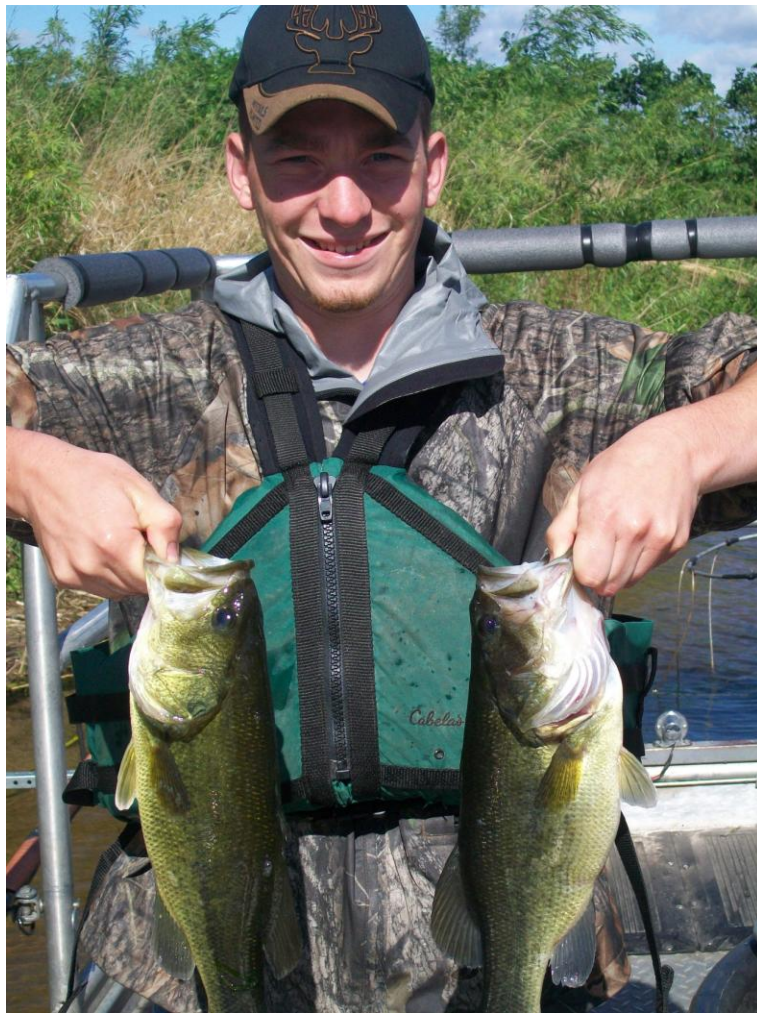


Buffalo County Natural Resources Internship Program

2012 Final Report



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August 2012

In May of 2012 I was hired as the intern for the Buffalo County Natural Resources Internship Program. This annual internship program has provided unique opportunities for aspiring college students to work with various natural resource agencies. Sponsoring agencies included the Wisconsin Department of Natural Resources (DNR), Natural Resource Conservation Service (NRCS), Buffalo County Land Conservation Department (LCD), and the University of Wisconsin-Extension. Similar to the inaugural 2011 internship program, scholarship dollars were provided by generous contributions from conservation clubs, businesses and private individuals. The contributor list is found at the end of this report.

I provided 500 hours of natural resource and land conservation related work for the sponsoring agencies. Personnel from the sponsoring agencies directed my daily duties. What follows is an agency by agency recap of my major accomplishments.

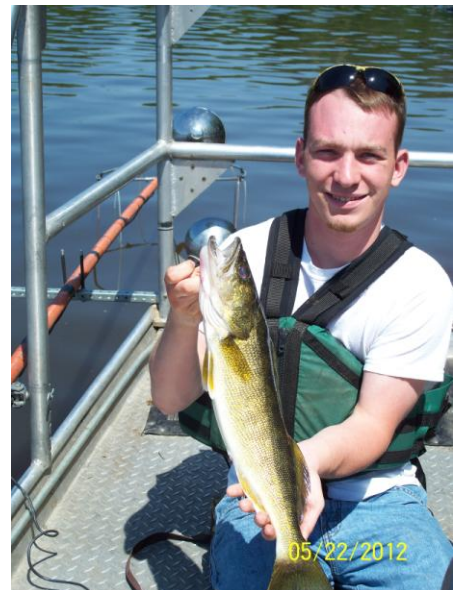
Department of Natural Resources

The internship program provided me the opportunity to assist several DNR programs. I worked with personnel from wildlife management, fisheries management and forestry management. Although each program is directed by the overall DNR mission, each program provided me unique challenges throughout the course of the internship.

While working for wildlife management, much of my effort was spent assisting DNR wildlife technician Gary Wolf. Gary's management area includes Buffalo and Trempealeau County. With Gary's leadership and direction, I

completed a bear survey, participated in goose banding, implemented prairie management techniques, and helped further a whitetail fawn mortality research project. The fawn mortality study was especially rewarding work. This ongoing study is being conducted in two areas of Wisconsin. The northern study, in which I was a part of, is conducted near Winter, while the eastern study occurs near Shawano. During our work, we looked for does that recently dropped their fawn. These does were previously equipped with transmitter collars; transmitters allow the research team to track their movements. In addition each doe had a vaginally implanted temperature sensitive transmitter; this allowed us to know precisely when she had given birth. Once a fawn is found, it is equipped with a transmitting collar, allowing the researchers to track fawn movements as well. If the fawn falls to predation, the research team enters the site and determines the predator.

My opportunity to work in fisheries management was led by Brian Brecka. Brian is a Mississippi River fisheries biologist. While working with Brian, I helped conduct fishery surveys, participated in angler education and recruitment projects, and helped collect fish for a contamination study. The fish for the contamination study were collected using an electrofishing boat. Our collection was part of an ongoing contaminant analysis completed on a biennial basis. The fish we collected were fish that an everyday sportsman would potentially keep to eat.



The species collection included bluegill, black crappie and largemouth bass. The fish are analyzed for PCBs and mercury content, but a subset are analyzed for PFCs, and at times illegal pesticides, and recently discovered chemicals. We also used the electrofishing boat to complete a fishery survey of Spring Lake. Spring Lake was the site of a habitat enhancement project that was completed in 2005. Our post-project assessment identified species and measured the size of all game fish encountered.

The last fisheries management work emphasis was angler education and recruitment. I assisted both Brian and Gary with two programs -- the Reel-Fun Fishing League and Four Days of Fishing. The Reel-Fun Fishing League is a program in which young anglers fished Wednesday evenings on the Great Alma Fishing Float. All necessary materials are provided to the participants at no cost. Bait, fishing poles, and the transportation costs to and from the float are all provided. Along these same lines, we also completed Four Days of Fishing during August. This fishing class allowed local young anglers the opportunity to spend four mornings learning about fish, fishing, and the rules and regulations put in place to preserve the great fishery we have. Everyone had a great time and used what they learned to catch a few fish.

My forestry experiences during this opportunity came with Brent Weaver. Brent is the Buffalo County forester. Much of our work was done at regeneration plots. In these plots, we used an 11 foot rope to check the population of trees found within the circumference of the rope. We found the population of trees in these plots to be roughly the same as prior years. I also assisted Brent within the

Tiffany Wildlife Area. A native creeping vine was negatively affecting young oak trees. To reverse these affects, we pruned the vines with loppers.

Land Conservation Department

Much of my work for the LCD was guided by Julie Lindstrom. Julie is the County Conservationist and previous to my employment had begun a county-wide water monitoring project. She brought me to speed on water monitoring site locations as well as who was responsible for completing the work at each site. Each monitoring session involved measuring dissolved oxygen, temperature, clarity, velocity, and flow. Having this information through time should provide valuable insight into the stream.

I also assisted Tom Schultz, the Buffalo County Soils Technician. Tom and I made visits to both current and recently completed construction sites to meet with contractors. Types of construction included wetland scrapes, dams, and water drop structures. The reason we visited contractors was to make sure the project was going smoothly and to ensure that specifications were being followed. These spot checks involved surveying the area to check the grade of the site and to make sure the project was been seeded and mulched. Seeding and mulching is a vital step in reducing erosion.

Natural Resources Conservation Service

Todd Mau is the NRCS district conservationist for Buffalo County. He also served as my immediate supervisor. Much of our time was spent explaining conservation practices to local farmers. These conservation practices included barnyard run-off systems, dams, grass waterways, contour farming, stream bank

protection, and long-term set-aside programs. These are important to the landscape because they reduce top soil loss and prevent future erosion. Besides being good for the land, conservation practices have another benefit -- they benefit the land-owner. By implementing these practices, the land-owner can be more efficient on their land.

Another NRCS work emphasis for Buffalo County was the Driftless Area Land Conservation Initiative. The primary purpose of the initiative is to restore, improve and protect fish and wildlife habitat for the unique and diverse species found in the region's working lands, forests, streams and prairies. This initiative involved portions of the state being chosen to receive more funding than usual. This funding allows the NRCS to complete more projects within the county. Another unique work opportunity was the Lower Waumandee Watershed Project located in south-central Buffalo County. This opportunity, much like the Driftless Area Initiative, allows landowners funding to implement projects such as barnyard run-off systems and stream bank restoration. This funding is a result of applying for grants.

I also assisted Tina Barone, NRCS Soil Conservation Technician in Buffalo County. Tina and I worked on grass waterways, stream crossings and construction checks. We also focused attention to wetland sites in northern Buffalo County when working with Kristin Westad. Kristin is an Easement Programs Biologist. When investigating a wetland site, we evaluated its functionality and made certain the landowner was following through with their

contracts. We also made sure the landowner was not doing anything on their property that would be detrimental to the wetland environment.

Water Action Volunteers

In addition to my work with the DNR, NRCS and LCD, I also was a volunteer for the Water Action Volunteers Program. Water Action Volunteers is a statewide program for Wisconsin citizens who want to learn about and improve the quality of Wisconsin's streams and rivers. Water Action Volunteers monitor dissolved oxygen, temperature, transparency, flow, habitat, and macroinvertebrates. In Buffalo County, I monitored five streams. In addition to monthly stream measurements, I also put temperature loggers in the streams.

These loggers collected a temperature reading every hour; hourly readings provided more data that could be used to better evaluate the affects that run-off and air temperature had on water temperature. The water temperature is extremely important as it directly relates to the health of the aquatic species in these streams.



The water monitoring program allows Buffalo County to collect physical, chemical and biological stream data parameters. This much needed data is very beneficial and increases the accuracy when ranking potential projects. This is especially important when funds are limited. After projects are complete, the

improvements help stabilize the banks and increase the habitat for aquatic life. From the landowner's perspective, their land is now part of a healthy environment. For the conservationist, the renewed habitat has healed the land and provided a place where something like a brook trout can reproduce naturally once again.

Every opportunity I was given opened my eyes during this internship. From water monitoring, to fish surveys, even the public contact through education and recruitment techniques, I learned some valuable knowledge. While some duties re-enforced my knowledge of a topic, others were completely new. Upon completing this internship, I feel I have gained a tremendous amount of knowledge and became a better conservationist. I thank each and every contributor of this summer position.

2012 Scholarship Contributors

Alma Rod and Gun Club
Bee Forest Products
Brunkow Hardwoods
Buffalo County Farm Bureau
Bushy's Meat Market
Dairyland Power Cooperative
Durand Sportsman's Club
Elk Rod and Gun Club
Fountain City Lions Club
Fountain City Rod and Gun Club
Greshik Farms
Stuart Hagen
Madison Fishing Expo
Mark and Cherie Noll
Oakdale Ridge Farms
Stream Monitoring Grant
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Trout Unlimited-Clearwater Chapter
Waumandee Rod and Gun Club
Whitetails Unlimited-Mississippi Valley Chapter