

Buffalo County Natural Resources Internship

2018 Final Report



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August 2018

The Buffalo County Natural Resource Internship offers a college student, majoring in a natural resource-related field, the opportunity to work hands-on with county, state, and federal government agencies; some of these agencies include: Buffalo County Land Conservation Department, Wisconsin Department of Natural Resources, and Natural Resource Conservation Service. The internship starts in mid-May and ends at the end of August. The student works 35-40 hours per week and is awarded a \$6,000 scholarship funded by generous contributors (see final page for a complete list).

I applied successfully for the internship through the application process, including tree and animal identification, natural resource presentation, and interview. As a qualifying student, the internship seemed like the perfect opportunity to gain hands-on experience and professional experience. I am a Wildlife Ecology and Management major at the University of Wisconsin-Stevens Point. Within the internship, I was able to apply skills I learned in the classroom to professional situations. It was amazing to see, and understand, the processes and effort put into Buffalo County from all involved agencies. My favorite experiences within the internship were peregrine falcon banding, electrofishing, and observing stream restoration projects. I am grateful to the internship and its educators for the new knowledge and professional development that I will apply to my future.

Buffalo County Land Conservation Department

The first day as the intern, I went stream monitoring with Tim Wucherer, Conservation Resource Specialist. We went to several different streams in the county, and we tested the stream clarity, temperature, velocity, dissolved oxygen levels, width, depth, and sampled for water

invertebrates. The data was entered into a public access database called Surface Water Integrated Monitoring System (SWIMS) for the Water Action Volunteers program. All information gathered is used to see progress or regress of the streams. It can also be used to



help decide a management plan for the stream and indicate the health of the stream. This process has helped prioritize several management stream plans, such as the reintroduction of trout and restoring streams to their original state.

We performed total phosphorus testing on some creeks throughout the county as well. We collected samples from Harvey Creek, Swinns Creek, and the Waumandee Creek. The samples were put in a small foam cooler with ice and sent to Madison for lab testing. If creeks have a high phosphorus, it increases algal blooms and decreases sunlight and oxygen levels affecting fish and other aquatic species.

While working with Land Conservation, we did a transect survey. One person would drive and the other would keep track where to stop using pre-determined locations. We would stop at fields that were already plotted in the GPS system. Looking at the field we would determine what kind of crop was growing, the previous year's crop, and the field preparation taken before planting to determine annual cropland soil loss. Sometimes, we would have to get

out of the truck to see what was growing. The whole survey contained 228 points and took two days.

I also worked with Tim to check and clean up the Rose Valley Dam. We collected small debris and threw it into a brush pile. We cleaned debris away from the drain. We trimmed bigger trees to throw in the brush pile. The clean up was done for precautionary measures to prevent the big debris from getting into the second drain in case of the event of a big flood.

Natural Resource Conservation Service

While working with the Natural Resource Conservation Service (NRCS), we spent a lot of time looking at construction projects. We checked a couple stream construction projects and had to use a level to assure the reshape of the bank was at the right height. Rock is laid first, and then, soil is placed on top. This whole process is good to prevent erosion. One of the streambank construction under evaluation was checked earlier with Carrie Olson, County Conservationist and Dennis



Reimers, NRCS District Conservationist. The follow-up was due to water leaching underneath the bank and causing sediment to keep sliding into the creek.

Wisconsin Department of Natural Resources – Wildlife Management

Throughout this internship, I spent the most time with DNR Wildlife Management. We sprayed herbicide, girdled aspen, banded geese and peregrine falcon chicks, wolf trapped, and helped with a Deer Management Assistant Program (DMAP). I attended a chainsaw safety course in Black River Falls, WI. I also worked with Steve Pence, Wildlife and Natural



Chainsaw safety course, Black River Falls

Heritage Conservation (NHC) Technician; Mitch Block, NHC intern; Gary Wolf, a Wildlife Technician; and Mark Rasmussen, a Wildlife Biologist. Early in the summer, Steve, Mitch, and I went to different wildlife areas to spray and pull garlic mustard. Garlic mustard is an invasive



Aspen girdling

species that spreads quickly; it flowers early in the summer. I worked with Steve to girdle aspen. Most of the aspen were located on bluff prairies. Aspen grow fast and spread quickly; they are undesirable for prairies. To girdle aspen, I had to take a small ring of bark off the tree. For some of the bigger trees, a chainsaw was used to make two rings around the tree, and then the hand girdle was used to take the bark off. I got to operate the chainsaw on some aspen on Maiden Rock Bluff Prairie. That same day at Maiden Rock, we got to help band peregrine

falcon chicks: one of my favorite experiences during this internship. The nest, which is on a cliff face, has been a natural nesting site for the falcons over the years. We scouted for the nest from the bottom of the cliff and headed to the location. Two climbers attached their rope to a tree and

repelled over the cliff face. They put the chicks in a small kennel. The kennel was brought to the top of the cliff where we got to watch the banding take place and hold the chicks!

I also helped band geese this summer. Early in the week, Gary and I drove and took the boat out scouting for geese. On the day to band geese, Mitch and I rode with others in boats, and we



Banding peregrine falcons

herded the geese to shore. The geese were further down river than originally expected, so we had



Transferring a goose to get banded

to move the gates and fencing to a different shore location. We finally got the geese to shore, but about half got away. Once the geese were all penned up, a couple of people caught the geese while everyone else lined up to transfer them to the banders. The weather was warm that day making it an early release for about a third of the geese.

I went wolf trapping with Mark Rasmussen and DeWayne Snobl, USDA Biologist, in Osseo, WI. DeWayne already had the leg hold traps set. We were checking and resetting the traps. There was a coyote in the first trap we checked. We released the coyote; no other animals were in the other traps. We found some wolf tracks and feces in an area without a trap, so another trap was set. I didn't realize how intricate it was to set each trap. DeWayne had to



DeWayne digging to place a wolf trap

place everything just right and make the trap invisible. If we would have caught a wolf, we would have tranquilized, measured, weighed, and placed a pit tag on it.

Adam Foehringer, DNR Forester, Gary Wolf, and I inspected the progress on a Deer Management Assistant Program (DMAP) area. This plan is used to help landowners better manage their land for growth in deer populations. The property owner had accomplished a lot of work with this project. We discussed some recommendations to help improve production, including: fencing the white pine seedlings; clear-cutting aspen to boost aspen growth; removing maples for a more diverse age forest; and controlling invasive species.

Natural Heritage Conservation

Aspen girdling, spraying herbicide, and collecting and spreading seeds were the main duties while working with NHC. I worked with Joe Krumrie, Wildlife Technician/Conservation Biologist, and Dean Edlin, Ecologist. We went to several bluff prairie locations in Buffalo County and La Crosse County. For most of the bluff work, we tried clearing most woody vegetation by spraying herbicide. For certain species, we used basal bark spraying and the chainsaw with girdling tools. Prairies are supposed to be open spaces with native plants, but woody vegetation and invasive species start to overgrow and take over the area if unmanaged. We went to La Crosse a couple times to help the La Crosse crew either girdle aspen or spray invasive species like crown vetch or sumac. Some of the terrain was steep and difficult to go through due to large overgrown brush. Working with the NHC, we also collected different seeds and dispersed them in different locations in the prairie. Most of the seed collection happened during volunteer days at Maiden Rock, another activity I was involved with. We collected Lupine and Spiderwort seeds. Prior to the internship, I did not realize how much work went into the restoration of each prairie.

Department of Natural Resources – Fisheries Management



A northern pike caught electrofishing

I went electrofishing during my time working with Brian Brecka, DNR Fisheries Biologist. The first time we went out, I scooped the fish out of the water with a net as they were shocked. We were collecting the fish to show to Alma Area Schools 6th grade class for their Conservation Days. The second time we shocked fish, we were collecting fish to send to Madison, WI, for contaminant sampling. For the sampling, we had to collect certain species and

amounts of each fish. After collecting the fish, we wrapped them in foil and parchment paper, labeled each fish, and sent them to Madison. There was never a dull moment when shocking fish: I never knew when a fish would appear, and sometimes, my reaction time would be too slow. The hardest fish to net was the gar. Its whole body would stiffen up making it extremely difficult to net.



Measuring a yellow perch

Department of Natural Resources – Forestry

Setting boundary lines, forest reconnaissance, property site visits, and harvest inspections were a few projects I completed with Adam Foehringer, DNR Forester. Adam was very educational; he informed me about the trees and some invasive woody species in the area. During all the projects, he would ensure the opportunity to identify invasive species in the area and the best management plan for that species.

During a property visit, we set boundary lines around large buckthorn clones with paint and flagging. Then, the landowner would be required to exterminate the invasive buckthorn within the range. Recording tree diameter, height, basal area, species, and invasive



Using a 10 prism factor to set plots in a forest.

species was all done during plot reconnaissance. This was used to help determine the forest diversity. Emerald ash borer, an invasive species, is becoming a persistent issue in Buffalo County; Adam and I visited a couple properties to examine and identify the infected trees.

Buffalo County Educational Programs

Throughout the summer, I assisted in several educational programs, such as the Alma Area Schools 6th grade Conservation Days; Mondovi Schools Conservation Day; and Trout Day. At each of these events, I educated youth and the community on water invertebrates and their purpose in streams; soil profiling and importance; electrofishing; and more.



Black River Falls DNR crew electrofishing during Trout Days



The 19-inch brown trout caught during Trout Days

Trout Day is an event for the whole family that's sponsored by Trout Unlimited and the local Rod and Gun Clubs. It took place in Waumandee, WI. Children get to fish a restored trout stream with unlimited worm bait. The record fish caught this year was a nineteen-inch Brown Trout! At the end of the day, The Black River Falls DNR crew shocks the stream and lets the kids measure the trout. Also, local Rod & Gun Clubs provides prizes such as fishing tackle and gear for the kids to win through a drawing.

The Alma Area Schools 6th Grade Conservation Days is a three-day experience where the children learn about a wide variety of conservation work, including the



Catching water invertebrate samples to examine

importance of soil, invasive species and importance of local bluff prairies, watershed and trout stream restoration, electrofishing and water



Talking to the Alma Schools 6th grade class about soil with Dennis

vertebrates, and more. The children helped pick invasive garlic mustard. The children catch, separate, and identify water

invertebrates. For electrofishing, I went out early with Brian Brecka to shock and net some fish. We collected several different species including buffalo, carp, crappie, northern pike, and redhorse. The kids were amused with guessing the species and measuring the fish.

Another educational opportunity for myself and the community was talking to youth at the Mondovi Schools Conservation Day. Tim Wucherer and I collected water invertebrates with a net and put them in a big container full of water. We had each youth group separate the invertebrates and try to



Alma Schools 6th grade class at the scenic Twin Bluff overlook

figure out the species from looking at a dichotomous key. Tim would then discuss the purpose and importance of each species. I facilitated discussions within each group and answered questions.

Every Wednesday evening, members of the DNR would promote youth fishing at the Great Alma Fishing Float. I helped kids put lure on or get fish off their hooks. The kids would keep track of the type and length of the fish they caught. At the end of the night, the kid with the biggest fish would win a medal. They had tackle for the kids to win as well. It was a great experience for the kids and a great promotional of nature and getting outdoors.

Summary

This internship was a great experience all around. It was interesting to get insight regarding the branches of DNR and Conservation agencies to help narrow down my future career. I've gained valuable knowledge and experience that I will apply to my future. I truly understand and am grateful for all the hard work and conservation the government agencies put into my county and surrounding counties. I would like to thank everyone that took the time out of their busy days to teach me about their expertise. I'm very appreciative and thankful for the time and effort for making this internship a one-of-a-kind experience. I would also like to thank

everyone who has donated for this scholarship; the funds I received will be applied to furthering my education at UW-Stevens Point.

2018 Donors

Alma Rod and Gun Club	Fountain City Ford
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This internship was partially funded through a grant awarded to the Wisconsin Department of Natural Resources by the United States Fish and Wildlife Service (C-SWG Grant #F17AP00917).