

Confluence Farms:

Habitat and Farmland Benefit from Partnerships in the Long Tom Watershed

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Stream and riparian restoration, a riparian forest buffer, a conservation easement, and farming overlap to provide beneficial outcomes for Trey and Tammie Hagen. At Confluence Farms, west of Junction City, Oregon, Trey and Tammie farm blueberries and sell them locally to schools and businesses. They also produce figs, manage meadows for hay, and grow Douglas fir trees. Over 2.3 miles of Ferguson Creek and South Fork Ferguson Creek pass through their farm. The headwaters of these streams are important spawning and rearing grounds for cutthroat trout and other native fish. Trey grew up in this watershed, about a mile and a half from his current residence. As a kid, Trey and his friends spent countless hours fishing, camping, and mucking about along its banks. “In retrospect, Trey says, “I think Ferguson Creek could qualify as my best friend growing up.”

However, as Trey got older, land uses in the area reduced the health of the creek and its banks. The stream became disconnected from its floodplain, down cut in its channel, and left high, steep banks prone to erosion. Their former playground had been degraded. Years later, when Trey’s family bought the Knebel Homestead and the pieces of Ferguson Creek running through it, Trey said “I vowed to do my part to return the stream to its former habitat. This has been my ongoing motivation for involvement with numerous agencies.”

Trey and Tammie became involved with the non-profit Long Tom Watershed Council (LTWC), in addition to other conservation organizations. The mission of LTWC is “to improve water quality and watershed condition in the Long Tom River basin and surrounding drainages through education and collaboration among all interests, using the collective wisdom and voluntary action of our community members.” The property’s large size and contiguity with other LTWC projects made the Hagen property a high priority for creating an extended corridor of improved fish and wildlife habitat.



Log jams like the one pictured at left create pools by slowing down and varying stream flow which can create important habitat for fish and aquatic insects. Photo by Katie MacKendrick.

The LTWC partnered with the Hagens to improve habitat in the creek and on its banks. With conifer logs removed from a nearby wildlife refuge to release oak trees from competition and improve oak habitat, the LTWC created 22 log jams in South Fork and mainstem Ferguson Creek, part of a broader effort to increase the frequency of large wood in four contiguous stream miles. Log jams create pools by slowing down and varying stream flow, allowing the buildup of gravel, which creates important habitat for fish and the aquatic insects they eat. Over time, it also helps reconnect the stream with its floodplain. To improve the creek banks, the LTWC replaced herbaceous pasture grasses and nonnative blackberry with a riparian forested buffer that included a diverse mix of native trees and shrubs across 20 acres. Planting occurred between 2012 and 2014 and actions to ensure the plants establish well will continue into 2018. Trey said that before the process of restoration, about three-quarters of the creek had become inaccessible due to mountains of invasive blackberry bushes. One benefit of this restoration work has been the rediscovery of swimming holes and beautiful stretches of water. Trey mentioned that after the restoration work, “it was like owning a new piece of property of natural wonders.”

In addition to the corridor improvements, the LTWC worked with the Hagens to improve a rocked crossing on South Fork Ferguson Creek. Before the work, the crossing blocked upstream fish passage

during low flows when water would flow through the rock but not over it. LTWC used funds from an Oregon Watershed Enhancement Board small grant to rebuild the crossing at the proper elevation so that water would continue to flow over the crossing, even during low stream flows. The stream crossing is also more farm-equipment friendly with a sloped and graded gravel bed.

Trey thinks there is a symbiotic relationship between Ferguson Creek and their farm; “the better we take care of it, the better it will take care of us.” Trey also mentioned that unlike other berry and fruit farmers in the region, they have not had trouble with pests or diseases in their blueberry and fig crops. While they say that they cannot be certain that they have avoided these issues because of the restored riparian corridor, they think they benefit from the abundance of beneficial insects residing within the riparian corridor. The diverse native shrubs and trees provide shelter and food for pollinators throughout the year. Trey mentioned, “We made the decision quite some time ago to never use insecticides, but it’s nice to have never faced the issue!”

Trey and Tammie also sold a conservation easement to McKenzie River Trust, the local land trust. While they don’t know if conservation easements are right for every family, for Trey and Tammie, “seven years after signing papers on a 62-acre easement running along the western half of our

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“We will add pollinator shrubs like viburnums and other native shrubs over the next few years.” On the day of the interview for this article, February 26th, 2016 Ron said, “As a matter of fact, today FSA, Farm Services Agency, is announcing a new initiative under the Conservation Reserve Program to help organic farmers plant buffers just like this... We like the diversity of plants because of the wildlife and beneficial insects that we get with the field buffers. But until now those field buffers just didn’t make us much money. They were just a requirement for our organic certification.”

The Rosmann farm headquarters and livestock feed yard are also protected by windbreaks. They have two big windbreak projects planned for the next three years using the Conservation Stewardship Program, CSP. The first is to renovate the old farmstead windbreak. The second is to plant edible nut and fruit crops on some of the bench terraces as well as the neighbor-buffer strips. “By adding diversity to these windbreaks we support wildlife, pollinators for our crops and we might be able to harvest some new crops for our on-farm store,” says Ron.

Another area, about a quarter of a mile long, will be planted with at least three species of pollinator shrubs: nannyberry,

arrowwood and serviceberry. Ron is thinking about adding additional species like plum, pear, blueberries, red currants and buttonbush. This new shrub planting will provide pollinator food and habitat and complement an older planting of rare and declining prairie plants. That prairie planting was placed on the top side of the terrace. That 30 foot strip isn’t farmed. “We do ridge tilling with a Buffalo Tiller. It provides some of the best weed control in our organic operation. I don’t like ridges on my turn rows. So, I planted permanent vegetation there, like this prairie. This makes it a lot smoother to turn around and I need a 30 foot wide buffer adjacent to my neighbors anyway,” says Rosmann.

“An alley cropping system would be cool,” Ron says, “but I can only do so much. We have four windbreaks that add up to a mile or more in length, that need gaps filled. I’ve also got quite a few trees that need to be trimmed up.”

Ron recognizes that windbreaks of trees and shrubs take time and labor but are worth the effort. “Those windbreaks, prairies and shrubs provide a diversity that enriches our lives. You get to see the biological system at work.” ▲

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stress also creates higher feed value, while the added shade helps reduce heat stress for livestock. Even in northern climates like Minnesota and Vermont heat stress is a common issue that producers deal with. “Silvopasture is a win-win situation because you can add value from the forage, from cutting trees, and from reducing soil compaction,” said Dan.

Demonstrating the theory and concept of silvopasture has heightened Dan’s interest. With the more than 100 acres of heavily wooded pasture that his family owns, there are many opportunities to increase silvopasture on his farm. So far he has seen that converting some wooded acres to silvopasture has improved their cow-calf operation. When the silvopasture system allows Dan to generate or wean more beef calves, there is economic benefit from the system and more saleable products from the farm.

Dan Caughey recently bought 72 additional wooded acres. He intends to harvest some of the timber from this land in winter 2017 for income and follow that by seeding in some grasses. He then plans to convert this wooded pasture into silvopasture that will become part of his rotational grazing plan.

“There are a lot of pastures in our area where cows are introduced and picked up after four months. I really believe in allowing the grass to grow back. Then I turn the cows back in to graze again, and then pull them out to let the grass grow back again to ensure viability of the plant species and help the soil to recover.” Dan is not only interested to learn more about improved pasture management, he is also interested in maintaining and taking care of the land to pass it on to his kids. ▲

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riparian corridor, it has heightened, not dampened, our enjoyment.” In fact, they say “our experience has been so positive that we are currently in deliberation to expand the easement over the majority of our property within the next two years.” The expanded easement would include and protect their working farm acres.

Trey and Tammie’s efforts demonstrate that riparian buffers, corridor restoration, and habitat improvements are very compatible with farming. Partnerships between farmers and nonprofits can help produce many environmental benefits consistent with and beneficial to farming operations. ▲



Before and after pictures of the riparian forest buffer installation at Confluence Farms. Photos by Katie MacKendrick.