

Common Ground

Bad River Natural Resources

Water Quality Standards

After years of working on obtaining treatment as a state (TAS) authority for Clean Water Act Sections 303/401, the Tribe received water quality standards program authorization from the EPA in June 2009.

The Water Resources Program worked on developing and refining water quality standards for the Bad River Reservation in 2010.

Water quality standards consist of three elements:

1. **designated uses** that describe the Tribe's management objectives for the waters;
2. **water quality criteria**, which are limits on chemicals or conditions in a waterbody necessary to protect specific designated uses; and
3. **antidegradation policy**, which protects existing uses and prevents clean waters from being unnecessarily degraded.



Volume 3, Issue 1

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Spring 2011

Special points of interest:

- ◆ Be sure to attend our Open House!
- ◆ You can help keep our air clean!
- ◆ Do you know of an abandoned well?
- ◆ Comment on water quality standards.

We Seek Your Comments

The Tribe is currently seeking comments on the proposed water quality standards.

Copies of the proposed standards are available in the Natural Resources Department.

A public hearing will be held on Monday, March 28, 2011 at 5:00 p.m. in the Madigan Room of the Bad River Lodge and Casino Convention Center.

The public comment period will end on March 28, 2011.

If you have questions or would like more information on how to submit comments on the proposed standards, please contact:
Naomi Tillison at
WQS@badriver-nsn.gov

2011 Environmental Program

A big
THANK
YOU to all
involved
with Clean
Sweep!

The Environmental Program works to address the environmental concerns of the Bad River Band through community engagement, interdisciplinary partnerships, environmental regulation, and resource monitoring.

To achieve this, we work with Federal organizations (like the Environmental Protection Agency), Regional collaborative (like the Wisconsin Community Action Program), and local programs (like Head

Start and the Boys and Girls Club).

2010 saw many opportunities for collaboration and the Environmental Program represented Bad River Natural Resources on the many levels.

The Environmental Specialist met with partners and stakeholders on a wide variety of topics, to include: the Xcel Ashland Superfund site, Climate Change, Mining Regulation, Chemical Monitoring, Great Lakes Human Health,

Pharmaceutical Waste, Tribal Environmental Management, Bad River Energy Infrastructure, Emergency Response, and Community Programs.

Participating in events on such a range of topics and scales ensures that Bad River receives timely information, coordinates between stakeholders on many levels, continues to develop its capacity to address environmental challenges, and solidifies its proud standing as a leader in environmental protection.

Clean Sweep

The Environmental Program also worked to maintain the environmental quality of the Reservation.

The annual "Clean Sweep" and "e-Sweep" events removed many forms of hazardous and electronic waste from the homes and offices on the Reservation. The quantities of hazardous substances collected during our Clean Sweep event are listed in the table to the right.

Plus, piles and piles of old computers, televisions, printers, and other electronic de-

vices were collected at the Bad River Recycling Center.

We also continue to work closely with the Bad River Recycling Center to improve the waste management capabilities of Red Cliff, Keweenaw Bay Indian Community, and Lac Courte Oreilles.

Moreover, our annual Earth Day clean-up last April was an outstanding success. With the help of over 100 volunteers, we removed 2,100 pounds of trash, 56 tires, and nearly 500 pounds of recyclables from the landscape.

Clean Sweep October 2010	
Hazardous Waste Collected	Amount
Paints Related	1,308
Mercury	14
Aerosols	96
Antifreeze	207
Corrosives	43
Pesticide Liquid	116
Flammable Liquid	8
4 ft Bulbs	500
HID Bulbs	217
Batteries	348
Oil Filters-Small	274



By Cyrus Hester,
Environmental Specialist

Looking Ahead

In 2011, we hope to build on the successes of the past; improving the accessibility of the natural resources to the community, expanding our outreach and education

efforts, bolstering our environmental safeguards, renewing our commitments to the landscape, and conserving these opportunities for the 7th generation.

On-going Water Quality Monitoring at Selected Stream/River and Wetland Sites

The basic water quality monitoring program on the Bad River Reservation began in 1997.

Currently, water quality monitoring involves measuring the levels of the following parameters at selected sites:

- dissolved oxygen
- water temperature
- pH
- conductivity
- turbidity
- hardness
- solids
- bacteria
- chloride
- a variety of nutrients

Throughout 2010, 30 streams/river sites and 12 wetland sites were monitored.

The Water Resources Program is currently reviewing the data collected last year.



Naomi Tillison

“The basic water quality monitoring program on the Bad River Reservation began in 1997.”

Biomonitoring and Bioassessment of Reservation Streams and Wetlands

Macroinvertebrate communities were sampled at 6 streams/river sites and 12 wetlands sites in 2010. Macroinvertebrates (such as mayfly nymphs) are aquatic invertebrates that live at the bottom of our waters. Vegetative surveys were also conducted at the wetland sites in 2010.



Closure of Abandoned Wells

The Water Resources Program continues to work on identifying and properly closing abandoned wells as abandoned wells can serve as a conduit for pollution to reach the groundwater resources.

If you know of an abandoned well that needs to be closed, please contact Ed Kolodziejki at wrtech@badriver-nsn.gov



If you have questions/comments about these projects, feel free to contact Naomi Tillison at WQS@badriver-nsn.gov

Air Quality in 2010

The Bad River Air Quality Office provided protection to the vital air resources of the Reservation in 2010 through ambient air monitoring, environmental awareness, participation in region and national planning and policy groups, and review of local air pollution permits.

You Help Keep Our Air Clean By:

- Recycle your garbage instead of burning it
- Carpooling and not leaving your car idle while running errands
- Turning down the thermostat you're not home in the cold months (there are programmable thermostats that will pay for themselves in energy savings)
- Open the windows on summer nights instead of using the A/C
- Have your furnace inspected annually, which is also a safety concern
- Filling your car up with gas after sunset in summer
- Periodically check your car's tire pressure (and get better gas mileage at the same time)
- Plant a tree (or several), Arbor Day is April 29th, 2011

NAAQS and Ambient Air Monitoring

Monitoring ambient air first started in 2001 with coarse particulate matter (the diameter of a human hair) in the air. Health studies have since shown that smaller-sized particles have a greater impact on human health so monitoring has shifted from coarse-sized particles to fine-sized.

Within the past year we have completed our eighth year of

monitoring the fine-sized particles and the sixth year of measuring ozone.

Monitoring continues to show that air quality in the northern portion of Wisconsin is much less polluted than the air in the south. This information only re-affirms the need to maintain and preserve our good air quality.

The National Ambient Air Quality Standards (NAAQS) are guidelines set to help regu-

late air pollution across the United States.

In the coming months the national allowable standard for ozone is expected to be lowered, allowing for more restriction on polluters in regions with high ozone.

We are looking forward for the new standard to be finalized soon but we believe our ozone levels are low enough to not be impacted by the upcoming change.

Open Burning/Burn Barrel Permit Program

Air Quality Staff continue to issue Burning Permits as a way to help ensure that burning is done in a safe and responsible manner, only during safe fire weather, and at safe times during the day.



As a reminder, all burn barrel permits expire on May 31st and are

valid only from 6:00pm until Midnight, and only when the Smokey sign on US-2 is Low, Moderate, or High.

Before any burning, please remember to think of safety first. If fire danger rises to an unsafe level, a burning ban will be issued and signs will be posted through the community.



Bayfront Generating Facility - Ashland

There were previous plans to convert the last turbine from coal to biomass at the power plant along US-2 in the City of Ashland.

Xcel has cited a higher cost than expected to convert the turbine and has now abandoned this project. Reducing coal burned in the local region will likely reduce mercury and

sulfur emissions and their impact both on human health and the environmental health of the Reservation.



Xcel Bayfront Power Plant

2010 Fish and Game Program Accomplishments

The Tribe's Fish and Game Program is responsible for Lake Superior fisheries management, on-reservation fisheries and wildlife management, fish hatchery operations, and conservation enforcement. The following is a summary of the program's accomplishments during 2010.

Lake Superior Fisheries Management

During the 2010 fishing year, Bad River commercial fishermen fished a total of 2,116,250 feet of large mesh gill net while fishing whitefish (WF) and lean lake trout (LLT) and 278,400 feet of small mesh gill net while fishing herring on Lake Superior.

The large mesh effort resulted in a yield of 51,598 pounds of LLT, 264,146 pounds WF,

3,677 pounds of siscowet, 1,473 pounds of herring, and 24 pounds of walleye.

The small mesh effort resulted in a yield of 65,000 pounds of herring and 46 pounds of LLT.

Bad River Natural Resources Department (BRNRD) staff monitored 33 large mesh gill net lifts.

During these lifts, the commercial fishermen fished 75,700 feet of effort and caught 518 LLT. This resulted in a Catch per Unit of Effort (CPUE) of 6.8 LLT per 1000 feet of large mesh gill net during monitored lifts.



By Timothy Wilson
Fisheries Specialist

On-Reservation Fisheries Management

Adult walleye were surveyed using gill and fyke nets during the spring spawning run in the Kakagon River. A total of 118 mature walleye, 91 males and 27 female, were



tagged with an orange floy tag and released into the Kakagon River during the 2010 brood stock survey.

Thirty of the marked fish were recaptured in the Tribe's nets. Using these numbers in a mark and recapture population model, an estimated 3,988 walleye spawned in the Kakagon River during 2010.

In 2010, the total allowable catch (TAC) for walleye in the Kakagon River was set based on the 2010 population estimate and was set at 1,200 fish.

Dip netters caught 293 fish, gill netters caught 383 fish, 269 fish were given to the elderly, 20 fish were donated to a Tribal youth conference, 25 fish were donated to the big drum feast, and there were 132 fish hatchery mortalities (45 for male trade program, 40 were discarded, and 47 unknown). A total of 1,122 fish were taken from the Kakagon River in 2010.

BRNRD staff worked with the USFWS to monitor the lake sturgeon spawning run in the Bad and White rivers.

A total of 320 adult lake sturgeon were handled during the 2010 survey, and the USFWS is currently using the collected data to estimate the sturgeon population in the rivers.

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On-Reservation Wildlife Management



Mallard platform with predator guard

The black bear population remains healthy on the reservation. Seventy two (72) percent of the bait stations were hit in 2010.

Two (2) wolves were trapped and collared on the Reservation during 2010. The wolves are now being monitored via aerial telemetry, in coopera-

tion with the Wisconsin Department of Natural Resources. The Tribe hopes to have a completed wolf management plan by September 2011.

Forty (40) waterfowl nesting structures (20 wood duck boxes and 20 cylinder mallard platforms) were installed

throughout the reservation in 2010.

Ten (10) nuisance bears were relocated, thirty six (36) bear complaints were investigated, and seven (7) beaver dams were removed by program staff during 2010.

“... over 53% of the marked fry stocked in the pond survived until being stocked...”

Fish Hatchery Operations and Maintenance

The hatchery collected a total of 5.2 million walleye and 300 thousand yellow perch eggs during 2010.

The rearing ponds were stocked with 660 thousand walleye and 250 thousand perch fry.

The Kakagon and Bad Rivers received 1,796,267 and 552,698 walleye fry respectively. A total of 265,765 fingerling walleye (1.5 to 2 inches) were harvested from

three walleye rearing ponds. 130,103 walleye were stocked in the Kakagon River and 135,662 were stocked in the Bad River.

A total of 127,083 walleye fingerlings stocked in the Kakagon River were marked with oxytetracycline.

The marked fish were healthy (their average size was nearly identical to unmarked fish) and over 53% of the marked fry stocked in the pond survived until being stocked (the walleye ponds with unmarked fish had survival rates of 30% and 35%).

The perch pond produced 75,317 yellow perch (2-2.5 inches), which were stocked into the Kakagon River.

Adult walleye, walleye and perch fry, and walleye fingerlings from the Bad River Hatchery were tested this year for Viral Hemorrhagic Septicemia virus (VHSV). No VHSV was detected in the any of the fish tested.

Conservation Enforcement

Tribal Wardens enforced and monitored 25 tribal regulations. These included:

- deer hunting
- trapping
- trespass
- waste of resources
- fishing
- commercial fishing
- wild rice
- slow-no-wake
- endangered and threatened species
- recreational registration and safety
- and illegal dumping.

Tribal wardens also participated in thirteen (13) joint patrols on Lake Superior with the Wisconsin DNR during the year.

During 2010, Tribal Wardens issued fifteen (15) citations. The majority of the cases were trespass and commercial fishing violations.



Robert Wilmer, Tribal Warden

Wildlife/GIS 2010 Summary

Well since I was only the Wildlife/GIS Specialist for 3 ½ months in 2010 it will be a relatively short summary!

This fall started with upgrading the GIS program for the Natural Resources Department.

I was also shown the ropes by the Tribal Warden, Bob Wilmer, on how to respond to nuisance wildlife complaints and the types of wildlife surveys that are conducted annually on the reservation. In 2010, there were 34 nuisance bear complaints made to the Natural Resources Department and 10 bears were trapped and relocated.

Late summer, Bad River Natural Resources Department, in cooperation with the Wisconsin Department of Natural Resources and USDA – APHIS Wildlife Services, two male wolves were radio-collared on the reservation.

In the fall, a young female was also trapped and radio collared just SE of the reservation. From tracking these individuals I was able to de-

termine that there were three different packs of wolves that used some part of the reservation in the fall.

Early winter, the young female from one pack and the adult male that was radio collared from another pack went off air. Through the winter, the telemetry surveys have been supplemented with winter track surveys to help get numbers of individuals on the reservation. Also any wolf sightings called into the department are also recorded.

Currently there are only 2 packs being monitored and only one pack that predominately stays on the reservation. The wolves are monitored on the ground a least twice a week and monitored by the air once every 2 weeks.



In November, there was a

Chronic Wasting Disease (CWD) scare in our area. I wrote an article about it in our last newsletter. I posted signs stating that the Natural Resources Department would be collecting CWD samples. We, unfortunately, only collected one sample. It is still important to collect CWD samples. Early detection is important. I will continue to collect CWD samples throughout this year. If you have any additional questions concerning CWD or what I actually do when I collect a sample feel free to contact me.

This winter we also installed 20 wood duck nesting boxes and 20 mallard nesting structures around the reservation. The nesting structures will be checked for success early this summer. You may have noticed a large sheet of tin attached to the pole below each structure... It is a predator guard used to hopefully minimize nest predation. It is important to leave these nesting structures alone during the months of April, May, and June.



By Lacey Hill

“It is still important to collect CWD samples. Early detection is important.”

What to Expect in 2011?

I plan a busy year!

- Collaring and monitoring more wolves
- deer pellet counts soon to begin
- the tribe will be hiring

two piping plover monitors for this summer

- building and installation of bat boxes
- monitoring of birds, amphibians, reptiles, and mammals

- working on a Bad River Reservation sensitive species list and developing a long term management program for those species.



Wood Duck nesting box with predator guard

If you have and questions/comments or interesting wildlife sightings feel free to contact Lacey Hill at wildlifegis@badriver-nsn.gov

“A lot of staff members were involved in the Department’s invasive species monitoring and controlling efforts.”

Monitoring and Controlling Invasive Species

The Natural Resources Department inventoried around 55 miles of the Reservation this past summer looking for invasive plant species, such as buckthorn, honey suckle, and garlic mustard.

The Department also worked on controlling purple loosestrife and non-native cattail species. After invasive cattail species were removed from selected areas (totaling 3.25 acres) in the Kakagon Sloughs these areas were re-

seeded with rice. A lot of staff members were involved in the Department’s invasive species monitoring and controlling efforts. Thanks to everyone who helped make 2010 a successful year!



Preparing area for new culvert



Reseeding Kakagon Sloughs with rice

Culvert Remediation Project

In cooperation with the Town of Sanborn, we replaced a degraded culvert on Birch Hill Road.

We received funding through the Wisconsin Tribal Conservation Advisory Council to purchase the supplies. Paul Johnson from the Natural Resources Conservation Ser-

vice provided the design for the new culvert.

Frank Connors and the Town of Sanborn Roads Crew installed the new culvert.

Thanks to all of our partners who contributed to the success of this project!



Degraded culvert

Other Water Resources Projects

- In 2010, we continued our nutrient study on Bear Trap Creek. This study was initiated in 2007 and is implemented with the assistance of USGS.
- We worked with the Bad River Watershed Association and other partners to develop the Marenco River Watershed Action Plan.
- We also reviewed different projects to provide recommendations on ways to minimize impacts to the water resources.
- We conducted some educational/outreach activities, including teaching Milwaukee students about water chemistry and macroinvertebrate monitoring.



Dragonfly emerging at a wetland near Madigan Road



Staff conducting educational activity



Showy Lady Slipper

If you have questions/comments about these projects, feel free to contact Naomi Tillison at WQS@badriver-nsn.gov

Cultural Resource Research Project

The Tribal Historic Preservation Office received a grant from the National Park Service Historic Preservation Fund to conduct the Cultural Resource Research Project.

Phase One: Burial Areas

The first phase of this project includes locating and identifying culturally significant areas through non-invasive

archaeological survey and inventory research methods of twelve known cemeteries and burial grounds within the

boundaries of the reservation. These burial areas will be documented and summarized for inclusion in the Tribal

Historic Preservation Office's overall Comprehensive Preservation Plan.

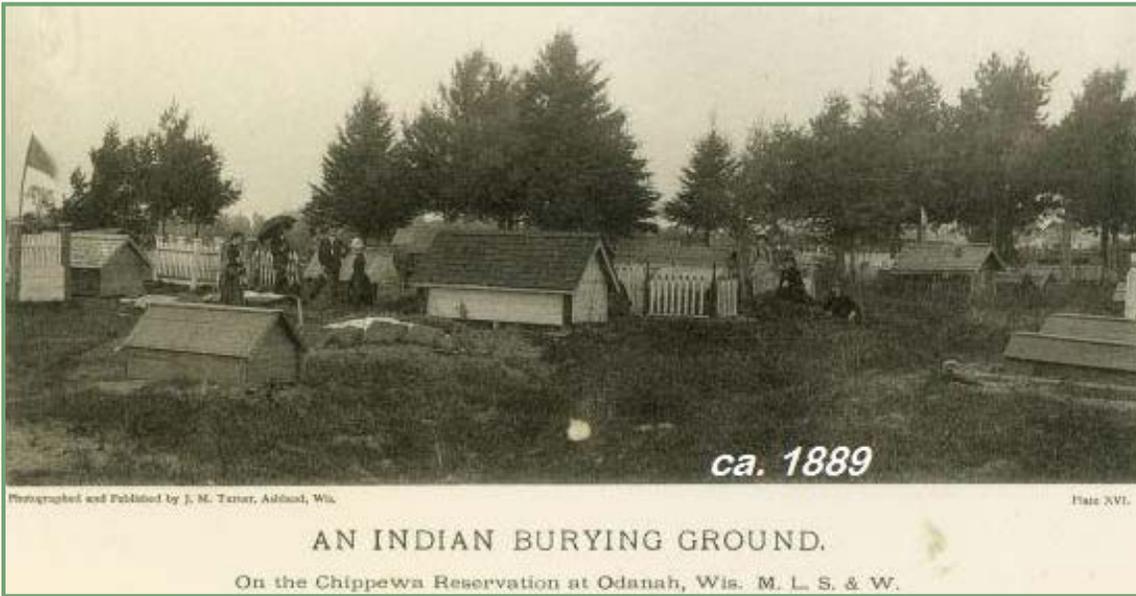
Disclaimer

This material is based upon work assisted by a grant from the Department of the Interior, National Park Service.

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of the Department of the Interior.

Patrick Mayotte
Cultural Resource Research
Coordinator





“... includes locating and identifying culturally significant areas ...”

Phase Two: Cultural Resource Preservation Team

A second aspect included in this grant is a historical review and documentation of two existing culturally significant structures in Old Odanah.

These include the former Government Farmer’s Office

and the old Tribal Clinic structures.

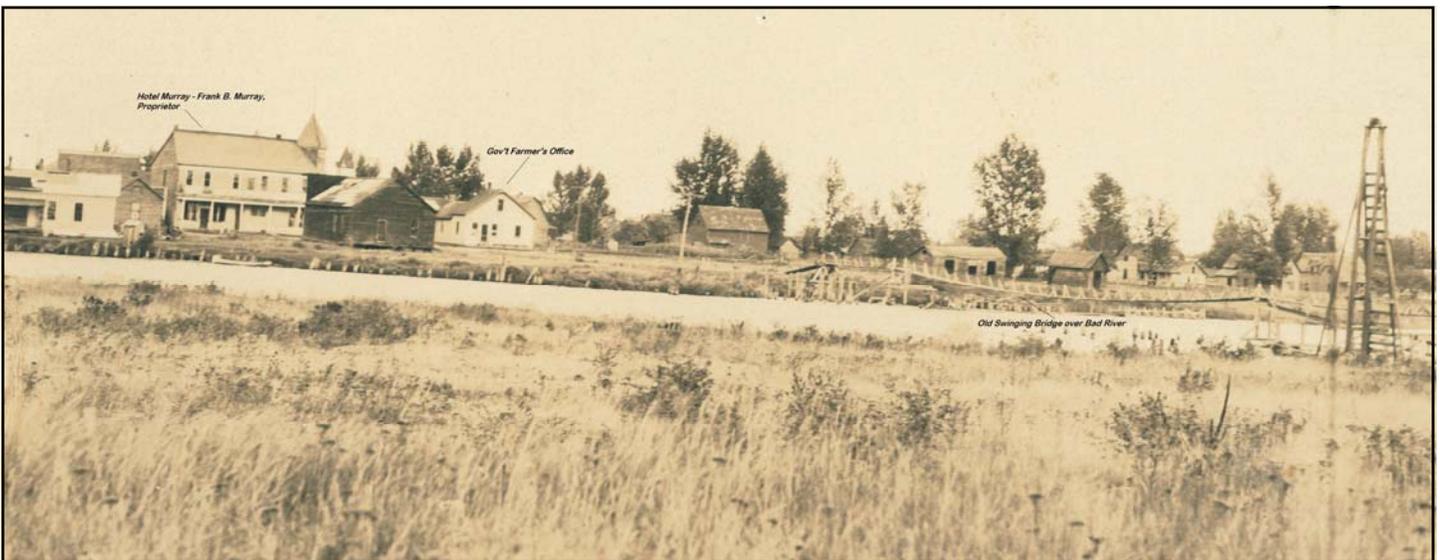
In carrying out the grant objectives, we’ll be forming a Cultural Resource Preservation Team which includes the two private home owners and other individuals such as the

cemetery maintenance crew, an archaeologist, and a Historic Preservation Review Board.

Once our preliminary historical review grant objective on the two historical structures is completed, the structures

may be determined eligible to nominate for the National Register of Historic Places.

Once registered, it will be up to the individual home owners to pursue funding sources to have their structures restored.



Government Farmer’s Office, Odanah

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Natural
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We're on the web!
www.badriver-nsn.gov



Water quality monitoring

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PUBLIC HEARING
Proposed Water Quality Standards

Monday, March 28, 2011, at 5:00 p.m.

Madigan Room Bad River Lodge & Casino Convention Center



Mission Statement

The Department strives for resource management which both conserves the natural resources for future generations and provide for the needs of the present.

The Department's 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.