Summer 2009 WATERSHED RESOURCE INVENTORY AREA 16 & 14B

Rivers for Life

A Newsletter of the WRIA 16 Planning Unit

News from the Watershed

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Hood Canal Marina Dock

Two New Docks and a Clean Marina in Union

by Constance Ibsen

Although marinas are not a leading source of polluted runoff into the Canal, WRIA 16 Planning Unit members recognize that docks and their users can have a significant impact on local water quality and habitat. Construction of a dock can disturb underwater grasses and alter critical habitat. Chemically treated pilings can leach into the water, possibly affecting marine life. In addition, docks and other fixed over-water structures can shade living organisms such as submerged aquatic vegetation if not designed properly. To be good stewards, Hood Canal boaters need adequate and properly functioning wastewater pump outs and garbage disposal, as well as fueling opportunities. Fueling a vessel with a five-gallon gas can on a wobbly dock is not safe for the boater or the environment.

Recognizing Hood Canal's sensitive ecosystem, North Forty Lodging, LLC, owners of the Alderbrook Inn Resort and Spa and the Hood Canal Marina, have been looking for

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The Health of Our Streams: New Analysis Complete

WRIA 16's Dosewallips River

The Planning Unit dedicated a portion of its available funding this year to the development of a new screening tool to aid land planners and water purveyors in assessing relative risks to streams and salmon habitat within the WRIA. The study, developed and written by Aspect Consulting, provides a relative ranking of subbasins within the WRIA based on habitat conditions and the potential for streamflow impacts resulting from future groundwater withdrawals and is entitled the *Rivers and Streams Impairment Analysis*.

For each stream reach, two ratings were developed. The first rates the quality of salmon habitat for a given stream reach. The second rates the potential of groundwater withdrawals to impact stream flow in that

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New Docks

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ways to remediate problems with docks and other over water structures existing before their purchase. They also wanted to avoid future environmental degradation while expanding their facilities.

Sitts and Hill engineering firm and Marine Floats designed and manufactured the new Hood Canal Marina and Alderbrook Resort docks to be environmentally friendly. The existing creosote-treated wood pilings were pulled and replaced by galvanized steel pilings, thereby reducing toxins leaching into the Canal. The constantly shredding Styrofoam dock floats were replaced with polyethylene floats topped with composite decking. Fifty percent of the new decking is grated to allow light to reach sea grasses and other organisms under the structures.

The newly expanded marina also has fuel available. Holding tanks onshore dispense unleaded gasoline and diesel fuel. The tanks are double-walled and have state-of-the-art leak detection sensors. At the ready is a special boom that can be deployed to contain any fuel spills. Two wave attenuators protect the facility against wind.

The marina also has an easy-access pump out facility to empty marine heads dockside as well as shore-based restrooms, potable water and 30 mp electric services.

North Forty Lodging didn't stop there; they applied for and received Clean Marina status for the newly upgraded marina.

The Clean Marina Initiative is a national voluntary, incentive-based program that encourages marina operators and recreational boaters to protect coastal water quality by engaging in and adopting best management practices. Washington State has around 40 designated Clean Marinas. In Hood Canal we have two: The Hood Canal Marina and Port Townsend Marina.

As a Clean Marina, Hood Canal Marina staff focus on preventive measures when fueling boats, offer recycling containers for trash disposal and encourage environmentally safe products for boat and deck washing. To keep fuel out of the water, fuel-absorption pads are distributed before fueling begins along with safety and spill-free tips. In addition, the marina has been landscaped with native plants to retain and absorb any stormwater runoff and pollutants before it has a chance to reach Hood Canal. An area for boat repair is set aside for small repairs that can be done in an environmentally sound manner so that dust, drips and debris are captured.

Cindy Sund is the manager of the marina and member of a Hood Canal pioneer family who, like North Forty Lodging, recognizes the delicate balance of Hood Canal's ecosystem. She feels strongly that being a good watershed steward is an integral component to a good business plan.

- Report All Spills to 800-OILS-911
- Contact Hood Canal Marina at hoodcanalmarina@hctc.com or 360/898-2252
- Learn about the Clean Marina Program at http://coastalmanagement.noaa.gov/marinas.html

NEW Natural Yard Care Brochure Available

Download a copy at:
www.ecy.wa.gov/biblio/0807064.html

The Natural Yard Care (NYC) brochure tells a tale of making simple changes to save money, save time, protect our families' health, and protect the environment. With five easy steps, you can put nature to work in your yard.

1. Build healthy soil
2. Plant right for your site
3. Practice smart watering
4. Think twice before using pesticides
5. Practice natural lawn care

Skokomish Tribe Completes Design for South Fork

Over 80% of the South Fork of the Skokomish River watershed has been harvested at least once. The Holman Flats area, for example, was clear cut extensively in the 1950-70s in anticipation of the construction of a hydroelectric dam and reservoir. The removal of the floodplain forest and log jams in the area, between river miles 10.8 and12.9, left little to protect the river banks from water erosion. The channel responded to the bank instability by becoming straighter and wider and the reach itself lost most of its deep pools, riffles, and other important fish habitat.

This spring, the Skokomish Tribe completed its design for a project that will drastically improve habitat conditions in the reach. The South Fork LWD Enhancement Project entails protecting and replanting approximately 14 acres of floodplain with deciduous tree and shrub species (cottonwood, willow and alder). The vegetation is expected to increase floodplain "roughness", slow floodwaters, capture the fine sediments, and provide stream shade and stability.

The project will also install up to forty log jam structures along the edges of the main channel, on the floodplain and at tributary outlets. The Tribe will use helicopters to transport up to 3,000 pieces of wood and excavators to install it in a manner that promotes a more sinuous channel within the two-mile target area between the canyon and LeBar Creek.

The majority of the South Fork of the Skokomish River is located within the Olympic National Forest with about 14% of the lower basin owned by the Green Diamond Resource Company (formerly Simpson Timber Co.). Tacoma Power owns a critical parcel in the proposed restoration reach.

The US Forest Service will soon complete an environmental assessment for the project and announce a public comment period. The Tribe has secured $700,000 and is seeking an additional $300,000, approximately, to complete the project.

Avoid Unnecessary Chemicals

ToxicFreeTips
A New Service

(reprinted from the WA Dept. of Ecology's *Closed Loop Scoop* Newsletter. Visit http://www.ecy.wa.gov/biblio/closedloop.html)

The average person comes in contact with over one hundred hazardous chemicals each day – many of them in common household products. ToxicFreeTips offers a toll-free phone line, website, printed materials, and an email option to help the public handle hazardous household products safely and choose safer alternatives.

ToxicFreeTips, sponsored by the Department of Ecology, can help you:

- Find your way through the maze of chemical and product information.
- Reduce the risk of asthma and other illnesses.
- Locate responsible disposal sites and recyclers for hazardous products.
- Have a less-toxic home and planet.

ToxicFreeTips@ecy.wa.gov
Toll-free: (866) 939-9991
Monday - Friday
10:00 a.m. - 2:00 p.m.
Or leave a message 24 hours

The average person comes in contact with over one-hundred hazardous chemicals each day.

State to Continue to Fund Geoduck Aquaculture Research

Washington Sea Grant (WSG) will continue its state-funded geoduck research through the 2009-2011 biennium. The Legislature originally authorized and funded geoduck research in 2007, leading to recommendations for managing geoduck aquaculture. WSG administers the program, with oversight by the state Shellfish Aquaculture Regulatory Committee.

Here are the three research projects now under way:

Geochemical and Ecological Consequences of Disturbances Associated with Geoduck Aquaculture Operations in Washington

Scientists are assessing geoduck aquaculture effects — including harvest and the placement, presence and removal of predator exclusion structures — on intertidal plants and animals. Effort to date has been devoted to establishing project infrastructure and methods at five study sites. The project includes an integrated two-year geochemical study of shellfish beds during the harvest process.

Cultured-Wild Geoduck Interactions

This project is assessing the potential effects of geoduck aquaculture on wild geoduck populations in Washington. Researchers have been obtaining baseline information on geoduck pathogens and diseases, collecting samples in coordination with the Jamestown S'Klallam and Lower Elwha Klallam tribes and the Washington departments of Natural Resources and Fish and Wildlife.

Resilience of Soft-sediment Communities after Geoduck Harvest in Samish Bay, Wash.

The project's first year examined the initial effects of geoduck harvest and planting. Researchers have collected information about short-term impacts of harvest. Later phases will examine the longer-term role of geoduck aquaculture, including the pace of eelgrass recovery after disturbance, effects of predator-exclusion devices and responses of invertebrate populations.

A detailed update of each research project is available on WSG's geoduck research Web site, *http://www.wsg.washington.edu/research/geoduck/index.html*. The scientists caution that data are preliminary and have not been analyzed statistically or peer reviewed.

For more information, contact Dan Williams – 206-616-6353 or dw7@u.washington.edu

Geoducks, the largest burrowing clams in the world.

River and Stream Analysis

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reach. Together these two ratings give an indication of the potential impacts of groundwater withdrawals to salmon habitat.

An assessment of salmon habitat was derived from an evaluation of existing information and gives approximately 22% of streams (by length) within the WRIA a habitat rating of good, 33% a rating of fair, and 28% a rating of poor. There was insufficient data to rate the remaining 17% of stream lengths. All streams in the South Shore basin were ranked as poor habitat condition, while mixed conditions existed in the other subbasins.

Water usage in the WRIA was estimated using population data in combination with information about the availability of water in the landscape. From these analyses, total current water withdrawals in the WRIA 16/14b study area are estimated at 2,300 acre-feet/year (afy) and consumptive use is estimated at 1,000 afy.

In other words, the amount of water diverted from the environment for human uses would be the equivalent of an acre-sized column of water a little less than a half mile high. Just over a third of that amount isn't returned to the watershed (via septics or the soil). Irrigation withdrawals were estimated at about 281 afy. Assumptions regarding irrigation of agricultural lands, particularly in the Skokomish River Valley, had a significant effect on the estimated current water use.

The relative risk of groundwater withdrawal to streams was quantified by looking at the percent of stream baseflow that is claimed by peak monthly groundwater withdrawals. Instream flow rules have not been set yet for the streams within the study area. Instream flows are the flows necessary to preserve and protect stream habitiat and resources and would provide the best benchmark for evaluating the impact of groundwater withdrawals on a stream. Stream baseflow was used in lieu of instream flows. Gaging data is lacking for many streams in the WRIA and baseflow had to be estimated for these streams based on correlations to the gaged streams.

Under current (2008) conditions, Purdy Creek located within the Skokomish Valley had the greatest estimated peak monthly groundwater withdrawal expressed as percent of baseflow (7%), respectively. Three streams in the South Shore subbasin had peak monthly groundwater withdrawals between 3.5 and 6% of baseflow. Current estimated peak monthly groundwater withdrawals as a percent of baseflow were less than 3.5% in other streams in the study area.

Under future full buildout conditions, that is, if development and construction proceed according to the maximum buildout allowed by current zoning until all of the available lots were utilized, thirteen streams would lose 10% or more of their low summer flows.

A companion to the study is a Stream Aggradation Potential Analysis. This component examined where the build up of sediments in stream channels, or aggradation has the potential to occur. Aggradation is associated with erosion and slope failures, culverts, and other factors. Aggradation has been problematic in many study area streams. Following the 2007 storm events, aggradation led to some streams flowing through the subsurface during periods of lower flow. The analysis will be used by the Planning Unit and others to identify areas with a high potential of stream aggradation for future actions.

A GIS tool and training were provided to GIS specialists working within the WRIA by Aspect Consulting. A number of assumptions used in the study can be updated using this product as better information becomes available.

The final report is anticipated in early July and will be available on the WRIA 16 website. Aspect Consulting presented their findings at a public meeting held June 18 at the Hoodsport Fire Hall.

Salmonberries.

RIVERS and STREAMS Rely on *Clean* BASE FLOWS

Portions of this article were contributed by the *Skokomish Sounder*, a publication of the Skokomish Indian Tribe.

Did you ever wonder why a stream flows long after it's stopped raining? The answer could be "snow" or "glaciers" but the most accurate answer is probably "ground water".

In summer and early fall, much of the "surface water" in our rivers and streams is groundwater that has been intercepted by a stream channel. Ground water flows into stream and rivers is called "base flow". Without it, many of our waterways would go dry in the summer just as they often do in more arid parts of the country. Even here, countless ephemeral streams dry up in summer . These streams are supplied only by runoff, and have no base flow to carry them through the summer.

Spring growth on a young Douglas fir tree. Native trees and healthy soils support water quality and clean base flows.

Since we rely upon groundwater for year-round stream flow, it makes great sense to guard its quality and maximize the recharge of the aquifers that supply it. Cleaning up groundwater is difficult, extremely expensive and may not even be possible.

Aquifers are underground layers of porous rock such as sand, gravel or fractured bedrock. Around Hood Canal, the best aquifers were created by the gravels and sands left behind by glaciers and rivers. Groundwater fills and travels through tiny spaces within these materials. While rivers travel many miles in a day, it may take an entire day for groundwater to move just a foot through an aquifer.

We all play a role in preserving our vital stream and drinking water resources. Even small amounts of chemicals spilled, leaked or dumped on the ground can seep into our aquifers and cause groundwater contamination. Help keep our ground water, and base flows, clean.

Avoid household, yard and automotive chemicals whenever possible, and always carefully follow instructions for the use, storage and disposal of hazardous chemicals. Solvents contained in products like paint thinner, metal degreaser, furniture stripper, spot remover and charcoal lighter fluid pose the greatest risk to groundwater.

Other chemicals of concern include fertilizers, pesticides, herbicides, detergents, soaps, oil, gasoline, antifreeze and paint. Dispose of unwanted chemicals properly. In Mason County, contact: David Baker, solid waste manager and program coordinator, at 360/427-9670 ext 771. In Jefferson County, contact the Moderate Risk Waste (MRW) Facility in Port Townsend at 360/379-6911 or visit http://solidwaste.wordpress.com.

Help protect the precious gift of clean water and preserve the natural resources and bountiful gifts of WRIA 16 watersheds and Hood Canal.

Here are some reminders and new resources that may interest you:

- Don't pour chemicals down household or stormwater drains or onto the ground!
- Check vehicles for leaks and clean up spills with absorbent material (available at most automotive stores). Dispose of all materials properly.
- Call ToxicFree Tips for advice on chemicals, their use, and to identify the safest alternatives for your family, pets and the environment: (866) 939-9991.
- Water wisely. *Very* helfpful water conservation and landscape information can be found at www.conserveH2o.org. Shrubs and trees generally need half as much water as a lawn!
- Plant native plants in your yard. Native plants are adapted to our local soils and environment. They require little supplemental water once established.

Meet More WRIA 16 Planning Unit Members!

Hank Bloomfield
(and family)

Hank Bloomfield is a lifetime resident of Mason County. He lives near the Hama Hama River with his wife Betsy and their four children Jesse, Emma, Penny, and Archimedes. He is rejoining the Planning Unit after a two year absence where he will fill the Mason County citizen #2 position. "One of my main goals in playing a part in the watershed planning process is to ensure that future generations get the same opportunities that we have had in regards to recreating and making a living in a safe and sustainable environment."

Hank traces his family lineage back through many generations of life in WRIA 16 to the Skokomish Tribe. As a result of his heritage, he has an 'insiders' view of many of the unique features of this area from geographical to historical. He believes that this perspective, coupled with his experience in the local logging, shellfish, and construction industries, is an important asset that he brings to the Planning Unit.

Hank is currently working for a local contractor who specializes in wetland rehabilitation projects. In addition he is licensed for septic installation and O&M in Mason and Jefferson Counties.

His hobbies include hunting, fishing, hiking, SCUBA diving, listening to books on tape, and tending to his sheep and chickens. He can be reached at hanknbetsy@gmail.com if you have any questions for him.

Pam Bennett-Cumming
(and Xena)

Pam was born in the Middle East, was raised in England, and college educated in the US. "I always knew I wanted to work in watershed planning, just didn't know that I was going to be able to do exactly that – or that it would be in an area as amazing as the Hood Canal. What I like about watershed planning is that it brings together such a diverse group of people – to work collaboratively on the health and welfare of the landscape. So it's not 'just' about water, it's about the land and the people who live here."

Pam has played a crucial role within the Planning Unit for many years, overseeing grants and project management for WRIA 16 with the Department of Ecology. She took a lead role in implementing the ground water study at Webb Hill and has been a consistent and knowledgeable asset to the Planning Unit. She is set to leave Mason County this month and will retire to the state of New Mexico when her home sells. She will be very missed, but we hope she will get around to more hiking, pottery making, and riding her horse, Xena.

Her new watershed will be the the Galisteo Creek subbasin of the Rio Grande and Santa Fe hydrologic unit, where the annual rainfall is 14-18 inches and summer thunderstorms can drop an inch of rain in an hour.

WRIA 16 says thanks, Pam. Please keep in touch!

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. For more information and to correspond with the WRIA 16 Planning Unit contact:

Susan Gulick, Facilitator
Sound Resolutions
Susan@Soundresolutions.com
Phone: (206) 548-0469 Fax: (206) 548-1465

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RIVERS FOR LIFE
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Help Control Invasive Knotweed

Knotweeds are natives of Asia and four species are spreading rapidly in the Pacific Northwest (Japanese, Giant, Bohemian, and Himalayan). They grow up to 15' tall and severely impact native plant and wildlife habitat by forming dense thickets that crowd and shade everything else out. Damage is especially severe along stream and riverbanks where it takes over completely.

The best time to control knotweed in Washington State is in July or August. For help in controlling knotweed and other invasive plants, contact the or Mason County Noxious Weed Control Program at 360/427-9670 ext. 592 or email pgrover@cahnrs.wsu.edu or, in Jefferson County, call 360/379-5610 ext. 205 or email noxiousweeds@co.jefferson.wa.us.