

COMMON GROUND

2018-19 WINTER EDITION

Battery Recycling Boxes – In a Space Near You

Jessica Strand, Environmental Specialist

Recently staff at the NRD were able to use grant funds from the US Environmental Protection Agency (EPA) to buy battery recycling boxes for placement around the community and for use by Tribal Departments. Battery recycling is important to the environment because when thrown in the trash batteries end up in landfills where they can pollute the environment either by leaching harmful chemicals into soil or water, or in the case of lithium batteries, causing landfill fires that release toxic gases into the atmosphere. Some of the chemicals in batteries, like lead, cadmium, and nickel, are toxic to humans and can enter the environment by throwing your batteries in the trash.

However, battery recycling has become more common over the years and can turn what may have been hazardous trash into new products.



Rechargeable batteries, like lithium ion and nickel-cadmium batteries, can be recycled into products like silverware, pots, pans, golf clubs, stainless steel products, and new batteries. Single-use batteries, like alkaline and lithium batteries, can be turned into products like silverware, sunscreen, road asphalt, and new batteries. Making these products from recycled batteries minimizes the need for additional raw materials to be mined out of the earth and reduces the volume of waste going into landfills.

Collect all your old batteries and find the brown Call2Recycle battery recycling boxes at locations like the Bad River Housing Authority, Community Center, and the Chief Blackbird Center! Please follow the instructions posted with each box to know

...Continued on page 4...

CONGRADULATIONS CONSERVATION OFFICER MIHALKO!

Gerry White, Chief Conservation Warden

THE BAD RIVER TRIBE HAS ANOTHER CONSERVATION OFFICER WHO HAS COMPLETED BASIC LAW ENFORCEMENT TRAINING. Megan Mihalko has completed the BIA IPA (Indian Police Academy) this past December of 2018. It's a rigorous training schedule for seventeen weeks that has many parts to it including law enforcement tactics, law, self-defense, firearms training, defensive driving, physical training with at the end of the course a seven (7) mile timed march. With the successful completion Conservation Officer Mihalko brings back to our reservation the knowledge and



Megan receiving certificate for completing BIA IPA training.

...Continued on page 2...

Special points of interest:

- Conservation Warden Megan completes basic training.
- 2019 Open House Preparations
- Buy-a-Brick Flyer
- OPEN HOUSE FLYER
- POWTS Application
- Beaches PUBLIC NOTICE
- Conservation Warden HOTLINE

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Congrats continued...

training from this academy to be an important part of the Bad River Natural Recourse Department and the Bad River Tribe. If there are questions for our Conservation Officers please meet them at the upcoming Natural Recourse Open House on Wednesday, March 27th, 2019 at the Casino Convention Center.

Again, Congratulations to Conservation Officer Megan Mihalko.



Megan and her classmates at BIA IPA .



Megan and her Proud Parents on Graduation Day.

Introducing NRD's New Brownsfield Specialist

Hello!

I recently joined the Natural Resource team as the new Brownsfields Specialist. I am very excited to have the opportunity to pursue my dreams of a career where I can address the issue of environmental contamination and work towards a healthier environment.

I grew up on the north shores of Lake Winnebago in Sherwood Wisconsin. I spent most of my youth exploring and developing a strong passion for the outdoors at High Cliff State Park. In high school I began backpacking and started expressing my passion for the outdoors through art.

I graduated from the University of Wisconsin Stevens Point (UWSP) in December 2018 with a Soil and Land Management Degree. It was at this time when I developed a deep appreciation for soil and its complexities. I am proud to have been a part of the UWSP soil judging team which took 1st place in the 2018 regional soil judging competition.

In my spare time I like to draw/paint, hike with my dog, and play the ukulele. I am eager to learn more about the traditions and culture on the reservation as I settle in to my new position. I am excited to be a part of the Natural Resource team and help keep the reservation clean and safe!



-MarKatie Mealy, Brownsfield Specialist

Still at Risk!

By Daniel Wiggins- Air Quality Technician



Unfortunately a person who doesn't smoke isn't always awarded with a lifetime absence of lung cancer; however, the risk is still there! Radon is the second leading cause of lung cancer behind tobacco smoke and the first leading cause for those who have never smoked (less than 100 cigarettes in a lifetime)¹. The chances of developing lung cancer from indoor radon can depend on three factors: 1) how much radon is in the home, 2) the amount of time you spend in your home, 3) and whether you are a smoker or have never smoked.¹

Smokers are at an obvious risk of developing lung cancer, and with the addition of living within a home that has high levels of indoor radon, are at an even higher risk. However, if you do not smoke and live within a home with high levels the risk is still there, but much lower. Studies have shown that out of 1,000 people living within a home at 20pCi/L, and whom smoke, 260 could likely get lung cancer. If those same 1000 people have never smoked, and lived within a home at the same level, an estimated 36

people could get lung cancer¹. The obvious answer is quit smoking and mitigate your home, if you are a smoker. However, what if you are a non-smoker is it worth fixing your home? Short answer... YES! The rise in concentration of radon and an extended length of exposure increases your chances; therefore, if you can lower your

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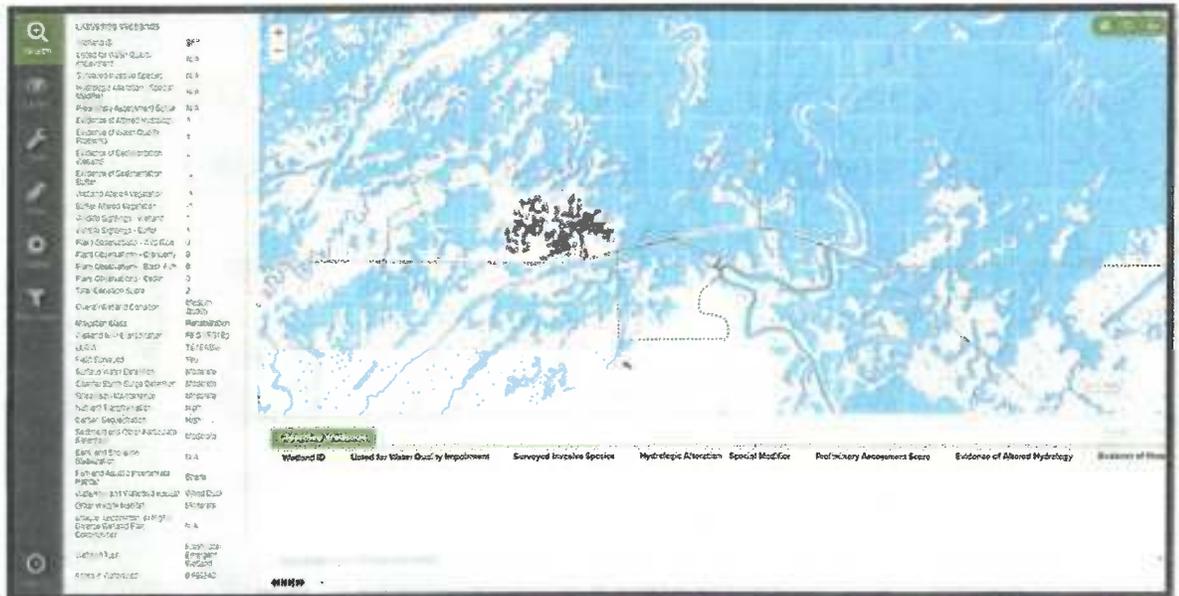
LiDAR Training and Wetland Mapping Bad River GIS & Mapping Services

Suzi Smith, GIS Specialist

Expanded Scope of Work for Lower Bad River Watershed Wetland Functional Assessment

Bad River Natural Resources staff (Wildlife, Water Resources, Fisheries, Environmental and GIS/Mapping Programs) continue to work collaboratively with environmental contractor WSB to assess wetland functions in the Lower Bad River sub-watershed. Wetland functions are the physical, chemical, and biological processes that characterize wetland ecosystems, such as flood storage, denitrification, habitat, and support of aquatic life.

In addition to conducting outreach at Elderly Breakfasts in the scoping and initial mapping review stages of the project, WSB has released to the department for review wetland condition assessment matrices in the form of tabular data that accompany geospatial data in the form of



Preview of DataLink wetland functional assessment online webmap tool (draft phase)

map layers. Combined, the tables and map layers can be considered tools that are being used to bring together information from multiple program areas into a method of determining functions and other special characteristics of reservation wetlands (e.g. wild rice habitat), to improve the project review process and other natural resources

work through an enhanced understanding of the landscape. Wetland functional determinations factor in decisions for mitigation, restoration, and project location among many other natural resources protection related activities.

The project is current-

...Continued on page 7...

Batteries continued...

whether you need to bag your battery (or tape the ends) prior to placing it in the box. To find a drop-off location for battery recycling in different areas outside the Reservation, visit <https://www.call2recycle.org/locator/>.

If you want more information about the battery boxes or have a suggestion about a public space that a battery box could be placed, please contact the NRD at 715-682-7123.

**WATCH FOR
EARTH DAY
UPDATES!**

Minimum Terminal Protection Guidelines

recommends the battery be individually bagged or taped

BATTERY TYPE / CHEMISTRY	TERMINAL PROTECTION REQUIRED?
<p>Rechargeable Nickel Cadmium (Ni-Cd) Nickel Metal Hydride (Ni-MH) Nickel Zinc (Ni-Zn)</p>	<p>9V or Less = NO (drop in the box) (look on battery for voltage) Greater than 9V = YES</p> <p>Terminal protection REQUIRED</p>
<p>Primary Alkaline & Carbon Zinc</p>	<p>12V or Less = NO (drop in the box) (look on battery for voltage) Greater than 12V = YES</p> <p>Terminal protection REQUIRED</p>
<p>Rechargeable Small Sealed Lead Acid (SSLA/Pb) Lithium Ion (Li-Ion)</p>	<p>DAMAGED BATTERIES: Special U.S. DOT-approved packaging (not included here) for shipment required. Contact Customer Service at 877.753.1207 for assistance.</p> <p>ALL = YES</p> <p>Terminal protection REQUIRED</p>
<p>Primary Lithium Button/Coin Cell</p>	<p>ALL = YES</p> <p>Terminal protection REQUIRED</p> <p>Call2Recycle boxes should be shipped when full (80 lbs.) or within one year of the collection of the first battery. Store the Call2Recycle collection bin in a cool, dry place and return it to under supervision.</p>

Charge Up Safety!
call2recycle.org/safety

Avoid the spark!

Battery terminals that touch metal surfaces or other batteries can spark, causing a fire or explosion.

Bag or Tape Each Battery!

Call2Recycle

Still at Risk continued...

indoor radon levels it will likely lower your chances.¹

Unfortunately, radon can cause cancer at very low concentrations, as well. Even at levels between 2 and 4pCi/L people still could get lung cancer. In addition, the EPA's action level for radon is 4pCi/L, which an estimated 7 people out of a 1,000 (whom never smoked) are still estimated that could develop cancer¹. Where can we hide and why test if even low levels can cause cancer?

The idea when monitoring and/or lowering radon levels is to minimize the amount and time of exposure, therefore lowering the chances of developing lung cancer. A person who wants to reduce their smoking wouldn't smoke more just because they found one cigarette can still cause lung cancer. The same should go for your home. Just because you found rather low levels does not mean you should not apply radon reduction methods and techniques to your home, if the opportunity is available.

The trend in construction will eventually be to build every home radon resistant utilizing material, methods, and tech-

niques during the beginning stages of constructing. Building a home radon resistant may be found sufficient for reducing levels initially, and if levels are still found high, will make the application of future radon reduction methods and techniques less labor intensive and less expensive. Although some contractors and companies do emphasize their radon resistant structures, which they offer, many still remain passive. Many contractors, developers, renters and even housing authorities are aware of radon but still do not apply or even offer these options when it is available, possible, convenient, and/or least expensive. Right now, it is up to the homeowner to emphasize radon resistance and protection to the contractor and/or renter. Testing can be very persuasive and a powerful tool!

Radon is everywhere! It is very difficult to find a city, country-side, or suburban community that has not found at least one home with high indoor radon levels. Unfortunately radon will always be an issue and even at low levels, possibly cause a person to develop cancer. However, it may be important to utilize radon

resistant construction and reduction methods/techniques, in the beginning stages of construction or during any time of your home's-lifespan. Testing your home is still essential in knowing the extent of your radon issue. Once you have a known concentration lowering that amount effectively can ultimately lower your chances of developing lung cancer.

If you have any questions please contact Daniel Wiggins, the Air Quality Technician, at 715-682-7123, extension 1553 or email at Air1@badriver-nsn.gov.

PLEASE START BY TESTING YOUR HOME FOR RADON!

Testing is free for Bad River Tribal Members!

¹ A Citizen's Guide to Radon: The Guide to Protecting Yourself and Your Family from Radon, U.S. EPA 402-K-07-009, Revised 2007



Solar PV Group Buy

CheqBayRenewables.org

How it works:

- Homes and businesses in our region express interest in installing solar PV (electricity) during the same time period
- Cheq Bay Renewables evaluates and selects an installer
- Participants receive a bulk purchasing discount bid
- Other incentives may apply, including:
 - Focus on Energy grant (Xcel & Dahlberg customers)
 - 30% Federal Tax Credit (homeowners and businesses)
 - Bonus depreciation (businesses only)
 - Net metering

Estimated project schedule:

Installer Selected - Next Energy Solution	January 1, 2019
Sign-up Period Information sessions - see next page	January - April 1, 2019
Installer Contract Period Formal site assessments performed Participant contracts signed Down payments due	February - July 1, 2019
Installations	April - Oct, 2019
Solar Celebration	December, 2019 (TBD)

DETACHABLE



Solar PV Group Buy

CheqBayRenewables.org

Interested?

Please sign-up to receive more information. Signing-up does not require any commitment and will ensure you're receiving all the details. You may sign-up by emailing cheqbayrenewables@gmail.com.

What we'll need from you:

- Physical address
- Your Utility company
- Annual usage (kWh)
- Email & Phone

Who is Chequamegon Bay Renewables?

We are a handful of volunteers focused on making renewable energy more accessible in our community. We achieve this through education, resources, and initiatives such as this group buy program. We are a 501(c)(3) nonprofit and have been engaged with solar projects in the community for the past several years. Additional projects include an annual solar tour, resource website, Bayfield Electric's community solar garden, and the Washburn/Bayfield Solar Project. In 2018, our Solar Group Buy was the largest in Wisconsin's history with 85 signed contracts totaling 552kW. It included 4 municipal projects, 12 small businesses and 69 residences. RENEW Wisconsin, a state-wide policy nonprofit based in Madison, awarded Cheq Bay Renewables the 2018 Renewable Champion Award at their January 2019 Policy Summit.

Additional Information

Solar Group Buy programs have been successful in other areas of Wisconsin and the nation. They are often initiated by groups like Cheq Bay Renewables. Our group buy program is unique in that there are no additional fees – all of the cost savings gets passed on to you. We feel that now is an opportune time to move forward with solar. The 30% federal tax credit is only offered through 2019 (lower rates are available through 2021).

Information sessions:

Mar. 28	5:30pm	Northern Great Lakes Visitor Ctr	Hwy G and Hwy 2
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DETAILED

LIDAR continued....

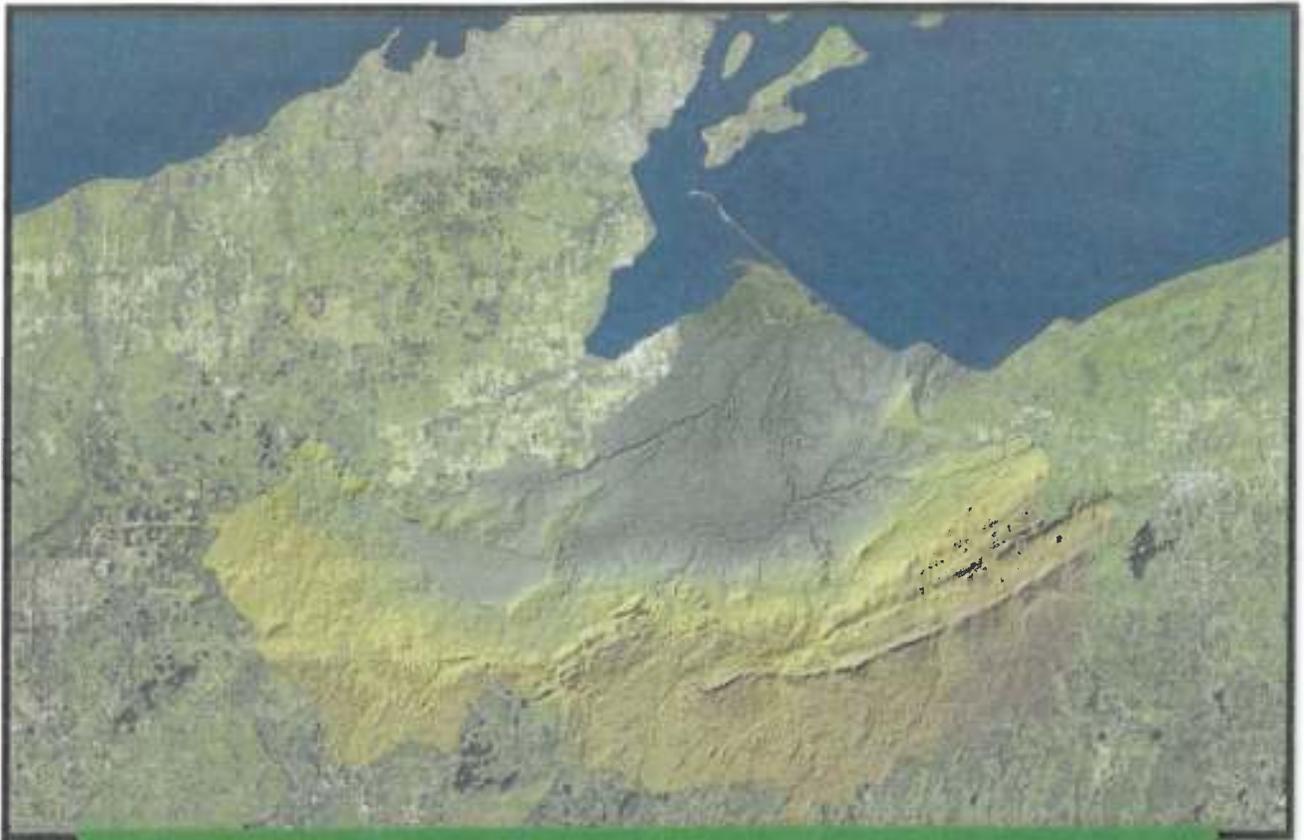
ly in draft/ review phase for both the tabular data and documentation in a report, and the contract timeline and anticipated products have been extended. Currently spatial data are being served via web map viewer called DataLink, but this project will continue to be developed within NRD even after the submission of the final report and wetland tables and maps.

Updates will be incorporated from future observations and additional maps will be created using the methods being created through this project.

Wisconsin Wetland Inventory (WWI) Currently Under Revision

Bad River GIS recently attended the annual conference of the Wisconsin Land Information Association (WLIA) in Appleton. One of the regular conference sessions was about how the Wisconsin DNR is currently reviewing the best available GIS data to update its Wisconsin Wetland Inventory (WWI). The WWI is used frequently in BRNRD to display mapped wetlands both on and off Reservation, as well as quantify the different wetland types. The WWI is being enhanced by high-resolution elevation data recently made available for the entire state of Wisconsin through LiDAR acquisition.

Of course, as with any mapping pro-



LiDAR, similar in concept to a laser point-based equivalent of RADAR and SONAR, coverage in the Bad River Watershed.

ject, there are physical and geographical limitations of both time and medium. Being a digitally generated project with little input of information from observations gathered on-the-ground, mapped wetlands are only as good as the technology and ability of cartographers and digital models to depict and interpret what exists in reality. Every geographic area presents unique challenges to accurately modeling and mapping and describing natural gifts and resources. Our area is especially wet and prone to water pooling in clay depressions, so there are a multitude of small wetlands not previously mapped on a large scale that are now more visible in higher resolution imagery and elevation data recently made available. However, a statewide map layer should never be interpreted as a complete or absolutely accurate depiction of wetlands or any other physical feature unique to our locality.

Bad River GIS Develops LiDAR Workshop for Natural Resource Managers

Light Detection and Ranging (LiDAR) is currently the best available data source for high resolution elevation data (think topo maps on steroids), and Bad River Natural Resources Department partici-

pated in a cost share program (WROC/ Wisconsin Regional Orthoimagery Consortium) to collect and process these data in 2014-15 using funds received through the BIA. Federal Emergency Management Agency (FEMA) collected LiDAR for Ashland County, and the WROC partners paid for collections in Bayfield County and Iron County to complete coverage of the Bad River Watershed. Bad River GIS has managed these data for use by resource managers to model project specific information about the landscape, as well as in development of Reservation-wide analyses. To better share understanding and increase leverage of LiDAR data, Bad River GIS is developing interactive educational materials for presentation to department staff. These materials and additional workshops in other components of GIS (web mapping, remote sensing) can be made available to the community upon direct request.

Wildlife Program Updates...

Lacey Hill-Kastern, Wildlife Specialist

Winter Severity Update

The winter severity index (WSI) is a way of assessing how difficult of a winter it has been on Waawaashkeshiwag. Every winter the Bad River Wildlife Program uses data collected from the weather station in New Odanah by the Bad River Air Program to keep track of the local WSI. Temperatures and snow depths do fluctuate across the Reservation and we are working on increasing our WSI data collection locations. The WSI is found by adding the number of days where the snow depth is greater than 18" to the number of days where the minimum daily temperature is less than 0°F. This winter started off relatively mild. Our first recorded below zero day was not until January 1st and we did not record having over 18" of snow until February 13th. The Wisconsin Department of Natural Resources (WDNR) ranks the WSI in Wisconsin as: a 50 or less is considered a mild winter, 50 - 79 is a moderate winter, 80-99 is severe, and anything over 100 is a very severe winter. In 2014 (another polar vortex year), the WSI for New Odanah at the end of December was 24, end of January it was at a 73, and at the end of February was the very severe winter category at 120 points. This year, December was at a 0, January concluded with a 12, and even though February came in with 22 points that brings us to having a winter severity score of 34 and still in the mild winter category and not even close to the February 2014 winter severity. We are continuing to keep an eye on Waawaashkeshiwag and will be continuing to monitor the WSI.

Ma'iinganag Update

This past summer, the Bad River Wildlife Program with the assistance of USDA-APHIS-WS collared an additional two Ma'iinganag on the Reservation. Gimiwan, a light colored Ma'iingan, that was collared on a rainy day has set up his territory in the exact center of the Reservation. The second collar had malfunctioned after 24 hours.

The Wildlife Program is continuing to collect information via tracks, scats, and trail camera observations. We hope to deploy four additional GPS collars this summer and will be deploying a lot more trail cameras in the upcoming months.

We will be partnering with UW-Madison on some research studying predator and livestock interactions on and surrounding the Reservation. This project has been two years in the making and we



...Continued on page 12....

POWTS @ Bad River Natural Resource Department

To: All Bad River Tribal Members.
From: Bad River POWTS Office

Here is a copy of the tribal application that all (private)! tribal members must complete if you have plans to build a home or set-up a trailer. This application can be picked up at our office M-F, 8:00 am-4:30pm . Our office is located in the Bad River Chief Blackbird Center, Department of Natural Resources.



~POWTS stands for Private On-site Wastewater Treatment System~

Gene Bigboy Jr.
Bad River POWTS Office
715-682-7123 ext.1663
powts@badriver-nsn.gov

INDIAN HEALTH SERVICE - APPLICATION FOR SANITATION FACILITIES

RESERVATION:

APPLICANT NAME (Please Print):

ENROLLMENT
NO.:

CURRENT MAILING ADDRESS:

CURRENT STREET ADDRESS (FIRE #):

MAILING ADDRESS OF NEW HOME (IF DIFFERENT FROM ABOVE):

STREET ADDRESS OF NEW HOME (FIRE #):

HOME PHONE:

WORK PHONE:

EMAIL:

Please note your email will only be used by IHS to correspond with you regarding your application and proposed facilities.

SERVICES REQUESTED: WATER: NEW SERVICE OR RENOVATION
SEWER: NEW SERVICE OR RENOVATION

Have you ever been served by the Indian Health Service before? YES NO
If yes, what year were you served?

Has the site you want served been served by the Indian Health Service before? YES NO
If yes, served under whose name?

HOME INFORMATION:

Is the home site on TRUST LAND TAXABLE LAND

Do you: OWN LEASE RENT Type of structure: MOBILE HOME, HOUSE

Approximately what year was the home built (or if mobile home, moved to the site)?

Are you living in the home now? YES NO If yes, how long have you lived in the home?
If no, when will the home be ready for occupancy?

Number of bedrooms in your home? _____ Number of bathrooms in your home? _____

Number of people which will occupy your home? _____

Does your home have electric service? YES NO If no, will electric service be provided?

Have there been any major improvements to the plumbing or rooms If yes, please describe. _____ added to the home in the past year? YES NO

Is there an: EXISTING WELL AND/ OR SEPTIC SYSTEM at the home site?
Are you having any problems with the WELL AND/ OR SEPTIC SYSTEM? Please describe.

SITE INFORMATION: THIS INFORMATION IS IMPORTANT. IT WILL HELP SOMEONE FROM THE INDIAN HEALTH SERVICE LOCATE AND VISIT YOUR HOME SITE.

LEGAL DESCRIPTION OF HOME SITE: _____ 1/4 OF _____ 1/4 OF SEC. _____ T _____ N R _____ E/W

Please attach a location map from a plat book showing the location of your home, or on the back of this form, please draw a map to your home, providing distances and directions from named paved roads, and a description of your home (or a neighbor's home) including color and /or size.

If available, please provide a survey map of your home site showing the property corners and dimensions of your home.

DETACHABLE

INDIAN HEALTH SERVICE - SANITATION FACILITIES CONSTRUCTION PROGRAM - INFORMATION FOR THE APPLICANT

Public Law 86-121 allows the Indian Health Service to assist members of federally recognized native tribes in obtaining a potable drinking water supply and a safe means of disposing of waste water for their home use, provided that funds are available and that the homes meet basic standard of living requirements (well insulated, have electricity, indoor plumbing, etc.).

Applications received late in the year, especially for those sites that require mound-type septic systems, may not allow sufficient time for service during the current construction season. Approval of a site by IHS will be determined on a case by case basis and will depend on the amount of funds available. The Tribe will set the priority of service on sites approved by IHS.

APPLICANT ROLES AND RESPONSIBILITIES

In signing this application, the applicant hereby agrees to the following terms and accepts all responsibilities to be completed by homeowner. The homeowner shall:

1. Provide proof of his or her legal right to reside on the site (e.g., a copy of a lease or deed). Attach a copy of the lease or deed to this completed application and return it to the tribal representative.
2. Grant access to the IHS, Tribe, and Contractor to enter onto the premises as needed to complete construction of the proposed sanitation facilities.
3. Stake the property corners and the proposed location of home, if it is not yet on site, prior to a visit by a representative of IHS. If the home location is moved after the soil evaluation has been completed, a new soil evaluation may be required, which will delay service.
4. Complete clearing and grubbing for the facilities to be installed.
5. Ensure the home meets current housing codes, is in sound condition with fully operable plumbing (including provisions against freezing in the winter, i.e. mobile homes must be skirted), and has 230V electrical power. Homes shall require only one sewer and one water connection.
6. For homes with slabs, provide cut-outs for water/sewer service connections at the locations required for the services; for homes with basements, provide sleeves for water/sewer service connections at the locations/elevations required for the services. If cut-outs/sleeves are not provided, Contractor will stop five (5) feet outside of building and the homeowner will be responsible for the water and sewer tie-ins to the interior plumbing.
7. Complete finish landscaping including seeding and mulching (if desired) on disturbed areas.
8. Provide for the proper operation and maintenance of the sanitation facilities after the date the system was put into use. System failures that occur within the first year after this date, which are determined to not be the fault of the homeowner, are covered by a 1-year warranty.
9. Be responsible for any construction costs that exceed the IHS site cost cap. The cost cap for sites receiving both water **and** sewer facilities is \$43,900.00 and for sites receiving only water **or** sewer facilities is \$29,300.00.

DRAW MAP HERE

(Please include details as listed on bottom of page 1)

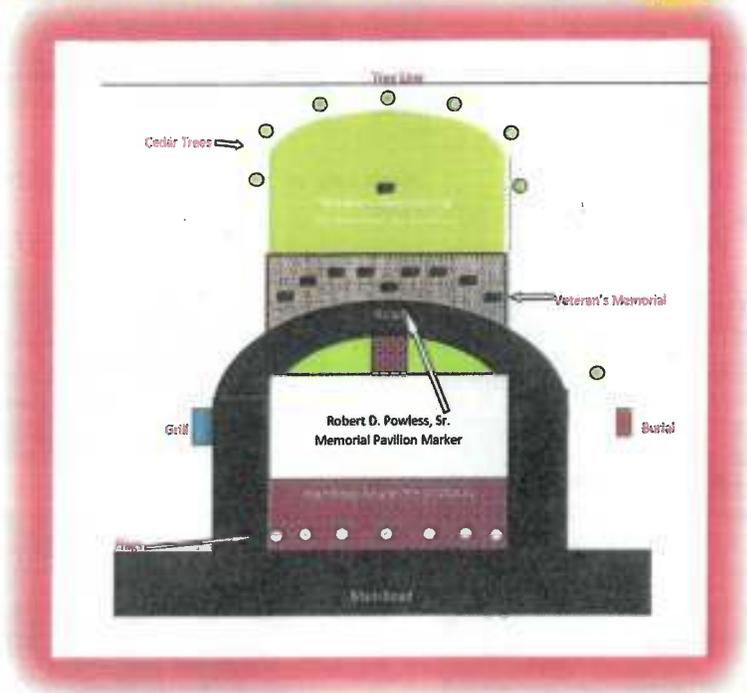
APPLICANT SIGNATURE:

DATE:

TRIBAL REPRESENTATIVE SIGNATURE:

DATE:

The
Bad River Veterans
"Buy-a-Brick" Fundraiser
is starting
Memorial Day!



Fundraising will continue until
\$125,000 Goal is reached!

For more information visit our website at www.badriver-nsn.gov or contact
 THPO at (715) 682-7123 or THPO@badriver-nsn.gov **

Developed by the Bad River THPO & Repatriation Committee

Wildlife Article continued...

are excited to begin this project this Spring. If you would like to learn more or maybe find out how to volunteer to help contact Lacey at wildlifegis@badriver-nsn.gov or call 715-685-7840 x1554.

Winter Camp and 4-H Mid-Winter Getaway Wildlife Presentations Update

The Bad River Wildlife Program had a presence at both the Winter Camp this year (along with other Natural Resources staff) and the 4-H Mid-Winter Getaway. For winter camp, Bad River Wildlife Biologist, Lacey Hill Kastern, and GLIFWC Conservation Warden, Christina Dzwonkowski, taught groups of students from kindergarten to fifth grade about the history and reasons for trapping and furbearer identification. Lacey demonstrated how to set a long spring foot hold trap and explained how they were used for trapping and radio-collaring wolves.

At the mid-winter getaway, we had a lot more time with the students. Seventy students attend. We started the sessions by explaining the role of Conservation Wardens, then dove into the wildlife table. We started with Bad River wolf research, did a radio telemetry demonstration and foot hold trap demonstration, taught track and scat identification of northern Wisconsin furbearers, aging and sexing the different species of turtles in Wisconsin, and concluded the activities with aging deer jawbones. At the end we asked who was interested in becoming wardens or biologists



quite a bit of interest for both careers and answered questions about colleges and how to get involved with internships and volunteering.



Otter Track



Coyote Track



Large Bobcat Track



Bobcat Track

These were two great programs and I look forward to doing them again!



and we had



Looking for trail camera hosts!
 Stop into the Bad River Natural Resources Department and talk to Lacey for more information or email her at wildlifegis@badriver-nsn.gov

Save the Date!
 Bad River will be hosting a
 Ma'ingan Symposium
 January 30th - February
 2nd, 2020!
 More information to come!

Public Input Opportunity: 2019 Beach Monitoring Project



The Bad River Natural Resources Department (BRNRD) is seeking public input on the 2019 Beach Monitoring Project sites and notification plan. Water quality on Reservation beaches is monitored from May through September and advisories are posted when bacteria levels exceed the Tribe's water quality criteria. Input is sought on the proposed monitoring locations, proposed monitoring frequency, and proposed advisory notification methods.

Comments will be accepted from **March 15th, 2019** through **April 30th, 2019** and may be submitted by email, in writing, in person at the BRNRD office, or during the BRNRD Open House (3/27/19):

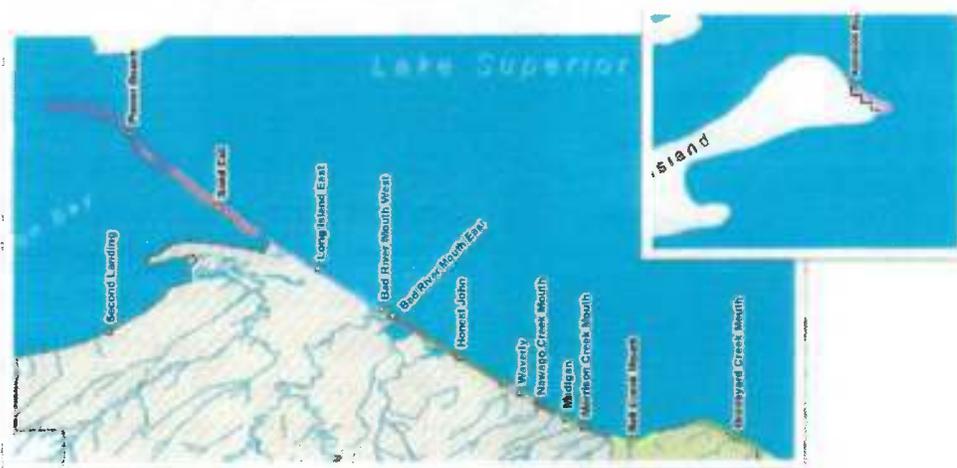
Bad River Natural Resources Department
Water Resources Specialist
PO Box 39
Odanah, WI 54861
wqs@badriver-nsn.gov

Proposed Beach Monitoring Locations & Frequency

The frequency and location of beach monitoring is based on: (a) the recreational use of the waters; (b) the frequency of use; (c) the proximity to known point sources and nonpoint sources of pollution; and (d) any effect of storm events on the waters. Based on the potential risk to human health presented by pathogens, beaches are ranked as either Tier 1, Tier 2, or Tier 3.

Fourteen (14) beaches within the Bad River Reservation are proposed for monitoring during the 2019 season.

Comments are sought on these proposed locations, rankings, and monitoring frequency:



Tier 1

Locations	Frequency
Bad River Mouth – East	1x per week
Bad River Mouth – West	1x per week
Joe Rose Beach	1x per week
Second Landing	1x per week
Waverly	2x per week

Tier 2

Locations	Frequency
Amnicon Bay (Madeline Island)	1x per 2 weeks
Madigan	4x per season
Plover	2x per season
Sand Cut	1x per 3 weeks

Tier 3

Locations	Frequency
Bell Creek Mouth	1x per season
Graveyard Creek Mouth	1x per season
Honest John	1x per season
Long Island – East	1x per season
Morrison Creek Mouth	1x per season
Nawajo Creek Mouth	1x per season
Other Sites*	see footnote

*Other sites include additional sites identified by the Tribal Council and/or community members as being used for swimming or other primary contact activities. These other sites may be moved into a different tier depending on the use and potential risk to human health.

Proposed Advisory Notification Methods

When there is an exceedance in water quality, advisories are posted notifying the public of the potential risk to human health presented by pathogens. Notifications are also sent out when an advisory is removed resulting from improved water quality.

Comments are sought on the following methods for notifying the Bad River community of advisory postings:

- Bad River Tribal website
- BRNRD Facebook page
- BRNRD Beach Monitoring Project phone message updated
- Sign posted at the beach/boat landings
- Signs posted throughout Bad River:
 - Bad River Administration building
 - Bad River Health & Wellness building
 - Bad River Housing Center
 - Bad River Elderly Building
 - Birch Hill Community House
 - Bad River Casino
 - Three Eagles
 - Moccasin Trail Center

Call (715) 685-7870 for current status of Bad River Beaches from May - September

NRD Preps for 2019 Environmental Open House

Jessica Strand, Environmental Specialist

Bad River NRD staff have been working hard to put together an interesting prize for kids attending the NRD's Open House on Wednesday, March 27th. Approximately the first 100 children ten-years-of-age and under who attend the Open House will have a chance to win a grow-your-own-vegetable-plant kit if they participate in the Kids Scavenger Hunt Bingo activity. These kits will give children all the supplies needed to start their own sweet red pepper, cherry tomato, tomato, or eggplant indoors before being transplanted outside for the year. To mix it up a little and show kids how to repurpose materials that are discarded every day, the NRD has created much of the kit from recyclables. Photos include Berthea Olby collecting two-liter pop bottles from the Bad River Recycling Center and other NRD staff prepping all the materials for the kits.



Save The Date!

BAD RIVER
NATURAL RESOURCES DEPARTMENT
~OPEN HOUSE~

Wednesday, March 27th, 2019
10AM - 6PM

Bad River Casino
Convention Center

- Informational Booths
- Educational Activities
- Snacks & Lunch provided.

PLUS Raffle Prizes!






Stay Tuned for More Details...



Managing soil contamination with bioremediation

MarKatie Mealy, Bad River Brownfields Specialist

Microbes are the most diverse and abundant life forms on this planet. They are truly incredible in their ability to break down complex material and survive extremely harsh environments.

Kathy Merrifield, a retired nematologist, states that “A single teaspoon (1 gram) of rich garden soil can hold up to one billion bacteria, several yards of fungal filaments, several thousand protozoa, and scores of nematodes.” Although scientists have discovered much about the microscopic world, their astounding abundance and diversity leads us to believe that there is so much more to uncover.



Figure 1: shows how microbes can decompose something like oil and turn it into water, CO₂, and organic matter Source: Oil-Out.com

brownfields@badriver-nsn.gov

Works Cited:

- 1-Herring, Peg. The Secret Life of Soil, Oregon State University. OSU Extension Service. January 2010
- 2-Donlan, Dana et al. A General Essay on Bioremediation Contaminated Soil. Montana State University.
- 3-Lana. How Bioremediation Works.Oil-Out.com. December 13th, 2017



Human interaction with the environment is not always healthy. When oil and other harmful chemicals are spilled

in the environment typically the method for cleanup is excavation and landfilling of contaminated water/soil. However, when spills occur in remote or sensitive locations, it may be very difficult or impossible to excavate. That’s where microbes come in!

Bioremediation works by creating an ideal environment in which microbes that use contaminants as a food source can thrive. The microbes convert harmful contaminants into simpler compounds that are less toxic or even harmless (see figure 1). The “ideal” conditions for the microbes to work most efficiently depends on the contaminant. For example, if the spill involved petroleum hydrocarbons, otherwise known as crude oil, then the microbes would benefit from aerobic conditions. So, to bioremediate a crude oil spill one might introduce oxygen by periodically tilling and adding wood chips to create large pore spaces where oxygen can be abundant. Fertilizers are often added to increase the diversity and provide microbes with a supply of limited nutrients so they can continue to break down contaminants.

Overall, microbes can facilitate biological, chemical, and physical processes that can be utilized to help clean the environment. This is only one example out of many that shows how beneficial and important microbes are to our lives. For more information and/or sources please contact:

For Your Information

THE MATH BEHIND SWITCHING TO LED LIGHTS

Nathan Kilger, Air Quality Specialist



you use 30 minutes each day

- Incandescent (\$0.50 per bulb)
 - \$1.48 electricity each year
- LED (\$10 per bulb)
 - \$0.25 electricity each year
- LED saves \$1.23 per year but takes 8 years to recoup cost



that you use 5 hours each day

- Incandescent (\$0.50 per bulb)
 - \$15.42 electricity each year
- LED (\$10 per bulb)
 - \$2.42 electricity each year
- LED saves \$13 per year and takes 9 months to recoup cost

✓ LED bulbs definitely save you money if you start changing out lights you use the most!

◆ Assuming a cost of 13.5¢ per kilowatt-hour

BRNRD Warden HOTLINE

Call 715-682-7123 Ext. 1560

The Bad River Hotline provides the tribal membership with the opportunity to confidentially report suspected wildlife, recreational and environmental violations.

These violations may include fishing, or hunting out of season, deposit of harmful substances in lakes or rivers or illegal storage or disposal of hazardous waste. All these violations seriously affect the natural resources of our reservation.

Information received on this line will be relayed to a Bad River Conservation Warden for investigation. You don't have to leave your name when reporting a violation. However, it is often helpful to an investigation if a Conservation Warden can follow-up on your report to verify essential facts. If you provide, your identity and any information that may identify you, that information will be protected and kept confidential.

If response is needed immediately please feel free to call or email one of the following Wardens:

Gerald White	715-292-7822	chiefwarden@badriver-nsn.gov
Brad Bigboy	715-979-1181	brnrwarden@badriver-nsn.gov
Megan Mihalko	715-292-1902	brwarden@badriver-nsn.gov

Helpful info when reporting a violation

Who is the violator? Describe the people, including their physical description and clothing

What is the violation?

Where did this violation take place? (be as specific as possible)

When did this occur?

If possible, please take pictures, and license plate numbers, anything to help identify the suspects.



Bad River Natural Resource Department

72682 Maple Street
PO Box 39
Odanah, WI, 54806

Phone: 715-682-7123
Fax: 715-682-7118

Email: NRDOutreach@badriver-nsn.gov

~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.

Were on the Web!
Visit www.badriver-nsn.gov