

Confluence

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New water supply, water quality programs aim to help salmon

Spurred by the threat of widespread listings for salmon, steelhead and trout under the Endangered Species Act, the Legislature passed several new laws that aim to restore salmon runs, address water shortages and clean up water pollution.

State agencies, local governments and others are now putting those measures into action. This issue of *Confluence* focuses on key statewide salmon and water protection efforts, and how you can get involved.

Watershed planning

How much water should be left in rivers and streams? How much is available for out-of-stream uses? The state's new watershed planning law (**HB 2514**) authorizes creation of local watershed plans that may answer these questions.

The plans could also include strategies for improving water quality and fish habitat. Gov. Locke said local watershed

planning "has the potential to resolve the long-standing stalemate over setting in-stream flow levels in Washington and to resolve other important issues dealing with water quality and fish habitat."

The law provided \$3.9 million for local planning grants and \$1.1 million for state agencies to provide technical assistance to communities. Ecology issued the first round of planning grants in June (*see story, page 3*).

Salmon recovery

House Bill 2496 provided \$3.5 million dollars in grants for salmon recovery projects, \$700,000 in grants for local governments to plan restoration activities and \$800,000 for technical assistance to volunteer groups. The bill establishes a local process for prioritizing and recommending the projects (*see story, page 5*). The bill also creates the Governor's

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The Methow River. Photo: Al Wald

Salmon and water programs *(continued from page 1)*

Salmon Recovery Office to coordinate state recovery plans, and an independent Science Panel to review those plans.

House Bill 2836 creates a pilot program to help five southwestern counties implement wild steelhead recovery. In March, the National Marine Fisheries Service listed the steelhead as a threatened species. The law establishes a "lower Columbia steelhead recovery management board" of local community and government leaders (*see sidebar story, page 5*).

New dairy waste program

Under **SB 6161**, Ecology must inspect all the state's 815 dairies within the next two years. Every farm must have an approved management plan by July 1, 2002. The plans will outline how waste is to be handled, collected and applied to the land during the growing season. Conservation districts will provide technical assistance and approve the plans. Farmers must implement the plans by December 31, 2003 (*see story, page 13*).

Streamlined permits

House Bill 2879 will make it easier for local volunteer groups to get permits for projects that enhance salmon and steelhead habitat.

The measure addresses concerns of local fishery enhancement groups frustrated by lengthy permit processes and fees. The law directed state agencies to create an expedited review process for projects that improve fish passage, stabilize streambanks with bioengineering techniques to prevent siltation and add woody debris for fish habitat. The application form for the streamlined process is posted on Ecology's web site at www.wa.gov/ecology/sea/pac/enhan.

Eligible habitat enhancement projects are presumed consistent with local shoreline master programs, and are exempt from State Environmental Policy Act review.

Local governments are prohibited from requiring permits or charging fees for eligible projects. For more information contact Ecology's Permit Assistance Center at (360) 407-7037.

The law also created a new grant program administered by the state Department of Transportation to help state agencies, local governments, private

landowners, and volunteer groups remove fish passage barriers. The first round of 50 grants totalling \$3.5 million was distributed in July. Projects include replacing culverts, adding fish ladders to irrigation dams, and conducting watershed-level inventories of barriers to salmon migration. Funds for additional grant cycles depend on future legislative appropriations.

For information on grants contact Transportation's Peter Downey at (360) 705-7492.

"Mitigation banking" rules

House Bill 2339 directs Ecology to adopt rules for the certification of wetland mitigation banks. Wetlands mitigation banking is when an agency or company creates, restores, enhances and/or preserves a wetland in one area in advance, and then uses this "new" or "improved" wetland as mitigation for *future* unavoidable impacts to other wetlands.

Organizations that may pursue mitigation banking include the state Department of Transportation, local public works departments, private companies that frequently create unavoidable impacts to wetlands (such as a utility or railroad), or entrepreneurs who believe they can make a profit from banking.

The new law defines key terms, outlines the issues to be addressed in the rules and directs Ecology to set up a process for certifying whether mitigation banks meet rule requirements. This statute requires that Ecology use a collaborative process to develop the rules. Ecology will

start developing the rule this summer and expects to adopt it mid-1999. To get on a mailing list for information, see page 19.

Legislature to study TMDLs

Many legislative committees continue their work between sessions. This summer and fall the House Agriculture and Ecology Committee is reviewing a 15-year schedule for Ecology to develop and implement water cleanup plans. The federal Clean Water Act requires these plans (known as total maximum daily loads or TMDLs) for polluted water bodies. The schedule is the outcome of a January lawsuit settlement agreement between Ecology, EPA and two environmental organizations (*see Confluence, Winter '98*).

Ecology attempted to get additional funds to implement the settlement agreement, but the Legislature did not approve Ecology's budget request. Environmental groups have taken initial steps to reopen the lawsuit settlement agreement, should the state not be able to implement it due to lack of funds.

Ecology Director Tom Fitzsimmons hopes the settlement does not go back to court. "We are counting on the settlement agreement as an integral part of our state's salmon recovery plan," said Fitzsimmons. "We hope the committee's evaluation can be completed quickly and will lead the legislature to lend its support next session."

For information contact Ecology's Dave Peeler at (360) 407-6461, dpee461@ecy.wa.gov.



A new law (HB 2879) exempts some fishery enhancement projects, such as adding woody debris to streams, from certain regulations and permit fees. Photo: Jeff Legg

Grant program starts new era in water supply planning

Twenty-two communities throughout Washington have been selected to share \$3.9 million to develop plans for meeting the water needs of people and fish now, and in the future (*see page 4 for list of communities*).

Ecology is issuing the grants in accordance with a new watershed-planning law (**ESHB 2514**) that establishes a framework for state, local and tribal governments to collaboratively create plans that address water needs, reduce water pollution and protect fish habitat in local watersheds.

Local decisions

Ecology Director Tom Fitzsimmons believes the state's new approach to watershed planning under HB 2514 gives important powers to local residents.

"The main tenet of the new approach is that watershed management needs to be locally based — directed by people who are affected by water use in their communities," said Fitzsimmons. "This is an opportunity for citizens of our watersheds to be architects of their own future and preserve our life quality."

Fitzsimmons believes there is no task more important to preserving that quality of life than taking care of our water. "Taking care means leaving enough water in streams for fish, making sure the water we do take out is used wisely, and preventing water pollution. Watershed planning gives local communities the power to do just that."

Planning approach defined

Watershed planning under HB 2514 is optional. But if local areas want state grant money, they must follow the decision-making framework described in the law.

Local governments may join together with state agencies, tribes and citizens to form "**planning units**" to develop watershed management plans.

The law establishes a three-step planning process, each with a separate grant.

"Phase One" is **organizing** the planning unit. Under "Phase Two," the planning unit would assess the watershed's **water supply**. A water supply assessment would include:

- Estimates of the surface and ground water present; how much is used, diverted

or withdrawn; and what is available seasonally;

- Accounting of the water right claims, permits, certificates, existing instream flow rules, and federal reserve rights;

- Evaluation of water needed for future uses;

- Identification of aquifers; and

- An appraisal of water available for future appropriation.

Under "Phase Three," planning units develop water strategies or recommendations for increasing water supplies. The purpose of the water strategies is to provide water for fish; future out-of-stream uses for agriculture; energy production; and population and economic growth.

Approval requires consensus

Planning units have up to **four years** to develop and approve proposed watershed plans.

Plans must be approved by **consensus** of all members of the planning unit; *or* a consensus of all of the government members of the planning unit and a majority vote of the non-government members.

Elected county officials in the watershed must conduct at least one public hearing, and then may approve the plan with a majority vote.

If county leaders approve the plan, then state and local governments *must* adopt appropriate rules and ordinances to ensure the plan is implemented.

The plan would also require state and

local governments to implement any other obligations (*issuing grants, permits, and other actions*) in the plan as soon as possible.

If county officials do not approve the plan, it goes back to the planning unit for revision. If the revised plan does not receive county approval, the planning process ends.

Open process encouraged

The law states that the watershed plan must involve "each of the governments to be obligated" by the plan. An "obligation" would be any action that imposes a fiscal cost, re-deployment of resources, or change of existing policy to a tribal, county, or state government.

The unit must also have a representation of a "wide range of water resource interests." The goal is to have everyone with a stake in the outcome at the table — state, local and tribal governments, businesses, environmental organizations, agricultural interests, and others.

Ecology Director Tom Fitzsimmons believes local efforts are likely to fail unless all affected parties are involved. "It is imperative that the planning processes be open and inclusive from the beginning," said Fitzsimmons. "If they are not, they risk having the plans derailed later by citizens or others whose views or interests were not included," he said.

For their part, citizens need to get involved, said Fitzsimmons. "To achieve

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The top priority for watershed planning is to ensure adequate water is left in streams for fish and for people. Photo: Al Wald

Watershed grants *(continued from page 3)*

success over the long term, we need citizens throughout the state to be engaged in these issues and to be willing to do their part — no matter how small — to make a difference,” said Fitzsimmons.

Local planning won't be easy

Fitzsimmons acknowledges that the work ahead will be very challenging. “Local planning units have a great deal of contentious negotiation ahead of them,”

said Fitzsimmons. “The planning law doesn't provide any answers - it simply sets up the framework to have the debate and requires a broad range of interest groups to participate.”

Fitzsimmons notes that pilot areas that have taken on watershed planning took many years to get agreement. “But the important lesson is that local processes are more likely to produce watershed plans

that the people who live there are satisfied with,” said Fitzsimmons. “Most of these plans will require that people change behavior, and that is a lot more palatable if it's your own decision rather than a directive.”

For more information

For more information on the grant program, contact Laura Lowe at (360) 407-7255, e-mail llow461@ecy.wa.gov

First two phases of watershed planning grants released

Ecology received applications for \$8.3 million in watershed grants - more than two times the \$3.9 million provided by the Legislature. Of the 30 applicants, 22 will receive organizing grants, with 10 of those also receiving a “phase two” grant to begin watershed assessments.

Ecology Director Tom Fitzsimmons expressed regret that eight of the applicants would not receive funding this year. The legislation set specific criteria for funding, and gave highest priority to areas where fish are threatened with extinction and where water shortages exist.

“A few communities do not meet all the criteria at this time, but we expect there will be additional opportunities in the future as our state continues grappling with these important issues,” he said. “Many changes are needed to restore salmon, and watershed plans are a crucial part of the answer.”

The communities receiving grants this year are summarized below. Inside the parentheses are the watershed name and Water Resource Inventory Area (WRIA) number (*see map*).

Northwest region

- Skagit Council of Governments (*Lower & Upper Skagit, WRIs 3&4*), \$453,956
- Whatcom Co. (*Nooksack, WRIA 1*), \$250,000
- King Co. (*Green-Duwamish, WRIA 9*), \$147,706
- City of Everett (*Snohomish, WRIA 7*), \$47,706
- Island Co. (*Island, WRIA 6*), \$47,706
- San Juan Co. (*San Juan, WRIA 2*), \$47,706

Central Region

- Tri-County Water Resource Council (*Lower & Upper Yakima & Naches, WRIs 37,38,39*) \$675,000
- Foster Creek Conservation District (*Moses Coulee, Foster Creek, WRIs 44 & 50*), \$72,706
- Chelan Co. Conservation District (*Entiat, WRIA 46*), \$147,706
- Okanogan Co. (*Methow, WRIA 48*), \$47,706

Southwest Region

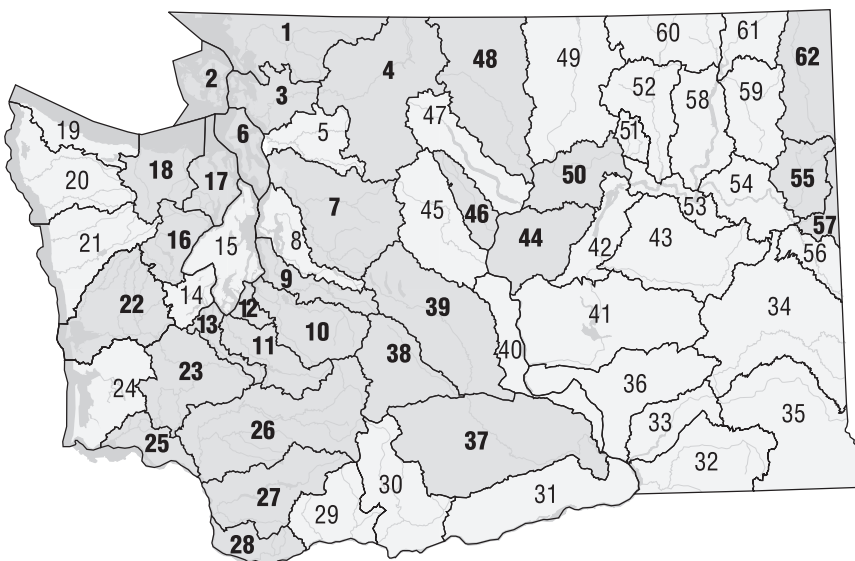
- Clallam Co. (*Elwha-Dungeness, WRIA 18*), \$200,000
- Jefferson Co. (*Quilcene-Snow, WRIA 17*) \$200,000
- Lewis Co. (*Lower/Upper Chehalis, WRIs 22 & 23*), \$453,956
- Lower Columbia River Management

Board (*Grays-Elokoman/Cowlitz, WRIs 25 & 26*), \$75,000

- Lower Columbia River Management Board (*Lewis/Salmon-Wahougal, WRIs 27 & 28*), \$72,706
- Mason Co. (*Skokomish-Dosewallips, WRIA 16*), \$47,706
- Nisqually Indian Tribe (*Nisqually, WRIA 11*), \$222,706
- Pierce Co. (*Puyallup-White, WRIA 10*), \$47,706
- Tacoma-Pierce Co. Health (*Chambers-Clover, WRIA 12*), \$47,706
- Thurston Co. (*Deschutes, WRIA 13*), \$47,706

Eastern Region

- Pend Oreille (*Pend Oreille, WRIA 62*), \$47,706
- Spokane Co. (*Little/Middle Spokane, WRIs 55 & 57*), \$460,206



The watersheds defined in HB 2514 are the state's 62 Water Resource Inventory Areas (WRIs). Areas with dark shading received grants for watershed planning.

New grant program to help communities restore salmon habitat

A new state grant program is helping pay for urgent local projects that improve habitat for salmon.

Under the 1998 Salmon Recovery Planning law (ESHB 2496), counties, cities and tribes may voluntarily join together to tackle restoration in a specific area, such as a watershed or group of watersheds.

Collaborating governments must designate a “lead entity,” which may be a consortium of citizens and government representatives, to develop a scheduled, prioritized list of restoration projects. The list will then be submitted as a proposal for grants to the **Interagency Review Team (IRT)** of the state Departments of Fish and Wildlife, Transportation and the Conservation Commission.

The salmon recovery law spells out specific steps lead entities must take in creating project lists. The first step is to work with a Technical Assistance Group (*see below*) to conduct a “**limiting factors analysis**” - an assessment of all the problems that are preventing salmon from returning to the area. Examples include culverts that fish can’t get through, or lack of shade causing high stream temperature.

The next step is to identify projects that will correct those problems, and determine the best sequence to make sure projects are constructed in a logical order. For example, you don’t want to replant trees near a culvert, only to replace the culvert next year and have to replant again. The law calls this sequencing process a “**critical pathways methodology.**”

The state Conservation Commission will be forming regional Technical Assistance Groups (TAGs) to conduct limiting factors analyses and help lead entities with project sequencing. For more information about TAGs, contact Ed Manary at (360) 407-6236.

Grant schedule

In July the Department of Fish and Wildlife issued 21 restoration grants totaling \$3.5 million directly to local project proponents. (*The agency received 72 applications requesting \$10 million.*)

Another \$700,000 in grants will help lead entities get organized and manage their committees.

Future funding for habitat grants and lead entities depends on 1999 legislative action.

For information call Nina Carter at the state Department of Fish and Wildlife, (360) 407-2252, cartenc@dfw.wa.gov.

Pilot program for Columbia

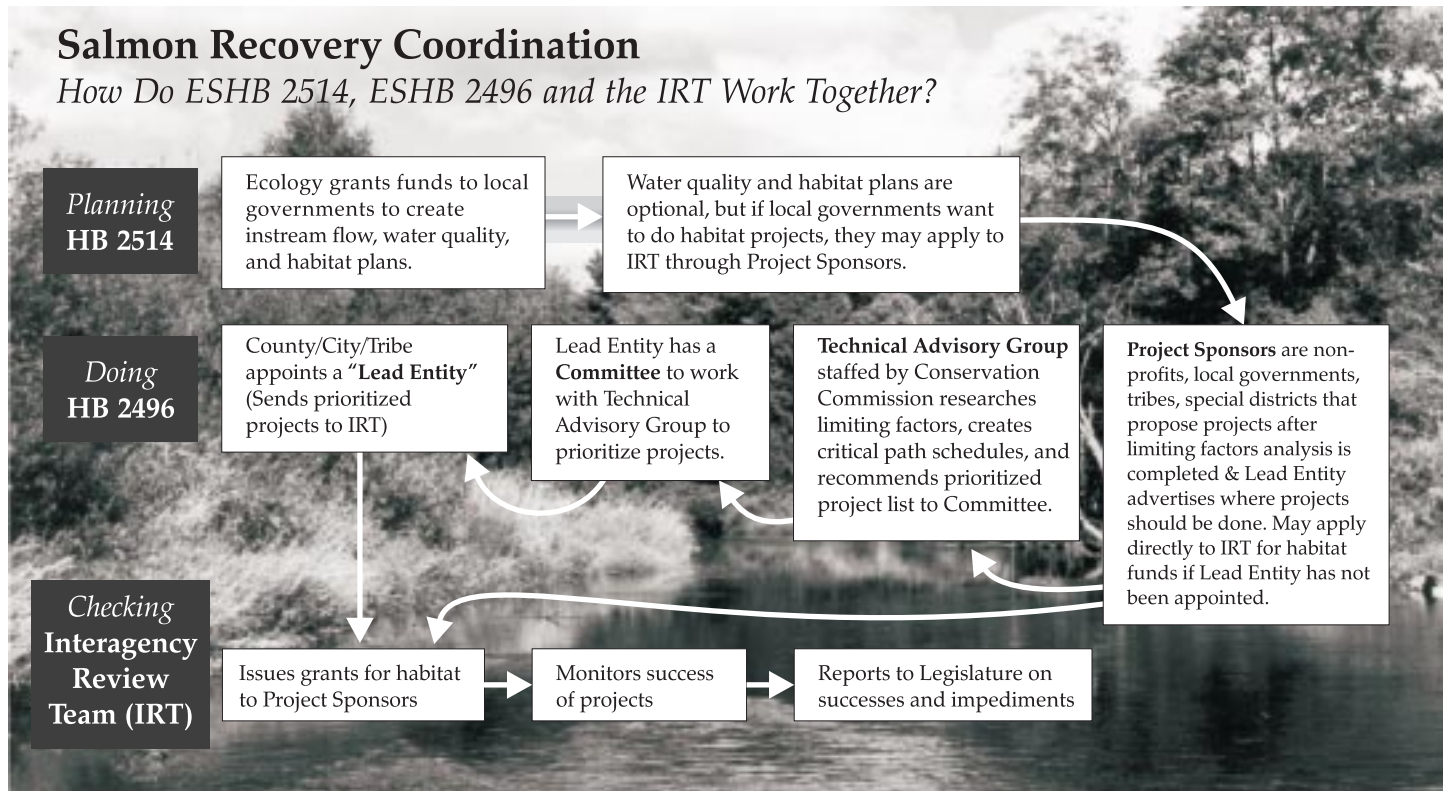
The Legislature created a pilot program in five southwestern counties to test a local management scheme for recovering fish populations. HB 2836 establishes a locally based committee similar to the “lead entities” that will be formed under HB 2496. The difference is the geographic area covered, and the members of the group, are more clearly defined in law.

The special program is a response to the March listing of Lower Columbia steelhead as a threatened species under the federal Endangered Species Act. The task of the “Lower Columbia Management Board” is to implement the habitat component of the state’s recovery plan for the area.

For more information visit the state’s ESA Web site at www.wa.gov/esa, or contact Linda Crerar of the State Salmon Recovery Office at (360) 902-1818.

Salmon Recovery Coordination

How Do ESHB 2514, ESHB 2496 and the IRT Work Together?



Flow chart showing how watershed planning under ESHB 2514 relates to salmon recovery efforts under ESHB 2496. Watershed “planning units” address longer-term problems of managing streamflows and preventing pollution, while “lead entities” will be setting priorities for urgent habitat restoration projects. The Interagency Review Team provide technical guidance and grants to local groups.

Study: regulations protecting marine shorelines fall short

Regulations protecting saltwater shoreline habitats are not doing the job, according to a report released by the Puget Sound Water Quality Action Team in May.

Commissioned by the Puget Sound/Georgia Basin Task Force (*see story, below*), the report focuses on regulations that apply to marine “nearshore” habitats, such as saltmarshes, eelgrass beds, rocky shores, and mudflats.

The report, *Puget Sound Nearshore Habitat Regulatory Perspective: A Review of Issues and Obstacles*, found that nearshore habitats are being harmed by:

- clearing of shade-giving shoreline vegetation,
- bulkheads causing scouring of the beaches,
- stormwater pollution, and
- disruption of sediment movement along the shore.

The loss of nearshore habitats threatens

populations of many species, including surf smelt, sand lance, rock sole, hardshell clams, and Dungeness crabs. Nearshore environments are also critical foraging areas and migratory pathways for ocean-bound juvenile salmon, particularly pink and chum.

It's the little things

According to report author Ginny Broadhurst, the numerous regulations designed to protect nearshore areas are mostly focused on larger industrial projects, while allowing, and even encouraging, a majority of the shoreline to be dramatically altered by residential development.

“In the past, large diking, dredging, and filling projects were causing the most harm to our shorelines,” said Broadhurst. “Today big projects still occur, but there are also a steady stream of bulkhead and

dock projects that add up to significant losses. Bit-by-bit, the habitat is disappearing, and once it's gone, it's usually gone forever.”

Broadhurst suggests that regulations should be updated to:

- provide greater setbacks for construction projects along the shoreline,
- preserve native shoreline vegetation,
- ensure proper siting and maintenance of septic systems,
- restrict new bulkheads to those needed to protect existing homes or businesses, and-
- prevent stormwater from harming the shoreline.

For more information

For more information, contact Ginny Broadhurst of the Puget Sound Water Quality Action Team at (360) 407-7322, e-mail gbroadhurst@psat.wa.gov.

Task force working to improve health of “shared waters”

Most Washington residents think of Puget Sound as “our water” and the Georgia Basin as “Canada’s water.” But science tells us these two waterbodies are part of one grand inland sea, and their fates are intimately tied. Many kinds of fish and wildlife, as well as toxic chemicals, readily cross the Washington/BC border in these “shared waters.”

The **Puget Sound/Georgia Basin Task Force** is a coalition of Washington State and British Columbia agencies and tribes working to improve environmental conditions in the inland sea.

The task force takes its lead from the work of a 1994 scientific panel that evaluated the state of the marine environment and proposed priority issues for action. The task force is served by several pairs of work groups addressing both sides of the border, each focusing on one of the highest priorities.

Status of WA workgroups

Habitat loss is the task force’s top priority because habitat destruction is irreversible, and is happening so rapidly. Washington’s **Nearshore Habitat Loss work group** sponsored a report evaluating the effectiveness of shoreline protection regulations (*see story, above*) and produced a report

outlining recommendations for reducing habitat loss. For information on the habitat loss workgroup contact Ecology’s Brian Lynn at (360) 407-6224, e-mail blyn461@ecy.wa.gov

The **Exotic Species work group** is working to reduce threats to Puget Sound from non-native plants and animals that displace native species or change habitats. The group is currently focusing on European green crabs, found for the first time in June of this year in Willapa Bay. The voracious predator can eat clams, oysters, Dungeness crabs and other species that have commercial and recreational importance.

The group’s strategy includes closing pathways through which species are introduced, and improving education, monitoring and invasion response plans.

For information on the exotic species workgroup call WDFW’s Scott Smith at (360) 902-2724.

The **Marine Protected Areas work group** recently prepared profiles of all existing state and federal “marine protected areas” where species are free from habitat disruption or harvest. The group is currently working on a proposal for a state process for designating new protected areas in Puget Sound.

A May 1997 report by the “**Protect Marine Life**” group identified fish,

invertebrates, birds and mammals suffering from declining populations in the shared waters. The state Fish and Wildlife Commission recently approved actions developed by the Department of Fish and Wildlife to carry out parts of the Task Force’s strategy for preserving bottomfish, including rockfish, sole, flounder and Pacific cod. For information on marine protected areas and “protect marine life” workgroups call WDF&W’s Mary Lou Mills at (360) 902-2834.

Other work groups are focusing on controlling toxic waste and improving research and monitoring.

For more information

For information about the overall Task Force contact the Puget Sound Water Quality Action Team’s Dan Clarkson at (360) 407-6453, e-mail dclarkson@psat.wa.gov.



Commission to help set new directions for local shoreline programs

Ecology is updating a rule that sets minimum guidelines for local governments to follow in managing streams, lakes and marine shorelines.

The 26-year-old guidelines¹ are the basis for 240 city and county **shoreline master programs** that regulate streams, lakes over 20 acres, and marine waterfronts. Ecology plans to adopt a new rule in December 1998.

Commission convened

Ecology has convened a **Shorelines Guidelines Commission** to help prepare the new rule. Commission members represent cities, counties, forestry, environmental groups, water-dependent business, port districts, shellfish and fishing industry, community organizations, tribes, and state agencies.

Salmon recovery strategy

At the commission's first meeting on July 7, Ecology director Tom Fitzsimmons said revised shoreline guidelines are a central element of the state's recovery strategy for fish listed as endangered species.

"The existing guidelines don't adequately protect habitat for wild salmon and other aquatic species that depend on shorelines," said Fitzsimmons. "Updating the rule that guides shoreline development is just as much a part of restoring salmon runs as getting water in streams and improving water quality."

Revitalized guidelines will help Washington demonstrate to the federal government that it has the ability to protect fish habitat statewide. Shoreline master programs are developed and implemented locally, but are all based on the same state guidelines with ongoing state oversight.

If the state doesn't develop adequate fish recovery plans, federal agencies or the courts could dictate how state and local governments must respond to endangered fish runs.

Integrating with GMA

Ecology hopes that, in addition to improving standards for protecting shoreline habitat, the new rule will be easier to apply at the local level.

Ecology was first authorized to revise the guidelines under a 1995 regulatory reform law (*ESHB 1724*) that established the Growth Management Act as the "integrating framework" for all land use planning. The law mandated that local shoreline programs be considered a part of local comprehensive plans and regulations. However, the law did not give explicit direction on how that was to be done.

According to Ecology shoreline policy lead Tom Mark, local governments will benefit from new guidance on integration. "Local governments trying to integrate their shoreline plans and regulations with other local plans and ordinances often find the existing master program guidelines aren't much help, and are sometimes a hindrance," said Mark.

Building on previous efforts

Ecology has worked to achieve consensus on a new rule with several different advisory groups over the past few years (*see Confluence, Spring/Summer 1997*).

Fitzsimmons told commission members he believes the group can build on the good will and hard work of previous efforts, and move fairly rapidly to meet the December deadline.

Fitzsimmons also said that while he believes the best agreements are reached collaboratively, Ecology doesn't have the luxury to wait any longer for a new rule.

"If the commission achieves consensus

on rule language, we will carry that forward," he said. "If not, we will be faced with taking elements of whatever consensus emerges and going forward. It is no longer an option to say we couldn't get it right this time."

Ecology to seek grant money

Under existing law, local governments must write new shoreline programs within two years of adoption of new state guidelines. This requirement has been one of the primary sticking points in previous discussions over the new guidelines.

"We realize that new guidelines means more work for local governments," said Mark. "We will provide as much technical help and money as we can to make their jobs easier." Ecology will support a proposal to the Legislature for an \$8 million dollar grant program for local planning efforts over a 5-year period beginning July 1999.

For more information

To get on a mailing list for the project, fill out the checklist on page 19, or if you prefer getting news on the Internet, visit Ecology's web site at www.wa.gov/ecology/ on the "Shorelands & Wetlands" page.

For more information, contact Ecology's Peter Skowlund at (360) 407-6522, e-mail psko461@ecy.wa.gov.



Revised shoreline guidelines will help the state set minimum standards for protecting habitat along stream corridors and saltwater shores. Photo: Al Wald

¹The current shoreline master program guidelines are codified in Chapter 173-16 of the Washington Administrative Code.

List of regulated streams ready for upgrade

Ecology is updating the list of streams and rivers regulated by the Shoreline Management Act. The act applies to rivers from the mouth upstream to a point where the “mean annual flow” is 20 cubic feet per second (*see sidebar*).

Locating these points accurately is essential to carrying out the provisions of the Act.

The rule will codify the results of a study conducted for Ecology by the United States Geological Survey (USGS) that determined shoreline boundaries for 1,600 streams in Western and Northeastern Washington.

(Ecology plans to repeal the existing Chapter 173-18 WAC and adopt the new streams and rivers list as Chapter 173-25 WAC.)

The study drops some areas from jurisdiction, but includes other stream reaches that were not classified before. A recent court decision said that until they

are adopted by rule, the new jurisdiction points in the study do not apply to shoreline regulations.

New points are more accurate

Because direct measurement of flow for all streams is impractical, USGS researchers used computerized models based on watershed area and rainfall/runoff relations, fine-tuned with stream gage records gathered over decades.

The last systematic streamflow study was done in 1971. The USGS study is more accurate than the original survey, according to Ecology hydrogeologist Al Wald. “The study benefits from two more decades of rainfall and streamflow data,” said Wald. “We’ve also included upstream boundaries for some streams that were skipped the first time around.”

Wald said most of these new stream reaches are at high elevations on federal forest lands.

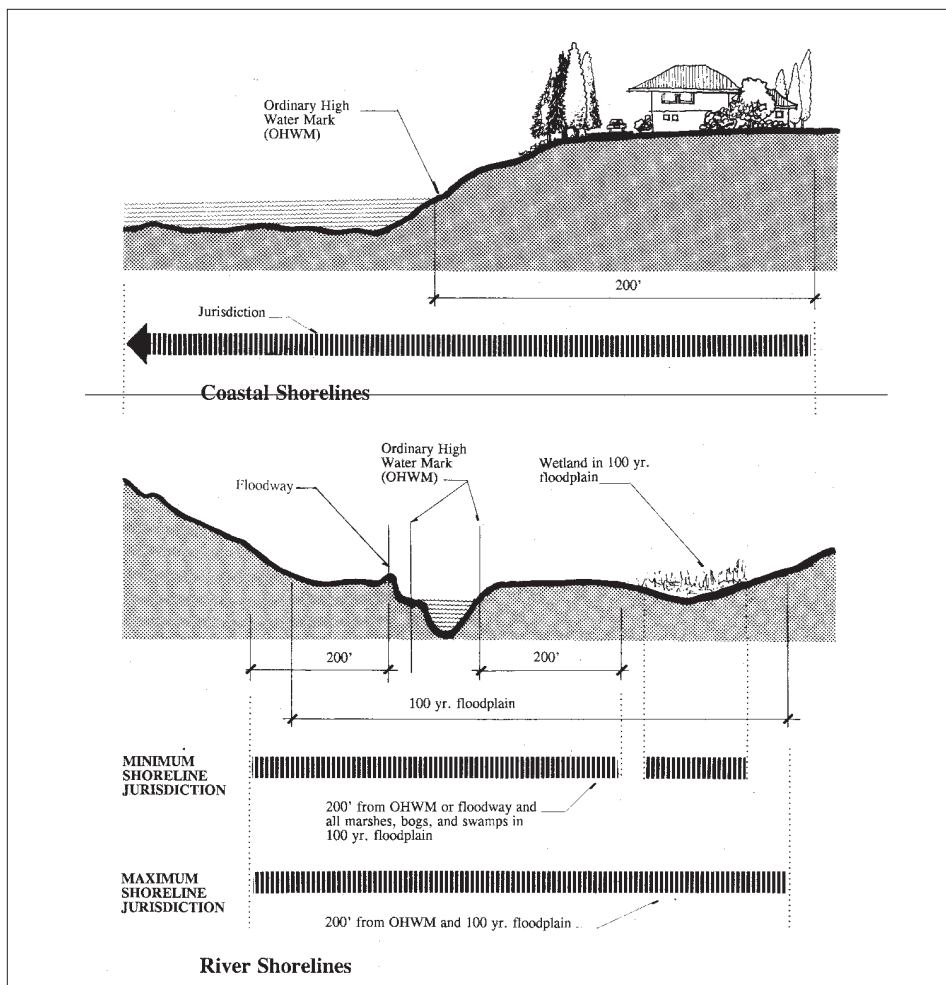
While some corrections are the result of a more complete study, some points changed because water has been diverted, or because land use patterns have altered a basin’s runoff characteristics.

For more information

Ecology already distributed new jurisdiction maps to county governments that were affected by the new stream points.

The data points will also be available in electronic format for integration into Geographic Information Systems after the new stream rule is adopted.

To receive more information about how you can participate and comment on this proposed rule adoption, public hearing schedule and SEPA documents, see page 19. For more information contact Don Bales at 360-407-6528 or doba461@ecy.wa.gov



“Mean annual flow” may not mean what you think

The Shoreline Management Act applies to streams “over 20 cubic feet per second mean annual flow.” Ecology hydrogeologist Al Wald says people are often confused over what that means. “The tricky part of the definition is what that measurement applies to,” said Wald. “The term *mean annual flow* is often confused with *annual mean flow*.”

Annual mean flow is the average daily flow over one year, while **mean annual flow** is the average (actually the arithmetic “mean”) of the annual mean flows over a period of many years.

According to Wald, you cannot determine the mean annual flow of a stream by looking at it on any particular day, or even by studying the flow record for any given year. “It’s not uncommon for stretches of stream with a mean annual flow of 20 cfs to have winter floods and high spring snowmelt but still go bone dry during summer,” said Wald. “The mean annual flow averages out years of unusually low flows with years of normal or above average flows.”

The Shoreline Management Act applies to approximately 20,650 miles of shorelines: 2,300 miles of lake shores, 16,000 miles of streams, and 2,420 marine shores.

Draft methods for assessing wetlands ready for review

New methods for assessing the functions of wetlands are ready for public review and field testing. Washington's **Wetland Function Assessment Project** will be working with volunteers this summer to help test the draft assessment methods in the field.

Why assess wetlands?

Project manager Teri Granger says it is helpful to think of *wetland functions* as the "services" wetlands provide. These functions include: reducing floods, providing fish and wildlife habitat, recharging groundwater, enhancing summer stream flows and filtering pollutants.

"Wetlands are regulated largely because they provide these 'public service' functions," said Granger. "When a developer proposes activities such as draining or filling that alter a wetland's level of functioning, regulations often require the developer to compensate for those losses."

Regulators use assessment reports to determine how much a proposed development will harm these functions, or to determine how well a proposed mitigation plan compensates for those losses. In other words, assessments provide the information needed to estimate gains and/or losses in functions.

Assessments are also used for non-regulatory efforts such as site restoration, and acquisition.

Why develop new methods?

There is currently no one method used consistently to determine the degree to which an individual wetland performs specific functions. Many methods don't provide the information regulators need for making decisions about how to compensate for losses. In addition, the techniques currently used are not tailored for Northwest wetlands, and some are very time-consuming relative to the information they provide.

The Wetlands Function Assessment Project is developing assessment methods that build on current approaches while correcting their weaknesses. The methods should provide better information on which to base wetlands decisions. If they are used consistently by jurisdictions in Washington State, they should reduce

permitting time and costs.

The project is guided by a technical committee of experts from the private and public sectors. The project also relies on generous help from volunteers to review drafts and collect data. Ecology is coordinating the project with funds from the Environmental Protection Agency.

Methods specific to regions

Ecology is basing the new methods on the national "Hydrogeomorphic" (HGM) approach. Wetlands within specific "classes" and "subclasses" are expected to perform functions in similar ways, so assessment methods are written for each type.

The HGM approach also recognizes that different methods are needed for specific regions. Ecology's first draft methods are designed to be used for "riverine" and "depressional" class wetlands in the lowlands of western Washington.

Test critical to success

According to Granger, this summer's test is an important reality check. "We have designed the methods to be relatively rapid and scientifically acceptable for a variety of applications. But only a field test will tell us how well they meet all our objectives," said Granger.

Volunteer testers will fill in a detailed questionnaire that will help determine whether or not the methods are technically acceptable, easy to apply, and cost-effective.

Some testers will be trained. Each will apply the methods at an assigned control wetland. The control test will determine if the results are reproducible.

Some *untrained* testers will also visit a selected control site assessed by the trained testers. This will help determine to what extent training is necessary for consistent application of the methods.

"Office" review welcome

Granger encourages those who don't have a technical background or who can't test the methods in the field to review the draft document. "We hope decision-makers and the regulated community will read the introductory sections that explain the methods and how the results can be used," said Granger.

Granger warns that the document is not light reading. "The models are very technical," she said. "It is a lot to ask people to review and test, but we believe the final result will be worth the investment."

For more information

For more information, contact project manager Teri Granger at (360) 407-6547, e-mail tgra461@ecy.wa.gov or visit the project web site at www.wa.gov/ecology/wfap/wfaphome.html.



Volunteers are testing draft wetland assessment methods this summer. Photo: Jane Rubey

Washington's eroding coast: What's happening and why?

When you think about Washington's coast, what comes to mind? A vast stretch of sand that meets crashing waves? A secluded get-away? Gulls flying over a rocky beach teeming with shellfish? A view of the seascape from your home or condominium? Boulder jetties and rock walls armoring the beach against crushing, eroding waves?

Opinions are diverse about how Washington's shorelines should look and how they should be managed. But one thing is clear — Washington residents care about their shorelines. A 1971 citizens' initiative created the state Shoreline Management Act that provides guidelines about how our state's shorelines should be managed. A recent public opinion survey found that across the state, residents are almost unanimous in their support for the Act's goals (*see Confluence, Fall 1996*). Those goals include reserving shorelines for uses that depend on a waterfront location, protecting the natural ecology, and promoting public access.

Erosion challenges state, local decisionmakers

Today much of our state's outer coast — designated as a "shoreline of statewide significance" under the Shoreline Act — is under close scrutiny as increasing erosion continues to affect structures and threaten public and private property.

Washington's coast has historically been one of the only stretches of beach on the west coast to enjoy accretion, or building out of the beach. Because of this, the state Shoreline Management Act dealt primarily with problems associated with accretion.

There is no comprehensive policy established to handle erosion at the magnitude currently being experienced.

So the question remains how coastal communities and the state should cope with the current erosion situation as we strive to balance environmental protection, public access and property rights.

Local, state and federal governments are challenged to solve immediate problems while realizing the need to develop a long-term strategy to protect the environment as well as economic livelihoods of coastal residents and communities. "We are at a crossroads right now, because today's decisions will affect the future

character of Washington's beaches," said Sue Mauermann, Ecology southwest region manager. "Do we want to armor our beaches like New Jersey, do we want to leave them alone and let nature take its course, or do we want to do something in-between?"

State Parks and Recreation Commission Director Cleve Pinnix said these questions are matters of statewide importance because the beaches belong to everyone. "The coastal communities are most acutely aware of this crisis but every Washington citizen has a stake in how the beaches are managed," said Pinnix.

Pinnix noted that three of the five most-visited state parks are on the ocean. The Parks and Recreation Commission logs an average of 8.7 million visits to Washington's ocean beaches every year.

Local governments and state agencies are cooperating in a number of arenas, including:

- developing an Environmental Impact Statement addressing erosion at Ocean Shores;
- exchanging information on the coastal erosion study (*see below*); and
- participating in a task force to develop a long-term coastal erosion strategy. Gov. Locke has asked the Department of Community Trade and Economic Development (CTED) to lead this effort. For information call CTED's Patrick Babineau at (360) 586-1239.

Why is erosion happening?

One hypothesis for the current situation links a reduction in sediment from the Columbia River to the erosion being experienced along the coast.

The historical peak floods on the river that flush out sand from the river no longer occur due to the extensive water management system of reservoirs, hydropower projects, and irrigation throughout the Columbia River basin. Sand may also be trapped behind the river's many dams.

Man-made jetties have trapped sand moving along the shore during the early part of the century when sediment supply was abundant, but the jetties, along with dredging, have also deepened the harbor entrance areas, moving sediment farther offshore where it can no longer return to the beaches.

Other contributing factors to the large-scale erosion on the coast include natural influences such as El Niño weather patterns of the past year. Long-term cycles of erosion and accretion along the coast have occurred in response to large earthquakes, subsidence and tsunami events.

Erosion hot spots

Washington's first modern coastal erosion challenge surfaced in December 1993 when a breach occurred near the Grays Harbor south jetty at Westport. The breach dug a trench that carved through



Erosion is threatening this Ocean Shores condominium. The owners built a temporary rock wall to protect the property.

Westhaven State Park and seriously jeopardized Westport's water-treatment plant, aquifer and water wells.

"Initially, it was difficult for federal, state and local agencies to agree on how to respond to this erosion crisis," said George Kaminsky, Ecology's coordinator for the Southwest Washington Coastal Erosion Study. "We worked very closely with the City of Westport and the Corps of Engineers, and it became obvious that we lacked basic data on coastal processes that were needed to implement both a temporary solution and a long-term plan."

In 1994 Ecology began an inventory of coastal erosion in southwest Washington and found chronic erosion at nearly all the headland points (*see graphic*). By 1995, the long-term erosion problem at Cape Shoalwater was beginning to undermine State Highway 105 and threatening cranberry bogs, adding to a renewed interest in addressing this coastal erosion problem. By 1996, severe erosion near the Grays Harbor north jetty in Ocean Shores caught nearly everyone by surprise, since this area had been accreting for so long.

Erosion study

As a result of the escalating erosion and the sobering realization that even temporary measures to mitigate erosion would cost many millions of dollars, Ecology and a coalition of coastal communities worked together to solicit funds and expertise from the US Geological Survey to help investigate the region's coastal processes.

The result was the **Southwest Washington Coastal Erosion Study**, a five-year project jointly funded and conducted by Ecology and the US Geological Survey. The focus of the study is the Columbia River littoral cell, a 100-mile coastal system stretching from Tillamook Head, OR to Point Grenville, WA.

Preliminary findings of the study suggest that the erosion hot spots are resulting from long-term regional erosional trends, revealed through bathymetric surveys of nearshore seafloor.

The seafloor continues to erode from a lack of sand offshore along Westport and Grayland, which will eventually result in greater shoreline erosion. Seismic and side-scan sonar surveys have shown that much less Columbia River sand has accumulated north of Grays Harbor, and

the Grays Harbor jetties continue to reduce the movement of sand between the adjacent coasts.

"It appears that the rapid beach accretion enjoyed for so long by coastal communities has largely ended, and long-term trends will be governed by the amount of sediment in the system," said Kaminsky. "We're building our baseline data to develop predictive capabilities so we can better anticipate and plan for future erosion problems."

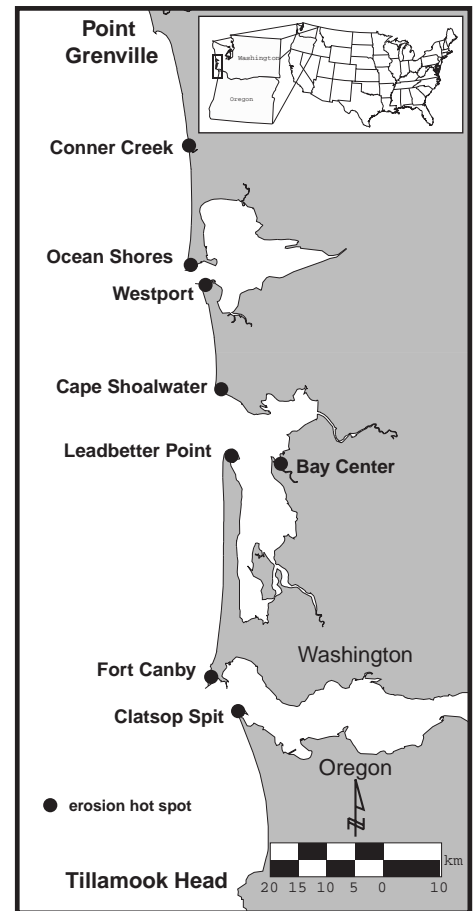
Some of the study's initial products include historical shoreline change maps, aerial photo mosaics, a network of 77 survey monuments, beach and nearshore surveys, and informational reports.

This fall, project scientists will release a "State of the Beaches" report summarizing the seasonal fluctuations in beach form. This annual report will become a valuable source of information for planners and residents as additional field data are collected.

In July, coastal communities received state grants to enhance public awareness, and to support local participation in the study.

For more information

For more information about the erosion study, visit Ecology's web site at www.wa.gov/ecology/ under "Shorelands & Wetlands," or contact Ecology's Brian Voigt at (360) 407-6568, e-mail bvoi461@ecy.wa.gov



Preliminary findings of the Southwest Washington Coastal Erosion Study suggest that areas of rapid erosion (bold circles) result from long-term regional erosional trends. The study focuses on the 100-mile coastal system from Tillamook Head to Point Grenville.



An amphibious vehicle rigged with Global Positioning System equipment maps the beach at Point Grenville as part of the Southwest Washington Coastal Erosion Study.

636 polluted lakes and streams in Washington

Ecology's biennial list of "impaired and threatened" waterways identifies 636 lakes, streams and estuaries in Washington as not meeting water-quality standards.

As required by the federal Clean Water Act, Ecology submitted the list to the U.S. Environmental Protection Agency (EPA) for approval.

Under Section 303(d) of the Clean Water Act, every two years, Ecology is required to prepare a list of estuaries, lakes, and streams that fall short of state **surface water quality standards**, and are not expected to improve within the next two years. These standards are the criteria to ensure our waters can be used for purposes we all enjoy, from fishing, swimming, boating, and drinking to industrial and agricultural purposes, and fish habitat. (*The standards are found in Chapter 173-201A WAC*)

List basis for TMDLs

When Ecology places a water segment on the Section 303(d) list, the federal Clean Water Act requires the agency to establish a Total Maximum Daily Load (TMDL).

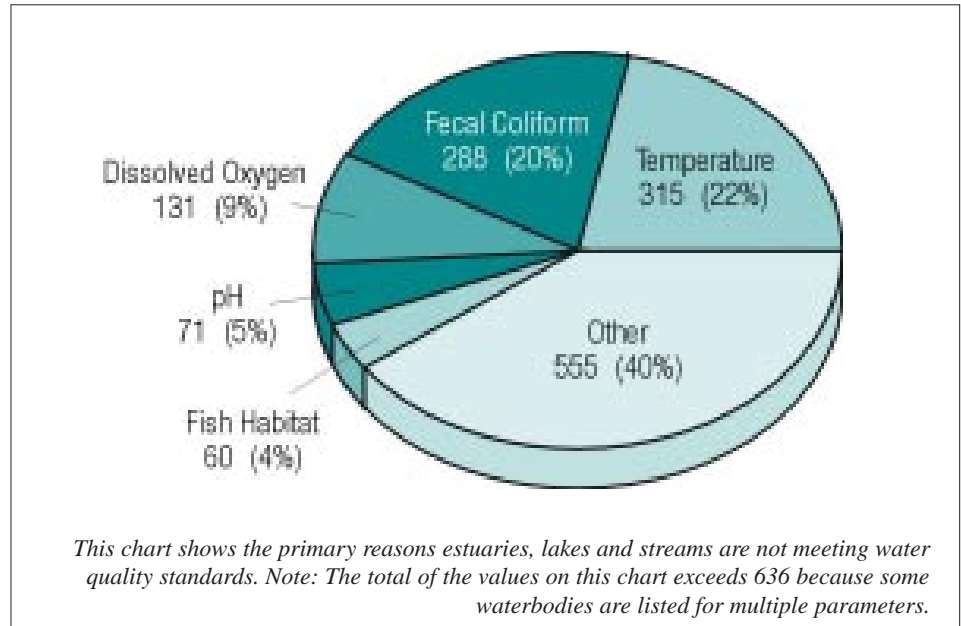
A TMDL, or water cleanup plan, entails an analysis of how much pollution a lake, river or marine water can take and still remain healthy for its intended uses (such as recreation, industrial activities or supporting aquatic life). The plan also includes recommendations for controlling pollution and a monitoring plan to test the plan's effectiveness.

Temperature and bacteria

The list indicates that the primary water quality problems are temperature and fecal coliform bacteria. Both problems are generally associated with "nonpoint-source" pollution, which comes from many, diffuse sources.

By far, temperature is the most prominent water quality problem for the water bodies, with 315 waters listed due to temperature problems. Elevated water temperature frequently occurs in areas where loggers or developers have removed trees for timber harvesting or land development, taking away shade that is necessary to keep the water temperature low and healthy for fish.

Excessive amounts of fecal coliform bacteria were found in 288 of the waters on the list. The bacteria indicate the



presence of sewage or animal waste, which enter streams when septic systems fail or when animal wastes are improperly managed.

In 1996, Ecology listed 611 water bodies as not meeting standards. It is difficult to compare the total number of water bodies on the 1996 and 1998 lists, because of a new method for identifying water segments. Approximately two-thirds of the water bodies on the two lists are the same and one-third of the waterbodies have changed. The primary reasons waters are no longer on the list are either action is being taken to improve the health of some segments or new information shows those waters are now meeting water quality standards.

Ecology received much of the new information from local governments, state agencies, Indian tribes, more than 60 industries, and others during a public comment period. Water quality data provided to Ecology must meet strict requirements. Data collection must follow a documented Quality Assurance/Quality Control plan, and samples must be analyzed at a state- accredited lab.

For more information

For on-line information, visit Ecology's web site at www.wa.gov/ecology/wq/303d/index.html

For more information, contact Ecology's Steve Saunders at (360) 407-6481, e-mail ssau61@ecy.wa.gov.



Ecology's Paul Pickett takes water quality measurements from a tributary of the lower Skagit River as part of a "Total Maximum Daily Load" study. Photo: Kevin Fitzpatrick

New program tackles dairy waste

Washington's new dairy waste law (SSB 6161) is aimed at keeping cow manure out of streams and groundwater. According to Ecology Water Quality Program Manager Megan White, the new program is a vast improvement over the state's previous approach to dairy pollution.

"Ecology could only conduct inspections in response to complaints or in response to verifiable proof that a dairy farm was the likely source of water pollution," said White. "We were restricted to inspecting only a fraction of the farms in our state."

Under the new law, all 815 dairy farms licensed to produce and sell milk in Washington must register with Ecology by September 1998. Beginning in October, Ecology will start inspecting every dairy farm. Under the law, Ecology must complete all of the inspections by October 2000. Inspections will continue, as needed, to ensure compliance with state and federal water quality requirements.

Ecology inspectors will look for water quality violations, identify steps to correct water pollution problems, monitor the development of the waste management plans, and identify farms in need of technical assistance.

The Legislature appropriated \$400,000 for Ecology to add four dairy inspectors, bringing the ratio of inspectors to dairies up from 1: 230 to 1:125.

According to White, Ecology estimated it would take \$630,000 and 5.5 new dairy waste inspectors to fully implement the new program. "We are still concerned that more resources might be needed to manage what amounts to small to medium sized communities without adequate sewage or septic systems," said White.

Dairy waste plans required

The new law requires the state Conservation Commission to develop guidelines for the waste management plans and establish up to four technical assistance teams to assist dairy producers by November 1998.

All farms must have a dairy waste management plan approved by their local conservation district by July 1, 2002. All farms must implement the plans by December 31, 2003.

A typical dairy waste management plan would include an engineered storage pond to contain manure and contaminated runoff

during the winter. The plan also will contain a seasonal schedule for applying manure and contaminated runoff to fields or crops during the growing season. The goal is for wastes to be used as a beneficial fertilizer for the crops and not discharged to surface water or groundwater.

If a farm does not develop a dairy waste management plan within the next four years, or implement it within the next five years, Ecology may issue penalties of up to \$100 per month, to a maximum of \$5,000.

Money collected from penalties will go to the Conservation Commission to provide grants to help develop farm plans.

Clean Water Act not affected

The revised state dairy waste management law does not preclude Ecology from issuing federal Clean Water Act "NPDES" waste discharge permits, nor does it preclude the agency from issuing penalties for water quality violations. Penalties may

be issued for up to \$10,000 per day, per violation.

Encouraging stewardship

White acknowledges that compliance with the new requirements may place an economic burden on farmers. "We will work toward solutions to keep dairy farmers who protect the environment in business," said White. "We are convinced we can preserve our economy and our streams."

"Farmers have a tradition of conserving the land's ability to support individual farms. We hope to encourage farmers and ranchers to take steps toward stewardship of entire watersheds."

For more information

For information about the new dairy waste program, contact Ecology's Phil Kaulzloric at (360) 407-6413, email pkau461@ecy.wa.gov.

Dairy waste a leading cause of stream pollution

Pollution from dairy waste is a very real problem in Washington.

Every day a mature dairy cow produces as much bodily waste as 20 people. A moderate-sized dairy farm of 300 animals produces waste equal to a town of 6,000 people each day.

Ecology estimates that less than one-fifth of all dairies in the state fully manage manure and contaminated runoff to protect surface and ground

water.

In Washington's streams that have pollution problems, nearly 60 percent of the pollution comes from agricultural practices, such as improperly managed dairy wastes. Pollution from dairy farms has been documented on a widespread basis.

Bacterial pollution associated with these discharges is also a cause of commercial shellfish harvest closures.



Ecology to reissue permits for gravel industry, fresh fruit packers

Ecology is preparing to reissue two water quality “general permits” – one for sand and gravel facilities, and another for the fresh fruit packing industry.

General permits are used to regulate businesses within an industry that have similar types of discharges. The permits are more efficient to write than individual, site-specific permits, and can improve treatment standards across an entire industry. Ecology manages six general permits that cover 3,000 businesses.

Ecology manages general permits like individual permits - through technical assistance, compliance inspections, and enforcement, with review and reissuance every five years.

Sand and gravel facilities

Ecology is getting ready to revise a general permit for rock quarries, gravel pits and processing plants for concrete and asphalt. The permit describes effluent limits and “best management practices” for process water, stormwater and mine-dewatering discharges.

According to Ecology’s Keith Johnson, the environment is cleaner as a result of the existing permit. “There used to be only a few individual wastewater discharge permits - now there are more than 800 permitted facilities,” said Johnson. “This has reduced the amount of sediment moving into streams and lakes, and helped conserve water and materials.”

Johnson said businesses have worked hard to comply with permit conditions. “The industry has come up with ingenious solutions to keep pollution out of streams,” said Johnson. “Several large firms have each invested in excess of a million dollars in control systems, while smaller companies are creatively putting spare parts and materials to new uses.”

All parts of the current permit will be subject to review, with a special focus on making it easier to understand.

For more information, call Keith Johnson at (360) 407-6442, kjoh461@ecy.wa.gov, or visit Ecology’s Sand and Gravel web site at www.wa.gov/ecology in the “Water Quality” section. See page 15 to get on a mailing list.

Fresh fruit packing

Ecology is also working with an advisory group to revise a general permit that applies to the fresh fruit packing industry.

The permit applies to 240 businesses that pack fruits such as apples, pears, cherries, and apricots. Most of the businesses are located in the state’s Central region.

The permit includes effluent limits and best management practices for six different “treatment disposal methods.” The permit includes limits for a broad range of methods because businesses covered by the permit range from small “mom-and-pop” operations to large factories.

According to Ecology’s Steve Huber, the agency has had good cooperation with

the industry. “Compliance with conditions of the general permit has improved over the past three years,” he said.

Ecology does not expect the permit revisions to include major new changes. “We’re focusing on making the permit easier to use, and correcting technical inconsistencies,” said Huber. Ecology will release the draft permit this fall.

For more information, call Steve Huber at Ecology’s Central Regional Office at (509) 454-7298, shub461@ecy.wa.gov.



Ecology is preparing to reissue a water quality permit that sets treatment standards for more than 800 rock quarries, gravel pits and batch plants around the state. Photo: Keith Johnson

Ecology flooded with comments on boat cleaning advisory

Ecology’s general permit for boatyards has been getting a lot of attention lately.

The permit, which applies to 130 public and private yards serving vessels 65 feet or less in length, is designed to prevent toxic pollutants such as metals, grease and oil from going into lakes, rivers and marine waters.

In response to an initial public comment period, Ecology had decided not to extend permit coverage to the 100 or so commercial divers who clean boats in the water. Ecology’s decision was based on concern about high levels of toxic copper and other metals that get scraped off hulls.

In-water hull cleaning is a commercial practice that results in the discharge of pollutants to state waters and under existing federal and state law, requires a discharge permit.

The dilemma for Ecology is that, based on known characteristics of the discharge from boat hull cleaning, it does not appear possible to issue a discharge permit for in-water hull cleaning that would be protective of state waters and comply with the law. Without a permit option, commercial divers face a legal Catch-22.

Ecology issued a draft environmental advisory in March 1998 announcing a proposed ban on in-water hull cleaning.

Over the next few months, Ecology logged 383 responses from divers, boat owners, boatyards and concerned citizens. Ecology will take final action after a full analysis of all the factors and available information.

For information contact Ecology’s Paul Stasch at (360) 407-6446.

Ecology considers new approaches for water quality projects

Ecology is considering whether to change how it disperses water quality grants and loans. The three funding sources involved are the Centennial Clean Water Fund, State Revolving Fund, and Section 319 of the federal Clean Water Act.

Currently, Ecology funds recipients based upon the highest water quality needs statewide. Ecology is meeting with an advisory committee through December 1998 to explore other methods for distributing grants and loans. The committee is made up of representatives of local governments, Indian tribes, conservation districts, water and sewer districts, environmental groups, and state and federal agencies.

If the group recommends a new approach, Ecology would develop a rule that outlines the new system. Statutory changes may also be needed, based on the final recommendations of the committee.

The fund pool under discussion is the total amount of grant and loan money remaining after statutory obligations are met. (*The Legislature allocates some Clean Water funds for specific projects through statute.*)

Three alternatives proposed

Under one proposal, Ecology would convert to a watershed “block-funding” method. The method would use a combination of population and geographic area for awarding grants and loans. The proposal is based on two-third population and one-third geographic area, determined by watershed. Local watershed entities, such as local “planning units” (*story, page 3*), would solicit proposals and determine local priorities for funding. Additionally, about one-third of the available funds would be reserved for distribution on a competitive basis.

Another proposal is for a new quasi-independent board (similar to the state’s Public Works Trust Fund Board) to make decisions about which projects to fund.

A third idea is to create regional pools of money. A specific portion of the total available funds would be distributed through Ecology’s four regional offices.

For information

For more information contact Ecology’s Dan Wrye at (360) 407-6459, or e-mail dwry461@ecy.wa.gov.

Ecology considers new rules for SRF loans

Ecology is proposing changes to the rule (*Chapter 173-98 WAC*) that governs low-interest loans of the state water pollution control revolving fund, known as SRF.

Most of the changes are aimed at making the SRF loan program consistent with current Centennial Clean Water Act grant and loan programs. Another major driver for the changes is the need to ensure the perpetuity of the fund.

The proposed rule is not connected to discussions about restructuring the way Ecology distributes grants and local decisions (*see story, left*).

A public hearing on the changes will be held this fall at Ecology headquarters. For information contact Ecology’s Brian Howard at (360) 407-6510, e-mail brho461@ecy.wa.gov.

“Imported” pollution from Idaho potential subject of mediation

A retired judge from Colorado may mediate the solution to the metals contamination problem in the Spokane River. It’s an especially knotty problem, as the pollution is imported from Idaho and is the result of many years of mining in the Silver Valley (*see Confluence, Fall 97*).

The Coeur d’Alene Tribe has sued the mining companies. The state of Idaho also has sued and some cleanup work is ongoing with the money from a settlement.

The U.S. Environmental Protection Agency is conducting a “Remedial Investigation/Feasibility Study” to determine the extent of the contamination—and that includes how far into Washington the metals have traveled. This should answer the questions, “should the Bunker Hill Superfund site grow to include everywhere the metals have come to rest?” and, “is the Spokane River part of that Superfund site?”

No physical work is being done on the Washington side of the border. Yet, the

Spokane River does not meet water quality standards for zinc and lead—metals that come from the historic mining practices. For the time being, the work being done here is political and legal.

“We need to make sure Washington’s interests are represented and that our water quality concerns are adequately addressed as this issue is discussed,” said Tony Grover, Ecology’s eastern regional office director. “Our voice needs to be loud and persistent.”

To that end, Grover and Owen Clarke of the Attorney General’s Office in Spokane have aggressively inserted Washington into the ongoing discussions about the problem.

Those talks may lead to mediation by retired Judge Richard Dana, if, after a series of interviews, he feels the issue can be successfully mediated. Dana has toured the region and heard from all sides. He is currently interviewing individuals to find out if mediation is appropriate for these

issues and if so, who should sit at the table, and which issues should be brought to the table.

Dana is expected to make a recommendation in August.

What does Washington want from this mediation, if it occurs? Grover has come up with what he calls Washington’s “vision.” It includes the expectation that the entire Spokane River meets water quality standards; that the source of the pollution is fully controlled; and that EPA’s Remedial Investigation extends all the way down to the Spokane arm of Lake Roosevelt.

Washington’s vision also includes studies that will identify appropriate compensation for damages to natural resources, a speedy mediation process and an enforceable agreement.

For more information, contact Ecology’s Jani Gilbert at (509) 456-4464, e-mail jagi461@ecy.wa.gov

- Jani Gilbert

Court affirms Ecology's approach to quantifying water rights

The State Supreme Court's July decision in *Department of Ecology v. George Theodoratus* settled a long-standing debate about how Ecology issues water right certificates for public water systems.

Pumps and pipes

Prior to the early 1990s, Ecology issued certificates to water suppliers that gave rights to water based on the capacity of the water conveyance system (diversion works and main supply lines), rather than the amount of water actually used. This method of "quantifying" a water right based upon system capacity, rather than the amount of water used, is known as "pumps and pipes."

By the early 1990s, the demand for water began to far outpace the supply. Ecology stopped issuing certificates for municipalities and other developments that had not completed putting water to use under their permits.

According to Ecology water resources program manager Keith Phillips, Ecology had been issuing water rights for water that may never be put to use. The trouble with this approach is it is inconsistent with the state water code, which has a primary premise of "use it or lose it." Water must be put to a *beneficial use* before a water right becomes a fixed, or "vested," right.

"We were tying up water for other water right permit applicants, and treating water suppliers differently than other water users," said Phillips.

George Theodoratus was one of the first developers affected by Ecology's new interpretation of water law. He sued Ecology, asserting that "pumps and pipes"

was the appropriate interpretation (*see case history, below*).

Beneficial use

The Supreme Court's ruling supports the view that water must be put to beneficial use before a vested right is created.

"The court said that water law does not allow for a final certificate of water right to be issued based upon the capacity of pumps and pipes," said Phillips.

Phillips said hundreds of certificates have been issued using the pumps and pipes concept. "Some have likely put all authorized water to use and others have not," he said. "The court's ruling creates considerable doubt as to the status of these certificates, particularly any quantities of water that have not been put to use."

Phillips said staff limitations prevent Ecology from taking action regarding permits or certificates issued subject to the pumps and pipes standards except as they come to the agency's immediate attention.

"For example, if Ecology receives an application for a change or extension to a permit, we will condition the permit to state that a final certificate will be based on the quantity of water put to use," said Phillips.

Phillips said Ecology will not take any actions to recover water that is being used in communities today provided that use is consistent with the original intent of the application and with the applicable permit or certificate.

For more information, visit Ecology's web site at www.wa.gov/ecology/ under the "Water Resources" section.

Group meeting on municipal water rights, instream flow issues

Ecology has established a group of interested parties to resolve water rights issues related to municipal water supply.

The **municipal water and instream flows work group** includes representatives of utilities, local governments, businesses, agriculture, the conservation community, public interest groups, fisheries, state agencies, and tribes.

One of the group's priorities is determining how municipalities can gain certainty regarding what water is available for future supply development. The key issue in providing certainty involves "inchoate" rights - those rights that have not yet been completed.

The "Theodoratus" ruling (*see story, left*) will influence this discussion, because Ecology and the Attorney General's Office believes the decision's analysis of "beneficial use" (i.e., there is no water right established for water that has not been put to use) also applies to inchoate rights held by municipalities.

Other topics the group may address include:

- How water allocation decisions will address the needs of fish,
- Incentives for efficient use of water, and
- How best to protect existing authorized uses of water, both for instream and off-stream purposes.

The group's goal is to put together a package of recommendations for consideration by the 1999 Legislature.

For more information about the municipal water group, visit Ecology's web site at www.wa.gov/ecology/wr/plan/munihome.html, or contact Steve Hirschey at (206) 649-7066, e-mail shir461@ecy.wa.gov.

Case history: Ecology v. George Theodoratus

Ecology first issued a water right permit to George Theodoratus in 1973 for a Skagit County property where he planned to build 253 homes.

The development grew very slowly; nevertheless, Ecology granted him several permit extensions over the years.

In 1992, after a long period of inactivity, Ecology conditioned his request for another permit extension, deciding that the water-right certificate would be issued for the water that was *actually being used* - not for water he *planned* to use. The conditions meant he

would receive less than half the amount of water that he planned under his water-right permit.

Theodoratus appealed the decision to the Pollution Control Hearings Board, seeking to retain his right to water for the remaining undeveloped property.

The case eventually reached the State Supreme Court, which ruled that Ecology had authority to condition the permit, and that Ecology's interpretation of the "beneficial use" provision of water rights law was correct.

Ecology committee to discuss groundwater withdrawal effects

Ecology has convened an advisory committee to determine appropriate technical methods for assessing and quantifying the effects of groundwater withdrawals on surface water sources, such as streams, rivers, and lakes.

Wells can capture surface water

As surface waters are subject to more intense competition for water, those seeking new water rights are turning to wells for their water supply. When wells pump groundwater, they sometimes “capture” water that was headed for surface water. This becomes a problem when new wells capture water that is already legally allocated, because under Washington’s water code, senior water rights are protected from impairment from junior (later) rights.

In the past, Ecology allowed ground water withdrawals that affected no more than five percent of nearby surface waters. Ecology now examines all water right applications in the context of watershed assessments that evaluate the availability of water for new uses. If streamflow was judged to be too low to support existing uses and/or instream flows that protect fish, Ecology has denied ground water permits for proposed wells that would capture surface water in these areas.

For example, in 1996, based on 16 watershed assessments, Ecology issued 600 water rights decisions, roughly half of which were denials. Ecology’s standard for these decisions, largely upheld by the Pollution Control Hearings Board, is a rigorous test, sometimes termed the “one molecule” standard. The reason is that if no further surface water diversions can be permitted—even small ones—then ground water withdrawals should be held to the same standard. A 1997 bill that would have set a different standard for determining impairment was vetoed and a 1998 bill that would have had the same effect failed to pass the House.

The subject remains controversial, in part because the cumulative effects of groundwater withdrawals on surface water are not always recognized, and in part because no agreement has been reached within the state about established or consistent methods for evaluating ground water/surface water interactions.

Scope of committee work

Ecology convened the technical advisory committee to seek advice on appropriate methods for evaluating the location, quantity, and timing of “capture” effects. Specific questions the group will address include:

- What methods should be used to assess not only where ground water/surface water interactions are important in a given watershed, but also the quantity and timing of any capture?
- How should the effects of individual wells or withdrawals be considered within the context of cumulative effects of all wells, both existing and proposed, within a watershed or ground water basin?
- What is the tradeoff between amount of effort (and time required), and the certainty or accuracy, for different technical methods?
- How well suited are the different technical methods for use at a screening

(i.e. watershed assessment) level of analysis, as well as at a more rigorous level of investigation?

- How might appropriate methods need to be tailored for different geographic areas or geologic settings in the state?

After the committee develops sound technical methods for assessing ground water/surface water interactions, Ecology will then have to determine how to apply them.

For example, Ecology must decide how the technical tools could be used to determine when the effects of capture constitute an impairment of existing rights or established instream flows, and what might be appropriate mitigation measures.

For more information

For more information, contact Ecology’s Doug McChesney at (360) 407-6647, e-mail dmcc461@ecy.wa.gov.

- Doug McChesney

New well rules improve compliance

Ecology adopted changes to rules governing well construction and licensing in April.

Updates to the **licensing standards** (Chapter 173-162 WAC) increase training requirements for well contractors and operators. Beginning in the year 2000, well drillers will need to show they are maintaining a high level of expertise through continuing education to renew a license.

Amendments to the **construction and maintenance standards** (Chapter 173-160 WAC) improve standards for materials used in constructing wells, and identify safe procedures for installing well seals. The rule was also reorganized to create separate standards for *water wells* (used for drinking water and irrigation) and *monitoring wells* (used to monitor pollution and water supply).

Ecology is already seeing results from separating standards for these different types of wells, said well drilling coordinator Dick Szymarek. “We’re getting lots more calls from drillers that specialize in monitoring wells,” said Szymarek. “The result is better compliance with the rule.”

For more information contact Ecology’s Dick Szymarek at (360) 407-6648, e-mail rsyz461@ecy.wa.gov.



Ecology well-drilling inspector Mark Ader helps a landowner install a well correctly.

Water right claim open filing period closed

On midnight, June 30, Ecology closed the water right claims registry that temporarily opened in September 1997 (*see Confluence, Fall 1997*).

The registry was opened to give Washington property owners the opportunity to claim they — or a predecessor to their land — have been using water since a time before state law required a water right. For groundwater rights, that was 53 years ago; for surface water rights, 81 years ago.

During the 9-month open filing period, more than 25,000 people contacted Ecology, and approximately 3,500 claims were filed. Ecology received 2,500 of

those in the last 2 weeks of the filing period.

About half the claims filed will meet legislative requirements for acceptance. For each claim, Ecology must determine in what county and Water Resource Inventory Area the claimant's property is located, whether or not the claim is in an area already under adjudication, whether the dates are correct, and that a quantity of water has been claimed.

"A huge bonus of the filing period has been the educational benefit," said Candy Pittman, Ecology's coordinator for the claims registry. "We've enjoyed this great opportunity to work directly with people

and share information with them about water rights."

This is the fourth time in 23 years that the legislature directed the opening of the claims registry. In previous openings, citizens filed a total of 165,000 claims. Only 6 percent of those claims have been adjudicated, where a court has decided which claims are legitimate.

For more information about the water right claims process, contact Ecology's water rights claims coordinator at (360) 407-6738.

Ecology amends Columbia River water rule

In 1992, in response to the National Marine Fisheries Service's decision to list several Snake River salmon stocks as endangered or threatened under the federal Endangered Species Act, Ecology adopted rules that established a moratorium on issuing new water rights from the Columbia and Snake rivers.

In June 1997, Governor Locke signed a law eliminating the Columbia River moratorium. He directed Ecology to immediately begin amending the Columbia River water-allocation rule, and said that no water withdrawals would be allowed until the agency updated the instream-flow and water-allocation rules.

In March 1998, Ecology adopted changes to the Columbia River rule. Under the rule amendment, Ecology will evaluate

new water right applications case-by-case, in consultation with local, state, federal and tribal governments to determine whether the water use may harm already weak fish stocks and existing water rights.

Lufkin said Ecology would eventually like the rule to set new instream flows on the Columbia River.

The rule would focus on protecting stream flows for endangered salmon, while also considering the possibility of new water uses from the river. Ecology does not currently have a schedule for setting new instream flows for the Columbia River.

For more information, contact Thom Lufkin at (360) 407-6631, e-mail tluf461@ecy.wa.gov.

Time to comment on Action Team workplan

The Puget Sound Water Quality Action Team is asking for comments on a proposed strategy for improving water quality, restoring habitat and protecting resources in the Sound during the 1999-2001 biennium.

The proposed work plan includes activities that address habitat, contaminated sediments, stormwater and toxics, aquatic nuisance species, shellfish, watershed protection, oil spills, on-site sewage systems, agriculture, forestry and monitoring.

The plan also proposes funding for the

state agencies that make up the Action Team to carry out these activities.

The Action Team will accept comments on the proposed 1999-2001 *Puget Sound Water Quality Work Plan* from July 27 - August 28, 1998.

The Action Team will hold meetings to hear public comments in Olympia (8/11), Seattle (8/13), Blyne (8/13), Tacoma (8/18), Poulsbo (8/18) and Mt. Vernon (8/19).

For more information contact the Action Team at 1-800-54-SOUND. To view and comment on the proposed work plan on the Action Team's web site, visit www.wa.gov/puget_sound.

WaterWeeks coming soon

Salmon restoration projects, stream cleanups, and lots of other great hands-on events to help our water environment are scheduled during **Washington WaterWeeks** from September 1 through October 4.

The details on Washington's 15th annual WaterWeeks celebration are listed in an Activity Guide available mid-August.

This year's guide will include a special *Hands On for Healthy Habitat* insert with tips on how to be a good salmon steward. To order an Activity Guide call 1-800-424-4EPA.

WaterWeeks events are also posted on a new, easy-to-use web site at www.waterweeks.org



Illustration by Nikki McClure.

Conference to focus on relationships between agriculture and water quality

Farmers, environmentalists, natural resource managers, regulators and citizens are invited to a conference on preserving agriculture and protecting water quality in the Pacific Northwest on October 20th and 21st at the Yakima Convention Center.

If this sounds to you like an unusual blend of subjects and participants, that is exactly why the conference is being held, said conference chair Richard Kepler.

“We’re holding this conference because there are plenty of conventions for farmers, environmental groups, and regulatory agencies, but they’re all *separate*,” said Kepler. “It doesn’t seem like people are talking to others outside their own groups enough.”

Kepler said the aim of this conference is to get everybody interested in the subjects of agriculture and water quality together to share information and perspectives in a non-confrontational setting. The result, Kepler hopes, is that groups will begin to cooperate with each other rather than always being at loggerheads.

Conference sessions are structured to encourage co-mingling of perspectives. For example, a panel on salmon restoration features speakers from Washington and Oregon’s Governors offices, a local farming cooperative, the

Sierra Club, and the National Marine Fisheries Service.

Information you can use

Kepler said the conference is also unique because all the presentations will focus on applied activities rather than scientific or academic studies. “We’ve insisted that all presentations provide useable information that can lead to workable solutions to problems,” said Kepler.

Conference sessions include topics such as:

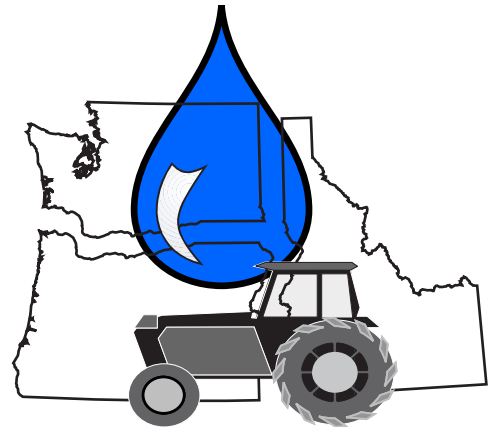
- Best management practices
- The Columbia Basin Ground Water Management Area
- Cooperative problem-solving
- Ecosystems and watersheds
- Environmental education
- Erosion control
- Farm economics
- Grazing
- Managing nutrients
- Nonpoint source pollution control
- Pesticide management
- Precision irrigation
- Riparian health
- Salmon Habitat and Recovery

The conference has no primary sponsors but is instead hosted by a loose coalition of regional, state, and local farm associations and government agencies.

The group held a similar conference two years ago that drew more than 400 participants, and conference planners expect greater attendance this time.

For more information

For information or a registration form contact Far West Fertilizer and Agrichemical Association at phone (509) 838-6653, FAX, 838-6685, or e-mail farwest@lor.com or visit the conference Web site at www.dwatcm.wr.usgs.gov/ccpt/ag_wq_conf98/



The conference on agriculture and water quality will draw presenters and participants from Alaska, Idaho, Oregon and Washington.



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Please place my name on mailing lists for the following topics:

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| <input type="checkbox"/> Wetland mitigation banking rule (page 2) | <input type="checkbox"/> Wetland Function assessment project (page 9) |
| <input type="checkbox"/> Shoreline master program rule (page 7) | <input type="checkbox"/> Sand and gravel permit (page 14) |
| <input type="checkbox"/> Shoreline stream jurisdiction rule (page 8) | |

Name _____ Affiliation _____

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Send this form (or a photocopy) to: Word Processing, Washington Department of Ecology, PO Box 47600, Olympia, WA 98504-7600, OR e-mail your request to scoo461@ecy.wa.gov with the subject line “Mail list.”

Conservation Corps can help your watershed

Looking for help restoring the environment? State, federal and local agencies throughout Washington state can take advantage of the industrious, affordable crews of the Washington Conservation Corps (WCC).

The WCC is a one-year on the job training and service program that puts young adults (18-25) to work tackling a wide range of restoration projects, including:

- Wetland mitigation;
- Watershed restoration;
- Fish habitat enhancement;
- Hiking trails construction;
- Emergency response; and more.



WCC crew building a trail at the Nisqually National Wildlife Refuge.

WCC crews are led by experienced supervisors.

A great deal for members

Corps program members receive minimum wage while gaining valuable job skills. After completing one year of service, members receive a \$4,725 AmeriCorps award to help with future educational and vocational costs or to pay off existing student loans.

For more information on WCC contact Ecology's Nick Mott at (360) 407-6946, nmot461@ecy.wa.gov or Jeff Legg at (360) 407-6077, e-mail jleg461@ecy.wa.gov.

Confluence

con-flu-ence [kon-floo-en(t)s] *n.* 1: a flowing together of two or more streams 2: an act or instance of congregating: an assembly: crowd

Confluence is a quarterly newsletter of the Washington State Department of Ecology. The name symbolizes the flowing together of water quality, water quantity, and shorelands issues into a common forum. The word also refers to a gathering of people, which is what it takes to solve water problems.

Contributors: Nina Carter, Mary Getchell, Jani Gilbert, Susanne Hindle, Jeff Legg, Thom Lufkin, Doug McChesney, Sandy Rudnick. Graphics: Nikki McClure, Tim Schlender. Photos: Keith Johnson, Jane Rubey, Al Wald. Editor: Tim Gates.

Address questions or comments to the person(s) identified at the end of the article or Tim Gates at 360/407-7256, e-mail: tgat461@ecy.wa.gov.

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Washington State Department of Ecology
Shorelands and Environmental Assistance Program
PO Box 47600
Olympia, WA 98504

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