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## PRESIDENT'S NOTES

by Peter Sturtevant, CH2M Hill, President, AWRA Washington Section

Well, we've crossed over into the New Millennium, with no apparent crash of water supplies or other major systems in this country. With the start of this New Year, I'd like to introduce myself as the new Washington State Chapter President. Normally, the transition would have taken place in mid-November. However, with my duties as Co-Chair (along with Rod Sakrison) of the big, National AWRA Conference this past December, we delayed the "hand-off" for a month. I would like to thank out-going President, Teresa Platin, for all of her hard work this past year. Her last official function was to receive the Outstanding State Section Award from the National AWRA at the President's Reception held at the beginning of the Conference (by the way, our second such award in 17 years). Her retirement as Section President is taking place just in time. Teresa will be taking a few months off to care for her new baby, due in late January.

Over the past year and a half, as our Conference Planning Committee prepared for the National Conference, I became aware that a big event had been scheduled to occur the week before ours: The World Trade Organization Talks. It had been obvious for months that some sort of really big demonstration was going to occur during the talks. Naturally, I was quite concerned over the impact that this might have on our AWRA Conference, the very next week. After all, our Conference would be held at the Sheraton Hotel, ground zero for the WTO delegates! My fears were somewhat alleviated by reports from National Headquarters that pre-registration for the Conference was running at an all-time high. Civil disorder, or not, these attendees were committed to attending our Conference.

On Monday night, November 29, I zipped downtown, after work, to the Sheraton Hotel to check on the layout of the banquet and conference rooms for our Conference, now less than a week away. I was amazed at the level of security and the number of police at the hotel and for several blocks around. Delegates with official-looking badges around their necks were out in abundance. Although I had no badge, I was wearing a coat and tie and managed to make my way into the hotel. I poked around the lobby and the second floor, where our conference rooms were located, being as inconspicuous as possible. I stayed only long enough to get a good feel for the layout of the hotel and then beat a retreat back out of the hotel. Security certainly looked well in hand on Monday night.

Well, I need not dwell upon the biggest civil disorder to hit Seattle in at least 70 years, and I'm certainly not going to try to take sides. Between Tuesday, November 30 and Thursday, December 2, the tear gas and broken windows in Downtown Seattle made headlines across the country and the world. As previously planned, Rod and I visited the Sheraton the following Sunday to assist the National staff in setting up for the AWRA Conference. I was amazed to see that life had nearly returned to normal in the downtown area. The Conference, itself, went off almost without a hitch. One of the few complaints received was an occasional lack of parking space in the hotel garage. Obviously, no one was staying away. Attendees seemed to take the previous week's events in stride. I'd like to acknowledge the tremendous logistical support from the National AWRA staff was so critical to the success of the Conference (see Conference Article).

I now look forward to the upcoming year. I call your attention to our Annual State Conference, which will return to the traditional mid-November timeframe and will again be held at the incomparable surroundings of the Seattle Art Museum. I wish all our members a prosperous 2000. ☺

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<http://earth.golder.com/waawra/>

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# The New 4 (d) Rules - ESA Oz, or Path to Effective Environmental Auditing and Response Planning?

by Keith Wolf, Senior Biologist – Golder Associates Inc.

## ***Over the Rainbow***

As we're all excruciatingly aware, the hydrogeology of the Endangered Species Act is best characterized as a constantly shifting mass of alluvial slurry, the biology and science is an estuary of uncertainty, and the politics of decision-making are seismically unstable at best, and, at worst, unconsolidated and populist. Nevertheless, campers, fear not – there's a new sheriff in town.

Just in time to dull our collective ESA migraine, and straight out of a "not ready for prime-time," election year, Superbowl-halftime-extravaganza blitz, comes the promise of "fast, effective pain relief." This comes in the form of a set of newly proposed, and long anticipated, 4(d) rules – or, as I'd like to call it: *The Path of Least Resistance*.

## ***Follow the Yellow Brick Road***

All kidding and contrived pessimism aside, the 4(d) rules propose an ESA mechanism aimed at protecting threatened (as opposed to endangered) species. They also propose a means by which states, tribes, government entities, developers, private citizens and others can obtain assurances that certain activities they authorize or conduct are permissible under the ESA. The rulings depend heavily upon well-developed and scientifically sound conservation planning efforts much like the Habitat Conservation Plans currently used in the Section 10 permitting processes.

The new approach, "will reduce red tape, eliminate the need for Endangered Species Act-related permits for covered activities, broaden significantly the scope of conservation efforts for the fish and vastly increase people's flexibility in complying with the Endangered Species Act (ESA)" say Federal agency officials.

NMFS has issued three proposed 4(d) rules: (1) one rule covering seven threatened steelhead evolutionary significant units (ESUs); (2) one covering seven other threatened salmonid ESUs (three Chinook, two chum, one Coho, and one sockeye ESU); and, (3) a rule addressing tribal resource management plans affecting threatened salmonids. The proposed 4(d) rules for steelhead and Chinook would apply the ESA take prohibitions to all actions except those within 13 "limits" described in detail in the rules. The tribal 4(d) rule would create an additional limit for tribal resource management plans. NMFS will conduct public hearings on these proposed rules in January and February 2000 and is seeking your comments as an important part of finalizing the rule.

Instead of imposing blanket restrictions against such "take," the proposed rules would allow exceptions, depending on qualifying existing state or

local conservation programs. For example, timber management conducted in Washington state consistent with the recently enacted state forest and fish agreement would be exempted on the grounds that the state agreement alone provides the necessary fish protection. In Oregon, activities carried out in accordance with the state's department of transportation rules would be exempted as well. In Washington, the agricultural community has also begun development of the so-called "AG and Fish Plan" intended to address significant salmon recovery habitat issues throughout our region. These are examples of the kinds of efforts 4(d) rules are meant to foster and reward.

Some of the activities carried out or authorized by local governments requiring conservation planning to qualify for 4(d) coverage include the following:

- Public works projects;
- Operations and maintenance programs;
- Planning, zoning, and development permitting;
- Erosion and sediment control;
- Floodplain management;
- NPDES permit implementation;
- Water use;
- Stormwater discharge;
- Wastewater discharge;
- Road and bridge construction and maintenance;
- Pesticide, herbicide, fertilizer, and other chemical use;
- Wetland protection, alteration, or development;
- Riparian area protection, alteration, or development; and,
- Estuarine shoreline protection, alteration, or development.

One of the critical first-steps to effective planning to address these issues is an ESA Audit and Response Plan. This balanced and systematic course of action reviews local, state, private, and municipal activities in the context of conservation planning and 4(d) rule applications. Audit and response planning eliminates reactive regulatory judgments and establishes a practical and constructive approach to biological resource concerns. The deliverable is a Conservation Plan aimed at gaining 4(d) rule compliance and flexibility.

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### **The Emerald City**

4(d) has the potential for a considerable dose of laminar flow through the incised valley of ESA response planning and permitting. But only if cared for and fed properly. The intricate balancing act of protecting our region's natural resources, growth, economy, and land-use practices, depends profoundly upon specialized and effective involvement in this process. It will be incumbent upon all of us to participate in what promises to be a lively and candid debate over what form the final rule, due next June, will take.

"These proposals constitute a major innovation in the ESA program that will be good for the fish and good for the public," said William Stelle, head of the fisheries service's Northwest Region in Seattle. "By creating powerful incentives for local programs in place of Federal 'take' rules, we hope to broaden the scope of those conservation efforts and provide local governments with the option of going with home-grown solutions."

### **There's No Place Like Home**

The proposed 4(d) rule and rule-making process presents one of the best opportunities yet to secure regulatory certainty while we continue to develop technically sound and qualified conservation plans and clear implementation strategies. ESA auditing and response planning defines the issues and pathways to development of effective and de-

fensible plans, and Conservation Plans are the "contracts." These plans will result in the covered activities 4(d) is meant to exempt. Furthermore, this process can serve to increase recognition and support for the ongoing salmon recovery efforts by state and local governments, private business, and various stakeholders. Many of these plans deserve exemption status also.

Finally, functional outcomes from the rule making process itself can only be accomplished through scientifically based and defensible input. We recommend a balanced approach that recognizes the comprehensive needs of all citizens superimposed on the biological and physical requirements for natural resource health throughout our region.

The National Marine Fisheries Service will solicit comments on the proposed rules for 60 days. The agency will hold public hearings in Idaho, Washington, Oregon and California during January to gather comments on the proposals.

For more information see:

[www.nwr.noaa.gov/1salmon/salmesa/4druleph.htm](http://www.nwr.noaa.gov/1salmon/salmesa/4druleph.htm) –

for time, date and place for these meetings, and: [www.nwr.noaa.gov/1salmon/salmesa/fedreg/fr99harm.pdf](http://www.nwr.noaa.gov/1salmon/salmesa/fedreg/fr99harm.pdf) –

for information on the newly proposed rule for definition of "harm" also currently open for comment. ❧

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## **1999 – 2000 Fellowships Awarded**

**by Stan Miller, Spokane County**

University of Washington students **Amy Groome** and **Lenore Jensen** have been awarded the Washington State Section's annual student fellowships for the 1999 – 2000 academic year. Ms. Groome received the open competition award for her studies related to water supply development in the Puget Sound region. Ms. Jensen received the student section member award for her work on wetland treatment of wastewater. The 1999 – 2000 Washington Section Fellowship Awards were presented Wednesday December 8, 1999 during the Student Career Night held in conjunction with the AWRA Annual Conference at the Seattle Sheraton Hotel.

The fellowship program provides the Section with the opportunity to encourage students attending graduate school in Washington to become the future leaders in water resources management by supporting promising individuals with a financial incentive to pursue their studies. Because AWRA recognizes the interdisciplinary nature of water resources management, the Section focuses on students who are applying a range of disciplines to their research problems for recognition through the fellowship program. Three criteria form the basis for the review of fellowship applicants: 1) the inter-

disciplinary nature of the course of study and research; 2) the potential application of the work to current needs in water resources management; and, 3) the effectiveness of the response in communicating research objectives.

The Section provides two awards. One fellowship is awarded through "open" competition to any student enrolled in an appropriate graduate program offered by a Washington State college or university. Competition for the second award is limited to members of AWRA Student Chapter Members; currently only the University of Washington has a student chapter.

In addition to the \$1500 cash stipend, the award recipients receive one year membership in both the State Section and National AWRA, a one-year subscription to the *Journal of the American Water Resources Association*, and admission to the Washington State Section Fall Conference. Award winners are expected to report on their work to the Section membership either through an article in the newsletter or by a presentation at a Washington State Section sponsored meeting. ❧

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# Bull Trout Listing in Puget Sound and WA Coastal Areas

By Thomas M. Pors, Foster Pepper & Shefelman PLLC

On October 28, 1999, the U.S. Fish & Wildlife Service (FWS) announced the listing of two more populations of bull trout, also referred to as "native char," as threatened under the Endangered Species Act. The listing of the Coastal-Puget Sound and St. Mary-Belly River population segments as a threatened species now encompasses all population segments of bull trout in the coterminous United States. The final listing rule was published in the Federal Register on November 1, 1999 (Vol. 64, No. 210, pp. 58909-58933), and its effective date is December 1, 1999.

## Summary of Final Listing Rule

### *What Are The Ecological Needs Of Bull Trout?*

Bull trout require somewhat different and more particular habitat than salmon and steelhead, although they coexist in many drainages. Bull trout require colder water during all segments of their life, but especially during spawning and rearing. During these critical stages, they require a water temperature between 39 and 51° F. As adults they do not live in water above 59° F. Bull trout require complex forms of cover, including large woody debris, undercut banks, boulders, and pools. Bull trout also require relatively constant stream flow, silt levels and gravelly streambeds for their eggs, or "redds." The ability to migrate is important to the persistence of local bull trout subpopulations. Because of these finicky habitat requirements, bull trout exhibit a patchy distribution.

### *Why Have Bull Trout Subpopulations Declined?*

The final listing rule points the finger primarily at habitat degradation as the reason for bull trout decline. The bull trout's habitat has been altered and destroyed by such actions as flood control structures, hydroelectric projects, water diversion structures, irrigation withdrawals, forest practices, agricultural cultivation, grazing, urbanization, and industrial development. These activities have contributed to streambed siltation and erosion, higher water temperatures, blocking of migration, decreased water quality and quantity, and loss of cover. Fishing, disease, and predation have also affected bull trout. Past forest practices and the introduction of non-native brook trout are thought to have had substantial effects.

### *Status and Distribution*

Bull trout in the Pacific Coast and Puget Sound drainages within the State of Washington form the Coastal-Puget Sound distinct population segment (DPS). The Coastal-Puget Sound DPS is further divided into five "analysis areas" – Coastal, Strait of Juan de Fuca, Hood Canal, Puget Sound, and Transboundary. Further subdivision occurs within each analysis area. Bull trout in each analysis area are divided into subpopulations, which are reproductively isolated from each other. Within the Puget Sound analysis area there are 15 native

char subpopulations in eight river basins, the Nisqually, Puyallup, Green, Snohomish, Skykomish, Stillaguamish, Skagit and Nooksack Rivers, and the Lake Washington Basin. While the listing rule affects all bull trout populations in the coterminous United States, the segments and analysis areas will be used by FWS to distinguish recovery objectives and for consultation and delisting purposes.

### **Likely Effects/Prohibitions of the Final Rule**

Because the upper reaches of streams are the most important for spawning and rearing habitat, forest management and agricultural practices will likely be the most by this listing. Municipalities and irrigators that divert water from upstream areas might also be required to reduce or modify their diversions. Generally, though, it seems unlikely that the bull trout listing will place greater burdens on municipalities than will occur from the Chinook salmon listing, except in coastal areas not already affected by the Chinook listing.

Critical Habitat. FWS has determined that critical habitat for bull trout is "not determinable" at this time due to lack of information, but it will be addressed in the future.

Consultation. The ESA §7 consultation requirement applies to any proposed action by a federal agency that may affect bull trout or other listed species. Much of the state's bull trout habitat is in federally owned national forests, wilderness areas, national parks and wildlife refuges. Any federal agency program regarding the use of these lands and resources must comply with the consultation requirement. State, municipal or private actions requiring a federal permit or funding also require consultation if the action affects bull trout or their habitat. Except for coastal areas not affected by the Chinook listing, this has already been required throughout most of the state because of other salmon and steelhead listings.

Take Prohibition. FWS, unlike the National Marine Fisheries Service (NMFS), automatically applies the ESA §9 take prohibition to threatened species as well as endangered species, therefore a §4(d) rule is not required before the take prohibition can be enforced, making the impact of this listing on nonfederal actions more immediate than the Puget Sound Chinook listing. The Department of the Interior has defined "take" to include significant habitat modification, therefore the absence of a critical habitat designation is somewhat moot. The take prohibition applies to all persons and agencies, and can be enforced by citizens through federal lawsuits after giving 60 days' notice.

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The final listing rule identifies the following activities that would or would not constitute a prohibited take of bull trout:

Actions That Would NOT Violate Section 9:

- Actions authorized by a §7 incidental take statement, a §4(d) special rule exemption, or a §10 incidental take permit;
- Possession of bull trout caught legally in accordance with applicable State, Tribal, and National Park fishing regulations;
- Planting native vegetation in riparian areas;
- Installation of fences to exclude livestock from riparian areas;
- Placement of fences and gates to limit use and disturbance of habitat by humans;
- Current operation and maintenance of fish screens on water diversions and pump intakes, but not the effects attributable to operation of diversions or pumps which deplete streamflow;
- Maintenance of structures such as homes and commercial buildings located close to streams but outside of channels, but not discharges of pollutants associated with such uses; and,
- Lawful use of existing roads, but not their maintenance or direct impacts on habitat, such as from stormwater, failing culverts or blocked migration.

Actions That Would Violate Section 9:

- "Take" of bull trout, as broadly defined, without incidental take authorization from FWS;
- Possession, transportation, or sale of illegally taken bull trout;
- Introduction of non-native fish species that compete, hybridize with, or prey on bull trout;
- Destruction or alteration of bull trout habitat by dredging, channelizing, diverting, grading, stormwater runoff, failing culverts, roads that block fish migration, or other activities that significantly degrade cover, channel stability, substrate composition, turbidity, temperature, and migratory corridors used by bull trout;
- Discharge of pollutants that result in death or injury to bull trout; and,

- Destruction or alteration of riparian or lakeshore habitat and adjoining uplands of waters supporting bull trout by timber harvest, grazing, mining, hydropower development, road construction, or other development activities that significantly degrade cover, channel stability, substrate composition, turbidity, temperature, and migratory corridors used by bull trout.

Special Rule. FWS has published a notice of intent to prepare a "special rule" under ESA §4(d) that will address habitat restoration activities, and land and water management. The idea is to encourage state and local governments to gain an exemption from enforcement for their land use permitting programs and utilities by developing bull trout conservation plans for approval by FWS. The final listing rule also contains a special rule that allows for the take of bull trout within the Coastal-Puget Sound segment when it is in accordance with applicable State, Tribal and National Park fishing regulations.

Habitat Conservation Plans (HCPs). In anticipation of this and other listings, Seattle and Tacoma prepared HCPs and sought incidental take permits under ESA §10 from FWS and NMFS. These actions will provide long-term certainty for their water diversions from the Cedar River and Green River basins in exchange for conservation measures designed to insure the long-term survival of bull trout, Chinook salmon and other species. The Plum Creek Cascades HCP, Washington DNR HCP, and the Forests and Fish Plan also protect substantial habitat for bull trout on both sides of the Cascades. These plans may be the model for other industry-wide or basin-wide efforts to recover bull trout and other aquatic species throughout the state in order to avoid enforcement actions, citizen suits, and the specter of extinction of these native species.

Additional information on bull trout, including a copy of the final listing rule, can be obtained on the FWS Pacific Region website at <http://www.r1.fws.gov/news/bulltrout>. Information about other listings of salmon and steelhead, including links to other federal, state, regional and local government recovery programs, is available on the state of Washington's official salmon recovery website at <http://www.governor.wa.gov/esa/> ❧

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## Ecology to Transfer Water Right to Irrigation District

YAKIMA - Washington Department of Ecology (Ecology) plans to assign a portion of its water right on Osoyoos Lake to the Oroville-Tonasket Irrigation District (OTID).

Ecology is considering assigning to OTID a supplemental water right to be used when the International Joint Commission declares a drought and the district's historic Osoyoos Lake water right cannot be exercised because of minimum flow re-

strictions. The non-interruptible water right would equal one foot, or 5,700 acre-feet, of storage annually.

This would settle a long-time dispute between Ecology and OTID. OTID agrees to relinquish its reservoir permit to develop water storage in Palmer Lake, as well as to withdraw a water right claim on the Similkameen River and withdraw several pending water-right requests from Palmer Lake. ❧

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# Artificial Redds Provide Clues To How Flooding Affects Salmon Egg Survival

by, Logan Harris, North Sound Information Officer, Northwest Indian Fisheries Commission

FINNEY CREEK -- They home in on the right Finney Creek spawning gravels before digging, then placing egg nests, or salmon redds. It happens every fall here and in many Skagit River tributaries, it's just that the redds typically are not plastic gravel-filled boxes, and the species doing the work aren't biologists and technicians.

But for the last two years, staff from Skagit System Cooperative (SSC) -- the fisheries management consortium of the Swinomish, Upper Skagit and Sauk-Suiattle tribes -- have placed artificial redds and scour chains in Skagit tributaries to learn more about how high, fast-moving water affects Chinook salmon egg-to-fry survival.

The project is designed to give good information about the sensitivity of egg-to-fry survival to changes in peak flows -- such as the extent to which spawning gravels are scoured away or egg nests are smothered with sediment. Such information will help produce more accurate pre-season run-size forecasts, a critical element in setting abundance-based fisheries.

"Although the relationship between habitat and Chinook escapement (the number of fish needed to return, spawn and perpetuate the run) is poorly understood in most cases, the mortality associated with peak incubation flows does seem to have a major effect on juvenile Chinook survival on the Skagit," said Eric Beamer, Senior Restoration Ecologist for SSC and lead project investigator.

Perhaps most importantly, the data can help SSC target restoration actions to streams where peak flows produce the harshest impacts to survival.

Results may show that egg mortality for some spawning areas is most related to scour from an increase in peak flows, not changes in sediment supply. If peak flows are caused by natural cycles of rain and snow, no action would be necessary. But if the cause is from something man is doing then those issues would be targeted for restoration.

"This study will help to draw the link that land use actually has some effect on the number of salmon available for harvest, and help define actions that might actually restore Chinook stocks, rather than relying solely on harvest restrictions," said Lorraine Loomis, Swinomish Fisheries Manager.

The artificial redds are essentially open plastic boxes with grating able to contain gravel but allow in sediment. They are installed where salmon redds are present and are retrieved throughout the incubation period after peak flow events. Any remaining boxes are retrieved when most fry have emerged. Once retrieved, the sediment is sieved to determine the amount of intrusion on eggs. SSC staff have installed more than 400 egg boxes in six different spawning areas.

Scour chains, a cable string of whiffle balls pounded directly into the streambed, monitor the depth of gravel movement and indicate whether the artificial redds have been exposed.

Combined with existing peak flow data spanning some 70-plus years, and similar research taking place on the North Fork of the Stillaguamish, a general model of Chinook egg to migrant fry survival was developed. The study has already produced some interesting conclusions.

Data show that six stock of Skagit Chinook and one stock of Stillaguamish Chinook were unable to produce enough return spawners to replace themselves if peak flow during the egg incubation period was equivalent to a 20-year event or larger.

"Egg incubation survival limited Chinook recruitment over 30 percent of the time, suggesting that the egg-to-fry life stage of the Chinook life cycle can limit adult production even when flooding is not severe. Clearly, freshwater habitat conditions at the egg to fry life stage can be a bottleneck to production of Chinook stocks," said Beamer. "This information is important when considering how to protect and restore Chinook." ❧

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## Proposed Radon Rule

In November 1999, EPA released for public comment proposed drinking water standards for radon. It could have significant implications for many Washington water providers. Comments are due by February 4, 2000. Final federal requirements for addressing radon are expected to be implemented in 2003.

Breathing radon in the indoor air of homes is the primary public health risk from radon and is the second leading cause of lung cancer in the U.S. Health risks of radon in drinking water are consid-

ered far less than radon in indoor air. The EPA-proposed radon standards are an attempt to encourage states to adopt indoor air regulations and programs.

EPA's radon proposal includes a 300 pCi/L maximum contaminant level for community water systems that use ground water, or an alternative, less-stringent MCL of 4,000 pCi/L water systems can comply with if they or their state implement an EPA-approved program to reduce radon risks in household indoor-air as well as tap water. ❧

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# Nooksack (WRIA 1) Instream Flow Needs Conference

by David Fernet, Golder Associates

A workshop was held in Bellingham from September 15 to 17, 1999 to consider suitable methods for identifying instream flow needs for fish in the Nooksack River Basin. The workshop was sponsored by the five initiating governments, specifically the City of Bellingham, Lummi Nation, Nooksack Tribe, PUD #1 of Whatcom Co., and Whatcom Co..

Four prior attempts at developing a watershed management plan for the Nooksack Basin were unsuccessful primarily due to the wide variety of stakeholder interests within the basin. Land uses include dairy, livestock and poultry raising, and cash crops (e.g., berries, peas, corn) in the lower basin, to forestry in the upper basin. Fishing has also traditionally been an important part of the economy.

The lower basin has changed significantly. The area was logged, drained, and diked to facilitate agricultural activities. These activities have resulted in the loss of habitat for fish species such as Coho and possibly Chinook salmon, and have resulted in very high runoff during rainfall or snow-melt events, and very little runoff thereafter. In the upstream area of the watershed, land use activities are primarily related to forestry, which has also led to hydrograph and sediment loading changes.

A novel strategy was employed to develop a framework for identifying basin instream flow needs. Twelve technical experts in the field of instream flow needs were assembled from industry and regulatory bodies, most of whom had in excess of 20 years of experience. Golder Associates was represented by Mr. Dave Fernet. The workshop was chaired by a widely respected instream flow needs researcher, Dr. Thom Hardy of Utah State University. The intent of the workshop was for the group of experts to develop a framework to identify the basin instream flow needs. In order to promote understanding and buy-in by the variety of stakeholder groups, 45 stakeholder group representatives were invited to observe and participate in the workshop. The entire proceedings were also video taped, with copies made available.

Streams and rivers were placed in 15 to 20 groups defined by basin characteristics, water quality, biology and land use. The strategy is then to conduct detailed instream flow needs studies on approximately 3 to 5 representative watercourses within each group, which would provide some relevant information regarding instream flow needs for other streams within the group, which have not had the benefit of a detailed study.

The experts then focused on providing input into the types of hydrological information that would be required for an instream flow needs analysis.

Streamflow statistics such as daily flows, recurrence interval flows, peak flood flows, and annual and monthly exceedence flows were identified as being necessary for conducting an analysis. The USGS would be charged with developing these statistics. A discussion was carried out about any suitable instream flow needs methods based on hydrology rather than biology. Ultimately, there was consensus within the group that if there was a requirement for a hydrological-based method, the "Toe-Width Method" currently being used by the Department of Ecology is appropriate.

The field methods were discussed. As the overall instream flow needs analytical technique of choice is the Physical Habitat Simulation (PHABSIM) group of models of the Instream Flow Incremental Methodology (IFIM), much of the discussion related on how to collect the appropriate information for use of these tools. There was also discussion on techniques for high gradient headwater streams, where the PHABSIM models did not work well. Methodologies that look at gravel tail-outs in pools, and plunge pool analysis were also discussed.

The workshop concluded with a discussion of habitat modeling, with the focus on PHABSIM, as well as a discussion of habitat suitability criteria for use in habitat modeling. New developments in the form of two- and three-dimensional hydraulic models were discussed. In terms of habitat suitability criteria, several points were raised.

Developing habitat preference information was highlighted. The information used should be true preference information, which involves making sure the habitat characteristics that are being used by the fish are because they actually prefer that habitat, and not because habitat is limiting and that the fish has no choice but to use what is available. If habitat preference information is transferred from one river or stream to another, it is very important that a validation or verification study is carried out.

Validation and verification was strongly recommended throughout the approach developed at the workshop. Adaptive management approach was also recommended, in which management activities are continually being evaluated, and modified if the desired ecosystem response is not achieved. The importance of developing a comprehensive database was also encouraged, which is continually updated as each new piece of information is generated from the basin.

A report being prepared on the workshop will be reviewed by technical experts, initiating governments, planning unit, an external peer review, and the public prior to being finalized. The date for final submission of the report to the initiating governments is March 2000. ~~~

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## Welcome to the New WA-AWRA Board!

### Executive Board Members:

**President: Peter Sturtevant** – Pete is a Senior Water Resources Engineer at CH2M HILL in Bellevue. Working primarily on drainage and stream restoration projects, his experience in the fields of water resources and environmental impact assessment has included water supply studies, water quality assessments, flood control, wastewater and water reuse projects. A proud Husky Alumni, Pete enjoys hiking, canoeing, sailing, and other water related activities in the Great Northwest. Pete Co-Chaired the recent AWRA National Conference, held December, 1999 in Seattle.

**Vice-President: Fran Solomon** - Fran is a Senior Ecologist at the King County Department of Natural Resources, where she is involved in salmonid habitat protection and recovery efforts for the Snoqualmie Watershed. She earned her Ph.D. in Fisheries from the University of Washington and has extensive experience in developing and implementing action plans that address water quality, habitat, and contaminated sediment issues in urban bays, lakes, and streams. Fran also mentors young women and girls who are interested in science careers. Fran and her husband live in Seattle and enjoy traveling, bicycling, backpacking, theatre, and music.

**Editor: Chris Pitre** – Chris is a hydrogeologist with Golder Associates. He works primarily in water resource management, including assessment, characterization, development, and protection, including water rights and other permitting, for both the public and private sectors. Chris' current focus is the integration of multiple disciplines into complete resource management. Brian (6 months old) just joined Chris and his wife, Sherry, in the enjoyment of life in this past year.

**Secretary: Stephen Hirschey** – Stephen works with the Washington Department of Ecology's Water Resources Program. Steve earned his B.S. in Natural Sciences from St. John's University, and his M.S. in Environmental Studies from the Evergreen State College. He has experience working with instream flow studies, water right administration, and more recently, state water policy, legislation development, and rule adoption. Steve is married and the father of six year old Olivia, and four year old David. In his leisure time, Steve enjoys snow-skiing, hiking, and camping.

**Treasurer: Ingrid Wertz** – Ingrid is a Water Resources Engineer/Scientist with Taylor Associates in Seattle where she works primarily on stormwater monitoring, NPDES compliance, and water quality and quantity monitoring in general. Her work experience also includes project permitting and Superfund site investigations. She received her MSE in Environmental Engineering and Science from the University of Washington and was a Guest Researcher in the Limnology Department at Lund University in Sweden. When not outside collecting samples in the rain, Ingrid enjoys backpacking, telemarking, traveling, and ultimate (Frisbee that is).

**Past President: Teresa J. Platin** – Teresa is head of the Seattle Area Water Resources Group with CH2M HILL. Her primary interests are in surface water hydrology, stormwater conveyance and treatment, and wetland systems. A graduate of both The Ohio State University (B.S.C.E.), and the University of Washington (M.S.C.E.), Teresa is an active participant in volunteer science education programs in elementary schools. She lives in Newcastle, with her husband and almost 4 year old daughter. She is expecting her second child in late January.

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## Directors

**Director West: Grant Bailey** is Managing Principal of the 37 person Bellevue office of Jones & Stokes. With a background in marine biology, water quality and energy, his work has included outfall studies, energy facility siting, NEPA/SEPA EISs on freeways, oil terminals, transmission line routing and cogeneration facilities. Grant and Julie have a daughter at Western Washington University and another in high school in Seattle. Grant's interests include fly fishing, canoeing, camping, and related summer and winter outdoor activities.

**Director: Naomi Chechowitz** is an engineer with WSDOT (Northwest Region) in the Hydraulics/Water Quality Group within the Environmental Program. She received her MSE in Environmental Engineering and Science from the University of Washington and BS in Biology from Wheaton College.

**Director: Chris Cleveland**, a vice president with Brown and Caldwell, manages the Olympia office. He is involved with projects in the areas of water reuse, watershed planning/TMDLs, utility competitiveness, and wastewater management for private and public entities. Chris, his wife, and their children live in the Olympia area and enjoy spending time together as a family, gardening, hiking, golfing, and playing basketball.

**Director: Adam Gravley** practices environmental and municipal law, with a concentration on water law, in the Seattle office of Preston, Gates and Ellis. He represents business, local government, and individual clients on all types of water rights matters. Adam lives in Seattle with his wife and two daughters and enjoys hiking, skiing, and playing basketball.

**Director: Logan Harris** is an information and education officer with the Northwest Indian Fisheries Commission. As senior water rights holders in most Puget Sound watersheds, the tribes are heavily involved in watershed management and recovery. Logan provides outreach and public relations services for tribal natural resource programs and recovery efforts. He attended the University of Oregon and was a newspaper reporter for 11 years before joining the NWIFC. Logan lives in Mount Vernon and is engaged to be married next year.

**Director: Stan Miller** is Program Manager for Spokane's regional aquifer protection program. This program works toward integrating the groundwater protection efforts of all municipalities and water purveyors using the Spokane Valley-Rathdrum Prairie Aquifer; the program is administered through the Spokane County Public Works Department, Utility Division. In addition to working on this program at the administrative level, Stan has developed technical information and conducted local studies on the potential impacts of storm water infiltration on ground water quality and the interaction of the Spokane River and the Spokane Valley Aquifer. Away from work Stan enjoys

canoeing, backpacking, running, and working on the restoration of a turn-of-the-century home.

**Director: Erin Nelson** is an Environmental Engineer at King County Department of Transportation where she works on permitting and environmental mitigation projects. She has an M.S.E. in Environmental Engineering from the University of Washington Center for Urban Water Resources Management and is the Past President of the AWRA UW student chapter. Prior to returning to school for graduate studies Erin was a geological engineer at GeoEngineers.

**Director: Ann Root** is a geographer with interests in natural resources, especially water resources policy. She is currently doing contract work for environmental consultants and researching a book on the birds of the Lewis and Clark Expedition. She hopes to obtain a permanent position with a consulting firm soon. She lives in Ballard with her husband, Ken Rauscher. In their spare time they enjoy hiking, birding, and canoeing.

**Director: Rodney Sakrison** is a water resources professional with the Washington State Department of Ecology. He has over twenty years of experience in the Water Resources and Water Quality Programs. He has earned his Ph.D. in Urban Design and Planning from the University of Washington. He is the Watershed Lead for the Upper and Lower Skagit Basins, Island County and San Juan County, where he is coordinating watershed planning and salmon recovery efforts. Prior to joining Ecology he worked at King County, the Seattle District Corps of Engineers, and the Muckleshoot Indian Tribe.

**Director: Mike Wert** is Vice President and Manager of the Water Resources and Utilities Division at Shapiro and Associates, Inc. of Seattle. His career has involved the planning of water supply, stormwater, wastewater, hydroelectric, and transportation facilities in the Pacific Northwest. Mike, his wife, and daughter reside in Kirkland and enjoy fishing and boating in Puget Sound and hiking or horseback riding the Cascades and Okanogan County.

**Faculty Advisor: Derek Booth** is a research associate professor at the University of Washington and the director of the Center for Urban Water Resources Management, a research center established to investigate the effects of land-use changes on the Pacific Northwest's water resources. Prior to this appointment he worked for eight years in King County's Basin Planning Program. He presently holds faculty appointments in the departments of Civil and Environmental Engineering, Geology, Forestry, and Landscape Architecture. ☸

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# SEATTLE NATIONAL CONFERENCE A SUCCESS

by Rob Sakrison

In early December, our State Section was on "center stage" as Host of the 35<sup>th</sup> Annual Conference of the American Water Resources Association. The Conference was held December 5 through 9 at the beautiful Sheraton Hotel in Downtown Seattle, Washington. Attendance was just under 600 registrants, nearly a record. These impressive numbers are the result of strong local and regional attendance. A hearty thanks goes to our State Section members for the strong support given to this Conference. I think that it is certainly fitting that our chapter was awarded the Outstanding State Section Award at the Sunday Night President's Reception held on the eve of the Conference.

This year's Theme was *Watershed Management to Protect Declining Species*. An entire track of the Conference was devoted to water management programs around the Country, which are being carried out to restore threatened and endangered aquatic species. This is an especially important topic in the Northwest Region the location of the Conference Host: the Washington State Section. Here numerous races of salmon and trout have been placed on the endangered species list during the past decade. Conference sessions were organized around regions from across the Country:

- Maine
- Platte River
- Puget Sound
- Missouri River
- Rio Grande River
- Columbia-Snake Rivers
- Edwards Aquifer, Texas
- South Florida/Everglades
- San Francisco Bay/Delta
- Upper Colorado/Green rivers

The Opening Session featured remarks by John Warwick, AWRA President, as well as from the two Conference Co-Chairs: Rod Sakrison and Pete Sturtevant. King County Executive, Ron Sims, was the featured speaker. Mr. Sims described the extensive activities underway by the Puget Sound counties in changing their procedures to better assure protection for recently listed salmon species, a particular challenge within this highly urbanized area. Speaking to a packed banquet room, he touched every listener with a personal thank-you for the dedication within our broad profession to improving the environment and the human quality of life. He also issued a stirring challenge to actively support efforts to enhance the environment through each person's personal and professional efforts.

Two additional plenary sessions were held on Tuesday and Wednesday mornings to discuss regional and national views on the effects that the Endangered Species Act has had in changing the ways in which water is managed. A panel of local leaders discussed what is being done in central Puget Sound to address ESA issues. Panel mem-

bers included Elizabeth Babcock (NMFS), Martin Baker (Seattle Public Utilities), Timothy Ceis (King County DNR), Chuck Mosier (City of Bellevue) and David Somers (Snohomish County Council). This was a chance to showcase to a National Audience the level of cooperation and coordination that has already taken place in our region, as well as the scope and complexity of the issues. All panel members agreed that they were working well together toward common objectives. Several panelists commented on the seriousness of the measures that society will be called upon to recover salmon in our streams and waterways; it will be a long and expensive process.

On the national stage, major examples of species recovery measures presented at the Conference include: altering dam operations to more closely mimic natural flow patterns along the Missouri, Colorado and Columbia river systems; potential curtailment of the major supply to 20 million people in California to assure adequate estuarine conditions in the upper San Francisco Bay; a new groundwater management agency (Edwards Aquifer Authority) to assure adequate flow from major springs supporting endangered species in the San Antonio area. At Wednesday's Plenary Session, Nancy Gloman, Head of the U.S. Fish and Wildlife Service's Endangered Species Section, spoke of her agency's role in promoting species recovery. Richard Opper, Ray Tenney and Susan Hughes are representatives of three regional water agencies who spoke of their respective efforts to manage water to recover endangered species. Three things were clear from their presentations: 1) species recovery efforts require a clear consensus among all major water users, 2) recovery programs are complex and require a long period of time, and 3) the regulated agencies strongly feel that more cooperation and flexibility is needed at the federal level. Rounding out the session, Bruce Davies, Northwest Indian Fisheries Commission, spoke of the critical importance of involving affect Indian Tribes in species recovery programs. The tribes often view the Endangered species Act as only a starting point; their objective being to restore commercially important endangered species beyond minimal recovery levels, up to harvestable levels.

The two other major tracks of the Conference were Watershed Management and Ecosystem Restoration. The influence of the "Hometown Crowd" was very evident as a number of sessions devoted to Washington State or Puget Sound issues were filled beyond room capacity. With the exception of a few complaints regarding several crowded sessions, the Conference went off quite smoothly. Across the four days of the Conference there were a total of 183 presentations plus 32 posters.

One of the Conference highlights was the Tuesday Night Social Activities, put on by our own State Section. This featured two unique events: the Water Knowledge Bowl and the Millennium Ball,

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performed the by AWRA All-Star Band. The University of Washington Student Chapter, assisted by the University of Wisconsin Student Chapter organized the Water Knowledge Bowl. A panel of Washington State Section members faced off against an opposing panel of National AWRA members, with the students firing questions. A not-always-impartial panel of student judges frequently interrupted the contest to add their two-cents worth. The audience definitely seemed to favor the National Panel. Unfortunately, very few of the local attendees stayed around to participate in this event; we were definitely out-numbered by the Out-of-Towners. There were gaffs and laughs galore. After an early lead by the Washington Section, the National Panel prevailed and was awarded a perpetual plaque at the end of the hour-long contest. It was a close call. The Organizing Committee for next year's Conference in Miami stated its interest in staging this event. Hopefully, it will become an AWRA tradition.

Immediately following was the Millennial Ball, which lasted well into the night. Rod Sakrison's Band, *The Jaywalkers*, formed the core of this musical presentation. At least five AWRA members and/or members of the local water resource community joined the band during the evening.

These included: Paul Korsmo (Entanco) Guitar and vocal; Bill Derry (CH2M HILL) guitar and vocal; Professor Dave Montgomery (UW Geology Dept.) Guitar; John Warwick (AWRA President) drums; Sophia Smith (Hart-Crowser) Vocal. A wide range of music was played, but the band settled into Rock and Roll tunes that had most of the participants dancing the night away. All in all, it was a great evening of entertainment.

In addition to the Conference, itself, a weekend workshop on *Watershed Characterization and Monitoring* was held. There were also two day-long field trips: a *Tour of Innovative Urban Runoff Control and Stream Restoration Projects* in the area and a *Tour of the City of Seattle's Cedar Watershed*, located in the heart of the Cascade Mountains, east of the city. By week's end the Conference had been judged as a great success. AWRA Executive Vice-President, Ken Reid remarked that this was the finest AWRA Conference he had attended. This is high praise from the man who has helped to organize the last 18 conferences! The bar has definitely been set for the Year 2000 Conference to be held this November in Miami. ☺

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## Wildlife Viewing

(from <http://www.wa.gov/wdfw/do/weekendr/weekendr.htm>)

**N. Puget Sound:** The Skagit Valley is loaded with wintering trumpeter swans, eagles, a whole variety of raptors and snow geese," reports WDFW Wildlife Biologist Mike Davison. For a good spot to enjoy snow geese, visit the Fir Island Farm Reserve about two miles west of Conway. Meanwhile, in the Upper Skagit Valley, bald eagle numbers continue to build, although viewing conditions fluctuate with river water levels. High waters cover river sand bars where eagles dine on spawned-out salmon carcasses.

**Olympic Peninsula:** With hunters preparing the leave the field, WDFW biologists have begun their Midwinter Waterfowl Inventory to make an annual assessment of the flocks. One place they'll be checking – and wildlife watchers might consider it too – is the Chehalis River valley between Elma and Porter, where between 300 and 400 trumpeter swans were spotted on a recent weekend. Also look there for a herd of about 150 Roosevelt elk, which have moved down from higher elevations to escape the winter snow.

**SW WA:** Hundreds of elk are visible around the base of Mount St. Helens. Pull off Highway 504 en route to the visitor's center and look for them in the valley below. While in the area, why not check the beauty of a frozen waterfall? The Lewis River has one of the state's highest concentrations of waterfalls, according to author James Luther Davis. See them along the river between Mount St. Helens and Mount Adams in the Gifford Pinchot National Forest. Take the Highway 503 exit from Interstate 5 and follow it as it becomes the Lewis River Road and then Forest Road 90. The falls are located east of Swift Reservoir

**N. Central WA:** Celebrate the new year with an outing to Okanogan County's Methow Valley to view wintering mule deer herds on the slopes above Hwy. 20 between Mazama and Twisp. Well over 10,000 mule deer – the largest migratory herd in the state – winter here. Given the right conditions, you may see 100 deer in a day of driving and watching through the valley. Cross country skiers and others who might have a closer mule deer encounter should remember to give them a wide berth to avoid stressing these animals.

**S. Central WA:** Wintery conditions have yet to set in at the Oak Creek Wildlife Area, just northwest of Yakima, so WDFW's winter elk feeding station there is not operational. Some elk that are used to the feeding pattern are hanging around, but the hundreds that usually congregate in the snow to feast on hay and alfalfa pellets are not to be seen. ☺

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## Upcoming Events

**January 19 6:30 p.m. Washington State Legislative Update On Water Resource Legislation for the 2000 Legislative Session**, Ken Slattery, Washington Department of Ecology. Washington Hydrologic Society. Meeting at the U.S. Geological Survey, Suite 6001201 Pacific Avenue, Tacoma. \$5.00 RSVP Llyn Doremus at (360) 592-2632 (email: [ladoremus@aol.com](mailto:ladoremus@aol.com), or Brian Drost at (253) 428-3600 x2642 (email: [bwdrost@usgs.gov](mailto:bwdrost@usgs.gov)).

**January 26, 7:00 p.m. Freeman House**, author of "Totem Salmon," and Tom Jay, co-author of "Reaching Home" will join us on Wednesday, at Maple Hall in La Conner. Freeman House is a leading voice for the growing watershed restoration movement. Tom Jay, writer, sculptor, and poet, is the co-founder of Wild Olympic Salmon. Their reverence for wild salmon, their knowledge of salmon-lore and their vision of a more sustainable future make for an unforgettable evening.

**February 23, 2000 5:30 p.m. Draft Stormwater Manual for Washington State**. Arthur Fleming, Golder Associates, Tony Barrett and Ed O'Brien, Washington Department of Ecology. WA-American Water Resources Association. Rock Salt Restaurant,

**March 11, 1999 Water for Life Fundraising Reception**, Dome Room in the Arctic Building (700 Third Avenue), Seattle, WA Water for the People, 11327-17th Avenue NE/Seattle, WA 98125, 206-297-3024, [msmith@water.org](mailto:msmith@water.org)

**April 10-12, 2000. FISH R<sup>2</sup> or Restoration and Recovery of Fish and their Habitat**. Cottontree Inn and Convention Center in Mt. Vernon, WA. Sponsored by the North Pacific-International Chapter of the American Fisheries Society. Contact: [william.mavros@metrokc.gov](mailto:william.mavros@metrokc.gov).

**April 27-29, 2000, Cordilleran Section meeting of the Geological Society of America**, Vancouver, British Columbia. <http://www.geosociety.org/profdev/sectdiv/cord/00cdmtg.htm>

**October 15 - 17, 2000, Symposium on the Hydrogeology of Washington State**, DoubleTree Suites, South-center, Washington. Call for papers to be released in January.

**December 13-16, 2000, Ground Water: A Transboundary, Strategic And Geopolitical Resource Conference** Announcement: Call for Participation, Las Vegas, NV. Assn. of Ground Water Scientists & Engineers, Michael E. Campana, Chair ([aquadoc@unm.edu](mailto:aquadoc@unm.edu); 505-277-3269; Fax: 505-277-3269. <http://www.ngwa.org/membership/agmain.html>

**January 7-9, 2001, International Symposium on Integrated Decision-making for Watershed Management**, Chevy Chase, Maryland. <http://www.conted.vt.edu/watershed.htm>.

**May 20-24, 2001, Integrated Surface and Groundwater Management, Orlando, Florida, ASCE**, [www.asce.org/conferences](http://www.asce.org/conferences)

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This newsletter is a publication of the Washington Section of the American Water Resources Association. It is published bi-monthly or quarterly. This is a forum for members to share ideas and opinions; opinions expressed in the AWRA Newsletter are those of the authors and do not necessarily represent the official position of the WA Section of AWRA. Comments on articles are welcome.

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Submissions are welcome for the March/April, 2000 newsletter. The submittal due date is March 3, 2000. The editor reserves the right to make changes for reasons of length, grammar, legality or clarity. Contact Chris Pitre at (425) 883-0777, or send submittals directly via:

Internet Mail: [cpitre@golder.com](mailto:cpitre@golder.com) (most document/graphic formats are acceptable). Recent newsletters are available on: <http://earth.golder.com/waawra/>

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# Ecology Limits Use of Municipal Inchoate Water Rights

By Kathleen Gilstrap, World staff writer

ENTIAT -- A change in the way the state Department of Ecology defines municipal water rights has halted an 85-home development here and could affect other Washington cities. The new interpretation restricts water rights for cities to the city limits at the time the state issued a water rights certificate. Entiat got its certificate in 1958.

The state ruling stopped work at the Treasure Haven subdivision on Highway 97 and Howe Street, beyond Entiat's city limits in 1958 and still outside the city. Prime Land LLC, the developer, expected to complete the first phase of the project before winter. "This is a huge one because the situation is that the city, like others in the state, thought it could service growth," said Entiat City Attorney Steve Smith. "This could impact almost every city in the state."

Ecology officials based their decision on recent rulings by the state Supreme Court, even though those rulings did not specifically address municipal water rights. The court said water rights extended to water used at the time the certificate was issued, and not to the system's capacity. Ecology officials said they believe that same rule applies to cities, and interpret that to mean that water rights do not extend beyond a city's boundaries at the time the water rights were given. In both cases, the court said water systems were only entitled to the amount of water in use at the time the rights were issued.

But State Rep. Gary Chandler, R-Moses Lake, the chairman of the Agriculture and Ecology Committee, said the court specifically said the rulings did not apply to municipal water systems. Chandler said Ecology wants to take away a city's rights to water that it might use in the future, which is called inchoate water rights. "If you do not let municipalities have that inchoate water right, you've shut down all growth," Chandler said.

Entiat officials will meet with Ecology officials on Jan. 20, but may be in limbo indefinitely. "We have to proceed very carefully because anything we do that is not within the bounds of the law or doesn't make sense will get challenged in court," said Carol Mortenson, an official in the Yakima office of Ecology. Mortenson said she does not know how the issue will be resolved or how long it will take, although she told Entiat officials it would take five months back in August.

"It's important to us here, we're wanting to build an economic base and get some industry going and we're really hamstrung by this," said Entiat Mayor Wendell Black.

Mortenson said it might take legislative or judicial action to solve the problem. Ecology's interpretation of the Supreme Court ruling means many cities in the state may be exceeding their water rights,

she said. The worst-case scenario is that without a legislative or judicial fix, almost every city would have to go back and reapply for a water rights certificate in order to continue development, Mortenson said.

"Ecology doesn't have the money or manpower to deal with this," said Elaine Kirkpatrick, a development and marketing specialist with Prime Land LLC, the Treasure Haven developer. "They're just hoping the Legislature will come up with a fix so they don't have to go through each city individually." "It's going to be a major problem and could hold up development in the whole state of Washington if we don't get Legislative relief. Ecology is going to get farther and farther behind."

Entiat, which gets its water from the Columbia River, received the letter from state Ecology after the developer filed its State Environmental Policy Act (SEPA) checklist for its proposed development.

Mortenson said there are two other problems in the Entiat case. A water right based on system capacity means the pipes and pumps to deliver water must be in place at the time the right is issued, and that's not the case in Entiat. There also are environmental concerns because of endangered species found in the Entiat area. "There is a really good chance that NMFS (National Marine Fisheries Service) and U.S. Fish and Wildlife will be unhappy about this because they will be taking more water out of the system than in the past," Mortenson said.

Smith said Entiat will try to get a different ruling on its water rights, but that if the issue isn't resolved by March 1, it would let Prime Land build its subdivision. Prime Land agreed to assume any liability for the action.

Chandler said state Ecology is picking on Entiat because it is a small city. "It's easier for them to pick on smaller entities with fewer voices," Chandler said. "What do you think the people in Everett would do, or Issaquah?"

Mortenson said at least three other Central Washington cities -- Granger, Naches and Riverside -- have had developments halted over water rights issues. She also said they are not being singled out, but are being notified of the problem when project developers file SEPA reports.

Chandler said he would resurrect a bill dealing with the water rights problem in the next Legislative session, which begins Monday. The bill was stalled in committee last year. "It is an issue we need to take on and look at, because not only Entiat but every city in Washington could be affected," Chandler said. ☺

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# ESA Biological Assessments - Do's and Don'ts

## October Dinner Meeting Review

by Ulysses Hillard, University of Washington

The October dinner meeting was a joint presentation by Steve Mallas of the Washington State Department of Transportation (WSDOT) and Keith McDonald of CH2M HILL. The presentation was geared towards people seeking how to best negotiate their way through licensing, which is important now that many local salmon runs have been listed as endangered. Keith introduced the background and history of the Endangered Species Act. Steve discussed how WSDOT processes biological assessments, and what this procedure looks like for those seeking favorable biological assessments (BAs) for their projects and for the contractors they hire to carry out the assessments. The winning approach, according to the presenters, is not merely to avoid damaging habitat, but improving habitat.

The ESA is an act of the federal government and thus affects any project that includes some federal involvement such as funding from a federal agency or that requires an easement to enter federally administered land. That involvement is called the federal nexus. Even small projects can require a BA to proceed, so long as they if there is a federal nexus. The project cannot legally proceed unless the agency that oversees the listed species in question approves a plan for protecting the species and its habitat.

The ESA has become important locally because of the recent listing of certain species of salmon that spawn in streams in and around the Seattle area. The first sign of what is to come will be the release of "draft 4(d)" rules. Draft 4(d) rules outline what must be done to conserve a protected species. The National Marine Fisheries Service (NMFS), who are responsible for anadromous fish, such as Puget Sound area Chinook, will release the Draft 4(d) rules for the Chinook salmon described in the recent EPA listings on December 15<sup>th</sup>, 1999.

A BA is similar to an environmental impact statement in that it is intended to describe the effect a project will have on a species and its habitat. WSDOT reviews them as a first screen for the NMFS. BAs should answer the following questions: What species are in an area and specifically what species are in the area that a particular agency is responsible for, how does that species use the area, and what effect will the proposed project have on the area. The answer to these questions will put the impact of the project in one of three categories: "no effect", "may affect" and "likely to adversely affect". Not surprisingly, a project is unlikely to be allowed if the assessment of the project is that it is "likely to adversely affect" habitat and the project's fortune is uncertain if it "may affect".

Steve indicated three flaws that commonly appear in BAs: Failure to understand that displacement of a species is not "no effect", failure to sufficiently specify how one knows that a species is not present in a project area, and anywhere where the biological assessment reasoning requires a leap of faith. Descriptions of habitat improvement is desirable.

The guiding criterion that NMFS, in particular, prescribes for evaluating project effects is that habitat must be properly functioning everywhere, all the time. The presenters mentioned, as an example, including descriptions of how changes in storm-water runoff due to a particular project will affect habitat. This example points to the concept of the importance of interdependent impacts. An impact that is not directly tied to a location within the boundaries of a project area is still on the table. A project to create a new road, for instance, must include an evaluation of the impact of the new access the road will allow. The assessment of a road project that will allow easy access to a new development of 500 homes must include the impacts of that development.

Keith then finished the presentation with a few examples of BAs and their costs. These ranged from \$800 requiring only one person working a couple full days, to \$80 million thus far and is still in process after several months. He pointed out that all US Army Corps of Engineers projects which require "replacing more than six pilings" will require BAs as an example criterion of whether a biological assessment will be necessary.

Keith pointed out that the prices at the large end are frightening but to not lose sight of the fact that prices can be quite small for small projects on private land with little likely impact. Even for larger projects, the availability of already collected pertinent data costs can attenuate costs significantly. The collection of site data is one of the largest time and money expenses in biological assessments. A thorough evaluation of all considerations is important. If unaddressed items are identified, it is likely the evaluation of the project would be restarted from scratch, and could postpone a project for weeks.

The word from NMFS is to include mitigation if you want to move your project ahead. The responsible agencies are working hard but they are understaffed and are not yet familiar with the material. They are taking measures where they can to make the process more efficient such as processing biological assessments in batches rather than one at a time. For further information, check out <http://www.wsdot.wa.gov/>.

## Draft Stormwater Manual

**Tony Barrett and Ed O'Brien, Washington Department of Ecology, and Arthur Fleming, Golder Associates**

The Washington State Department of Ecology (Ecology) issued the Stormwater Management Manual for Puget Sound in 1992. A major update of this manual has been issued as a review draft, and counties throughout Washington are expected to adopt the new manual. This will require that entities across the state revise their current drainage manuals such that the new regulations and design requirements incorporate the more stringent conditions of the state's or county's methods.

This dinner meeting will discuss how the manual was prepared, issues related to application of these criteria state-wide, and what revisions may be made before finalizing the document. Feedback from workshops held across the state will be reviewed.

Ed O'Brien is the Principal Stormwater Engineer for Ecology. He is a Professional Engineer and has been working with stormwater related issues for the last ten years. He is considered to be the technical and policy expert on stormwater for Ecology and will present the technical issues regarding the revision of the stormwater manual.

Tony Barrett is a Senior Environmental Engineer for the Department of Ecology. He is responsible for the development and publication of the draft manual and has been involved in stormwater related issues for the last eight years. Tony will discuss the policy decisions that were required to develop the new stormwater manual.

Arthur Fleming, is an Associate Engineer with Golder Associates. Mr. Fleming is the project manager responsible for reviewing this draft of DOE's manual on behalf of Benton County in Eastern Washington. Mr. Fleming is a civil engineer with over 20 years of civil and storm drainage design experience.

The dinner will be held at the Rock Salt Restaurant (formerly Latitude 47), located on the shores of scenic Lake Union, near downtown Seattle. There is plenty of free parking. Pre-dinner socializing and a no-host bar will begin at 5:30 p.m. Dinner will be served at 6:15 p.m., followed by the presentation. We hope to see you there.

**Pre-registration is requested.** The cost is \$22.00 for State Chapter Members and \$25.00 for others. There will be a \$5.00 additional fee charged for registration at the door. Make checks payable to AWRA. Send them to AWRA Dinner, c/o Ingrid Wertz, Taylor Associates, 3917 Ashworth Ave. N., Seattle, WA 98103.

***The Rock Salt Restaurant is on the west shore of Lake Union at 1232 Westlake Ave. N., Seattle. Take the Mercer Exit from I-5. Turn north at the Westlake Ave. traffic light. The restaurant is on the right, ~½ mile after the turn. – Or download the map from <http://earth.golder.com/waawra/>.***

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### What this State Section is All About!

The WA State Chapter of the AWRA fosters educational and professional development.

**Student support** is provided in the form of two annual student fellowships, sponsorship of a student chapter at the University of Washington, underwriting of a special meeting in the late spring hosted by the student chapter, and other subsidies.

**Interorganizational support** is fostered with local, interstate and international organizations.

A **bimonthly newsletter** is published containing in-depth analysis and editorials on current issues.

Several **dinner meetings** are held throughout the year providing good food and good company followed by a presentation by featured guests. **Brownbags** are organized on special issues as they arise.

The annual climax is the **Annual Section Fall Conference**, the next one which will be held in November, 2000. The Conference is the principal funding vehicle for many Section activities, including providing financial support to the Section's Student Fellowship program.

A **dedicated board** of 15 members meets regularly to plan, organize and facilitate events.

The Washington Chapter has been selected to host the **1999 National AWRA Conference** in Seattle.

If you wish to learn more about your Section and/or wish to participate more in Section activities, you will be warmly welcomed. Please contact any of the board members listed on page 8.

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**2000 Membership Application / Change of Address Form**

( please circle, as appropriate )

Annual membership in the state chapter costs \$25.

(If you attended the 1999 June Conference, you are already a member for 2000 – Welcome!)

Name \_\_\_\_\_ Position \_\_\_\_\_ Affiliation \_\_\_\_\_

Street Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone(\_\_\_\_\_) \_\_\_\_\_ Fax(\_\_\_\_\_) \_\_\_\_\_ E-mail \_\_\_\_\_ @ \_\_\_\_\_

Check if you would like to be actively involved on a committee.  
You will be contacted to determine what committee involvement you would like.

2000 Membership Dues (through November 2000): \$25.00. **Checks only.** Please make check payable to **AWRA Washington Section.**

Mail to: AWRA, Washington Section  
c/o Ingrid Wertz, Taylor Associates  
3917 Ashworth Ave. N.  
Seattle, WA 98103

The American Water Resources Association is a scientific and educational non-profit organization established to encourage and foster interdisciplinary communication among persons of diverse backgrounds working on any aspect of water resources disciplines. Individuals interested in water resources are encouraged to participate in the activities of the Washington Section.

***Special thanks to Golder Associates Inc. for word processing and graphics support on this newsletter.***

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3917 Ashworth Ave. N.  
Seattle, WA 98103

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