

# ENTER FOR A CHANCE TO WIN!!

FAMILY CAMPING SET

2 NIGHT CABIN STAY ON MADELINE ISLAND!

FAMILY FISHING SET

~Provide Your Input Today~

The Mashkiiziibii Natural Resources Department is working on revising the Integrated Resources Management Plan (IRMP) from 2001. We would like to incorporate the thoughts and input of the community to make the document wholistic, relevant, and representative.

Please take the time **today** to provide your thoughts and get entered for a chance to win some great prizes!

**\*Please provide Name and Contact info at end of survey to be entered in prize drawings.\***



Please take the time to provide feedback to MNRD to use in the revision process by snapping the QR code or visiting this link:

<https://survey.alchemer.com/s3/6601625/Mashkiiziibii-Natural-Resource-Department-IRMP-Community-Survey>



Questions? Call our office at 715-682-7123. Hard copies available. Chi miigwech! We are excited to hear your thoughts and improve our stewardship of the resources for you and seventh generation.

IRMP Survey  
Deadline is  
December  
31, 2023.

Drawing will  
be held the  
beginning of  
January  
2024!

**\*Remember to provide  
Name/Contact Info to be  
entered into Drawings!**

## ~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.*

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Mashkiiziibii Natural Resources

# COMMON GROUND

2023 WINTER EDITION

## Hope You Have a Green Holiday Season!

Jessica Strand, Environmental Specialist - [Environmental@badriver-nsn.gov](mailto:Environmental@badriver-nsn.gov)

While we are used to a white holiday season here in northern Wisconsin, this article is going to focus on how you could “green up” your Christmas, Hanukkah, Kwanzaa, and Boxing Day celebrations with some environmental (and budget) friendly choices for wrapping gifts. Including even a few of these wrapping choices in your holiday routine should give you a warm fuzzy feeling to carry you through the winter.

### Gift Wrapping

- **Newspaper!** Consider wrapping your gifts in newspaper and those weekly ads you can't seem to escape, to save money and green your wrapping regiment. With a colorful bow (which you can save and reuse next year) your presents will look just as festive.
- \* **Tips & Tricks:** When wrapping with newspaper



Photo credits: JiaYing Grygiel, The Seattle Times.

to keep your present from accidentally peeking out at the corners you might need to wrap something twice. Using small strips of clear packing tape or clearer “scotch” tape works better

...continued on page 4...

### Special points of interest:

- *Natural Resources New hires*
- *2023 Beach Monitoring Updates*
- *Forestry Updates on Pine thinning*
- *Radon Update*
- *Air Quality Update*
- *IAS Community Events*
- *Thin Ice Tips*

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## Indoor Air more Polluted than Outdoor Air?

Zakkary Zander, Air Quality Technician - [airqualitytech@badriver-nsn.gov](mailto:airqualitytech@badriver-nsn.gov)

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 some-

times 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 over-time. “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

...Continued on page 7...





# A Time for Review, Brownfields

Andrew Spychalla, Brownfield Specialist - [Brownfields@badriver-nsn.gov](mailto:Brownfields@badriver-nsn.gov)

The Mashkiziibii Natural Resources Department has seen its share of hazardous chemical releases, dumping, and spills over the years. The main focus of the brownfield program is to determine how to best clean up the areas where those releases take place. From a quick fix leaking hydraulic line, to the more clandestine dumping and burying of waste from a generation ago; these potential brownfield sites need to be reviewed, a cleanup plan selected, and monitoring to occur afterward.

Throughout all such events, the evaluation criteria for ranking sites have been edited and revised, and remediation and monitoring steps have been taken. The public record – the revolving list of current brownfield sites that are in various stages of cleanup and sampling – has been maintained and updated to reflect the sites of most concern. Furthermore, review of Bad River Band’s Environmental Response and Remediation Code has taken place to guide responses to such hazardous substance releases. This Environmental Response and Remediation Code, or ERRC - Chapter 380, gives the Bad River Band the authority, among other things, to determine who is at fault for releases of hazardous substances or

materials into the environment. Once identified, that at-fault or responsible party will then ensure that professionals respond for a mitigation and cleanup, or they will pay the bill if MNRD calls the professionals first. With these authorities in place, it would make sense to think that a cleanup of a spill would be quick and easy. However, as Tribal Elders and many others are aware, some spills or dumping occurred when such authorities or environmental protections were not in place. Some hazardous substance releases have been festering on the landscape for decades. The toxic health effects of the current, late-2023 “chemicals of concern” – or the recently discovered adverse effects of older, known substances – are being researched at a pace that hasn’t occurred at any time in the past. Human health in general, particularly after the pandemic, has become the focus of many individuals and families. Contaminant effects on human health have similarly become a focus. Environmental health concerns, with climate science in the driving seat, have gone hand in hand with the others.

In the early days of brownfield research – contaminants and their effects were under-

stood slowly. Lead in paint chips, asbestos in ceiling or floor tiles; these discoveries took time, but they set up a template for how to study the effects of substances that are potentially hazardous to human and environmental health. In a similar fashion, if there wasn’t a bubbling landscape with barrels marked “radioactive,” there wasn’t a brownfield. Now, an old field with vehicles strewn about might warrant investigation and sampling, as you can’t choose which contaminants might or might not enter the landscape.

The Brownfield program will be reviewing the ERRC and making recommendations for additions and revisions which will be posted for community feedback. This will allow the focus to move from investigation to cleanup much quicker. There will also be additions to the types of sites that the program will be looking at. Facilities that have been used in the past and have mostly been abandoned can be cleaned up and revitalized for new and useful spaces. Around the 1st of a new year, individuals will often head over to the Doctor and get a check-up. The same should be done for our natural spaces. Miigwech.



# Manoomin at Head Start

Dan Powless, Manoomin Oshkaabewis - [Manoomin@badriver-nsn.gov](mailto:Manoomin@badriver-nsn.gov)

The Head Start Program sponsored a Head Start Ricing Camp at their playground. The workshop introduced abinoojiinyag (children) to the different aspects of manoominikeng (ricing ) as they were led through various work stations and taught in Ojibwemowin. It was begun with the value of offering aseamaa and good prayer. They then participated in how our people have harvested manoomin in a canoe (jiman) which included gaandakii’igewin (poling) and bawa’iga-naatigoon (rice knocking). Next was the biinichi-gaade manoomin (cleaning manoomin) and fol-

lowed with gidasi-gewin (parching rice) by the staff. Mimi-goshkaming ( jiggling or dancing the rice to remove the husk) and finally nooshkaachigeng (winnowing rice with birch basket).

This was a collaborative effort provided by the Head Start staffers, Ojibwe language program, and a host of community members hav-



ing a great time with the future.

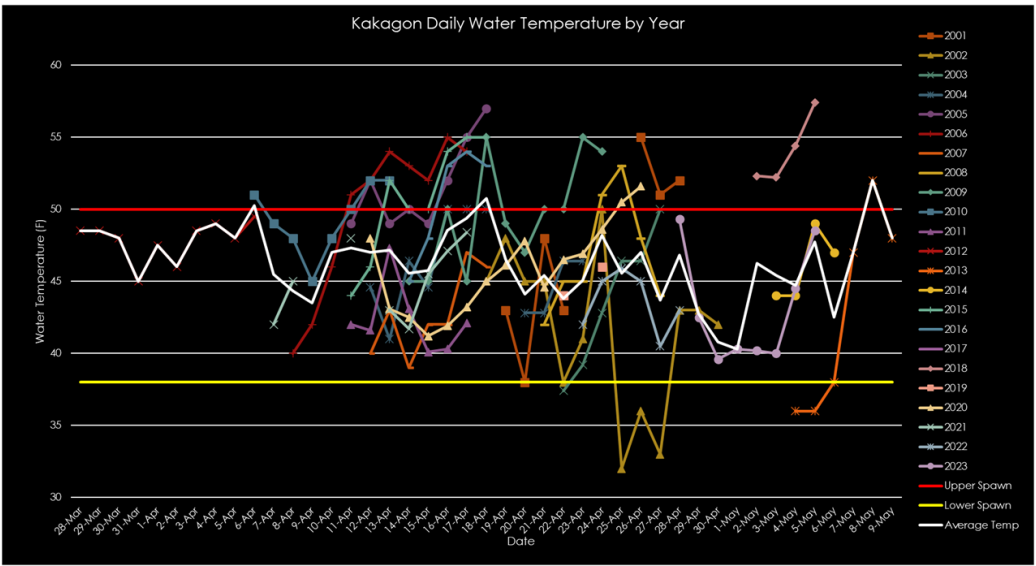
The manoomin program was in attendance and is in initial discussions with other programs to hold a manoomin camp in the sloughs next summer.



# Kakagon Spring Fishing Meeting

Jacob Rodmaker, Fisheries Specialist - [fisheryspecialist@badriver-nsn.gov](mailto:fisheryspecialist@badriver-nsn.gov)

The Fisheries Program will be hosting a Spring fishing meeting this year. The time and date have not been determined yet, but will happen sometime in early March. This meeting will be a public meeting for all Bad River tribal members to join. This meeting will cover all fisheries related activities that occur on the Kakagon River. With a primary focus on Walleye fishing and fish hatchery production. We will cover all the aspects of Walleye spawning parameters and how the timing of spring can impact when Walleye run up stream for spawning. Some of the parameters we will cover include water temperature, photo-duration, and precipitation. Below is a graph that will be in the presentation that shows the wide range of spawning dates. In addition to spawning parameters, we will cover the Total Allowable Catch (TAC) and how the TAC is calculated each year. For the hatchery focused section, we will cover production numbers in the past 20 years. We will also describe how the hatchery collects gametes (eggs and milt) for the fish that it produces for



stocking in the Kakagon and Bad rivers. If you are interested in learning more about what the Fisheries Program does on the Kakagon, watch for the final posting of when and where the Kakagon Spring Fishing Meeting details or reach out to Jacob Rodmaker, Fisheries Specialist at [fisheryspecialist@badriver-nsn.gov](mailto:fisheryspecialist@badriver-nsn.gov) or call 715-682-7123 ext 1552.







# Where in the World is Carmen Sandeerego?

Louis Lozinski, Ornithology Specialist – [Ornithology@Badriver-NSN.gov](mailto:Ornithology@Badriver-NSN.gov)

If you spent your hunting season wondering where all the deer have gone, you wouldn't be the only one. One reason people sometimes give is that the wolves are preying upon them and driving the population down, but that may not be the case. There are multiple possible factors that may be driving the poor hunts, with a hard winter last year, along with changes in the deer's behavior.

As we all experienced, last winter was a difficult one, with above average snowfall and having it stay cold with snow on the ground until mid to late April. With the amount of snow fall and the cold, last winter was definitely hard on the deer, and it would have resulted in less fawns being born. Beyond just last year, since 2016, every winter has been moderate in severity with the exception of 2021, giving the deer a harder time and leaving them with no recovery window. Stretches of hard winters have happened before though, and thankfully. We just need one or two good years for the herds to bounce back.

With that being said, wolves may not be entirely innocent either. While they may not have a major impact on the deer population, they do have an impact on the behavior. When there are wolves in an environment, deer are more likely to browse and hide among the dense undergrowth, making themselves harder to find and track. They don't spend as much time migrating and avoid corridors where they may get chased down. This unfortunately also helps to keep the deer safe from any potential hunters as well. The one upside is that while the deer are harder to hunt, they're also less likely to jump out in front of your car as the roads are one of the corridors they'll start to avoid.

Here with the Mashkiiziibii wildlife program, we do care about both deer and wolves, and track both populations. We try to gather information about where both the wolf packs and deer herds are spending their time and migrating to, and if you have any questions about either, feel free to reach out. Bad River's Ma'iingan Relationship Plan is available at: [https://www.badriver-nsn.gov/wp-content/uploads/2020/01/NRD\\_MaiinganPlan\\_2019.pdf](https://www.badriver-nsn.gov/wp-content/uploads/2020/01/NRD_MaiinganPlan_2019.pdf)



A wolf and deer, both photographed at the same creek crossing. The photos were taken 4 feet of snow apart.



# Beach Monitoring for 2023

By: Nicholas Blanchard, Water Resources Technician - [watertech@badriver-nsn.gov](mailto:watertech@badriver-nsn.gov)

## History of the Beach Monitoring Project

The Natural Resources Dept. of the Bad River people initiated the beach monitoring project in the swimming season of 2011. Though the Chequamegon Bay Area Partnership, utilizing Great Lakes Restoration Initiative (GLRI) funds. The Bad River tribe became eligible for funding under the Beach Environmental Assessment and Coastal Health (BEACH) Act, upon finalization of Bad River's Water Quality Standards developed under the Clean Water Act program authority. More information about the BEACH Act and the health of coastal waters can be found on EPA's website at: <http://water.epa.gov/type/oceb/beaches/>

## Summary of 2023 Beach Monitoring

Beach water is routinely tested at area beaches by the Bad River Water Resources Program to determine levels of *E. coli*. High levels of *E. coli* in the water may indicate unsafe levels of other harmful pathogens in the water that may cause illness in humans that come into contact when swimming, boating, or playing in the water. The Beach Monitoring Program uses this information to determine if the water is safe for area beach enthusiasts.

In the 2023 swim season, 156 water samples were collected from the beaches and analyzed for bacteria. Only two samples had results that triggered a code yellow swim advisory being posted, while none had elevated results that would trigger a code red advisory. If water samples results indicate levels of *E. coli*  $\geq 235$  MPN/100mL it triggers a code yellow swim advisory, whereas results  $\geq 1000$  MPN/100mL triggers a code red swim advisory. Swim advisories were posted for the Amnicon Bay (Madeline) Beach on June 07, and Second Landing on July 05.

Follow-up samples collected the next day for these beaches indicated that *E. coli* levels were no longer elevated.

The MNRD Beach Program posts advisory signs thought the community using posting boards, Facebook, and the MNRD website. This informs the community of such risks and allow people to make informed decisions about their beach activities. To aide in our capacity to continue to keep the public safe and informed, the Beach Monitoring Program is developing new tools for 2024, which will help us forecast possible elevations in real-time so that public notices can be posted faster. The focus of these efforts, to begin with, will be Waverly, Bad River Mouth, and Second Landing beach as these are some of the more visited beaches on the Reservation.

For further information regarding *E. coli* and safe water at the beach, please visit our website by clicking on the following link. <http://www.badriver-nsn.gov/natural-resources/beach-monitoring/>

We hope that you all had a fun, wonderful summer and that you keep a lookout for Beach Monitoring Staff once the weather warms up again in 2024!



Beach	# Samples Collected	# Exceedances	Dates of Exceedances
Waverly	47	0	
Bad River Mouth East	19	0	
Bad River Mouth West	19	0	
Amnicon Bay	12	1	06/07/2023
Second Landing	24	1	07/05/2023
Joe Rose	16	0	
Sand Cut	9	0	
Bell Creek Mouth	1	0	
Madigan	1	0	
Graveyard Creek Mouth	1	0	
Long Island East	1	0	
Morrison Creek Mouth	1	0	
Honest Johns	1	0	
Nawago Creek Mouth	1	0	
Chequamegon Point	3	0	
Total	156	2	





## Green Holiday Season continued...

than your everyday scotch tape (just make sure you remove tape before recycling). Make sure to box clothes or other unboxed items as sometimes the ink will transfer from certain newspapers. When the recipient of your gift unwraps it, keep the bow (or encourage them to) and then ditch the rest of the wrapping in the nearest recycling bin.

- Paper grocery bags and “packing” paper! Recent trip to the grocery store? Did your package arrive from Amazon with some paper stuffing to protect your purchase? Either can be reused into wrapping paper for your gifts. Add a pretty pre-made bow or tie with twine and a sprig of greenery and you’ll end up with a very trendy-looking wrapped gift. This is also a great option for kids and other older artists since it also gives you a great canvas to draw your own festive creations on to add a more personal touch.
- \* Tips & Tricks: Same tape choices apply to this paper option as those listed above for newspaper, but it’s unlikely that you’ll need to add a second layer with these heftier paper products. Recycle and reuse as applicable.
- Festive Gift Bags While buying a paper gift bag at the store isn’t as money-saving as using newspaper or brown paper to wrap your gift, when treated with care some gift bags and the tissue paper sidekicks can last through many rounds of gift giving.
- \* Tips & Tricks: To keep bags looking nice and in one-piece clear packing tape can be used on the inside to reinforce where the handles are attached to reduce tearing—then all you have to do is fold it nicely and store it somewhere flat until you need it again. Want to keep the tissue too? Then wrap and fold around gifts without using tape to reduce tearing when the present is unwrapped—or consider just stuffing a bunch on top of the bag—then smooth out and fold up for storage until it can be used again. When either start showing wear and tear, just remove any non-paper parts (string handles, non-paper embellishments, and such) and throw in with your regular paper recycling.
- Wrapping Paper Have a child (or adult) in your life that just wouldn’t feel as special without



regular wrapping paper on their present? Don’t stress it, just think about some of these Tips & Tricks when wrapping...

### \* Tips & Tricks:

Buy wrapping paper made from post-consumer recycled paper, Sustainable Forestry Initiative (SFI) paper, or those that can be recycled more easily (generally this would be paper that is less “glossy” or metallic). If you can’t find any of these, consider buying wrapping paper that supports a fundraiser or other cause to put a positive spin on your purchase. Measure twice, cut once. Save yourself the headache of cutting a piece slightly smaller than needed by rolling out a section of paper and then wrapping it carefully around the present first before cutting to make sure you get just the right size. Also, see if smaller presents can be wrapped with just the width of the paper roll instead. Wrap big or unusually sized presents first and keep any small scraps you cut off for the smaller presents you may have. The don’t forget to reuse your bows!

- Decorative boxes, fancy tins, Furoshiki, and more.

\* There are many additional ways of greening your wrapping regime. Baskets, decorative boxes, and fancy tins can all be used to “wrap” a gift and can be reused multiple times or repurposed for storage.

\* Furoshiki, or the Japanese art of cloth wrapping, can turn almost any square piece of cloth into a decorative, reusable wrapping for presents. Here’s a link to a YouTube video with the basics of the technique:  
[https://youtu.be/2flwQAb6QMM?si=xtQ\\_vuMfeEF1sc8G](https://youtu.be/2flwQAb6QMM?si=xtQ_vuMfeEF1sc8G)

## Manoomin Camp Held at Chequamegon Waters September 7-9th

By Nathanael Secor, IAS Coordinator - [IAS@badriver-nsn.gov](mailto:IAS@badriver-nsn.gov)

Over the weekend of September 8th – 10th, a group of rices and processors from Bad River and beyond met up at Chequamegon Waters Flowage in Taylor County to host an off-rez rice camp. The camp was a collaborative effort between Bad River’s Food Sovereignty, Genawendang Aki, Boys and Girls Club, and Indigenous Arts and Sciences (IAS) programs as well as the Great Lakes Fish and Wildlife Commission (GLIFWC), Great Lakes Intertribal Council (GLITC), and Ashland School District which all contributed in important ways and added to the success of this event.

While it’s a good distance to Chequamegon Waters from Bad River, we opted to travel the distance for the large acreage rice body that was marked “very good” by GLIFWC’s annual manoomin assessments. The later ripening window also allowed for the involvement with the Ashland School District and meant that many of our partners had already made rice for themselves for the year and were free to focus on teaching. The weekend was a lot of fun and grounded in culture; many important skills and lessons were imparted about the good seed. The youth got to explore, go fishing, catch frogs, and there was even a “fairy village” that mysteriously appeared right by the group camp. The camp also received visitors from the surrounding campground who wanted to come and learn about this sacred food.

On Saturday the 9th, the Bad River youth got the chance to learn how to harvest manoomin, each with an experienced rice partner. They first got a primer on canoe safety and how to knock gently and effectively, and then they



departed from the camp to the water’s edge. After giving our offerings and a

heartfelt prayer and water song from Kathy Smith, the pairs launched off into the manoomin beds on the north side of the flowage. Despite challenging poling, the group was in good spirits with laughter being heard over the water. The adults were teasing each other, and a friendly wager was made for the youth who harvested the most rice to win \$20. Each pair riced for around 1.5 hours and came back in with a significant harvest. Several of the kids got close to a full bag, many of them on their first outing. That night, Maria Nevala, JD Lemieux, Bob Wright, and Kevin Finney worked with their thrashers to lead manoomin processing demonstrations. It was a good day.

After an overnight rainstorm which spared the camp during waking hours, the camp resumed activities. Roger LaBine of Lac Vieux Desert and GLIFWC’s Kathy Smith of Keeweenaw Bay Indian Community spoke about the importance of manoomin for Anishinaabe people and shared teachings about the four orders of creation. Chris McGeshick lead a dancing demonstration and the youth in attendance got the opportunity to try this



traditional method of processing the parched manoomin. Roger LaBine taught tool making, both knockers and traditional forked push poles. Several of the youth completed pairs of knockers for themselves and their families.

Overall, this camp was a very gratifying experience for those involved. The youth were able to meet up later to process their manoomin for free with Maria and JD, and they each got appreciable amounts to share with their families. It is our hope and intention that this camp will be a yearly event from this point forward.



# Buckskin Workshop Held in Odanah

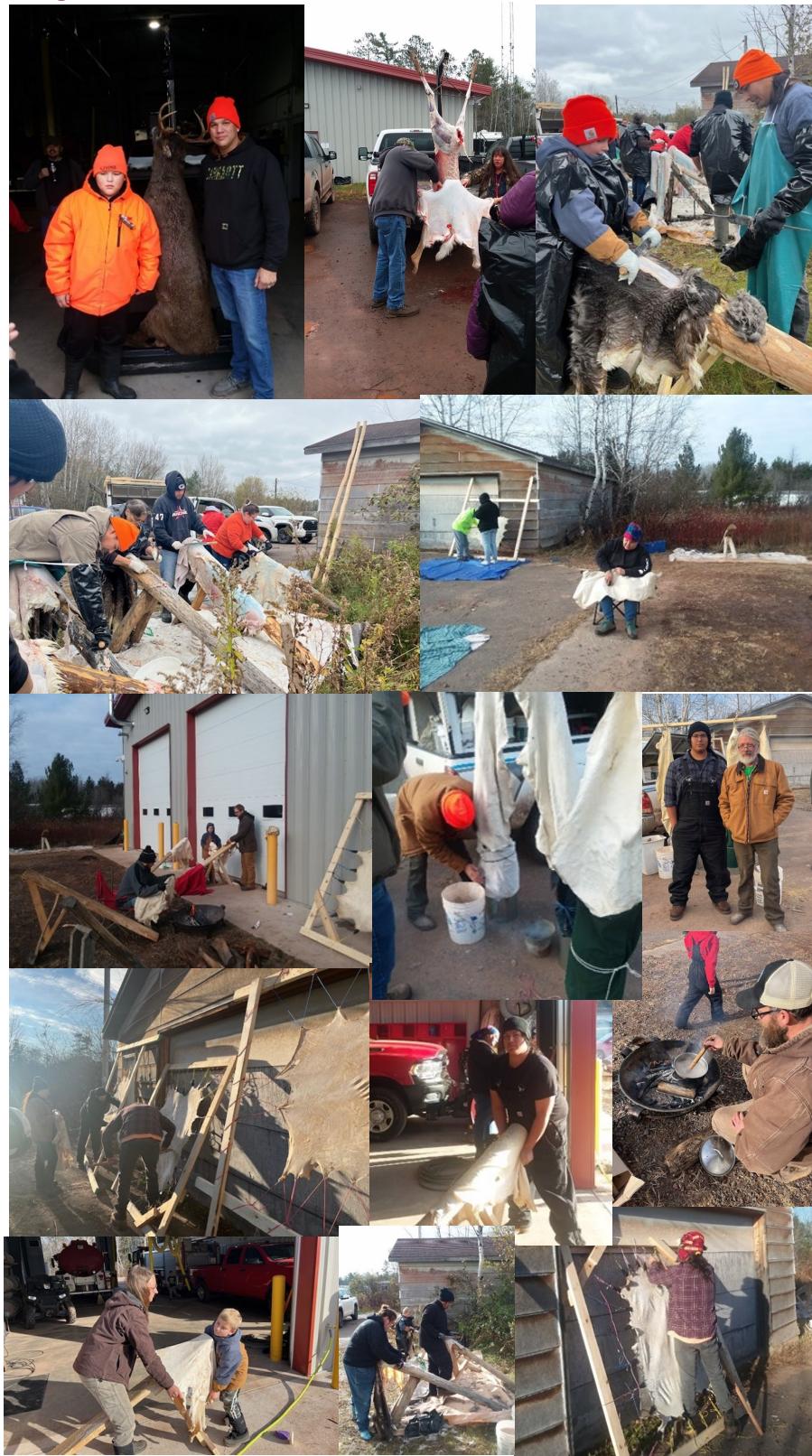
By Nathanael Secor, IAS Coordinator - [IAS@badriver-nsn.gov](mailto:IAS@badriver-nsn.gov)

Over the weekends of November 11-12<sup>th</sup> and December 2-3<sup>rd</sup>, about a dozen interested tribal members met to learn the art and skill of braintanning deer hides sponsored by Mashkiziibii's Indigenous Arts and Sciences (IAS) program. Instructors Mike Jones and Joseph Gokee taught participants the necessary steps to transform a deer hide from a freshly skinned deer to finished, smoked buckskin. Everyone learned just how hard and how rewarding this full process is.

For the first two days of the workshop, IAS was lucky enough to collaborate with the Bad River Youth Hunt, put on by David Nevala, Bad River's Genawendang Aki and a half dozen volunteer adult mentors who each gave their time to teach Bad River youth how to hunt deer. Maria Nevala and JD Lemieux instructed the youth and other attendees on how to skin the deer without harming the hide and then how to quarter the animal for further processing. 11-year-old Jayceon Lemieux under (Adam Oja's tutelage) was successful in shooting his first deer over that weekend and was celebrated by all in attendance. Congratulations Jayceon!

As the workshop progressed, each attendee got hands on experience with fleshing the hides, scraping the hair and epidermis off, and braining and softening their hides. Each step has many tricks to learn and can be challenging for newcomers to tanning until they develop muscle memory and understand all the concepts thoroughly. The instructors patiently explained the best practices and made the rounds to help each participant. Despite the hard work, everyone was in good cheer, joking and teasing, and helping each other with their hides. All in all, 5 people were able to complete their hides entirely and just as many will have the chance to complete theirs at an upcoming follow-up session. Among those who completed their hides were 8-year-old Nalin Downey and 17 year old Jackson Rose. These two stuck with the process from start to finish and with a little help were able to finish their beautiful projects. Be on the lookout for all of these tanners in training and keep an eye out for the announcement for our traditional tanning club.

Chi Miigwech to Mike and Joseph, Maria and JD, David and all the hunting mentors, as well as all participants for making this a memorable event and revitalizing this traditional craft!



# Bad River's Climate Action Plan

Climate Change Coordinator - [Climate@badriver-nsn.gov](mailto:Climate@badriver-nsn.gov)

Since 1950, Wisconsin has warmed 2-3 degrees Fahrenheit and is projected to warm an additional 2-8 degrees by 2050. Temperatures will continue to increase as we continue to increase atmospheric greenhouse gas concentrations. MNRD's Climate Change Specialist and Energy Coordinator have been working on a Green House Gas Inventory for Bad River. This Inventory will be used to make a Priority Climate Action Plan for the Tribe. This plan will allow us to take action against climate change into the future.

This Climate Action Plan takes an in-depth look at our on-Reservation emissions in a way we've never looked at them before. Having specific data on where our infrastructure, practices, and behavior contribute to climate change allows us to target those items individually and reduce our emissions right from their source. The Climate Action Plan will allow us to make progress towards becoming a community that does not contribute to climate change.



# New Position - Energy Coordinator

Jillian Lojas, Energy Coordinator - [energycoordinator@badriver-nsn.gov](mailto:energycoordinator@badriver-nsn.gov)

Energy Coordinator is a new position within the Mashkiziibii Natural Resource Department. This role is responsible for moving Bad River toward tribal independence by implementing our Strategic Energy Plan. This position manages our energy infrastructure and energy efficiency projects.

Jillian Lojas has taken on the role of Energy Coordinator for Bad River. Jillian is Inupiat, from Kotzebue Alaska, north of the Arctic circle. Northland College brought her to Northern Wisconsin, where she has resided for the past six years. Her Alaskan Native ties motivate her to work for the Tribal government, and she feels very fortunate to work for Bad River as she considers the Northwoods home now.

Jillian was MNRD's Climate Change Specialist before this and will be fulfilling both positions until a new Climate Change Specialist is hired. As Climate Change Special-

ist, Jillian was already exposed to Bad River's energy projects and plans. With an understanding of Bad River's strategic energy plan and current renewable energy infrastructure, she hopes to continue expanding upon the Tribe's renewable energy projects. Bad River has already taken the initiative on cutting edge renewable energy projects and will continue to into the future!





# New Water Regulatory Specialist

Kaylee Houle, Water Regulatory Specialist - [WaterReg@badriver-nsn.gov](mailto:WaterReg@badriver-nsn.gov)

Boozhoo! My name is Kaylee Houle, I am an enrolled member of the Bad River tribe. I was born and raised here on the Bad River Indian Reservation. I recently joined the Mashkiiziibii Natural Resource Department (MNRD) as the new Water Regulatory Specialist.

I worked for a summer as MNRD Natural Resource Aide where I worked a lot with invasive species, and I did an internship with Wisconsin Tribal Conservation Advisory Council (WTCAC) here at MNRD.

I graduated with my associate degree in Natural Resources at the College of Menominee Nation in Keshena Wisconsin. I transferred to Northland College to pursue my bachelor's degree but then I had

my son, so my education was put on hold for a while.

It has always been my dream to be a part of MNRD and help preserve Natural Resources for the generations to come. It is an honor to be part of the MNRD's Water Resource team and to serve as the Water Regulatory Specialist.

Thank you for giving me this opportunity and I look forward to this new journey ahead!



# New Non-Local Beings Program Manager

Bridget Thornburg, NLB Program Manager - [nonlocalbeings\\_@badriver-nsn.gov](mailto:nonlocalbeings_@badriver-nsn.gov)

Boozhoo! I am Bridget Thornburg, and I am the new Non-Local Beings Program Manager. I was raised in southeastern WI, in the town of Delafield. There are lots of wetlands and prairies there, and I have many fond memories searching for frogs hiding in the muck and counting the seemingly endless seas of sandhill cranes feasting in the open fields. I have always felt my strongest sense of place in the natural world, and I knew from a young age I wanted a career that allowed me to spend time learning from and taking care of the landscape. This led me to Northland College, where I graduated with degrees in Biology and Natural Resources. After graduating I worked as a Water Resource Specialist for the Mary Griggs Burke Center. In this position I learned a lot about the Penoche Lakes and their importance as the headwaters of the Bad River. I was lucky to monitor these

lakes year-round and see them change through the seasons. I am excited to connect what I have learned and further develop my understanding of this landscape in my new position. In my free time I enjoy exploring the area by hiking, skiing, swimming, fishing, botanizing, and sometimes just wandering the woods with my 7-year-old dog named James. I am grateful for this opportunity, and I look forward to getting to know this community, see you around!



# EARLY ICE

Jacob Rodmaker, Fisheries Specialist - [fisheryspecialist@badriver-nsn.gov](mailto:fisheryspecialist@badriver-nsn.gov)

The weather is getting colder and ice is forming on lakes and streams. It will be tempting to get out on lakes early to start fishing before others. There are many tips and tricks out there to get on to the ice early, but here is my advice on how to stay safe when going out on early ice.

1. Bring a friend or family member. If you bring someone along, they should stay a safe distance away, whether that is on shore, or a minimum of 10 feet away. In case you fall through they will be there to help by throwing a long rope or calling for help.
2. Suit up. Bring ice picks and wear a float suit or a life jacket when checking first ice.
3. Know your different types of ice. Cloudy ice is less safe than clear ice. Cloudy ice forms fast, trapping air pockets in the ice allowing the ice to fracture and cause bigger gaps in the ice. Clear ice forms slower allowing the crystal latus to form more uniform and stronger.
4. Check the ice first. Spud your way out to where you want to fish before dragging/carrying your gear because ice is not always uniform across a body of water. Springs and currents can change how ice may or may not form.
5. Changing conditions. On flowing bodies of water ice conditions are always changing, check ice regularly when you are on them. On warmer days check ice regularly too. If you notice ice conditions changing, get off the ice.
6. If you don't feel safe on the ice, don't go out on it. Nothing is worse than going somewhere that you don't feel safe. Fishing and other ice related activities are about having fun, and if you are uncomfortable, you aren't having fun.

The recommended minimum ice thickness for walking on is 4 inches. Any less and your risk for breaking through is much greater.

## What happens if you fall through the ice?

1. Stay calm. If you fall through the ice, panicking can only make matters worse.
2. Catch your breath. After falling through the ice, your heart is going to race and you



are going to start breathing heavy. Catch your breath and get your bearings.

3. Orient yourself to where you came from. Once you are pointing in the direction you know there is ice that will support you, you can start your self-rescue.
4. Pull yourself onto the ice. Since you are wearing a flotation device you should be floating, start kicking your legs to push your body on to the ice and used your arms and ice picks to pull yourself onto the ice.
5. Stay low. Army crawl your way back to safe ice or even land. This movement may take the most energy, but it will keep your weight distributed over the largest surface area. Even though you may have walked over this ice already, you never know how breaking ice elsewhere may have affected that ice you

were just on.

6. Get to warmth. Once you are safely off the ice stay warm by doing jumping jacks or other exercises. If you happen to have spare clothes, change clothes and get home so you can dry off completely and warm yourself up in blankets.

Stay safe and have fun fishing, skating, etc..

Jacob Rodmaker, Fisheries Specialist



# Wildfire Smoke Increasing in Recent Years

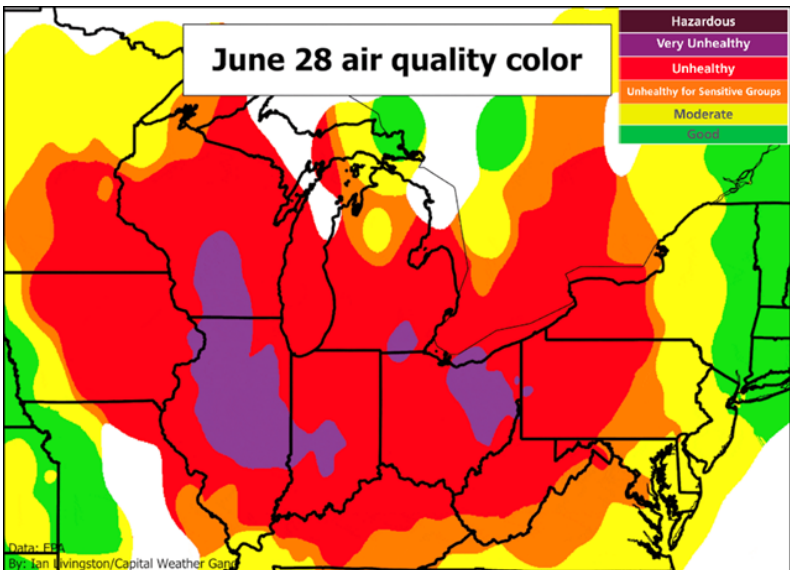
Nathan Kilger, Air Quality Specialist - [airquality@badriver-nsn.gov](mailto:airquality@badriver-nsn.gov)

**F**ine particulate pollution has been sampled on the Bad River Reservation since 2002, allowing us to see how the trend of poor air quality has changed over time.

In 2023 we counted 46 days levels of “moderate” or “unhealthy for sensitive groups” on the Air Quality Index. Wildfire smoke spread across the middle portion of the United States for many days as millions of acres of wildfires burned across four Canadian provinces. The only year in recent history that saw so much wildfire smoke was 2021 when we measured 37 days of poor air quality.

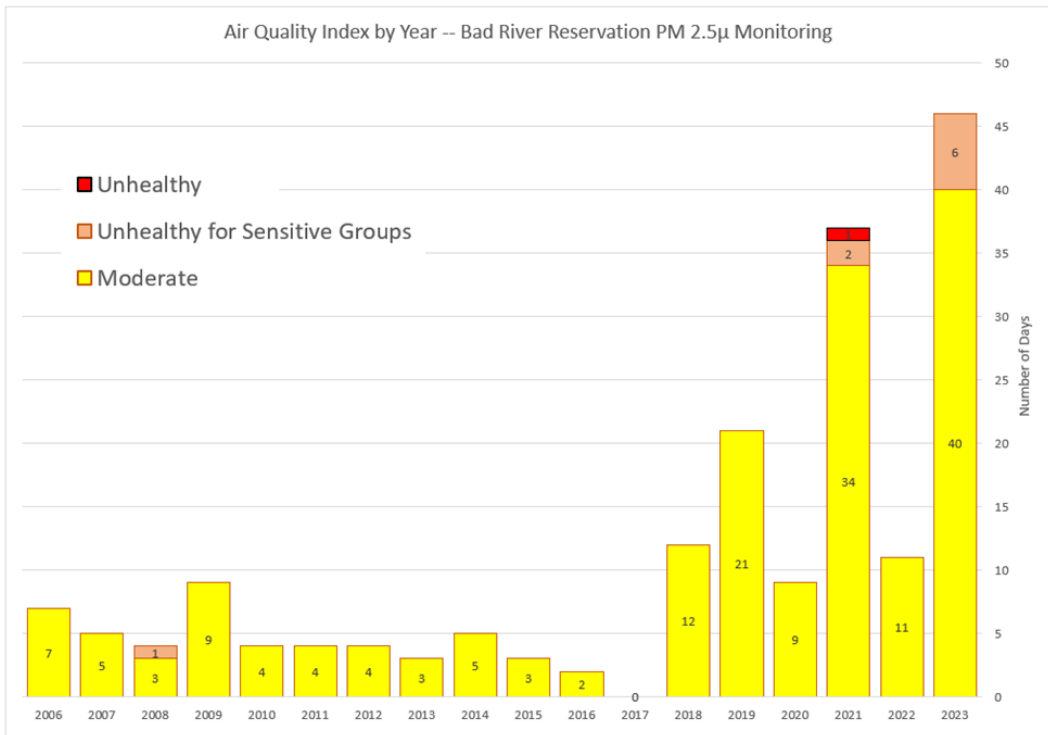
In the winter months we sometimes see weather patterns that trap wood smoke near the ground on cold nights, those nights are counted towards our days of poor air quality.

However, in the summer months, much of our air quality also depends on what happens farther away, sometimes as



year, 45.7 million acres burned in Canada, a record number of both fires and acres in Canada.

With forecasts of an overall drier and warmer winter for southern Canada and the northern States, there is concern our snowpack will be lacking this winter, providing less snow melt in the spring. If spring melt doesn’t produce much water, or if spring comes early, we could easily be in a position where drought returns in 2024 and we have to worry about another elevated wildfire season. The current uptick in wildfire smoke in recent years is a worrying trend and we need to prepare for this happening every year.



# New Air Quality Technician

Zakkary Zander, Air Quality Technician - [airquality@badriver-nsn.gov](mailto:airquality@badriver-nsn.gov)

**H**ello, most of you already know who I am, and if not I'm Zakkary Zander. I was the Wetlands Specialist for the past 2 years; I have now switched positions to Air Quality Technician. As part of my evaporation from the water program I hope to continue to work with them on topics where air meets the water. I've been in the area for the last 10 years; I moved here to attend Northland where I earned a BS in Biology. A good part of the reason I have stayed in

the region is the relatively intact natural areas (not just wetlands, though the wetlands in this area will be in the forefront of my thoughts), as compared to the extensive corn and soybean fields of the Green Bay area where I'm from. My goal as the Air Quality Technician position is the same as it was in the Wetlands Specialist position and that is to help the community to the best of my ability.



## Air Continued...

and identifying these sources 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 even 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.

Methamphetamine usage has brought to light additional indoor air issues. Previous homes used as “meth labs” or from the “use of methamphetamines “may still contain residues and chemicals that can contribute to indoor health concerns if breathed in or come in contact with.

Health effects associated with certain pollutants are more difficult to pinpoint. 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 away 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,

## TEST YOUR HOME FOR RADON!

### FREE RADON TESTING

*From January to April 2024*

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.

### Zakkary Zander, Air Quality Technician

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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>.



## Forestry Biboon Common Ground 2023/2024

Gina Abramson, Forestry - [forester@badriver-nsn.gov](mailto:forester@badriver-nsn.gov)

Mino-biboon!

We just finished administering the Birch Hill Red Pine Thinning and couldn't be happier with the results. Each house in the Birch Hill Community had trees removed around them, and no damage occurred to any of them! We were very fortunate to have sold this timber to a logger who has been in the business for several decades. It has been said that their processor operator is one of the best in the country! Had this work been done by an arborist, simply for the protection of the houses, it could have cost upwards of a million dollars to accomplish what we were able to do and provide revenue for the tribe at the same time!

At the time of this writing, we're not sure of the exact dollar amount that the tribe is collecting from this sale, but it may be close to \$100,000. Lots of people have been asking where the timber goes. I'm happy to have this opportunity to explain that.

There was quite a bit of oak that had to be removed in order to get to the red pine logs. Instead of just running it over, those small trees were cut in 8 foot lengths and stacked. The hardwood is being taken to the Bad River Recycling Firewood Bank for processing and curing. It takes about a year for green wood to dry out enough to burn it safely and efficiently in home heating systems. Because it's not free to cut or haul the prospective firewood, the tribe paid the logger to have that done. Processing it will be an additional cost. There's a lot of work and expense that goes into providing firewood for a community, and the tribe absorbs most if not all of that cost. However, firewood is sustainable and produces an intensity of heat that can't be replicated by petroleum based systems.

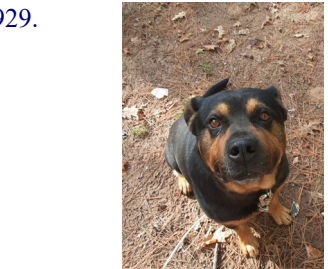
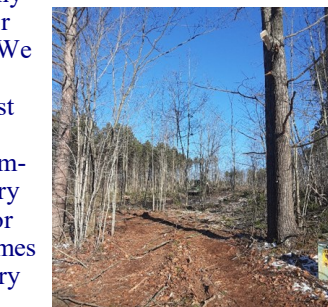
The clearing just to the south of the Birch Hill Community is intended to provide space for a solar field which will provide electricity for the 95(+/-)

will provide electricity for the 95(+/-) Birch Hill homes. If you've been up there to see the difference, it's astonishing. There's a new view of the Penokee Mountains that really is remarkable.

Additionally, a small clearing has been made just north of the Birch Hill Community House which will accommodate a new water tower. The new water tower will be 2 ½ times the size of the current one, according to the Bad River Water/Sewer department. This new infrastructure will provide our much respected water to the Birch Hill, Franks Field, and Aspen Acres Communities.

Many people have been asking and chatting about where the timber sale proceeds (money from the pine logs) goes. The logger that was chosen to cut the timber was the high bidder in a sale advertisement process that the BIA administered. He makes payments for the wood as it is cut. That money goes directly to the BIA in St. Louis, Missouri. From there, it goes into the Bad River's TAAMS account. TAAMS stands for Trust Asset Accounting Management System. Since there are no allottees associated with the land on which this sale was administered, 90 percent of the sale proceeds are allocated to the Bad River Tribal Government and 10 percent goes to the Bad River Forestry Program. Each year we allocate these funds to further the forest development into a healthier, more diverse ecosystem. Sometimes that means purchasing timber marking paint, equipment, or other supplies that help us carry out our mission of creating a better forest for the 7th generation.

To further reduce the fire hazard on Birch Hill, we are in the process of chipping the tops of the trees. The tree tops are not merchantable, and by chipping and leaving them onsite, we provide nutrients for the remaining trees, reduce the fire hazard, improve the appearance of the land, and



reduce the nesting habitat of rodents. Additionally, the chipped tops will hold moisture better than the bare sand, which will provide needed moisture for the remaining trees and vegetation.

Please reach out to us if you have any questions or concerns. We appreciate your interest and input! Gena Abramson, Forestry Specialist or Tyrese James (TJ) Forestry Technician 715-685-8929.

## Caring for Personal Collections Series: Photographs

Paula Maday, Museum Manager - [p.maday@badriver-nsn.gov](mailto:p.maday@badriver-nsn.gov)

One of the questions I have heard from several community members since starting at the museum is: *How can I take care of historic items that I have at home?* The answer to this question can be different for everyone and is based on several factors. This edition, we will start a series dedicated to sharing tips for taking care of historic items at home.

The way that each person takes care of historic items is usually a mix of honoring familial and cultural protocols and taking physical preservation precautions. When sacred items or important family heirlooms are passed down, they often come with instructions on how to care for those items. It is important to continue practicing those ways, as they are part of your history and your heritage.

When it comes to physical preservation of items, there are five basic rules to keep in mind. Let's dive into the basics of preservation!

### Preservation Protocols to Keep your Personal Collections Safe at Home

1. **Avoid bright or direct light.** Color photographs are especially vulnerable to fading when they are hit by light of any type. Do not store films, prints, or fabrics in direct sunlight. Avoid exterior, south-facing walls or other locations that receive direct sunlight.
2. **Maintain a consistent temperature in the storage area.** Do not store objects in attics or basements, where the temperature varies by season. Attics get too hot and humid in the summer. Also avoid placing collection items near heaters, radiators, chimneys, vents, electrical sources, and open windows. An interior closet can be a good option for storage at home.
3. **Keep objects clean.** Dust can scratch delicate surfaces such as photographs and textiles. When dusting, use a soft, lint-free cloth, and avoid rubbing. Always clean gently and avoid harsh commercial cleansers or cleaning solvents.
4. **Guard against insects and pests.** Keep the area around your items clean and food and liquid-free. If you are concerned about bugs, consider using pest traps to alert you to their presence.
5. **Avoid excess moisture.** Do not store collection items in areas that may experience water damage. Steer clear of plumbing pipes, sprinklers, open windows, vents, or sinks. Avoid storing items in the basement or anywhere else where humidity and mold are common and where flooding might occur.

These preservation protocols apply broadly to all types of collection items and putting them into practice can do a lot to protect your items from physical deterioration. When it comes to taking care of photographs specifically, here are some additional tips:

- Protect photos from light by placing them in acid-free folders, sleeves, and boxes.
- Do not store photographs in wooden drawers or cardboard boxes.
- Store documents flat instead of rolled or folded.



- Do not use staples, paper clips, tape, or glue, even if a photo is damaged.
- Make a copy to use for research or display and keep the original in proper storage.
- Wash your hands before handling photographs and keep them clean to avoid stains. Some people prefer to wear gloves when handling historic items. If wearing gloves while handling photographs, it is recommended to wear fitted, clean, lint-free cotton or nitrile gloves.
- Be aware that many commercially available photo albums contain acidic paper, harmful plastics, and adhesives. Avoid laminated photo albums.
- Avoid buffered tissue paper and plastic sleeves that contain polyvinylchloride (PVC).
- Separate out damaged or fragile photos. These may need to be stored in a different way.
- Create an inventory. Becoming familiar with the formats, sizes, quantities, condition, and uses of your photos can help you choose the best storage solution and keep it organized.

Some acid-free and archival storage supplies can be found on Amazon by searching for 'acid-free' + item name or 'archival' + item name. For example, if looking for tissue paper, type 'acid-free tissue paper' in the search box. Gaylord Archival is another reputable company that offers archival supplies for personal collections. They also offer on-demand webinars and informational articles for a variety of personal preservation projects. You can access these helpful resources at: <https://www.gaylord.com/resources-personal>.

Sources:

"Tips for Preserving your Family Treasures." *Smithsonian National Museum of African American History & Culture*, <https://nmaahc.si.edu/explore/stories/tips-preserving-your-family-treasures#:~:text=Here%20are%20the%20five%20basics%20of%20preservation%20and%20pests.%20...%205%20Avoid%20excess%20moisture.%20> Accessed 5 December 2023.  
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