

CONSERVATION QUARTERLY

SUMMER 2013

NEWLY INSTALLED RAIN GAUGES PROVIDE WARNING OF FLOOD EVENT

Several government agencies, including the Natural Resources Conservation Service (NRCS), the Cascadia Conservation District (CCD), the Chelan County Public Works (CCPW), and the Chelan County Natural Resource Department (CCNRD), worked together to install 10 rain gauges located upstream from No. 1 and No. 2 Canyons near Wenatchee, Mission Creek near Cashmere, Oklahoma Gulch near Entiat, and First Creek near Lake Chelan's south shore. Site selection was based on location of communities, historic flooding, and burn severity.

These rain gauges are maintained by the U.S. Geological Survey (USGS) and gather real time data to alert residents of potential flood danger during heavy rain events. Once rainfall reaches a certain threshold, the rain gauges transmit data hourly via satellite to a USGS database monitored by the National Weather Service (NWS). Rainfall exceeding one-tenth of an inch in a 10 minute period initiates more rapid data collection and monitoring of rainfall.



One of 10 newly installed rain gauges that alert residents of flash flood risk. Photo courtesy of USGS.

The NWS issues weather watches, advisories and/or warnings based on the data from the rain gauges, Doppler Radar, and reports from the area. The public can track conditions through the National Oceanic Atmospheric Agency (NOAA) weather radio, the internet, and local media outlets. The NWS also posts Facebook and Twitter updates during events as time allows. Please note that emergency management officials advise the public not to rely solely on warnings since heavy rainfall can cause flash flooding before warnings can be issued. If you know there is heavy rain in the area, take precautionary action.

"The best thing you can do to prepare your home and family for flash-flooding is to educate yourself before it happens," said Amy Hendershot of the Natural Resources Conservation Service. "Have food, water and other necessary items available."

The newly installed rain gauges were put to the test on Saturday, June 29 when extremely heavy rainfall hit the Wenatchee area. The new rain gauges near Wenatchee reported as much as 0.6 inches of rain, most of which fell within 30 minutes. New rain gauges in Peavine Canyon recorded as much as 1.5 inches of rain. NWS Doppler radar showed even heavier rain falling on the burn scars in Tronsen Creek and Devil's Gulch, which led to the debris flows in those drainages.

"The new rain gauges provided the real-time rainfall data that gave the NWS the information needed to issue the flash flood warnings," said Katherine Rowden, of the National Weather Service/NOAA.

People with newer cell phones automatically received alerts through the national wireless emergency alert system (www.ready.gov/alerts) when the NWS issued a flash flood warning. Those with certain weather applications (apps) installed on their smart phones also would have received the warning."

Flood preparedness information can be found at the interagency Central Washington Fire Recovery website: <http://centralwashingtonfirerecovery.info>.



Debris from flood event in Mission Creek on Saturday, June 29. Alerts were sent to cell phones. Photo by Matt Lyons.

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2014 ENTIAT RESTORATION PROJECT PLANNING IS UNDERWAY



Boulder cluster installed in 2010. Additional boulder clusters will be installed as part of the 2014 projects

Through the Intensively Monitored Watershed (IMW) study, a schedule for in-stream salmon habitat restoration work was developed. The next round of fish habitat improvements will take place in Summer 2014. This work is proposed within the lower seven river miles and includes up to four project areas.

The proposed treatments include cover and backwater habitat along the banks, newly expanded off-channel areas, and improvements to existing high flow and split flow channels. The objective of these projects is to provide juvenile fish a place to grow before heading to the ocean, as well as resting and holding areas for adult salmon as they return to spawn. Project sponsors and designers are currently working closely with landowners for project development and support of the proposed work.

The goal of the salmon recovery effort within the Entiat River Valley is to work with willing landowners and the community to improve fish populations, and maintain the character and allure of the Entiat River Valley. Below are general descriptions for the proposed projects. For additional information or questions please contact Cascadia Conservation District at (509) 664-9370.

River Mile 0.8 to 2.3, Restoration Project (Project Sponsors: Chelan County Natural Resources Department & Cascadia Conservation District) – The general project area includes approximately 1.5 river miles, which begins at the Kiosk information and parking area near the mouth of the river, known as Entiaqua Park. Project details are still being developed with landowners in this vicinity as designs and future river use are being considered. In areas where disturbance to existing riparian vegetation will be avoided, boulder clusters are proposed. These treatments will be similar to what already exist in this area as part of restoration work completed in 2010. Other components include the possible creation of off-channel habitats and enhancement to existing high flow channels. Improvements like the burying of a log into a bank or the placement of a large boulder will provide higher quality fish habitat in already existing river features.

River Mile 2.6 to 3.5 Restoration Project (Project Sponsor: Yakama Nation) – This project includes the proposed installation of boulder clusters in the center of the stream and margin-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. Clusters will consist of three 4-5 ft. basalt boulders arranged in triangular fashion within the channel, and habitat logs will be anchored with boulder ballast and cabling into the existing bank. Gaps in the existing riparian vegetation will be utilized for access so as to minimize disturbance to the riparian corridor. Access to the sites will utilize existing routes and no new roads will be constructed for this project. Approximately 26 margin-wood habitat structures may be created as well as 43 boulder cluster configurations.



Similar wood structures will be installed as part of the 2014 habitat restoration projects

River Mile 4.0 Side Channel Project (Project Sponsor: Chelan County Natural Resource Department) – This project will modify the inlet to an existing side channel connected through a levee breach in 2008. Monitoring of the side channel has shown significant sand and sediment deposition since 2008. Inlet modifications will include additional levee removal, and installation of large wood structures that will direct flows into the side channel and help move sediment through the side channel. Boulder clusters and wood habitat structures along the bank of the main stem are also proposed in this area. The project goal is to provide off-channel rearing habitat for juvenile fish and main stem holding habitat for juvenile and adult fish.

Entiat National Fish Hatchery Phase II Restoration, River Mile 6.7 – 7.0 (Project Sponsor: Cascadia Conservation District) – Proposed project actions consist of the enhancement of an existing split flow channel and the excavation of a possible side channel or backwatered alcove areas with associated habitat wood. The work within the split flow channel includes the installation of an engineered log



River Mile 4 side channel inlet. Project proposals include installation of additional side channels in the Entiat River

structure at the head of the island, boulder clusters within the channel, and habitat logs along the river banks to provide cover and backwater areas. The objective of this project, like the others, is to improve fish habitat in the lower Entiat River in order to create an environment where juvenile spring Chinook salmon, steelhead, and bull trout populations have the greatest possibility of growth and survival for out-migration. These actions will provide additional off-channel habitat and resting areas for various life stages of the listed species.

For further information regarding this work, come visit us at the Entiaqua Park on August 3 for River Appreciation Day. Project sponsors will be available at the Saturday event during the barbeque, after river cleanup activities have been completed that morning. Sponsors will have additional information about the types of proposed treatments, how they are designed, and what they hope to accomplish with this work. Materials from river assessments completed for the Entiat River will also be displayed. These assessments are a part of the foundation for restoration work within the watershed. In addition, representatives with local fish monitoring crews will also be available for questions and can provide details about the types of monitoring being conducted and how they are using this information. Please contact Amanda Levesque with Cascadia Conservation District for additional information about Entiat River Appreciation Day, 509-664-9370.

MONITORING RESULTS FOR ENTIAT SIDE CHANNEL PROJECT

The side channel was constructed as part of the 2012 round of habitat implementation under the Entiat IMW. Habitat within the side channel is complex and primarily consists of a large wood structure placed during construction. Since project completion, beaver activity within the site has resulted in the further addition of log structures to the channel.

In the year since it was constructed, the side channel is supporting higher densities of Chinook than the mainstem Entiat River and other side channels (except for Wilson), and those Chinook are healthier (as measured by a standardized weight) than Chinook found in other side channels. Steelhead were also present in the side channel, although not in numbers as great as Chinook.

ENTIAT RIVER APPRECIATION 2013: WORKING TOGETHER TO BUILD COMMUNITY

Cascadia Conservation District, the City of Entiat and the Entiat Watershed Planning Unit will co-host a fun filled day on the Entiat River in early August.

Save the date! The fourth Entiat River Appreciation event will take place on Saturday, August 3.

The day's activities begin at 9:00 a.m. with your choice of participating in an on-the-ground cleanup at Entiaqua Park, weed removal at the Entiat National Fish Hatchery, or floating a one mile reach (experienced people only) of the river for trash collection.

The morning's work will be followed by a volunteer appreciation party beginning at noon. The party will include a free barbeque, live music, and family oriented games and activities, including a visit by Smokey Bear.



Volunteers plant native species as part of the Entiat River Appreciation event

The party will also feature experts on the series of restoration projects to be implemented in the Entiat River in 2014.

To RSVP for this fun-filled family event or for additional information please visit www.cascadiacd.org or call 509-664-9370. We hope to see you there!

We are also inviting streamside

landowners to take advantage of this opportunity to clean up their own waterfront area.

These landowners can participate by bringing debris they collect on their property (excluding hazardous chemicals) to Entiaqua Park for disposal and then stay for the barbecue. A few years ago, one landowner brought an old rusted car frame that had long littered their streambank. Landowners are encouraged to call us with any questions about this opportunity.



Volunteers enjoy an encounter with Smokey Bear at the volunteer appreciation party

Cascadia would like to thank all the local organizations and businesses listed below that helped make this great event possible.

Partnering agencies include: the City of Entiat, Entiat Watershed Planning Unit, National Fish & Wildlife Foundation, US Fish and Wildlife Service, US Forest Service, Chelan County Fire District 8, US Bureau of Reclamation, Upper Columbia Regional Fisheries Enhancement Group, Chelan County Natural Resources Department, Trout Unlimited Washington Water Project, and Chelan-Douglas Land Trust.

Entiat community groups, businesses, and individuals include: the Entiat Tree Board, Entiat Grange, Entiat Valley Community Services Group, Entiat Food Center, Cooper's Store/Restaurant in Ardenvoir, Log Cabin Restaurant, Mom's Kitchen, Entiat Shell Station, Numerica Credit Union, Cascade Quality Water, Entiat Bakery, Bob Whitehall, and Crunch Pak in Cashmere.

PREPARE YOUR HOME FOR WILDFIRE SEASON

Wildfire is a fact of life in north central Washington, especially as people continue to move into the Wildfire/Urban Interface. In Chelan County, we value the beauty of our forests and want our homes near them. While many enjoy the privacy a densely vegetated property provides, this could mean devastation in the face of a wildfire. However, there are steps you can take to prepare for wildfire and minimize your threat of damage.

Wildfire behavior is influenced by three main factors: topography (lie of the land), weather (wind speed, relative humidity and ambient temperature) and fuel (vegetation and man-made structures). Of these, **fuel** is the one factor we can influence. Debris like dead leaves and pine needles left on decks, in gutters and on lawns can ignite from flying embers.

The following are tips from Firewise.org for making your home less vulnerable to damage during a wildfire. Visit Firewise.org for additional information and resources:



Keep vegetation out of your Home Ignition Zone to reduce your risk of fire damage

Home Ignition Zone: Create a fuel-free area within 3-5 feet of your home's perimeter:

including cleaning debris from your gutters and sweeping leaves and pine needles off your deck. To prevent fire spread, trim back branches that overhang structures and prune branches of large trees up to 6 to 10 feet from the ground. *From 5 feet to at least 30 feet out:* thin and space vegetation, remove dead leaves and needles, prune shrubs and tree limbs. Choose Firewise plants – find lists at www.firewise.org or from your local Cooperative Extension service. Keep wood piles and flammable secondary buildings, like sheds, outside of your Home Ignition Zone as they make your house vulnerable to ignition. Your home ignition zone extends up to 200 feet—and it's quite common to have neighbors whose home ignition zone overlaps yours. Buildings closer than 100 feet apart can ignite one another if they are in flames. So it is important to work with your neighbors to ensure their homes are Firewise as well.

Be Prepared: Have a disaster plan in place that you discuss and practice with everyone in the household. Make sure emergency responders can find your home by having clearly marked street names and numbers. Create phone trees within your neighborhood to ensure all residents are notified during a wildfire emergency.

Homeowners must take primary responsibility for wildfire safety action around their home!



The best offense is a good defense. Create defensible space around your home to protect it from wildfire

CASCADIA COMINGS AND GOINGS

FAREWELLS

During **Kate Koenig's** five years with Cascadia, she worked extensively on the cost-share program helping landowners manage natural resources on their property through technical and financial assistance. Kate also managed Cascadia's Wildfire Preparedness program and assisted several local communities in becoming Firewise. Thank you and best wishes Kate!



Susan Dretke worked as Cascadia's lead coordinator for the Entiat for the past three years. During that time Susan was very active with the Entiat community through public meetings, coordinating project implementation and monitoring, and hosting annual events like the Entiat River Appreciation volunteer event held each August. Thank you Susan and best of luck in your future endeavors!

Jon Stutler served as Cascadia's AmeriCorps intern for the past year and greatly contributed to many of Cascadia's programs, especially education-related initiatives. Jon attended many educational events including Earth Day fairs, Wenatchee Salmonfest, and Entiat Summerfest. He also kept our Pollinator Garden in great shape! Thank you Jon, and happy travels!



WELCOME ABOARD



Kristine Desgroseillier has a Bachelor's of Science in biology and environmental science from Western Washington University and over fifteen years of experience working in natural resource fields. She has always enjoyed working cooperatively with local landowners and producers. In her free time she enjoys gardening, camping, swimming, and experiencing the natural beauty of our area. Welcome Kristine!

Jason Sims was born and raised in Wenatchee. He spent four years in the Army with one combat tour of Iraq and followed that with time in the National Guard. Jason returned to school in 2009 earning an Associate's Degree at Wenatchee Valley College and a Bachelor's of Science in Biology from University of Washington. He is very excited to join the Cascadia team and we are excited to have him. Welcome aboard Jason!



CASCADIA
CONSERVATION DISTRICT

215 Melody Lane Wenatchee, WA 98801
(509) 664-9370 • www.cascadiacd.org

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UPCOMING MEETINGS & EVENTS

Cascadia Conservation District Board Meetings

August 6 at 3:30 pm at 215 Melody Lane, Wenatchee
September 3 at 3:30 pm at 215 Melody Lane, Wenatchee
October 1 at 3:30 pm at 215 Melody Lane, Wenatchee
For more information contact Cascadia's office: (509) 664-9370.

Wenatchee Habitat Subcommittee Meetings

August 21 at 9:00 am, Leavenworth
September 18 at 9:00 am, Leavenworth
October 16 at 9:00 am, Leavenworth
For more information contact Mary Jo Sanborn: (509) 667-6532

Entiat Habitat Subcommittee Meetings

August 15 at 8:30 am at 215 Melody Lane, Wenatchee
September 19 at 8:30 am at 215 Melody Lane, Wenatchee
October 17 at 8:30 am at 215 Melody Lane, Wenatchee

Entiat Watershed Planning Unit Meeting

October 2 at 9:00 am at Grange Hall, Entiat

Upper Columbia Salmon Recovery Board Meetings

September 26 at 10:00 am at the Okanogan Co Commissioners Hearing Room
October 24 at 9:00 am, Conference Call (Contact Barbara Carrillo at 662-4704 for call-in information)

Upper Columbia Salmon Recovery Board Implementation Team Meeting

June 4 at 10:00 am at the Chelan Fire House, Chelan

Initiative for Rural Innovation and Stewardship

2013 NCW Community Success Summit. November 20 from 9:00 a.m. – 3:00 p.m. at the Okanogan Middle School. For more information visit: <http://irisncw.org/>

Cascadia has funding available for several types of projects and can offer technical and financial assistance. Eligible Projects include:

- Irrigation systems and mainlines
- Soil moisture monitoring and equipment
- Soil testing and nutrient management
- Noxious weed control
- Wildlife habitat planting and structures
- Mulching
- Variable frequency drives for pumps
- Pasture renovation and reseeding
- Pasture management plans
- Windbreaks/shelterbelts
- *Other projects may also be eligible

Deadline to apply is October 15, 2013.

Contact Cascadia Conservation District at (509) 664-9370 to find out how we can help manage natural resources on your property.



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