

*Red Cliff Band of Lake Superior Chippewa*

# Treaty Natural Resources Division Newsletter

*Volume 6, Issue 4, Winter 2017*



## Ganawenjigaade

*It is taken care of, protected . . .*

*We take care of, protect, keep it.*



Photo credit: Linda Nguyen

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## **Employee of the Month**

An office is only as good as its staff, and we at the Treaty Natural Resources Division think we have some of the best. The following team members were nominated for Employee of the Month in the last three months by their fellow co-workers. By: Chad Abel

### **October Employee of the Month**

#### **Kyle Cadotte, Conservation Warden**



For a brief moment in time, Kyle left his position with the Red Cliff Police Department to become a Red Cliff Warden. In addition to his warden duties, Kyle became the Division's first certified blaster and also joined the Tribe's new wildland fire program. He is known and appreciated as being a person who looks for solutions to problems instead of just complaining about them. Kyle announced that he was returning to the Red Cliff Police Department shortly after he was nominated for employee of the month in October, undoubtedly to aid in finding solutions to other issues Red Cliff faces. Thanks for swinging through, Kyle!

### **November Employee of the Month**

#### **Linda Nguyen, Environmental Director**



Linda completed her fifth year of service to the Tribe this year. Like the Treaty Natural Resources Division as a whole, the Environmental Department has grown considerably in staffing, scope and financial capacity in recent years. Linda has played a big role in that growth. She was nominated for the continuity she brings to her office and for all the work she does behind the scenes to keep the programs she oversees running smoothly. Miigwech to Linda for providing symbiosis to our efforts in the TNR Division!

### **December Employee of the Month**

#### **Tanner Bresette, Water Resources Technician**



Tanner has been bumping around the Division for the last few years in different seasonal positions, helping out wherever he was needed. As a testament to his contributions, fellow staff often joke about what might best be called the "Tanner Equation." Like if a work day requires 6 staff, how many Tanners will it need? I appreciate Tanner's willingness to help out with all the hard jobs and make his presence known. Tanner earned his keep and now has a full time job with us as the Water Resources Technician.



# BIBOON

It is Winter

GICHI-MANIDOO-GIIZIS

*Great Spirit Moon*

NAMEBINI-GIIZIS

*Sucker Moon*

ONAAABANI-GIIZIS

*Hard Crust on the Snow Moon*

GOONIKA-IZHIWEBAD

*Snow / Weather*

MIIGWECHII-MIIGIWEWIN

*Gift Giving*

ZOOGIPO

*Snowing*

AA-GI-MAG

*Snowshoes*

ENDAAYANG

*Homes / Family*

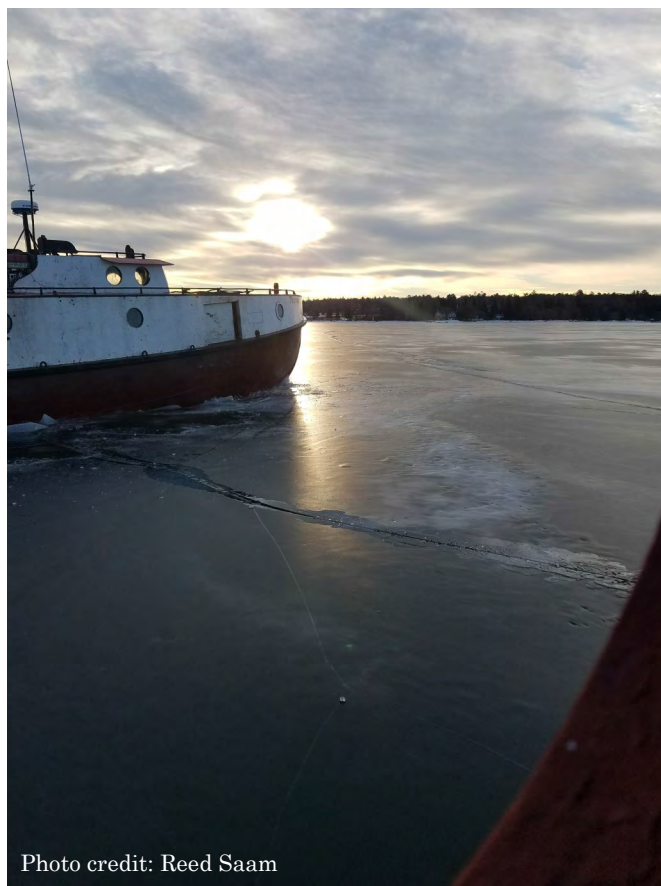


Photo credit: Reed Saam

# Red Cliff Tribal Fish Hatchery

Chase Meierotto-TNR



Above: Lance getting weights on the brook trout before they are stocked.

The hatchery recently stocked 37,000 coaster brook trout at the “Old Dock” here in Red Cliff. Fish were reared in both the hatchery’s flow through and partial recirculation system this year. They were fed daily, with the use of belt feeders, at varying rates depending on the number and weight of the fish in each tank. By taking a sample each month, the hatchery staff was able to determine how fast the fish were growing as well as how much food was needed. This year’s fish were marked with a RV fin clip. RV stands for right ventral and is located on the underside of the fish along the right edge.



Above: Fish being loaded in the stocking truck.

Growth rates were calculated each month and feed was adjusted according to the size of the fish. Fish averaged about six inches on the release day.

The release of the 2016 class comes at the perfect time, as the hatchery is kicking off the spawning season for the in-house brood stock. Our brood stock fish are essentially the parents of all of the fish in the hatchery. Hatchery staff have collected the first few liters of eggs and will continue until all of the eggs are collected. Much like the 2016 fish, the 2017 fish will then be moved over to the partial recirculation system and the flow through tanks will be set up for the 2018 fish.



Above: Fish being stocked into Lake Superior.

Along with the eggs from the brood fish, the hatchery will also be receiving eggs from the Iron River fish hatchery. The Tribal Fish Hatchery is still in the process of converting over the brood stock to the Tobin Harbor strain, which comes from the Iron River Hatchery.



# Red Cliff Reservation Hunting, Trapping, and Fishing Seasons



Some seasons may be subject to change. Consult the tribal ordinances before going hunting.

## Small Game Hunting Season: Requires Tribal ID

Species:	Daily Bag:	Season:
Ruffed Grouse	10	Sept. 1 - Dec. 31
Sharptailed Grouse	10	Sept. 1 - Dec. 31
Squirrel	10	Sept. 1 - Dec. 31
Raccoon	None	Open All Year
Rabbit and Hare	5	Open All Year
Bob White Quail	5	Open All Year
Pheasant	5	Sept. 1 - Dec. 31
Fox	1	Open All Year
Bob Cat	1 Per Season	Open All Year
Morning Dove	None	Open All Year

Check Tribal Ordinances on regulations regarding "Protected Species," and "Animals and Birds Causing Damage."

## Big Game Hunting Season: Requires Tribal Transportation Tag

Species:		Season:
Deer	Antler	July 1 - Dec. 31
	Antlerless	Sept. 1 - Dec. 31
Bear		Sept. 1 - Nov. 30

## Trapping Season: Requires Tribal Trapping Permit

Species:	Reservation Quota or Season Limit:	Season:
Beaver	No Limit	Oct. 15 - Apr. 30
Bobcat	Reservation Quota: 1 bobcat per year	Oct. 15 - Dec. 31
Fisher	Reservation Quota: 20 per year	Oct. 15 - Mar. 31
Fox	No Limit	Oct. 15 - Feb 28
Mink	No Limit	Oct. 15 - Feb 28
Muskrat	No Limit	Oct. 15 - Apr. 30
Otter	1 per trapper per year	Oct. 15 - Apr. 30
Raccoon	No Limit	Oct. 15 - Jan. 31

## Fishing Regulations on Lake Superior: Requires Tribal ID

Species: Walleye, northern pike, white bass, rock bass, bluegill, crappie, pumpkinseed, bullheads, yellow bass, catfish, cisco, whitefish, rough fish, largemouth and smallmouth bass, muskellunge, trout and salmon. \*, \*\*

Season: Year Round  
Bag Limit: None  
Size Limit: None

\* No person may fish in a refuge, as described in Tribal Codes.

Sturgeon \*, \*\*

Season: Year Round  
Bag Limit: One per person per day  
Size Limit: None

\*\* No person may use more than 30 attended or unattended lines.

# Summary of Ice Fishing Regulations in the 1842 Ceded Territory and on Lake Superior for Members of the Red Cliff Band of Lake Superior Chippewa

## I. Ice Fishing Seasons, Bag Limits and Size Limits (apply to all methods except netting) for areas within 1842 Ceded Territory (not including Lake Superior)

Walleye, White Bass, Rock Bass, Bluegill, Crappie, Pumpkinseed, Yellow Perch, Bullheads, Yellow Bass, Catfish, Cisco, Whitefish, Rough fish

Season: continuous open season

Bag limit: none

Size limit: none

Largemouth and Smallmouth Bass, Northern Pike

Season: continuous open season

Bag limit: 10 per person per day

Size limit: none

Sturgeon

Season: continuous open season

Bag limit: 1 per person per year (all methods)

Size limit: 45 inch minimum (Sturgeon must be registered and tagged by the Tribal Conservation Department by 5:00 p.m. of the working day following the harvest.)

Muskellunge

Season: continuous open season

Bag limit: none

Size limit: first fish may be of any size; thereafter at least half the catch must be at least 32 inches in length

Lake Trout

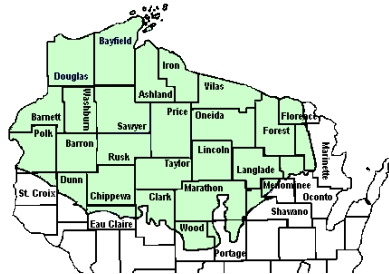
Season: continuous open season

Bag limit: 2 per person per day

Size limit: 26 inch minimum size limit

Paddlefish

No open season



## II. Methods and Particular Regulations (not including Lake Superior)

### A. Hook and Line (includes attended and unattended tip ups, hand-held lines, and any device using a fishing hook and line)

1. Fishing holes (for attended or unattended lines) cannot be larger than 12" in diameter.

2. Limit of 30 total attended and unattended lines may be used at any one time. Lines cannot be used on more than 3 lakes at any one time.

3. Special rules applying to unattended lines.

a. "Unattended line fishing" means fishing with a line that is beyond visual contact without the aid of a magnifying device for a period of more than 1/2 hour. Unattended lines:

--can only have one single iron hook with a maximum 1/2" point to shank gape;

--must be of a material that will naturally deteriorate in water over time (note: monofilament line will not, but cotton twine will);

--must be securely anchored so that they cannot be dislodged by a hooked fish;

--must be tagged with an identification tag from the tribal conservation department;

--must be checked at least once every 24 hours unless severe weather makes this impractical;

--must be marked so that they are visible to vehicular traffic on the lake.

b. Prior to using unattended lines, you must inform the tribal conservation department of the lakes you intend to fish.

### B. Spearing Through the Ice

1. Ice spearing is legal. The seasons, bag limits and size limits noted above apply to ice spearing.

2. Spearing holes cannot be larger than 24" by 36".

3. When not in use, spearing holes must be marked to identify them as a hazard.

4. No special spearing permit is required. Your Tribal ID is all that is necessary.

### C. Netting Through the Ice

See your tribal conservation department for more information.

### III. General Regulations That Apply to All Ice Fishing

1. You may not share ice fishing gear with any non-member unless:
  - a. the person is part of your immediate family or household; or
  - b. the person is legally fishing under state law.
2. Ice fishing houses:
  - a. must be able to be opened from the outside when occupied;
  - b. must display owner's name and address on the outside;
  - c. must be removed no later than March 15 (note: portable shelters can be used after that date as long as they are removed daily).
3. You must comply with any request to complete an ice fishing catch report or to take part in a creel survey.
4. You may possess only double the daily bag limit of "fresh" fish. "Fresh" means unspoiled and never frozen after being taken from the lake (note: fish that become frozen which are still on the ice are considered fresh). There is no possession limit that applies to fish that are not fresh or that are already in your freezer.
5. You may not use the following live bait: carp, goldfish, redbreast, freshwater drum, burbot, bowfish, garfish, buffalo fish, lamprey, alewife, gizzard shad, smelt, goldeye, mooneye, carpsucker, quillback, and crayfish.
6. You must comply with fish refuge regulations. See your tribal conservation department for details.
7. If your tribe allows the sale of fish harvested off-reservation, you cannot sell fish without first getting a tag from the tribal conservation department for each fish you wish to sell. If the fish is filleted, the fillets must be tagged together or packaged together with the tag in the package.
8. You must have your Tribal ID on you at all times.

## Lake Superior Hook and Line Fishing Regulations for Red Cliff Tribal Members:

### General Provisions:

1. No tribal member shall fish the waters of Lake Superior, pursuant to this ordinance, without possessing their tribal identification card.
2. "Hook and line fishing" means fishing with a rod and reel or similar device such as a hand held line, and includes trolling.
3. No person may use more than thirty (30) attended or unattended lines while hook and line fishing on Lake Superior.
4. No person may fish in a refuge, as described later in this section, or other area closed by order of the Red Cliff Tribal Council.
5. No member may take the catch of a non-member while actively fishing.

### Unattended Lines:

1. All unattended lines shall have attached a single iron hook with a maximum ½ inch point to shank gape.
2. All unattended lines shall be securely anchored so as not to be dislodged by a hooked fish.
3. All unattended lines shall be tagged by the fisherperson with a tag that states Red Cliff, and the fisherperson's tribal identification number.
4. Each unattended line shall be checked at least once every 24 hours unless severe weather conditions render it impractical to do so.

### Ice Fishing:

1. No person shall ice fish by the use of hook and line through a hole larger than 12 inches in diameter.
  - a. No person shall place, maintain or use a house or other enclosure for ice fishing, and leave said ice fishing enclosure unattended for more than 12 hours, unless the owner's name and address is clearly displayed on the outside of the house.
  - b. No member shall fail to remove an ice fishing house or other enclosure on or before March 15, except that portable shelters may be used while ice fishing after that date provided the portable shelter is not unattended while on the ice.

### Live Bait Restrictions:

The following species may not be used as live bait: crayfish, carp, goldfish, redbreast, freshwater drum, burbot, bowfin, garfish, buffalofish, hamprey, alewife, gizzard shad, smelt, goldeye, mooneye, carpsucker, and quillback.

### Refuges:

All refuges as described in the Tribal Ordinances should be honored, including the Devil's Island Refuge, Gull Island Refuge, and "Hot Pond" Refuge. Please refer to ordinances for specific coordinates on these areas.

### Seasons, Size Limits, and Bag Limits for Both Open and Ice Fishing:

- a. Walleye, northern pike, white bass, rock bass, bluegill, crappie, pumpkinseed, bullheads, yellow bass, catfish, cisco, whitefish, rough fish, largemouth and smallmouth bass, muskellunge, trout, and salmon.

Season:	year round
Bag Limit:	none
Size Limit:	none
- b. Sturgeon

Season:	year round
Bag Limit:	one per person per day
Size Limit:	none

# ICE DANGER AND ICE SAFETY



Before going out onto a frozen lake, pond or river, it's important to take safety precautions to reduce the risk of falling through the ice. Knowing how to judge ice conditions will also help you make more informed decisions while fishing or recreating on frozen lakes.

Springtime can be an especially dangerous time to venture out on a frozen lake. The springtime's warming temperatures can create rapidly changing and unpredictable ice conditions. Remember there is no such thing as ice that is completely safe. Here are some important tips to follow before you decide to venture out.

## Carefully Check Ice Conditions

- **Remember** you take a risk anytime you go out onto the ice.
- **Ice thickness is not consistent.** Water currents, particularly around narrow spots, bridges, inlets and outlets, are always suspect for thin ice.
- **When ice fishing**, it is always a good idea to drill test holes as you progress out onto a lake to help judge the thickness and character of the ice.
- **Beware of ice around partially submerged objects**, such as trees, logs brush, embankments or dam structures.
- **Don't judge ice strictly by appearance.**
- **Stay away from cracks, seams, pressure ridges, slushy areas and darker areas that signify thinner ice.**
- **Be aware of ice that forms at the edges of lakes.** Ice melts at the edges first in spring.
- **Never go out onto the ice alone.** A buddy should be able to rescue you or go for help if you fall through.
- **When changing locations on the ice always walk at least 10 yards apart from your buddy.** If one person falls through the ice, the other can go for help.
- **Before you leave shore**, inform someone of your destination and expected time of return.
- **Always wear a life jacket or personal flotation device (PFD)**, over an ordinary snowmobile suit or layered winter clothing. Life jackets can provide excellent flotation and protection from hypothermia. Specialized coats that float or dry suits are also highly recommended.
- **Assemble a personal safety kit**, no larger than the size of a man's wallet, and carry it on your body. The kit should include a lighter, waterproof matches, magnesium fire starter, pocketknife, compass and whistle.
- **In addition to the above safety equipment**, carry ice picks, a rope and cellular phone. These items could save your life.
- **Always keep your pet on a leash.** If a pet falls through the ice, do not attempt to rescue your pet. Go for help.

## What to Do if You Fall Through the Ice

- If you **cannot** get out of the cold water by yourself, take the appropriate actions to extend your survival time while waiting to be rescued.
- **Stay calm.** Do not attempt to swim; swimming will cause our body to lose heat much faster than if you stay as still as possible.
- **Use a whistle to attract help.** **Act slowly and deliberately to conserve heat** and move slowly back to where you entered the water. Expect a progressive decrease in your strength and ability to move. Make the harder moves to attempt to get out of the beginning while you can.
- **If you are wearing a snowmobile helmet and your face is in the water**, remove the helmet as quickly as possible because it can fill with water and cause you to drown. Hold onto it to keep afloat.
- **Once on the ice, try to push yourself forward on your stomach** or roll on your side to keep the weight distributed over a greater surface area. Do not stand up until you have moved onto the ground or an area of solid ice.

If you would like more information on ice safety, contact the Red Cliff Wardens at 715-779-3732.



# 2017 Red Cliff Elderly Hunt Event

## (The Importance of Giving Back)

By: Linda Nguyen, Environmental Director

November 9th, 2017 marked the annual Red Cliff community deer hunt event, an event which dates back to the late eighties or early nineties—an almost three-decade tradition! This event is just one of the opportunities for community to come together to give back. Numerous Red Cliff hunters brought in their harvested waawaashkeshi (deer) to be processed. After processing, the meat is wrapped up and then distributed to our elders through the Food Distribution Center as well as made available for important feasts or gatherings. For the past several years, the Treaty Natural Resources Division staff has led the charge for processing and butchering. This year, a total of 14 deer were brought in!



Venison is perhaps one of the healthiest meats in the world! It is a very good source of protein. Each year, the tribe tries to use every part of the deer. This year the brains and hides were donated to the Waawaashekshi Camp Event which took place on December 2nd and 3rd, 2017, where members learned how to traditionally tan hides. The event was hosted by the Red Cliff Tribal Historic Preservation Office.

Chief Warden Mark Duffy said, “It’s great to see community members and staff participating and contributing to this event year after year!”



**Chi miigwech to everyone who made this event successful!**

# Forestry Updates

*Red Cliff Wildlife & Forestry  
Treaty Natural Resources*

## ***Suspension of Birch Pole Harvesting on Red Cliff Reservation***

On December 4, 2017 the Tribal Council approved suspending birch pole harvest permits under 11.7.2 of the Red Cliff Code of Laws. This was in response to the declining vigor and abundance of birch in our area and evidence that overharvest of birch poles was occurring.

Under 11.7.1, a Red Cliff tribal member may still harvest up to 10 birch poles for home use per calendar year. Please review 11.7.4 for birch pole harvest guidelines if you wish to collect birch poles for home use.

Questions on birch pole harvest can be directed to:  
Red Cliff Environmental Department  
715/779-3650  
Red Cliff Wildlife & Forestry Program  
715/779-3795



## ***Chapter 11.7.4, Red Cliff Code of Laws***

### **11.7.4**

#### **Birch Poles:**

- a) Permittees shall only harvest a Birch pole or sapling that is 5 inches in DBH or less;
- b) Harvest of Birch poles shall not be more than twenty-five percent (25%) of a species in any particular harvest area, unless the location is a designated harvest area.
- c) Harvest of Birch poles must occur within 10 inches of the ground.



# Raspberry Campground Blowdown

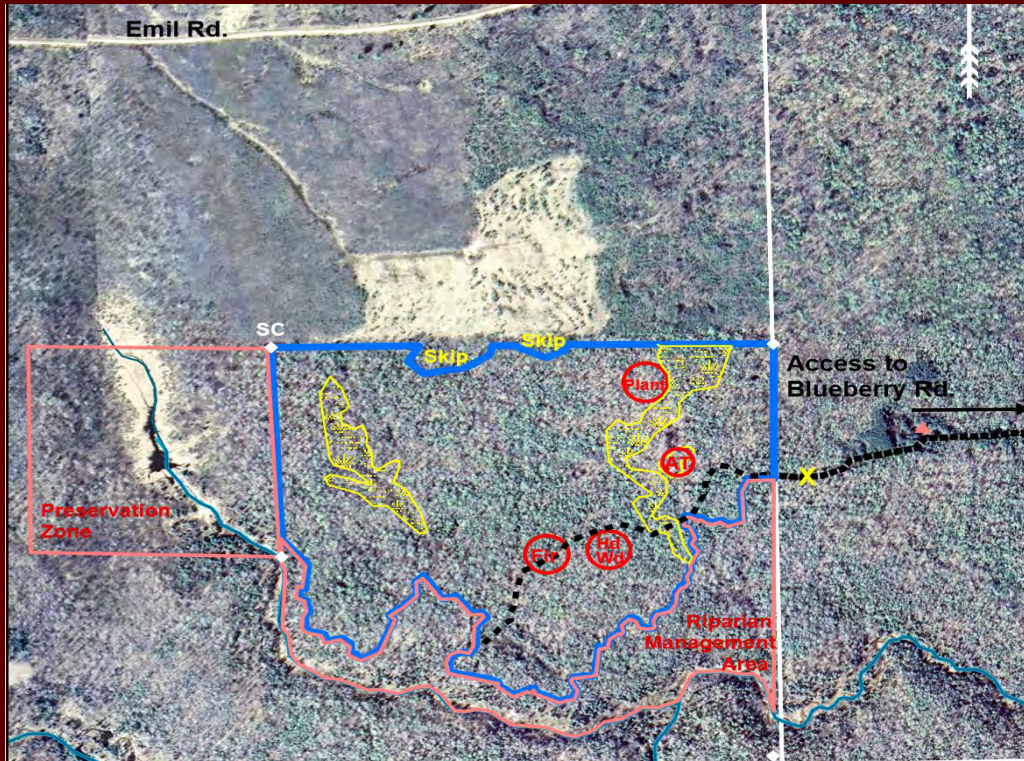
Recently, Tribal staff were alerted to a section of Red Pines that had blown down at Raspberry Campground. The section is adjacent (East) to the campground along the edge of the fen (at the edge of the burn unit from this past summer). Due to the volume and size of timber that is salvageable, plans are being made to cut and mill the wood. The boards from the milled wood will be used to enhance the Raspberry Campground, although decisions on what to build have not been finalized. Current ideas for the timber include: benches, picnic tables, a cooking structure, or a covered gazebo (similar to the one at the Pow Wow grounds). The Tribal Historic Preservation Office will take the lead on the project and will also help fund the harvesting and milling of the timber.





# Blueberry Road Timber Harvest Resumes

## Red Cliff Wildlife & Forestry Treaty Natural Resources



In a December 2014 resolution, the Red Cliff Tribal Council approved this timber sale offering for bidding. Work began in the winter of 2016-2017, with about one-third of the harvest being completed. Additionally, one of the four test plots was planted with 500 native trees during the summer of 2017.

This sale will provide forest management for 103 acres, accounting for 245% of the Tribe's annual allowable cut (AAC) of 42 acres per year (AAC is 25% of annual growth volume). This 25 percent AAC rate was specified in the 2006 Integrated Resource Management Plan (IRMP), but no cutting unrelated to urban development has occurred since then. Volume-wise, this is only utilizing 81% of annual growth volume of the forest.

The eastern boundary of the sale area is connected to Blueberry Road, one half-mile west, by a logging road, which will be the access road for the sale. The sale is in the SE quarter of Section 13, T51N R4W. The sale is entirely on Tribal Trust land. The south and west boundaries abut resource protection areas for a tributary of Red Cliff Creek (south boundary) and the Red Cliff Trust Preserved Zone. To the north is Bayfield County land where three clear-cuts of different ages border the sale area. To the east is more Tribal Trust land with mature timber. All external boundaries are marked with blue paint blazes.

### Timber Harvest Goals

- Generate revenue for the Tribe
- Demonstrate high reserves harvest
- Induce increased growth, recruitment, and regeneration of reserve trees
- Preserve structural diversity of the forest for wildlife, vegetation, water resources, and other ecosystem protection and enhancement goals
- Demonstrate an alternative silvicultural prescription to clearcutting

### Timber Harvest Notes

- First test plot was planted with sugar maple, red pine, white pine, jack pine, tamarack, basswood, white cedar, white spruce and yellow birch.
- Approximately 2,734 cords of aspen (only aspen) scheduled to be harvested.
- Situated between Blueberry Road and Emil Road, near the transfer station.
- Four small test plots will be done to draw conclusions for prescriptions on similar sites.
- Heavy equipment warning signs will be located near the sale on Blueberry Road.
- One of the main concerns from tribal members was dislike for Bayfield County clearcuts within the reservation boundary.
- Winter harvest will reduce soil compaction, rutting and erosion.



# Stream Monitoring With Bayfield Schools

By Reed Saam

On November 16<sup>th</sup> Red Cliff Fisheries staff teamed up with the Superior Rivers Watershed Association and the Bayfield alternative education classes to monitor the big ravine stream in downtown Bayfield. Monitoring consisted of sampling the stream for macroinvertebrates and taking water quality samples. Macroinvertebrates are insects that live in streams and are critical to the ecology of the stream. Sampling was done by providing D-shaped nets to the students and letting them try to find the different habitats that the insects prefer. Water quality samples included were dissolved oxygen, pH, temperature, and turbidity. These samples were all taken by the students with laboratory equipment provided by Superior Rivers Watershed Association.



Macroinvertebrates can be used as indicators of a healthy or degraded stream. Certain species are very sensitive to changes in water quality and therefore by knowing what species are present you can determine if the stream is being affected by human-induced stressors. Fortunately the big ravine stream has very few stressors and has a healthy diversity of macroinvertebrates.

After collecting the macroinvertebrates we brought a few specimens back to classroom to examine them further while being inside. The students really enjoyed getting to use microscopes to get a closer look at the specimens we collected. The most common insects we found were crane flies, caddisflies, mayflies and stoneflies. In the classroom we were also able to teach students about insect identification and basic stream ecology. We look forward to future collaborations with both the Bayfield alternative education classes as well as Superior Rivers Watershed Association.

Special thanks to Mariana Brewster from Superior Rivers Watershed Association for providing all the equipment! And Lena Wilson from Earth Partnership for helping organize the event!

# New Study Quantifies Microplastic Pollution on National Park Beaches

The National Park Service, in collaboration with Clemson University and the NOAA (National Oceanic and Atmospheric Administration) Marine Debris Program, recently conducted a study of 37 beaches at 35 National Parks, Monuments, Seashores, and Recreation Areas including the Apostle Islands National Lakeshore. The goal of the study was to quantify the amount of microplastics currently at these 37 beaches and to begin to understand the factors affecting the distribution of these particles.



Above: National Park Service employees begin sampling. Photo credit National Park Service

## What are Microplastics?

- Microplastics are classified as any small plastic particles less than 5 mm in diameter.
- These particles can either be created from the breakdown of larger plastic pieces, or they can start out small.
- Microplastics can also exist as pre-production “nurdles” (pictured below)
- Microfibers are actually more common than microbeads, and originate from synthetic clothing, ropes, and nets made of polyester, rayon, and cotton.
- In the NPS study, fibers made up 97% of the plastics counted.

## Results

### *Nationwide*

- Microplastics and microfibers were found at each of the 37 sample sites.
- The highest levels of microplastics were found at beaches in the Great Lakes and the Pacific Islands.

### *Apostle Islands National Lakeshore*

- Out of all the sampling sites, the highest abundance of microplastics was found at the Apostle Islands (measured by microplastic count per kg of sand collected).
- The sample was collected on the western side of the York Island sand spit, which could have contributed to its high microplastic count. This particular area receives prevailing currents from Duluth and Superior.
- It’s believed that most microplastics enter the Great Lakes through tributaries, thus the proximity of the mouth of the St. Louis river in Duluth increases the probability that microplastics would exist in higher numbers in the Apostle Islands.



Above: A resident of Rossport, Ontario shows a handful of pre-production nurdles washed up on his beach near Mountain Bay on the northern shore of the lake.



# What Can You Do About Microplastics?

NOAA and the National Park Service have the following recommendations to help reduce microplastics pollution.

## Rethink it!

Buy fewer plastic single use items, avoid plastic bags and products with plastic microbeads, and opt for products that minimize plastic packaging.



Photo credit: The Verge

## Remove it!

Join beach cleanups to help pick up trash in our waterways and on our coasts.



Photo Credit: Our Coast

## Tap it!

Drink tap water (or artesian well water!) from a reusable container.



Photo credit: Milled



## Reuse it!

Take along your reusable coffee mug, food containers, silverware, and shopping bags.

## Can it!

Use a trash can with a lid so your plastics and other waste do not accidentally end up in our waterways.



## Recycle it!

Recycle the plastics that you do use.



## Re-wear it!

Reduce the amount of laundry to decrease the amount of fibers entering rivers and eventually the ocean.



Check out the National Park Service's Story Map on the study: <http://arcg.ic/2nq7b5f>

# AIR PROGRAM UPDATE

**By: Ernie Grooms, Air Quality Manager**

As the Air Program has been in place since 2010, it has seen minute changes in its endeavor to educate tribal members on the importance of indoor air quality. Since taking over the position in January of 2015, there have been small updates to the program as to the way in which indoor assessments are performed, attending tribal health fairs, and providing informational pamphlets and brochures. The largest changes have been by way of equipment, and have allowed for expanded sensor technology which aid in detecting a wider range of harmful elements within a home.

Since coming on board, program expansion into the ambient air field has been a priority. Red Cliff submitted its first Level III Emissions Inventory for air pollutants within our reservation boundaries for the year of 2015, and was accepted by the Environmental Protection Agency (EPA) in 2016. This was a major accomplishment because it shows how much we contribute to air pollution in our little “neck of the woods”. However, this is not enough!

As our next grant cycle is drawing near, I have been working closely with Linda Nguyen, Environmental Director, for our next submittal that will move us into the ambient air field. This includes working with other Tribes in our region who have developed successful air programs, with one in particular. The Forest County Potawatomi have graciously donated a 2025i Thermo-Partisol sequential air sampler for Particulate Matter 2.5 microns (see photo 1). This piece of equipment will allow us to gather information on particulate pollution (see photo 2) that can affect us the most, especially those with upper respiratory sensitivity and asthma, as it moves across our reservation.



**Photo 1.** An example of a 2025i Thermo-Partisol Sequential Air Sampler.



**Photo 2.** Examples of particle pollution that affects upper respiratory sensitivity and asthma include pollen, mold, table salt, and human hair.

I look forward to serving our members in this capacity, and with the continued relationships of our surrounding Tribal communities.

Updates to follow.....Miigwetch!

# Wisconsin Repeals Historic Mining Legislation

Allissa Stutte, Environmental Justice Specialist

The state of Wisconsin has recently rolled back landmark mining legislation that has been in place since 1998. On December 11<sup>th</sup>, Governor Scott Walker signed the “Mining for America” bill into law in Rhinelander, Wisconsin. This new legislation repeals the decades-long “Prove It First” mining protections that have historically held up Wisconsin’s reputation for environmental protections against metallic sulfide mining. Until it was repealed, the landmark legislation (commonly referred to as Wisconsin’s Mining Moratorium) required any mining company wanting to operate a sulfide mine in Wisconsin to prove that another similar mine has been able to operate without pollution, and remain closed without polluting nearby waters, for at least ten years.

According to the Sierra Club, there has never been an example of a metallic sulfide mine that has met these requirements. Metallic sulfide mining commonly leads to acid mine drainage and polluted surface and ground water.

This new bill, by repealing the above requirements, weakens the regulations which protect the environment. It also puts time constraints on the Wisconsin Department of Natural Resources in regards to drafting Environmental Impact Statements and reviewing information from the mining applicant. As the legislation was being passed through the State Senate and Assembly, it was met with pushback from various environmental groups and tribes.

## Sulfide Mining 101

Sulfide mining refers to the mining of metals found in sulfide-bearing rock. Gold, copper, zinc, nickel and other metals are typically found bonded to sulfur. Sulfuric acid is created when sulfides are released through the mining process and exposed to air and water. The resulting runoff can enter nearby streams and waterways and since it readily mixes with water, can kill fish, insects and plants. Sulfuric acid is similar in composition to battery acid.

<http://infosuperior.com/blog/2017/12/15/wisconsin-passes-mining-for-america-bill/>



Above: The Flambeau open pit copper mine was a catalyst for the original legislation which increased environmental protections.



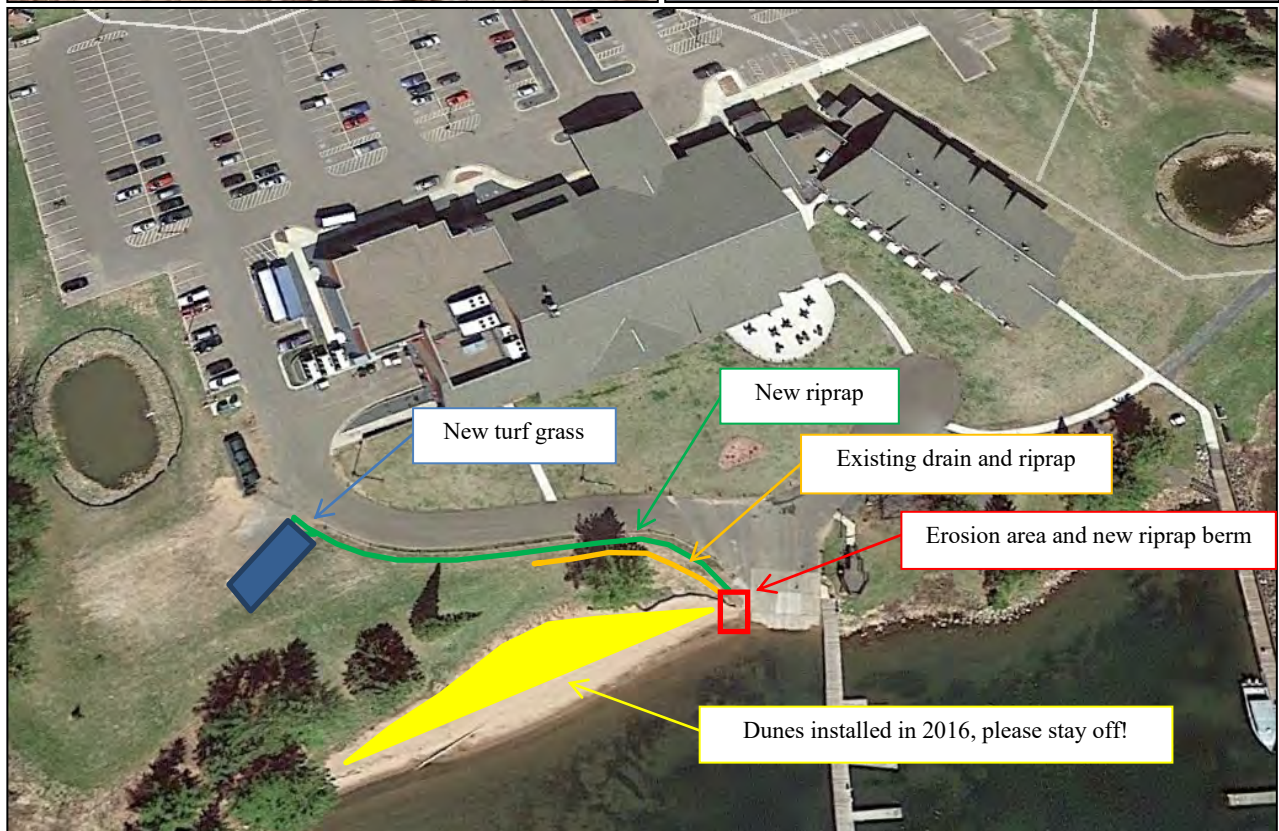
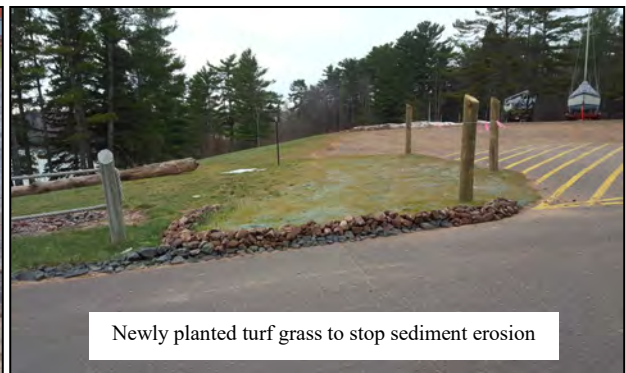
# Legendary Waters Erosion Project Completed

Gabrielle VanBergen – Water Resources Program Manager

Throughout the summer and fall, Environmental Department staff have been working on resolving an erosion issue at the boat ramp and beach of the Legendary Waters Casino. An existing drain tile and riprap area (orange line on photo) had been malfunctioning, causing a small area between the newly installed beach dune (2016) and the boat ramp to be scoured out by stormwater runoff.

To slow down the flow of runoff and deflect the runoff water from the beach, staff installed an additional line of riprap along the entire driveway (green line on photo) and created a riprap berm at the bottom of the hill that will direct runoff towards the boat ramp. As work activities progressed, staff noticed that a lot of sediment was being carried downhill and plugging up the riprap, taking away the riprap's ability to slow down water. To prevent this, an additional area near the Casino's dumpsters was blocked off with posts and revegetated with grass seed (blue rectangle on photo).

In the spring of 2018, dune plants will be transplanted into the previously eroded area to help solidify this project and stabilize the beach sand.



# Illegal Dumping

**By: Linda Nguyen, Environmental Director**

Illegal dumping is a serious issue. It makes our communities and natural areas look dirty and uncared for— unpleasant to be in. More dumped items in an environment will encourage and lead to more dumping and other illegal activities. This type of activity pollutes our environment and can diminish the subsistence and cultural uses, enjoyment, and value of our natural areas. Just like litter, illegal dumping occurs across a range of situations and environments, such as the woods and vacant lots.



Some forms of illegal dumping such as chemicals, electronic waste, or construction debris like asbestos can directly cause harm or injury to humans and wildlife, or lead to soil and/or groundwater contamination. Animals can also become entangled in dumped items leading to injury and/or death. Illegal dumping can also introduce rodents and invasive species into our natural areas, block waterways and roads, cause flooding (by blocked drainage areas), and facilitate higher rates of erosion by choking out natural vegetation cover.

Littering and illegal dumping costs the Tribe and community crucial funds each year in waste management, including clean-up expenses. Let's take a stance because we deserve a clean and safe environment! It's NOT OK to use our environment as a dump!

If you come across a site, please do not disturb the site where the incident occurred, as the site may contain hazardous materials. To report a site or dumping activity, contact the Environmental Department at 715-779-3650 or Conservation Wardens at 715-779-3732.



# Is Your Christmas Wrapping Recyclable?

By: Linda Nguyen, Environmental Director

A common mistake many people make around the holidays is loading their recycling bins with wrapping paper, tissue, ribbons, and more.

Unfortunately, the shiny, laminated paper is actually not recyclable.

Including it with other paper products can make an entire load unrecyclable.



**Bows (Plastic or Ribbon)** - these items are not recyclable.

**Wrapping Paper** - If paper is metallic, has glitter or is velvety, these items are not recyclable. Reuse it or dispose of them in household trash.



**Christmas Cards** - If cards are printed on shiny paper, has glitter, or metallic embossing, these items are not recyclable. Reuse it or dispose of them in household trash.



When you're buying next year's wrapping paper, you can reduce the environmental impact of your purchase by looking for paper made from recycled materials. Try also to avoid foiled and laminated papers, to make sure as much of it as possible can be recycled again.

And there you have it – recycling holiday gift wrappings really couldn't be easier! Call Linda at 715-779-3650 if there are any questions!



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# Styrofoam – What’s the Deal?

By Linda Nguyen, Environmental Director

## What do throw-away coffee cups, soup bowls, and trays all have in common?

Check out photo 2.

None of them can be recycled at the Red Cliff Transfer Station. Some commercial mailing houses may accept packing peanuts, but for the most part, community recycling centers do not accept throwaway foam food containers.

Also, styrofoam does not decompose in the environment under normal circumstances. Much like plastic, styrofoam is made from a polystyrene-based petroleum product that is not biodegradable. Plastic takes hundreds of years to decompose, and styrofoam takes much longer because it is a stronger form of plastic, while it can also release hazardous toxins into the environment. When it is littered in the environment, turtles and fish can mistake it for food, causing mortalities.

## How do we reduce styrofoam litter in the environment and landfills?

Check out photo 1.

Some cities like New York City, Seattle, Minneapolis, and San Francisco have banned styrofoam! Here at Red Cliff, we can reduce styrofoam litter by reducing our

usage of it. Some ways include:

*-Take your own containers to restaurants for any leftovers.*

*-Hold off on purchasing single-use cups, plates and bowls. Instead, use reusable cups, plates, and bowls.*

*-Avoid using non-recyclable packaging for mailings.*

*-If you have to use single-use, use plant based or compostable materials. Some restaurants in the area, like Maggie’s, uses these!*



**Photo 2.** Common styrofoam products.

I challenge each and every one of you to help clean up and protect our natural resources!



**Photo 1.** Styrofoam cup in swept up on the shoreline and landfills.

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# Environmental Impacts of Road Salt & Ice Melt

Gabrielle VanBergen-Water Resources Program Manager



Icy roads, driveways and sidewalks are an everyday issue for us all during the winter months. Road salt and other ice melt products however, contain impurities that make their way into our environment through rain/snowmelt runoff and spray from vehicles. According to The Salt Institute in Alexandria, Virginia, about 17 million tons of deicing salt is applied to roadways in the U.S. each year.

## Impacts on Plants & Soil

The most visible impact of road salt on our environment is in the plants along the roadside. Salt causes dehydration which leads to leaf damage and also harms root growth and nutrient uptake.

Salt can ultimately lead to plant death, which can allow invasive species to take over an area. Road salt can also influence the chemistry of soils by leaching out minerals and inhibiting important soil bacteria, all of which decreases soil fertility.



## Impacts on Human Health

Sodium in drinking water is a health concern for individuals restricted to low-sodium diets due to hypertension (high blood pressure). Chloride is not toxic to human health at low levels but does cause taste and odor issues.

## Impacts on Water Quality

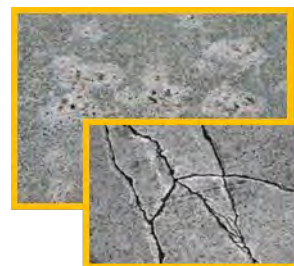
Contaminants from road salt enter groundwater and waterways by infiltration, runoff and through storm drains. Chloride remains in the watershed until it is flushed downstream. Meaning the road salt will remain in our waterways until it is flushed into Lake Superior, neither of which is good. Since groundwater takes much longer to recharge, chloride can remain for a very long time and contaminated wells often must be replaced.



## Impacts on Infrastructure

Chloride ions increase the conductivity of water and accelerate corrosion. Chloride can penetrate and deteriorate concrete on bridges, roads, sidewalks and parking garage structures, and damage reinforcing rods, compromising structural integrity. Salt also damages vehicle parts such as brake linings, frames, and bumpers.

The cost of corrosion damage and corrosion protection practices for highways and vehicles costs millions of dollars every year.





# Environmental Impacts of Road Salt & Ice Melt

Gabrielle VanBergen-Water Resources Program Manager

## Impacts on Aquatic Life, Wildlife, & Pets

Chloride in surface waters can be toxic to fish, aquatic bugs and amphibians. Birds and other wildlife often consume road salt, which can lead to dehydration, confusion and toxicity as well as cause increased vehicular accidents because animals are drawn to roads more often. Damage to vegetation can also limit food resources, shelter, and nesting sites.



## **Your Pets**

The 2 biggest concerns for pet owners are ingestion of salt and paw health. The ASPCA's Poison Control Center says that ingestion of salt melt can cause vomiting, diarrhea, excessive thirst, weakness, seizure, coma, and even death. Exposure of your pet's paws to road salt can produce painful irritation, inflammation, and cracking of the feet pads that can be prone to infection and are slow to heal.



## Alternatives to Ice Melt Products

### **For Roads:**

- Cheese brine: In Wisconsin, cheese brine is now part of the de-icing process. The liquid is used in factories to soak certain cheeses. As a bonus, because it's a byproduct that's thrown away after the cheese is made, it's free.
- Molasses: Some towns in the U.S. are favoring sweet over salty as they turn to molasses. Mixing it into a salt brine solution apparently helps salt stick to the roads and makes it less corrosive.
- EcoTraction: Invented by a Canadian company, EcoTraction is made of non-toxic, all-natural volcanic rock. The granules embed into ice and snow, creating a solid, non-slip surface.



### **For Sidewalks and Driveways:**

- Sand, light gravel, pea rock, and cat litter: can provide traction without melting ice. Can use in combination with a small amount of ice melt
- Safe Paw Ice Melter: a no-salt melter that's safe for the environment and pet friendly.
- Shoveling: Keep ice from building up by shoveling regularly, or use a small amount of ice melt to loosen ice and shovel it off.





# Winter Pet Care

Winter is here again, meaning not only cold weather for us, but for our pets as well. Indoor and outdoor pets feel the effects of winter weather and here are a few tips to ensure a healthy and happy pet.

1. Most pets should be welcomed into the home to keep safe and warm.
2. If your dog is chained outside, a doghouse must be provided. According to Red Cliff Ordinance 15.10.2 - *No owner or keeper shall fail to provide his animal(s) with food, water, adequate shelter, or proper care when needed to prevent suffering.* To provide the most comfortable shelter the house should be a few inches off the ground to allow for air circulation and waterproof. A flap covering the entrance will help keep the warm air inside the house and provide protection from wind gusts. The dog house should be large enough for the dog to lie down and have a little head room when sitting down. At this size the dog's body warmth will keep the house warm. Adding fresh hay, straw, and cedar shaving will add warmth and comfort.
3. When temperatures drop below 20 degrees it is best to keep your pet indoors. When it drops below 40 degrees short haired dogs, elderly dogs, and puppies should be kept indoors.
4. Keep a watchful eye on your pet. Frostbite can affect both dogs and cats and is common on ears, noses, paws, and bellies. Signs of frostbite include turning reddish, white, or grey and the skin is cool to touch. If your animal shows signs of frostbite, bring it indoors and call a veterinarian.
5. Outdoor cats may seek shelter in your car engine for warmth. Be sure to honk your horn or bang on the hood before starting the engine to give them extra time to evacuate.
6. Antifreeze attracts both cats and dogs. Ethylene glycol is an ingredient in antifreeze that provides a sweet taste which invites them to taste it. Even a small amount is enough to cause death. If you pet has swallowed antifreeze, call a veterinarian immediately.
7. Some salt used to clear roadways and sidewalks are harmful for pets. Make sure you inspect your dogs' paws after walks for any embedded salt rocks and wipe paws to prevent them from ingesting it.
8. With the decrease in temperatures your pets' body will be working extra hard to produce more heat. This will increase their appetite and they will require more food than normal. Always have fresh, clean water available – snow is not enough. Check your outdoor pets' water frequently as it may freeze. Animals cannot burn calories without a fresh supply of drinking water.



If you follow these tips your pet can be comfortable throughout the winter which makes you a good pet owner. If you have an animal welfare concern or feel that someone is violating Red Cliff Ordinances you can call the Red Cliff Wardens at (715) 779-3732 or email [lucas.cadotte@redcliff-nsn.gov](mailto:lucas.cadotte@redcliff-nsn.gov)





NIBI *Water*

MASHKAWADIN *It freezes, is frozen solid*

GANAWENDAN *Take care of, protect, keep it*

GISINAA *It is cold (weather)*



## Environmental Word Search

E C Q A Z G T F D B N V R N P E I B B U  
V C R A O H B Y G O G M E B O D J F F A  
U W N O L L G R I E J E S T Z B W R R S  
C J P E K L J T K L C C O P A M R C X E  
B O R E I A U U O C W I U I Z M W A T A  
Z K N R N L H R Q Y G E R D O V I J C S  
D Z N S L I I Q H C T N C W D P C L R O  
X W D O E I N S M E Q V E J C O E C C N  
J T P E J R B S E R H I S Q M S N C T S  
C S D L P A V W U R W R Q M U A M E B Z  
K Z N B X L E A M L S O U E T K M N F N  
I Z I A A O R S T D A N R U V P W I P N  
Q Z G W G S Q O Z I I M R W E T T N K Z  
W A T E R S H E D T O E H R M C L L L N  
J A C N Q W B S Y Z U N A A E F L O O D  
U C E E C U D E R C G T T T B H V C J M  
O M O R G A N I C W U N O I T I D A R T  
F V M Q S C O Y N R V R G P L Q T I A Q  
D X H A O C T Z E X P Q P D H A Y A Q M  
N O I T A T P A D A U Y I U W D R A T M

ADAPTATION  
CARBON  
CLIMATE  
COMMUNITY  
CONSERVATION  
ENVIRONMENT  
FLOOD  
HABITAT  
NATURE  
ORGANIC  
PENINSULA  
POLLUTION  
PROTECT  
RECYCLE  
REDUCE  
RENEWABLE  
RESILIENCE  
RESOURCES  
REUSE  
SEASONS  
SOLAR  
TEMPERATURE  
TRADITION  
WATERSHED

**ATTENTION RED CLIFF TRIBAL MEMBERS**  
**FEE-EXEMPT PARKING IS AVAILABLE AT USFS**  
**VALHALLA RECREATION AREA**



**Through an agreement between participating GLIFWC member bands and the U.S. Forest Service, Tribal members may park for free with a permit in U.S.F.S. recreation areas. The free parking permits are available at the Red Cliff Wardens Office (715-779-3732).**



**MEYERS BEACH/SEA CAVE**  
**PARKING AREA**

To enhance the opportunity to exercise treaty-retained rights within the Lakeshore, **NO-FEE PARKING** may take place at Meyers Beach subject to the following conditions:

No member shall park at Meyers Beach without providing the following information **ON AN AVAILABLE FEE ENVELOPE (insert no money):**

- 1) Member's Name
- 2) Member's Address
- 3) Member's Tribal Affiliation
- 4) Member's Enrollment Number





# Protect Yourself, Protect Your Community



## Safe Options for Household Sharps Disposal

### DON'T

- Put needles and lancets in the trash
- Put needles and lancets in recycling containers
- Take needles and lancets to medication collections
- Flush needles and lancets down the toilet

### DO

- Package needles and lancets safely
- Dispose of needles and lancets using one of the options listed on this poster

#### Package needles and lancets safely:

- Recap your own discarded sharps or clip the needle points.
- Put the sharps in a rigid, puncture-resistant container with a secure lid or cap.
- Clearly label the container with the words "bio-hazard," "infectious waste," or "sharps."
- When the container is full, seal it and dispose of it safely with one of the options below.

#### Use one of these safe disposal options:

- Bring the container to a registered sharps collection station.
- Ask your doctor, clinic or local hospital if you can bring sharps to their location for disposal.
- Call your local pharmacy, public health department, solid waste department, or streets department to learn about other local disposal options.
- Use a sharps mail-back program.

#### What are the dangers of used sharps?

Used needles and lancets can stick waste disposal workers when they are thrown away in the trash or recycling, brought to medication collections, or flushed down the toilet. Any worker accidentally stuck with a needle must get expensive medical testing and worry about the possibility of harmful or deadly diseases such as Hepatitis and HIV. However, needle-stick injuries are a preventable health risk. Package and dispose of sharps safely to avoid exposing yourself and others to harm.



Wisconsin Department of Natural Resources • Waste and Materials Management Program • PO Box 7921 • Madison, WI 53707

For more information on managing household medical sharps, contact [DNRWasteMaterials@Wisconsin.gov](mailto:DNRWasteMaterials@Wisconsin.gov) or 608-266-2111.

The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan.

If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240.

This publication is available in alternative format upon request. Please call 608-266-2111 for more information.

PUBWA-1636-2013



**YOUR LOCAL DISPOSAL OPTIONS:** Red Cliff Community Health Center  
36745 Aiken Rd.  
Bayfield, WI 54814





RED CLIFF BAND OF LAKE SUPERIOR CHIPPEWA

## Treaty Natural Resources Division



Fisheries

715-779-3750

Environmental

715-779-3650

Natural Resources

715-779-3795

Transfer Station

715-779-0171

Conservation Wardens

715-779-3732