



CHELAN COUNTY CONSERVATION DISTRICT

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Warm Spring Brings High Water, but *How Often?*

Unseasonably high temperatures in mid-May caused above normal flows in many snowmelt-fed streams throughout Chelan County. In recent years, we have become accustomed to relatively dry conditions in the area and many folks may think that the high flows we experienced are rare events. A look at historical data for area stream gages indicates otherwise.

For instance, the Entiat River above Ardenvoir peaked on May 19 at around 3,800 cubic feet per second (cfs) according to a stream gage operated by the United States Geological Survey (USGS). Several homes along the river reportedly “got their feet wet”. According to analyses of almost a half-century of historical data for that stream gage, the frequency for such a flow is between only six and seven years. The highest flow documented at the Ardenvoir site was 6,430 cfs recorded on June 10, 1972.



USGS stream gages at the Wenatchee River at Peshastin and Wenatchee River at Monitor sites showed peak flows to be around 21,000 and 23,000 cubic feet per second, respectively. River levels in the lower Wenatchee River just brushed flood stage. The amount of water moving through our rivers and streams this spring may have seemed impressive, but would not be categorized as rare events historically. Flow levels have equaled or exceeded

these measurements 15 of the last 76 years of record at the Wenatchee River at Peshastin site and 8 of the last 42 years of record at the Wenatchee River at Monitor site. The highest documented flows at the Peshastin and Monitor sites were both recorded on

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Kids in the Creek and Out of the Classroom

What do you get when you put an urban teenager in a pair of chest waders and lead them into a stream? Squeals, giggles, oohs and ahhs – especially when they discover exactly *what* is in the water.

Last May, area high school science students were once again able to participate in a unique learning experience. *Kids in the Creek* is an annual outdoor environmental education program developed by the Chelan County Conservation

District in partnership with area educators, private citizens and multiple local, state and federal agencies.

“Exploring an actual stream provides insight that is unavailable in the pages of a science book.”

After spending time in the classroom learning about such things as aquatic insects, stream habitat, water quality and riparian plants, students take their studies to the field for a hands-on learning experience. There they can see the bugs, pools, riffles, pebbles, boulders, flowing water and plants for themselves. Exploring an actual stream provides insight that is unavailable in the pages of a science book. As they rotate between four different learning stations, students are given the opportunity to observe firsthand the texture, scent and proportion of stream elements – as well as their relationship to the surrounding land. They begin to make the connection between water quality, stream features, insects, animals and people. An understanding of how the different elements interact begins to grow.

Local resource specialists participate in the program by sharing their knowledge of the environment with the students. The kids, in

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ALIENS IN THE ENTIAT?!

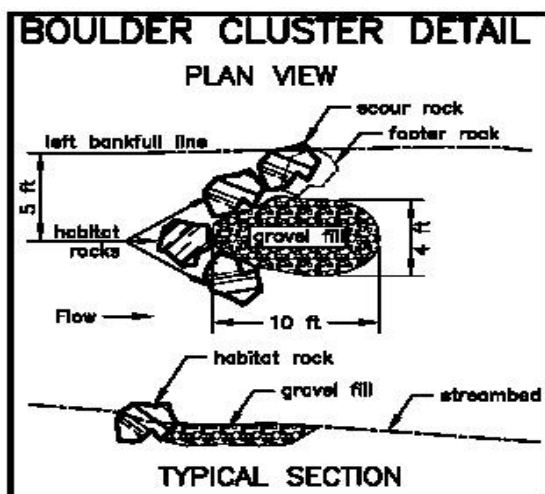
From time to time, you may see lights at night in stretches of the lower Entiat River. Don't be alarmed! Aliens have not landed in the Entiat—it's only scientists.

In 2005, effectiveness monitoring of instream restoration projects was initiated by the Entiat Watershed Planning Unit (EWPU) in the lower Entiat River with the cooperation of local landowners. As part of the study, US Fish & Wildlife Service (USFWS) staff members snorkel segments of the Entiat River three times a year to monitor fish habitat use. The hope is to collect data for at least five years; however, the length of the study will depend on funding.

Annual surveys are conducted in late July/early August, late October/early November, and again in late February/early March. One snorkel survey is conducted at night during each of the three monitoring cycles. Nighttime snorkeling is done because some species of fish, such as bull trout and juvenile salmon, are more active at that time. Snorkelers use portable lights to help them see during the nighttime sampling events and these are the lights that you may notice.

Stream habitat data will also be collected as part of the effectiveness monitoring program. Surveyors from TerrAqua, Inc. will be collecting data on such features as bed material, channel width and depth, and stream flow at established transects and randomly selected sites.

The goal of this multi-year pilot study is to help evaluate how instream restoration projects are affecting fish populations and habitat conditions in the river. The data will be used to assess how much progress is being made toward salmon recovery in the Entiat River watershed.



A preliminary plan drawing depicting the specifications for a typical boulder cluster that will be installed in the Entiat River as part of the Bridge-to-Bridge Reach Restoration Project.

Project Implementation Going Strong in the Entiat Valley

Since completion of the WRIA 46 Watershed Plan, the Chelan County Conservation District and members of the Entiat Watershed Planning Unit (EWPU) have been building new partnerships, securing funding, obtaining necessary permits, and working with local landowners to get projects on-the-ground. Typically, three years of behind-the-scenes work and coordination is required before a project can be implemented. All of the EWPU's project development work is starting to come together. For example...

Entiat Four-Mile and Whitehall Wells Projects

With funding from the Bonneville Power Administration (BPA), the Conservation District and the United States Bureau of Reclamation (USBR) are contracting for the construction of up to five wells to serve four irrigators in the lower Entiat valley. By converting to wells, the landowners will no longer need to perform annual push-up dam work and other maintenance typically associated with surface water diversions. The more efficient irrigation set-ups will help increase the amount of water in the river during critical late summer low flow months, improve fish passage, and eliminate entrainment of juvenile salmonids and other small fish.

Bridge-to-Bridge Reach Restoration Project

The Bridge-to-Bridge project is a complex three phase, multi-year effort to restore streamside vegetation, fish habitat and floodplain connectivity in the lower Entiat River between the Fire Station Bridge and the Dinkleman Canyon Bridge. The Bridge-to-Bridge project was initiated in January 2005. Phase I of the project involves revegetation, construction of an engineered rock cross-vane, placement of streamside boulder clusters and large woody debris, and installation of a new slide-gate in the Chelan County Public Utility District (PUD) irrigation canal.

Field work for Phase I began last fall when native trees and shrubs were planted to help improve streamside shading and riparian habitat. Instream construction and slide-gate installation are scheduled to begin later this summer, followed by more plantings this fall. The rock cross-vane will help direct flow into the canal during periods of low flow and increase the amount of pool habitat for fish. The boulder clusters and wood will increase habitat complexity, and the slide-gate will improve overall system operation and allow the canal to remain watered year-round to provide habitat for young fish.

Phase I of the Bridge-to-Bridge Reach Restoration Project required the support and cooperation of private landowners, the US Forest Service, Natural Resources Conservation Service, Chelan PUD, and USBR. Funding for Phase I is provided by Chelan County, the Bureau of Land Management, the Salmon Recovery Funding Board, the Mid-Columbia Habitat Conservation Plan Tributary Fund, and State of Washington Coastal Protection Fund.

Knapp-Wham/Hanan Detwiler Irrigation System Consolidation

Over the last year and a half, irrigators in the lower Entiat valley that receive their water from the Knapp-Wham and/or Hanan Detwiler systems have been working with the Conservation District and USBR to determine how to improve the efficiency of the two irrigation systems. Many issues influence the planning process including the water needs and rights of local irrigators, potential fish habitat benefits, water savings, and overall project costs.

One strategy the group is exploring involves eliminating the open, earthen Hanan-Detwiler canal and serving current users with water from the Knapp-Wham system and/or wells. Combining the two systems and/or integrating the use of wells would reduce the amount of overall maintenance required to operate the diversion and improve water delivery. Two new rock cross-vanes would also be installed to help improve the system water diversion, create large resting pools for fish, and eliminate the potential for seasonal fish passage barriers.

The Conservation District and USBR, in partnership with affected irrigators, have performed extensive surveying and mapping of the two systems and all associated distribution lines. Preliminary designs of the cross-vane structures are nearly finished and a preliminary engineering design for the new delivery system will be completed later this year. Due to the large scale of the project, the goal is to construct it in phases. The hope is to install the rock cross vanes in 2007 and begin construction to combine the systems in 2008; however, construction timelines are dependent on the amount of time it takes to approve the final design, obtain necessary permits, and acquire funding.

For more information on any of the EWPU projects listed, contact either Rich Malinowski at (509) 664-0213, or Sarah Walker at (509) 664-0271.

Spring Flows

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November 30, 1995. Flow levels peaked at 41,300 cfs at the Wenatchee River at Peshastin site and 47,500 cfs at the Wenatchee River at Monitor site.

As more and more streamside and floodplain property is developed in the county it is critical for landowners to have an understanding of how high water levels can get, and how often these levels are reached. For more information about water supply and flow statistics, visit the USGS website at www.waterdata.usgs.gov, or the Washington State Department of Ecology's Stream Hydrology Unit webpage at www.ecy.wa.gov.



An example of a fuels reduction treatment area at Red-Tail Canyon Farm. Trees are appropriately spaced, and fuels in the form of dead/dying trees, branches and brush are removed to help slow an oncoming wildfire.

Hay Rides, BBQs and Wildfire Fuels Reduction?

Red-Tail Canyon Farm is a working draft horse ranch located in a picturesque canyon just outside of Leavenworth. Owners Ross and Marianne Frank offer guests horsedrawn hay and sleigh rides, BBQ cookouts, overnight lodging, and facilities for such events as weddings and family reunions. They recently added a new option to their menu of activities—tours of wildfire fuels reduction sites.

The Franks have been involved in community wildfire protection planning efforts in the Leavenworth area for some time. They have put a lot of hard work into instituting “firewise” principles and practices on their property and have now turned Red-Tail Canyon Farm into a wildfire fuels reduction demonstration site.

Visitors can tour the grounds with the Franks, or on their own, and view various types and intensities of wildfire fuels reduction techniques. These treatments are aimed at creating a defensible space around homes and other structures to help protect them in the event of a wildfire. Photos depicting how each treatment area looked before fuels reduction efforts occurred are posted for comparison purposes. Actions visitors can take to protect their own homes and property from the threat of wildfire are also discussed.

If you are interested in visiting the demonstration site at Red-Tail Canyon Farm, please call ahead (509) 548-4512 or 1-800-678-4512 to schedule a tour. Driving directions and information about the ranch are available at www.redtailcanyonfarm.com.

CWPP Process Update

The Chelan County Conservation District has been working with area residents, local fire districts, the Washington State Department of Natural Resources, and the United States Forest Service (USFS) to develop Community Wildfire Protection Plans (CWPPs) for areas along the wildland-urban interface in Chelan County. CWPPs help at-risk communities address such issues as wildfire response, hazard mitigation, community preparedness, and structure protection. Completed CWPPs can be used by communities to acquire grant funding for wildfire prevention and protection projects. They are also used to help direct management actions on adjoining public lands.

With help from a grant provided by the USFS, the Conservation District was able to assist in the completion of CWPPs for the Leavenworth, Manson, Peshastin Creek Drainage, Squilchuck Valley, and Union Valley communities between 2003 and 2005. We are currently working with county officials to obtain funding to complete plans for each remaining fire district in Chelan County. Efforts are also being directed toward the completion of a county-wide wildfire plan to help establish a prioritization process for projects proposed in individual CWPPs.

Completed Plans

In 2003, Union Valley became the first area in Chelan County to complete a CWPP. Subsequent fuels reduction projects identified in the plan have received federal and state funding. Approximately 200 acres of land have been treated to date. Treatments include shaded fuel breaks in heavily forested areas between private or public lands.

The Leavenworth Area CWPP was completed in 2005. The CWPP boundary includes both the Icicle Creek and Chumstick Creek drainages. Two years prior to the completion of the CWPP, the Leavenworth Neighborhoods Fuels Reduction and Fire Education Project was initiated by a group of concerned residents. This project focused on assessing fire risks in the Mountain Home Road, Dempsey Road, Red Tail Canyon Farm and Copper Notch areas outside of Leavenworth. With funding from the United States Fish and Wildlife Service, 134 fire risk assessments and fuels treatment recommendations were provided to individual landowners and approximately 100 acres were treated with fuels reduction work.

The Chumstick Watershed Fire Education and Fuels Reduction Committee formed in 2004 to help expand fire prevention and protection efforts in the Leavenworth area. With help from the Conservation District, the group received a grant from the Bureau of Land Management (BLM) to assess fuel loads in the watershed and provide education and outreach materials to residents. Since the summer of 2005, almost 400 homes have been assessed for wildfire risk. Landowners are currently receiving packets containing assessment results, mitigation recommendations, and educational materials.

CWPPs for the Squilchuck Valley, Manson and Peshastin Creek areas were completed between 2004 and 2005. Grants on behalf of landowners in these areas have been submitted to help support fuels reduction projects. With the help of a local contractor, the Ponderosa Estates Homeowner's Association completed a CWPP for their development in 2005. The document is currently awaiting final approval.

New Planning Efforts

Community wildfire protection planning is currently underway in the Entiat Valley. For more information on this effort contact Troy Corn at (509) 784-1673. Committees are also forming in the Lake Wenatchee & Plain Area and South Shore of Lake Chelan. If you would like more information on these efforts contact Mike Rickel at (509) 664-0268.



Students work alongside a resource professional to collect macroinvertebrates, or “stream bugs”, as part of the annual Kids in the Creek program.

Kids in the Creek

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turn, get to rub elbows with folks who *actually do this stuff for a living*. Many a student has come away with not only a new vision and appreciation of the natural world around them, but also an awareness of natural resource related career possibilities.

This year marked the 13th year of the *Kids in the Creek* program. The field days were hosted by the Washington State University (WSU) Colockum Research Center and Lake Chelan State Park. Many organizations worked with the Conservation District to help make this year’s program a success including the US Fish & Wildlife Service and the US Forest Service. Other participants were the City of Wenatchee Water Quality Department, WSU Cooperative Extension 4-H Forestry Education Program, Cascade Analytical, Inc. and the North Central Washington Audubon Society Barn Beach Reserve. This amazing team took students on a journey into a new world – right in their own backyard.

If you are an area high-school teacher or homeschooling parent interested in finding out more about the Chelan County Conservation District’s *Kids in the Creek* environmental education program contact Valerie Hampton at (509) 664-0275.



September 7-10

Look for our display at the **Chelan County Fair!**
Chelan County Fairgrounds in Cashmere, WA

September 30 – October 1

Visit our booth at the 16th Annual **Wenatchee River Salmon Festival**.
Leavenworth National Fish Hatchery in Leavenworth, WA
For festival information visit www.salmonfest.org.

October 7

Chelan County Household Hazardous Waste Collection Event
Chelan County Solid Waste & Recycling
Call (509) 667-6415 or visit www.co.chelan.wa.us for more info

New Addition to NRCS Office

The Chelan County Conservation District would like to welcome Justin Mount as the new Natural Resources Conservation Service (NRCS) Resource Conservationist for the Wenatchee office. Prior to coming to Wenatchee, Justin was a Soil Conservationist out of the NRCS office in Ephrata, Washington.

Justin is a fifth generation farmer from southern Illinois. He grew up on a farm that produced corn, soybeans and a variety of other grain and seed crops, along with cattle and hay. After obtaining a B.S. degree in Plant and Soil Sciences from the University of Tennessee, Knoxville, Justin went on to complete a M.S. degree in Forestry at Southern Illinois University, Carbondale.

The challenge of addressing a variety of resource issues was one of the things that attracted Justin to the NRCS. He looks forward to learning more about orchard and vineyard operations. Asked about his plans for the office, Justin said, “My short-term goal is to improve the visibility of NRCS with the Chelan County growers.” He has already started working toward that goal by making contacts and familiarizing himself with the area.



When not at work, Justin enjoys camping with his wife and young son. They have already explored some of the outdoor recreational opportunities in the region. Stop in and help us welcome the newest member of our team!



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