

Buffalo County Natural Resources Internship Program

2015 Final Report



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The Buffalo County Natural Resource Internship program offers a college student the opportunity to receive hands-on experience in a wide-array of natural resource related fields. It is a position for a college student pursuing a degree in a natural resource related field, such as conservation, wildlife ecology, or biology. The internship begins in mid-May and ends at the end of August. The student will work 35-40 hours per week, with the total hours for the summer being around 500. The intern is awarded a \$5,000 scholarship established through generous contributions from conservation clubs, businesses and private individuals; see the final page of this report for a complete contributor list. The internship allows students to work in a variety of projects related to conservation, while working with county, state, and federal agencies (Buffalo County Land Conservation Department, Wisconsin Department of Natural Resources, University of Wisconsin-Extension, Natural Resource Conservation Service). This year, there were two different internship positions. The other position was filled by Tristin Christopher and primarily focused on bluff prairies.

Having lived in Buffalo County my whole life, I was very excited when I found out I was chosen to be the 2015 intern. I have always had a passion for the outdoors and more recently for conserving our natural resources. I am currently attending the University of Wisconsin-River Falls, where I am majoring in conservation, with a minor in soil science. This internship fits my current studies perfectly. It has been an unbelievable experience seeing all the things I have learned in a classroom setting in real-world applications. This internship has brought me experience that cannot be gained in a classroom setting, and I feel it has prepared me tremendously for my future endeavors.

Buffalo County Land Conservation Department

My duties while working for the Buffalo County Land Conservation Department were initially led by Brooke Muhlack, county conservationist. She introduced water monitoring on several streams found throughout the county. There was a training process where I was taught how to administer the different measurements. After the initial training, I started performing the measurements on my own and led others as well. At each site, we would measure temperature, dissolved oxygen, velocity, width, depth, and turbidity. The results were then entered in a public data base through the Water Action Volunteers. By taking these measurements, it allowed us to see the conditions and health of each stream, while also alerting us to potential problems. These measurements also tell us what fish and wildlife species each stream can support. The collected data can also provide information to determine if conservation practices in the area are working or if additional improvements are needed.



Gathering water in a turbidity tube.

Throughout our travel in Buffalo County, Brooke and I met with many landowners. We discussed different conservation practices, current and future construction projects, and so much more. Creating and maintaining good relations with landowners is a critical component in this job and is often overlooked.

I also spent time with Tom Schultz, the county conservation technician. During one outing, we staked out a future construction project. Using the construction plan, we staked out each side of the dam and where the pipe will go. This will allow the construction crew to begin their work without questions, allowing a quicker and more accurate finished project.

Wisconsin Department of Natural Resources-Fisheries Management

Electroshocking was the main task while working with the fisheries biologist, Brian Brecka. Before I could start electrofishing, I completed a safety course held in Black River Falls. Here, we covered how everything worked and the safety procedures that accompanied it. Using a maxi-boom shocker, we performed population surveys at several locations. After we had the boat and booms properly set up, we began shocking. Any fish that came up was netted, regardless of species. We would shock for ten to fifteen minutes at a time. All the netted fish would be measured, recorded, and released. The most common fish netted were spotted sucker, freshwater drum, silver redhorse, and common carp. On Spring Lake, we shocked twenty different species, including longnose gar, bowfin, freshwater drum, yellow perch, spotted sucker, and a flathead catfish. The biggest fish of the day was a common carp, measuring around thirty inches. I also helped Brian and Gary Wolf (wildlife technician) with kids fishing night. Every Wednesday, the Alma Fishing Float allowed any kid who wanted to come out and fish to do so. Brian and Gary were the leaders of this and have been organizing it for a few years now. It is a really great program that allows kids to fish for free.



Holding a longnose gar during a fish survey.

I also was fortunate to spend a couple days with Marty Engel, shocking some of the premiere trout streams in Wisconsin: the Rush and Kinnickinnic River. Holding an electrode in one hand and a net in the other, we waded upstream shocking mainly brown and a few brook trout. The trout were counted and measured before being released into the stream. A count of the young of the year trout was taken while shocking as well. On the Rush River alone, over 2,000 young of the year brown trout were counted, along with several hundred brook trout. If I was not doing the shocking, I was running fish to be measured and putting fresh water in the holding tanks. Because of severe flooding earlier in the year, the adult numbers were down, but we still

consistently shocked 14-16 inch brown trout. Nevertheless, the future of the streams looked very promising with all of the young trout that was observed. In order to have participated, I first had to be trained in first aid and CPR.

Wisconsin Department of Natural Resources-Wildlife Management



Spraying herbicide on Round

While working for the wildlife management, my time was spent spraying herbicides, helping band different birds, and restoring areas to their original state. I received chainsaw safety early this summer to be prepared for various conditions. I worked with Mark Rasmussen, a wildlife biologist, Gary Wolf, a wildlife technician, and Dean Edlin, an ecologist. A more common work activity was discovering bluff prairie plants and remnant areas. Bluff prairies are a rare ecosystem and only found in a few areas; Buffalo County is home to many of them. Dean, Tristin, and I looked at potential sites for restoration and sites currently being restored. These prairies are home to very rare plant and animal species that need the bluff prairies to survive. One duty I performed was spraying herbicide on non-desirable plants on these prairies. Using a backpack sprayer and hiking in, we sprayed crown vetch and birdsfoot trefoil. While these

plants are not considered invasive, they are still undesirable on a prairie. Before I could spray, however, I had to become a certified applicator. This involved taking an applicator test. Round Hill, near Durand, was a location where Mark, Tristin, and I spent a couple afternoons spraying. Here, we were spraying black locust and Siberian elm. Dean, Tristin, and I also spent a day girdling aspen on a site where several clones are taking over. Girdling aspen is the most effective way to kill it and prevent it from suckering.

Banding peregrine falcons was a very unique opportunity I partook in this summer. The falcons nest in vertical rock faces, making it difficult to access them. Climbers repelled down the face of the rock to the nest and transferred the chicks to an enclosed basket. The basket was raised to the top of the cliff where the banding took place. I had the chance to go goose banding as well. Having close to ten boats, we corralled the geese into a holding pen on shore. They had individuals who would catch the geese, and other individuals transfer them to the banders. I assisted in bear baiting with Gary. They take the same route every year near Clark and Eau Claire Counties. My job was to secure the fat and meat to the trees. We placed the baits every half mile for a total of fifty baits. They checked the baits a week later to see which ones have been hit. About one third



Peregrine falcon chick just after being banded.

of the baits were hit this year, which is about average. They can relate this new information to previous years to help estimate and monitor bear populations. I also helped Gary with a whippoorwill survey. We stopped every mile on a predetermined route, listened for whippoorwills and owls, and recorded their location.

Department of Natural Resources-Forestry

Looking for invasive species, non-desirable trees, eligibility for programs, and timber stand improvement opportunities on several properties were a few of the duties while working with Brent Weaver, the DNR forester. One pressing issue currently is the spread of buckthorn. It is a highly invasive, non-native species that can take over a woodlot in no time. If there is not much of it and is still young, simply pulling it by hand can be effective. Otherwise, herbicide will kill it. There are programs that you could get involved in to help take care of it. A property that we looked at had buckthorn, but it was isolated in certain parts. This made the property owner eligible to partake in a program to help cost share the removal of it. Garlic mustard is another invasive that is quickly taking over the county. Although garlic mustard is not a woody plant, it still grows in wooded areas. We saw garlic mustard on almost every property. As with buckthorn, pulling and herbicide will take care of it.

UW-Extension

My main project while working with the UW-Extension was taking the lead on deploying deer exclusions and collecting data both inside the exclusion and outside of it.. Carl Duley, an



Deer exclusion set out in an alfalfa field.

agricultural agent, was my main contact while performing this venture. The deer exclusions consisted of four, 4'x4', hog or cattle panels, accompanied by a steel post in one corner. They were placed in four different alfalfa fields to gauge the amount of damage done from different animals, mainly deer. My findings showed that alfalfa's third crop produced the highest tons per acre lost, with secluded fields producing the highest total tons lost.

This was a project where I was able to work independently. It was very rewarding to collect the results knowing my findings were contributing to a real project. This project was also my "special project" which was required from the University of Wisconsin-River Falls.

Natural Resource Conservation Service

My time with Natural Resource Conservation Service (NRCS) was spent helping with public education events, communicating with landowners about different programs and projects, performing constructions and surveys, and much more. I worked with Todd Mau, the district

conservationist, and Chad Dewyre, a soil conservation technician. Early this summer, I helped Todd with the Alma Area Schools 6th grade camp out, where the kids get a three day experience learning about various conservation practices. The activities included learning about soil health and profiles, hiking to prairies, learning about stream restoration projects, and much more. The kids also picked almost five hundred pounds of garlic mustard. I also helped him with the Mondovi Conservation Camp, which entailed going through a three dimensional model of Buffalo County with elementary aged children. Explaining different conservation practices and some natural features the kids see daily was the goal. Another activity that was a joint effort between all agencies was trout day. This is an annual event where children are invited to a trout stream that has been restored and encouraged to fish for the morning. They are provided with bait, lures, and a brand new fishing pole they get to take home.



Digging a trench for the solarization project.

With Todd, communication with landowners on past, current, and future projects is a



DNR crew stream shocking at trout day.

daily occurrence. The projects were wide ranging, such as: CSP contracts, pollinator plantings, prairie restoration, EQIP signups, and many others. We performed field checks to make sure the contract was correctly followed. We had a project where we learned about solarization for pollinators. A clear plastic tarp was laid over recently tilled ground, and was buried along the edges to hold it in place. The tarp will stay there all summer to kill all of the weeds. This fall it will be planted with a pollinator plant mix. Todd, Tristin, and I also spent a couple days at the conservancy in

Nelson, where we worked on improving trail systems, spraying invasives, and placing signs for tree identification.

Working with Chad involved looking at past, present, and potential construction projects. We performed several construction checks and looked at different landowner's property for potential projects. One project I assisted him with was calculating slopes on a bank reshaping project. Having the correct slope ratio is critical to prevent erosion. I also had the opportunity to view a grassed waterway which was seeded but not mulched. Planting the seed perpendicular to

the way the water will travel and not tilling the soil is vital in these projects. I also helped Chad survey a few sites, including one dam that was finished and a field that a water diversion needed to be developed. The diversion was an especially interesting project, for I was able to help design the diversion using AutoCAD. One of the more exciting days involved a new stream crossing construction site, where Chad and I both fell in the keyway trying to drag a piece of fabric across the stream that the rocks go on. We also performed a CRP field check to make sure the cover was still established, and if it was eligible to re-enter the program. Stream bank restoration was common project type we looked at, whether it was past projects or projects to be done in the future.

I was also fortunate to meet Scott Stipetich, a farm bill biologist for Pheasants Forever. Meeting with landowners to talk about the possibility of creating pollinator habitat was the agenda for one day. Another morning with Scott was spent working with wetland delineation. I spent a day with a soil scientist, Mike England, as well. We went to several sites and determined the soil types and textures, along with different horizons.



Taking a point during a survey.

Summary

This summer has been an unbelievable experience. I have gained an invaluable amount of experience which cannot be gained in a classroom setting. Having grown up here in Buffalo County, I thought I was familiar with it, however I couldn't have been more wrong. I have gained a great appreciation for county and have learned a lot about it as well. I am without doubt that this internship has helped prepare me for future job opportunities and life events. I couldn't be more thankful and appreciative for having been given this opportunity. I would like to thank everyone for taking time out of their already busy schedules to lead me in continuing my understanding of various conservation practices. I would also like to thank everyone who has donated to this scholarship. It is a truly valuable experience that would not be possible without you.

2015 Contributors

Alma Rod and Gun Club

Dairyland Power Cooperative

Clearwater Chapter – Trout
Unlimited

Madison Fishing Expo

Arcadia Sportsmen's Club

Bee Forest Products, Inc.

Fountain City Rod and Gun Club

Modena Farms

Waumandee Rod and Gun Club

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