



## Native Competitors: Natural Parts of the Sloughs Ecosystem

By Jessica Strand, Wetlands Specialist



Manomin (wild rice) is such an important and popular plant that there is a general understanding of its place in the landscape. However, some of the plants that grow with manomin are less well known so their role in the landscape seems to be less understood. Specifically, plants that are the “native competitors”, or those plants that compete with manomin for habitat space, sunlight, and nutrients, are the focus of this article.

However, just because these native competitor species (pickerelweed, arrowheads, and water lilies) compete with the manomin does not mean that they are detrimental. Only in recent years the NRD has worked to reduce native competitor density because of community concern that these species are outcompeting the manomin due to the historically low water levels in Lake Superior interrupting the native processes thought to keep these species in check. (Now that Lake Superior water levels are recovering it is hoped that the natural balance will be restored.) Controlling native competitors is different than controlling non-native invasive species like narrow-leaf cattail or purple loosestrife though, since native competitors are a natural part of the

*(Continued on page 2)*

### Inside this issue:

Native Competitors: Natural Part of the Sloughs System	1
Beach Balls of Jelly	2
ANA Grant for Environmental Regulatory Enhancement...	3
Indoor Air Quality (IAQ)	4
Northern Long Eared Bat Federally Recognized...	6

### Points of Interest:

- *Beach Monitoring Advisories Signs*
- *New Bad River Conservation Warden*
- *New GIS Specialist*
- *Free Radon Testing*

---

# Native Competitors: Natural Parts of the Sloughs Ecosystem *Continued*

By Jessica Strand, Wetlands Specialist



(Continued from page 1)

sloughs ecosystem and even if natural processes are disrupted it is not expected they will not completely replace other species, like manomin. In fact, eradicating native competitors may affect the landscape negatively. Some of these plants even have historical cultural uses, even if they're not commonly used today, and are treated differently than non-native invasives for that reason as well.

According to GLIFWC's *Plants Used by the Great Lakes Ojibwa* there are a variety of uses for these native competitors. Pickerelweed (*kinozhaeguhnsh*) is thought to have been used as an indicator of pike habitat by fishermen due to the translation of the Ojibway name into "the pike's plant". Arrowheads

(*waabiziipin*), also known as wapato or duck potato, were eaten in ways similar to garden potatoes and an infusion of their root was used as an aid for indigestion. Most versatile, were the water lilies (*akandamoo* and *nbiish-waawaasgone*) which were used for medicinal treatments and for food. The lilies' tuberous roots, or rhizomes, were prepared similar to garden potatoes. In addition, the seeds of yellow water lily were also popped like popcorn and its powdered root used to treat sores, cuts, and swellings. Also, the white water lily leaves and flowers were eaten as greens and its powdered root used to treat mouth sores and coughs.

So even though these species compete with manomin for space, sunlight, and nutrients they were and are important components to the landscape and to whoever would like to use them.

## Beach Balls of Jelly

By Naomi Tillison, Water Resources Specialist

Have you been swimming in Lake Superior and felt those small balls of jelly while walking in the sand? Or have you have seen those little globs of jelly wash up to shore and wonder what they are? Those balls of jelly are the homes of native zooplankton, *Holopedium gibberum*.

*Holopedium gibberum* live in small gelatinous mantles (balls of jelly) with their legs sticking out to swim. Their mantels may help the zooplankton appear larger in size, keeping some predators away. Their mantels also may help with buoyancy, making it easier for *Holopedium gibberum* to swim up to the water surface late afternoon or near sunset and later return to deeper waters.

At some point in their life cycle, *Holopedium gibberum* leave their mantels (their homes of jelly) and swim in open water without them. Their mantels then get blown or float into shore. Swimmers often feel these balls of jelly before they see them. We observed these balls of jelly at multiple Lake Superior beaches within the Bad River Reservation at the end of July.

So the next time you feel these goo balls when your swimming, you'll know these are the abandoned homes of native zooplankton. And you can wonder how these small fascinating organisms (*Holopedium gibberum*) can swim upside down as they feed on algae.



### Sources:

Great Lakes Environmental Research Laboratory: Great Lakes Sea Grant Extension Office, Feb. 8, 2007. "Great Lakes Water Life Photo Gallery." [www.glerl.noaa.gov/seagrant/GLWL/Zooplankton/Cladocera/CladoceraGallery5.html](http://www.glerl.noaa.gov/seagrant/GLWL/Zooplankton/Cladocera/CladoceraGallery5.html)

Michigan State University Extension, Sept. 2, 2014. "What are the mysterious pea-size gelatinous globules along the shoreline of Lake Superior?" [http://msue.anr.msu.edu/news/what\\_are\\_the\\_mysterious\\_pea-size\\_gelatinous\\_globules\\_along\\_the\\_shoreline\\_of](http://msue.anr.msu.edu/news/what_are_the_mysterious_pea-size_gelatinous_globules_along_the_shoreline_of)

Minnesota Sea Grant, October 2006. "Readers want to know: What are those small goo balls that washed ashore on beaches around Lake Superior?" [www.seagrant.umn.edu/newsletter/2006/10/readers\\_want\\_to\\_know.html](http://www.seagrant.umn.edu/newsletter/2006/10/readers_want_to_know.html)

# ANA Grant for Environmental Regulatory Enhancement...

## ...Winding Down

By Anthony Corbine, ANA Grant Manager



In 2012 the Natural Resources department was successful in obtaining a three year grant titled “Implementing Water Quality Standards at Cultural Sites”. Over the past three years we have worked diligent in meeting the grant objectives.

The Tribal Government has sought to approach the implementation of their water quality standards in the most rigorous and defensible manner available. This project has strengthened

the Tribe’s Water Resources Program, which will protect the watershed for generations to come. With regular water quality monitoring the Tribe has gathered baseline data to establish sampling criteria levels for monitoring, furthermore, protecting the environment. As the Tribe strengthens codes and ordinances we might see various methods of monitoring plants, animals, and cultural resources.

Using the methods outlined at the beginning of the project we now have the ability to quickly identify many historic and cultural places located throughout the watershed by referencing a GIS map, developed through this project by the GIS program. An extensive amount of data was used to develop a plat book style map book. The data used for the map comes from a combination of archaeological surveys, traditional gathering locations, and current cultural activity locations were identified by elders and community members through interviews. The main focus is sites located within the reservation boundary and secondly sites located outside the reservation boundary but within the watershed. We have made a few copies of this map book available in our library for all tribal members to view.

Another deliverable from this grant activity includes two reports that can be utilized for planning purposes. The development of this report was completed by cultural anthropologist, Professor Larry Nesper, UW-Madison, and historian and Native American studies Professor Chantal Norrgard, formerly with Northland College. We have developed a report on historic and current socio-cultural locations that have great significance to tribal members. The *Maskiiziibii: Human Water and Landscape Report* highlights local history, cultural activities and identifies traditional cultural properties and recognize the community members and elders that have a connection to the land. The greatest benefit of this report is its utilization as a single source reference for all traditional cultural properties. The collection of

references and report will also be available in our library for all tribal members to view.

As the Water Resources program is collecting water quality conditions throughout the Bad River watershed it is important to examine the data which can establish a baseline. Another method in establishing baseline data is collecting sediment core samples. For the first two years of the project we were out in the field in the middle of winter. There were a number of lakes that we previously identified and drilled a hole through the ice to drive a sediment corer through the lake bottom. The samples for more than six lakes were sent to the University of Minnesota – Limnological Research Center for core dating and analysis. Through this effort we can gain insight on historic and current



(Continued on page 4)

---

# **ANA Grant for Environmental Regulatory Enhancement... ...Winding Down *Continued***

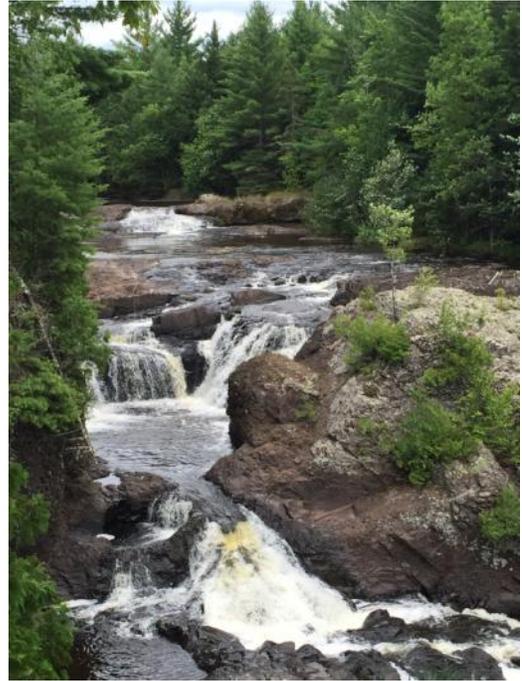
**By Anthony Corbine, ANA Grant Manager**

*(Continued from page 3)*

water quality data to develop baseline parameters for specific site locations.

We were recently visited by ANA staff to conduct an Impact Evaluation. The evaluation examines the project impact to the community and people involved with the project. They look at the activities and the work that is created from the project to assess the sustainability of the work. Although the grant is coming to an end, the continuation of work from this project will be the responsibility of Water Resources program and Bad River Legal department. Project recommendations will be presented to Tribal Council for government review. To stay informed on these actions you can contact the Bad River Natural Resources Department or the Tribal government to hear about any changes.

I am delighted to report that we have successfully completed most of the grant requirements for this project. There are still a few site inspections that need to be completed, which provide us in depth the details of a particular traditional cultural property. Also, this information needs to be presented to the community and tribal council to share the goals we've obtained during this project.



## **Indoor Air Quality (IAQ)**

**By Daniel Wiggins, Air Quality Technician**

With people spending up to 90% of their time indoors the growing awareness to address indoor air conditions has become more relevant. Scientific studies have proven some indoor environments are more polluted than any outdoor environment, which health concerns can vary from home to home, can be related to allergies or asthma, and can cause cancer and even death.

Indoor air pollution is sometimes not contributed solely by one source, but rather a combination of sources or factors. There are a variety of things that can contribute to indoor air pollution and is usually associated with sources that release gases or particles into the air. It can be related to specific use of certain chemicals and cleaning agents or traced back to a malfunctioning gas-appliance, such as a furnace. Other issues can be directly related to how the home was built or the deterioration of the structure overtime. "Leaky" homes have a tendency of being less energy efficient and may allow excessive moisture to enter, eventually contributing to moisture damage and the development of mold.

Controlling or eliminating sources to minimize can improve indoor environments; however, locating and identifying these sources

*(Continued on page 5)*



## Indoor Air Quality (IAQ) Continued

By Daniel Wiggins, Air Quality Technician



(Continued from page 4)

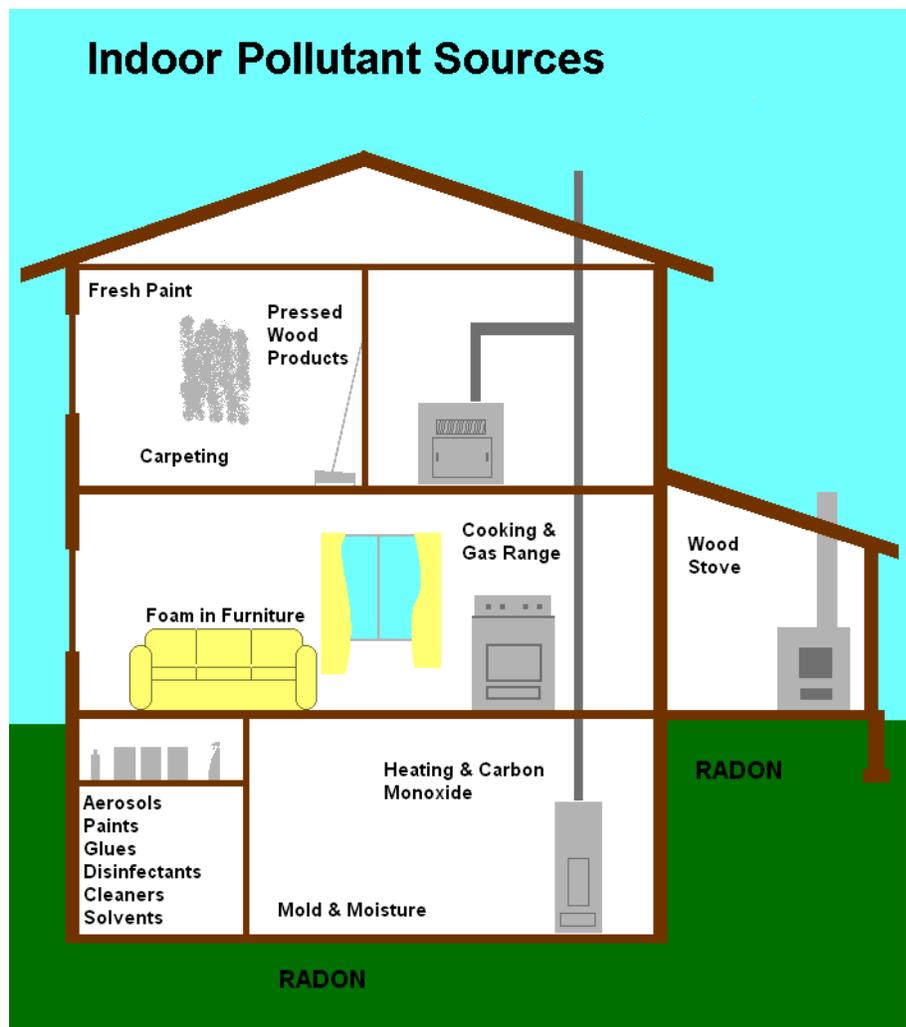
are not always simple. Reading labels and understanding proper usage of cleaning agents or other household chemicals should be done before use and may help limit some pollutants. Allowing an adequate amount of outdoor air to be introduced into the home can often avoid a build-up of many indoor pollutants.

Other pollutants may be more difficult to control and may require a sort of testing to identify. Radon is naturally occurring, odorless, cannot be seen, and may cause the development of lung cancer. A test kit placed in the home is the only way to determine the indoor radon concentration. Depending on the recorded level of radon a home may require radon reduction system to be installed to lower the levels. Other pollutants, such as carbon monoxide are also odorless, cannot be seen, and can cause death. Maintaining and understanding the proper usage of gas appliances can help avoid a build-up of CO and CO detectors are important in every home and building to avoid being present during threshold levels.

Health effects associated with certain pollutants are more difficult to pin point. With multiple household chemicals being present in today's homes, along with each person reacting differently to certain pollutants, establishing precise concentrations related to the development of certain symptoms are drastically harder to determine. Regular wheezing, colds, and irritation of asthma can often be signs of elevated pollutants. It is important to notice time and place of symptoms and if they lessen or go way once leaving the home.

Not all indoor pollutants will be noticed immediately, which exposure to some pollutants overtime can contribute to cancers, respiratory illness, or heart

disease. This is why it is important to identify pollutants, such as radon. The United States Environmental Protection Agency (USEPA) has this and additional information that can be found related to IAQ, at <http://www.epa.gov/iaq/index.html>. Information can also be found on the Bad River Tribes website at <http://www.badriver-nsn.gov/tribal-operations/natural-resources/nrd/air-nrd>.



Picture above shows possible pollutant sources that are present in homes. Although they are sources if done properly a person can avoid exposure to excessive amounts of pollutants.

---

# Northern Long Eared Bat Federally Threatened...

## What Does That Mean?

By Lacey Hill-Kastern, Wildlife Specialist



The Northern Long-Eared Bat (*Myotis septentrionalis*) has suffered drastic declines in its population due to the fungal disease known as white nosed syndrome (WNS). The United States Fish & Wildlife Service (USFWS), as of April 2<sup>nd</sup>, 2015, has listed this bat as threatened under the Endangered Species Act (ESA). With this listing the USFWS also issued the Interim 4(d) rule which is meant to ease burden that the listing may impose on land owners, managers, and agencies while research is still being conducted on this species.

Included in the 4(d) rule are the following protections:

- Activities must occur more than 0.25 miles from a known hibernacula
- Activities must avoid cutting or destroying known, occupied roost trees during the pup season (June 1- July 31)
- Activities must avoid clearcuts and similar harvest methods within 0.25 miles of known, occupied roosts and hibernacula.

BRNRD has been conducting an acoustic monitoring transect survey throughout the Reservation for three years now. There are plans to possibly expand these efforts in the upcoming year.

### What should you do if you find a bat(s) in your home?

There are several species of bats on the reservation that are impacted by WNS and are facing drastic declines to their populations. These species of bats are also the most likely to establish a summer residence in your attic. One thing to keep in mind is that these colonies could be maternal colonies meaning pups that are unable to fly could be present, so no bat exclusions should be done between June 1 – August 15. Exclusion activities can occur before or after those dates and more information on how to perform bat exclusions yourself can be

located here: <http://wiatri.net/inventory/bats/Resources/BatExclusion.pdf>.

I recommend giving the bats an alternative to roost when an exclusion is being done by putting a bat house or houses up in your back yard. Bats are beneficial to have in your yard due to the large amount of insects they eat throughout the summer months! One big brown bat can eat 110% of its body weight in insects a night! That would be like a person eating 500 hamburgers in a night! If you are interested in getting a bat house in your yard to monitor contact BRNRD. You can also build your own bat house! Plans for building can be found here: <http://wiatri.net/inventory/bats/Resources/BuildingBatHouses.pdf>.



### Do not shake bat houses! Minimize Disturbance

There are currently twenty-two bat houses scattered around the Reservation. Some of these are located in public places. Please do not shake or disturb the bat houses. Bats will come out when they are ready. The majority of the houses are maternal houses meaning there may be pups inside that cannot fly. Shaking a house could cause pups to fall out and be killed. If you see others disturbing bat houses please help and inform them not to do so.

### Volunteer to assist in bat monitoring efforts

BRNRD is interested in summer roost monitoring and could use

*(Continued on page 7)*

---

## Northern Long Eared Bat Federally Threatened... What Does That Mean? *Continued*

By Lacey Hill-Kastern, Wildlife Specialist

(Continued from page 6)

your help! This is as simple as sitting in a lawn chair in your backyard and counting how many bats emerge from your attic or bat house in the evening. BRNRD also has an acoustic monitoring device that can detect exactly what species of bat they are by recording the calls. Also if you may know of places on the Reservation where bats roost please report the location to BRNRD. To learn more just contact Lacey Hill Kastern, Bad River Wildlife Specialist, at [wildlifegis@badriver-nsn.gov](mailto:wildlifegis@badriver-nsn.gov).



### Long Island Plover Chick Spotted on Minnesota Point! By Lacey Hill-Kastern, Wild Life Specialist

The piping plover monitoring season ran from June 2 to August 5 this year. We had four active nests on Long Island, fledging eleven chicks. One of these chicks was just

spotted on Minnesota Point by Duluth, MN on August 29 (see picture). We use colored leg bands which help us identify a bird down to the individual. These leg bands let us know where the bird came from and where the bird travels. We can receive updates about individual birds when they are spotted on their migration route, while they are on their wintering grounds, and where they decide to breed and spend their summers. If you want to learn more about the piping plover project just contact Lacey Hill Kastern, Bad River Wildlife Specialist, at [wildlifegis@badriver-nsn.gov](mailto:wildlifegis@badriver-nsn.gov).



Jan Kraemer



# Beach Monitoring Project Swim Advisory Signs

By Stephanie Julian, NRD Outreach Coordinator

The Bad River Natural Resources Dept. Water Resources program has developed the Bad River Beach Monitoring Project to routinely test our reservation beach water for certain levels of E.coli. High levels may indicate unsafe levels of other harmful bacteria in the water. The Beach Monitoring Project, uses this information to ensure the water is safe for area beach enthusiasts.

In the event E. coli levels exceed our standards and show signs of contamination, the Beach Monitoring Program will respond by posting advisory signs at area beaches that show these exceeded levels

The following Swim Advisory signs will be posted at those beaches which exceed levels of E.coli, at the measurement of 235 MPN/100ml or above, to ensure public awareness.

A yellow advisory sign means the levels of E. coli have exceeded the 235 MPN/100mL. The yellow advisory sign will tell the date the beach was sampled, the name of the beach, and the date the next sample will be taken.

A red advisory sign means the levels of E. coli have exceeded the 1000 MPN/100ml. The red advisory sign will tell the date the beach was sampled, the name of the beach, and the date the next sample will be taken.

Along with posting advisory signs, the Beach Monitoring Project staff will email a Tribal wide advisory to all Tribal employees, and post an update on the Beach Monitoring recorded message, (715-685-7870) which can be accessed 24-hours per day, for your convenience.

Beach Monitoring plans, including monitoring locations, monitoring frequency and sampling days can be obtained from the Bad River Natural Resources Outreach Coordinator, at [NRDOutreach@badriver-nsn.gov](mailto:NRDOutreach@badriver-nsn.gov) or by calling (715) 682-7123 ex. 1589.

**For further information regarding E. coli and safe water at the beach, you can visit these websites:**

Centers for Disease Control and Prevention's Health Swimming/ Recreational Waters:

<http://www.cdc.gov/healthywater/swimming/>

Environmental Protection Agency's Beaches:

<http://www2.epa.gov/beaches>

Wisconsin Beach Health:

<http://www.wibeaches.us/apex/f?p=181:1:17158548920930::NO>

**Swimming Advisory**

This beach is routinely monitored for the presence of bacteria in the water.  
The most recent water sample was collected on: 8/18/15  
@ WAVERLY BEACH

\* Indicated an exceedance of the Bad River Tribe's water quality criteria.\*

**CAUTION**  
**SWIM AT OWN RISK**

Swimming at this beach during this advisory period should be avoided

Advisory remains in effect until a sample is below the water quality criteria.  
Sampling at this site is planned for: 8/19/15

Further information can be obtained by contacting:  
Beach Act Coordinator  
Bad River Natural Resources Department  
715-682-7123 ex. 1589

Printed on: [blank]

**Swimming Advisory**

This beach is routinely monitored for the presence of bacteria in the water.  
The most recent water sample was collected on: 08/19/15  
@ Second Landing

\* Indicated an exceedance of the Bad River Tribe's water quality criteria.\*

**CAUTION**  
**SWIM AT OWN RISK**

Swimming at this beach during this advisory period should be avoided

Advisory remains in effect until a sample is below the water quality criteria.  
Sampling at this site is planned for: 08/24/15

Further information can be obtained by contacting:  
Beach Act Coordinator  
Bad River Natural Resources Department  
715-682-7123 ex. 1589

Printed on: [blank]

---

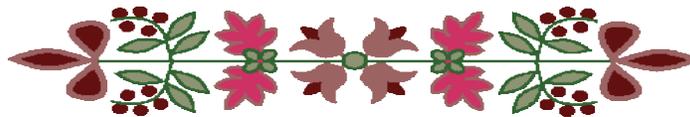
# Bad River Natural Resources New Employees!!!



## New Bad River Conservation Warden, David Nevala

Hello, my name is David Nevala. I was hired as a Conservation Law Enforcement Officer for the Bad River Natural Resources Department. I am married with two kids, my family and I enjoy a life of hunting, fishing, trapping, and gathering. I completed my secondary schooling with 60 college credits and a certificate in Natural Resources field methods from Lac Court Oreilles Ojibwa Community College. While a student I worked as an intern, shadowing the now retired Warden Bob Wilmer. I will be attending the law enforcement academy in January of 2016. I look forward to working with everyone, if you have any questions feel free to contact me, call 715-292-1902 or email, [brtwarden@badriver-nsn.gov](mailto:brtwarden@badriver-nsn.gov).

*Photo of Chairman Mike Wiggins Jr. swearing in David Nevala as a Bad River Conservation Warden.*

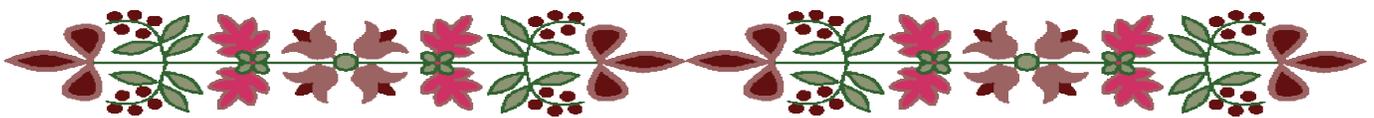


## Meet the New GIS Specialist, Suzi Smith

Suzi Smith started working as the GIS Specialist this past June. She has so far greatly enjoyed getting to know all the friendly people she works with, and familiarizing herself with the Natural Resource Department's many forms of geographic data. This is Suzi's first career position, as she graduated from University of Wisconsin-La Crosse in May of 2015, double majoring in environmental biology and geography with an emphasis on GIS. She is glad to have returned to the area where she grew up (Suzi is from Washburn), and being back in the woods, water, and soon the snow.



She is excited at the prospect of helping NRD and the rest of the community honor and protect the reservation's many valuable natural resources by maintaining GIS and Mapping Services in-house. Bad River's GIS and Mapping Services has a long history of being progressive both in terms of influence on local decision making and on methods of data acquisition. Suzi looks forward to continuing this tradition and sharing Geographic Information with the community. Aerial photos and maps of the reservation can be brought out for viewing upon request. Away from the desk, Suzi can be found swimming, biking, and camping around Lake Superior in the Chequamegon Bay Area. This winter, she looks forward to trying out a new set of snowshoes, a reasonable upgrade from the big blue plastic bear paws last used in grade school.





## **BAD RIVER NATURAL RESOURCES**

Bad River Natural Resource Department

Chief Blackbird Center

72682 Maple Street

Odanah, WI 54861

Phone: 715-682-7123

Fax: 715-682-7118

**We're On The WEB!**

**[www.badriver-nsn.gov](http://www.badriver-nsn.gov)**



*Photo of Corrigans Lookout, courtesy of Anthony Corbine.*

### **FREE RADON TESTING!!!**

*From November '15 to March '16*

Radon does cause lung cancer and can be prevented if addressed properly. The Tribal Air Office offers free radon testing and IAQ monitoring services every year. It is easy and takes only a very short period of time to test your home for radon. If you would like to schedule testing please use the contact information below and set a date to test your home.

Daniel Wiggins, Air Quality Technician

72682 Maple Street

Odanah, WI 54861

Phone: 715-682-7123 ext. 1553

### ***-MISSION STATEMENT-***

*The Department strives for resource management which both conserves the natural resources for the future generations and provide for the needs of the present. The departments existence reflects the importance the Bad River Tribe places on its right and ability to exercise sovereignty, self-determination and self-regulation in the area of natural resource management.*