

Confluence

A Quarterly Newsletter Exploring the State of Washington's Waters and Shorelands

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Governor proposes salmon plan, water law reforms

Governor Gary Locke in January released a final draft of Washington's Statewide Salmon Recovery Strategy. The strategy, called *Extinction is Not an Option*, was developed over the past year by the Governor's Joint Cabinet on Natural Resources to restore wild salmon and their habitat without federal intervention.

In the next year, more than three-quarters of Washington State will likely be affected by nearly 20 salmon and steelhead listings under the federal Endangered Species Act. Unless the state offers a salmon restoration plan acceptable to federal authorities, the federal government will impose one of its own (*see Confluence, Spring 98*).

The statewide strategy is guided by a collaborative, incentive-based approach to recovery, coupled with better enforcement of existing natural resources laws. The Governor plans to submit the strategy to federal agencies this summer, after incorporating changes resulting from input by legislators and citizens.

Legislation, budget request

The Governor accompanied the release of the long-term recovery strategy with a legislative package, dubbed *Water for People, Farms and Fish*, that would put the plan into action over the next two years and beyond.

Besides increasing enforcement of existing laws and supporting local watershed planning, the Governor is proposing a wide range of new initiatives, including water conservation and reuse programs and new directions for Washington's century-old water laws.

"We know the key to saving salmon and protecting our long-term economic vitality is to solve the water gridlock in this

state," Locke said. "Salmon cannot survive in streams that are too polluted, too warm or too shallow - and our communities cannot survive unless we find new sources of water to meet their long-term needs."

The Governor's proposals are accompanied by a \$200 million budget request. Approximately half this amount is expected to come from federal grants.

Key water supply and water quality provisions of the Governor's proposal and budget request are summarized below. The next issue of *Confluence* will report on the final outcome of the legislative session.

Water conservation

For the first time, small **public water systems** (*15 or more connections*) would be required to implement water conservation plans. The Governor's proposal would require large public water systems (*1,000 or more hookups*), to enhance their water conservation plans through leak detection and repair programs, conducting water audits, and using a commodity-based rate

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Graphic: Darrell Pruett

Locke salmon, water proposal *(continued from page 1)*

structure (*water use fee is based on the amount used*).

For **agricultural lands**, the Governor's measure provides that up to 50 percent of irrigated water saved through conservation measures may be transferred to new lands. But it also requires that at least 50 percent would be transferred to the state as a "trust water right" for use in meeting instream flow needs for fish.

Reclaimed water

Governor Locke proposes to amend the definition of "water conservation" to include use of reclaimed municipal and industrial wastewater.

Rather than taking new water from streams or rivers, treated wastewater could be used instead for watering golf courses and industrial processing. Under the proposal, Ecology could deny a water right application if reclaimed water were a feasible alternative source of supply.

Ecology would adopt rules outlining criteria for determining when use of reclaimed water is feasible to replace potable water supplied for nonpotable uses.

Water right decisions

In general, current law and regulations require Ecology to process water-right applications on the basis of public health and safety, enhancement to the environment and then by the oldest applications first within a geographic basin.

The Governor's proposal would allow Ecology to process certain applications for *changes to water rights* ahead of requests for *new water-right permits*. The law would essentially create a dual-track permit system: applicants for "new water" in one line, applicants for changes to existing rights in another. (In areas of the state where most of the available water is already being used, it is unlikely that Ecology will issue many new water rights.)

Additionally, the Governor's budget includes \$1.7 million to boost Ecology staff to help erase a backlog of pending water right decisions.

Buying water

During summer months, the amount of water in many streams is insufficient to support healthy populations of wild salmon. To help return more water to

streams, the Governor's budget contains \$10 million to purchase water rights from willing parties in 16 defined "critical salmon basins" through the Trust Water Right Program. Buying water rights would be market-driven, with appraisers determining the price. A technical assessment would be completed, based on guidelines, to determine the value of the water.

Public water systems

A recent state Supreme Court decision created a great deal of uncertainty about the right of public water systems to use water that is not now being used. While these entities may hold a certificate granting a right to that unused water, the court decision has raised questions about the validity of those certificates. If cities, counties and other public water systems cannot be certain they have access to additional water in the future, they cannot plan for growth.

Under the Governor's plan, the holder of the certificate would receive a *water right permit* — but not a final water right — to any or all of the unused portion of the water. Under the water right permit, the public water system could develop ways to tap that unused water, but only under certain conditions, spelled out in the legislation, which promote the instream flow needs of fish and water conservation.

The permits would be reviewed periodically against the water system's long-term development schedule and a set of performance requirements. (*See story, page 11.*)

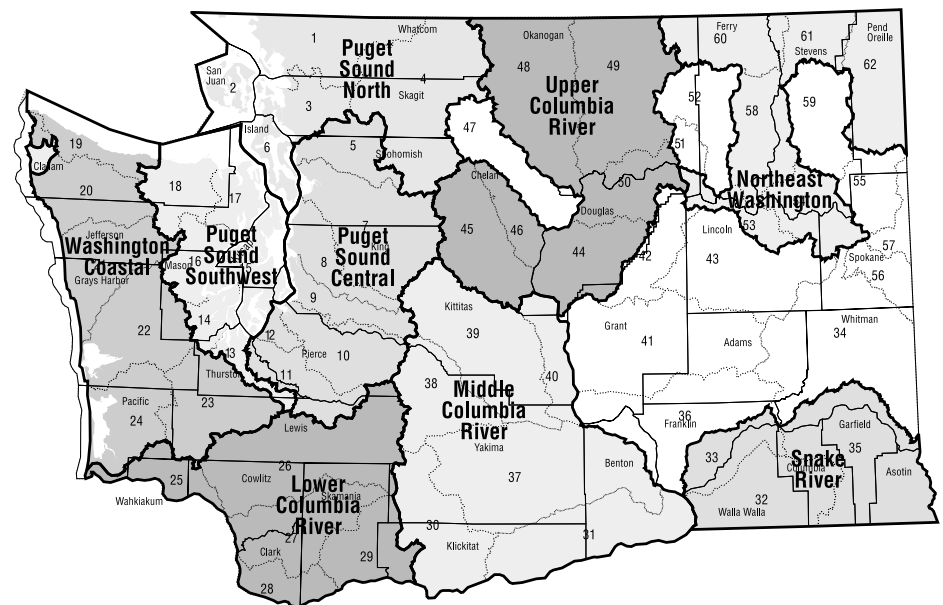
Groundwater exemption

Currently, wells that use up to 5,000 gallons of water per day are exempt from needing a water right. The growing number of such wells is reducing stream flows, thus harming fish. The legislation would reduce the exemption to 400 gallons per day in "critical salmon basins." Counties in these areas would be required to reach agreements with Ecology on how they would manage the exemption. Other counties would also have the option to enter into agreements.

Under the legislation, the groundwater exemption in current law would end in two years.

"Hydraulic continuity"

In most areas of the state, ground water and surface waters (such as streams and lakes) are connected. This is sometimes referred to as "hydraulic continuity." When these conditions exist, pumping water out of the ground prevents water from getting into streams, causing inadequate streams flows. The Governor's legislation requires Ecology to convene an



Areas with salmon, trout, or steelhead that are listed, proposed for listing, or have a high potential for future listing under the Endangered Species Act. Source: Washington Department of Fish and Wildlife Habitat Management GIS, 12/30/98.

advisory group to recommend methods for mitigating the effects of proposed ground water withdrawals on surface water.

This proposal is based on the work of a technical advisory committee report released last fall (*see page 12*).

Metering water flows

Ecology currently has limited ability to monitor flows and regulate water use when rivers and streams are stressed from low water flows. Accurate information on water flows in rivers and streams is necessary to effectively manage instream and out-of-stream uses.

The Governor's proposed budget would allow Ecology to develop and implement new metering requirements to monitor water withdrawals. The monitoring would ensure that the amount, time, and place of water use do not exceed existing permits. Ecology would also install river flow gauges in 16 "critical salmon basins" to collect information on water flows.

A total of \$1.45 million are proposed for metering and gauging efforts.

Increasing civil penalties

Current law contains a penalty of only \$100 for water use violations. In the Governor's proposed legislation, three classes of water code violations are established and civil penalties are adjusted to fit the nature of the violation. A minor violation penalty is between \$100 and \$1,000. A serious violation penalty would range from \$1,000 to not more than \$10,000. A major violation penalty — such as continuous unauthorized use of water after a notice to cease — would range from \$10,000 to \$25,000.

Watershed management

The 1998 Watershed Management Act authorized development of locally driven watershed plans for managing water availability, water quality and fish habitat.

Local and tribal governments and water purveyors are currently leading efforts in 19 watersheds, with funds and technical support from Ecology. The Governor's budget adds \$2.8 million to this effort, which would bring the total available grant funds to \$7.8 million for the biennium.

The Governor also proposes a \$1.5 million appropriation for Ecology to

provide data for local planning efforts.

Ecology would update its water rights tracking system and digitize existing water right documents. The budget would also enhance Ecology's ability to provide hydrogeology technical assistance to local watershed planning groups.

Local government grants

The Governor's budget request contains \$178 million of *ongoing* funding for water quality and water conservation projects, including grants and loans to local governments. The Governor is also proposing \$136 million in *new* funds for state technical assistance, data sharing, and grants to local communities. In addition to increased grant funds under the Watershed Management Act (*see above*), the proposal includes grants for:

Updates to shoreline management programs - A \$2.2 million grant program would help local governments revise shoreline master programs and critical area ordinances to address salmon habitat. The Governor's proposal also extends the time frame for local governments to develop new shoreline programs. Ecology expects to adopt new guidelines this year (*see page 4*).

Salmon recovery planning - \$4.1 million in technical expertise and grants would allow the State Conservation Commission to increase its work with local watersheds. The Commission would analyze factors within each watershed that limit salmon production. This analysis is a key step in developing restoration and enhancement plans and projects under the Salmon Recovery Planning Act (*ESHB 2496*).

Transportation projects - Road construction can harm salmon habitat by creating barriers to fish passage and by increasing stormwater runoff. The Governor's request would provide \$11.8 million of Motor Vehicle Account grants to local governments to control stormwater, correct fish passage barriers, and purchase wetlands.

Water quality assessments

The Governor's budget includes a request for \$1.5 million in state funds (*matched by \$1.9 million in federal funds*) to assess pollutants entering the water bodies and establish limits through what is called the

Salmon recovery is about much more than fish. It is about respect for the natural world that sustains us. And if we fail to do what's necessary for salmon, we will fail at something far larger than saving fish. We will fail at saving the very quality of life that makes living in the Pacific Northwest special and distinctive.

The truth that every Washington resident must know is that salmon recovery will affect all of us – even those of us who don't fish, don't live near streams, or don't even like to eat salmon. Restoring salmon – and protecting our environment – will affect decisions about where and how we build new homes, and expand or start businesses. It will affect how we wash our cars and fertilize our lawns, and how much we pay for water and electricity. And the longer we postpone the tough decisions needed to save our wild salmon, the higher the costs will be.

-- Governor Gary Locke
State of the State address
January 12, 1999

Total Maximum Daily Load (TMDL), or water cleanup plans. Water cleanup plans are required for the nearly 700 of our state's rivers, streams and estuaries that fail to meet water quality standards (*see page 14*).

Urban Stormwater

Uncontrolled stormwater can harm salmon habitat by scouring streambeds, increasing siltation and sediment, and transmitting toxic chemicals. The Governor proposes \$680,000 for Ecology to update the state stormwater manual and provide technical assistance to local governments to modify their stormwater programs.

For more information

For more information on the draft state salmon recovery plan, visit www.wa.gov/esa/. For current information on legislation, visit the Legislature's web page at www.leg.wa.gov/wsladm/bills.htm.

Ecology readies draft shoreline master program guidelines

Ecology is preparing to release a comprehensive update to the state's 26-year-old rule that guides how local governments manage shorelines.

The guidelines are the basis for 246 city and county shoreline master programs that regulate streams, lakes over 20 acres, and marine waterfronts. Ecology expects to release a draft rule for public review in March 1999.

Ecology wrote the draft rule with advice from a Shoreline Guidelines Commission. Members represented cities, counties, forestry, environmental groups, water-dependent business, port districts, the shellfish industry, community organizations, tribes, and state agencies. The Commission was chaired by Snohomish County Councilman Dave Somers.

Ecology Director Tom Fitzsimmons expressed his gratitude to members of the commission. "The Commission did not have an easy job," said Fitzsimmons. "Shorelines are the most valuable property for development, but also the most valuable for habitat, so the subject is, by its very nature, sensitive and sometimes contentious."

"On top of that, Washington's approach to shoreline management requires a careful balance of responsibility between state and local governments, and that can be tricky," he said. "On the one hand, local governments need flexibility to address local circumstances; on the other, state government needs to safeguard statewide ecological and economic interests."

The draft rule seeks to find a workable balance by setting "performance criteria," or specific outcomes, that local regulations should achieve, and lets local governments decide how to meet those goals.

Using current science

Fitzsimmons said one of the chief goals of the new rule is to bring state guidelines up-to-date with current science. The rule adopts the approach taken by the Growth Management Act, which requires that local governments use "best available science" in setting protection measures.

"Clearly, state standards should reflect what scientists have learned about shoreline habitat over the past quarter century," said Fitzsimmons. "A key feature of the rule is new guidance for protecting

and restoring habitat for salmon and other endangered fish species."

The rule is a part of Governor Locke's strategy for recovering salmon and satisfying the requirements of the Endangered Species Act. Key features of the new rule are summarized below.

Slowing bulkhead sprawl

Under the proposed guidelines, local master programs would need to take stricter measures to slow the spread of bulkheads and other "hard" shoreline armoring.

The rule would require that applicants demonstrate a need for new bulkheads and other shoreline armoring before installing such structures. The rule also requires that "softer," more environmentally benign methods be used as a first priority.

A 1995 study found that one-third, or 800 miles, of the Puget Sound shoreline is modified by bulkheads and other hard structures. Scientists have found that these structures degrade fish and wildlife habitat and interfere with dynamic shoreline processes.

Managing shoreline plants

The existing guidelines do not include measures for protecting shoreline plants. Plant roots keep banks from eroding and create habitat for fish, and their leaves shade the water, keeping it cool and rich in

oxygen. The proposed guidelines restrict removal of native vegetation along certain shorelines, depending on the type of use and condition of the shoreline.

Improving local inventories

Most local governments conducted inventories of their shorelines in the mid-1970s, when they adopted their first master programs. Most of those inventories have never been updated. The draft rule requires that local governments use existing information such as critical area inventories as a basis for master programs provisions.

If a more detailed inventory is needed as a baseline, especially if the inventory is required to comply with the Endangered Species Act, then the State will take the lead or contribute technical and/or financial resources.

Environment designations

Shoreline "environment designations" are one of the principal ways local governments tailor their broad shoreline policies to specific shoreline segments. The designations, such as "urban," or "rural-conservancy," are applied to all shorelines based on land use patterns and the character of the natural resources. Designations are mapped for all shorelines within the jurisdiction (*see graphic*).

The draft guidelines give local govern-



Proposed guidelines for local shoreline programs would promote environmentally-friendly methods for controlling erosion. Traditional shore defense structures, such as bulkheads (pictured), often degrade fish habitat. Photo: Hugh Shipman

ments new directions for setting environment designations.

For example, many *undeveloped* shorelines will fall into either “natural” or “rural-conservancy” classifications that emphasize preserving and enhancing ecological integrity. *Urban* shorelines will typically emphasize avoiding further degradation while focusing on restoring natural functions when possible.

If a local government’s existing environment designations are consistent with the intent of the new guidelines, they need not be changed.

Integration with GMA

Fitzsimmons said the proposed rule will make it easier for local governments to integrate shoreline programs with local Growth Management plans and regulations. A state law passed in 1995 (*ESHB 1724*), mandated that local shoreline programs be considered part of local plans,

but did not specify how that was to be done.

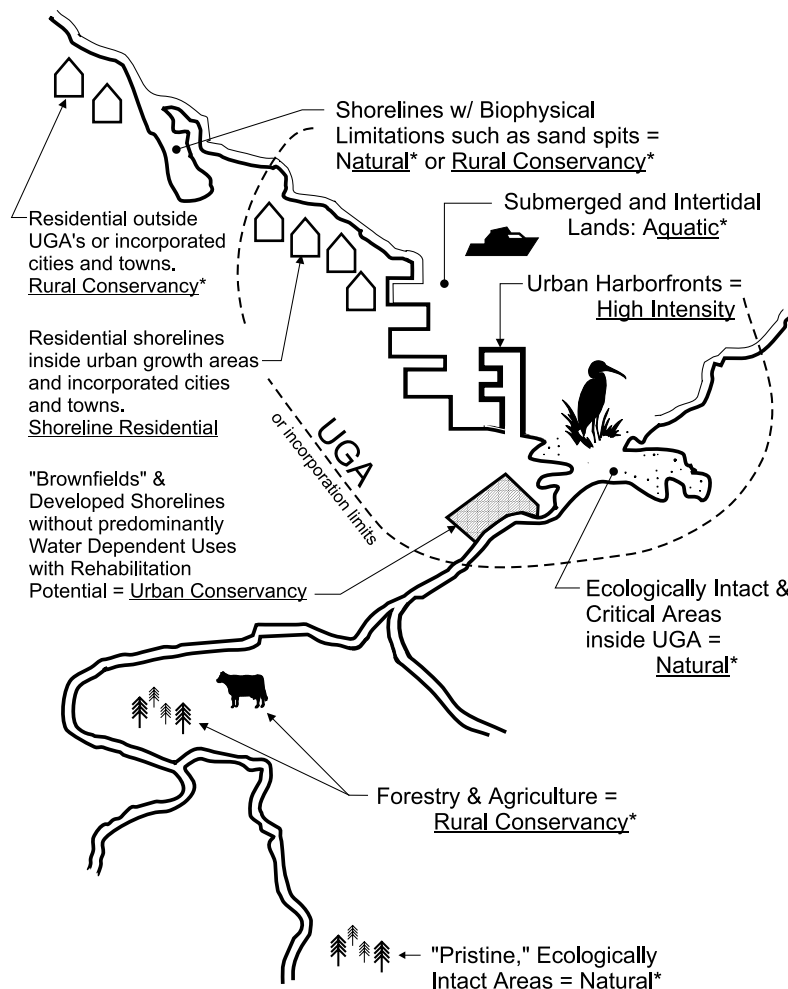
“The draft rule gives local governments a variety of alternate ways to blend requirements of the two laws,” said Fitzsimmons. “This should help reduce duplication and streamline regulations.”

The Governor’s proposed budget includes \$2.2 million in grants to local governments for preparing master program updates over the next two years.

For more information

Ecology plans to release a final draft rule for public comment in March or April and to hold public hearings in late Spring 1999.

The draft rule will be posted on the web at www.wa.gov/ecology/ under “Shorelands and Wetlands” when it is filed with the Code Reviser. For a paper copy of the rule, contact Ecology’s James Schroeder at (360) 407-7196, e-mail jasc461@ecy.wa.gov.



Ecology’s draft shoreline master program rule gives local governments new guidance on setting “environment designations.” (Note: UGA stands for “urban growth area.”)

Ecology to update sediment standards

Ecology is considering amending the state’s Sediment Management Standards.

The 1991 standards (*found in Chapter 173-204 WAC*) designate sediments that can harm aquatic organisms or pose significant health risk to humans. They also set requirements for how the standards are applied in controlling sources of contaminated sediment and in cleanup of contaminated sites.

However, the criteria in the current regulation are set to protect the ecology of Puget Sound marine sediments only - sediment criteria for human health, freshwater, and other marine areas must be addressed case-by-case.

Ecology is considering the following changes to the sediment standards:

- **Adding sediment criteria for the protection of human health.** The goal is to reduce and ultimately eliminate significant health threats to humans via the ingestion of fish and shellfish contaminated by toxic bioaccumulative compounds found in sediment. The proposal includes methods for applying human health sediment standards in source control and cleanup actions.
- **Updating the marine sediment chemical criteria.** New scientific studies suggest changes in the current criteria. The proposed recalculated values may result in the lowering of some individual chemical criteria and the raising of other individual chemical criteria.
- **Applying the Puget Sound sediment chemical and biological criteria to other marine areas** in the state, e.g., Grays Harbor and Willapa Bay.
- **Adding sediment biological test criteria for freshwater sediments.**
- **Revising methods** for identifying and defining sediment cleanup sites to address “hot spot” sites.

Ecology plans to release a draft rule and EIS for public review by April 1999.

For more information

For information, contact Ecology’s Dave Bradley at (360) 407-6907, e-mail dbra461@ecy.wa.gov or visit Ecology’s web site at www.wa.gov/ecology/ under the “Sediments” page.

Agencies seek comment on sediment disposal plan

Federal and state agencies are seeking public comment on a plan for disposing of contaminated muck dredged from Puget Sound.

The draft plan, called a “programmatic” environmental impact statement (EIS), was written by the US Army Corps of Engineers (Corps), together with the Puget Sound Water Quality Action Team and the state Departments of Ecology and Natural Resources.

Public meetings are scheduled for March 1999.

A home for dredged muck

Sediment is the sandy or mucky material found at the bottom of Puget Sound and other bodies of water.

Ports, marinas, waterfront industries, and government agencies dredge sediments for a variety of reasons, including:

- Maintaining navigation channels;
- cleaning up contaminated areas;
- restoring damaged aquatic habitats; and
- developing shoreline property.

If the dredged sediment is clean enough, it can either be used locally (*e.g., for construction sand*) or dumped in certified open water sites.

However, if the sediment is contaminated, it must be either covered or “capped” with clean sand (*an inappropriate technique for many dredging projects*), or taken at great expense to an existing municipal landfill (*using valuable space for garbage*).

According to the Corps’ Steve Babcock, the lack of safe and economical options for disposing of contaminated sediment is delaying clean-up activities and preventing economic development in harbor areas.

Babcock said as much as 10 million cubic yards of contaminated sediment in Puget Sound will need to be dredged during the next 20 years. That’s about one million 10-cubic-yard dump truck loads.

“Multi-user” site proposed

The draft EIS released in November proposes a range of alternatives for handling this volume of material. The EIS is called “programmatic” because it evaluates a broad regional approach to sediment disposal. The study does not propose a specific site to dump sediment, but does address the *criteria* for selecting a site.

The chief alternative identified is construction of a “Multi-User Disposal Site” (MUDS). A multi-user site would operate much like a municipal landfill. Different “users” would pay a fee to dispose of contaminated sediment, just like people pay to dispose of garbage in the local landfill.

The EIS identifies alternative approaches to building such a site, including:

- a pit dug 100 feet below the surface of Puget Sound, filled with contaminated sediment and covered over with clean sand;
- a “walled-in” area near the shoreline of Puget Sound, filled with contaminated sediment and covered with clean sand;
- a specially protected landfill-like facility located within 15-30 miles of the shoreline; or
- a combination of these.

The MUDS approach is not a new idea. The Puget Sound Management Plan identified the need for a “multi-user” disposal site in 1987. The Corps conducted a “Reconnaissance Study” a few years ago

to determine whether or not the concept was feasible. The current EIS grew out of that original study.

Safety concerns

According to Ecology’s Tom Gries, a MUDS project would speed cleanup of contaminated sediment that can affect the health of bottom-dwelling organisms and fish. The sediment can pose some threat to humans, if it finds its way into the fish and shellfish we eat. Sediments classified as toxic waste would still be required to be taken to a specially designed, out-of-state landfill.

Gries said many safe facilities have already been built for contaminated sediment, but all the facilities in Puget Sound region were built for individual projects. “Building a new regional MUDS facility would have only minimal, short-term environmental impacts that could be adequately mitigated,” said Gries. “If a MUDS cannot be built safely, it will not be built at all.”

For more information

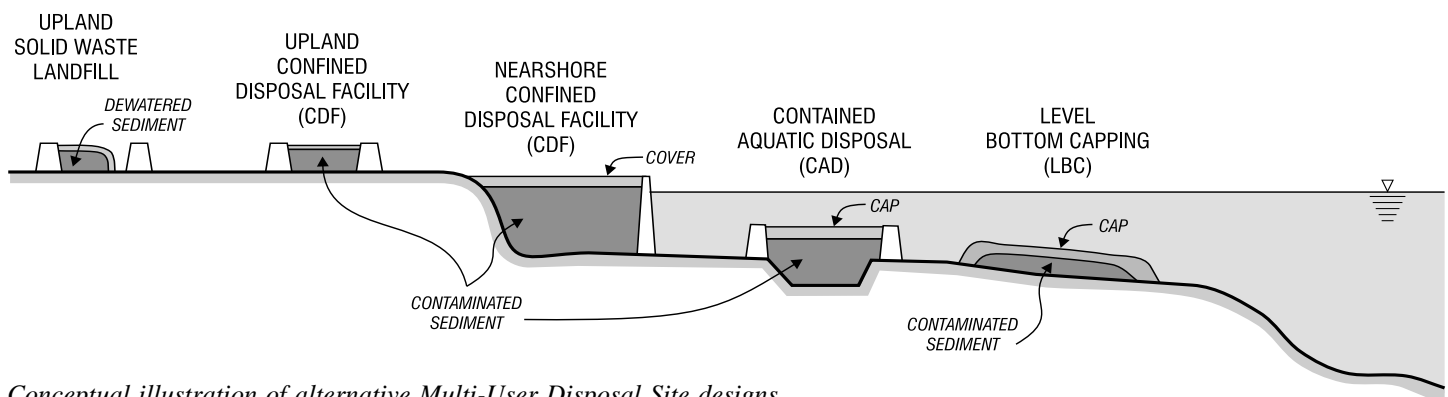
Informational meetings and public hearings will be held:

March 16 in Seattle at the US Army Corps of Engineers building;

March 18 in Tacoma at the downtown Public Library; and

March 23 at the Howard Johnson Plaza Hotel in Bremerton.

For more information, visit Ecology’s website at www.wa.gov/ecology/ under the Sediments section. To get on a mailing list for the project, contact the Corps’ Steve Martin at (206) 764-3631 or Ecology’s Tom Gries at (360) 407-7536, e-mail tgri461@ecy.wa.gov.



Conceptual illustration of alternative Multi-User Disposal Site designs.

Ecology to write wetland mitigation banking rule

Ecology is writing a rule that will add another tool to the regulatory toolbox for protecting wetlands in Washington State.

A 1997 state law (*Chapter 90.84 RCW*) directs Ecology to create a workable, statewide process for certifying **wetland mitigation banks**. Ecology convened an advisory team to help write the rule and expects to release a draft for public review in Fall 1999.

What is mitigation banking?

Under current federal, state and local regulatory programs, a developer seeking permits for activities that may harm wetlands must first **avoid** and then **minimize** those effects. If harm to wetlands is unavoidable, the developer must **compensate** for that damage by creating, restoring, or enhancing a wetland.

Historically, regulatory agencies preferred that this mitigation occur *on the site where the damage is done*. These “on-site” compensatory mitigation efforts often result in small, “postage stamp” wetlands with relatively low ecological values.

Mitigation banks typically involve the consolidation of many small mitigation projects into a larger, potentially more ecologically valuable site. A bank “provider” would generate credits through the advance creation, restoration, or enhancement of wetlands. If approved by regulatory agencies, those credits can then be used by the bank provider or sold to another party to offset effects to wetlands that occur in other locations.

The new law does not override the 3-step “mitigation sequence” (*avoidance - minimization - compensation*). Credits from a bank can only be used to compensate for impacts that cannot be avoided.

Who would set up a bank?

Wetland mitigation banks might be initiated by:

- **Transportation agencies or utilities** that have many projects that affect wetlands;
- **Businesses** that anticipate having large or on-going wetland impacts may create banks rather than mitigating in a piecemeal fashion;
- **Entrepreneurs** interested in creating mitigation banks for the purpose of selling credits.

In addition, **local jurisdictions** may want to encourage establishment of mitigation banks to help meet local watershed needs. Banks could be designed to enhance or restore wetland functions that are in short supply or are of critical importance in a given watershed.

Ecological benefits

One of the benefits of mitigation banks is compensation occurs “up-front,” prior to harming a wetland at another site. This assures the success of the mitigation before unavoidable damage occurs at another site. Banks also consolidate piecemeal mitigation projects into one contiguous, unified ecosystem, which encourages greater diversity of habitat and wetland functions and creates more sustainable systems.

Economic benefits

Those purchasing credits from a bank will benefit from a streamlined permit process, since proposed compensatory mitigation is already constructed and functioning.

Banks also reduce the enforcement burden on regulatory agencies. Each mitigation bank applicant must demonstrate that performance standards are met prior to the releasing of credits.

Writing the rule

Ecology is working with an 18-member



advisory team to help develop the rule (*see “key issues,” below*). The team includes representatives from local, state, and federal agencies; environmental groups; private bank developers; agricultural concerns; and business. Ecology will keep interested parties up-to-date through mailings, workshops, hearings, and through a web site with meeting agendas, summaries, and draft rules. Visit the site at www.wa.gov/ecology/ under “Shorelands and Wetlands.”

For more information

For more information, or to sign up for a mail list, contact Judy Geier at (360) 407-7257, jgei461@ecy.wa.gov.

Key issues in developing a wetland mitigation banking rule

The Wetland Mitigation Banking rule will focus on two processes: how banks will be certified, and how they will be implemented. The advisory team will consider the following issues:

- **Service areas** - guidance on defining “service areas,” the designated geographic areas in which a bank can reasonably be expected to provide appropriate compensation for unavoidable impacts to wetlands.
- **Determining credits** - considerations for assessing credit values in a wetland bank, including acreage, category type, and/or function.
- **Release of credits** - guidelines for tying release of credits to achieved gains in wetlands function.

■ **Use of restoration, creation, enhancement and preservation:** the law requires that the certification process prioritize these types of mitigation actions.

■ **Streamlining the approval process:** ways to streamline the certification process and approval by local, federal and state agencies.

■ **Identifying inappropriate applications:** Some wetland functions, such as fish habitat and flood storage, are tied to a wetland’s location within the landscape and may not be appropriate for mitigation banking. Ecology will develop guidelines to address this concern.

Timber landscape management plans tested

An experimental “landscape planning” approach to managing forests is underway in Washington State.

The 1998 Legislature (*in SHB 1985*) authorized creation of as many as seven pilot Landowner Landscape management Plans (LLPs) that could provide private timber companies a single state forest practices permit and hydraulic project approval (HPA) for as long as 50 years. Pilot LLPs must be approved by the state departments of Natural Resources, Fish and Wildlife, and Ecology. The Forest Practices Board will evaluate the results of the pilot project in 2000, and may recommend to the legislature that LLPs be authorized for statewide implementation.

Benefits

The law anticipates that landowners will benefit by avoiding permit-by-permit scrutiny and by gaining assurance that they would not be subject to a “ratcheting” of the regulations over time. The public resources (*such as fish, wildlife, and water*) would benefit because the law requires that plans provide higher level of protection than provided by current state forest practices rules.

The LLP approach roughly parallels the federal “Habitat Conservation Plan” (HCP) approach allowed under the Endangered Species Act. Under the federal HCP process, landowners are provided protection from ESA should management actions

identified in an approved plan incidentally harm (or “take”) a threatened or endangered species covered by the plan.

Landowners may develop state-level LLPs concurrent with federal HCPs. The plans may also elect to combine clean-up plans required under the Clean Water Act.

“The landscape approach has the potential to be more effective than regulating forests permit-by-permit and species-by-species,” said Ecology’s Nora Jewett. “One of the main advantages is that plans are tailored to the actual landscape, so environmental protection measures can be very specific.”

To assure the plans are doing the job,

landowners must monitor the environment and submit results every year. The plans must build in “adaptive management” approaches that allow for course corrections should results show environmental harm.

Public involvement

Landowners must involve the public in drafting plans, and are subject to environmental analysis under the State Environmental Policy Act (SEPA).

For more information contact DNR’s John Edwards at (360) 902-1730, john.edwards@wadnr.gov.



Example of preferred stocking after timber harvest on potential “landowner landscape management plan” property. Photo: Nora Jewett.

Construction projects on public property must do more to protect surface and ground water

Ecology recently revised the stormwater permit that is geared at preventing water pollution while land is cleared, graded, excavated, or any other activity that disturbs the surface of the land. Such activities may include road building or improvement, bridge construction, buildings, utility lines, importing or exporting soils, or demolition work.

Approximately 265 cities and all counties and special districts, (such as schools, ports and utilities) need to apply for coverage under Ecology’s revised general stormwater permit for construction activities. Currently, it is limited to projects where five or more acres of soil will be

disturbed, and stormwater runoff drains into storm drains or any waters of the state, e.g., wetlands, lakes, creeks, rivers, ditches, estuaries, or marine waters. Project planners must develop and implement a stormwater pollution prevention plan before disturbing soil.

Prior to revising the stormwater permit, municipalities under 100,000 in population did not need to apply for stormwater construction permits. In 1996, in response to an appeal of the stormwater construction permit, the Pollution Control Hearings Board directed Ecology to issue the permit to all municipalities, regardless of population.

“In many communities, local work crews are already doing a lot to keep soil and construction materials out of streams and lakes,” said Megan White, manager of Ecology’s water quality program. “Now *all* local jurisdictions must take steps to keep water clean and critical fish habitat unharmed during construction projects.”

For more information

For more information, visit Ecology’s website at www.wa.gov/ecology/ under the “Water Quality” section, or contact Ecology’s Linda Matlock at (360) 407-6437, lmat461@ecy.wa.gov.

Ecology tests changes to water quality grants and loans

Ecology is testing a new process for selecting and awarding water quality grants and loans.

Based on recommendations of an advisory committee that met between March and November 1998, Ecology will make the following changes:

- **Adopt the funding method as a rule** to include the overall structure, major policies and methods, and administrative details;
- **Establish evaluation criteria** for selecting grant and loan recipients;
- **Establish rating points system** applied to each evaluative criterion, periodically adjusted for changing priorities;
- **Allow local funding priorities** in the selection process through the award of bonus points for projects submitted by an inclusive local priority-setting process;
- **Keep the process simple and user-friendly**;
- **Establish a Water Quality Financial Assistance Advisory Council** to help Ecology develop the rule, and policy and program guidelines. The Council will also advise Ecology on implementing the new approach, and developing and adjusting the rating and evaluation system.

Membership on the Council includes people from across the state representing cities, counties, tribes, Conservation Districts; special purpose districts; environmental organizations, business and industry, agriculture; and other groups as appropriate.

Plan tested in current cycle

Ecology convened the 15-member Council in December 1998, and is testing the new

process during the Fiscal Year 2000 funding cycle for all water quality grants and loans, including:

- the Centennial Clean Water Fund,
- State Revolving Fund, and
- Section 319 of the federal Clean Water Act.

Grant and loan recipients include cities, counties, tribes, state agencies, conservation districts, special purpose districts.

The Council will evaluate the new approach in Fall 1999.

Related efforts

Ecology is looking at how the distribution of other water-related funds could benefit from the new approach.

In particular, a "Unified Watershed Assessment" initiative by the U.S. Environmental Protection Agency (*see page 11*) is being looked at for integration under the Water Quality Financial Assistance Advisory Council approach.

Note: The new approach is in addition to recent changes made to the rule that defines how water quality loans are issued (*see sidebar*).

For more information

For information on the current fund cycle contact Steve Carley at (360) 407-6572, e-mail scar461@ecy.wa.gov.

For information on the local prioritization process, call Dan Wrye at (360) 407-6459, e-mail dwrye461@ecy.wa.gov.

Rule streamlines loans

Ecology adopted a rule in November 1998 designed to improve the process of issuing water quality loans for local and tribal governments.

The rule defines how Ecology administers the State Revolving Fund low-interest loans. The loans, a combination of federal and state money, are used by local governments to upgrade or expand wastewater treatment plants.

The loans are also used to prevent water pollution problems from practices such as agriculture, logging and urban development.

To date, Ecology has provided approximately \$327 million through the loan program.

The rule change will improve the low-interest loan program by:

- Making the program more consistent with the uses of the state-funded Centennial Clean Water Fund, which provides grant and loan money for water quality projects;
- Ensuring the continued existence of the loan program;
- Streamlining procedures to speed delivery of funds to local communities; and
- Clarifying eligibility requirements.

For more information

The final rule, entitled *Uses and Limitations of the Water Pollution Control Revolving Fund*, is posted on the Internet at www.wa.gov/ecology/leg/arc_all.html.

For information, contact Ecology loan coordinator Brian Howard at (360) 407-6510, e-mail bhow461@ecy.wa.gov

Dairies respond to cattle call for environmental inspections

Dairy farmers in Washington are doing a good job complying with a new state law aimed at preventing dairy waste from polluting lakes and streams.

Nearly 99 percent of Washington's 765 dairies have registered with Ecology as called for under a law passed by the state legislature in 1998 (*see Confluence, Spring/Summer 1998*).

The revisions to the state's dairy-waste management act required all licensed dairy producers to register with Ecology by

Sept. 1, 1998. The registration process provides information about the number of farms, animals and overall data on how well dairies are managing waste.

As of February, eight operators did not register. As directed in the dairy-waste management law, Ecology issued penalties of \$100 to unregistered farms.

Ecology inspectors are now starting inspections of every dairy farm in the state. Under the new law, Ecology plans to

inspect all of Washington's dairies by October 2000.

The new law also requires all farms to have an approved and implemented plan to manage dairy waste by Dec. 31, 2003.

For more information

For more information contact Ecology's Dairy Program Coordinator Phil KauzLoric at (360) 407-6413, pkau461@ecy.wa.gov.

State takes first step towards “Unified Watershed Assessment”

Across the nation, federal, state and local agencies and tribal governments are using watershed planning as a way to integrate environmental protection programs.

Working at the watershed level allows governments to strike a balance among efforts to control *all* sources of pollution - both individual “point” sources of pollution, as well as “nonpoint” polluted runoff - and address other intimately connected issues such as water supply planning, and wetlands management.

The watershed approach is also seen as an effective way to build partnerships and involve the public in protecting and restoring water resources.

However, the federal government is worried that proliferation of watershed approaches could be too much of a good thing.

The February 1998 **Clean Water Action Plan**, produced by the US Environmental Protection Agency and the US Department of Agriculture, notes that different agencies and tribal governments are setting priorities for watershed action in many different ways and are missing opportunities to work together.

The Action Plan calls for states and tribes to work with federal agencies to prepare “Unified Watershed Assessments.”

The idea of the unified watershed assessment is to build links among the numerous watershed assessment and restoration processes currently underway. By working together to identify common priorities, then considering those priorities in selecting watershed activities, agencies and others can focus resources and reduce duplicative and sometimes conflicting efforts.

The incentive for states and tribes to begin “Unified Watershed Assessments” is additional federal funds under the Clean Water Act and other programs.

Washington’s plan

In August 1998 a number of tribes and federal, state and local agencies worked together to successfully complete a first phase of the Unified Watershed Assessment. Ecology was designated the state agency to convene the process in Washington State; the Natural Resources Conservation Service was designated the federal agency. (Tribes are responsible for

developing assessments for reservation lands.)

Under federal guidelines, the first phase involves categorizing watersheds on the basis of need for restoration or protection, and selecting watersheds that are a high priority to receive additional Clean Water Action Plan funds for the 1999 fiscal year. Washington expects to receive approximately \$1.5 million dollars in extra grant money.

Two screening levels

The prioritization scheme developed by Washington’s work group used two screening levels to identify watersheds most in need of restoration during 1999-2000. The first screening level used four equally weighted criteria to evaluate watersheds on the basis of need for restoration. The four criteria are **public health** (as indicated by shellfish closures, or nitrates in drinking water); **tribal priorities** (as indicated by tribal input); **fish problems** (as indicated by the presence of at-risk fish stocks); and **water quality standard violations** (as indicated by water clean-up plans, see page 14).

The second screening is more discretionary, and is applied at the time funding decisions are made. Factors considered at the second screening level are indicators of the likelihood of success of funded projects. The second screening level

addresses the question: Can this project work and is this the most effective use of available funds?

What’s next

“The unified approach is a work in progress,” said Ecology project coordinator Chris Hempleman. “The first phase of this effort is a good start, but the process needs to be refined to look at watersheds on a smaller scale and pull in local information and resources.”

Hempleman said the participating agencies also have basic questions about the priorities set in federal guidelines. For example, guidance for the first year emphasized restoration - focusing money first on watersheds with the most problems. A number of comments received during the September ‘98 public comment period favored a preservation approach (focusing on healthy watersheds first) or a mixed approach tailored to each watershed.

“The work group will continue to refine the assessment process and consider how to design the best tool for decision-making,” said Hempleman.

For more information

For more information on the unified watershed assessment, please contact Ecology’s Chris Hempleman at (360) 407-6480, email chem461@ecy.wa.gov.



Washington State completed the first phase of a “Unified Watershed Assessment” plan, which qualified the state for additional federal funds to help clean up priority watersheds. The goal of the assessment project is to help target resources efficiently to improve watershed health.

Ecology questions cross-Cascade pipeline proposal

Ecology's review of a proposed cross-Cascade pipeline has turned up concerns about critical threats to Washington's environment.

The Renton-based Olympic Pipe Line Company has proposed a 231-mile pipeline that will stretch from Woodinville in King County to Pasco in South-Central Washington, carrying up to 4.6 million gallons of petroleum products each day. Environmental protection is important because the pipeline would cross 78 wetland areas and nearly 300 rivers and streams.

"We believe that the project, as proposed, will threaten salmon habitat and damage water quality during construction and operation of the pipeline," said Ecology's Polly Zehm. "Olympic Pipe Line Company must pay greater attention to preventing and responding to leaks, and to finding routes that cause the smallest risk to the environment."

Ecology has not taken a position on the project as a whole. However, it joined EPA and other agencies in criticizing the pipeline's draft environmental impact statement as inadequate.

Brenden McFarland, who coordinates more than a dozen Ecology staff reviewing the proposal, said the agency is playing an unaccustomed role on this project. Because it is an energy-related project, the state Energy Facility Site Evaluation Council (EFSEC) preempts all state and local permits and makes a recommendation to the governor, who then makes the final decision to approve or deny the project.

"Ecology plays a role in the pipeline project, but our job is to provide expert testimony and comment rather than make permit decisions," he said. "We have

input, but we do not make the final decisions."

Ecology reviewers want to see another draft EIS that analyzes alternative routes and stream crossing methods, pipeline leak detection and response, and other operational practices that could reduce or eliminate the effects on salmon habitat. They also want EFSEC to commit to using the EIS when it considers its recommendation to the governor.

Progress has been made in one area. Zehm said Ecology and the company have resolved concerns about the pipeline's effects on air quality. Among other things, Olympic has agreed to control air-polluting emissions from the pipeline's terminal in Kittitas and strictly control dust during construction. The agreement will be presented to EFSEC early this year for its acceptance.

Ecology is also working with experts from other agencies such as the state Department of Fish & Wildlife and the Department of Natural Resources. The agencies filed written testimony with EFSEC in February and will participate in hearings scheduled for this summer.

The final recommendation to Gov. Locke about whether to approve or deny Olympic's proposal will come from the EFSEC board, possibly in early 2000.

For more information

For more information contact Ecology's project coordinator, Brenden McFarland, (360)407-6913, e-mail bmc461@ecy.wa.gov. The full text of Ecology's comments on the draft EIS can be found on Ecology's web site at <http://www.wa.gov/ecology/sea/opl/>.



Workers line up a pipeline segment for direction drilling under the Green River. Photo: Paul Substis

Proposal would address municipal water rights

Among the components of the Governor's "water for people and fish" proposal (*see cover story*) is a proposed change to water law that would give public water suppliers greater certainty regarding what water is available for future use.

The bill addresses the complex legal issue of "inchoate" water rights held by municipalities and other water purveyors. The legal issues are fundamentally about assuring a water supply for the state's growing population while also keeping

enough water instream for fish and other instream uses.

Inchoate rights

For many years, Ecology issued water right certificates to water suppliers based on *projected* future use, rather than *actual* "beneficial use." The unused portions of those certificates or rights are known as "inchoate" rights.

Two recent Washington State Supreme

Court rulings raise questions regarding how a right is created, when a right can be changed, when a right is lost, and what special considerations water rights law affords public water purveyors.

The July '98 *Theodoratus* Supreme Court case (*see Confluence, Summer 1998*) clarified that water must be put to a beneficial use before it becomes a property right. The court also said Ecology could condition a permit to effect the public

(continued on page 12)

Municipal water *(continued from page 11)*

interest, if a permit holder applies for an extension to a permit. Ecology and the Attorney General's Office believe this ruling applies to all inchoate rights, including rights held by municipalities.

The Court's ruling in *Okanogan Wilderness League, Inc. v. Town of Twisp*, reaffirmed the idea that a surface water right had to be applied to beneficial use prior to its transfer.

For many years utilities have proposed that *transfer of water* through interties might be a way to manage water for both fish and people. In light of these court cases, interties are of limited value to meet new demands because very few proposals to transfer water through an intertie involve water previously put to beneficial use.

Certainty

These court decisions raise questions about the *certainty* a water right holder

has if the water has not been used. Public water systems need a level of certainty to obtain financing for capital facilities as well as to issue letters of water availability to development interests.

Outstanding questions that remain are how much certainty is needed, how much certainty does a water right certificate or permit give, and whether or not a water right is the proper vehicle for providing certainty.

Water use group

Ecology met with a work group through the latter half of 1998 to develop legislation that would clarify how municipalities and other public water purveyors could have certainty regarding water available for future development and how that water might be shared.

The group was not able to reach consensus, but the Governor used the work of the group as the foundation for

proposed legislative language related to the movement of inchoate water.

Bill addresses transfers

The Governor's proposal would amend water law to allow the transfer of an inchoate right and to spell out the conditions that must be satisfied when an inchoate right is proposed for transfer.

The volume of water or value paid to the state would go into either a trust water right or a dedicated fund and be equal to ten percent of the water (or value of the water) proposed for transfer. Also, the use of water must be consistent with land use zoning and any applicable water system plans or coordinated water system plans.

For more information

For more information about municipal water issues, visit www.wa.gov/ecology/ under "Water Resources," or e-mail Steve Hirschey at shir461@ecy.wa.gov.

Report suggests framework for analyzing hydraulic continuity

Over the years, water has been diverted from many of Washington's rivers, lakes and streams to the point that water supply can no longer meet the full range of competing needs. As a result, people have begun to turn to ground water to develop new water uses. However, in most of the state, surface water and ground water are interconnected, which is commonly referred to as "hydraulic continuity."

Under these conditions, wells that pump ground water "capture" the surface water either by directly reducing the amount of water in the surface water body, or more often by intercepting water that was otherwise destined to flow into surface waters. This connection of ground water and streams complicates water resource management because the water cannot be considered separate and distinct bodies of water.

A report released in August 1998 answers key technical questions and establishes a framework to begin addressing this problem.

Selecting the right tools

The report was prepared by the Technical Advisory Committee on the Capture of

Surface Water by Wells (*see Confluence, Spring 1998*). The group was convened at the behest of state legislative leaders to seek agreement among experts on appropriate technical methods for assessing and quantifying the effects of ground water withdrawals on surface waters.

According to committee member Bob Anderson, "There is no magic formula or unified approach that can adequately characterize and predict the location, timing and magnitude of surface water capture from wells in all situations."

Rather than prescribing specific analytic tools for the wide range of circumstances, the report presents a general framework for selecting appropriate tools to analyze the capture of water.

Depending on the circumstances and the technical questions posed, differing levels of analysis may be required. Additionally, some approaches are valid primarily at a local level, while others work better for watershed-scale analysis.

The report presents a range of simple to complex analytic tools, and describes how to decide which approaches are technically valid and appropriate for different hydrogeologic settings. The

report recommends that Ecology and water rights applicants use this framework to determine the best tools for evaluating applications for ground water rights.

The report concludes that water withdrawal proposals are best evaluated in the context of an entire watershed, and recommends that a concerted effort be undertaken to develop the data and analytic tools that would support the assessment of cumulative, basin-wide effects.

What's next?

The Governor's "water for people, farms and fish" proposal (*see cover*) provides principles for considering mitigation measures.

Ecology would be required to convene an interest group and scientists to review, assess and recommend methods for mitigating the effects of proposed ground water withdrawals on surface water bodies.

For more information

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

Aging dams pose threat to new homes

Ecology is discovering an unexpected consequence of population growth - many small dams in Washington that once were adequate are now a safety concern because people have moved in below them.

Ecology's Dam Safety Office regulates the design, construction, operation, and maintenance of all public and private non-federal dams that impound 10 acre-feet (3.3 million gallons) or more of water.*

Most of the 880 structures Ecology regulates are earthen dams built for recreation or irrigation between 1940 and 1960.

Ecology's latest statewide assessment of these dams shows that a third are sited above populated areas. Of these, 111 are located upstream of three or more residences and are classified as having "high downstream hazard potential."

According to Ecology dam safety supervisor Doug Johnson, this represents an increase of 10 dams sited above high downstream hazard areas in the past two years.

"There are more dams in the higher hazard category not because the dams are falling apart, but because downstream development makes a dam failure a more serious problem," said Johnson. "We're talking about people living in the path of a flood should these dams fail."

Tahuya Lake dam

The Tahuya Lake dam illustrates the problem, and how the state is responding.

The dam, west of Bremerton at the headwaters of the Tahuya River in Kitsap County, was built in 1961 to create a 150-acre lake as an amenity for a housing development.

At the time the 16-foot high dam was built, the area downstream was largely undeveloped, so the dam wasn't designed to handle large floods.

A flood hazard assessment and inspection report released in August 1998 revealed that low-lying homes near the

lakeshore are flooded by backwater from the dam in as little as a 10-year flood, due to the restricted capacity and poor design of the spillway.

A 100-year flood (*a flood that has one chance in 100 of occurring in any given year*) could inundate up to 20 lakeside homes, and would likely overtop the spillway and erode the downstream face, leading to a failure.

In the event of a dam failure, 18 to 20 homes situated on the banks of the Tahuya River downstream from the dam would be inundated by a 3- to 5-foot high flood wave.

Many homes had been built downstream from the dam since the time it was constructed, with many residents potentially at risk if the dam should fail.

The owners of the dam, an association of lakeside residents, are working with Ecology to develop a solution.

The association is starting short-term repairs and has developed procedures for warning downstream residents to evacuate during a major flood event or dam failure.

In the longer term, Ecology will work with the homeowners to make repairs to meet current state design standards for a dam with a high downstream hazard.

Renewed inspection focus

Ecology inspects dams on the high hazard list on a six-year schedule. Dams such as Tahuya Lake, that are currently rated low hazard, are inspected under a reconnaissance program that targets 20 to 30 dams a year.

Past inspection efforts focused on low hazard dams that were 15 to 20 feet high. Starting in 1999, Ecology will be evaluating low hazard dams 10 to 15 feet high.

"Tahuya Lake really opened our eyes to the potential that some small dam exists out there that now represents a public safety hazard because of downstream development," said Johnson.

"Our intent is to check these smaller dams to make sure that we don't have another high hazard dam lurking out there that hasn't been looked at in 30 years."

For more information

For more information on dam safety, visit Ecology's website at www.wa.gov/ecology/ under "Water Resources."

The latest report on the status of hazardous dams will be published in March 1999.

For more information contact Ecology's Doug Johnson at (360) 407-6623, e-mail djsd461@ecy.wa.gov.



Typical aging concrete dam. Ecology is stepping up inspections of small dams located above areas where population is increasing. Photo: Doug Johnson

*Ecology's Dam Safety Office does not regulate dikes, levees, water storage tanks, or dams owned by the federal government.

Pilot rule to test local processing of water right applications

Ecology is developing a rule that will involve county governments in processing certain kinds of water right decisions.

A law established by the state legislature in 1997 allows counties to establish **water conservancy boards** to process applications for changes to existing water right permits, certificates or claims.

Under the law, conservancy boards would be comprised of at least three commissioners appointed by the county legislative authority for six-year terms. The law requires that Ecology approve boards and oversee the water right determinations boards make.

To help implement the law, Gov. Gary Locke directed Ecology to develop a "pilot rule" to specify training requirements for the boards and other details of how the boards and Ecology would work together. Under the pilot rule, Benton and Lewis counties received training and are acting as "pilots" to test the rule and conser-

vancy-board process.

Water right "change applications" do not affect the *amount* of water being used. A "change" may include the **place where water is used**; the **location where water is withdrawn or diverted**, adding points of withdrawal or diversion; or the **purpose** of the water right (*e.g., from irrigation to domestic use*).

Currently, approximately 6,200 water-right permits statewide are awaiting decisions by Ecology. About 24 percent of the applications are for changes to existing water rights. Under the new law, local governments could be given the authority to process "change applications" awaiting decisions in their area.

The conservancy board would investigate applications and issue a recommendation to approve, deny or condition the recommendation.

Ecology would have 45 days to respond to the board's recommendation

and issue final approval, modification, or denial of the change request.

Ecology plans to adopt the final rule in summer 1999. Once the rule is adopted, Ecology will work with other communities that have an interest in establishing conservancy boards.

The Benton County Water Conservancy Board made its first decision under the pilot rule in January 1999. The board of local citizens recommended to allow a vineyard to irrigate more land while using less water by using a more efficient irrigation systems. Ecology approved the recommendation.

For more information

For information about conservancy boards, or to comment on the draft rule, visit Ecology's web page at www.wa.gov/ecology/ under "Water Resources," or contact Ecology's Peggy Clifford at (360) 407-7262, e-mail pcli461@ecy.wa.gov.

Ecology setting priorities for next year's water cleanup plans

Ecology's regional offices are asking people in four watershed areas of the state to help set priorities for cleaning up water pollution in those watersheds.

In each of these areas (*see table*), Ecology wants to know:

- What are the believed sources of pollution?
- Is pollution threatening human health or fish populations?
- What priorities should we give to the water bodies that don't meet water quality standards?
- When should the development of water cleanup plans be scheduled for each watershed?

With information from people living in these watersheds, and existing studies and reports, Ecology will draft priorities and schedules for developing water cleanup plans, including those to be initiated during the next fiscal year (7/99- 6/2000).

In Spring 1999, Ecology will also ask for public comments on the draft *statewide* schedule for developing and implementing cleanup plans.

Water cleanup plans are required by the federal Clean Water Act. The plans are known as "Total Maximum Daily Loads"

(TMDLs) because they define how much pollution "load" a lake, river or marine water can absorb and still meet water quality standards and protect beneficial uses for drinking, boating, aquatic life and other uses. The plans include recommendations for controlling pollution and a monitoring plan.

Meeting a legal agreement

Ecology's work on water cleanup plans is part of a 15-year schedule directing how Washington state will improve the health of nearly 700 polluted water segments.

The schedule was initially set as part of a Jan. 1998 agreement among Ecology, the U.S. EPA, and two environmental groups. The agreement is the result of a lawsuit the environmental groups filed against the two agencies in 1991.

Right now, Ecology is working on cleanup plans on approximately 53 water bodies. Since signing the agreement, Ecology has maintained that two elements are needed to successfully carry it out.

First, Ecology needs additional resources – staff to do the water cleanup work. Second, others, such as local governments, tribes and businesses need

to support water cleanup work. In some cases, they may actually do some of the work.

Governor Locke's draft salmon strategy emphasizes the need for clean water to aid salmon recovery. Locke's budget proposal for the next two fiscal years includes \$3.4 million in state and federal monies for more staff and resources.

In addition, the Legislature released a study on water cleanup plans in January 1999 and is considering proposed legislation for doing water cleanup work in Washington.

For information about TMDL schedules, contact Ecology's Ron McBride at (360) 407-6469, rmcb461@ecy.wa.gov.

WATERSHED AREA	ECOLOGY CONTACT
Horseheaven/Klickitat	Max Linden (509)454-7207
Upper Columbia/Pend Oreille	Dave Knight (509)625-5191
Skagit/Stillaguamish	Gerald Shurvey (425)649-7215
Columbia Gorge	Dave Howard (360)690-4796

Contact Ecology for information on setting water cleanup priorities in these watersheds.

Watershed information and lots more on website

Government agencies are steadily building a larger presence on the Internet, making it easier to find information 24 hours a day. Ecology's main webpage is at www.wa.gov/ecology/

To reach other government agencies, click the "Government" button on Washington State's new home page, called "@ccess Washington." The site, at www.access.wa.gov, is very popular, with as many as 22 million "hits" in a recent month.

Here's an introduction to a few of the many new water-related sites on Ecology's home page.

Watershed management

Ecology's new "Watershed Management" web site focuses on local area planning under the Watershed Management Act.

Pages for each of the 19 watershed areas summarize current activities, the scope of work the watershed is undertaking, and state and local contacts for more information. The site recently posted the final draft *Guide to Watershed Planning and Management*.

Each watershed page also links to a page that summarizes scientific and technical studies Ecology has conducted in that watershed (see *Conditions*, below). Go to: www.wa.gov/ecology/lats-etc.html

Conditions and trends

Ecology's "Conditions and Trends" pages offer a wealth of scientific information

about the state of the environment. For example, under the "Watersheds" page, click on a watershed area and find links to:

- a bibliography, with abstracts, of all water quality studies Ecology has conducted in that area;
- maps of river and lake water quality monitoring stations, with links to recently collected data;
- maps of biological monitoring stations, where Ecology has counted aquatic insects as indicators of the health of a stream;
- listings under the Clean Water Act's definition of "impaired and threatened" waters (the "Section 303(d)" list).

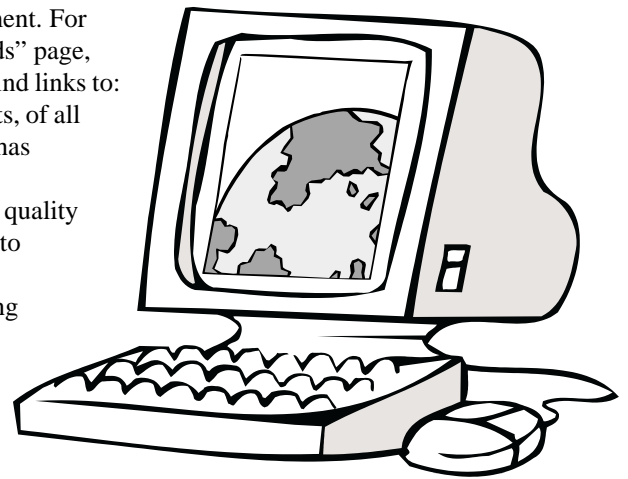
The "Conditions" site also includes data from Ecology's Puget Sound Ambient monitoring program, which has been monitoring water quality at about 40 stations since 1973.

Go to: www.wa.gov/ecology/eils/

Erosion

Ecology's popular series of books for coastal slope property owners are now on the web:

- *Vegetation Management Guide* - How to manage plants on coastal bluffs;
- *Slope Stabilization and Erosion Control Using Vegetation* - How to use plants to stop erosion on coastal slopes; and
- *Surface Water and Groundwater on*



Coastal Bluffs - How to design a drainage control system for coastal property.

Besides property owners, these sites are useful for contractors, real estate agents that deal with shoreline property, and local government permit agencies.

Go to: www.wa.gov/ecology/ on the "Shorelands/Wetlands" site.

Grant information

Water-related grant programs on-line include:

- Water quality grants and loans,
- Watershed grants;
- Coastal Zone Management grants
- Flood Control Assistance Account grants.

Most grant sites include application forms and guidance documents for downloading. Go to: www.wa.gov/fap.html.

Permit help

Ecology's Online Permit Assistance System (OPAS) offers a swift way to determine state and federal environmental permits needed for a project. The site is "interactive" - by answering a series of questions about a proposed project, viewers receive a list of required permits, and the names and phone numbers of the agencies to contact. The site also includes several permit applications for downloading.

Because changes to permitting requirements happen regularly, the site is constantly updated, so users have access to the most current information.

Besides Ecology permits, the site also

Video explores ocean coast erosion

A new video is now available that explores the complexities of Washington's coastal erosion problems.

"*At Ocean's Edge: Coastal Change in Southwest Washington*" was produced by Ecology and the U.S. Geological Survey, with help from local coastal communities.

The 20-minute video visually illustrates erosion problem areas along Southwest Washington's dynamic coast. Footage shows the forces of nature in action and a variety of scientific methods being used to sort out the causes of long-term coastal changes.

Interviews with scientists, local

government officials, and coastal residents reveal the broad range and complexity of the issues confronting coastal communities and the efforts being made to resolve these issues (see *Confluence*, Summer 1998).

For a copy of the video, send a \$5 check or money order to Department of Ecology, Fiscal Office, Attn: Cashier Section, P.O. Box 5128, Lacey, WA 98509.

For information on Ecology's coastal erosion study, visit the web at www.wa.gov/ecology/sea/swce/, or contact Brian Voigt at (360) 407-6568, e-mail bvoi461@ecy.wa.gov

(continued on back page)

Watershed data and lots more on website

(continued from page 15)

features links to important information provided by other state agencies, state air authorities and the U.S. Army Corps of Engineers. The OPAS is at www.wa.gov/ecology/sea/pac/

Lake information

The on-line version of the *Washington Lakes Book* gives tips for lakeshore property owners. The web site also includes comprehensive information on invasive aquatic plants - how to identify them and strategies for combatting them. Go to: www.wa.gov/ecology/ under "Water Quality," and "Aquatic Plants and Lakes Issues."



Washington State's new web "portal" site is at <http://access.wa.gov/>

Monitoring

The Watch Over Washington (WOW) web site is one-stop-shopping for citizens interested in monitoring the environment. The site includes a searchable **database** of volunteer monitoring groups; **news** about upcoming training sessions; information on **resources** available for volunteers (such as publications, videos, software, etc.); a calendar of opportunities; and more.

Go to: www.wa.gov/ecology/wq/wow/

It's not too early to plan for Water Weeks!

If your organization is involved in protecting water quality or stream habitat, you might want to plan an activity for Washington's **WaterWeeks** program.

WaterWeeks events are publicized through 60,000 copies of an Activity Guide, a web site and media coverage. Activities are held throughout the month of September, and are sponsored by community groups, libraries, tribes, science centers, cities and counties, watershed planning groups, and many others.

For more information, visit www.waterweeks.org, or call the WaterWeeks office at (360) 943-3642.



Nikki McClure

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 the 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: Judy Geier, Mary Getchell, Tom Gries, Chris Hempleman, Steve Hirschey, Nora Jewett, Ron Langley, Brenden McFarland, Doug McChesney.

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Change service