

Project Description: This project will address nonpoint pollution form boat owners, hobby farmers, households, and businesses in the Drayton Harbor, Lower Nooksack, and Bellingham Bay watersheds. The project will provide the target audience with comprehensive education and incentives to make behavior changes that protect water quality.

7. **Project Sponsor:** Benton Conservation District
Project Title: Yakima River Salmonid Habitat Improvement Project

Total Grant: $244,500
Source of Funds: CCWF
WRIA: 37

Project Description: This project implements actions outlined in the Yakima Conference of Governments Yakima River Basin Water Quality Plan, Ecology's TMDL Implementation Plans, Yakima River Sediment Reduction Plan and NRCS' EQIP on-farm conservation program. Benton CD will coordinate with Kittitas, North and South Yakima CD to implement water quality improvements for salmonids in the Yakima Basin.

8. **Project Sponsor:** Chehalis Basin District Alliance
Project Title: Upper Chehalis Nonpoint Reduction
Total Grant: $250,000
Source of Funds: CCWF
WRIA: 23

Project Description: This grant will be used to provide technical and financial assistance to landowners and occupiers who own livestock that have access to surface waters of the state. District and NRCS personnel will develop conservation plans and work with the landowners and occupiers to design and implement riparian restoration projects.

9. **Project Sponsor:** Chehalis River Council
Project Title: Chehalis River Volunteer Monitoring
Total Grant: $15,108
Source of Funds: 319
WRIA: 23

Project Description: Our project will train and equip volunteers to monitor water quality and benthic macroinvertebrates at four sites in the upper Chehalis watershed. Data will be collected using Ecology-approved methods. We will provide public education by training volunteers, holding workshops in local schools, and publishing our findings.

10. **Project Sponsor:** Chelan County Conservation District
Project Title: Wenatchee TMDL & BMP Implementation Project
Total Grant: $250,000
Source of Funds: CCWF
WRIA: 45

Project Description: Coordinate and implement "early action items" that will assist the planned total maximum daily load (TMDL) process in the Wenatchee River watershed and participate in the Wenatchee WRIA planning. Increase public awareness of water quality issues and provide technical assistance to landowners to improve water quality with best management practices.

11. **Project Sponsor:** Clallam Conservation District
Project Title: Dungeness Watershed Farm Plan Implementation
Total Grant: $243,800
Source of Funds: CCWF
WRIA: 18

Project Description: Technical and financial assistance will be provided to Sequim-Dungeness Clean Water District farm operators to develop farm plans and implement best management practices. A farm inventory will be conducted to identify high priority farms.

12. **Project Sponsor:** Clallam County
Project Title: Clean Water District Water Quality Monitoring and TMDL Implementation
Total Grant: $49,516
Source of Funds: CCWF
WRIA: 18

Project Description: This proposal requests funds to conduct water quality monitoring in the proposed Clean Water District to: Determine the success of remediation measures for fecal coliform abatement on water quality; Conduct follow-up water quality monitoring in priority streams, and; Inform the public of water quality conditions.

13. **Project Sponsor:** Clark Conservation District
Project Title: Salmon Creek Clean Water Grant
Total Grant: $220,000
Source of Funds: CCWF
WRIA: 28

Project Description: Ecology has established a TMDL on Salmon Creek in Clark County for fecal coliform and turbidity. Human disturbance, failing septic systems, and agricultural waste are identified as sources for both parameters. This proposal will address the need in Salmon Creek for water quality programs that assist livestock owners in reducing fecal coliform and sediment entering Salmon Creek from their property and assist the community in identifying and correcting domestic septic system problems.

14. **Project Sponsor:** Clark County Public Works Department
Project Title: Monitoring Coordination and Resource Program
Total Grant: $172,875
Source of Funds: 319
WRIA: 28

Project Description: This project will establish a shared monitoring resource program for the varied needs of local agencies, students, and volunteers. The "resource center" will provide training to volunteers and local agency staff; maintain an equipment borrowing facility; coordinate monitoring activities, and establish agreed upon indicators, data management, and reporting systems.

15. **Project Sponsor:** Clark County Public Works Department
Project Title: Watershed Characterization for Clark County/LCFRB
Total Grant: $240,000
Source of Funds: CCWF
WRIA: 28

Project Description: This project will collect data for watershed characterization and fish recovery project planning. It will implement part of the Clark County municipal NPDES permit as well as assist in the preparation and implementation of a ESA recovery plan for Clark County and the Lower Columbia Fish Recovery Board. With Clark County as project lead, it will be a cooperative effort of Clark County Public Works and the Lower Columbia Fish Recovery Board.

16. **Project Sponsor:** East Columbia Basin Irrigation District
Project Title: ECBID Rill to Sprinkler Conversion Program
Total Loan: $10,000,000
Source of Funds: SRF
WRIA: 41 & 36

Project Description: This rill to sprinkler conversion program is proposed to provide low cost loans to farmers in the East District irrigated service area to finance these conversions. The benefits achieved by reducing the amount of rill irrigated land will be improved water quality through the reduction of sediment loads and the levels of pesticides, nitrogen and other pollutants in District drains and wasteways.

17. **Project Sponsor:** Ferndale City of
Project Title: Comprehensive Stormwater Pl
Total Loan: $189,000
Source of Funds: SRF
WRIA: 1

Project Description: Prepare a comprehensive stormwater plan for the city of Ferndale.

18. **Project Sponsor:** Franklin Conservation District
Project Title: Irrigated Ag Loan Program
Total Loan: $750,000

Source of Funds: SRF
WRIA: 36 & 33

Project Description: Reduce agriculture impacts to surface and ground water by providing low-interest loans to growers to convert inefficient rill and hand- or wheel-line irrigation systems to center pivot or drip systems that prevent surface runoff and reduce ground water leaching.

19. **Project Sponsor:** Franklin Conservation District
Project Title: Irrigated Ag Technical Assistance
Total Grant: $82,676
Source of Funds: 319
WRIA: 36 & 33

Project Description: Reduce agriculture impacts to surface and ground water by providing on-farm technical support for new irrigation systems, and demonstrate continuous soil-moisture monitors that allow a grower greater control on their irrigation and fertilizer systems. Project includes water quality monitoring.

20. **Project Sponsor:** Franklin Conservation District
Project Title: Water Quality Education Progr
Total Grant: $115,163
Source of Funds: CCWF
WRIA: 36 & 33

Project Description: This program will educate agricultural producers and the public about the problem of elevated nitrate levels in ground water in Franklin County. In addition, a County-wide environmental education program will be developed. The program will educate K-12 graders by providing in-class instruction about water quality issues. The educational program will be marketed to the public via an interactive web site.

21. **Project Sponsor:** Housing Authority of the City of Tacoma
Project Title: Feasibility Study - Zero/Low Impact Housing
Total Grant: $75,000
Source of Funds: CCWF
WRIA: 10

Project Description: A feasibility study is proposed to redevelop Salishan, a public housing project, following zero/low impact guidelines. The redeveloped 200-acre project would have near zero impact on water and habitat quality in Swan Creek. It would demonstrate that heavily damaged urban streams need not be abandoned, but can be restored through redevelopment.

22. **Project Sponsor:** Island County Health Department
Project Title: On-Site Repair Financial Assistance Program
Total Loan: $300,000
Source of Funds: SRF
WRIA: 6

Project Description: The program will continue a local loan fund to provide financial assistance to private citizens to repair or replace failing on-site sewage systems. A priority system will be used to identify and fund failing on-site sewage systems with the most critical water quality, public health, and citizen need for low interest funding. A portion of the general fund will be reserved to assure loan repayment. A financial institution will provide loan approvals and contract collection services. Loans will be secured by a Promissory Note and Deed of Trust. Assurances will be obtained for systems installed with local loan funds to be properly designed by a Washington State licensed on-site sewage system designer, installed by an Island County licensed on-site sewage system installer and properly operated and maintained per Island County Code 8.07C.250.

23. **Project Sponsor:** Island County Public Works Department
Project Title: Camano Watershed Program
Total Grant: $407,673
Source of Funds: CCWF
WRIA: 6

Project Description: Camano Island Watersheds were ranked number three for watershed action planning (WAC 400-12). Island County has made a commitment to proactively manage nonpoint pollution by initiating, completing, and implementing action plans on Whidbey Island. This action plan process will complete the County's efforts to develop pollution solutions for WRIA 06.

24. **Project Sponsor:** Island County Public Works Department
Project Title: Freeland Water Quality Improvement Report
Total Grant: $111,150
Source of Funds: CCWF
WRIA: 6

Project Description: Prepare an engineering feasibility report that sets forth specific recommendations to control water quality and enhance water quality in the Freeland Business District, including: improving wetland habitat, enhancing riparian area, public education/recreation kiosk and trail, and providing sites for detention wet ponds.

25. **Project Sponsor:** Jefferson County Public Works
Project Title: Jefferson County Surface Water Plan

Total Grant: $207,500
Source of Funds: CCWF
WRIA: 21 & 20

Project Description: Jefferson County will complete a Surface Water Management Plan in two phases. Phase one will identify the content, issues and lead to a detailed scope for the Surface Water Management Plan. Phase two includes the completion of a Surface Water Management Plan that addresses water quality, water quantity and habitat issues.

26. **Project Sponsor:** King County Department of Natural Resources
Project Title: Ground Water Education Program
Total Grant: $85,931
Source of Funds: CCWF
WRIA: 7 & 8

Project Description: Promote commitment, awareness, appreciation, and knowledge of ground water resources through visual and interactive learning activities and public outreach that will create environmentally sustainable lifestyle behaviors and practices that will increase individual participation in ground water protection and conservation.

27. **Project Sponsor:** Kitsap County Department of Community Development
Project Title: Chico Creek Watershed Resources Protection
Total Grant: $98,250
Source of Funds: CCWF
WRIA: 15

Project Description: Kitsap County DCD and the Bremerton Kitsap Health District will complete a resource protection project on the Chico Creek Watershed. Health will implement shellfish protection in Chico Bay, and pollution control in Kitsap Lake. DCD will complete a demonstration model watershed plan with the U.S. EPA for "Smart Growth/Alternative Futures".

28. **Project Sponsor:** Kittitas Reclamation District
Project Title: Kittitas TMDL Support and Monitoring
Total Grant: $183,842
Source of Funds: 319
WRIA: 39

Project Description: Assist Ecology's Upper Yakima Total Suspended Sediment and Pesticide TMDL efforts to: monitor TMDL effects on water quality; coordinate early TMDL implementation actions; conduct outreach and technical assistance to water purveyors and water users; and support local water quality and habitat improvement through the KCWP.

29. **Project Sponsor:** Lacey City of
Project Title: Stormwater Pond Maintenance Outreach Project
Total Grant: $77,275
Source of Funds: 319
WRIA: 13 & 11

Project Description: This outreach effort will provide homeowners with the motivation and training necessary to better maintain their stormwater ponds. Through workshops and work parties, homeowners will learn how to effectively maintain their facilities, ultimately preventing pollution of stormwater at the source and decreasing the incidence of storm pond failure.

30. **Project Sponsor:** Lake Chelan Reclamation District
Project Title: Water Quality Assessment Manson Lakes
Total Grant: $112,500
Source of Funds: CCWF
WRIA: 47

Project Description: This project is a study of Wapato, Roses, and Dry Lakes near Manson. The lakes collect nutrients and pesticides that impact the Manson area lakes and potentially Lake Chelan. This study will provide baseline data for a Lake Management Plan and TMDLs.

31. **Project Sponsor:** Lincoln County Conservation District
Project Title: Crab Creek's Contribution to Moses Lake's TMDL
Total Grant: $228,188
Source of Funds: 319
WRIA: 43

Project Description: We propose to verify and quantify existing conditions of ground and surface water of Crab Creek in WRIA 43, and identify sources of high pH, excessive phosphorus, and bacteria. A riparian restoration activity would be implemented to reduce bacteria and/or phosphorus loading. Public outreach through information and education will also be accomplished.

32. **Project Sponsor:** Longview City of
Project Title: Longview Ditches TMDL Supplemental Project
Total Grant: $369,000
Source of Funds: CCWF
WRIA: 25

Project Description: Expansion of Ecology TMDL sampling of Longview ditches, which are listed on 303(d) section of the Clean Water Act. Cataloging the stormwater system including outfalls and roadside ditches and culverts by GIS. Development of public outreach and education programs.

33. **Project Sponsor:** Lower Columbia Fish Recovery Board
Project Title: Watershed Assessment of the Kalama River
Total Grant: $112,500
Source of Funds: CCWF
WRIA: 27

Project Description: This proposal is to conduct a watershed assessment of the Kalama River basin where there is limited habitat data relative to other lower Columbia watersheds. It is key to ensuring that fisheries protection address the factors limiting recovery using best available science. It will allow the sponsor to develop a prioritized and logically sequenced list of restoration efforts to bring about recovery.

34. **Project Sponsor:** Lummi Indian Business Council
Project Title: TMDL Implementation Monitoring in WRIA 1
Total Grant: $247,852
Source of Funds: 319
WRIA: 1

Project Description: Perform water quality monitoring necessary to: implement the Nooksack River and Johnson Creek fecal coliform TMDLs; evaluate impacts of farm plans and associated BMPs on water quality of downgraded and threatened tribal shellfish beds; and support upcoming Drayton Harbor fecal coliform TMDL water quality monitoring. Sreamflow and water quality data will be collected and analyzed.

35. **Project Sponsor:** Lummi Nation Service Organization
Project Title: Coal Mine Road Sediment Reduction
Total Grant: $203,490
Source of Funds: CCWF
WRIA: 1

Project Description: This project will storm-proof 3.5 miles of north fork Nooksack forest road on Whatcom County right-of-way. New drainage structures will prevent road initiated slope failures and limit sediment delivery. Specially designed culverts and bridges will be required to meet sediment objectives and restore anadramous fish passage.

36. **Project Sponsor:** Lummi Nation Service Organization
Project Title: South Fork Saxon Instream Structure

Total Grant: $250,000
Source of Funds: CCWF
WRIA: 1

Project Description: This proposal is to install 4-5 historic-scale large woody debris structures in the south fork Nooksack River Saxon/Acme Reach. Structures will restore the complex network of large woody debris necessary to limit bank erosion, provide sediment storage. They will scour and maintain functional salmonid holding and rearing pools for endangered Chinook salmon.

37. **Project Sponsor:** Marysville City of
Project Title: Water Quality/Flow Monitoring Program
Total Grant: $37,500
Source of Funds: CCWF
WRIA: 7

Project Description: Development and implementation of a water quality and flow monitoring program to evaluate water quality within the Marysville city limits. Objectives are to measure the effectiveness of proposed nonpoint source BMPs in achieving state surface water quality standards and verification of stream flows for use in calibration of hydrologic models.

38. **Project Sponsor:** Mason County Department of Health Services
Project Title: Lower Hood Canal O&M Program
Total Grant: $90,000
Source of Funds: CCWF
WRIA: 14 & 15

Project Description: An on-site septic system operation and maintenance education and homeowner inspection and reporting program will be developed and implemented in the Lower Hood Canal Watershed. The purpose of this project is to continue the restoration and prevent further degradation of the marine and freshwater water quality in the watershed.

39. **Project Sponsor:** Napavine City of
Project Title: Napavine Comprehensive Stormwater Management Plan
Total Loan: $40,000
Source of Funds: SRF
WRIA: 23

Project Description: The proposed project would develop a Comprehensive Stormwater Management Plan to address water quality and quantity problems in the vicinity of the town of Napavine.

40. **Project Sponsor:** Nooksack Indian Tribe
Project Title: Fecal Coliform Transport in Shallow Ground Water Discharging to Streams
Total Grant: $187,481
Source of Funds: CCWF
WRIA: 1

Project Description: Assess the transport of fecal coliform bacteria from agricultural operations and septic systems through shallow ground water discharging to surface water. Data on enteric bacteria colony numbers, hydraulic head, and geochemical conditions will be collected from nested piezometer sets installed at three locations and subsurface tile drains. Data analysis will assess the potential for agricultural manure spraying to be providing a source of enteric bacteria to ground water for transport to surface water.

41. **Project Sponsor:** Okanogan Conservation District
Project Title: Methow Watershed Irrigation Water Management
Total Grant: $250,000
Source of Funds: 319
WRIA: 48

Project Description: Provide technical assistance to WRIA 48 irrigators, with focus on the irrigation districts that are facing regulatory control by NMFS. The Okanogan Conservation District will provide water management training and technical assistance to irrigators that are withdrawing water from priority and 303(d) listed streams to enhance existing water savings programs.

42. **Project Sponsor:** Okanogan Conservation District
Project Title: Okanogan Implementation Committee Coordination
Total Grant: $49,486
Source of Funds: CCWF
WRIA: 49

Project Description: This project will coordinate the Okanogan Watershed Implementation Committee as it oversees the implementation of the Okanogan Watershed Water Quality Management Plan and provide local input into the development of the Okanogan Watershed DDT TMDL. It will provide valuable public outreach and information and education activities relating to water quality.

43. **Project Sponsor:** Pacific Conservation District
Project Title: Willapa River TMDL Issues
Total Grant: $161,963
Source of Funds: CCWF

WRIA: 24

Project Description: The Willapa River, TMDL Study; Data Summary Report and the 1998 Washington State 303 (d) list cited the Willapa River for exceeding state water quality standards for temperature, dissolved oxygen, and fecal coliform. Natural Resource Conservation Service farm plans will be developed and practices implemented to improve water quality in the Willapa River.

44. **Project Sponsor:** Palouse Conservation District
Project Title: Palouse Pilot TMDL Project: Phase 2
Total Grant: $75,000
Source of Funds: CCWF
WRIA: 34

Project Description: This project comprises Phase 2 of a three-phase Pilot TMDL project in the Palouse Region. Phase 2 will complete a TMDL Implementation Plan for fecal coliform bacteria on the North Fork Palouse River and allow for completion of TMDLs for all other listed parameters (temp. DO, pH) with minimal additional resources.

45. **Project Sponsor:** Pend Oreille Conservation District
Project Title: Upper Pend Oreille Sub-Watershed Ranking
Total Grant: $249,850
Source of Funds: CCWF
WRIA: 62

Project Description: Collection of baseline data for establishing future BMP implementations and TMDLs for 16 sub-watersheds emptying into the northern portion of the Pend Oreille River; 11 containing Westslope Cutthroat, 5 containing Cutthroat and Bull Trout. Install temperature data loggers in 303(d) Section of Cedar Creek for more complete long-term information.

46. **Project Sponsor:** San Juan County Conservation District
Project Title: San Juan County Monitoring Program
Total Grant: $187,500
Source of Funds: CCWF
WRIA: 2

Project Description: This proposal is for a preventive, early action program that analyzes water quality trends, establishes baseline conditions, defines critical areas, provides remedial action, and involves the public in stewardship through volunteer monitoring and public involvement.

47. **Project Sponsor:** Sequim City of
Project Title: Valley Surface Water Management Plan
Total Grant: $50,000
Source of Funds: CCWF
WRIA: 18

Project Description: The consultant will prepare a surface water management plan for the Bell Creek watershed, including irrigation systems and related connections. This plan will provide ideas for regional stormwater management and water quality and aquatic habitat protection through correction of existing stormwater problems and prevention of the degradation of water quality.

48. **Project Sponsor:** Skagit Conservation District
Project Title: No Name Slough Implementation - Phase 1
Total Grant: $194,063
Source of Funds: CCWF
WRIA: 3

Project Description: The No Name Slough basin currently suffers from water quality, quantity, and fish and wildlife habitat impairments, including documented violations of state water quality standards, low flows, and loss of riparian, estuary, and near shore habitat. The proposed project will directly address recommended action items in a targeted priority area. Through a coordinated and comprehensive stakeholder program consisting landowner participation, public outreach, volunteer involvement, watershed characterization, and the development of site-specific implementation projects, the SCD will protect and improve the resources of this area.

49. **Project Sponsor:** South Yakima Conservation District
Project Title: Granger Drain Run-Off Reduction Project
Total Grant: $186,577
Source of Funds: CCWF
WRIA: 37

Project Description: SYCD will conduct an intensive outreach, education, and technical assistance project for small farm owners and larger crop growers in the Granger Drain watershed. Workshop topics will include pasture management, manure handling, soil compaction, and local water quality concerns. Cost-share will be provided to landowners for BMP implementation.

50. **Project Sponsor:** Spokane County Conservation District
Project Title: Direct Seeding Assistance Program
Total Loan: $4,000,000
Source of Funds: SRF

WRIA: 56 & 54

Project Description: Crop residue/straw management is the most significant contributing factor preventing the widespread acceptance of direct seeding of cereal grain crops. The project would facilitate the implementation of direct seeding and the phase out of field burning, making funds available to remove, store and process straw and establish markets for straw products.

51. **Project Sponsor:** Spokane County Conservation District
Project Title: Little Spokane River Management Plan
Total Grant: $133,146
Source of Funds: CCWF
WRIA: 55

Project Description: This project is a follow-up to the Little Spokane Watershed Plan Development (G0000198). The Development Plan outlined four studies that are currently underway. After these studies are completed, this project will use the data and previous project results to develop a comprehensive management plan for the Little Spokane River Watershed.

52. **Project Sponsor:** Spokane County Conservation District
Project Title: Spokane County Riparian Buffer Program
Total Grant: $150,000
Source of Funds: CCWF
WRIA: 56

Project Description: This project will implement a riparian buffer and best management practices (BMP) program in Spokane County. It will fund a full time position to develop, coordinate, and implement approximately $100,000 of conservation practices throughout Spokane County. The project will conduct workshops, implement riparian planting, fencing, BMPs, and associated cost-share programs.

53. **Project Sponsor:** Stevens County Conservation District
Project Title: Mill Creek Watershed Plan Implementation
Total Grant: $250,000
Source of Funds: 319
WRIA: 59

Project Description: In December 2000, a watershed management plan was developed by a watershed management committee for the 108,400 acre Mill Creek Watershed, a tributary of the Colville River. This project would implement some of the recommendations contained in that plan to enhance, maintain, and protect surface water quality.

54. **Project Sponsor:** Thurston Conservation District
Project Title: Nisqually Delta Shellfish Response Grant
Total Grant: $198,750
Source of Funds: 319
WRIA: 11 & 13

Project Description: This project reduces fecal coliform contaminating shellfish beds by addressing agricultural and urban communities in the Nisqually Reach and McAllister. TCD will inventory and map farms in focus areas and develop 30 conservation plans with 75 percent implementation. BMP effectiveness will be monitored. Workshops will be held and videos produced. Shellfish stewards will conduct educational projects for shellfish recovery.

55. **Project Sponsor:** Thurston County Environmental Health Division
Project Title: Nisqually Reach Pollution Source Identification
Total Grant: $88,500
Source of Funds: 319
WRIA: 11

Project Description: Nisqually Reach commercial shellfish areas have been downgraded due to increasing levels of fecal coliform contamination. The main purpose of this project is to determine what and where the major sources of fecal coliform contamination in McAllister Creek are, and take actions to reduce them. This goal will be accomplished through stream segmentation, prioritization of sources, source analysis, technical assistance, survey methodology, education, and compliance action.

56. **Project Sponsor:** Tumwater City of
Project Title: Deschutes/Percival Habitat & Public Education
Total Grant: $43,540
Source of Funds: CCWF
WRIA: 13

Project Description: This project will protect and enhance water quality and salmon habitat in the Deschutes River main stem through a combination of riparian buffer revegetation, bioengineering and large woody debris placement, and promote proactive watershed stewardship in the Deschutes River and Percival Creek watersheds through the development and installation of educational signs.

57. **Project Sponsor:** Washington State University
Project Title: BMPs for Cranberry Farms
Total Grant: $250,000

Source of Funds: CCWF
WRIA: 24 & 22

Project Description: Pesticides found in cranberry farm surface water exceeded water quality standards by orders of magnitude. Despite intense effort to resolve the problem, little progress has been made. We propose to solve this problem with cost-effective solutions that are the result of research, implementation, educational outreach, consensus building, and adaptive management.

58. **Project Sponsor:** Washington State University
Project Title: Temperature/Turbidity Relationship Study
Total Grant: $40,184
Source of Funds: CCWF
WRIA: 37

Project Description: The relationship between water temperature and turbidity will be evaluated through a literature review and a laboratory study on temperature variations in turbid water exposed to natural and artificial sunlight. Results will be compiled in a report and other materials for dissemination to interested agencies, entities, and groups.

59. **Project Sponsor:** Western Washington University
Project Title: Water Quality: Abbotsford-Sumas Aquifer
Total Grant: $155,607
Source of Funds: CCWF
WRIA: 1

Project Description: This project will monitor species associated with agronomic loading (e.g., nitrate, DO, and fecals) in ground and surface water in a portion of the Abbotsford-Sumas. The objective is to quantify impacts due to local and Canadian loading and to assess the effectiveness of best management practices and dairy nutrient management plans.

60. **Project Sponsor:** Whatcom Conservation District
Project Title: Tenmile Creek Riparian Restoration Pilot
Total Grant: $250,000
Source of Funds: CCWF
WRIA: 1

Project Description: This farmer-led initiative joins with an active regional fish enhancement group and conservation district to meet the needs of salmon, agriculture and community. The water quality problems (fecal coliform, ammonia, temperature, dissolved oxygen, pH) in the Tenmile Creek watershed will be reduced by establishing appropriate riparian buffers along agricultural watercourses.

61. **Project Sponsor:** Whatcom County
Project Title: Water Quality Monitoring Implementation
Total Grant: $250,000
Source of Funds: CCWF
WRIA: 1

Project Description: The project will support work being done under the Watershed Planning Act. The project will result in implementation of a long-term comprehensive water quality monitoring program within WRIA 1 that includes: Identifying the nature and extent of water quality concerns; Identifying trends; Evaluating management actions; and Meeting Planning Act goals.

62. **Project Sponsor:** Whatcom County Public Works
Project Title: Water Quality and Riparian Restoration
Total Grant: $250,000
Source of Funds: 319
WRIA: 1

Project Description: A systematic effort for establishment of riparian buffers along lowland Whatcom County streams to improve water quality. A low-cost program utilizing labor from Whatcom County Jail and Washington Conservation Corps to improve water quality and salmon habitat. Partners include Whatcom County, Nooksack Salmon Enhancement Association, Drainage Improvement Districts, and Whatcom Sheriff's Office.

63. **Project Sponsor:** Yakima County
Project Title: Removal of Wrecking Yards from Flood Plains
Total Grant/Loan: $205,950/$154,400
Source of Funds: CCWF & SRF
WRIA: 38 & 37

Project Description: Yakima County has four automobile wrecking yards within the flood plains of the Naches and Yakima Rivers. It is the intent of this project to relocate these wrecking yards out of the flood plain, and relocate them to a more friendly environment.

Part 2 - Is Water Quality Improving?

This question will be answered over time by principally evaluating four sets of information.

1. Baseline and ambient monitoring
2. Violation frequency
3. 303(d) listed water bodies
4. Success Stories

In the meantime, we will report on individual successes as they are reported to us. Ecology created a nonpoint website and requested success stories from local governments. We have been overwhelmed with submittals. A few are noted below.

Baseline and ambient monitoring

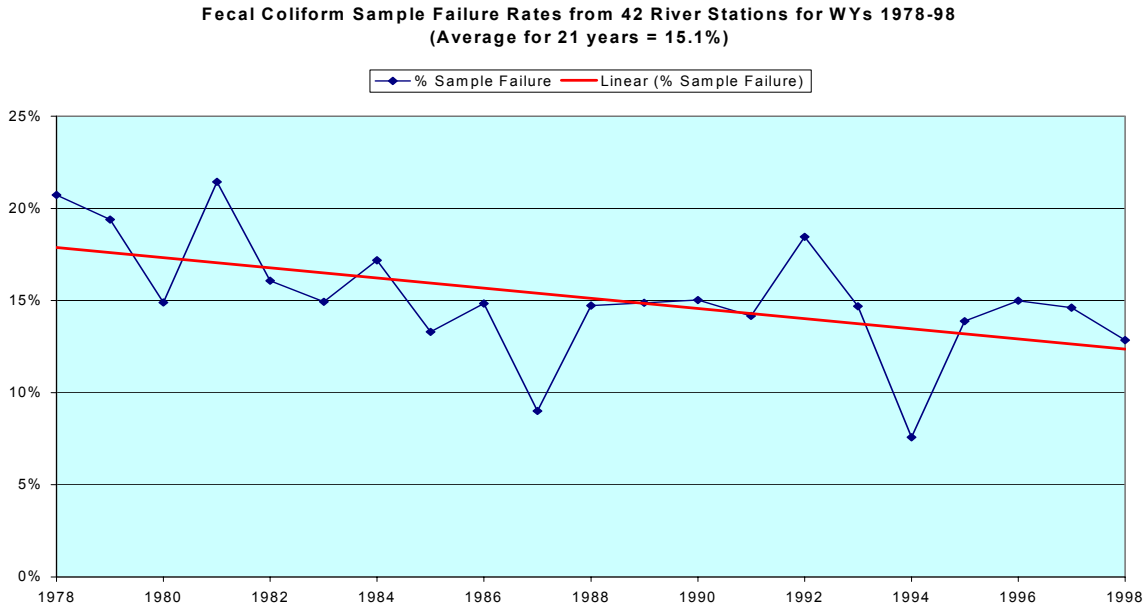
Baseline and ambient monitoring will provide long-term trend information on several water quality parameters around the state. These data are relatively gross in nature due to the approach used. However, they do provide a long-term look at conditions across the state. There is an effort that began in the latter half of FY2000, to develop a multi-agency ambient monitoring program. The monitoring strategy is being developed and will be implemented within the next year.

Violation frequency

Violation frequency is another approach to water quality analysis. This involves looking at the same ambient data, but looking for the frequency of violation as an indicator of change. It is not a trend analysis, but does provide a sense of how often a water body is out compliance over time.

For example, last year we reported that fecal coliform showed a decline in sample failures for the last 20 years. During 2001, Ecology hired a statistician to critique sample failure rate methodology. The methodology received a favorable report, thus will begin in incorporating raw data collected during 2001. Updated reports will be available later in 2002.

Fecal contamination Failure Rate

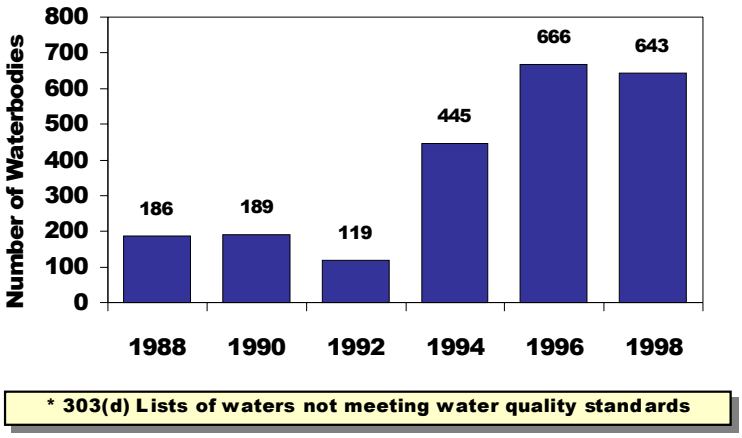


In the following years we will update the failure rates for temperature, fecal coliform, dissolved oxygen, pH, and other parameters that are typically monitored for nonpoint pollution.

303(d) Listed Waterbodies

An examination of the biennial **303(d) list** will indicate which water bodies have met water quality standards. This is a true indicator of water quality improvement at a site or throughout a watershed. Data from across the state is used to list water bodies not meeting State water quality standards. We will report on how many sites have improved water quality and are now meeting water quality standards.

Number of Waters Not Meeting Standards in Washington



The top six parameters that are causing listings and the number of waterbodies being affected by these parameters are:

Parameter	**1996 303(d) list**	**1998 303(d) list**
Fecal coliform	312	313
Temperature	282	320
Dissolved oxygen	130	130
pH	126	88
Instream flow	49	45
Total phosphorus	43	26

Success Stories

The state does not yet have an ambient monitoring program to assess the effectiveness of nonpoint source controls overall, however, we can show that water quality is improving, in places. Success stories are a great way to tell a story how water quality improvement can happen in a particular place. Ecology has developed a nonpoint source website where success stories are showcased from all over the state. The website address is: http://www.ecologydev/programs/wq/nonpoint/new_website/success/success.html

The following success stories are a sample of those that have been received through an active solicitation to local governments, tribes, and special purpose districts.

1. Water Quality Improvement Achieved Through Better Irrigation Methods

This project allowed irrigators to protect surface water quality and quantity by converting open irrigation canals to pipeline systems.

Project Purpose: The goal is to help irrigators in the Dungeness Valley prevent contamination of irrigation canals that supply surplus flows (tailwater) to Dungeness Bay, Sequim Bay or any natural drainages that lead to these receiving waters.

Project Description: The multi-agency effort is replacing open canals with pipelines to prevent contamination. Specifically, enclosing open canals in pipes has the added benefit of conserving irrigation water, thus reducing diversions from the Dungeness River, as well as eliminating the need for canal maintenance that can otherwise potentially degrade water quality. The work group has thus far completed one project that replaced over 7,000 feet of open irrigation canal with pipeline.

Project Results: The cost-share project with the Dungeness Irrigation Company resulted in the complete elimination of tailwater from one lateral that formerly delivered surplus flows to Mud Creek, a tributary of Matriotti Creek, which in turn flows into the Dungeness River. This irrigation lateral had the highest fecal coliform loading of all the tailwater ditches in the valley.

How Success Was Measured: Success is being measured by the reduction in fecal coliform loading to natural water bodies and the amount of irrigation water saved. In the one project completed, fecal coliform loading has been completely eliminated and irrigation water savings are estimated at over 0.8 cubic feet per second.

Notes: Construction on a similar project started in early January 2002. This project involves the replacement of approximately 14,000 feet of open irrigation canal maintained by the Clallam Ditch Company. Two tailwater ditches draining to Matriotti Creek will be completely eliminated. A third project involving the replacement of approximately 4,500 feet of Agnew Irrigation District open canal draining to Matriotti Creek is in the planning stages.

Lead: Clallam Conservation District

Partners: Dungeness Irrigation Company, and the Natural Resources Conservation Service.

Location: Dungeness Valley, Clallam County

Funding Source: Funding for this project was provided by a Washington Conservation Commission Centennial Clean Water Fund grant, a Department of Ecology Centennial Clean Water Fund grant, a Jamestown S'Klallam Tribe Salmon Recovery Funding Board grant, the Clallam County Road Department, the Dungeness Irrigation Company, a National Fish and Wildlife Foundation grant, a Washington Conservation Commission Dairy Nutrient Management grant, the Clallam Ditch Company, and the Agnew Irrigation District.

Timeline: This project began in April of 2000 and will continue through December 2004.

Contact: Joe Holtrop, Clallam Conservation District Manager at 360-452-1912x103, joe-holtrop@wa.nacdnet.org.

2. Farm Plan Created to Protect Water Quality

A farm plan designed with Best Management Practices can reduce sedimentation and manure polluted runoff (fecal coliform) in water systems.

Project Purpose: Russell and Kim Johns received a letter from Department of Ecology in the spring of 2001 notifying them of potential water quality concerns on their farm. In response, they identified and selected suitable management alternatives based on Best Management Practices to protect water quality, enhance wildlife habitat, and promote sustainable agriculture.

Project Description: With assistance from the Conservation District and NRCS District Conservationist, Kerry Perkins, Russell and Kim developed a farm plan for their 32 acres of crop and pastureland. The plan organized four activities. 1) The outlet from their pond ran through a small paddock, which was excessively muddy most of the year. The outlet was re-piped through the paddock area and directed into a newly excavated ditch. The photographs below illustrate the before, during and after progress of the task.

Johns outlet - before

Johns outlet - during

Johns outlet - after

Photos of the pond outlet entering the paddock area. The "after" photo was taken right after the culvert was installed. There is a culvert from the pond to a catchment basin, then the water from the catchment basin is piped through the paddock area, and directed into a newly excavated ditch.

2) Llamas, cattle and horses were excluded from numerous drainage ditches. All drainage ditches were fenced to restrict livestock access and crossings were installed on the ditches to maintain access between pastures.
3) The Johns planted grass filter strips along the drainage ditches and are currently developing a planting plan for incorporating native trees and shrubs as well. Before and after photos of a drainage ditch are shown below.

Drainage Ditch – after

Drainage Ditch - before

These photos correspond to the newly excavated and fenced drainage ditch. The rock barriers are for dissipating the flow of the pond runoff, which minimizes bank erosion and collects fine sediment.

4) They also piped their roof runoff away from the paddock areas and are currently establishing sacrifice areas for keeping livestock off wet pastures.

Project Results: The farm plan has enabled the Johns to develop a timeline and strategy for incorporating management improvements on their farm. Approximately 3,500 feet of exclusion fencing has been erected to date. Three livestock and equipment crossings were installed to maintain access between newly fenced pastures. The crossings have also helped the Johns practice rotational grazing with greater ease. Mud in the paddock areas has been substantially reduced and the general aesthetics of the property have increased.

How Success Was Measured: Washington State Water Pollution Control Laws require that landowners protect water quality on their property. Controlling animal access to streams protects water quality by reducing manure or manure contaminated runoff from entering the stream and reducing sedimentation. Vegetative strips provide filtration, trapping pollution and sediment before it washes into the stream. By developing a farm plan and implementing BMPs, the Johns have now met Ecology's requirements for water quality protection on their property.

Notes: Future plans include enhancing a wetland area for wildlife and constructing compost bins for utilizing livestock manure in their crop production.

Project Lead: Clallam Conservation District

Project Partners: Russell and Kim Johns, and the Natural Resource Conservation Service

Location: A private 32 acre farm in Sequim, WA.

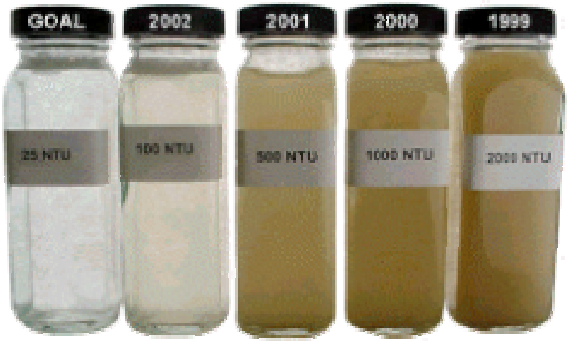
Funding Sources: Clallam County, Washington State Conservation Commission, and the Department of Ecology. The total cost of the project was approximately $16,414. Under Clallam Conservation District's Cost Share Program, 75% of the total project costs ($12,311) were covered with a combination of funds from the above agencies. The Johns contributed 25% ($4,103) of the project costs.

Timeline: Spring 2001. This is an on-going project but all of the cost share work was completed by Fall of 2001.

Contact: Jennifer Coyle, Conservation Planner. (360) 452-1912 ext. 110

3. Effective Irrigation Techniques Improve Turbidity on the Yakima River

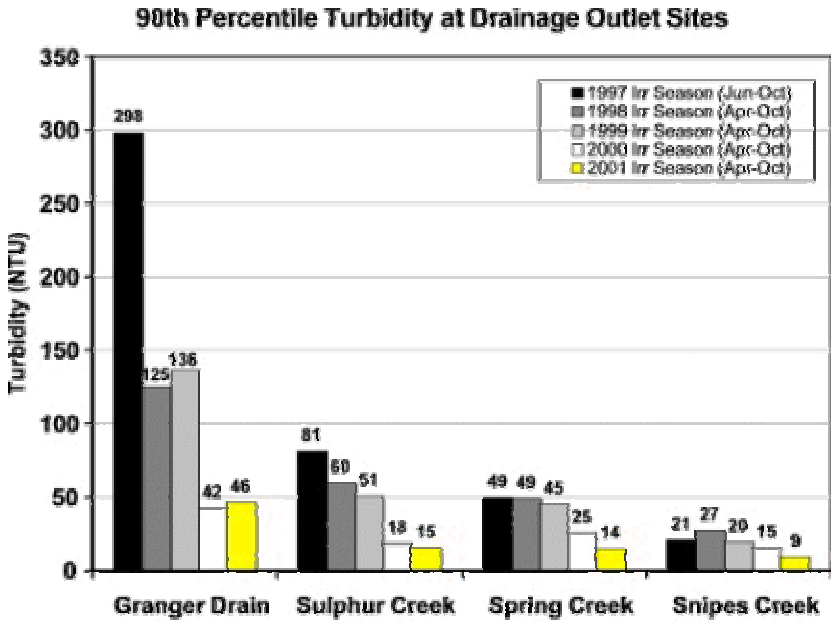
A multi-agency effort helped local farmers improve irrigation techniques through education, loans, and technical assistance. The project decreased harmful turbidity levels in the Yakima River by 95% and more.

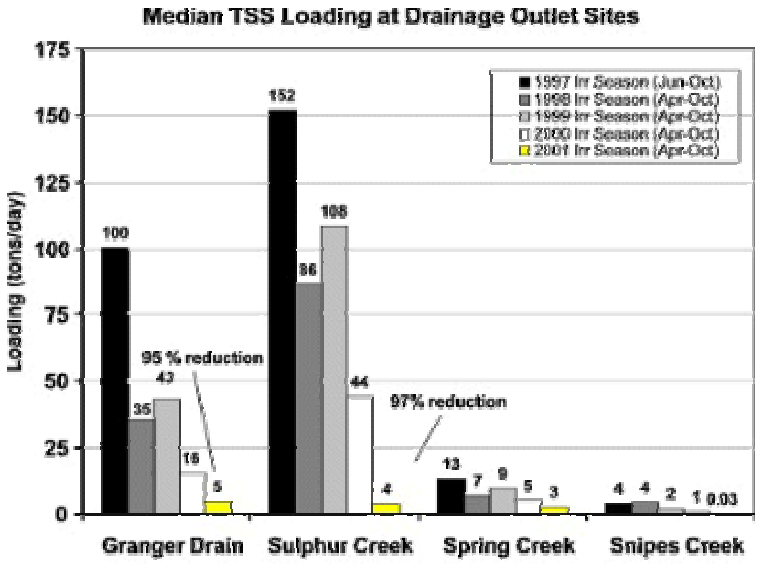


Project Purpose: This project has three primary objectives. 1) To comply with the Clean Water Act and Endangered Species Act that requires turbidity to be at or below 25 nephelometric turbidity units (NTU) 90% of the time (based on 1997 Washington State Department of Ecology (WDOE) lower Yakima River evaluation and subsequent 303d listings), 2) to protect the water rights of local farmers, and 3) to enable farmers to efficiently manage available water resources and be responsible stewards of the environment.

Project Description: Irrigation practices were identified as a direct cause of high TSS (total suspended sediments) loading and turbidity levels that commonly reached 300 NTUs or higher. The RSBOJC, having jurisdiction over irrigation return drains, created a think-tank to investigate and develop measures to address the levels of suspended sediments. A Water Quality Policy was created, the founding principles being education and support; the goal being to reduce on-farm turbid return flow and satisfy CWA objectives. In 1998 the group set incremental, yearly, on-farm turbidity targets that farmers must still meet today in order to remain in compliance with the RSBOJC Water Quality Policy. The objective is to meet the 2002 target of 25 NTU as set by the WDOE for all return flow discharge points on the Yakima River. If on-farm targets are not met, the landowner is responsible to take corrective action; either the implementation of a Best Management Practice (BMP) – such as managing irrigation application or monitoring soil moisture levels, or a system upgrade – such as upgrading from rill irrigation to a more efficient sprinkler system. The RSBOJC helps farmers meet yearly turbidity targets by providing education, technical assistance, and identifying outside resources. The RSBOJC Water Quality Monitoring Program, featuring an in-house WDOE-certified water quality laboratory, was established to gather baseline data and to track several parameters, including turbidity, to measure progress and gauge policy effectiveness.

Project Results: By 2000, two years before the deadline, three out of four primary irrigation drains met the CWA standard for turbidity (less than 25 NTU over 90% of the time). TSS decreased by 95% in Granger Drain and 97% in Sulphur Creek Wasteway, the equivalent of reducing sediment loading from 152 tons per day to 4 tons per day. Water quality continues to improve, and although Granger Drain has improved dramatically, it remains just outside the 25 NTU target. The RSBOJC believes Granger Drain will meet the WDOE's 25 NTU goal by the 2002 deadline.





How Success Was Measured: Direct water quality testing.

Notes: The farmers of the Lower Yakima Basin have worked extremely hard and have made tremendous financial investments (irrigation upgrades can cost over $1,500 per acre) to improve water quality. Yakima Valley farmers have again proven themselves exemplary stewards of the environment and should be congratulated for their efforts, vision, and cooperation. This project illustrates how partnerships between the agricultural community and state and federal agencies can truly manifest significant improvements to the environment.

Lead: Roza-Sunnyside Board of Joint Control (RSBOJC)

Partners: United States Bureau of Reclamation, South Yakima Conservation District, Department of Ecology, Environmental Protection Agency, landowners, other state and federal entities, and RSBOJC member Irrigation Districts.

Location: Lower Yakima River, irrigation return flow drainage network

Funding Source: The RSBOJC water quality policies and programs are funded in-house through irrigation water assessments. The success of the programs eventually led to a $10 million loan from the WDOE to help promote and finance implementation of on-farm BMP's. It's equally important to note that many irrigators and farmers spent millions of dollars incorporating new management techniques, building sedimentation basins, or upgrading their on-farm irrigation delivery system. (For example, well over 10,000 acres have been upgraded from rill irrigation to an improved method since 1999 – at an out-of-pocket cost to farmers of more than $1,500 per acre).

Timeline: 1997 - 2002

Contact: Joe Schmitt, Roza-Sunnyside Board of Joint Control, (509)-837-6980 or SchmittJ@svid.org. Please visit http://www.svid.org for more information.

4. Riley Slough Restoration Project

Landowners and agencies plant trees, monitor water quality and replace culverts with bridges to improve the environmental integrity of Riley Slough.

Project Purpose: To restore native riparian habitat, to address the low water levels, to address water quality and fish passage in Riley Slough,

Project Description: Throughout 1999 and 2000, the Snohomish Conservation District (SCD) worked with landowners to increase their awareness of the poor health of Riley slough and recommended actions they could take to improve it. During that time, landowners and Washington Conservation Corp crews planted over 2,000 native trees and shrubs and maintained over 7,000 linear feet of the slough. Since March 1999, two Americorps interns, in cooperation with the Stilly Snohomish Fisheries Enhancement Task Force, monitored the water quality of six sites on a monthly basis. Other Riley Slough restoration efforts began in early 2001, when the SCD received a Centennial Clean Water Centennial grant to address erosion and other problems related to culverts. With a budget of $80,000 the District replaced two undersized culverts with two bridges made of recycled concrete slabs in the fall of 2001. The Adopt-A-Stream Foundation assisted with the in-stream work and bridge placement, Chinook Engineering assisted with the bridge designs and local contractors provided gravel, crane service and metal fabrication. This project cost $21,000. The Centennial Clean Water Grant enabled the District to continue the re-vegetation focus of the first grant, address maintenance needs, and continue water quality monitoring.

Project Results: The bridges are a vast improvement to the culverts as erosion and road runoff no longer washes sediment and pollution into Riley Slough. The newly-planted native trees will reduce sedimentation and filter road runoff that will eventually improve water quality.

How Success Was Measured: The success of this project is measured through landowner involvement and support. While it is a slow process, staying involved with the landowners and understanding their concerns is integral to long-term water quality solutions. Another benefit is working with a specific waterway and involving all the landowners who live there. It will be many years before the scientific results of our work are measurable; however, it is already apparent how involving the community in the project can have great educational value.

Notes: Snohomish Conservation District continues to work with the landowners along the slough. Twice a year the landowners receive mailings and updates on the project. The District has held a community meeting and a field trip to restoration sites to answer questions and concerns. The project is known through the county and mentioned in the Near Term Action Agenda as a project on the lower Skykomish River. Quarterly project updates are published in the Nexus and the District Web site. Another bridge and re-vegetation project are scheduled for late summer 2002.

Project Lead: Snohomish Conservation District (SCD)

Project Partners: Eight landowners, Washington Conservation Corp, Americorps, Stilly Snohomish Fisheries Enhancement Task Force, Adopt-A-Stream Foundation, Chinook Engineering, local contractors.

Location: Floodplains associated with six miles of Riley Slough south of Monroe, WA

Funding Sources: Early Action grant from the Salmon Recovery Funding Board (SRFB), Clean Water Centennial grant.

Timeline: 1999 – ongoing

Contact: Kim Levesque, Snohomish Conservation District, kim@snohomishcd.org

5. Lake Tapps Parkway Wetland Mitigation

A wetland was created in a highly urbanized area to enhance water quality in a highly polluted tributary to the Stuck River.

Project Purpose: The project has several main objectives: 1) to mitigate for wetland impacts for the Lake Tapps Parkway East construction project, 2) to create and enhance off-channel salmonid habitat, 3) enhance a highly urbanized area and 4) provide treatment of water from Government Canal prior to discharge to the Stuck River.

Project Description: Government Canal, which runs to the north side of the mitigation site, originates at the Boeing Facility in Auburn, Washington where it drains nearly 600 acres of paved parking lot. It runs nearly two miles prior to discharging directly into the Stuck (White) River. The canal is roughly an average of four to five feet wide and maintains a relatively regular, year-round flow with some of the input coming from groundwater. Over the two mile stretch, Government Canal picks up a lot of surface runoff and pollutants, including high levels of nitrogen and phosphorus. An investigation of the canal stretch did not indicate unusual land use, being mostly residential with a few interspersed warehouse facilities. The likely cause of pollutants is mostly from residential sources (i.e. runoff from yard fertilization, pet waste, soaps and surfactants from activities such as car washing, land disturbances, etc.) with some light industrial activity. Because the main source of Government Canal is stormwater and runoff, water levels are highly irregular and pollutants vary extremely from one week to the next. Water levels can be as low as 0.5 feet, but may exceed four feet directly following a major storm event. In October of 2000, Government Canal was diverted to enter a 2.5-acre constructed wetland system, consisting of three wetland "cells" which are maintained at specific elevations by concrete weirs, and eventually emptying into the Stuck River.

Prior to wetland construction and during low flow (July 2000), the water was tested for various pollutants, including heavy metals, turbidity, BOD, COD, TDS, D.O., ammonia, iron, nitrogen, orthophosphate, and total phosphate. Nitrate and phosphate were the main areas of concern as the concentrations were at 0.57 mg/L and 0.29 mg/L, respectively. (These numbers are tame. Concentrations of phosphate and nitrate often spike to the point that they are unreadable on our

portable meters during storm events). After diversion of the canal, water continued to be monitored for phosphate, nitrate, BOD_5, and turbidity, at the inlet, at each of the three cells, and at the outlet directly before the wetland discharges to the Stuck River. No further testing was done for the other pollutants, as they did not pose any foreseeable threat to water quality.

Project Results: After over one year of water quality monitoring at the Lake Tapps Parkway Wetland Mitigation Site, a definite trend of pollutant reduction from the inlet, near the initial diversion of Government Canal, to the outlet at the Stuck River was evident. The overall nitrate reduction has been near 60%, the overall phosphate reduction has been near 40%, the overall reduction of turbidity has been near 17%, and the overall reduction of BOD_5 has been approximately 0.8%. Most of the pollution reduction is probably the result of quiescent settling, as the water entering the wetland from the canal is greatly reduced in velocity. However, a large amount of phosphate reduction may be attributed to the interaction between available binding sites on the freshly exposed soil particles. Phosphate reduction is also the likely result of plant uptake through roots. Phosphate uptake may be reduced over time as plants die and re-release phosphorus into the surrounding water column. Uptake will also likely slow down as soil binding sites fill up. Nitrate reduction is expected to increase within the wetland over time as anaerobic conditions reach a threshold.

The Lake Tapps Parkway Wetland Mitigation Site prior to construction.

The Lake Tapps Parkway Mitigation Site after construction in April 2001.

How Success Was Measured: Bi-monthly water quality testing.

Notes: WDFW electroshocked fish at the Lake Tapps Parkway Wetland Mitigation Site in the spring of 2001. They found wild Coho Salmon using the constructed wetland for off-channel habitat, which is very promising for the Stuck River system and for salmonid species in a very highly developed area. The land on which the wetland was constructed was previously an abandoned gravel mine, so the project was a type of reclamation project as well. The area around the mitigation site is very urbanized, consisting of trucking firms, lumber mills, and metal fabrication facilities. A green space was direly needed in such an urbanized environment. Great blue heron, kingfisher, fox, deer, waterfowl, and even bald eagles now call this wetland home.

Project Lead: Mary L. Lynch, Environmental Biologist for Pierce County Public Works and Utilities, Transportation Services

Project Partners: Washington Department of Fish and Wildlife and the Puyallup Tribe

Location: Butte Avenue off of 8th Street East in unincorporated Pierce County, directly adjacent to the Stuck River and Government Canal

Funding Source: Pierce County Road Funds

Timeline: 2000-2002

Contact: Mary L. Lynch, Pierce County Environmental Biologist (253)798-7250
Michelle Banonis, Engineering Technician (253)798-7250

6. Hedgerows for Salmon

In a cooperative effort between local livestock farmers, agencies and volunteer groups, hedgerow fences now protect salmon habitat.

Project Purpose: The project's objective was to encourage landowners to install major hedges to keep livestock out of streams.

Project Description: The Snohomish Conservation District (SCD) sent out 200 letters to the livestock owners in the District database to invite their participation in this project. The letters provoked many responses that eventually led to site visits. The project was also publicized through SCD quarterly newsletters, mailings, summer fairs, and festivals. The implementation budget for this project was $75,000, which the District used to purchase plants, fencing materials, and plant protector supplies. Most of the hedgerows were installed with volunteer labor; Girl Scouts, Boy Scouts, and 4H clubs. The Washington Conservation Corps assisted with maintenance and large tasks.

Project Results: The project has resulted in a renewed interest in the many uses of hedgerows throughout the county. While hedgerows cannot be applied everywhere, there is a wide range of benefits and uses. For example, hedgerows develop complex root systems that hold sediments in place. Stream sedimentation can clog salmon redds (nests) and make it difficult for aquatic animals to breathe. Hedgerows also act as filter strips that absorb polluted runoff associated with agriculture and roads. In addition, they exclude livestock from water systems. This is important because livestock tend to erode streambanks and contribute to fecal coliform pollution that is abundant in their waste. Encouraging landowners to install a diverse and wildlife friendly hedgerow along their property line, fence line, or waterway is beneficial to both the landowner and wildlife habitat.

How Success Was Measured: Success was measured by the willingness and cooperation of the participating landowners to try a new technique that was not currently practiced in the county.

Notes: Hedgerows can be a simple and economical tool for rural as well as urban landowners. The hedgerow project is featured on the SCD Web site as well as the county website.

Project Lead: Snohomish Conservation District (SCD)

Project Partners: Girl Scouts, Boy Scouts, 4H clubs, volunteer labor, and the Washington Conservation Corps.

Location: Snohomish basin

Funding Sources: Clean Water Centennial grant

Timeline: 1998 - ongoing

Contact: Kim Levesque, Snohomish Conservation District, kim@snohomishcd.org

Part 3 - Are Programs Identified in the Plan Effective?

This year was the first effort at determining the effectiveness of the programs included in the plan. The state's nonpoint workgroup (A detailed description of the state agency workgroup is in Part 5 of this report) met in retreat in October to discuss their plan implementation activities. The purpose of the retreat was to discuss agency activities relevant to the nonpoint plan; the status of activities identified in Table 9.1 (Table 9.1 is the activities table in Chapter 9 of the nonpoint plan); whether those activities need to be upgraded or deleted; and the addition of new initiatives. Updated Table 9.1 is added as Appendix 1 to this report.

Effectiveness of the programs relates to both implementation of activities and the effectiveness of BMPs. The state will continue effectiveness monitoring of BMPs and will track BMP implementation activities. Part 3 is a compilation of progress reports for Table 9.1 activities.

Agency Progress Reports

Participating agencies include:

Department of Agriculture	Interagency Committee for Outdoor Recreation
Conservation Commission	Office of Community Development
Department of Ecology	WSU Cooperative Extension
Department of Fish and Wildlife	Department of Health
Department of Natural Resources	Puget Sound Action Team
Parks and Recreation Commission	Department of Transportation

The annual report describes the following:

1. Efforts to implement activities they have agreed to implement in Chapter 9;
2. Success measures;
3. Any significant changes to implementation or funding of existing programs;
4. Reporting on progress on cooperative efforts involving other entities not part of the State Agency Workgroup will also be expected. The Salmon Recovery Office will report on performance measures identified in the Salmon Recovery Strategy.

All the information gathered will be annually tabulated by Ecology and used by State Agency Workgroup to make decisions about overall Plan effectiveness. It will also be made available to the general public using the Ecology web site.

Not all actions identified in Table 9.1 are discussed. A number of them are scheduled for future implementation, some of them haven't begun implementation, or there was simply no activity this last year. What follows are this year's reports on implementation activities where action took place:

Statewide Irrigated Agriculture Plan

Salmon Strategy (Agr 1)

Ag1 - Develop Statewide Irrigated Agriculture Comprehensive Plan to facilitate development of Comprehensive Irrigation District plans.

Implementing Agencies: **State Department of Agriculture**
Conservation Commission
Ecology
State Fish and Wildlife
Natural Resource Conservation Service
tribes

Milestones:

Plan developed by December 2001

Begin implementation in 2002

Discussion:

In 1998, "Extinction is not an Option" was released by Governor Gary Locke as a plan for salmon recovery in the state of Washington. The three parts to the general recovery strategy (the Forest Module, Agriculture Module, and Urban Module), each were to develop guidelines for improving land and water management practices that would be more sensitive to better protection of rivers, streams and riparian habitats.

Each strategy would be developed independently, but when combined would improve the health of the watersheds by promoting riparian and aquatic functions to provide for a colder, cleaner and adequate water supply for salmonids and contribute to ecological improvements. The Agricultural Strategy subsequently developed two distinct pathways for addressing endangered species and water quality issues. The first focused directly on farming practices through a revision of the Natural Resources Conservation Service's (NRCS) Field Office Technical Guide (FOTGs) used in developing farm plans.

The second focused on cooperating with Irrigation Districts in the development of a planning manual for achieving water conservation and water quality improvements in their water delivery and drainage systems. Together these two separate processes became known as the Agriculture, Fish and Water (AFW) process. Although the agriculture strategy involving both of these processes is a voluntary, incentive-based approach, those who choose to participate can receive regulatory certainty under the Endangered Species Act (ESA) and the Clean Water Act (CWA). In July 1999, the Board of Directors of the Washington State Water Resources Association (WSWRA), representing Washington's Irrigation Districts, developed a white paper entitled "Programmatic Response-Irrigation District Operations" to describe their preferred method for addressing endangered species and water quality issues

Results:
Guidelines for Preparation of Comprehensive Irrigation District Management Plans is the product of substantial collaboration between Irrigation Districts, state and federal government, the Colville Tribes, and environmental stakeholders in the Irrigation District portion of Washington State's Agriculture, Fish and Water (AFW) process. The participants in the AFW Comprehensive Irrigation District Management Plan (CIDMP) development process set out to develop a voluntary and incentive based process for improving district operations in response to both Endangered Species Act (ESA) and Clean Water Act (CWA) concerns. The extensive collaboration during this manual's development has led to a better understanding by all participants of the varied values, legal requirements, constraints and needs associated with the ESA, the CWA and those who must conform with those laws. The participants worked collaboratively within technical workgroups and the Executive Committee to develop the CIDMP Guidelines manual.

Funding Conservation Districts

Puget Sound Plan (Ag-1)

Ag2 - Build capacity in conservation districts to better deliver water quality programs by providing permanent stable funding

Implementing Agencies – **Counties**
Conservation Commission
Washington Association of Conservation Districts

Milestones: 3 new counties per year will provide assessments

Discussion: Current state law (RCW 89.08.400) allows county governments to enact an assessment as part of the property tax to fund Conservation Districts. However, only 8 of the 42 districts have the assessment in place. These current assessments provide about $8.6 million, but do not address the estimated $39.6 million in unmet needs from the remaining districts. These additional assessments could be put in place from negotiations between the counties and the conservation districts on an individual or group basis, or by legislative action.

Results:

Pierce went through the assessment process during 2001, however the county, after public discussion, did not act on the request.

District with Assessments	Districts without Assessments	
Franklin	Adams	Pacific
King	Asotin County	Palouse
Kitsap	Benton	Palouse-Rock Lake
Lincoln County	Central Klickitat	Pend Oreille
North Yakima	Chelan County	Pierce
South Yakima	Clallam	Pine Creek
Spokane County	Clark County	Pomeroy
Thurston	Columbia	San Juan County
	Cowlitz	Skagit
	Eastern Klickitat	Snohomish
	Ferry	South Douglas
	Foster Creek	Stevens County
	Grays Harbor	Underwood
	Jefferson County	Upper Grant
	Kittitas County	Wahkiakum
	Lewis County	Walla Walla County
	Mason	Warden
	Moses Lake	Whatcom
	Okanogan	Whidbey Island
	Othello	Whitman

Well Water Protection

Ag3 - Expand well water protection findings in order to prioritize technical support and compliance inspections.

Implementing Agencies: **Ecology**
State Department of Agriculture
Cooperative Extension

Milestones:

Provide Technical Assistance to Improve Agricultural Practices and Support Non-Point Water Quality Improvement

Discussion:

The Washington State Department of Ecology conducted a certification analysis of the final Columbia Basin Ground Water Management Area. As a result of that analysis, the CB GWMA has received certification.

The Washington State Department of Agriculture supplied significant technical assistance in developing the ground water management plan and provided policy guidance in the areas of fertilizer management options. The department instituted a chemigation/fertigation technical assistance program and staffed that program with two FTE's

Results:

See Above

Field Office Technical Guides

Salmon Strategy (Agr 4)

Ag4 - Update Field Office Technical Guide (FOTGs) for use by NRCS and CDs

Implementing Agencies: **State Department of Agriculture**
Conservation Commission
Cooperative Extension
Ecology
State Fish and Wildlife
State Department of Transportation

Milestones:
Progress on updating FOTG's by December 31, 2002

Discussion:
The technical group is working on and progressing with an agricultural strategy updating associated FOTGs in Skagit County. The FOTGs in question relate to the operation of drainage systems, overland flows containing sediments and pollutants, and providing stability to stream banks through the use of tree plantings with a desired result of reducing water temperatures.

Results:
The Agriculture Fish and Water process has been reviewing the standards in the Field Office Technical Guide for Washington. This analysis is resulting in changes to standards that will provide greater protection for water quality and fish. AFW has focused on the standards employed in northwest Washington first. At this point in time, it is uncertain when a final document will be produced. The current schedule proposes some agreement to be in print mid-year in 2002. NRCS will adopt the changes as BMPs within the FOTG and the Department of Ecology and the Conservation Commission will utilize these new standards as guidance for recipients of grant funds. In addition, it is assumed that these same BMPs will become the basis for any response to TMDL issues arising from agricultural lands. Finally, state agencies are beginning discussions with county governments on how these update BMPs will be used within the context of the Growth Management Act and county ordinances designed to protect water quality.

Irrigation Delivery System Study

Salmon Strategy (Agr-4)

Ag7 - Study feasibility of converting open gravity canals and other current delivery systems to more efficient systems, including pressurized pipe.

Implementing Agencies: **Ecology**

Milestones: Report completed by December 31, 2004

Discussion:

The actual feasibility study has not yet begun. Preliminary outreach and discussion with irrigation districts has centered around the use of SRF to loan to growers funds for the purchase of irrigation delivery systems.

Results:

No overall strategy has been developed; element to begin in earnest in 2004.

Farm*A*Syst/ Home*A*Syst

(National Farm*A*Syst/ Home*A*Syst)

Ag9 - Secure a source of permanent and ongoing funding for the FARM*A*SYST/ HOME*A*SYST program within Washington State University.

Implementing Agencies: **Washington State University**
Washington Association of Conservation Districts
Conservation Commission

Milestones:

A permanently funded statewide coordinator, implementing the program in targeted locations in cooperation with other county faculty.

Discussion:

Although WSU Cooperative Extension would like to be able to implement the Home*A*Syst program in Washington State, it does not have the resources to fund a coordinator position. WSU has not pursued funding for a full-time coordinator either, due to lack of resources and other priorities.

Results:

At this time there is not a coordinator for the program. However, WSU currently provides a website where people can get information, as well a full range of wellhead and groundwater protection factsheets and self-assessment worksheets (most are available on-line).

Water Quality Education for Small Farms

Ag10 - Develop an education and outreach program targeted at small farms water quality and ESA compliance

Implementing Agencies: **Cooperative Extension**
Washington Association of Conservation Districts
Conservation Commission
Ecology

Milestones:
Funding of $40,728 was provided to WSU through the 2001, DIF process.
Project was been fully developed and planned with appropriate research and outreach faculty.
Demonstration sites for project implementation have been identified and obtained for project use.

Discussion:
Due to contract negotiations the project was not funded until January 2002. However, much of the preliminary planning and logistics of the project were worked out during the summer and fall of 2001. Implementation of the project will occur during 2002.

Results:
Project was been fully developed and planned with appropriate research and outreach faculty.
Demonstration sites for project implementation have been identified and obtained for project use.

The following plan was developed and is being implemented:

I. Demonstration of Best Farming Practices for Water Quality

a. WSU-Puyallup

•Establish Cover Cropping Demonstration Area	Two winter seedings
•Develop Riparian Buffer Demonstration Area	Establish riparian plantings

b. WSU-Vancouver

•Establish Cover Cropping Demonstration	Summer and winter seedings
•Establish Irrigation Demonstration Project	Install drip irrigation system
•Develop Riparian Buffer Demonstration Area	Establish riparian plantings

II. Research on Best Farming Practices for Water Quality

• Farmer Needs Identification and Assessment	Farmer interviews and surveys
• Cropping system trials-WSU Puyallup	Cover cropping system established Vegetable cropping system established Yield and soil monitoring
• Design riparian research program for Clark's Creek	Map riparian buffer area Develop long-term research plan

CREP

(Salmon Strategy Agr-)

Ag11 - Implement Conservation Reserve Program

Implementing Agencies: **Conservation Commission**
State Department of Agriculture
Natural Resource Conservation Service
FSA

Milestones:

208 landowners have secured CREP contracts.

- Target of 400 additional landowners by FY 2003.
- Target of additional 300 by FY 2004.
- Legislature passed and Governor signed bill from 2001 session exempting CREP contract holders from Forest Practices Act.
- Conservation Commission develops and implements PIP Loan program, eliminating the 40% of the cost that the landowner was faced with carrying for up to three years.

Discussion:

The Conservation Commission is implementing this action. Program has taken off. Payment rates and 100% cost share are popular among landowners. Shortage of conifers effected 2001 planting. Current barrier to success is amount of technical assistance funding available to Conservation Districts for plan development and implementation. Landowners are being turned away due to lack of staff to address planning components. Still awaiting federal action on (1) irrigation rental rates and (2) extending eligibility of CREP to all perennial crops.

Results:

There are currently 3844 acres enrolled that comprises 201 miles of salmon and steelhead habitat protected and in the process of being restored. The average statewide buffer width is 149 feet.

Commodity Group BMPs

Action – Actively engage agricultural producer groups in developing and implementing new Best Management Practices.

Implementing Agencies: **Conservation Commission**
Ecology
Agriculture
Washington State University

Milestones: 50% of farms with farm plans using developed BMPs by 2003, 75% by 2008

Discussion: Current and pending designations of Best Management Practices include: High Efficiency Irrigation, Direct Seed, Site-specific farming (precision agriculture), Rotational Grazing, Late Spring Birthing, those developed for Cranberry Agriculture and those developed form Pesticide Strategic Management Plans as approved by the Commission and Ecology.

Results: Several different Agricultural BMPs have been investigated including:

Use of USDA's Pest Management Strategic Plans to develop pesticide BMPs for differing commodity groups. Due to the large number of commodities grown in the state (over 300), an enhancement of WSU's current program is being sought.

Hop growers are continuing work on Integrated Pest Management and resistence management.

Potato growers have developed a possible IPM program.

Wine Grape Growers are independently considering a BMP program.

Washington State University established the Cunningham Farm to research optimization of Direct Seed technology for the Palouse region.

State Revolving Funds were loaned to implement BMPs to:

East Columbia Irrigation District	$10,000,000	for higher efficiency irrigation
Spokane Conservation District	$4,000,000	for direct seed

Agricultural BMP Financing

Ag13 - Use State Revolving Fund low-interest loans to help agricultural commodity groups with development and installation of BMPs that reduce pollution and water use.

Implementing Agencies - **Ecology**

Milestones - $40 million provided by 2004

Discussion:

As BMPs are developed and approved, grower groups may seek funding in the form of SRF loans to implement the BMPs on farm. Loans may be through any local government entity or special district.

Results:

Ecology approved the following BMP implementation projects that implement this action through the Centennial Clean Water Fund/319/SRF grant and loan process:

Tracking Number	Recipient Name & Project Title	Fund Source	Fund Amount
FP02046	**East Columbia Basin Irrigation District** ECBID Rill to Sprinkler Conversion Program	SRF Loan	$10,000,000
FP02012	**Spokane County Conservation District** Direct Seeding Assistance Program	SRF Loan	$4,000,000
FP02088	**Franklin Conservation District** Irrigated Agriculture Loan Program	SRF Loan	$750,000
FP02092	**Chelan County Conservation District** Wenatchee TMDL & BMP Implementation	CCWF Grant	$250,000
FP02037	**Washington State University** BMPs for Cranberry Farms	CCWF Grant	$250,000
FP02008	**Adams Conservation District** Cow Creek Implementation	CCWF Grant	$250,000
FP02049	**Chehalis Basin District Alliance** Upper Chehalis Nonpoint Reduction	CCWF Grant	$250,000
FP02087	**Franklin Conservation District** Irrigated Agriculture Technical Assistance	319 Grant	$82,676

Forest HCPs

(Salmon Strategy For 3)

For2 - Complete Habitat Conservation Plan on forestry module

Implementing Agencies: **Salmon Recovery Office**
State Department of Agriculture
Ecology
State Fish and Wildlife
Department of Natural Resources

Milestones: 1 new HCP per year starting in 2003.

Discussion:

Limited budget and staff have impacted the ability to prepare for the HCP and its environmental documents this biennium. All work that is being accomplished to implement provisions of the Forests and Fish report, and ESHB 2091 is considered preparatory for the HCP. ESHB 2091 extends the time for the federal government to issue an incidental take permit for the Forests and Fish Report in order to prevent a failure of assurances under this agreement. Prior to implementing this activity, Forest 1 (Adopt new forest practices rules) and Forest 2 (Approve road maintenance abandonment plans), both from the Salmon Recovery Plan, must be fully implemented as critical elements to HCPs. Developing habitat conservation plans for the forestry module is scheduled to begin in fiscal year 2002.

Results:

The following has been accomplished:

- HCP and environmental documents to comply with ESA, NEPA, and SEPA;
- Long-term certainty provided by an incidental take permit issued by NMFS and USFWS under ESA for actions taken by state in issuing forest practices permit;
- Long-term certainty provided by an incidental take permit issued by NMFS and USFWS under ESA for forest products industry for action regulated by the state.

Watershed Analysis

(Salmon Strategy For 5)

For3 - Update the watershed analysis manual, facilitate conducting watershed analyses and approve watershed analysis permits

Implementing Agencies: **State Fish and Wildlife**
Department of Natural Resources
Ecology

Milestones: Manual updated by June 2003

Discussion:

This element of Forest and Fish process has had its priority lowered through promulgation of rules.

Results:

Components of the watershed analysis process were incorporated into the Forest and Fish agreement. Other components were replaced by new Forest and Fish rules.

Class IV General Forest Practices Permits

(Salmon Strategy Lan 12)
(Puget Sound Plan FP-2)

For5 – Approve transfer of Class IV general forest practices permits to local governments

Implementing Agencies: Department of Natural Resources
State Fish and Wildlife
Ecology
Office of Community Development

Milestones: All Puget Sound counties and cities will have ordinances in place by December 31, 2005.

Discussion:

The deadline for each county and city to adopt ordinances or regulations which set standards for Class IV forest practices regulated by local government is extended from December 31, 2001, to December 31, 2005. The Department of Natural Resources may continue to provide technical assistance to cities and counties related to Class IV forest practices until January 1, 2006

Results:

Small Forest Landowners

(Salmon Strategy For 4)

For8 – Carry out the functions of the Small Forest Landowners' Office.

Implementing Agencies: **Department of Natural Resources**
State Fish and Wildlife
Ecology

Milestones:

Discussion:

The state legislature authorized DNR, as part of the 50% compensation for leaving a forest and fish riparian zone, to be able to include reimbursement of a small landowner's consultant costs for setting up a riparian easement. The legislature requires that the small landowner representatives nominated by WFFA will serve staggered terms. The bill also removes the requirement to have a reduced compensation for landowners that may take trees out of the riparian easement before the 50 years is up and leaves others, as in an eastside riparian zone.

Results:

The legislature wants a report of progress on development of alternative plans for small landowners or alternative harvest restrictions that may lower their overall cost of regulation by July 1, 2003

GMA Critical Areas

(Salmon Strategy Lan 2)

Urb1 - Update guidelines and models for consideration by counties and cities on inclusion of Best Available Science and giving special consideration to salmon conservation in their local GMA Critical Areas Ordinances.

Implementing Agencies: **Office of Community Development**
State Department of Agriculture
Conservation Commission
Ecology
State Fish and Wildlife
Department of Natural Resources
Puget Sound Action Team
State Department of Transportation
Tribes

Milestones:
The DIF grant for $50,000 is being applied to a contract with a private consultant to help with the development of model critical area ordinances. The ordinances will be completed by March 1, 2002.

Discussion: Following the publication of these model ordinances, OCD and other state natural resource agencies will conduct training workshops throughout the state to help explain the model provisions and offer additional technical assistance.

Results: As of January 23, 2002, $12,742 has been invoiced to OCD/Ecology for payment from the consultant. Expenditure of the full $50,000 grant is expected by March 2002. The model ordinances are being designed to be easily transferable to medium and small sized communities. OCD will be working with other state agencies in designing regional workshops in the spring to share this information with local governments and the public.

Floodplain Management

(Salmon Strategy Lan 4,5)

Urb2 - Revise guidance for development and implementation of local Floodplain Management Plans and for use of non-regulatory tools and incentives to reconnect rivers and flood plains

Implementing Agencies: **Ecology**
Office of Community Development
State Fish and Wildlife
Puget Sound Action Team
State Department of Transportation
Department of Emergency Management

Milestones:

Ecology Floodplain staff assisted in the development by FEMA Region 10 of a revised Model Flood Ordinance for Washington State that incorporates policies to better preserve and protect natural floodplain values.

Discussion:

The revised model ordinance has been reviewed by staff from both USFWS and NMFS and comments from each agency have been incorporated into the revised model.

Results: A revised model flood hazard ordinance is avaialable from FEMA Region 10 or the Department of Ecology.

Land Protection Incentives

(Salmon Strategy Lan 8)

Urb3 - Design and promote incentives for non-regulatory land use protection programs.

Implementing Agencies: **Ecology**
Office of Community Development
State Fish and Wildlife
Puget Sound Action Team
State Department of Transportation
Department of Natural Resources

Milestones:
Ongoing technical assistance and grants administration.

Discussion:

This action is an ongoing project with Ecology and partnering agencies. Technical assistance is provided when requested and grant are given to local governments who apply for projects to provide land use protection programs, including acquisition and land improvements. Efforts are underway to update existing directory of incentive opportunities, which includes programs for funding and technical assistance that support wetlands and salmon habitat preservation and recovery efforts.

Results:

Ecology produced and distributed technical guidance document 99-108 titled, *Open Space Taxation Act Current Use Assessment Program: Applying the Public Benefit Rating System as a Watershed Action Tool*. The document was distributed to all counties in the state

State Stormwater Manual

(Salmon Strategy Sto 1,2,4)
(Puget Sound Plan SW-1)

Urb4 - Develop a Stormwater Management Strategy which includes updating the stormwater manual and helping local governments implement the manual to address stormwater impacts on habitat and water quality of new development

Implementing Agencies: **Ecology**
State Fish and Wildlife
Puget Sound Action Team
State Department of Transportation
Tribes

Discussion:
Ecology spent two and one half investigating and proposing changes to the 1992 Stormwater Management Manual for the Puget Sound Basin. The project involved:

Five staff members, each responsible for one of five volumes
Advisory committees that totaled over 70 different individuals
A consultant team to program a new hydrology model
A consultant to assist with technical editing

Two drafts of the manual update were published - one in 1999, and another in 2000. Public workshops, public input, and additional advisory committees were held after the release of each draft.

Results:
The final stormwater manual for western Washington was published in September 2001. Ecology mailed at least one copy of the manual to each local government. An announcement of the manual and an explanation for how to order a copy from the Dept. of Printing was sent to over 3,000 interested parties. The manual is also available on-line at the Water Quality Program's website. Workshops to introduce the manual to local governments and development project managers are scheduled for February and March 2002. The Puget Sound Water Quality Management Plan calls for local governments to adopt the Western Washington Stormwater Manual, or an equivalent manual, by March 2003.

Ecology also held a number of workshops in the summer and fall of 2001 to introduce the new hydrology model for western Washington. Workshop attendance totaled approximately 450. The model is a specific application of USEPA's Hydrologic Simulation Program Fortran – (HSPF). It uses a Windows format to allow easy use of HSPF. The model predicts pre-development and post-development runoff flow rates. Its use is necessary as a step in sizing retention/detention facilities to meet the flow control requirement in the new manual.

Stormwater Control Technology

(Salmon Strategy Rea 4)

Urb5 - Research stormwater technology design, cost benefit and know-how to effectively address stormwater problems

Implementing Agencies: **State Department of Transportation**
Ecology
State Fish and Wildlife
Puget Sound Action Team
Tribes

Milestones:

Number of local communities assisted.

Discussion:

Results:

1. SW Practicability Checklist completed.
2. Temp. monitoring of BMPs will start in '02.
3. Dry well research continuing with field testing near Spokane starting in spring of '02.
4. Dissolved metals and temperature BMPs are currently being researched.

Puget Sound Stormwater Management Program

(Salmon Strategy Sto 3)

Urb6 - Update the Puget Sound Stormwater Management Program and, as appropriate, update model ordinances for local stormwater management programs to be consistent with changes to the Puget Sound Management Plan

Implementing Agencies: **Puget Sound Action Team**
Office of Community Development
Ecology
State Fish and Wildlife

Milestones:
December 2000 – A comprehensive revision of the Stormwater and Combined Sewer Overflows program was adopted by the Puget Sound Water Quality Action Team as part of the revised *Puget Sound Water Quality Management Plan.*

Model ordinances are under development and are on schedule. Extensive guidance on low impact development practices has been developed and circulated. This includes a major regional conference, *Low Impact Development in Puget Sound,* CD-ROM, color brochure, web page, model PowerPoint presentation, and extensive list of web resources.

Discussion:
The revised stormwater program reflects new technologies and new issues such as the salmon listing under the Endangered Species Act. The program now sets one comprehensive program goal for implementation by Puget Sound jurisdictions rather than the two-tiered basic and comprehensive programs of the previous plan. The comprehensive program is in line with expectations for Endangered Species Act requirements for stormwater, and includes all of the minimum requirements of EPA's NPDES Phase II Rule. It also encourages low-impact development techniques and requires integration of stormwater planning with land use and watershed planning.

Results:

- The stormwater program is now consistent with innovative technologies such as low impact development, Endangered Species Act standards for stormwater management, and expectations for stormwater management under NPDES Phase II.
- The revision process provided opportunities for outreach to local and tribal governments about the new stormwater program.
- Puget Sound region now has access to extensive guidance and educational materials on low impact development.
- Awareness of low impact development was greatly heightened by *Low Impact Development in Puget Sound* conference.

Stormwater General Permits

(Salmon Strategy Sto 5)

Urb7 - Issue and reissue (on the regular five-year cycle) stormwater general NPDES permits. Provide technical assistance with implementation that conforms to the latest water quality standards and technical manual

Implementing Agencies: **Ecology**
State Fish and Wildlife
Puget Sound Action Team
State Department of Transportation

Milestones:

Stormwater General Permit reissued by end of calendar year 2002.

Discussion:

The next step in this process is distribution of a revised draft permit, and Ecology is working on the revisions. Unfortunately, Ecology stormwater resources are being directed to other unscheduled activities, such as responding to proposed legislation and implementation of ESB 6188, the Transportation Permit Efficiency and Accountability Act. As a result we cannot predict when a revised draft will be complete. We are anxious to get the permit reissued and are making every effort to shift our attention back to redrafting permit language.

Results:

Work on the permit has been delayed

Low Impact Development

Urb8 - Identify and participate in a low impact stormwater demonstration project

Implementing Agencies: **Ecology**
Office of Community Development
Counties
Cities
Association of General Contractors

Milestones: Some milestones that will be accomplished in the future:

- The initiation of a process with the City of Tacoma regarding adoption of innovative design standards which are a variance from their current standards.

- The development of site layout drawings, including structure design details, road, parking, driveway, apron designs and material details, and designated reforestation areas.

- The completion of presentations to target groups and consensus on the design approach for Salishan

Discussion:

The ability of low impact development to help control stormwater runoff is in its infancy in Washington State. This project will be used as a demonstration for other communities, and the state, to determine the efficacy of LID, and the variations and improvements that can be made.

Results:

A Centennial Clean Water Fund Grant was awarded to the Tacoma Housing Authority Project on January 24, 2002. This project is intended to be the first step in the restoration of Swan Creek, its watershed, and the water quality and fish habitat that extend well beyond Swan Creek.

The project will determine the extent to which low-impact development techniques can be incorporated into the redevelopment of an existing public housing development.

Onsite Sewage O/M

(Puget Sound Plan OS-2)

Urb11 - Identify needs to enhance the onsite O/M program at both state and local levels and recommend funding to implement.

Implementing Agencies: **Department of Health**
Puget Sound Action Team

Milestones:

Discussion:

During 2001, DOH sponsored the work of an On-site (Sewage) Advisory Committee. The top six recommendations of this multi-stakeholder committee related to O&M or on-site systems. They were:

1. Explore establishing and identifying funding mechanisms for an O&M Coordinator position to provide technical assistance to local health jurisdictions.
2. [DOH] support WOSSA's (Washington On-site Sewage Association) efforts to develop a comprehensive statewide O&M program as well as an insurance/warranty program for on-site systems.
3. Develop a model risk-based O&M program.
4. Emphasize and promote the development of O&M management programs, models, and methods, based on national, state, local and private experience.
5. Explore establishing and demonstrating the utility model for O&M activities.

Results:

DOH has assigned a staff member of the wastewater management program to serve part-time as an interim O&M Coordinator.

Stable funding sources for ongoing O&M programs remains elusive, and recent statewide initiatives limiting government access to revenues is making the effort to establish stable funding more difficult.

Onsite Sewage Inspections

Urb12 - Seek additional legal and financial assistance for local health officers' inspections of onsite sewage systems

Implementing Agencies: **Department of Health**

Milestones: 16 FTEs doing inspections statewide by 2005

Discussion:

Department of Health is continuing to seek additional funding.

Results:

Funding for local health districts continues to be an unresolved issue. Health will be exploring new avenues this year, but given the state's budget shortfall, this element may have to be delayed for several years.

New OSS Technologies

(Puget Sound Plan OS-5)

Urb13 - Identify and approve new technologies for onsite waste treatment

Implementing Agencies: **Department of Health**

Milestones:

By December 2001

1) Delineation and clarification of review and approval process for new and experimental technologies.
2) Establish standard protocols for testing new and experimental technologies.
3) Establish performance standards to be met by technologies seeking approval.

Discussion:

DOH has 17 technical documents called Recommended Standards and Guidance documents for a variety of on-site technologies. These documents are typically reviewed every 3 years for possible updating and revision. Most new technologies fall into one or more of these 17 technologies.

Results:

OSS Education

Urb14 - Establish an effective statewide education program to convince the general public of the importance of properly maintaining their onsite sewage systems and how to do that.

Implementing Agencies: **Department of Health**
Local Boards of Health

Milestones: Statewide education program in place by 2004

Discussion:

DOH currently has consumer education materials on the DOH website. DOH also works with local health jurisdictions in preparing information materials and developing ways to get these materials into the hands of on-site sewage system owners and users.

Results:

Statewide mass media approaches have not yet been explored, but a DIF application is being submitted to the Interagency NonPoint workgroup for this very purpose.

Urban Pesticide Strategic Team

Urb18 - Through the Urban Pesticide Strategic Team, encourage the development and implementation of programs to reduce the impacts of pesticide use in urban areas.

Implementing Agencies: **Environmental Protection Agency**
Agriculture
Ecology
Health
Washington State University

Milestones:

Discussion:

Chapter 333, Laws of 2001: requires additional notification and record-keeping for use of pesticides on school grounds.

Results:

Structural pest association has released it's pesticide and IPM uses educational video. Copies were sent to all schools by the Office of Public Instruction. The U-PEST team is working on an education web page on intergrated pest management in schools.

NEPA Pilot Projects

(Salmon Strategy Lan 11)

Urb22 - Complete "Reinvent NEPA Pilot Projects" to address environmental concerns on a broad geographic area and earlier into project planning

Implementing Agencies: **State Department of Transportation**
Ecology
State Fish and Wildlife

Milestones:

List of completed pilot projects

Discussion:

Ongoing activity to complete this project

Results:

- I-405 pilot to be completed by July 2002. At that time the "record of decision" will be issued.
- SR20 impacts were reduced; pilot project will not continue.
- SR24 pilot project is 20% completed.

Controlling Highway Runoff

(Salmon Strategy Sto 6)
(Puget Sound Plan SW-4)

Urb23 - Revise and implement highway runoff manual; undertake stormwater retrofit for transportation projects; implement grant programs

Implementing Agencies: **State Department of Transportation**
Ecology
State Fish and Wildlife
Transportation Improvement Board

Milestones:

Miles of highways that meet new stormwater requirements

Discussion:

The activities for this project are ongoing.

Results:

HSPF-based hydraulics model will be completed in February 2002.

HRM rewrite is scheduled for completion in August 2003.

Off-Road Vehicle Plan

Rec3 – Include Water Quality considerations in regular or required updates of grant funding policy plans.

Implementing Agencies: **Interagency Committee for Outdoor Recreation**

Milestones:

Discussion:

IAC developed draft language for inclusion in the 2001-2007 NOVA PLAN. Draft language was:

> The Department of Ecology's *Water Quality Management Plan to Control Nonpoint Source Pollution* (April 2000) cites the "strong potential for water quality degradation" related to NOVA-funded activities and the high "potential for disturbing stream banks and causing erosion and sedimentation".
>
> Some experts believe that certain types of land-based recreation may have a detrimental impact on the environment, particularly on water quality. IAC will attempt to determine the extent of any problem and develop a program, if it appears needed, that will assist sponsors in making their projects more environmentally friendly. To accomplish this, IAC will seek non-NOVA funding to implement a workshop among water quality specialists, recreation land managers, and biologists. Workshop discussion points would include personal experience and current research regarding the water quality impacts of land-based trail recreation activities such as hiking, mountain bicycling, horse/stock use, and off-road vehicles.

Results:

The advisory committee to IAC decided to table the language until they had a chance to discuss the issue further. Ecology is continuing communication with IAC on the topic.

Boat Sewage Plan Update

(Puget Sound Plan MB-3)

Rec6 - Update the Comprehensive Boat Sewage Management Plan for Washington State

Implementing Agencies: **Parks and Recreation Commission**

Milestones:
Sites for future pumpout installation will be identified. Information will be provided to marina owners and operators on the expected maintenance and repair needs of the various types of pumpout.

Discussion:

State Parks is currently in the process of conducting a survey called "Boat Sewage Disposal Facility Inventory and Needs Assessment for Washington State." This survey replaces the 1994 "Comprehensive Plan for Boat Sewage Management in Washington State" .The purpose of the inventory and needs assessment at all public and private marinas is to determine status of existng facilities and identify current and future needs.

Results:

No progress was made on this project during this reporting period. We will be reporting on the update of this plan in the next reporting period.

Boater Water Quality Education

(Puget Sound Plan MB-4)

Rec7 - Coordinate agency educational efforts for boaters on environmentally safe practices, such as for the Clean Boating Week held last year.

Implementing Agencies: **Parks and Recreation Commission**
Ecology
State Fish and Wildlife
Department of Natural Resources
Puget Sound Action Team

Milestones:

This ongoing educational program will continue.

Discussion:

Information on boating environmental issues are continually being provided to educators upon request. In 2001 we began distribution of our "Kids Activity Bag" to local law enforcement, and non-profit organizations who conduct boating classes for children in schools. It includes both boating safety and good environmental information for school age children.

Results:

Boater education materials are continually being provided to school educational efforts.

Integrated Stream Corridor Guidelines

(Salmon Strategy Per-2)

Hyd1 - Develop and implement Integrated Stream Corridor Guidelines, building on the completed Integrated Streambank Protection Guidelines.

Implementing Agencies: **Washington Department of Fish and Wildlife**
Washington Department of Transportation
Washington Department of Ecology

Milestones:

Integrated Stream Corridor Guidelines will be adopted in year 2002.

Discussion:

Washington Department of Fish and Wildlife completed four guidance documents, and hired contractors to provide (1) editing for style consistency and (2) formatting for publication. The four guidance documents, which are expected to be published in 2002, are:

1. Integrated Streambank Protection Guidelines.
2. Fish Protection Screens.
3. Fish Passage at Culverts.
4. Fishways

Eight "white papers" on the state-of-the-knowledge on selected topics which will serve as best available scientific and technical information upon which to base additional, future, guidance documents were completed and published. Papers cover the following topics (some topics may be merged into a single guidance paper):

1. Channel Design.
2. Marine Overwater Structures.
3. Freshwater Overwater Structures.
4. Treated Wood Issues.
5. Marine and Estuarine Shoreline Modification Issues.
6. Floodplain and Riparian Corridors.
7. Marine Dredging.
8. Freshwater Dredging and Gravel Removal.

A ninth paper on Water Crossings is expected to be completed and published in 2002.

Preparation of a fifth guidance document, Stream Habitat Restoration Guidelines (based on the white papers on Channel Design and Freshwater Dredging and Gravel Removal) was initiated in late 2001, with completion and publication expected in late 2002 or early 2003. Stream Habitat Restoration Guidelines builds upon Integrated Streambank Protection Guidelines, and each will complement the other.

Contracting for preparation of Stream Habitat Restoration Guidelines exhausts the project funding originally provided by the Salmon Recovery Funding Board, and leaves a deficit of approximately $50,000 necessary to complete technical and format editing , formatting, and publication.

To complete the project – finalizing the ninth white paper, developing guideline documents based on the white papers, and providing training for implementing the guidelines is a more expensive and time-consuming process than originally envisioned. In particular, money budgeted in the current biennium will not be sufficient, even with the ability to carry over unspent funds past June, 2001. Latest estimates for completion of the documents and initiation of training in the next biennium would take an additional $800K for Puget Sound Region-specific project types, and another $1.1M for project types applicable for the rest of the state.

Results:

Eight final white papers were published in March 2001.

Final technical drafts of the first four guidance documents were posted to the project web site (http://www.wa.gov/wdfw/hab/ahg/) and trainings on these documents were delivered by Washington Department of Fish and Wildlife for staff from the state departments of Fish & Wildlife, and Transportation.

Washington Department of Fish and Wildlife delivered trainings on the draft guidance documents for state agency staff from the departments of Fish and Wildlife and Transportation.

Membership on the project steering committee was extended to representatives of the US Army Corps of Engineers, Seattle District, and to the US Fish and Wildlife Service, Portland Region.

Hydraulics Code and Water Quality

(Salmon Strategy Per-4)

Hyd2 – Evaluate the Hydraulics Code with an eye towards improving its use for water quality protection.

Implementing Agencies: **State Fish and Wildlife**
Ecology

Milestones:

Discussion: Work on the HPA ESA compliance review has been in hiatus since March 2001. Although WDFW will continue to evaluate the need for new HPA rules, based on best science, efforts specifically aimed at agreeing on a Habitat Conservation Plan (HCP) with National Marine Fisheries Service, and U.S. Fish and Wildlife Service have ended.

Results: Although some added protection for water quality could come out of future HPA rule making, this would be an indirect effect. Permit holders cannot expect to be protected from the risk of violation of ESA take provisions.

Stream Restoration Technical Assistance

(Salmon Strategy Pas 4 & Reg 9)

Hyd3 - Provide technical guidance and engineering support to help regional and watershed lead entities, local governments, tribes, private landowners and volunteers participate in salmon restoration projects, inventory and correct fish passage barriers, and implement screening in water diversions. Provide engineering support to instream and marine construction.

Implementing Agencies: **State Department of Transportation**
State Fish and Wildlife
Department of Health
Interagency Committee for Outdoor Recreation
Conservation Commission
Ecology

Milestones: Ongoing

Discussion: Key tasks include providing technical assistance to Salmon Recovery Funding Board grants recipients for fish passage barrier inventories and corrections, and irrigation diversion screening, as well as provide technical and financial assistance to cities for inventory and correction of transportation related fish passage barriers. Provide technical assistance to local governments and lead entities on salmon restoration projects.

Results: WDFW has established its Watershed Stewardship Team (WST) to provide technical assistance to lead entities for recovery planning, conservation planning, scientific analysis, project design (including engineering support), and prioritization. This represents about 14 FTE. As of December 2001, 28 lead entities were being served by the WST. Technical assistance provided by the WST has aided in developing and prioritizing projects submitted by lead entities for funding. To date, about 350 projects and 13 multi-county or programmatic contracts have received funding from the various legislatively authorized sources.

Critical Areas Ordinance

(Salmon Strategy Lan 3)

LAE3 - Develop and provide critical information, technical guidance and maps to support local governments' update of their Critical Areas Ordinances

Implementing Agencies: **Office of Community Development**
Ecology
State Fish and Wildlife
Department of Natural Resources
Tribes

Milestones:
OCD has completed four state-wide workshops in November 2001 to assist local governments with reviewing and updating their GMA comprehensive plan policies and development regulations, such as critical area ordinances. The workshops were attended by about 800 regional and local planners, state agency staff, and elected officials. Featured presentations included a discussion about how to include the best available science (BAS) when reviewing technical information as a part of the 5-year review and update process. Regional planners and state agency experts shared helpful information about how to proceed with improving policies and regulations to ensure protection of critical areas functions, including protecting surface and ground water quality.

In addition to the workshops, OCD is updating an earlier report of scientific citations that demonstrate the characteristics of sound science. This BAS Citations Report is an annotated bibliography of mapping sources and technical reports recommended by state natural resource agencies. The final report is available in late January 2002. The electronic version of the report enables the reader to hyperlink directly to the reports and mapping information.

Discussion: Working closely with state natural resource agencies, local government planners and tribes encourage productive partnerships and timely information sharing. The BAS Citations Report provides direct access to recent studies that can help policy-makers and natural resource managers with understanding the linkages between land-use decisions and protection of ecological functions and water quality.

Results: Technical assistance materials such as the BAS Citations Report combined with model critical area ordinances will help to streamline ordinance adoption by local governments. Water quality will be improved because natural process will be preserved and protected from adverse land use decisions. Local governments must update their policies and regulations by September 1, 2002 or face noncompliance challenges by state agencies and citizens. These tools help local governments stay in compliance with the Growth Management Act requirements.

Aquatic Nuisance Species

(Salmon Strategy Lan 13)

LAE4 – Prevent, control, and monitor the spread of aquatic nuisance species

Implementing Agencies: **Ecology**
State Fish and Wildlife
Department of Natural Resources
Puget Sound Action Team
Department of Agriculture

Milestones:

Discussion:

WDFW must create a rapid response plan in cooperation with the Aquatic Nuisance Species Committee and the other state agencies involved in invasive species management. WDFW and the State Patrol must jointly develop a plan to inspect watercraft entering the state to prevent the introduction of invasive aquatic species. The plan must be provided to the Legislature by December 2003. The Fish and Wildlife Commission is given authority to classify aquatic plant and animal species (both native and non-native) in various categories related to their danger to the environment. The Commission is given the authority to designate by rule state waters that are infested if the director of the Department of Fish and Wildlife determines that the waters contain a prohibited aquatic animal species. The commission may also develop a work plan to eradicate native aquatic species that threaten human health.

Results:

Statewide Lake Management Program

LAE5 - Develop and implement a statewide lakes management program addressing TMDLs.

Implementing Agencies: **Ecology**

Milestones:

1. Ecology's volunteer and intensive monitoring program was discontinued due to funding.
2. Develop a comprehensive utilization of monitoring data to help direct the future course of lake protection efforts.
3. Establish a coordinated education program.
4. Implementation of the ecoregional phosphorus criteria.
5. Develop TMDLs for completed lake restoration projects.
6. Provide funding for Phase I and Phase II lake restoration projects.

Discussion:

Funding is needed to continue Ecology's volunteer monitoring and intensive monitoring program. The data from this program is available on the internet and helps foster awareness and enthusiasm for protecting and improving the lakes of Washington. A more coordinated education program would better utilize the existing data and lake protection information.
Ecology Surface Water Quality Standards has a public involvement process for establishing phosphorus criteria on an ecoregional - individual lake basis. At the same time Ecology is working with EPA on its initiative to establish ecoregional lake criteria.
A number of Phase I Lake Restoration Diagnostic/Feasibility studies have been completed over the last 20 years. Approximately 31 of these studies will be converted into TMDLs.
Sponsors of lake restoration projects submitting applications to the Ecology grants and loans program have found that with the current rating process, it is very unlikely that their projects will be funded.

Results:

1. No volunteer and intensive lake monitoring was conducted in 2001.
2. No action.
3. No action.
4. Ecology continues to work with the EPA Region X Regional Technical Advisory Group for developing criteria and guidance on establishing Lake and Reservoir phosphorus criteria.
5. A public participation plan was developed for involving the local public in establishing TMDLs for their lake restoration project lakes.
6. Efforts by WALPA and Ecology to improve the chances for obtaining grant/loan funding for lake restoration continued but did not result in any grant/loan applications.

Puget Sound Plan

(Salmon Strategy Lan 9)

LAE6 - Implement, maintain, and update the Puget Sound Plan and biennial work plans for the Puget Sound Basin

Implementing Agencies: **Puget Sound Action Team**

Milestones:

- December 2000 – The updated *Puget Sound Water Quality Management Plan* was adopted by the Puget Sound Water Quality Action Team as recommended by the Puget Sound Council.
- December 2000 – The draft *Puget Sound Water Quality Work Plan* for the 01-03 biennium was submitted to the legislature. In July 2001 the final work plan was produced to reflect the final 01-03 legislative budget.
- Ongoing work by the Action Team support staff in coordination with other state programs and agencies is targeted at implementation of the management plan and the 01-03 work plan

Discussion:

Management Plan and Work Plan updates - Updates included comprehensive revisions of the Stormwater and Combined Sewer Overflows, and Marine and Freshwater Habitat programs to address new technologies and emerging issues such as the Endangered Species Act listing of several Puget Sound salmon species. New programs were added for Puget Sound/Georgia Basin Shared Waters and Aquatic Nuisance Species. Other programs were edited and updated in terms of target dates and outdated references. Local and tribal governments, state agencies, interest groups and citizens were involved in advising and commenting on the revision throughout the planning process. Both the work plan and the revised management plan are available on the Action Team website.

Implementation - Priority projects for the Action Team support staff include outreach to local governments to provide tools, resources, and recommendations for 2002 Growth Management updates and Shoreline Master Program revisions, as well as workshops on low-impact development and alternatives to hard armoring of shorelines. Support staff continues to work through the Puget Sound Ambient Monitoring Program, the Northwest Straits Commission, the Puget Sound Shared Strategy, the Puget Sound Nearshore Estuarine Research Project, WRIA planning and salmon recovery groups, and other forums to monitor conditions and to implement the biennial work plan.

Results:

- Revised *Puget Sound Water Quality Management Plan* is available in hard copy and on the Action Team website.
- 01-03 *Puget Sound Water Quality Work Plan* is available in hard copy and on the Action Team website.

- The Action Team support staff's strategic plan for 01-03 emphasizes projects such as those described above that target plan implementation rather than further planning activities. Those projects are currently underway.

Implementing the Statewide Wetlands Integration Strategy

LAE7 - Implement the Statewide Wetlands Integration Strategy and the Puget Sound Wetland Restoration Program

Implementing Agencies: **Ecology**
State Department of Transportation
Puget Sound Action Team

Milestones:
State Wetland Integration Strategy

1. Completed study of wetland compensatory mitigation (SWIS recommendation #15)
2. Provided technical assistance to local governments (SWIS recommendation #20)
3. Draft wetland mitigation banking rules (SWIS recommendation #32)

Puget Sound Wetland Restoration Program

1. Principles of landscape-scale wetland restoration were incorporated in assistance to local governments engaged in shoreline planning efforts.
2. Analysis of the Nooksack Basin wetland restoration database was completed with results to be incorporated in the Basin report.
3. Work continued on a number of large wetland restoration projects in Puget Sound.

Discussion:

Progress was made on several fronts. Our efforts focused on three areas: Improving wetland mitigation, developing landscape scale restoration methods that can be used by local governments, and on-going technical assistance to cities and counties.

Results:

A two year study of wetland mitigation was completed and the results will be used to make revisions to current policies and procedures. Wetland mitigation bank rules were filed for adoption and a draft environmental impact statement was completed.

Staff dedicated a significant portion of time to providing technical assistance on methods to update shoreline management plans. This included providing direct technical assistance in response to requests for advice on individual planning efforts, as well as developing presentations for workshops introducing an approach to the inventory step. Response from the workshops directed our efforts toward the development of more detailed guidance. Considerable additional technical assistance was provided to cities and counties in developing and implementing local wetland regulations.

Staff are continuing collaboration with the Drayton Harbor Shellfish Growers to use the wetland restoration coverage and database in the Nooksack Basin to identify and prioritize wetland preservation and restoration sites that reduce fecal coliform and nutrient inputs into the harbor.

This information, along with water quality data and new urban growth boundaries will be used to prioritize sites for field evaluation.

Wetland restoration technical support has been provided to developing projects in the Nisqually, Puyallup, Snohomish, Stillaguamish, Skagit, and Nooksack Basins.

Lake Management Plans

LAE9 - Continue to emphasize lake and watershed management planning to address nutrient and sediment enrichment, and de-emphasize the use of chemicals for pest control

Implementing Agencies: **Ecology**
State Department of Agriculture

Milestones:

1. Provide technical advice to local entities for aquatic plant and algae control and restoration planning.
2. Provide funding for Phase I and II lake restoration projects.
3. Require local sponsors to develop Integrated Aquatic Vegetation Management Plans (IAVMPs) for controlling algae and aquatic plants.
4. Irrigation districts submit IAVMPs as a requirement of their aquatic herbicide permits.

Discussion:

Local sponsors continue to ask regions and headquarters personnel for technical and funding assistance for aquatic plant and algae control and lake management planning. Through the development of the 2001 update of the Aquatic Plant SEIS, sponsors are being required to develop and implement IAVMPs. The Ninth Circuit Court of Appeals decision in Headwaters vs. Talent Irrigation District prompted irrigation districts to apply for state permits for use of herbicides to control aquatic plants and algae in irrigation systems. Each irrigation district permit required the development of an IAVM plan. Some of these irrigation districts discharge treated waters to natural and man-made lakes.

Results:

1. Ecology headquarters and regional personnel provide technical assistance to agencies, local governments and individuals concerning IAVMPs.
2. See LAE5 for discussion on funding Phase I and II lake restoration projects.
3. Lake IAVMPs were submitted to Ecology.
4. Fifteen irrigation districts submitted IAVMPs to Ecology.

Home-to-Ocean

Ed3 - Implement the H2O Home to Ocean program similar to a program currently in California, which educates the public about wise use and proper disposal of pesticides.

Implementing Agencies: **State Department of Agriculture**

Milestones:
Recruit participation of local agencies, ready existing materials for use at Washington locations.

Discussion:

Initial implementation had been delayed due to the loss of the previous water quality manager. Beginning in January 2002, the project has been actively restarted, and initial contact has been made with the Island and Snohomish County Health Districts and the respective conservation districts. Modification of the initial "California-based" materials has been started, and should be completed late January or early February. Initial expenditures have been made in the amount of $604.

Results:

Initial contact with the respective local agencies has been positive. In addition to the health and conservation districts in Snohomish County, the newly established groundwater protection unit has indicated interest in the program. During the month of February, we anticipate selection of the retail outlets and finalization of the training outline for the outlets.

Biennial Nonpoint Conference

Ed4 - Organize a biennial conference on nonpoint pollution for implementing agencies and groups as well as the general public

Implementing Agencies: **Ecology**

Milestones: 1 nonpoint conference every even numbered year.

Discussion:

Ecology held a conference on nonpoint pollution in the fall of 2000 in Everett. We are currently organizing the 2002 conference – "Achieving Cleaner Water" – which will be in Spokane, April 9 – 11, 2002.

We added an extra day with 2 field trips and 2 workshops to the regular sessions at the 2000 conference. Since those were very popular we plan to offer those again at the 2002 conference. We hired a conference coordinator to help us organize the speakers, logistics with the hotel, conference brochure, mailings, etc. This saved us a lot of time and energy on conference details and we have hired a coordinator again this year.

Results:

Almost 300 people – including about 75 speakers - attended the 2000 conference. Attendees included conservation and irrigation districts; federal, state and local agencies; tribes; WSU cooperative extension; universities and community colleges; salmon enhancement and watershed groups; consultants; and environmental groups. We had about 10 nonprofit groups and a couple businesses set up information tables at the conference.

Evaluations indicated that the conference was very successful! Participants appreciated the three days of opportunity for sharing, learning and networking among professionals and the public in the work to reduce nonpoint pollution.

Salmon Environmental Learning Centers

(Salmon Strategy Edu 5)

Ed5 - Develop and implement site-specific public education plans, for example, for parks with significant salmon resources and for hatcheries as Salmon Environmental Learning Centers

Implementing Agencies: **Parks and Recreation Commission**
State Fish and Wildlife
Department of Natural Resources

Milestones:
Completed Salmon Interpretive Learning Center

Discussion:
In the Spring of 2001, Washington State Parks and Recreation Commission began a salmon interpretive pilot within the State Parks System. This pilot included developing interpretive materials for seven separate State Parks and providing interpretive resources for each of the four State Parks Regional offices for use in their region.

Interpretive materials for the specific parks were developed with the cooperation of the Washington Department of Fish and Wildlife, Washington Department of Natural Resources, the Governor's Salmon Recovery Office, the US Army Corps of Engineers and the US Forest Service. Salmon interpertive trails were developed for Flaming Geyser and Lake Wenatchee State Parks, a historic photo montage created for Maryhill and Horsethief State Parks and a variety of interpretive panels and/or posters erected at Saltwater, Dosewallips and Rasar State Parks.

In addition to these park specific efforts, State Parks recreated the Department of Fish and Wildlife's salmon trunks for each of the regional offices. The salmon trunks are a collection of educational outreach lesson plans and curricula to be lent out by the regional office to parks or other entities for environmental education programming regarding salmon.

Results:

State Parks is currently in the process of developing the next phase salmon interpretation. State Parks has proposed to establish a center for salmon and watershed studies in an old historic dairy barn at Flaming Geyser State Park. State Parks is also begun Phase II of our statewide salmon interpretive effort. This will likely include the convening of a State Salmon Interpetive Team and the development of a "traveling display" for use throughout the state. State Parks is also looking into the possiblity of marketing recently developed interpretive materials relating to salmon.

Project WET

Ed6 - Conduct a series of watershed-specific PROJECT WET teacher workshops on Watersheds for People and Salmon, focusing on pollution prevention, water conservation, habitat, and public health.

Implementing Agencies: **Ecology**
State Fish and Wildlife
local government facilitators

Milestones:

WET surpassed its goals of 10-15 workshops for 2001. Project WET facilitators conducted 17 teacher workshops across the state in 2001, training 446 predominately classroom teachers and about 10% non-formal educators.

Discussion:

Non-point pollution is our greatest source of water pollution. Enforcement can't reach all the sources of non-point pollution and it makes good sense to use more education to help people understand their effects and dependence on water. Project WET teaches pollution prevention, water conservation and human health. It reaches the students in the classroom and the adult teachers and parents related to those students.

Results:

Each of the formal classroom educators reaches at least 20-28 students / year (and by association often their parents). The non-formal educators' audience varies widely, often reaching hundreds. Additionally, Project WET helped sponsor a Vancouver Water Festival that reached over 1,200 students, 50 teachers and about 200 parents.

Columbia River Watershed Curriculum

Ed7 - Complete Columbia Watershed curriculum for youth and adults, for better understanding and stewardship in the Columbia Basin

Implementing Agencies: **<u>Governor's Council on Environmental Education</u>**
Ecology
State Fish and Wildlife
Department of Natural Resources
Department of Health
tribes

Milestones:

5 Watershed curriculum workshops

Discussion:

The curriculum project is moving more slowly than was anticipated, and will not yet be ready to be used in workshops until next winter, earliest.

Results:

Magic Apple Grants

Ed8 - Expand “Magic Apple” grants to fund exemplary teachers’ water quality class projects

Action: Continue "Magic Apple" grants to fund exemplary teachers' water quality class projects

Implementing Agencies: **Ecology**

Milestones:

Nine $750 grants that were awarded to teachers last spring are underway. Last November and December, notices went out re: the current application window, deadline, and criteria. New applications are due March 1, and will be judged by professional educators across the state. Winners will be announced mid-May, and checks sent out to principals or school districts the end of May so the money will be available during the summer in preparation for fall startup.

Discussion:

This year, for the first time, the announcement was published in the Seattle P-I. As a result, we have been getting more requests than usual for the application form, especially from Catholic schools, which seem to have been out of the loop up to now. This is good.

Results:

Encouraging teachers to teach students about water quality and become stewards of the resource has a great multiplying effect. And often the kids go home and talk to their parents about what they're learning. Kids are captive audiences in classrooms, so they can't dodge the message like most adult audiences can. These grants are very cost-effective, in terms of the number of people they can influence.

Water Festivals

Ed9 - Sponsor one new community Water Festival per year, for 4th graders

Implementing Agencies: **Ecology**
Local water quality agencies
Pierce County Environmental Services

Milestones:

Each year, we contract with a local agency to organize a festival for fourth grade classrooms. We grant them $5,000 and allow them a lot of leeway to determine the way the festival takes shape. Each community does it differently. We only require that entire classrooms be invited to the festival, that it be held on a school day, and that it is a memorable, fun, and enlightening occasion. The hope is that the community will continue to hold the festival in subsequent years, without our $upport. Our 2002 festival will take place in Pend Oreille this May. Details are now being planned. The concept is that this festival will draw kids from Idaho and even from Canada, for the first time.

Discussion:

Our first festival, in Kitsap County, is now in its 8th year and has tripled in size. Our second festival, in Lake Roosevelt, is now held on two days and has tripled as well. Our last year's festival, in Quincy, will repeat this spring.

Results:

Each year, hundreds of school kids are personally, permanently impressed with the importance of clean water. Their parents are sure to hear about it. Hopefully, the community will continue to hold the event in years to come.

Funding "PIE"

(Puget Sound Plan EPI-8)

Ed10 - Manage the Puget Sound Public Involvement and Education "PIE" fund program to develop innovative education programs

Implementing Agencies: **Puget Sound Action Team**

Milestones:

- 1999-2001 biennium – sixteen PIE contracts successfully completed on time and within budget.
- 2001-2003 biennium – twelve PIE contracts have been selected and contracts are being written. The work will be completed in May, 2003.
- 2001-2003 biennium – Small Awards pilot program has awarded $30,000 in amounts of up to $3,000 to 14 contractors.

Discussion:

The Round 13 selection process for the 2001-2003 biennium has been completed and twelve PIE contracts are being written for a total amount of just under $400,000. Examples of selected projects include educational boat tours for tourists, workshops and demonstration projects on low-impact development, marina and boater education, radio stories on community-based stream restoration, and partnerships with realtors to educate new residents about protection of watersheds and nearshore habitat. Awards range from $5,000 to $45,000.

A Small Awards pilot program is underway to fund proposals for up to $3000, with a total of $30,000 allocated to fourteen projects. The pilot program will be evaluated based on goals of reaching new audiences, providing seed money to leverage funds through partnerships and volunteer work, and supporting local activities consistent with building local partnerships and involving the public in solutions to protect and restore Puget Sound.

Additional PIE funds supported a regional low-impact development conference and outreach tools, shoreline landowner workshops, and other education and public involvement activities.

Results:
For the 1999-2001 biennium, sixteen PIE Round 12 contracts were completed for a total amount of $427,000. Projects in Puget Sound communities included activities such as low-impact development workshops for homebuilders, education on best management practices for horse owners, boater-marina education, outreach to the Asian-Pacific Islander community on shellfish and other resources, stream restoration, and school education programs. Results include increased awareness and involvement of Puget Sound residents in support of *Puget Sound Water Quality Management Plan* priorities, stronger partnerships within communities, outreach to new and more diverse audiences, models for innovative programs that can be replicated and adapted to other communities, and funding support to establish local education programs that will be continued in the future.

Master Watershed Steward

Ed14 - Introduce and support Master Watershed Steward programs throughout the state

Implementing Agencies: **WSU**
Governor's Council on Environmental Education

Milestones:

Discussion:
The Master Watershed Stewards program provides community members with a comprehensive understanding of watershed processes and facilitates community-based leadership in protecting, restoring and monitoring aquatic resources. Volunteers trained and subsequently coordinated through the program provide thousands of hours in water resource protection activities. The program is currently being conducted in 6 counties in Washington (Clark, Island, Jefferson, King, and Pierce Counties). These programs are either funded from local jurisdictions or conducted through extraordinary efforts of the local WSU county agents. These programs have evolved over the years at the county level with locally developed materials and curricula, training and volunteer expectations. In order to facilitate expansion of this program we need to make this program more accessible to local county agents, and make available in more regions of the state.

Results:

Over the past year over 100 volunteers were trained as watershed stewards. These trainees worked with existing volunteers who provided over 8,240 volunteer hours related to water resource protection. These volunteers made over 65,000 contacts in their communities related to environmental stewardship.

Results:

Watch Over Washington

Ed16 - Support Watch over Washington's website for volunteer monitors and provide technical help to local groups and classrooms.

Implementing Agencies: **Ecology**

Milestones:

The WOW Web site had to be totally revised in order to move it to the new Agency server. The old Web site was developed by a private designer in an esoteric programming style that would make it increasingly hard for us to troubleshoot. Now it will be more stable. We were able to make some revisions and improvements that became advisable over the 6 years since its first launch.

Discussion:

Information of a more permanent nature goes on the Web site. Information that is ephemeral gets published through two listservs, one for web-footed volunteer monitors, and one for 'friends of' volunteer monitors. Together, subscription to these listservs totals almost 600, and is growing steadily. We established them in summer of 2000 to notify people about the new online NatureMapping data bank.

Results:

Volunteer monitors can get information about current opportunities for training, equipment, new methods and manuals, and other resources of interest.

Volunteer Monitors

(Puget Sound Plan M-2)

Action # - Ed 17 - Train, direct, and equip volunteer monitors
Dates of Activities: 9/01-12/01

Implementing Agencies: **Ecology**
Cooperative Extension
State Fish and Wildlife
Department of Natural Resources
State Department of Transportation

Milestones: Provide bi-monthly report on number and nature of request; including time spent on each task
Results: I have provided a detailed monthly report to my supervisor and Annie Phillips of the Water Quality Program. From 8/01 to 12/01, I responded to a total of 51 requests for information involving 78 hours of time.

Milestones: Contact all 39 counties and compile a list of their water quality monitoring programs
Discussion: I have not yet begun this task.
Results: See above comment

Milestones: Conduct a minimum of six (6) training sessions on water quality topics
Discussion:
Results: I have conducted four (4) training sessions with three more planned

Milestones: Review a minimum of five (5) volunteer monitoring Quality Assurance Project Plans (QAPP's)
Discussion:
Results: I have reviewed three QAPP's to date

Milestones: Print and distribute copies of compiled sampling protocols
Discussion:
Results: At the four training sessions I have conducted so far, I have made available copies of water quality sampling protocol documents to the attendees which included volunteer monitoring groups

Milestones: Review data entry forms intended for use with Ecology's EIM database
Discussion: I have not yet met with the EIM group working on the volunteer monitoring data entry forms
Results:

Volunteer Monitoring Data Repository

Ed18 - Establish an online, central repository for volunteers' data of known quality

Implementing Agencies: **Ecology**

Milestones:

Phase I is complete and very popular. More than 100 groups have registered more than 200 monitoring or restoration sites around the state, and many have entered data for water quality, flow, and habitat; information about restoration sites is kept in the database as well.

Discussion:

The NatureMapping program at the University of Washington began with wildlife inventories. Then they added water quality. As modules are added, Fish & Wildlife is becoming more of a lead for the data repository. They contributed to Phase I by buying the DRG interactive zoom-in mapping program. They held several training sessions around the state last year on how to use the databank, and published a training manual. We will be contracting with F&W soon to add a much better data retrieval function to the current Web site, which will constitute Phase II. This feature is something users have asked for. At present, anyone can view anyone's data (that's good!), but the process is quite clumsy.

Results:

Volunteer monitors and classrooms have a central place to store and share their data, where it is available for use by agencies and by themselves. The quality of the data is indicated by various answers to questions like, "What level (out of 4 levels) does your group achieve in its monitoring?" and "Do you have a written QAPP?" Many groups have registered more than one site, and many have entered data from past records, as well as current data.

Local Watershed Planning

Gen2 – Expand the development of local watershed plans under chapters 75.46 & 90.82 RCW and other related acts.

Implementing Agencies: **Ecology**
State Fish & Wildlife
Salmon Recovery Office

Milestones:

The first set of plans are due in the fall 2003.

Discussion:

41 Water Resource Inventory Areas engaged in RCW 90.82 Watershed Planning. 34 out of the 41 are addressing the optional water quality component

Results:

Planning committees have submitted draft assessments to Ecology for the following WRIAs:

WRIA 1 – Nooksack Basin
WRIA 3/4 – Skagit Basin
WRIA 17 – Quilcene/Snow Basin
WRIA 18 – Elwha/Dungeness Basin
WRIA 22/23 – Chehalis Basin
WRIAs 37/38/39 – Yakima Basin

Watershed Characterization Team

Gen3 - Enhance the abilities of the Watershed Characterization Team to analyze the watersheds of the state and provide tools to others to do the same.

Implementing Agencies: **Ecology**
State Department of Transportation
State Fish and Wildlife
Department of Natural Resources

Milestones:

1. Collaborate with the Governor's Salmon Team to incorporate watershed characterization concepts into the statewide guidance on watershed assessment.
2. Use watershed characterization principles in the development of guidance for shoreline management planning.

Discussion:

Basin characterization provides an excellent tool for local governments to evaluate current watershed conditions and to predict the effects of future development and expansion.

Results:

Staff served on a technical team lead by the Governor's Salmon Recovery Office to incorporate landscape-scale process-based assessment criteria into the Guidance on Watershed Assessment for Salmon. This incorporates a watershed perspective into statewide assessment guidelines and encourages a holistic approach to address issues of water quality, flooding, and habitat.

Staff also participated on a technical team to provide assistance to local governments involved in updates to shoreline management plans. This assistance included response to requests for advice on individual planning efforts, and also the development of workshop materials with direction on how to address the ecological process component.

Water Clean-up Plans

(Clean Water Action Plan TMDLs)

Gen4 - Promote local watershed planning and implementation that address 303(d) listings and prevents further listings. Provide technical assistance

Implementing Agencies: **Ecology**
Puget Sound Action Team

Milestones:

1. Scoping: September 2000 to January 2001.
2. Joint Management Team (JMT): February 28, 2001
3. Public Process: April 2001 to May 2001
4. Final Priority TMDL List for Water Quality Program: June 30, 2001

Discussion:

In accordance with the TMDL Memorandum of Agreement (MOA) with EPA, the identification and prioritization of TMDLs is conducted as part of the Water Quality Program's (WQP) Watershed Approach to Water Quality Management. This approach selects 4 to 5 Water Quality Management Areas (WQMAs) each year to Scope for TMDLs and other priority WQ projects. Priority TMDLs and other projects recommended by the regional offices are reviewed by the Joint Management Team (JMT) annually. Subsequent to JMT approval, projects compete for placement on the Environmental Assessment Program's (EAP) fiscal year _ project list. Technical projects selected and placed on the list are started in the fiscal year following selection.

Results:

Scoping of the WQMA's was to produce at least 24 TMDLs for development. The actual number recommended and placed on the FY01 EAP Project List was 77.
- Wenatchee
- Upper/Lower Snake
- Nooksack/San Juan
- Western Olympic

In FY2001, 56 TMDLs were submitted to EPA for approval

TMDL Implementation

(Salmon Strategy Wqa 3)

Gen5 - Develop and implement schedule for Water Cleanup Plans (TMDLs) focussing on watersheds with listed species first.

Implementing Agencies: **Ecology**
Conservation Commission
Puget Sound Action Team
Tribes

Milestones:

Number of cumulative TMDLs to be submitted to EPA for approval are:
63 TMDLs in FY2000;
348 TMDLs by 2003;
766 TMDLs by 2008;
1165 TMDLs by 2013

Discussion:

In accordance with Ecology's MOA with EPA, a Summary Implementation Strategy (SIS) accompanies the submittal. A Detailed Implementation Plan (DIP) is to be completed one year after a TMDL approval by EPA. This does not limit initiation of on-the-ground implementation or mitigation activities as soon as the pollutant source is scientifically identified.

Results:

55 TMDLs approved by EPA in FY2000
Total number of TMDLs approved by EPA since 1991 is 343
Total DIPs completed: 0

Interstate Ground Water Protection

Gen6 - Develop a cooperative and comprehensive interstate ground water protection plan with state (Oregon and Idaho) and tribal governments.

Implementing Agencies: **Ecology**
Oregon
Idaho
Tribes

Milestones:

Future implementation.

Discussion:

The Comprehensive Ground Water Protection Plan for Washington is complete and has now been certified by EPA. To my knowledge, we have not initiated contact with Idaho, Oregon, or the Tribal governments to develop a plan, as of yet.

Results:

Federal Consistency

Gen7 – Establish working agreements with various federal agencies to address Clean Water Act consistency requirements.

Implementing Agencies: **Ecology**

Milestones:

Discussion:

An implementation structure for this action is being developed:

A basic description of the program was drafted by Ecology has been favorably reviewed by EPA, and Ecology is proceeding to set up the program according to the description.

Work to establish a working group of federal agencies has been initiated.

A request for increased support for Pest Management Strategic Plans (see action Ag 13) was submitted to USDA, and favorable received. USDA and EPA will participate in discussions of a permanent funding strategy for the Plans to be developed by June 30, 2003.

Results:

Shoreline Master Programs

(Salmon Strategy Lan 1)

Gen8 – Adopt revised Guidelines for Shoreline Master Programs (SMPs), and assist local governments to modify their Shoreline Master Programs

Implementing Agencies: **Ecology**
State Department of Agriculture
Cooperative Extension

Milestones: Two year deadlines for update of local SMPs triggered by adoption of guidelines, are eliminated as a result of guidelines invalidation (see below).

Discussion: The Department of Ecology adopted new SMP Guidelines on November 29, 2001. The guidelines were appealed to the Washington Shorelines Hearings Board (SHB). On August 27, 2001 the SHB released a split decision invalidating the guidelines in their entirety. On September 26, Ecology together with the other parties to the lawsuit (State Attorney General, business, and environmental interests) appealed the SHB ruling to Thurston County Superior Court. In conjunction with appeal, all parties to the lawsuit agreed to participate in facilitated settlement negotiations that began in December, 2001.

Results: Due to the invalidation of Ecology's guidelines rule, implementation of the guidelines remains uncertain at this time. In the meantime, however, Ecology is providing technical assistance to local governments throughout the state that continue to, voluntarily, proceed with update of their SMPs.

Water Quality Standards

(Salmon Strategy Wqa 1,2)

Gen9 - Develop, adopt and implement standards for water quality.

Implementing Agencies: **Ecology**
State Fish and Wildlife
Puget Sound Action Team
State Department of Transportation
Tribes

Milestones: **Completed Milestones:**
Redrafted all proposals
Put all materials on Ecology's web page
Formed a stakeholder workgroup
Hired a facilitator to manage a series of stakeholder meetings

Next Milestones:
Complete facilitated stakeholder workshops (April, 2002)
Determine if EIS will be required for rule
Complete EIS if required
File draft rule with the Code Reviser (est. July 2002)
Schedule public hearings (est. August, 2002)
Complete responsiveness summary
File final rule with Code Reviser (est. October, 2002)
Submit final rule to EPA (est. December, 2002)

Discussion:

Revised all draft discussion documents showing proposed rule changes and completed two of three professionally facilitated stakeholder workshops. One facilitated workshops will be held each month until April, after which Ecology will develop a formal rule proposal to file with the state Code Reviser. Ecology will need to go through the SEPA checklist process to determine if the proposal warrants the development of an Environmental Impact Statement. If it is determined an EIS is required, then at least several months will be added to the projected timeline and the projected completion date of December 2002 would move out to March 2002. Another unknown factor in this process is that the USEPA is developing guidance on temperature standards, which is one of the issues of this rulemaking. At present their schedule is to complete the guidance by June or July, 2002. Ecology will need to consider their guidance in developing a final rule proposal, and so any significant slippage of their schedule will be reflected in Ecology's rulemaking timeline as well.

Results:

Rulemaking still in progress.

Shellfish Protection

Gen10 - Examine additional funding needs for DOH shellfish protection efforts.

Implementing Agencies: **Department of Health**

Milestones:
One meeting of the funding subcommittee of the Shellfish Workgroup was held on August 7 2001 at the DOH Airdustrial Campus.

Discussion:

A focused shellfish workgroup met to discuss ways in which funding programs for shellfish restoration can be consistent and reliable. The discussion centered on making it easier for local government to access existing funding resources.

Results:

The Puget Sound Water Quality Action Team discussed their plans to develop a web site with links to funding resources. Ecology agreed to consider alternatives that provide some level of consistent local funding for nonpoint work. Other potentials for funding will be reported on as they unfold.

Yakima River Sediment Reduction

(Salmon Strategy Wqa 6)

Gen11 - Implement the Yakima River Sediment Reduction Plan

Implementing Agencies: **Ecology**
State Department of Agriculture
Conservation Commission

Milestones:

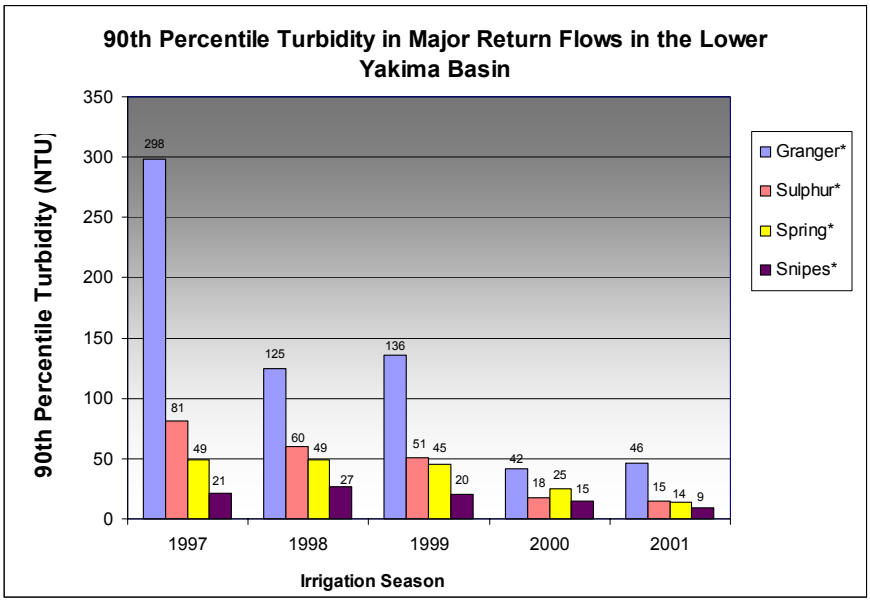
- During the irrigation season of 2001, 4 out of five major irrigation return flows met the first five year goal for turbidity set by the *Lower Yakima River Suspended Sediment and DDT TMDL*. Turbidity improved in all but one drain, and the total suspended sediment loading for each drain improved. Additionally, premliminary data from the USGS NAWQA studies indicates that total-DDT levels in the Yakima River system are decreasing. This is related to the suspended sediment improvements.

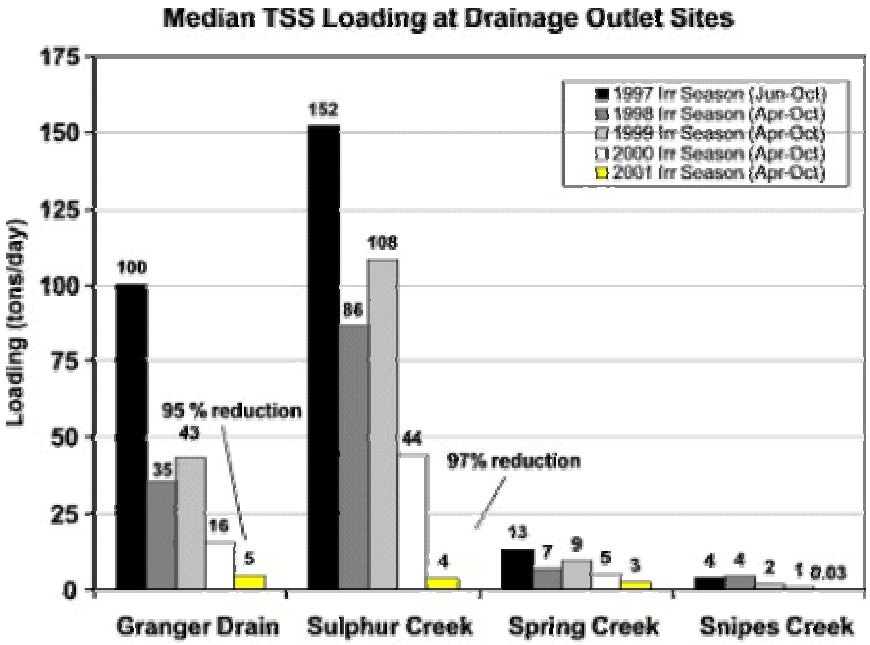
Discussion:

- Water Qaulity staff from CRO worked throughout 2001 with our partners in the Yakima River Basin to further the efforts of the Lower Yakima River Suspended Sediment Clean-up. Ecology provided lower valley irrigation districts with human resources to work with farmers, administrate a SRF funded loan program for BMP implementation, and provide technical assistance to growers.

- In 2001 TMDL Submittal Reports for the Teanaway (temperature) and Granger Drain (Fecal Coliform Bacteria) were accepted by EPA and implementation of those plans began.

- Also, a TMDL for the Upper Yakima Valley is being developed and will be submitted to EPA soon. The Upper Yakima Valley Suspended Sediment and Organochlorine Pesticide TMDL is already a foundation for forming partnerships in the Upper Yakima Valley and for achieving water quality improvements.


90th Percentile Turbidity in Major Return Flows in the Lower Yakima Basin
90th Percentile Turbidity (NTU)
350
300
250
200
150
100
50
0
298
81
49
21
125
60
49
27
136
51
45
20
42
18
25
15
46
15
14
9
1997
1998
1999
2000
2001
Irrigation Season
Granger*
Sulphur*
Spring*
Snipes*


Median TSS Loading at Drainage Outlet Sites
Loading (tons/day)
175
150
125
100
75
50
25
0
1997 Irr Season (Jun-Oct)
1998 Irr Season (Apr-Oct)
1999 Irr Season (Apr-Oct)
2000 Irr Season (Apr-Oct)
2001 Irr Season (Apr-Oct)
100
35
43
16
5
95 % reduction
152
86
108
44
4
97% reduction
13
7
9
5
3
4
4
2
1
0.03
Granger Drain
Sulphur Creek
Spring Creek
Snipes Creek

Water Quality Funding

Gen13 - Establish an information base for local communities that describes funding sources and necessary requirements.

Implementing Agencies: **Ecology**
Governor's Office

Milestones:

Watershed Funding Directory and Workshops

Staff of Ecology's Water Quality Program helped facilitate the development of a directory of all funding available for watershed restoration and protection in the State of Washington. Staff gathered current information from a total of 50 State funding programs administered by 13 different State agencies. Staff also made presentations regarding Ecology's Water Quality Program funding at four Statewide workshops. For each program the directory contained:

- Overviews of programs (including available brochures),
- Application information,
- Key contacts, and
- Websites and other ways to understand more about each program

The directory also contained the same type of current information on 34 federal programs that are administered by nine different federal agencies, 12 private funding sources of watershed funding, the description of eight methods to obtain funds locally, and other resource information. The directory was compiled by the Environmental Finance Research Center (EFC) at Boise State University under contract with Ecology, EPA, and Corps of Engineers. .

The directory was used to showcase and explain these programs at the "Watershed Funding Workshops" held in February 2002, in Sequim, Mt. Vernon, Yakima, and Moses Lake, Washington. Approximately 150 people attended these workshops

Copies of the directory are available from EFC **at cost** ($25.00 plus postage). Call 208.426.1567 for more information.

Infrastructure Assistance Coordination Council (IACC)

Ecology's Water Quality Program also provided overviews of its financial assistance programs at the Infrastructure Assistance Coordination Council (IACC) at the council's semi-annual statewide meeting in November 2001, to coordinate with stakeholders looking for sources of project funding and other agencies working to develop and enhance funding strategies. IACC is comprised of Ecology and other state and federal agencies tasked with the responsibility distributing always limited state and federal grant and loan funds.
Ecology and other state and federal agency staff on IACC meet and share applicant lists and project lists to ensure project funding from more than on funding source is coordinated to the maximum extent possible and agencies are not over-obligating funds or duplicating funding for a

project. Coordination meetings with potential grant and loan recipients are also used to inform a local government on how various state and federal funds can be used in combination and the technical requirements that may be unique for a funding source or project specific.

The council has also developed and published a state and federal infrastructure-funding directory that lists all funding available, program requirements and application schedules. With all infrastructure needs being addressed in this directory the document has an essentially different group of stakeholders than those attending the Watershed Funding Workshops.

Water Quality Program Funding

Ecology's Water Quality Program also has maintained its own web page (as noted in the directory, for information about its financial assistance programs. The main overview funding page is located at <http://www.ecy.wa.gov/programs/wq/funding/ and the current fiscal year's specific information is located in a subsidiary directory (see FY 2003 information at <http://www.ecy.wa.gov/programs/wq/funding/2003/ for example). In order to be as useful as possible, this information system is regularly changing to supply the most current and appropriate information. Each year we post the guidelines, other guidance materials, applications and other forms, as well as other material useful for funding applicants.. When other documents are completed - the draft and final funding offer lists, for example - we make these available online as well. All published documents are linked from the funding web page when they are current, and remain available long-term in the Ecology publications system (<http://www.ecy.wa.gov/pubs.shtm).

Staff also conduct four workshops during the January/February application cycle to explain application and program requirements.

Building Capacity in Local Water Quality Programs

Gen14 - Enhance local ability to address water quality complaints and information requests

Implementing Agencies: **Ecology**
Puget Sound Action Team

Milestones:

Provide, when the opportunity exists:
outreach, education, training, field technical assistance opportunities, site investigations, enforcement support, sponsorship of local Jobs for the Environment projects, technical support for the development of local conversion ordinances under forest practices, and onsite septic survey support.

Discussion:

As a statewide agency with technical expertise, Ecology typically has far more resources than most individual local governments for nonpoint source control issues. In order to maximize the Ecology expertise with environmental results, transferring that knowledge and expertise to local government staff is paramount to on-the-ground success. Ecology specialists in several fields (such as agriculture, forestry, stormwater, and hydrology) have made efforts to enhance local programs.

Results:

The following is a sampling of the type of results that have been achieved this year:

- Reviewed and evaluated the adequacy of water quality protection measures written into local ordinances (Skamania and Cowlitz counties) for the conversion of forest lands to other uses per Forest Practices rules.
- Completed comprehensive livestock inspection sweeps in targeted watersheds such as the Dungeness River and McAllister Creek, in cooperation with local county and conservation district staff and managers.
- Attended Chehalis Basin District Alliance meetings regularly to facilitate better implementation and coordination with the Thurston, Lewis and Grays Harbor Conservation Districts to implement local pollution control programs.
- Participated in Shellfish Closure Response planning for Filucy Bay by working with Pierce County, the Pierce County Conservation District, and landowners.
- Conducted monitoring in McAllister Creek to identify fecal coliform pollution sources, and worked with Thurston County and the Thurston Conservation District to manage problems.
- Received 346 complaints and conducted 536 site inspections with the majority having some relationship to local agencies.
- Provided technical expertise to dam relicensing proposals on the Cowlitz, Lewis, Nisqually Rivers to include state and local interests in water quality protection measures.

Assisting Communities with ESA Compliance

(Salmon Strategy Reg 1)

Gen15 - Provide technical assistance and information regarding ESA compliance to communities

Implementing Agencies: **Ecology**
State Fish and Wildlife

Milestones: Targets highly variable due to number of entities and complexity of issues.

Discussion: WDFW has established its Watershed Stewardship Team (WST) to provide technical assistance to lead entities for recovery planning, conservation planning, scientific analysis, project design (including engineering support), and prioritization. This represents about 14 FTE. As of December 2001, 28 lead entities were being served by the WST.

Results: Technical assistance provided by the WST has aided in developing and prioritizing projects submitted by lead entities for funding. To date, about 350 projects and 13 multi-county or programmatic contracts have received funding from the various legislatively authorized sources.

Integrating Watershed Planning into the Nonpoint Plan

Gen16 - Develop a coordinated process to integrate local and watershed planning efforts into the state nonpoint plan.

Implementing Agencies: **Ecology**

Milestones:

Update Appendix A of the nonpoint plan by December 31 of each year.

Discussion:

The purpose of this action is to acknowledge the work of local governments, tribes, and special purpose districts in combating nonpoint source pollution. Appendix A of the nonpoint plan provide water quality summaries of the 62 WRIAs of Washington State. Appendix A can be found at http://www.ecy.wa.gov/programs/wq/nonpoint/99-26appa.pdf, Ecology's nonpoint website. The summaries include demographics, environmental information, and water quality programs, including 303(d) listed segments, impacted beneficial uses, local planning programs, and local implementation efforts.

By identifying local programs and implementation activities, they are adopted by reference into the state's nonpoint plan.

Results:

Over 5000 letters were sent and numerous telephone calls were made to local governments, tribes, and special purpose districts asking for updated information about programs and implementation activities to control nonpoint sources of pollution. Additions to Appendix A were voluminous because of this effort. In subsequent years, we hope to improve the format of Appendix A and the usefulness of information.

Coordinating Multi-Level Monitoring

(Salmon Strategy Mon 1)

Gen17 - Expand the development of a coordinated monitoring framework to integrate and/or coordinate statewide, regional, watershed and project-specific monitoring systems

Implementing Agencies: **Salmon Recovery Office**
State Fish and Wildlife
Department of Natural Resources
Puget Sound Action Team
Ecology

Milestones:

1. Develop a Salmon Recovery Scorecard by Spring 2000
2. Develop a framework for comprehensive statewide monitoring in the Fall 2000
3. Task completion within 4 years

Discussion:

The purpose of this task is to identify monitoring needs that are currently met and unmet, identify improvement in resource needs, and if appropriate expand and improve the comprehensive statewide monitoring framework presented in the Salmon Plan.

Results:

A tool to monitor agencies' performance and environmental indicators (Salmon Recovery Scorecard) was developed and finalized in May 2000. The Scorecard workgroups have identified monitoring needs and improvements and budgets needed to implement. First report on scorecard is expected by end of December 2000.

Development of the comprehensive statewide monitoring program is currently in progress.

Tracking Water Quality Indicators

(Clean Water Action Plan)

Gen19 - Track primary water quality indicators (pH, Temp, DO and Turbidity) using number of exceedances approach.

Implementing Agencies: **Ecology**

Milestones: Yearly updates

Discussion:

Raw data has been compiled for years 2000 and 2001, however, they have not been incorporated into the analysis already completed for water years 1978-1999. During 2001, Ecology hired a statistician to critique sample failure rate methodology. The methodology received a favorable report, thus will begin in incorporating raw data collected during the last two years. Updated reports will be available this year.

Results:

It is anticipated that work on this activity will begin again in March 2002, with a report completed by October 2002.

Using Monitoring Data in Decision Making

(Salmon Strategy Mon 2)

Gen20 - Develop criteria and protocol to guide the use of monitoring in decision making including adaptive management when specifically committed to at the watershed, activity, and regional scales and ensure decisions include adaptive management and monitoring component consistent with protocol and criteria

Implementing Agencies: **Salmon Recovery Office**
State Fish and Wildlife
Department of Natural Resources
Puget Sound Action Team
Ecology
State Department of Transportation

Milestones:

Completion of guidelines to be determined.

Discussion:

The purpose of this activity is to link the development of a comprehensive statewide monitoring program to ESA compliance. The criteria and guidelines for monitoring and adaptive management and their use by state agencies is part of this activity. The workgroup implementing this element is developing key questions and answers to using monitoring data with decision making.

Results:

The workgroup meets regularly and is developing the protocols and timeframe for implementation.

Implementation and Effectiveness Monitoring

(Salmon Strategy Mon1)

Gen21 – Develop implementation and effectiveness monitoring systems to be incorporated in all new salmon recovery activities.

Implementing Agencies: **Salmon Recovery Office**
State Department of Agriculture
Ecology
State Fish and Wildlife
Tribes

Milestones:
Completion in 2003

Discussion:
The SRS, comprehensive statewide monitoring framework, and related implementation plans will guide development of monitoring efforts, increase alignment and consistency across agencies, and provide information and support to salmon recovery efforts.

Results:

Monitoring framework is still being developed. Key tasks include:

1. Expand and improve the comprehensive statewide monitoring framework;

2. Refine comprehensive monitoring planning needs, identify those that are currently met and unmet, identify improvements, and resource needs.

Statewide Ambient Ground Water Monitoring

Gen25 - In cooperation with IGWC and other state agencies, develop a statewide ambient ground water monitoring system.

Implementing Agencies: **Ecology**
Department of Health
State Department of Transportation
Tribes
Counties

Milestones:

To be developed

Discussion:
The IGWC Ambient Monitoring Subcommittee has been intermittently active over the past few years. Recently, it was chaired by Russ Darr, Ecology, and by Cindy Moore, Washington Dept. of Agriculture.

At the last IGWC meeting, the subcommittee was reformed, mainly in response to an effort by the Ecology Environmental Assessment Program to establish an ambient ground water monitoring program, to be run from within the Environmental Assessment Program. Charles Pitz is leading this effort, and has made presentations to the IGWC. He has requested information and input from IGWC participants.

The Washington State Departments of Health, Agriculture, Ecology; King County; and EPA are participating in an informational workshop/meeting sponsored by the Dept. of Ecology Environmental Assessment Program.

As a result of this workshop, EAP will formulate a plan to establish an ambient monitoring network for the State of Washington. The IGWC Ambient Monitoring Subcommittee will meet to develop goals for interagency cooperation on this issue.

Results:

Coordinated Enforcement

(Salmon Strategy Enf 1)

Gen26 - Establish and implement collaborative processes to increase coordination of compliance and enforcement activities among the regulatory natural resource agencies with joint or primary jurisdictional authorities.

Implementing Agencies: **Ecology**
State Fish and Wildlife
Department of Natural Resources
Tribes

Milestones:

April 2001 assess accomplishments and develop recommendations.

Discussion:

Many agencies have overlapping jurisdictional responsibility. The purpose of this action is to develop a coordinated process to create enforcement efficiencies and to work collaboratively to identify illegal water withdrawals, Hydraulic Code violations, water quality violations, and improper forest practices.

Results:

Coordination process has been established including a committee of DNR, Ecology, and Fish and Wildlife. Four watersheds that have been identified for joint enforcement pilot efforts are:

1. Skagit
2. Dungeness
3. Methow
4. Walla Walla

Report on the pilot enforcement projects in these watersheds is forthcoming.

Enforcing the Hydraulic Code

(Salmon Strategy Enf 3)

Gen28 - Increase compliance and enforcement of the Hydraulic Code for habitat protection and increase compliance with fish passage and screening requirements.

Implementing Agencies: **State Fish and Wildlife**
State Department of Agriculture
Conservation Commission
Ecology

Milestones: Ongoing

Discussion: Key tasks include: 1. detect and enforce screening of water diversion intakes with routine and emphasis patrols in priority restoration basins identified in the Statewide Strategy to Recover Salmon; 2. increase HPA compliance through routine checks of permittees; and 3. monitor for change in compliance. All tasks involve ongoing work.

Results: NMFS ESA training has occurred in all WDFW Regions. The Cooperative Compliance Review Program continues in the Walla Walla River basin, enabling landowners to come into compliance with screening and diversion regulations. Funding has been lost for additional screening and diversion checking projects.

Nonpoint Pollution Enforcement

(Salmon Strategy Enf 4)

Gen29 - Increase compliance and enforcement activities for nonpoint pollution sources.

Implementing Agencies: **Ecology**
State Department of Agriculture
Conservation Commission
Puget Sound Action Team

Milestones:
In 2001, Ecology. Met the milestone to increase compliance and enforcement activities for nonpoint pollution sources by hiring 3 additional FTEs for these efforts. Each of the two Western Washington regions has one staff person, while Central and Eastern Washington each have one-half of a position. These staff are doing site inspections, providing technical assistance, developing partnerships with local governments and others, and taking enforcement actions where warranted.

Discussion:
Nonpoint source pollution has become the leading problem affecting water quality in Washington State. This general runoff from the land into water bodies is not associated with point source discharges from a pipe such as industrial and municipal wastewater discharges. Rather, it is diffuse pollution from all of our daily activities. The majority of this pollution is the result of improper agricultural and forestry activities, urban and suburban stormwater runoff, poorly managed hobby farms, failing septic systems, and the like.

Ecology has been providing public education to raise awareness of people's actions that cause nonpoint pollution. Ecology staff have provided technical assistance to help achieve voluntary compliance with water quality laws and goals. These actions have achieved some success with people who want to do the right thing. However, without some enforcement capability, the actions of a few individuals can undermine the good efforts of the majority of our citizens.

Thus, the three nonpoint compliance positions are focusing on correcting known water quality problems. Each regional office is focusing on the biggest problems in their particular area. For example, the Southwest Region is concentrating on non-dairy livestock inspections, technical assistance, and complaint response on manure and mud runoff, and riparian degradation. The Northwest Region is focusing on the Lower Skagit and Snohomish River basins where fecal coliform TMDLs are being implemented. Northwest nonpoint inspectors are supplementing TMDL efforts by correcting problems related to non-dairy agriculture, hobby farms, and rural construction stormwater. Central is performing compliance inspections for stormwater construction sites to determine runoff problems and permitting requirements. They are also assisting in the development of eastern Washington Stormwater Manual. Eastern region is working with counties and land owners to reduce the degradation of riparian areas and fecal coliform pollution from livestock operations primarily in the lower snake water quality management area.

Results:
In 2001, the 3 FTEs have more than doubled Ecology's compliance and enforcement activities compared to calendar year 2000. The volume of their work is expressed in the following statistics for 2001:

ACTIONS	TOTAL
Number of complaints received	112
Number of complaints responded to	85
Number of referrals to others	48
Number of site inspections	364
Informal enforcement actions taken	37
Formal enforcement actions taken	10
Partnering contacts made	552

Direct Implementation Fund (DIF)

At the start of calendar year 2001, Ecology developed a funding program only available to state agencies for projects that would assist in implementing program development projects clearly identified in Table 9.1 of the nonpoint plan. Activities must be beyond the current responsibilities of the agency as mandated by the Legislature. State agencies will submit applications for activities for which they are designated as lead in the plan. Projects would be identified and prioritized by the State Agency Nonpoint Workgroup, and a recommended funding list presented to the Water Quality Program Management Team for approval.

The list of DIF projects include:

State Agency	Table 9.1 Activity	Project Name	Amount
Governor's Council on Environmental Education	ME8	WA Monitoring Month	$38,500
Office of Community Development	Urb1	Critical Area Model Ordinance	$50,000
Puget Sound Water Quality Action Team	Ed18	Horses for Clean Water	$47,500
Department of Health	Urb14	Optical Storage for Onsite Sewage Records	$49,972
Department of Health	Ed18	Correcting Failing Onsite Sewage Systems in Shellfish Areas	$50,000
Department of Natural Resources	ME6	Forest Road Plans Effectiveness Monitoring	$41,000
Department of Agriculture	Ed3	*Our Water, Our World*	$32,300
Puget Sound Water Quality Action Team	Urb8	Urban Sprawl and Impervious Surfaces	$50,000
WSU Cooperative Extension	AG10	Water Quality Education for Small Farmers	$40,728

There was a total of $400,00 available for DIF projects. After developing workplans and budgets, we noticed that we were able to leverage about $1.1 million of state funds for direct implementation activities.

Most of the agreements were developed between July 1, 2001 and December 31, 2001. Next years report will detail the successes of these first year DIFs.

Part 4 - Is the Nonpoint Source Management Plan Effective?

It will be important to assess the effectiveness of the overall plan on a regular basis (every five years) so that changes can be made to add emphasis or refocus efforts where they are most needed. During the first five years of this plan, agencies will continue to develop the programs necessary to implement the actions identified in the plan, and implement where and when possible.

Every five years this plan will be updated. The need for major changes in strategy will be identified at that time. We will have the action reports as well as build upon any knowledge gained from effectiveness monitoring, or other monitoring activities related to nonpoint source controls.

Washington's NPS Management Plan is a living document. EPA and NOAA require a review and update of the plan on a five-year cycle. The actions of the plan, when taken as a whole, will focus resources in a manner that widens program implementation, improves program effectiveness, and attends to problems not previously addressed. Through increased coordination and cooperation, we can improve the quality of the state's waters and maintain and improve our quality of life.

At year four of plan implementation, we will look at the agency progress reports, and begin another chapter 5 analysis. However, attempting to determine whether this water quality plan is successful or not will be problematic. We can ask “Is water quality improving because of the actions of this plan?”, or “Is Washington State water quality degrading because nonpoint programs are not effective?” However, answering these questions will not be easy, but we will attempt an answer.

Beyond five years, programs will be implemented to the maximum extent needed and where possible within the state, and additional programs will be developed and implemented to manage future identified needs.

Part 5 - What Changes in Strategy are Needed to Improve Effectiveness

To determine changes in strategy requires time and information. During this second year of plan implementation, we are able to see movement towards implementation of individual actions; some of these are ongoing and some have been completed. However, whether or not the implemented action had led to improvements in water quality will not be immediately known. Part 5 only discusses how the nonpoint workgroup made decisions on Table 9.1. The overall impact of the plan on water quality will be determined at a later date.

Washington State Agency Nonpoint Workgroup

Membership in the state agency nonpoint workgroup is primarily from within Washington State Government, and secondarily from other federal, state, and local governments managing nonpoint source pollution.

In October of 1999, the Director of Ecology sent a letter to Washington State Agencies inviting membership into the workgroup. By January of 2000, most names were submitted, and in April the workgroup was formalized. A few months later a request was made and approval granted to establish the workgroup as a class one committee. Class one groups involve responsibility for major policy decisions and represents a significant demand on the time and resources of its members. It is expected that the role of this workgroup will expand as advanced planning and implementation of the state's nonpoint plan evolves.

Director's Designees--as of December 31, 2001

Agency	Director	Designee	Representative
Agriculture		Kirk Cook	
Conservation Commission	Steve Meyer	Steve Meyer	Mark Clark
Office of Community Development	Busse Nutley	Chris Parsons	
Cooperative Extension	Jim Zuiches	Dr. Ed Adams	Bob Simmons
Ecology	Tom Fitzsimmons	Megan White	Helen Bresler
Fish and Wildlife	Jeff Koenigs	Carl Samuelson	John Carleton
Health	Mary Selecky	Selden Hall	
Interagency Comm. for Outdoor Rec.	Laura Eckert Johnson	Jim Fox	Jim Eychaner
Natural Resources	Doug Sutherland	Nancy Sturhan	
Parks and Recreation Commission	Cleve Pinnix	Bill Jolly	Chris Regan
Puget Sound Action Team	Nancy McKay	Harriet Beale	
Transportation	Doug MacDonald	Tim Hilliard	

Ad-hoc Members

There are also agencies and others in the state that have nonpoint programs, or are interested in nonpoint issues. They have been asked to be ad-hoc members of the workgroup. Ad-hoc members can participate in meetings, offer assistance, have programs of interest to the workgroup, and are generally a resource to workgroup members

Name	Agency
Bev Isenson	Gov Comm on Environmental Education
Bill Green	Ecology--Workgroup staff
Bob Lee	Senate – Agriculture and International Trade
Bob Woolrich	Health
Jason Callahan	House – Natural Resources
Caroleen Dineen	House – Agriculture and Ecology
Kim McKee	Ecology – Water Quality Financial Assistance
Wayne Clifford	Health – Shellfish
Dan Filip	Ecology – Financial Assistance
Greg Lovelady	Interagency Committee for Outdoor Recreation
David Roberts	Department of Ecology
Aleceia Tilley	Ecology – 319
Phil Miller	Salmon Recovery Office
Hedia Adelsman	Salmon Recovery Office
Krista Mendelman	EPA Region X
Ross Antipa	Senate – Natural Resources, Parks, and Shorelines
Linda Loos	Cooperative Extension
Richard Rodger	Senate – Environment, Energy, and Water
Ron Schavlik	Natural Resource Conservation Service

Role of the Workgroup:

The nonpoint plan outlined the role of the nonpoint workgroup. The State Agency Nonpoint Workgroup will meet annually to accomplish the following:

1. Review water quality reports
2. Review various implementation reports (as available)
3. Review progress on implementation commitments (Chapter 9)
4. Collaborate on new ideas for solving nonpoint source pollution
5. Advise Ecology on changes needed to the 319 plan
6. Oversee the use of the Direct Implementation Fund

This will also be a good opportunity to coordinate nonpoint control programs and co-manage data. In October 2001, the workgroup met in retreat to discuss plan implementation activities. The purpose of the retreat was to determine which actions were completed, which actions need to be amended, and what new actions are needed to further nonpoint source controls in Washington State. The result was an updated Table 9.1 (see Appendix 1).

It is likely that commitments in the plan will need to be revisited throughout the plan implementation period (five years). Many of the commitments are actions that have a high likelihood of being carried out because the program already exists and the funding sources are relatively assured. In a number of cases, actions identified in the plan are limited by funding or by the need for many entities to participate in the outcome. In these cases, the progress will be difficult to predict. These annual reviews will be important to make sure the overall plan direction is maintained.

Striving for Success

The actions identified in the plan will require a long-term commitment from federal, tribal, state, local and private resources. There is no quick fix to pollution that is as endemic as nonpoint pollution. Although Table 9.1 identifies actions to be taken within a relative short time frame the efforts embodied in the plan will continue many more years. During the first five years of this plan, the focus of many agencies will be to develop the necessary programs to implement the actions in the plan. Each agency will determine its own timeline for the actions, and report the timeline to the State Agency Workgroup. Ecology will track these timelines and project completion for the Workgroup. The Workgroup will also coordinate the timing of inter-related actions.

As programs are developed, they will be implemented on the ground by the appropriate groups. For example, as landowners put BMPs in place, agencies will provide technical and financial assistance when possible. In the meantime, water quality monitoring programs will help us assess the overall improvement to water quality from these nonpoint source control measures. Meaningful improvements take years. The various planning processes such as TMDLs, local watershed plans under chapter 90.82 RCW, salmon recovery limiting analyses under the Salmon Recovery Act, and Puget Sound Watershed Plans under chapter 400-12 WAC (or their equivalent outside the Puget Sound area) will continue to investigate and identify water quality problems across the state. This plan will provide a toolbox of programs to be used in these areas to address the identified problem. The plan also provides a mechanism through the consistent review process and other feedback to develop programs to address unmet needs that may arise.

Appendix 1

Updated Table 9.1

Actions to Manage Nonpoint Pollution in Washington State

Updated Actions Table for Calendar Year 2002

Updated Table 9.1

Actions to Manage Nonpoint Pollution in Washington State

Updated Actions Table for Calendar Year 2002

** Lead agency is in bold*

Agriculture Activities *Common Sources: loss of riparian areas, livestock manure, sediment*	**Responsible Organization**	**Action Status**	**Measurable Outcome**	**Major Program Linkage**
New Program Development				
Ag 1: Develop Statewide Irrigated Agriculture Comprehensive Plan to facilitate development of Comprehensive Irrigation District plans	**WSDA**, CC, ECY, WDFW, NRCS, tribes	In Process	Quantity of water saved and retained in-stream	Salmon Strategy, Agr-1
Ag 2: Build capacity in conservation districts to better deliver water quality programs by providing permanent stable funding	**Counties, CC, WACD**	Ongoing	Number of districts receiving county funds	
Ag 3: Expand well water protection findings in order to prioritize technical support and compliance inspections. Support GWMA projects.	**ECY, WDSA**, WSU	Ongoing		Wellhead and Groundwater Protection
Ag 4: Update Field Office Technical Guide (FOTGs) for use by NRCS and CDs	**WSDA, CC**, WSU, WDFW, ECY, WSDOT	Ongoing	Number of field office technical guides updated	Salmon Strategy, Agr-4
Ag 5: Establish an MOA with NRCS to evaluate the effectiveness of Best Management Practices used in agriculture	ECY, NRCS	Future	Date signed	CWA general requirement
Ag 7: Study feasibility of converting open gravity canals and other current delivery systems to more efficient systems, including pressurized pipe.	ECY	Future	Study completion date	

Ag 8: Refine and update state restrictions on pesticide applications and provide technical assistance on proper use of pesticides to ensure compliance with the *Endangered Species* and *Clean Water Acts*, in both rural and urban areas.	**WSDA**, ECY, WDFW, DNR, WSDOT	Upgrade	Tons of pesticides collected per year; Number of PSMPs completed	Salmon Strategy, Agr-1 Puget Sound Plan, AG-0
Ag 9: Secure a source of permanent and ongoing funding for the FARM*A*SYST/ HOME*A*SYST program within Washington State University.	**WSU**, WACD, CC	Upgrade		National FARM*A*SYST/ HOME*A*SYST
Ag 10: Develop an education and outreach program targeted at small farms water quality and ESA compliance	**WSU**, ECY, , WACD, CC	Ongoing		
Ag 11: Provide research to develop or evaluate agricultural best management practices to Washington and Washington crops.	**WSU,** CC, ECY, WSDA	NEW	Papers published on new agricultural BMPs	
Agricultural Incentive Programs				
Ag 11: Implement Conservation Reserve Enhancement Program	**CC,** WSDA, NRCS, FSA	Ongoing	Number of landowners served through CRP and CREP	Salmon Strategy
Ag 12: Actively engage agricultural producer groups in developing and implementing new BMPs	**CC, WSU,** ECY, WSDA	Ongoing	Number of approved BMPs; Number of groups with approved BMPs	Puget Sound Plan, AG-0
Ag 13: Use SRF low-interest loans to help agricultural commodity groups with development and installation of BMPs that reduce pollution and water use.	ECY	Ongoing	Amount of dollars loaned through SRF	
Forestry Activities *Common Sources: Forest roads, timber harvest, sediment, temperature*	**Responsible Organization**	**Action Status**	**Measurable Outcome**	**Major Program Linkage**
New Program Development				
For 2: Develop and implement a habitat conservation plan for forest and fish.	**DNR**, SRO, WDFW, WSDA, ECY	Upgrade	Date HCP completed	Salmon Strategy, For-3

For 3: Update watershed analysis manual, facilitate conducting watershed analyses and approve watershed analysis permits	**DNR**, ECY, WDFW	Upgrade	Updated manual and technical guidelines	Salmon Strategy, For-5
For 4: Review and approve road maintenance and abandonment plans	**DNR**, WSDA, ECY, WDFW	Ongoing	Number of forest landowners with approved plans; Miles of forest roads with plans	Salmon Strategy, For-2
For 5: Approve transfer of Class IV general forest practices permits to local governments	**DNR**, ECY, WDFW, OCD	Ongoing	Number of local governments with permitting authority	Salmon Strategy, Lan-6
For 7: Establish a state policy to allow timber leases for conservation purposes.	DNR	New		
For 8: Implement new rules consistent with the Fish and Forest Report and WAC 222	**Forest Practices Board, DNR, ECY,** WDFW, WSDA, DCTED	New	Improved water quality in forested habitats	Salmon Strategy, For-1
For 9: Monitor implementation of the MOA between the USFS and Ecology	ECY, USFS	New		
Small Forest Landowner Assistance				
For 8: Carry out functions of the Small Forest Landowners' Office	**DNR**, ECY, WDFW	Ongoing	Number of small forest landowners served	Salmon Strategy (For 4)
For 9: Educate small forest landowners on water quality and ESA issues, and new rules	**DNR, WSU**, ECY, NRCS, DFW,	Upgrade	Number of small forest landowners served	
Urban Activities *Common Sources: stormwater runoff, failing on-site sewage systems, transportation facilities, heavy metals, fecal contamination, silt, petroleum and nutrients*	**Responsible Organization**	**Action Status**	**Measurable Outcomes**	**Major Program Linkage**
Development and Construction				

Urb 1: Update guidelines and models for consideration by counties and cities on inclusion of Best Available Science and giving special consideration to salmon conservation in their local GMA Critical Areas Ordinances	**PSWQAT OCD,** WSDA, ECY, WDFW, DNR, CC, WSDOT	Upgrade	Guidance completed	Salmon Strategy, Lan-2 Puget Sound Plan, MFH-2
Urb 2: Revise guidance for development and implementation of local Floodplain Management Plans and for use of non-regulatory tools and incentives to reconnect rivers and flood plains	**ECY,** WDFW, , OCD, WSDOT, EMD	Upgrade	Number of updated floodplain management plans	Salmon Strategy (Lan 4, 5)
Urb 3: Design and promote incentives for non-regulatory land use protection programs.	**ECY**, OCD, WDFW, DNR, WSDOT, PSWQAT,	New	Program developed by 2003	Salmon Strategy (Lan 8)
Urb 25: Develop a model clearing and grading ordinance to include low impact development. Partner with resource agencies to utilize regional staff in updating ordinances. Implement a series of workshops around the state on legal obligations of land use planning.	**OCD,** ECY, PSWQAT,	NEW	Water quality impacts reduced	Puget Sound Plan, SW-2
Stormwater Runoff				
Urb 5: Research and communicate stormwater technology design, cost benefit and know-how to effectively address stormwater problems	**WSDOT**, ECY, WDFW, WSU PSWQAT	Upgrade	Number of local governments assisted	Salmon Strategy, Rea-4 Puget Sound Plan, SW-3
Urb 6: Update model ordinances for local stormwater management programs to help local governments adopt the revised comprehensive program.	**PSWQAT,** OCD, ECY, WDFW,	Upgrade	Number of communities within Puget Sound that have met target dates for implementing the PS stormwater program	Salmon Strategy, Sto-3 Puget Sound Plan, SW-3
Urb 7: Issue and reissue (on the regular five-year cycle) stormwater general NPDES permits. Provide technical assistance with implementation that conforms to the latest water quality standards and technical manual	**ECY,** WDFW, PSWQAT, WSDOT	Ongoing	Number of permits issued	Salmon Strategy (Sto 5)

Urb 26: Develop a Stormwater Management Strategy for eastern Washington and help local governments implement the manual to address stormwater impacts on habitat and water quality of new development	**ECY**, WSDOT	NEW	Adoption of eastern Washington manual	
Urb 27: Develop a GIS-based information management system for stormwater related data, such as outfall locations, BMP locations, sites of construction and industrial permits, and monitoring sites.	**WSDOT,** ECY, WDFW	NEW		
Urb 28: Develop methods and procedures for watershed-based runoff, streamflow, and water quality mitigation measures, with a goal of resource recovery in place of patchwork, incremental mitigation as practiced in the past.	WSDOT, **ECY, PSWQAT**	NEW	Track success of mitigation measures	Salmon Strategy, Lan-7
Stormwater Prevention				
Urb 8: Identify and participate in a low impact stormwater demonstration project and research the applicability of low-impact techniques to regional hydrogeology, soils, and climactic conditions.	**ECY, OCD, PSWQAT**, WSU, Cities, AGC	Upgrade	Amount of contaminated runoff decreased	Puget Sound Plan, SW-2
Urb 9: Expand the Urban and Community Forestry program to meet current requests for assistance from local governments, and perform adequate outreach.	**DNR**, Cities	Upgrade	Number of communities with urban forestry programs	
Urb 29: Research the effects of urbanization, especially stormwater runoff, on ecosystems. Educate key audiences on strategies for reducing stormwater impacts.	PSWQAT, WSU	NEW		
On-site Sewage Systems				
Urb 13: Identify and approve new technologies for onsite waste treatment	DOH	Ongoing	New on-site technologies approved and promoted	Puget Sound Plan, OS-5
Urb 14: Establish an effective statewide education program to convince the general public of the importance of properly maintaining their onsite sewage systems and how to do that.	**DOH,** Local Boards of Health	Upgrade		

Urb 15: Expand current programs to address the needs for expansion of sewer services to areas of actual or projected high population density.	**ECY**, **OCD**, Counties	Upgrade		
Urb 30: Work toward the establishment of a dedicated local health on-site O&M Coordinator to integrate the activities of various groups and agencies in developing and implementing a model risk-based O&M program characterized by effective O&M data tracking, homeowner education programs and identified funding mechanism to support local programs.	DOH, **PSWQAT**	Replaces Urb11 and Urb12	Number of communities with functional O&M programs	Puget Sound Plan, OS-2
Urb 31: Inventory, prioritize and repair failing septic systems on marine facilities owned by the Parks and Recreation Commission.	**Parks**	NEW	Number of facilities reparied	
Pollution Prevention				
Urb 17: Implement spill prevention and response, hazardous waste and contaminated sediments programs to eliminate or reduce risks and impacts on aquatic systems	**ECY**, WDFW, DNR, WSDOT	New	Number of spills that have been responded to	Salmon Strategy, Wqa-5 Puget Sound Plan, SP-1
Urb 18: Through the Urban Pesticide Strategy Team, encourage the development and implementation of programs to reduce the impacts of pesticide use in urban areas.	**EPA, WSU,** WSDA, ECY	Upgrade	Complete UPEST website	
Urb 19: Increase capacity within the state to re-refine motor oil	**ECY**	Upgrade	Production of recycled oil within the state	
Land Transportation Systems				
Urb 20: Provide road maintenance guidelines to local communities	**WSDOT**	Upgrade	Number of communities assisted	Puget Sound Plan, SW-3

Urb 22: Reinvent NEPA pilot projects to address environmental concerns on a broad geographic area and earlier into project planning	**WSDOT**, ECY, WDFW,	Ongoing	List of completed pilot projects	Salmon Strategy, Lan-11
Urb 23: Revise and implement highway runoff manual; undertake stormwater retrofit for transportation projects; implement grant programs	**WSDOT,** ECY, WDFW, TIB,	Ongoing	Miles of highways that meet new stormwater requirements	Salmon Strategy, Sto-6 Puget Sound Plan, SW-4
Urb 24: Develop and implement a compliance/ accountability database to track WSDOT permit requirements and mitigation activities.	**WSDOT,** ECY, WDFW, DNR,	Future	Database built and permits tracked	Salmon Strategy, Enf-6
Urb 32: Monitor pesticide spraying on roads.	WSDOT	NEW		
Recreational Activities	**Responsible Organization**	**Action Status**	**Measurable Outcomes**	**Major Program Linkage**
General				
Rec 1: Investigate impacts on water quality from recreational activities	ECY, **Parks, DNR, WDFW**	Future		
Rec 2: Establish a system of review that ensures that all public recreational lands have adequate toilets and that solid waste disposal facilities are provided.	IAC	Upgrade		
Rec 12: Study the feasibility of increasing the fee for the recreational shellfish license dedicated to restoring shellfish beds from nonpoint sources of pollution.	**WDFW,** DOH, ECY	NEW	Programs for protecting and restoring shellfish beds will be coordinated	
Rec 13: Develop a beach monitoring and notification program for recreational marine waters contaminated with nonpoint sources of pollution.	**ECY,** DOH, DNR, Parks, WDFW	NEW		
Rec 14: Promote the use of ALEA funds to protect and restore water quality where public recreational shellfish harvesting is threatened or closed due to public health concerns.	DNR	NEW	Programs for protecting and restoring shellfish beds will be coordinated	
Off-Road Vehicles				
Rec 3: Update the Non-Highway and Off-Road Vehicle Activities Plan to address water quality and funding issues	IAC	In Process	Number of ORV facilities with water quality plans	

Rec 4: Develop and implement educational programs for off-road vehicle users	IAC	Future		
Marinas and Boats				
Rec 5: Evaluate the needs regarding the fuel dock education and assistance program	**WSG**, ECY, NWMTA	Future	Needs analysis completed	
Rec 7: Update the Comprehensive Boat Sewage Management Plan for Washington State.	Parks	Upgrade	Number of marinas with operating marine sanitation pump-outs	Puget Sound Plan, MB-5
Rec 8: Coordinate agency educational efforts for boaters on environmentally safe practices, such as for the Clean Boating Week held last year.	ECY, Parks, WDFW, DNR, PSWQAT	Upgrade	Number of boaters educated	Puget Sound Plan, MB-1
Hydromodification *Common Sources: pH, metals, dissolved oxygen, nutrients, low flows*	**Responsible Organization**	**Action Status**	**Measurable Outcomes**	**Major Program Linkage**
Hyd 2: Evaluate implementing the Hydraulics Code with an eye towards improving its use for water quality protection.	**WDFW** , ECY	New		
Hyd 3: Provide technical guidance and engineering support to help regional and watershed lead entities, local governments, tribes, private landowners and volunteers participate in salmon restoration projects, inventory and correct fish passage barriers, and implement screening in water diversions. Provide engineering support to instream and marine construction projects affecting salmon	**WDFW**, IAC, **WSDOT** CC, ECY, DOH,	Upgrade	Number of local governments, tribes, and private landowners assisted	Salmon Strategy (Pas 4)
Loss of Aquatic Ecosystems	**Responsible Organization**	**Action Status**	Measurable Outcome	**Major Program Linkage**
Program Development				
LAE 2: Coordinate restoration projects on a watershed basis to provide more effective results.	**ECY,** IAC, DNR, CC,	Upgrade		

LAE 3: Develop and provide critical information, technical guidance and maps to support local governments' update of their Critical Areas Ordinances	**OCD**, ECY, WDFW, DNR, PSWQAT	Upgrade	List of technical documents and timelines	Salmon Strategy, Lan -3
LAE 4: Prevent, control and monitor the spread of aquatic nuisance species	**WSDA,** ECY, WDFW, DNR, PSWQAT	Upgrade	Reduction in areas where nuisance species exist	Salmon Strategy, Lan- 13 Puget Sound Plan, ANS-3
LAE 5: Develop and implement a statewide lakes management program addressing TMDLs.	ECY	Upgrade		
LAE 14: Streamline the aquatic pesticide permitting process, including further incorporation of applicable requirements from the water quality standards to establish a NPDES Permits for all aquatic pesticide applications.	ECY	Upgrade LAE1	Number of permits issued	Puget Sound Plan, ANS-3
LAE 15: Develop outreach and education materials on Aquatic Habitat Guidelines	**WDFW, ECY, WSDOT**	NEW	Number of items published and number of each distributed.	Salmon Strategy, Per-2 Puget Sound Plan, MFH-7
LAE 16: Train local, state, and tribal staff on Aquatic Habitat Guidelines	**WDFW, ECY, WSDOT**	NEW	Number of training events delivered and number of people trained.	Salmon Strategy, Per-2 Puget Sound Plan, MFH-7
LAE 17: Publish and disseminate existing and in-development Aquatic Habitat Guidelines and reports in multi-media formats.	**WDFW, ECY, WSDOT**	NEW	Number of guidelines published and number of copies distributed.	Salmon Strategy, Per-2 Puget Sound Plan, MFH-7
LAE 18: Develop additional needed Aquatic Habitat Guidelines (e.g. stream crossings, marine shorelines protection, marine habitat restoration, treated wood, etc.)	**WDFW, ECY, WSDOT**	NEW	Number of new guidelines initiated and/or completed	Salmon Strategy, Per-2 Puget Sound Plan, MFH-7
LAE 19: Develop wetland guidance documents based on the best available scientific information for use by local governments in developing wetland protection regulations under the GMA and the SMA.	**ECY,** WDFW, PSWQAT, OCD, EPA	NEW	Acres of wetlands preserved or restored	Puget Sound Plan, MFH-2 Salmon Strategy, Lan-9

LAE 20: Conduct wetland training workshops for local governments to assist them in implementing local wetland regulatory programs.	**ECY,** OCD, PSWQAT, EPA	NEW	Acres of wetlands preserved or restored	Puget Sound Plan, MFH-2 Salmon Strategy, Lan-9
LAE 21: Develop new guidance on wetland mitigation plans	**ECY,** WDFW, PSWQAT, EPA	Update	Acres of wetlands preserved or restored	Puget Sound Plan, MFH-2 Salmon Strategy, Lan-9
LAE 22: Develop a compliance tracking and enforcement program for agency permitted wetland mitigation projects.	**ECY,** EPA PSWQAT	New	Acres of wetlands preserved or restored	Puget Sound Plan, MFH-4 Salmon Strategy, Lan-9
Ecosystem Programs				
LAE 6: Implement, maintain, and update the Puget Sound Plan and biennial work plans for the Puget Sound Basin	PSWQAT	Upgrade	Plan updated	Salmon Strategy (Lan 9 - revised)
LAE 7: Implement the Statewide Wetlands Integration Strategy and the Puget Sound Wetland Restoration Program	**ECY**, WSDOT **PSWQAT,**	Upgrade	Net gain of wetlands function and acreage of other aquatic habitat	
LAE 9: Continue to emphasize lake and watershed management planning to address nutrient and sediment enrichment, and de-emphasize the use of chemicals for pest control	**ECY**, WDSA	Upgrade	Lakes with phase 1 restoration plans	Puget Sound Plan, ANS-3 CWA Requirement
LAE 23: Develop a demonstration project showing the efficacy of using a constructed wetland to treat a combination of point source discharges and nonpoint source polluted waters from an adjoining creek. The project should monitor the removal of nutrients and other pollutants, and show whether combined treatment will result in an overall reduction in pollutant loading.	WDFW	NEW	Amount of nitrogen removed	
Educational Activities *Education is essential to public involvement in the successful reduction of nonpoint*	**Responsible Organization**	**Action Status**	**Measurable Outcomes**	**Major Program Linkage**
Program Development				

Ed 1: Develop a resource library of high quality educational materials to assist communities with nonpoint source issues.	ECY, PSWQAT, **GCEE**	New		
Ed 2: Distribute or provide easy access to information on funding sources for salmon recovery and on funds expended on salmon recovery efforts	**IAC,** OCD, ECY, WDFW, TIB, WSDOT	New	Total funds expended	Salmon Strategy (Edu 7)
Ed 3: Implement the Home-to-Ocean program similar to a program currently in California, which educates the public about wise use and proper disposal of pesticides.	WSDA	Ongoing	Number of pesticide retailers trained	
Ed 4: Organize a biennial conference on nonpoint pollution for implementing agencies and groups as well as the general public	ECY	Upgrade	Number of attendees and participants evaluation	
Ed 5: Develop and implement site-specific public education plans, for example, for parks with significant salmon resources and for hatcheries as Salmon Environmental Learning Centers	**Parks,** WDFW, DNR,	New	1 new salmon environmental learning center per year	Salmon Strategy (Edu 5)
Ed 15: Develop a user-friendly Nonpoint Web page on the Ecology web site	**ECY**	NEW		
Ed 16: Work with federal EPA and other state nonpoint educators on a major media campaign to change behavior to improve water quality	ECY, **GCEE, EPA, PSWQAT**	NEW		
Ed 17: Through guidance to grant applicants and recipients, encourage more effective community-based education projects that actually change behavior to improve water quality.	**ECY,** PSWQAT	NEW		
Ed 18: Develop educational materials and other resources on shellfish protection for use by local, state, and federal nonpoint educators.	**PSWQAT, DOH**, **ECY**	NEW	Education material developed and disseminated	Puget Sound Plan, SF-6
Programs for Schools				
Ed 6: Conduct a series of watershed-specific PROJECT WET teacher workshops on Watersheds	**ECY**, WDFW, local gov't	New	Number of teacher workshops conducted	

for People and Salmon, focusing on pollution prevention, water conservation, habitat, and public health.	facilitators			
Ed 7: Complete Columbia Watershed curriculum for youth and adults, for better understanding and stewardship in the Columbia Basin	**GCEE, ECY, WDFW,DNR, DOH, tribes**	Upgrade		
Ed 8: Expand "Magic Apple" grants to fund exemplary teachers' water quality class projects	ECY	Upgrade	Number of grants awarded	
Ed 9: Sponsor one new community Water Festival per year, for 4th graders	**ECY** with local agency	Upgrade		
Ed 19: Implement Chehalis Basin Education and Consortium water quality monitoring program with teachers and students, including Student Congress to share results around the watershed.	**ECY**, GCEE	NEW		
Public Education Programs				
Ed 10: Manage the Puget Sound Public Involvement and Education "PIE" fund program to develop innovative education programs	PSWQAT	Upgrade	Number of projects funded and total amount spent	Puget Sound Plan, EPI-8 Salmon Strategy Edu-7
Ed 11: Fund small water quality education grants statewide	ECY	New	Total funds spent for water quality education	
Ed 12: Develop and implement statewide training programs for the public and specific interest groups such as teachers, agricultural producers, foresters, developers, and others.	**ECY, WDFW, WSU,** GCEE, TIB, WSDOT	Upgrade	Training developed and presented	Salmon Strategy, Edu-6
Ed 13: Develop and disseminate using external communication tools educational materials, brochures, fact sheets, and other items, information on salmon needs, status, stress factors, [water quality issues], and actions being taken and/or needed to assist the public in understanding salmon issues and solutions and how they can help	**GCEE,** CC, WSDA, ECY, WDFW, , DIS, DNR, SRO, WSDOT, tribes	New	Number of presentations to public and key stakeholders	Salmon Strategy, Edu-2
Ed 14: Introduce and support Master Watershed	**WSU,** GCEE	Upgrade		

Steward programs throughout the state				
General Program Activities *Programs that have multiple impacts or are administrative in nature*	**Responsible Agency**	**Action Status**	**Measurable Outcome**	**Management Measure and/or Program Linkage**
Program Development				
Gen 2: Expand the development of local watershed plans under chapters 75.46 & 90.82 RCW and other related acts	**ECY,** WDFW, SRO	Upgrade	Number of 2514 plans approved	Salmon Strategy, Reg-3
Gen 4: Promote local watershed planning and implementation that address 303(d) listings and prevents further listings. Provide technical assistance	**ECY, PSWQAT**	Ongoing		Clean Water Action Plan TMDLs Puget Sound Plan, WP-4
Gen 5: Develop and implement schedule for Water Cleanup Plans (TMDLs) focussing on watersheds with listed species first	**ECY**, tribes PSWQAT, CC	Ongoing	Number of TMDLs submitted to EPA	TMDLs, Salmon Strategy, Wqa-3
Gen 6: Develop a cooperative and comprehensive interstate ground water protection plan with state (Oregon and Idaho) and tribal governments.	**ECY**, Oregon, Idaho, Tribes	Future		
Gen 7: Establish working agreements with various federal agencies to address Clean Water Act federal consistency requirements	ECY	In Process	Number of federal agencies reviewed	Clean Water Act
Gen 8: Assist local governments to modify their Shoreline Master Programs	**ECY**, OCD PSWQAT, WDFW, WSDA, DNR, WSDOT	Upgrade	Number of local governments assisted	Salmon Strategy, Lan-1
Gen 9: Develop, adopt, and implement standards for water quality.	**ECY,** WDFW, PSWQAT, WSDOT	Ongoing	Timeline created	Salmon Strategy, Wqa-1, 2
Gen 10: Examine additional funding needs for DOH shellfish protection efforts	**DOH** , PSWQAT	Ongoing	Number of shellfish upgrades and recertification status	
Gen 11: Implement the Yakima River Sediment Reduction Plan	**ECY,** WSDA, CC	Ongoing	Amount of sediment reduced	Salmon Strategy, Wqa-4 TMDLs

Gen 12: Negotiate a "road map" to facilitate the integration of the requirements of the federal *Clean Water* and *Endangered Species Acts*	**ECY**, WSDA WDFW, DNR, WSDOT, tribes	In Process	Final "roadmap" developed	Salmon Strategy, Wqa-6
Gen 17: Convene a multi-agency workgroup to determine which agency databases (for example the shoreline survey database) would be useful for controlling water quality problems, and determine ways to share information.	**ECY, OCD PSWQAT, , DNR, WDFW, WSDA, WSU, WSDOT**	NEW		
Gen 18: Create a web directory of agency technical assistance for use by agency staff, public, and others.	**ECY, OCD PSWQAT, , DNR, WDFW, WSDA, WSU, WSDOT**	NEW		
Community Assistance				
Gen 13: Establish an information base for local communities that describes funding sources and necessary requirements.	**ECY**, Gov Office	New		
Gen 14: Enhance local ability to address water quality complaints and information requests	**ECY, PSWQAT**	Upgrade		
Gen 15: Provide technical assistance and information regarding ESA compliance to communities	**WDFW,** ECY, PSWQAT	Upgrade		
Gen 16: Develop a coordinated process to integrate local and watershed planning efforts into the state nonpoint plan.	ECY	Upgrade		
Gen 19: Provide technical assistance for watershed characterization at the local level.	**ECY,** WSDOT, WDFW, DNR	NEW	Number of communities assisted	Puget Sound Plan, WP-6
Monitoring and Enforcement - *Programs that monitor water quality or enforce water quality standards*	**Responsible Agency**	**Action Status**	**Measurable Outcome**	**Management Measure And/or Program Linkage**
Monitoring				

ME 1: Expand the development of a coordinated monitoring framework to integrate and/or coordinate statewide, regional, watershed and project-specific monitoring systems	**IAC**, ECY, WDFW, DNR, PSWQAT, SRO	Replaces Gen 17	Monitoring framework developed by 2003	Salmon Strategy, Mon-1
ME 2: Track primary water quality indicators (pH, Temp, DO and Turbidity) using number of exceedances approach	ECY	Replaces Gen 19		President's Clean Water Action Plan
ME 3: Develop criteria and protocol to guide the use of monitoring in decision making including adaptive management when specifically committed to at the watershed, activity, and regional scales and ensure decisions include adaptive management and monitoring component consistent with protocol and criteria	**SRO,** ECY, WDFW, DNR, PSAT, WSDOT, IAC	New	To be determined	Salmon Strategy, Mon-2
ME 4: Develop and implement effectiveness monitoring systems to be incorporated in all new salmon recovery activities and a percent of existing activities.	**SRO,** WSDA, ECY, WDFW, IAC	New	Issue report every two years	Salmon Strategy, Mon-3
ME 5: Develop and implement a comprehensive marina and boater destination water quality monitoring program	**ECY**, Parks, Counties, NWMTA	New		
ME 6: Enhance statewide monitoring of rate of harvest, riparian zone management, etc. consistent with the Forest and Fish Report	**DNR,** ECY, WDFW, tribes	Replaces Gen 24	Yearly monitoring report	Salmon Strategy, For-6
ME 7: In cooperation with IGWC and other state agencies, develop a statewide ambient ground water monitoring system	**ECY,** DOH, WSDOT, tribes, counties	Replaces Gen 25		
ME 8: Develop and implement education/outreach and volunteers strategy. Coordinate volunteer monitoring activities statewide.	**GCEE**, ECY, WDFW, WSU, PSWQAT	Replaces Ed 15	Number of volunteers	Salmon Strategy, Edu-1
ME 9: Support Watch over Washington's website for volunteer monitors and provide technical help to local groups and classrooms.	ECY	Replaces Ed 16		

ME 10: Train, direct, and equip volunteer monitors. Develop resources for coordination of volunteer monitoring.	**ECY,** WSU , DNR WDFW, WSDOT	Replaces Ed 17	Total number of volunteers.	Puget Sound Plan, M-3
ME 11: Establish an online, central repository for volunteers' data of known quality	ECY	Replaces Ed 18		
ME 12: Work with ASWIPCA to organize and promote the first annual Nationwide (volunteer) Monitoring Day as a celebration of the 30th anniversary of the Clean Water Act.	ECY	NEW		
ME 13: Develop a collaborative monitoring program with locals on nonpoint TMDLs.	**ECY**	NEW		
ME 14: Start monitoring temperature TMDLs using forward looking infrared radiometry (FLIR) overflights.	**ECY**	NEW		
ME 15: Monitor the effectiveness of nonpoint source corrective action for the Dungeness River TMDL.	**ECY**	NEW		
Enforcement				
ME 16: Establish and implement collaborative processes to increase coordination of compliance and enforcement activities among the regulatory natural resource agencies with joint or primary jurisdictional authorities with joint or primary jurisdictional authority	**ECY, WDFW, DNR**,	Replaces Gen 26	Number of enforcement activities	Salmon Strategy, Enf-1
ME 17: Fully implement marine detachments within WDFW Enforcement to increase visible enforcement presence on marine waters	WDFW	Replaces Gen 27	Number of enforcement activities	Salmon Strategy, Enf-2
ME 18: Increase compliance and enforcement of the Hydraulic Code for habitat protection and increase compliance with fish passage and screening requirements	**WDFW,** ECY WSDA, CC	Replaces Gen 28	Number of enforcement activities	Salmon Strategy, Enf-3
ME 19: Increase compliance and enforcement activities for nonpoint pollution sources	**ECY,** WSDA, CC, PSAT	Replaces Gen 29	Number of enforcement activities	Salmon Strategy, Enf-4

ME 20: Evaluate new ways to improve compliance on DOT construction projects	ECY, WSDOT	Replaces Gen 30		