

LE CLERC CREEK

BY AMANDA PARRISH

To an untrained eye, the scene along LeClerc Creek near Diamond City, Washington might look bleak. But to The Lands Council (TLC) and US Forest Service (USFS) staff, it looks like a successful restoration project completed in record time. In order to improve endangered bull trout habitat and undue a century-old legacy of logging, TLC partnered with USFS to restore two miles of the West Branch of LeClerc Creek. Phase 1 of the project was completed this past summer by local contractors from Priest River, Douglas Construction and Custom Cutting. The idea behind the project came from USFS hydrologist, Rob Lawler. After working for years to obtain permitting and background information, USFS reached out to TLC to help them complete the project.

Large woody debris (like large trees that fall into streambeds) are very beneficial to aquatic habitat. They create scour pools for fish rearing, slow and disperse the flow of water, and can increase the overall heterogeneity of the aquatic landscape. But this particular stretch of LeClerc Creek was devoid of woody debris and had been falsely straightened. In the early 1900s, the Diamond Match Company had a logging operation on the

creek that straightened the stream channel and saw the installation of two crib dams along upper and lower portions of the reach. These dams have led to sediment build up, which overtime divorced the stream from its natural floodplain. To address both issues of sediment build-up and the need for large woody debris, a six week construction project took place over the summer.



USFS silviculturists marked unhealthy trees in a nearby stand that could be tipped over with root wads intact to be used for large woody debris. Once this was done, TLC's Amanda Parrish coordinated the construction phase with Douglas

Construction and USFS. Many tons of sediment were scraped back to lower the stream to its natural floodplain, turning a 30 foot wide stream into a 300 foot wide stream in some places. Hundreds of trees were placed in stream and partially buried, and another few hundred will be placed upstream to a more remote part of the stream by helicopter during Phase 2 of the project. The lower crib dam, which was buried in sediment, was removed while the upper crib dam was blown up after the construction was completed.

Today, the stream looks pretty different from where it started. But as vegetation grows on the newly formed streambanks and the logs continue to redirect the flow to create braided channels, pools, and ripples, the stream will eventually look better than ever. Best of all, the endangered bull trout that are already present in this cold-water creek will have improved rearing habitat that will increase populations throughout the region.

To learn more about this project, please contact watershed program director, Amanda Parrish, at aparrish@landscouncil.org.



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ST. GEORGE'S STORM GARDEN | COLVILLE FOREST UPDATE | FROM OUR EXECUTIVE DIRECTOR

PACWEST SILICON SMELTER IN NEWPORT, WASHINGTON

BY MIKE PETERSEN

The proposed PacWest silicon smelter in Newport, Washington is drawing fierce opposition. The Kalispel Tribe and other residents in Pend Oreille and Bonner Counties are very concerned about pollution that would come from the facility, including sulfur dioxide, nitrous oxides, carbon dioxide, and particulate matter. We will submit formal scoping comments to Washington Department of Ecology by the October 26 deadline. We encourage each of you to submit specific comments and you can submit your comments online.

The carbon needed in the smelting process will be provided by coal from Kentucky. We believe there are better options that would substantially reduce the sulfur dioxide. One of those options is to use locally produced biochar.

Biochar, which is activated carbon, is produced from wood or agricultural waste products, such as slash piles, seed milling residue, crop residue and other plant materials. It is much lower in sulfur content, can create jobs locally, and can also avoid transportation costs and diesel emissions.

Power plants, smelters, industrial furnaces, and waste-to-energy plants all release nitrous oxides. Filters and scrubbers can eliminate much of this nitrous oxide, which, like sulfur dioxide, leads to acid rain. Ecology should conduct a thorough analysis of reducing the nitrous oxides. Other expected air emissions including PM2.5 emissions must be analyzed. The carbon dioxide emissions are massive. PacWest claims that at least half of the silicon produced would be used in solar panels. What commitment is PacWest making that this would actually occur? There are other potential contaminants, depending on the process, including mercury, carbon

monoxide, etc. Ecology's analysis should look at the range and levels of pollutants and how they would be treated. We also want to know how many furnaces are planned at the facility and we ask that projected future emissions be analyzed.

Startup, shutdown, and intermittent use can give off very different emissions than continuous operation. What are the best management practices to be used during the smelting operation?

The proposed location of the smelter was moved from one controversial site to another. Will Ecology look at other areas in Pend Oreille County? There have been claims about water usage and disposal. Ecology needs to address the source and quantity of that water.

As our region makes efforts to transition away from fossil fuels to solar and wind, we must insist that renewable energy is also environmentally and socially responsible.



FALL
2018

THOUGHTS FROM OUR EXECUTIVE DIRECTOR
BY MIKE PETERSEN



I just returned from a road trip to help our International Fellow, Dimitar Dimitrov, climb Mt. Whitney. The skies in Northern California and Eastern Oregon were still filled with smoke. The massive wildfires from this summer are under control, but not out. Climate change is causing higher temperatures, which have extended fire seasons by two months in much of the American West.

Here in the Inland Northwest we are working with many partners to restore our fire-evolved forests in a manner that favors fire resilient trees, and uses science-based prescriptions in previously logged areas.

We are also working with our forest coalition partners to challenge the recent Colville National Forest Plan Revision (which did not recommend many key roadless areas for Wilderness including the wild Kettle River Range). Our forest collaboration has been built on balance. We all agree that the plan revision is out of balance with regards to protecting conservation and recreation interests.

Here in Washington State voters have an opportunity to take an important step to reduce carbon emissions. Initiative 1631 would place a fee on carbon. The fees collected are mandated to go directly to clean energy projects such as wind and solar, as well as investments in healthy communities, sustainable forests, and clean water throughout our state. Thirty-five percent of all investments are dedicated to those areas impacted by pollution the most, thus giving the most affected communities the ability to create healthier communities for themselves, their children, and their

children's children. The Lands Council has endorsed I-1631, and we urge our members to support this forward-thinking initiative.

Lastly, I would like to invite all of you to join me on November 4th for the Fifth Annual Gerry Copeland Hike and Trail Clean-Up. We will meet at the Kettle Crest Trailhead, at the top of Sherman Pass, at 11:00 AM. The hike is on the south side of Highway 20 on the Sherman Peak Loop. Bring gloves, warm clothes, water, and a lunch.

Many thanks to all of you who came out for our annual Spokane River Clean-Up on September 15th, as well as Reforest Spokane Day on October 13th!

Mike Petersen | Executive Director

INTERAGENCY COOPERATION TO SUPPORT WOLF RECOVERY
BY CHRIS BACHMAN



The Lands Council is hosting a meeting with the Washington Department of Fish and Wildlife and the United States Forest Service to work cooperatively on forest management and wildlife policy. Each party will work to modify the policies and procedures to help eliminate the ongoing conflict between the wolf population and livestock industry.

From 2012 until today, wolf and livestock conflict has led to the killing of 20 recovering wolves. Yet, there has been no change in public lands grazing policy to adapt for a recolonizing predator. The Lands Council argues that continuation of the same policies will inevitably lead to the same results. Wildlands should be managed for wildlife.

There are areas in the Colville National Forest that are conducive to defensible livestock grazing - open range where livestock can instinctively and protectively group in a herd. This behavior has been shown to deter wolf predation. The Lands Council is proposing the restoration of native low-altitude meadows in the Colville National Forest that will mimic historical conditions, offer protected areas where livestock can safely graze, and effectively employ non-lethal wolf deterrents. The time has come to creatively solve conflict between the recovering wolf population and the livestock industry by changing human behavior.

REFOREST SPOKANE DAY

Thank you to everyone who attended our 8th Annual Reforest Spokane Day! The sun was shining and it was a beautiful fall day. In about 3 hours, 300 volunteers planted over 300 native trees and shrubs and collected 200 pounds of garbage and recyclables from the Spokane River.

Thank you to our partner, Avista Utilities, who made this day possible for our amazing volunteers.



ST. GEORGE'S STORM GARDEN
BY KAT HALL



Visit St. George's School and you'll notice a new addition shortly after you pass through the gates into the campus. It's a garden of sorts. You'll see shrubs, grasses, and groundcover plants. You'll see reddish-brown bark mulch. You'll see a river rock inlet path running through it and connecting it to the road. You'll see a grated drain. Depending on what time of year it is, you may see water ponding in its lowest section. This is not your average, everyday garden. It's a storm garden!

Storm gardens help capture contaminated stormwater runoff at its source. Instead of routing stormwater runoff down the street along the curb to a drain—which often empties directly into our Spokane River—this runoff is channeled into a garden. Constructed slightly lower than street level and located between the street and sidewalk, storm garden plants and soils filter contaminated runoff and help recharge our aquifer. And, they are aesthetically pleasing!

Thanks to grant funding from the Washington Department of Ecology and in partnership with Spokane County, the City of Spokane, and AHBL, Inc., TLC spent the 2017 - 2018 school year teaching 8th

grade students at St. George's a practical, hands-on curriculum on green infrastructure and low impact development (LID). During the first semester, students acted out the urban water cycle through role plays; tried their hands at green infrastructure artwork; created optimal storm garden media mixes; and mixed gravel, cement, and water to create "magic sidewalks" of pervious pavement.

Inspired by a field trip to the City of Spokane's Broadway Avenue SURGE (Spokane Urban Runoff Greenways Ecosystem) project, the students kicked off the second semester by designing a storm garden on their campus. Students completed a comprehensive site analysis; researched and selected a suite of local plant species suited for storm gardens; conducted soil texture and infiltration tests; and learned how to properly size a storm garden. Based on their data, we made the collective decision to site the storm garden in a grassed-swale in front of the main campus buildings. After final approval by school administration, campus facilities maintenance staff performed the bulk of the excavation of the garden, and TLC secured compost, river rock, plants, and bark mulch. In April, students finished shaping and sloping the storm garden; cleaned out the inlet funnel (joining the storm garden with the road); dug an inlet channel through the garden; filled the inlet channel with river rock; and mixed compost into the garden. In June, they planted additional plants and added bark mulch to the garden. An interpretive sign is presently in production; and as soon as it is installed, the students can proudly claim completion of their legacy to the school!

TLC has the opportunity to teach this curriculum to a second pilot school in Spokane during the 2018 - 2019 school year - at the Spokane Public Montessori. The adventures are already underway, and we're excited! Keep an eye on TLC's Facebook and Instagram pages to follow our progress!