



# Rivers for Life

A Quarterly Newsletter of the WRIA 16 Planning Unit

## Planning Unit Introduces Watershed Plan to the Public

The Planning Unit is hosting three informational events to update residents of the Dosewallips-Skokomish watershed on the WRIA 16 plan. The first meeting, held on November 3, was at the Brinnon Community Center. The second occurred on December 6 in Union as part of the monthly potluck for the Hood Canal Improvement Club. The meetings were attended by about 35 people. Brief presentations on water quality, quantity and habitat, and the watershed planning process were followed by questions and comments on topics ranging from the study of Hood Canal and climate change to sediment deposition in the Skokomish estuary, logging, and seal predation on salmon. A third event is scheduled at the Hoodport Fire Hall on March 2.



Above: Pam Bennett-Cumming, a senior planner for Mason County, talks about efforts by the Planning Unit at a public event in Union. Below: Two attendees share their views.



## Read the Watershed Plan on the Web!

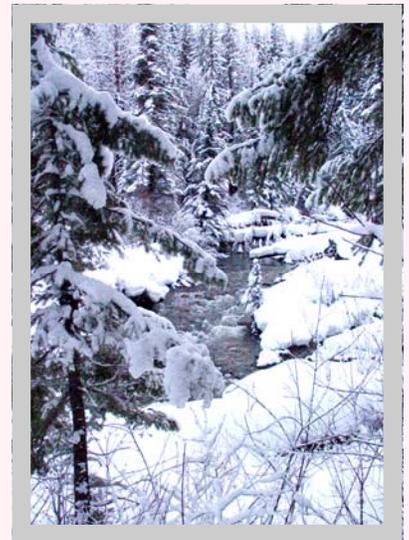
The current draft of the WRIA 16 Watershed Plan is on-line at <http://www.ecy.wa.gov/apps/watersheds/planning/16.html>

## WRIA 16 Final Draft Recommendations are Here!

The WRIA 16 Planning Unit's proposed recommendations to address key water quality, quantity and habitat concerns in the Dosewallips-Skokomish watershed are enclosed with this issue of *Rivers for Life*. Eighty-five recommendations are presented under ten different headings: Water Quantity, Water Quality, Habitat, Hood Canal Recommendations, Funding, Education and Outreach, Enforcement, Support for Ongoing Activities, Information Gathering, and Plan Implementation.

The Water Quantity section pertains to surface and ground water quantity monitoring, water conservation, water planning, and opportunities such as water banking and rainwater capture.

The Water Quality recommendations address monitoring and data needs, coordination between agencies, former dumpsites and landfills, voluntary well water monitoring and water depth measurements. There are several recommendations having to do with waste water systems and grey water disposal. Two subsections deal with pollution from animal wastes, stormwater and salt



(Final Draft continued on page 4)

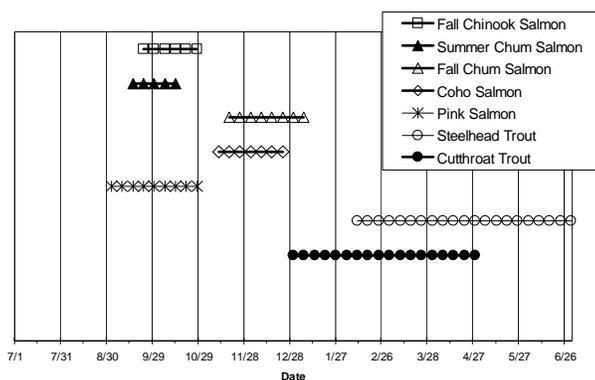


## New Study: Sizing Up Flows and Passage for Fish

The heat and glare of summer drought have faded into the cool dampness of a rainforest winter in WRIA 16. A new report, *WRIA 16 Instream Flow Studies*, offers an intriguing contrast to the season as it re-examines the relatively meager flows of '04/'05 to assess passage requirements for salmon and expand the record of daily discharges for the watershed.

The studies, by Aspect Consulting, LLC and subcontractor Entrix, Inc., had three goals:

1. To measure and record the flows of seven streams in the watershed for one year.



Spawning periods for target species in WRIA 16 streams.

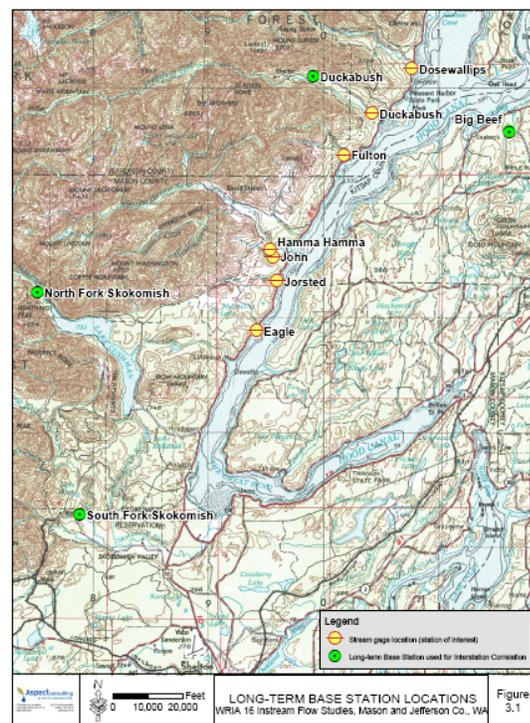
2. To use mathematical relationships between these flows and ones from long-term base stations (in other drainages) to develop simulated discharge records for the seven streams extending back in time.

3. To identify streamflows of sufficient size to provide passage by salmon through low-water riffles on Fulton, John and Jorsted Creeks.

To assess stream flows, Aspect installed stream gauges on three rivers fed by melting snowpack (the Dosewallips, Duckabush, and the Hamma Hamma Rivers) and in three streams dominated by rainfall (Fulton, Jorsted, and Eagle Creeks). In our area, the rivers that discharge melted snow-pack hit their peak flows twice a year in December and late spring. Drainages fed mostly by rainfall peak just once in December because they lack the high flows associated with spring run-off from snow melt. Both stream types have their lowest flows in late summer and early fall.

The new gauging stations were operated from June 25, 2004 through July 17, 2005 by Aspect and continue to be monitored by Hood Canal Dissolved Oxygen Program. The average daily flow for the Hamma Hamma was 480 cubic feet per sec-

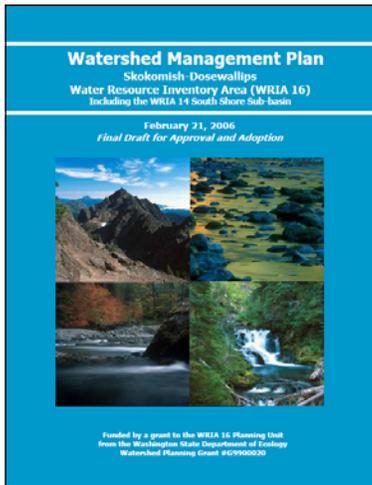
ond (cfs), the highest during this period. By contrast, Jorsted Creek had an average flow of 14 cfs. The dryness of the year is reflected by "exceedence" values for the measured flows of at least 73 percent. In other words, more than 73 percent of the years on record had greater flows than the 2004/2005 period. The larger, snow-pack dominated rivers were least affected by drought.



Fulton Creek, John Creek and Jorsted Creek were selected for the fish passage study.

All of the streams in the fish passage study are used by chum, pink, and coho salmon, steelhead trout and cutthroat trout. John Creek, a tributary of the Hamma Hamma River, also sustains Chinook salmon. Field staff located two data collection sites on each stream where shal-

(Passage continued on page 5)



## Next Steps for the Watershed Plan

The Planning Unit will decide whether or not to approve the WRIA 16 Watershed Plan in mid-April. If approved, Mason

and Jefferson Counties will each hold a public hearing prior to a vote on the plan by their respective boards. Another public hearing will be held jointly by the two counties prior to final adoption of the plan in a combined session of the boards of commissioners.

### Planning Unit Retreat Held in Union

On January 19, the WRIA 16 Planning Unit members convened a day-long retreat in Union at the St. Andrews House Conference Center to refine the draft recommendations put forth in its watershed plan. The recommendations represent the Planning Unit's best thinking on how to provide for the water quantity and quality needs of both people and fish.

Under Chapter 90.82 of the Revised Code of Washington, the recommendations must meet the approval of both the Jefferson and Mason County Commissioners. In WRIA 16, the Planning Unit also includes the Skokomish Tribe, The Port of Hoodport, Mason County Public Utility District #1, local community groups and watershed councils, citizen representatives, and representatives of the shellfish industry, lake issues and other interests.



### WRIA 16 Watershed Plan's Lead Writer, Peter Erickson

Peter is a Senior Associate at Cascadia. He leads and conducts policy and economic analysis, program evaluation, and watershed planning projects throughout the Northwest. Peter has written numerous technical reports for public and policymaker audiences. Currently, Peter is writing the Western WRIA 29 Watershed Plan, and is the lead writer on the WRIA 16 Watershed Plan. Peter holds a BA in mathematics and geology from Carleton College. He has also developed economic and mathematical models to estimate the effectiveness and cost of waste reduction, recycling, and product take-back programs – models that have drawn praise for their ease-of-use and comprehensiveness.



The Planning Unit discussing watershed plan recommendations last January.



Mason County staff participating in WRIA 16 meetings: Wendy Mathews, Amy Georgeson, and Seth Book from Environmental Health and Pat Bennett-Cumming from Community Development.

*Final Draft continued from page 1*

water intrusion.

Habitat recommendations are generally related to salmon recovery. Actions to protect shoreline vegetation, river channel function and to integrate salmon recovery efforts with floodwater management planning are encouraged.

The Planning Unit also makes recommendations specific to Hood Canal. These include assessing the adequacy of existing pump-out stations and restrooms at ports and marinas. The group also recommends expanding educational efforts to minimize the use of pesticides, herbicides, fertilizers, and household products containing nitrogen and phosphorus. The protection and restoration of shorelines and marine drift cells is consid-

ered necessary. The removal of abandoned boats and equipment was recommended to restore eelgrass beds.

A section on funding asks the state legislature and counties to provide on-going support for the implementation of watershed plans.

Education and outreach requests emphasize water law, nutrient impacts from septic systems and animal wastes, the importance of native vegetation to water quality, and the effects of bulkheads on shoreline processes.

Adequate funding for enforcement is recommended to curb illegal water withdrawals and diversions, prevent removal of large woody debris from streams, and discourage illegal gray-water and black-water discharges. Recommendation 7.1.3 says, "Full compliance with existing laws and regulations

would address many of the issues identified in this watershed plan."

The Planning Unit supports the ongoing activities of several organizations and agencies including the Puget Sound Action Team, WSU Extension, Master Gardeners, the Hood Canal Coordinating Council, and the Hood Canal Dissolved Oxygen Program. It also recognizes the need for additional studies of aquifers, stream flows, groundwater quality and wetlands as well as improved information-sharing.

Implementation of many Planning Unit recommendations is contingent on securing necessary funding. Recommendations will be prioritized when the Planning Unit prepares its detailed implementation plan after the watershed plan is adopted.



**It's  
SPRING.  
Enjoy the  
SNOW!**



The winter of 2004 - 2005 passed with low or near record-low snow depths in the Olympics and Cascades. The snow storms had gone south for the winter—to the Sierras, Wasatch and southern Rockies. This

spring it's a whole new ball game. Snow depths at Hurricane Ridge south of Port Angeles were 115% of normal on February 15 at 101". Many areas of the Cascades report 140% of normal. Mount Baker received 111" of snow in 7 days.

Fall started off with cold temperatures and heavy snowfall in the Northwest. Warm, wet weather in December melted the snowpack down towards 50% of normal but

on December 26, the weather pattern aimed the jet stream in our direction for almost six straight weeks. Early in February a dusting of lowland snow was reported in Seabeck and Belfair. Lake Cushman was reported to have received 5 inches. Subsequent cold temperatures have kept us busy thawing pumps and pipes. The mountains glisten with snow that, if we're lucky, will support stream flows come summer. For more information, visit [www.nwac.us](http://www.nwac.us) or [www.skimountaineer.com](http://www.skimountaineer.com).

# What's Been Studied in WRIA 16?

Several studies specific to the Dosewallips-Skokomish Basin have supported the development of the WRIA 16 watershed plan:

**Level 1 Assessment** provides a compilation of existing information to provide an overview of the water resources of the Skokomish-Dosewallips Basin.

**Hydrogeologic Study of the Lower Dosewallips/Brinnon Area** examines ground and surface water interactions.

**Baseline Assessment of Lower Hood Canal Streams:** 2004 Study reports on water quality in 20 WRIA 16 streams.

**WRIA 16 Instream Flow Studies** measured flows and examines passage requirements for fish (see page 2).



A great blue heron studies the view from a dock near Union.

Skokomish-Dosewallips Watershed Planning (WRIA 16) - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.ecy.wa.gov/apps/watersheds/planning/16.html>

Department of Ecology Watershed Planning

Ecology home > Watershed Planning >

### Skokomish-Dosewallips Watershed Planning (WRIA 16)

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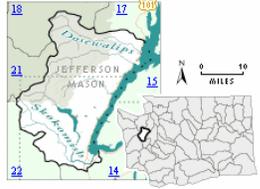
**Planning phase:** Phase 3 - Plan Development

**Optional elements:** Quality, Habitat, Instream Flows

**Plan due:** December 2005

**Grants awarded:** About \$680,000 through June 2005

**Initiating governments:** Mason County, Mason PUD #1, Jefferson County, Skokomish Tribe



Find out more about watershed planning in WRIA 16 on the website!

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low water is likely to limit fish migration. The presence of fish, carcasses and redds were documented. Using a computer model, this information was combined with water velocity and stage measurements to evaluate whether the different fish species would reach their spawning areas under various flow conditions. Spawning areas tend to be broad open areas where a marked increase in flow is needed to substantially increase the water's depth. For example, increasing the depth of Jorsted Creek by 2.5 to 3.6 inches requires an increase in flow of 24 cfs.

Chum salmon were the most frequently observed species during the study and their passage is thought to indicate sufficient channel depth and width for coho salmon, pink salmon and steelhead trout to travel as well. Since Chinook salmon are appreciably larger, they probably need deeper water for their migration upstream. At the time of the

study, all the creeks flowed at less than 4 cfs. The researchers concluded that minimum passage flows are 7.5 cfs for John Creek, 10 cfs for Fulton Creek and 5.5 cfs for Jorsted Creek and suggests a buffer of 25 to 30 percent to ensure that passage is provided to most returning adults. The researchers suggested additional spawning and hydrologic surveys are needed to further document the regional behaviors of salmon, especially the less-frequently observed Chinook salmon.

As in most WRIs around the state, peak water use by people and peak stream flows do not coincide here. Lawns, gardens, golf courses, and crops are thirstiest when salmon—especially summer chum, pink and Chinook—are heading upstream. *WRIA 16 Instream Flow Studies* will be used to develop instream flow recommendations that help balance the needs of people and fish regardless of the season.



## You're invited to participate

The Planning Unit generally meets on the first and third Thursday of each month.  
Please call to confirm dates, times and locations.

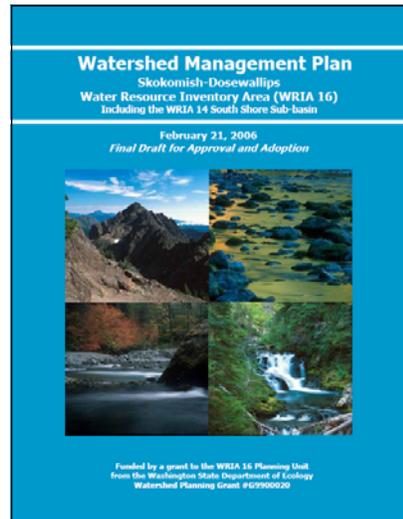
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The newsletter is designed and written by Tami Pokorny, Natural Resources, Jefferson County. Send comments or ideas for future issues to her at [tpokorny@co.jefferson.wa.us](mailto:tpokorny@co.jefferson.wa.us) or (360) 379-4498.



Read the **WRIA 16 Watershed Plan** and share your thoughts and suggestions **on-line!**

**Visit:**

<http://www.ecy.wa.gov/apps/watersheds/planning/16.html>



## **RIVERS FOR LIFE**

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