

PRESIDENT'S NOTES

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

I've been back in the Northwest for over 6 years now. I first lived here in the mid-to late 1970s, where I went to Graduate School at the University of Washington and then worked locally for several years. Altogether, I've spent a total of nearly 12 years in the Seattle Area. Yet I'm still filled with a sense of wonder and special appreciation every time I see a stream or river flowing across the landscape, and I probably will be until the day I die.

I grew up in San Diego and knew mainly the Southwest until out of College. Where I lived, rivers are 100 miles apart. Large streams only flow during the rainy winters and may not flow at all for years on end. Perennial streams exist only in the high mountain areas and they die or are captured in reservoirs before they even make it out of the foothills. For nearly 10 years I worked in an office complex located next to the Santa Ana River in San Bernardino. The middle stretch of this river actually is perennial. This Basin covers 3,000 square miles and includes portions of two mountain ranges exceeding 10,000 feet in height. However, the source of the river's year-round flow was just a stone's throw from my office, directly across the river. It's the 30 MGD discharge from the San Bernardino Wastewater Treatment Plant. It flows 15 miles down the river channel and is joined by an equivalent discharge from the Riverside Wastewater Treatment Plan and further down-river by several additional wastewater discharges.

It's interesting to note that during the 1950s and 1960s the water in this 90-mile long river was fought over in the largest court adjudication process (well over 4,000 claimants) in the country before a settlement was reached. This river of secondary-treated effluent flows for about 40 miles into Orange County. There, the river channel is partitioned into a long series of infiltration basins. Except for rare periods of high river runoff, every last drop of the river is infiltrated into the regional aquifer that serves as a primary domestic water supply for Orange County. It's been estimated that water originating in the upper Santa Ana Watershed is reused at least three times before it finally reaches the ocean.

I do remember one spring, after an unusually heavy snowfall in the mountains, when the river really did flow for a couple of months. I would walk along the levee trail during lunch and marvel at the river which had come alive. I remember a large cottonwood tree that had been carried down and lodged in the center of the channel. I didn't realize it at the time, but I was staring face-to-face at my first piece of Large Woody Debris!

There is justifiable concern in this region over protecting and improving stream and river habitat. But we really do have a marvelous resource in our surface waters and should take a moment to appreciate this as we strive in our profession to maintain and improve this treasure.. ~~~

2000 - 2001 FELLOWSHIP OFFERED

The Washington State Section of the American Water Resources Association (AWRA) is seeking nominations for the 2000 - 01 school year. One fellowship will be awarded to a member of an organized Student Chapter of AWRA. The other is available to any full-time graduate student enrolled at an accredited college or university in Washington State. The fellowships are offered to full-time graduate students completing advanced degrees in an interdisciplinary Water Resources subject. In addition to the \$1500 cash award, each fellowship includes a 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.

The general criteria for selection of winning applications include:

- The interdisciplinary nature of the course of study and research;**
- The effectiveness of the response in communicating research objectives; and**
- The potential application of the work to current needs in water resources management.**

Applications for the 2000 - 01 award will be accepted through September 15, 2000. Information on how to apply for the fellowship will be mailed to Department Heads of graduate programs that offer degrees likely to involve topics acceptable for the award during the last week in April. Financial aid offices will also receive the information. Alternatively, individuals may request information on the award directly from the fellowship committee chair, or see the following pages.

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

2000 - 2001 FELLOWSHIP ANNOUNCEMENT

The Washington State Section of the American Water Resources Association (AWRA) is seeking nominations for a 2000-2001 Fellowship Award of \$1500. For the 2000-2001 academic year, two fellowship awards will be given. One award will be to a member of a Washington Section affiliated Student Chapter. The other award will go to a student enrolled in a graduate program at a college or university in Washington state. This fellowship is for a full-time graduate student completing an advanced degree in an interdisciplinary water resources subject. In addition to the \$1500, the award includes membership in both the State and National AWRA, a one-year subscription to the *Journal of the American Water Resources Association*, and admission to the Washington State Section Annual Conference.

Each department with qualified applicants may submit one nomination for the award. The application packet, limited to **five** pages, should include the following:

- 1. A brief letter of nomination from the department head;**
- 2. Completed Application Form;**
- 3. Statement of goals and objectives for graduate work;**
- 4. Detailed description of research interest; and**

Qualified students need to fill out the application form and prepare the additional information requested above and mail it to the address below. The letter of nomination may be mailed under separate cover by the department head or included with the applicant's package. Items two through four constitute the application package and must be prepared by the applicant. Nominations will be evaluated on the basis of:

- 1. The interdisciplinary nature of the course of study and research;**
- 2. The effectiveness of the response in communicating research objectives;**
- 3. The potential for application of the work to the current needs in water resources management; and**
- 4. The overall impression of the application package.**

Nominations must be received by **September 15, 2000**. The Fellowship Committee will evaluate the applications received and will recommend a recipient and two alternates (the second and third highest rankings) to the Washington Section Board of Directors. The Board will select the recipient by November 8, 2000. The winners will be notified as soon as the board approves the award. Special recognition will be given to the fellowship recipients at the State Section's annual conference in November.

The recipients will prepare an article describing their research for the Section newsletter.

For additional information call Stan Miller at (509) 456-3604, or e-mail him at: smiller@spokanecounty.org.

Mail all applications to:

Stan Miller, Fellowship Committee Chair
AWRA Washington State Section
1329 S. Ferris Court
Spokane, WA 99202

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

More songbirds, from chickadees to wrens, are looking for nesting sites so clean out your old nestboxes or quickly make or buy nestboxes to put up for their use (ask for WDFW's Backyard Wildlife Sanctuary program packet for more specific information.) Great blue herons are very visible in the cottonwoods where they communally nest along the Little Spokane River near WDFW's Spokane Trout Hatchery and the Spokane County Parks and Recreation Department's Natural Area. ♪

2000 – 2001 AWRA Fellowship Application

The Fellowship

Each year, the Washington State Section of the American Water Resources Association (AWRA), each year, offers an annual Fellowship of \$1500 to full-time graduate students completing an advanced degree in an interdisciplinary water resources subject. Since 1998 two fellowship awards have been given. One award is to a member of a Washington Section affiliated Student Chapter. The other award goes to a student enrolled in a graduate program at any college or university in Washington State. In addition to the \$1500, the award includes a one-year membership in both the State and National AWRA, a one-year subscription to the *Journal of the American Water Resources Association*, and admission to the Washington State Section Annual Conference.

The information provided in the following application will help the Fellowship Committee select this years fellowship recipients.

Personal Information

The following information will allow us to contact you to obtain additional information on your application or proposed work. It will also be used to notify you of your standing after the applications have been reviewed.

Applicant Name _____ Phone (____) ____ - ____ / (____) ____ - ____
Address _____

E-mail Address _____

Other information that might help us contact you (e.g. work hours when you will not be at one of your listed phones).

Academic Background

Describe your previous academic experience below.

| <u>Educational Institution</u> | <u>Area of Study</u> | <u>Degree Granted</u> | <u>Year</u> |
|--------------------------------|----------------------|-----------------------|-------------|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

Current Academic Program

Describe the program in which you are currently enrolled. This is the program which will be evaluated for purposes of the 1999-2000 fellowship award.

Educational Institution Area of Study Degree Expected Completion Date

Thesis or Dissertation Topic _____

Major Professor _____

Proposed Course Work

List the courses you have taken or plan to take as part of your degree program. Include the course grade for those classes you have completed.

Course Number Course Title

Grade

| <u>Course Number</u> | <u>Course Title</u> | <u>Grade</u> |
|----------------------|---------------------|--------------|
| _____ | _____ | _____ |
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| _____ | _____ | _____ |

Final Application

For additional information call Stan Miller at (509) 456-3604.

Mail the completed Application and support materials to:

Stan Miller, Fellowship Committee Chair
AWRA Washington State Section
1329 S Ferris Court
Spokane, WA 99202

Professional Geologist Registration In Washington State

by Ken Neal

Editor's Note: Ken Neal has been pursuing the establishment of Professional Geologist registration in Washington State for many years. His perseverance paid off this year, as indicated below. Now we do not have to travel to foreign lands and learn about exotic terrains to obtain a geologist license. As part of his effort, a lobbyist was retained to secure successful passage through the legislature. Donations have covered most of the cost, however additional donations are required. I hope that you will consider helping defray this expense with a contribution.

Gov. Locke signed the bill on the afternoon of March 31, 2000. Check out the following web address for the final rendition that was signed into law http://www.leg.wa.gov/sl/6455-s_sl.pdf

The law goes into effect on 7/1/00. All of the processes, forms, etc., have yet to be developed. This program has to start from the ground up (although the Department of Licensing (DOL) professional services organization will provide the overall framework). I'll be making contact with the DOL in a month or two and ask them how we can help. The actual next step in the process is to put together the ballot information for the referendum, in case the judge's decision on I-695 is overturned. Senator Gardner and I will lead that committee.

I want to thank all of you for your support, hard work and financial donations in getting this bill passed. We are still approximately \$1,000 short of what is needed to cover our costs. Anyone interested in helping us break even can contact me at kengneal@aol.com or by telephone at 360-352-5125 or use the pledge sheet below.

Name(s) _____

Company _____

Address _____

City _____ State _____ Zip Code _____

Telephone _____ Fax _____ e-mail _____

I(we) pledge the following financial support for the lobbying effort to register geologists and engineering geologists in Washington:

| | | |
|-----------|-------------|------------|
| \$ _____ | \$ _____ | \$ _____ |
| (monthly) | (quarterly) | (lump sum) |

Signature _____ Date _____

Please make checks payable to AEG Washington State Section and designate "geologist registration effort" in the lower left column.

Mail checks to:

AEG Washington State Section
Attn: Ken Neal, Treasurer
Kenneth Neal & Associates
2014 Baker Terrace
Olympia, WA 98501-3719

Telephone: (360) 352-5125
Fax: (360) 236-0201
e-mail: kengneal@aol.com

We suggest you send one copy of this form with your contribution, and make another for your records.

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

The Wind River and Drano Lake are the places to be for spring Chinook fishing. The season opened April 1 and WDFW surveys showed boat anglers on the Wind averaged a Chinook for every five rods. Anglers at Drano Lake averaged a fish for every two rods. Anglers were catching Chinook up to 30 pounds, although most fish were in the 12 to 15 pound range. For more details, anglers should check WDFW's web site. Creel survey results and sport fishing regulations can be found in the [Fishing/Shellfish section](#). Links are also available to the Army Corps of Engineers' dam fish counts. Spring Chinook fishing also should to continue to improve in the Cowlitz, Kalama and Lewis rivers. Battle Ground Lake received 4,000 catchable rainbow trout last week and

kokanee fishing is improving in Merwin Reservoir. Bass fishing in John Day Pool is also picking up, according to WDFW biologist Joe Hymer. 🌊

Court To Rule On Water Supplies For Developments

(Olympia, April 13, 2000) The Washington Department of Ecology (Ecology) is taking legal action to clarify whether large housing developments need a water-right permit before using ground water.

Today Ecology filed a complaint naming Dan Class, owner of Class Development in Woodland, Wash., along with 11 other individuals and a bank for not having a water-right permit for Columbia Crest Estates, a housing development under construction in Cowlitz County.

Ecology is seeking a decision from Cowlitz County Superior Court whether Columbia Crest Estates needs a water-right permit to construct 12 drinking - and irrigating-water wells for about 50 lots. The lawsuit asks the court to interpret an often-controversial element in state water law involving an exemption in the law that allows property owners to withdraw up to 5,000 gallons of water a day from a well without a water-right permit.

"If the development continues without a water right, the homes could be withdrawing up to 60,000 gallons of water per day. That's a lot of water," said Keith Phillips, manager of Ecology's Water Resources Program. "Anybody else wanting that much water would need a water-right permit." State law requires people to get a water-right permit for all surface-water diversions, as well as for ground-

water withdrawals of more than 5,000 gallons of water per day. A development that cumulatively withdraws more than 5, 000 gallons of water per day needs a water-right permit.

"We are concerned with ensuring that individual homeowners have a reliable and legal source of water," said Phillips. "We hope the court will agree that the exemption was intended for individual homes and small developments - not large housing developments."

Phillips also said Ecology is concerned that such a significant withdrawal of ground water may further harm salmon, trout and steelhead in the lower Columbia River. Canyon Creek runs through the proposed development. The creek flows into the lower Columbia, which has several species of fish, whose survival is threatened and populations are decreasing. The Cowlitz County lawsuit is the second "exempt-withdrawal" case Ecology has pending before Washington courts. In October 1999, Ecology filed a lawsuit against Campbell & Gwinn and E.A. and Beverly White in Yakima County Superior Court, involving a housing development where the builders plan to drill multiple wells without a water-right permit.

In the Yakima case, the developers joined with Ecology to get an answer from the court. ❧

Skokomish Tribe Seeks \$5.8 Billion in Damages

by D. Williams (from <http://www.nwifc.wa.gov/newsletter/>)

Claiming it has sustained 75 years of "ruthless economic and human damage" from the Cushman Hydroelectric Project, the Skokomish Indian Tribe has filed suit against the City of Tacoma and the federal government. The tribe seeks \$5.8 billion in damages as a result of lost economic revenue from fisheries, and other damages.

"For 75 years the United States has aggressively covered for Tacoma's predatory practices. This makes a mockery of the regulatory process and of the rule of law," said tribal chairman Denny Hurtado. The tribe contends Tacoma obtained the federal license under false pretenses, in that it failed to fully explain that the tribe's primary source of salmon and steelhead would be all but obliterated and its economy severely crippled.

The Cushman project was constructed on the North Fork Skokomish River three-quarters of a century ago. It was built without fish passages and diverted the majority of the river's flow from its watershed. This not only led to the dewatering of the North Fork - home to the river system's most productive fish habitat - but it also led to the huge

flooding problems the tribe and other Skokomish River Valley residents still face every year.

"We want the water back in our river," Hurtado said. "The only way we're going to restore our river is to have all of the water put back into it." The city's original license request from the Federal Power Commission was to flood 8.8 acres of U.S. Forest Service land on the North Fork, upstream of the Skokomish Indian Reservation. The city didn't ask for, nor did the power commission grant, a license for any hydroelectric facilities.

Nevertheless, the city built two dams, two powerhouses, transmission lines, and other structures, and in 1930 began diverting all of the North Fork's flow out of the watershed to a powerhouse on land the city had condemned within the tribe's reservation. The original license's 8.8 acres has since grown to a total project area of about 4,700 acres.

The tribe named the federal government in the suit because it failed to perform its trust duty to the tribe.

Economic studies commissioned by the tribe show that the city has made more than \$1.6 billion in net revenues from the Cushman Project since it went

on-line in 1926, while the tribe has endured \$5.8 billion in damages from the project. ❧

A Water Resources Vision

from <http://www.wa.gov/ecology/wr/plan/vis-stat.html>

Over the last 20 years, there have been multiple attempts to change the historic way we manage water to better address the challenges of population growth, a changing economy, and environmental protection - unsuccessfully.

In reviewing our lack of progress, we have started to wonder about the long-term future of water management in this state. Might we find better agreement among those interested in water, better support from the broader public, and more opportunity for real progress if future common ground could be defined and then used to encourage people to take the first step?

So, we want to start a dialogue in search of common ground. To prompt this dialogue, we have a few ideas to offer and want to hear your ideas. With you, we want to explore this question -- what should water resource management look like in Washington's future?

The Washington Department of Ecology encourages you to be part of a discussion regarding the future of water resources management.

NATURAL RESOURCE BASE

A natural resource base is in place:

- Surface water flows and ground water levels of adequate quantity and quality needed for properly functioning, healthy watersheds.
- The base includes sufficient water to meet esthetic, recreational and other human needs for streamflows and water levels within the watershed.
- The base has been specifically defined for each watershed and has been established through a variety of means - purchase of water rights, trust water rights, adjudication, negotiated settlements, setting instream or target flows, meeting the requirements of federal laws (e.g., Clean Water Act, Endangered Species Act), etc.
- As new information suggests the need for additional water to be added to the base, this water would be purchased from the water market.

WATER MARKET

A water market exists which replaces the need for and process of water allocation:

- All water transactions are registered and data systems ensure full accountability.
- True costs of water are identified in the system: the market defines value, and value drives efficiency and maximum net benefits for use of water.
- The doctrine of prior appropriation and attendant principles (beneficial use, abandonment/relinquishment) remain and are utilized within the market.
- There are simple rules to ensure fair economic practices and to provide procedures for evalu-

ating and avoiding impairment to other water rights.

- Funds to support the market and to manage the natural resource base are derived from a market transaction fee, a fee for water use, and/or through state funding. A portion of the funds go to the local governance system, and a portion to the state for management of the natural resource base.
- Water for basic family and small business needs is subsidized in the market through re-investment of a portion of the fees. The local governance system manages the subsidized water consistent with their land use authorities.

INFORMATION-BASED MANAGEMENT

The natural resource base and the water market are supported by and managed through a comprehensive information system:

- Comprehensive stream system monitoring and aquifer monitoring is performed;
- Metering, reporting, and analysis of water use is carried out -- quantity and location of water used and water available is known;
- Ownership, use and sale price of water are recorded and this information is available;
- Data are disseminated to all governments, operators, markets, and users; and,
- To clearly define what water rights exist, water right claims have been fully adjudicated using streamlined procedures.

SHARED GOVERNANCE

Water management responsibilities are divided and shared by different governments:

The state governance role includes the following:

- Coordinate and produce water information;
- Adopt statewide rules for water markets;
- Provide market oversight as needed;
- Enforcement needed to protect the natural resource base;
- Produce water education materials for local use; and
- Government-to-government collaboration with tribal and federal governments.

The local governance role includes the following:

- Ensure local access to water information;
- Establish local water market rules;
- Operate and manage the water market;
- Enforce water market rules and protect existing water rights;
- Coordinate land use and water use decisions;
- Manage the subsidized water for family and small business needs; and
- Distribute water education materials.

If you would like to provide comments, contact Barb Tovrea at btov461@ecy.wa.gov.

Revised Corps of Engineers Section 404 Nationwide Permit Program

By Marc E. Boulé, Senior Vice President, Shapiro and Associates, Inc.

Much interest, and a fair amount of consternation, has been expressed regarding the recently modified Section 404 Nationwide Permits (NWP) issued by the Corps of Engineers, and the resulting impact on construction activities. The bittersweet news is that, with a few exceptions, the Pacific Northwest likely will not see significant changes in the permitting process or requirements. (It should be noted, however, that this is being said *without benefit of* either the Regional Conditions, or the Section 401 certification from the Department of Ecology, both of which could modify the requirements.) In other parts of the country, the changes in NWPs will be dramatic, and the complaints have already been raised.

Although NWPs cover a wide array of activities from farm buildings to boat ramps to removal of sunken ships, only a few are really important to the general development community. In fact, in many ways changes in the conditions on the permits may be more significant than changes in the actual NWPs themselves.

Before launching into a discussion of what has changed with the nationwide permitting program, it is important to understand the components of the program, at least in a general sense. With 14 pages of regulations in three-column Federal Register print, and another 67 pages of preamble to explain them, it is not anticipated that anyone will understand all the detail and nuances of the new program.

Nationwide Permit Program

Under Section 404 of the Clean Water Act, the Corps was given the responsibility to issue permits for the discharge of dredged or fill material into the waters of the U.S. and their adjacent wetlands. In order to streamline the program somewhat, and to relieve both the Corps and project proponents from an often onerous permitting process, a series of NWPs was established for activities similar in nature and considered to have a minimal impact on water quality or the functions of wetlands.

Along with the NWPs, the Corps also issued a series of General Conditions relating to such things as notification, maintenance and erosion control, to name a few. Furthermore, the Division Engineer (the District Engineer's superior commander) may issue regional conditions. These regional conditions are usually issued in response to specific recommendations made by other federal agencies,

especially U.S. Fish and Wildlife Service, National Marine Fisheries Service, and the Environmental Protection Agency. At the state level, the Department of Ecology must issue Section 401 certification of NWPs, and certify that they are consistent with the State's Coastal Zone Management Program. For a project to be eligible for an NWP, the NWP must be certified by the state and the project must meet all the conditions.

In the 23 years since the Clean Water Act was passed, the Corps has developed 43 NWPs, some of which have since been modified. The cancellation of NWP 26 has eliminated one. With the latest modifications of the NWPs, the Corps has provided more guidance as to the activities to which NWPs may or may not (more often may not) be applied. They also have attempted to standardize much of the language in the General Conditions. It should be noted, however, that the regional conditions, 401 certification, and Coastal Zone Management certification have not yet been issued. As a result, the final framework of the NWPs is not yet known. These conditions and certifications are scheduled to be announced on or before June 7, 2000.

General Conditions

It may be that the General Conditions will have more influence than the NWPs on how projects are permitted and constructed, especially here in the Pacific Northwest. While the General Conditions are in many ways unchanged, they have been considerably expanded in detail and have become less discretionary on the part of the District Engineer.

To many permit applicants, the revisions to General Condition 13 regarding Notification and GC 19 regarding Mitigation will be the most substantial changes in the program. Pre-construction Notification (PCN) is now required for most NWPs, and the level of information required has in many cases been increased. The review and response time by the District Engineer also has been increased from 30 to 45 days. In addition, all NWPs requiring a PCN will be required to provide mitigation at a 1:1 replacement ratio. Although the requirement for mitigation has been common in the Northwest (and the ratios are often greater than 1:1), elsewhere in the country it has not been as prevalent. In addition, General Condition 19 also allows the District Engineer to require vegetated buffers of 25-50 feet. Here again, buffers are not new in the Northwest, and are often wider.

The new regulations do expand slightly the extent of wetland to which they are applicable. Gone are the references to "isolated and above the headwaters." Instead, the new NWP's apply to all wetlands except tidal wetlands and non-tidal wetlands adjacent to tidal wetlands. Here in the Northwest, that is a significant expansion in the applicability of NWP 39, since our tidal wetlands are relatively limited in extent and relatively few of them have non-tidal wetlands adjacent to them. At the same time, however, since many of the other NWP's (such as those for road crossings and utility corridors) previously were applicable in tidal and adjacent non-tidal wetlands, this new condition may substantially limit their applicability.

NWP Changes

NWP 39 for residential, commercial and institutional developments, which replaces NWP 26, has more severe restrictions on the extent of fill, with a 0.5-acre maximum for any fill, and a 0.1-acre maximum for fills requiring only Pre-construction Notification. Here in the Northwest, these replace the previous 2 acres and 1/3 acre (elsewhere in the country, these could have been as much as 10 acres).

NWP 3 addresses "repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill." It does not allow changes in the use, but does allow "minor deviations" in configuration to reflect changes in materials, construction techniques or codes, or safety standards. It also permits restoration of upland areas damaged by flood or storm. With the new revisions, the NWP goes on to permit the removal of accumulated sediments in the vicinity of structures. Under the new General Conditions, the permittee must provide the District Engineer Pre-construction Notification. The project may not proceed without a letter of Authorization from the District Engineer, which must be issued or denied within 45 days, assuming all necessary information is provided.

NWP 7 addresses the construction of "outfall structures, and associated intake structures, where the effluent from the outfall is authorized...under the National Pollution Control Discharge Elimination System (NPDES)." Pre-construction Notification has always been required by this NWP. Modifications to this NWP relate primarily to minimizing the excavation or fill, discharging such fill in uplands, and providing adequate erosion/ sedimentation control.

NWP 12 addresses "construction, maintenance, and repair of utility lines and associated facilities." As in the previous version of this NWP, utility line is widely defined to include any pipe carrying any gaseous or liquid material and any wire carrying any electrical transmission. It has been expanded to include utility substations, transmission line towers and access roads, with all activities being subject to the 1/2-acre rule, similar to NWP 39. Pre-construction Notification is required if any of several circumstances occur, including clearing of forested wetland or impact to more than 500 feet of wetland or waters of the U.S. This is one place where, based on previous Section 401 conditions from Ecology, the following limitations may be expected: pipelines carrying petroleum products (except natural gas) will be excluded, and trenching in wetlands will be limited to 2 feet in width.

NWP 14 addresses "linear transportation crossings." Formerly, this NWP applied only to roads, but now it includes railways, trails and airport runways. For public projects not located in non-tidal and adjacent wetlands, a maximum of 1/2 acre of wetland may be filled in a "single and complete project," whereas for public projects in tidal and adjacent wetlands and all private projects, fill is limited to 1/3-acre and 200 feet of stream relocation. In the case of roads with multiple crossings, "single and complete project" has been more specifically defined as a road segment with "independent utility." The interpretation of this may reduce the number of situations in which this NWP can be used to avoid the NEPA/404 merger process on roadway projects. Only time and interpretation from a higher authority will resolve this issue.

All in all, the new Nationwide Permit program offers hours of puzzling reading, months of understanding, and probably years of interpretation. ☺

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.

Salmon Friendly Seattle Design Charrette

by Bill Derry, CH2M HILL

Recently, I had the privilege to be part of the Salmon Friendly Seattle Design Charrette. A charrette is an activity where the participants are assigned a very complicated problem and are expected to bring it as close to completion as possible within a very short time.

“What can we do to protect and restore salmon habitat in a dense urban city like Seattle? Are there creative ideas and techniques we ought to explore?” To answer these questions, the City of Seattle hosted the Salmon Friendly Seattle Design Charrette. Each team had an engineer, a biologist and several landscape architects. Two of the teams had professional artists and there were other disciplines represented as well. The teams developed wonderfully imaginative design solutions to reduce runoff, increase infiltration and enhance salmon habitat.

I was on the team assigned to the Arboretum along with Robert Murase, Ian Robertson, Jackie Brookner, Bill Belknap, Elizabeth Thorstenson, Debbie Peters, Emily Rivers, Ken Yocom. Other teams were assigned Beer Sheba park on Lake Washington, a residential neighborhood on Longfellow Creek, a high school and junior high school site on Longfellow Creek and the Puget Sound shoreline from Pier 71 to the proposed Immunex site north of the grain terminal.

Our team was surprised to learn that the stream in the Arboretum is turned on in the morning and turned off in the evening when the Japanese Garden is opened and closed. It is fed by City of Seattle water that comes from the Cedar River watershed. We were also surprised to learn that virtually all of the drainage in the watershed surrounding the Arboretum is collected in the combined sewer system and sent to the West Point treatment plant. The team addressed Arboretum Creek, neighborhood stormwater, and the Park's mission to display plants and educate the public.

Community

One of the earliest and most consistent principles that our team mentioned is that design must be completed in partnership with the community. The professional should help the community realize their own vision. Most of the concepts proposed today were recommended twenty, or more, years ago by citizen groups. Our task is to apply, refine and communicate those concepts to the arboretum site. But concepts will not be implemented unless the process is driven by the community.

Ecosystem

Another principle identified by our team is to address ecosystems rather than individual species. Thus, our task is to develop a healthy ecosystem

including the aquatic system in the arboretum. If the habitat is healthy, the appropriate species will use it. It is less critical which individual species are found there. If we develop an ecosystem that accommodates people as well as healthy and diverse populations of fish and wildlife, we have succeeded whether or not there are salmon. Elements of the plan will protect salmon far beyond the borders of the arboretum watershed.

Our professional role is also to test and evaluate the concepts. As the region moves to act in response to ESA listings, it is important to be clear about what, when and where actions are appropriate. In this context, sometimes our greatest service is to identify what is not achievable.

One critical element of the plan is to re-establish the forest and native soils wherever possible in both the short and long term. One evergreen tree planted in each residential yard would make a significant difference in 100 years in the amount and timing of runoff following rains. It would also shade and cool the yards and the neighborhood reducing the amount of summer irrigation needed.

Reconnecting the Watershed

The watershed of the arboretum has been highly altered. The forest and the native soils have been removed from most of the watershed. All runoff from the surrounding neighborhoods and streets is collected, combined in a sewer pipe system and conveyed to the wastewater treatment plant. At least a portion of the watershed needs to be removed from the combined sewer pipe system and re-connected to the Arboretum Creek. This action would at least reduce the Tap On/Tap Off character of the stream and save the City some water supply and wastewater treatment costs in the bargain.

Follow-on

Events like these are tremendous opportunities to demonstrate that there are better ways for us to inhabit the landscape. Hopefully, they generate momentum that will lead to implementation of the concepts developed at sites throughout the city. Steve Moddemeyer has announced that the City will be following-up with additional activities that involve the local communities surrounding the charrette sites. On April 5 the City sponsored a Noon Brown Bag Presentation where a representative from each of the five teams presented approaches to stream and city watershed restoration. Nearly 100 people attended this very enlightening presentation. In the future, there will be a full-color book illustrating and describing the solutions developed by the teams. So we can expect to hear continuing good things about this event.

More information on these Charrettes can be found

on www.cityofseattle.net/salmon 

2000 State Chapter Conference

POTENTIAL FOR WATER MARKETING IN WASHINGTON

(working title)

The 2000 State Chapter Conference will be held at the Seattle Art Museum in downtown Seattle Wednesday, November 15. The theme of the conference will be water marketing in Washington. It will be a full day conference with individual presentations and panel discussions. Topics presented will include:

- Legal, economic, and scientific frameworks for water marketing
- Perspectives from outside Washington
- Case studies of water marketing transactions and potentials in Eastern and Western Washington

As water supply problems in Washington and throughout the West escalate, innovative solutions are being sought. In the more arid states such as Colorado, Arizona, and California, one of the solutions being pursued is water marketing. The Pacific Northwest has trailed behind in applying this solution. However, as water demand for development increases and endangered species listings highlight the need for increased instream flows, water transfers and water marketing are being viewed as alternatives to traditional means of allocating water. For this reason the AWRA State Section Conference will focus on the potential of water marketing in Washington.

Water marketing in Washington is not yet very active, but there is considerable interest in water rights transfers to new uses and the purchase of water rights. There is a great deal of uncertainty about the legal, economic and technical framework for water marketing in Washington. Our Annual Conference will attempt to address those uncertainties and create a forum to advance the future of water marketing in Washington.

We intend to provide a keynote speaker from a state actively involved in water marketing who can provide a broad perspective on the issues surrounding water marketing. Experts on legal, economic, and scientific issues involved with water markets will be selected for presentations. At least one representative from the Washington Department of Ecology will speak on the state's stance on water markets. Case studies presentations will present the viewpoints of the Washington Water Trust, Eastern Washington irrigators, the Bureau of Reclamation, and Western Washington municipal water suppliers.

Ideas for presentation topics or speakers are welcome. Watch for details of the conference in upcoming newsletters and flyers. For more information, please contact conference co-chairs Ann Root (206-789-9658 or aroot@adolfson.com) or Naomi Chechowitz at (206-440-4602 or chechon@wsdot.wa.gov).

Send checks only payable to "AWRA Washington Section." No credit cards or purchase orders please. Transferable. Refunds up to November 3, 2000 less a \$10 administration fee. Please mail checks to:

AWRA, Washington Section Annual Conference
c/o Ingrid Wertz, Taylor Associates
3917 Ashworth Ave. N.
Seattle, WA 98103

**The Student Chapter at the University of Washington
and the American Water Resources Association Washington State Section
Cordially Invite You to Attend a Joint Membership Social Presentation
(Students and Section Members Only)**

The Role of Hydrologic Variability in Stream Restoration by Dr. Susan Bolton, Professor of Forest Resources

Restoration activities in the Puget Sound region are anticipated to increase as actual and potential listings under the Endangered Species Act continue. Currently much of the emphasis of restoration is based on in-channel habitat conditions. Agencies and groups are just beginning to recognize the importance of understanding the whole watershed setting before identifying which projects to undertake. Changes in the processes of water, wood and sediment delivery to streams can create situations that limit the effectiveness of in-channel restoration projects. This talk will describe the importance of looking beyond the channel with special emphasis on the role of hydrologic variability.

Tuesday, May 9th 2000, 6:00 pm - 8:30 pm @ The UW Waterfront Activities Center
Drinks and hors d'oeuvres are complimentary

The Ecology Stormwater Management Manual Update

February WAAWRA Dinner Meeting Review

by Kenneth Ludwa, P.E. Parametrix, Inc.

February's AWRA Dinner Meeting featured a discussion of the proposed changes to the Washington State Department of Ecology (Ecology) Stormwater Management Manual, due to be published in 2000. Tony Barrett, a Senior Environmental Planner for Ecology and lead for development and publication of the new Manual, discussed policy decisions that shaped the Manual. Ed O'Brien, P.E., Ecology's Principal Engineer and stormwater policy expert, presented proposed changes in technical standards. Arthur Fleming, an Associate Engineer with Golder Associates, discussed the perspective of Eastern and Central Washington municipalities on adoption of the new Manual.

In 1992, Ecology issued the original Stormwater Management Manual for the Puget Sound (the Manual). A major update of this Manual was issued in Autumn 1999 as a review draft. The new Manual will have statewide applicability; many jurisdictions throughout Washington will be required to adopt the new Manual, or develop regulations equivalent to the Manual. The Manual itself has no independent regulatory status; it becomes a regulatory document when it is adopted by local governments or state agencies.

Why Revise the Manual?

There are several reasons for updating the Manual, including:

- Make the Manual more user-friendly;
- Update technical standards;
- Make the Manual applicable statewide;
- Respond to expansion of Federal stormwater permit requirements (NPDES Phase 2); and
- Prepare stormwater standards that may form the basis for Endangered Species Act (ESA) Section 4(d) rules to provide for species conservation (although it has not yet been determined, it is hoped that this NMFS will cite this Manual in their 4(d) rules for Washington's Water Resource Inventory Areas).

Objectives of the New Manual

The primary goals for the new Manual are to:

- Produce a commonly-accepted set of standards for industry, local governments, and agencies;
- Establish technology standards for controlling the quantity & quality of stormwater runoff from new development and redevelopment; and,

- Establish best management practices that will result in compliance with numerical water quality standards and protect beneficial uses.

Modeling and Detention Requirements

Under the new Manual, flow control analysis and design for Western Washington will require the use of continuous hydrologic simulation. Event models (i.e., the Santa Barbara Urban Hydrograph) promulgated in the 1992 Manual did not sufficiently account for the back-to-back events common in Western Washington. A generic, location-adaptable continuous model for Western Washington is being developed. Parameter defaults will be provided for numerous locations to provide ease of calibration. It will still be necessary for a flow control module to be added to the model to calculate requisite pond sizes; Ecology may leave this task to local jurisdictions.

In addition to the peak flow controls required in the 1992 Manual, flow control standards in the new Manual will require duration matching for Western Washington to limit the duration of erosive streamflows. The Western Washington flow control standard is as follows:

- Developed discharge durations shall match predeveloped durations for the range of predeveloped discharge rates from 50% of the 2-year peak flow up to the full 50-year peak flow,
- Developed peak discharge rates shall not exceed the pre-developed peak discharge rates for 2- and 10-year return periods, and the pre-developed condition will be limited to forest or pasture.

The Eastern Washington flow control standard is proposed as follows:

- Limit the peak rate of runoff from individual development sites to 50 percent of the pre-developed condition 2-year, 24-hour design storm;
- Maintain the pre-developed condition peak runoff rate for the 10-year, 24-hour and 100-year, 24-hour design storms; and
- Utilize infiltration to the fullest extent practicable, if site conditions are appropriate and ground water quality is protected.

Water Quality

To capture 90 percent of runoff volume (water quality treatment goal), the water quality design storm is defined as the 6-month 24-hour peak flow. This storm is now estimated as 72 percent of the 2-year storm peak flow (formerly 64 percent).

When the 1992 Manual was established, it was presumed that “basic” BMPs (i.e., bioswales, wet-pools) would provide sufficient treatment to maintain water quality. However, extensive observations and research have demonstrated that additional levels of protection may be necessary.

“Enhanced treatment” BMPs may be necessary to achieve treatment standards. Enhanced treatment options include filtration, treatment trains comprising of several BMPs, and Large Basic BMPs.

Ecology intends to develop performance criteria and evaluation protocols for new and existing water quality treatment BMPs. The intent of these criteria is to encourage development of innovative treatment processes. Ecology proposes that local jurisdictions be responsible for evaluation and approval of new BMPs.

Redevelopment Requirements

A significant change to the new Manual would require retrofitting of flow control and water quality BMPs to sites where the cost of improvements exceeds 50 percent of the value of the existing site. Recognizing that retrofitting is sometimes difficult in highly-built areas, exemptions would be allowed if regional facilities are implemented.

Eastern and Central Washington Perspective

Reviewers representing Eastern and Central Washington communities expressed concern over statewide application of the Manual as it appeared in draft, due to substantial discrepancies over statewide application of standards developed primarily for Western Washington. Some reviewers suggested a need for a separate Manual for Eastern and Central Washington. Major issues over application of stormwater standards to Eastern and Central Washington include:

- More discrete rainfall events may not require continuous modeling; event-based models such as SBUH may be appropriate;
- More intense rainfall may require an alternate definition of water quality design storm, for example treating the first half-inch of precipitation.
- Snowmelt should be considered in hydrologic design and analysis;
- Infiltration may be more practicable in Eastern and Central Washington, but this practice also raises a greater concern for aquifer protection; currently limited pretreatment options may need to be expanded; and,
- Dry season dust control is as significant an issue in Eastern and Central Washington as wet season erosion control in Western Washington.

Implementation & Additional Information

In order to achieve the goal of developing an accepted set of standards, stakeholder participation and concurrence are essential. Ecology therefore intends that publication of the Manual be process-driven rather than schedule-driven. The current proposed schedule is as follows:

Spring 2000: Convene technical advisory committees to incorporate comments on first draft.

June 2000: Publish final draft.

Summer 2000: Public review and comment on final draft.

Fall 2000: Publish Revised Manual.

The five 1999 draft volumes can be downloaded at Ecology's website: <http://www.wa.gov/ecology/biblio/wq.html> (currently under "1999" link).

Request to be added to the Stormwater Mailing List; contact Donna Lynch at dlyn461@ecy.wa.gov or phone (360) 407-7529.

Contact the technical leads (identified in each volume) or Tony Barrett, Team Lead, at tbar461@ecy.wa.gov or phone (360) 407-6467. ☞

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Upcoming Events

April 20, 2000 5:30 p.m.. Exploration Approaches and Geotechnical Conditions for Seattle Light Rail. Presented by Red Robinson and Bill Laprade, Shannon & Wilson, Inc. The RockSalt Steak House, Seattle, 1232 Westlake Avenue North. RSVP to asce.geotech@geoengineers.com or call Sandy McDaniel @ 425-861-6000.

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>

May 9th, 2000, 6:00 pm – 8:30 pm. The Role of Hydrologic Variability in Stream Restoration, by Dr. Susan Bolton, Professor of Forest Resources Tuesday. The UW Waterfront Activities Center. Drinks and hors d'oeuvres are complimentary. RSVP by Friday, May 5th to Karen Comings, AWRA Student Chapter President (206) 543-6272 or awra@u.washington.edu. **Students and AWRA Section members only.**

June 20-24, 2000 Watershed Management and Operations Management 2000, Colorado State University, Fort Collins, Colorado. www.asce.org/conferences

October 16-18, 2000, Symposium on the Hydrogeology of Washington State, DoubleTree Suites, South-center, Washington. Call for papers, <http://www.wa.gov/ecology/hg/index.html>.

October 24-25, 2000, Agriculture and Water Quality in the Pacific Northwest, Bend, Oregon. For information, call (509) 252-4165. <http://www.agwaterqualitynw.org>.

November 15, 2000 Potential For Water Marketing in Washington. Washington State AWRA Fall Conference at the Seattle Art Museum. See <http://earth.golder.com/waawra/> for additional details.

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, <http://www.ngwa.org/education/agwse2.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

STUDENT INTERN OPPORTUNITY

KING CO DEPARTMENT OF NATURAL RESOURCES WATER & LAND RESOURCES DIVISION

June 1 - December 31, 2000 w/ possibility of extension. Start at \$11.73/hr, and up, depending on year in school. Available to all currently enrolled full-time students. Work will take place in Downtown Seattle (exact location to be determined), and will be 10-20 hours per week at times mutually agreed upon by Supervisor and Intern. Description of Duties:

- Represent PSURP in multi-agency partnerships, coalitions.

Outreach to communities

- Develop and carry out community outreach strategies to promote community-based environmental projects in under-served areas.
- Recruit new government, business and community partners and maintain existing partners.
- Coordinate partner technical assistance in aid to community projects

Marketing/ Public Relations

- Develop and implement marketing tools and strategies to explain PSURP to various constituencies
- Make presentations, staff booths, etc. at local conferences, fairs and meetings
- Ensure the visibility of PSURP among government, community and business leaders

- **Desirable Qualifications**
- Work with local, state and federal governments in a variety of capacities
- Work with projects that address environmental justice issues and/or involve the community in stewardship activities
- Project coordination/partnership development involving at least two of the following sectors: government, the community and businesses, the success of these projects relying primarily on voluntary cooperation.
- Excellent written and verbal skills.

To apply, send cover letter, resume, and King County application no later than April 26, 2000 at the close of business day to:

Sara Hatfield
 King County Water & Land Resources Division
 201 S. Jackson Ste. 600
 Seattle, WA 98104

Contact Sara Hatfield at (206) 296-8042 for questions regarding this announcement. Contact (206) 205-8782 for application requests; or download from the Internet at <http://www.metrokc.gov/ohrm/psd/howto.html>

April Dinner Meeting:

Dam Removal in the Pacific Northwest

Featuring:

Rob Masonis, American Rivers & Bruce Stoker, Earth Systems

Tuesday, April 25, 2000

5:30 Social & 6:15 Dinner and Program

at the Rocksalt Steakhouse (formerly Latitude 47 Restaurant)

As Pacific Northwest wild salmon populations have declined to fractions of their historic levels, more attention has been given to dam removal as a potential recovery mechanism. This year the federal government will decide whether recovery of Snake River stocks of salmon and steelhead, all of which are listed under the Endangered Species Act, will require the removal of four federal dams on the lower Snake River in eastern Washington. Rob Masonis, Regional Director of Dam Programs in the Northwest Office of American Rivers, will summarize the latest science and economic analysis and explain why dam removal makes sense both from an environmental and economic standpoint. Mr. Masonis is a natural resource attorney and his work focuses on restoring healthy rivers and salmon runs through dam reform. He also serves on the Board of the Save Our Wild Salmon Coalition.

Our second speaker is Bruce Stoker, a consulting geomorphologist with Earth Systems. Mr. Stoker will discuss technical issues related to dam removal, focusing on the Elwha River on the Olympic Peninsula. Mr. Stoker worked on the three Environmental Impact Statements for restoration of the Elwha River for the Federal Energy Regulatory Commission and the National Park Service. Mr. Stoker has degrees in geology, remote sensing and civil engineering and has worked in the Pacific Northwest for over 20 years.

Directions: Rocksalt Steakhouse is located on the west shore of Lake Union at 1232 Westlake Avenue North in Seattle. Take the Mercer Street Exit from I-5. Turn right at the Westlake Avenue traffic light. The restaurant is on the right, about 1/2 mile after the turn. (For map, see web site: <http://earth.golder.com/waawra>)

DINNER MEETING REGISTRATION FORM

Early Registration (before April 20): \$22.00 for members, \$25.00 for non-members

If Received After April 20: \$5.00 extra

Menu Choice: Halibut or Vegetarian Lasagna with Mixed Green Salad (please circle one below).

Organization: _____ Phone: _____

Address: _____ E-mail: _____

Name: _____ Meal: Halibut or Lasagna @ \$_____ TOTAL

Name: _____ Meal: Halibut or Lasagna @ \$_____ \$

Detach and mail with payment (**checks payable to AWRA, Washington Section**) to Erin Nelson, King County Dept. of Transportation, King Street Center M.S. KSC-TR-0231, 201 S. Jackson St., Seattle, WA 98104. Please direct any phone inquiries to Erin at 206.205.5221.

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.

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.

American Water Resources Association, Washington Section
3917 Ashworth Ave. N.
Seattle, WA 98103

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