

CONSERVATION QUARTERLY

SPRING 2014

LOWER WENATCHEE FLOW ENHANCEMENT PROJECT A SUCCESS

Trout Unlimited – Washington Water Project’s (TU) and Cascadia Conservation District’s (CCD) Lower Wenatchee Instream Flow Enhancement Project is a successfully implemented salmon habitat enhancement and irrigator assistance project on the Lower Wenatchee River,



Welding and installation of the HDPE pipeline near Sunnyslope

Wenatchee River and irrigators of the PWUA.

The project provided the PWUA with an efficient, state-of-the-art pressurized pump irrigation system, and restored 38.27 cubic feet per second (cfs) to the lower Wenatchee River for the benefit of Steelhead, Bull trout, Sockeye and Chinook salmon. With strong support from multiple project partners, TU and PWUA completed the Project in 2013.

Beginning in 2008, TU staff took the project from conception to completion in under five years. This project is a noteworthy example of the beneficial results of cooperative partnerships as it involved over 15 different government, utility, non-profit and tribal entities and multiple private sector contractors. Design and engineering

for the project was led by Wenatchee's Forsgren and Associates, and Pipe of Washington, out of Pasco was the construction contractor; both did a fantastic job. CCD was one of the primary project partners. This project achieved its goal of improving instream flow in the lower Wenatchee River to improve fish passage by improving late season flows, removing a channel spanning diversion dam, and by decreasing the critical temperature barriers at the confluence of the Columbia and Wenatchee Rivers. As part of the project, TU and PWUA completed a change in the entire PWUA water right, which included moving the old point of diversion downstream to the new diversion(s). This effort was conducted by PWUA attorney Mark Peterson, with assistance from TU Project Director Aaron Penrose and TU's water rights attorney Mary McCrea.

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Inside the state-of-the-art pump station



Looking down at PWUA's new pumphouse at the confluence of the Wenatchee and Columbia Rivers

“Working on this project with Trout Unlimited was a great experience, with an outstanding organization,” says Barry Barnes, PWUA Board President.

Through this process, TU demonstrated on a large scale that public and private entities can collaborate with regulatory agencies to create significant, successful outcomes!

TU created a video to illustrate the great work and partnerships on this project, called “Water Partners at Work: Pioneer Ditch”. View the video here: http://www.youtube.com/watch?v=TOY__kNyCjU.

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“Enchantment Larch Lake”
by Drew Gaylord

WHY ARE THE FORESTS IN CHELAN COUNTY SICK?

Contributed by Amy Hendershot of the Natural Resources Conservation Service (NRCS)

Studies tell us that many forests in Chelan County have become over-crowded, or are dominated by tree species that are more susceptible to damage. Generally, forests become unhealthy when natural dynamics are upset by certain types of change. In Chelan County, it could be argued that the biggest factor making some of our forests sick is our forest management practices.



Condition of forest before treatment

Over time, natural processes have influenced forest landscapes. Native Americans lived in relative harmony with the forests. European settlement brought about dramatic changes to these natural processes. One of these dramatic changes was the exclusion of fire—they started to fight fire in forests instead of letting them take their natural course. As natural fires were suppressed, dense forests grew where open, park-like pines once stood. These dense forests are now made up of trees more shade tolerant than pine and are much less fire and pest resistant.

The most obvious kinds of change in Chelan County have been human activities, wildfire, and insects and diseases. When recreating or driving through the county, you have probably seen the effects of insects and diseases as a result of poor forest management practices. Defoliating insects such as spruce budworm eat the foliage of Douglas-fir and grand fir. Probably the most obvious example of this is the forests on Blewett Pass. Over the past couple of years, it has been easy to spot the orange-red color of the dead

needles on the trees as a result of the budworms munching. Wildfires can be catastrophic where high levels of ground debris and dense trees exist, which often translates to what scientists call “stand replacement fires”, where entire forests are killed, soil is sterilized, and severe erosion and runoff can occur. Other human activities, such as harvesting the best trees and leaving the weaker trees or species, can adversely affect forest health as well.

So what can we do? Although types of change will always be present and many of them can't be controlled, there are management practices which can be used to improve forest health issues and reduce the risks of your property experiencing catastrophic wildfires and subsequent damage. Forest treatments such as favoring ponderosa pine and larch in the forest will reduce damage caused by wildfire because these species are more fire-tolerant. Thinning forests to remove sick or weak trees and leaving a tree spacing that is appropriate for your site is another action you can take to improve your forest's health.

Agencies, businesses, and landowners work together to develop management practices which will promote healthier, more vigorous forests in Chelan County. A lot of good work has been done but there is more to do. If you have questions, would like assistance assessing your forest's health, or applying for grants to treat your property, contact the local NRCS (664-9303), Dept. of Natural Resources (899-0298), or contact Cascadia CD (436-1601).



Condition of forest post treatment. Treatments included: pre-commercial thinning, pruning, and slash treatment

FOREST RIDGE WILDFIRE COALITION: NAMED ONE OF FIVE MOST EFFECTIVE WILDFIRE COMMUNITIES

Forest Ridge Wildfire Coalition (FRWC) was named one of the five most effective wildfire communities in the United States by the National Fire Protection Association (NFPA). Nominated by the Washington State Department of Natural Resources to compete with Firewise communities nationwide in the NFPA's “1,000 Safest Places: The Firewise Challenge”. FRWC is seen as a representative community dedicated to reducing wildfire risk in the Squilchuck Valley. Criteria consisted of the development of an action plan and participation in wildfire mitigation activities, reducing wildfire risk in the Forest Ridge neighborhood and the Squilchuck Valley.



FRWC members chip slash piles during their annual “Firewise Day.” Cascadia has funding available to help your community become Firewise and protect itself from wildfire damage. Contact us at (509) 436-1601 for additional information

Jerry Holm, FRWC Chairperson, will accept the \$5000 NFPA award on behalf of the Forest Ridge Wildfire Coalition. This monetary award will be used for Firewise mitigation within the community. In their award announcement the NFPA said:

“Your (FRWC) hard work, dedication and passion has been

an inspiration to communities all across the country. By taking steps to combat the threat of wildfire, you have played an integral role in reducing your neighborhoods' wildfire risk, and have encouraged more residents to take action in their own areas”.

FRWC has already begun planning for the 2014 fire season.

FRWC award article contributed by Barbara Flick of FRWC.

Cascadia Conservation District assists communities in Chelan County with becoming Firewise and with fuels reduction projects.

For Firewise, please visit Firewise.org to learn more about the program and view requirements to become a Firewise community. If you are interested in this opportunity or you would like additional information please contact Amanda Levesque at (509) 436-1601 or amandal@cascadiacd.org.

For fuels reduction projects, please contact Kristine Desgroseiller at (509) 436-1601 or kristined@cascadiacd.org.



FRWC Board Members: Mary Redding, Ed Snyder, Barbara Flick, Don Flick, Doug Haven, Jerry Holm, Christel Holm, and Gary Jeffries with their check from Firewise to continue efforts that gave them recognition as one of the five most effective wildfire communities in the U.S.

CASCADIA OFFERS TECHNICAL ASSISTANCE TO HELP MANAGE NATURAL RESOURCES ON YOUR LAND

This spring Cascadia Conservation District would like to help landowners learn about Best Management Practices for irrigation.

Start by checking your Irrigation IQ:

How much of the water on earth is available for people's everyday use?

- A. More than 50%
- B. 28%
- C. Less than 1%
- D. 12%

How much water used for irrigating lawns and gardens, on average, is wasted due to overwatering and evaporation?

- A. 50%
- B. 25%
- C. 15%
- D. 10%

Need help managing natural resources on your property? Cascadia is here to help!

Cascadia's Landowner Assistance Program offers technical and financial assistance and can pay up to 50% of the total cost of eligible projects. Eligible projects include: fuels reduction, irrigation system upgrades, and more.

Cascadia is currently seeking cooperators for streamside planting projects in the Wenatchee River basin.

For additional information, please contact Kristine Desgroseillier at: (509) 436-1601 or Kristined@cascadiacd.org

A water-efficient irrigation system may include which features?

- A. Drip irrigation
- B. Moisture sensors
- C. Rain shut-off device
- D. All of the above

What is the best method for determining the duration of irrigation?

- A. Historical—how past generations irrigated
- B. To use the current water right
- C. Based on needs of the targeted crop

Visit www.cascadiacd.org and click on **Programs** then **Landowner Assistance** to take the rest of the quiz, get answers, and see the rest of our Irrigation Packet information. This page also includes additional information on our cost-share program. If you do not have computer access, give us a call at (509) 436-1601 and we will help you get paper copies of this information.



Micro Irrigation System installed on private property in Wenatchee Heights

2014 ENTIAT RESTORATION PROJECTS UPDATE

Construction of the 2014 Lower Entiat Salmon Habitat Restoration Projects begins in July. These projects consist of four project areas on the lower seven miles of the Entiat River. The goal of the projects is to create more habitat for juvenile fish to grow before heading to the ocean, as well as resting and holding areas for adults returning to spawn. To achieve this goal, several boulder clusters, side channel excavations, and large wood structures will be installed this summer.



Habitat Log Structure

The planned work follows the Intensively Monitored Watershed (IMW) study schedule and can only be accomplished through strong community support and willing landowners. Project details and designs are being negotiated with landowners and permit agencies in order to finalize designs for construction this summer. Please see the brief project descriptions below.

River Mile 0.8 to 2.3: Sponsors: Cascadia Conservation District and Chelan County Natural Resource Department. This project area includes 1.5 River Miles, beginning at the Kiosk information and parking area near the mouth of the river. Proposed habitat features include boulder clusters similar to those that already exist in this area as part of restoration work completed in 2010, and groupings of single logs embedded into the river bed and banks for habitat along channel margins. Other components include side channel improvement for higher quality habitat in already existing river features, especially during high flows.

River Mile 2.6 to 3.5: Sponsor: Yakama Nation Fisheries. This project includes installation of boulder clusters and wood habitat structures along the river bank

through approximately 0.9 miles of the lower Entiat River. The boulder clusters and margin-wood will be similar to existing structures installed in 2005. The wood structures will be anchored with boulder ballast and cabling into the existing bank and boulder clusters will consist of three 4-5 ft. size boulders arranged in triangular fashion within the channel. The chosen structure locations were the result of hydraulic modeling and landowner agreements.



Highflow Side Channel Inlet at River Mile 0.8-2.3

River Mile 4.0 Side Channel: Sponsor: Chelan County Natural Resource Department. This project includes additional improvement to a side channel where a levee was removed in 2008 and enhancement of an inlet to provide year around flow to an historic oxbow channel. Proposed activities also include work within the Entiat River to help direct flow into the side channel while providing mid-channel habitat, and riparian planting for long-term benefit to water temperature, water quality, and future wood recruitment.



Entiat Hatchery Split Flow Channel Inlet

Entiat National Fish Hatchery River Mile 6.7 to 7.0: Sponsor: Cascadia Conservation District. Improvement to an existing split flow channel and creation of a backwatered alcove area with habitat wood are proposed for this site. The work within the split flow channel includes installing groupings of single logs embedded into the river bed and bank, an engineered log structure at the head of the island, and a boulder cluster at the inlet of the split flow channel to help direct and sustain flow into the channel.

CASCADIA'S PRESENCE IN THE ENTIAT COMMUNITY

About 100 people came to Kiwanis Park in Entiat on Saturday, March 29 for Kite Festival, which was presented by the Entiat Valley Chamber of Commerce. Cascadia helped sponsor the event and staffed an information booth.

On April 12, Cascadia brought the Bureau of Reclamation's Rolling Rivers interactive watershed model to the Ardenvoir Swallowfest to teach kids and adults alike about the importance of a healthy watershed. Rolling Rivers has always been a big hit with the young and young-at-heart and our experience at Swallowfest this year was no different. About 150 people attended the event.



Children enjoy Rolling Rivers at Swallowfest

Group. Several different organizations had booths set up with fun educational activities. Cascadia brought our table length fish anatomy puzzle. This beautifully crafted wood puzzle depicts the internal and external organs of a fish. We played a game of Fish Anatomy Jeopardy with the students, where we would describe a fish organ and they would guess the part, then place it in the puzzle. The students also enjoyed doing fish origami as another component of Cascadia's station.

On April 29, Cascadia hosted an Open House at the Entiat Valley Community Service Group's new building to share information about the upcoming 2014 round of habitat restoration projects in the lower Entiat River. See page 3 for project descriptions and locations.

The second week of May, Cascadia and partners will be at the Entiat National Fish Hatchery hosting Kids in the Creek, a hands-on environmental education program for high school 10th graders. Students explore actual field methods for assessing aquatic and riparian habitat, water quantity, water quality and indicator insects, as well as an introduction to land use planning considerations. Kids in the Creek annually reaches over 300 hundred students from 7-10 area high schools. For additional information please visit the Kids in the Creek website, www.kidsinthecreek.com and make sure to tell your teachers and school board about this exciting educational opportunity!



Students at the Kids in the Creek Water Flow Station

UPCOMING MEETINGS & EVENTS

Cascadia Conservation Board Meetings

May 15, 3:30 PM, Douglas Conference Room, 14 N Mission St, Wenatchee
 June 19, 3:30 PM, Douglas Conference Room, 14 N Mission St, Wenatchee
 July 17, 3:30 PM, Douglas Conference Room, 14 N Mission St, Wenatchee
 Please contact Cascadia's office for more information: (509) 436-1601

Entiat Watershed Planning Unit (EWPU) Meeting

July 2, Entiat Grange Hall, 9:00 AM

Entiat Habitat Subcommittee Meeting

May 15, TBA (may cancel - contact Cascadia)
 June 19, Fire Station, 9:00 AM- 12:00 PM
 July 17, Wenatchee Room, 9:00 AM-12:00 PM

Kids in the Creek Outdoor Environmental Education Program

May 6, 7, & 8, 8:00 AM-2:30 PM each day
 For additional information visit:
www.kidsinthecreek.com
 To volunteer for the event contact
 Amanda Levesque at (509) 436-1601 or
amandal@cascadiacd.org

Leavenworth Spring Bird Fest

May 15-18, for more information visit
www.leavenworthspringbirdfest.com

Cascadia Conservation District has launched a blog: Cascadia's Conservation Conversation!

Please check it out at: <http://ccdconservationconversation.blogspot.com/>



CASCADIA
 CONSERVATION DISTRICT

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