



BAY MILLS INDIAN COMMUNITY

# BIOLOGICAL SERVICES NEWSLETTER

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## IN THE NEWS: Beach Grass Planted by BMCC

In an effort to increase biodiversity, restore native plants and decrease erosion, Bay Mills Community College and Bay Mills Biological Services planted hundreds of beach grass plugs on the sand dunes near the college. Students from Environmental Science classes potted the grass last fall, overwintered it in the greenhouse, then planted it on the steep hillside in May.

Coastal sand dunes serve as protective barriers from flooding and erosion, provide reservoirs of sand to replenish the beach zone, and provide habitat for a variety of plants and animals. However many of these species, while adapted for the harsh, dynamic environment of a beach, are intolerant to vehicle traffic, which tears up root systems. Please do your part by giving these plants a chance to grow; walk on the well-developed paths and keep motorized vehicles off the beach.



*Photo by Biological Services*

Above: BMCC students admire their beach grass planting on the sand dune.

***For questions about fishing/hunting licenses, current regulations, or if you wish to report poaching, please contact the Conservation Department at 906-248-8640.***

# INLAND FISH AND WILDLIFE PROGRAM UPDATE



Photo by Biological Services



## THE INLAND CREW INVENTORIES SUGAR ISLAND FORESTS

Throughout the summer of 2017, Bay Mills Indian Community Biological Services has been taking inventory of the plant species present on the Sugar Island reservation land. The island provides a wide variety of habitats and opportunities for tribal members whether it is hunting, gathering, or recreation. Throughout the survey, over 51,000 plants within 480 individual meter square quadrats were identified and documented, determining that there are five naturally occurring communities within the reservation property.

One of the most prevalent habitat types found on the Sugar Island property is the Mesic Northern Forest, which is known for its abundance of hardwood and conifer trees, particularly Sugar Maple, White Pine, and Red Oak. These natural communities are known for once dominating the Great Lakes region, and are one of the best areas to find old growth forests. Along with the presence of these tree species, the understory vegetation is typically comprised of numerous species (listed on the right).

For more information about this project or the Inland program, contact Emily Martin at [emartin@baymills.org](mailto:emartin@baymills.org).

### Sugar Island Plants

Baneberry  
Blue Bead Lily  
Bracken Fern  
Bunchberry  
Canada Mayflower  
Goldthread  
Jack in the Pulpit  
Starflower  
Sensitive Fern  
Wild Sarsaparilla  
Wood Fern

Beaked Hazelnut  
Canadian Fly Honeysuckle  
Prickly Gooseberry

Balsam Fir  
Hemlock  
Northern White Cedar  
Paper Birch  
Red Maple  
Red Oak  
Striped Maple  
Sugar Maple  
White Pine  
Yellow Birch

*\*\*Please Note: This list is not inclusive of all species found within Mesic Northern Forests located on Sugar Island*

# FEATURED INVASIVE SPECIES: Garlic Mustard



Photo by Ohio State Weed Lab Bugwood.org



Photo by C. Evans, Bugwood.org

## NEW INVASIVE PLANT FOUND ON 55 STRETCH IN BAY MILLS

Garlic Mustard (*Alliaria etiolate*) is an upland plant from Europe that grows on forest and road edges. In its first year, the stems are short and the leaves have a rounded, or heart-shaped, appearance. During early spring of the following year, the plant will develop a stalk 4 ft tall stalk with small white flowers and leaves with serrated edges.

In June, Bay Mills Biological Services began control on a patch of Garlic Mustard that was discovered on the 55 stretch of Lakeshore Drive. Biological Services spent 42 man-hours hand-pulling the plant from the half-mile span. Nearly 13 large garbage bags of the invasive Garlic Mustard were removed just before going to seed. For more information on Garlic Mustard or to report an infestation, contact Bay Mills Biological Services at (906) 248-8652 or [misin.msu.edu](mailto:misin.msu.edu). Biological Services is a partner of the Three Shores Cooperative Invasive Species Management Area (CISMA).

## Why it's a Problem

Garlic Mustard quickly escaped from herb gardens and spread throughout the Eastern and Midwestern United States, out-competing many native plants. This competition can lead to reduced diversity of plant and insect species as the Garlic Mustard tends to form dense stands that inhibit the growth of native vegetation. While typically preferring forest edges, the plant may also invade the understory, even preventing the germination of indigenous tree species.

## How it Spreads

Each Garlic Mustard produces hundreds of tiny seeds. These seeds are easily carried to new sites in the treads of tires and shoes.

## Ways to Control Garlic Mustard

Control methods for Garlic mustard include hand-pulling of plants, controlled burns, and/or herbicides depending on the size of the patch. For more information on identifying this plant [https://www.stewardshipnetwork.org/sites/default/files/gm\\_id\\_cards\\_back\\_and\\_front.pdf](https://www.stewardshipnetwork.org/sites/default/files/gm_id_cards_back_and_front.pdf)

Photos courtesy of C. Evans University of Illinois, and Ohio State Weed Lab, Ohio State University, Bugwood.org

# COMMUNITY OUTREACH

## BRIMLEY STUDENTS PARTNER WITH BIOLOGICAL SERVICES DEPARTMENT TO CLEAN-UP TRASH AROUND BAY MILLS

On May 25, students from Brimley Middle School conducted a community service project titled Operation Clean UP. Every year as part of a philanthropy unit, Ms. Case's 8th grade social studies class plans and implements a service project. After much thought, this year's class decided to focus on caring for our environment and thinking about the trash we throw away.

"I think we all need to be more aware of how much garbage we throw away...as an adult, I plan to help the environment. I think it's important we change the world now so people in the future change how they do things, like learning not to litter. It damages the world that keeps us alive."

- Jaden Fus



"We need to continue helping our earth, not just for ourselves but for everyone and everything that lives on this planet." - Ciara Clement

"I think that the best part of this project was cleaning up while having fun doing it. When we first started planning, I thought it was VERY ambitious for us to do, but we did it!" - Brandon Sharp

The class teamed up with Bay Mills Biological Services and North Country Trail, Hiawatha Shore-to-Shore hiking group to clean up trash in the area. The hiking club guided students to segments of the North Country Trail. Bay Mills Biological Services staff guided students to forested areas near Deep Creek, behind the Boys and Girls Club, and a wetland near Gumshoes Rd. Although

two of the sites couldn't be fully cleaned up due to time constraints, students made great improvements to all the sites. Students removed over three truck-loads of garbage from the sites. Garbage ranged from broken glass to tires, tin cans, filing cabinets, refrigerators, and more. Says student Janine Napoletano, "This project started only with one small idea. Now, it's grown into something much bigger. Not only has this project helped us learn and grow, it has helped everyone in the community!"



# GREAT LAKES FISHERIES PROGRAM UPDATE

Fisheries staff conducted several types of surveys on Lake Superior this season.

- Pre-recruit Lake Whitefish surveys (annual): The goal is to monitor trends in abundance of sub-legal (< 17 inch) Lake Whitefish, evaluate recruitment, and predict contributions of year classes to future harvests.
- Lake Whitefish assessment project (annual): Data are used for evaluating abundance and population characteristics of Lake Whitefish in eastern Lake Superior.
- Annual spring Lake Trout assessment (annual): Biological information on Lake Trout is used for harvest limit estimates. Diet analysis is also performed for several types of Lake Trout.
- Waishkey Bay fish community assessment project (annual): Rough fish (Common Carp, suckers, Bullhead), sunfish, Rock Bass, Walleye, Yellow Perch, Northern Pike, and Smallmouth Bass are typically caught in this assessment.

In addition to the annual assessments, the fisheries staff conducted one other survey this season:

- Juvenile Coregonid assessment: Using beach seines, the staff sampled shallow water in hopes of capturing juvenile Coregonid species (Lake Whitefish, Round Whitefish, Lake Herring/Cisco and others) to estimate the abundance of these species. They sampled at various sites within Whitefish Bay and west of Whitefish Point.



Photo by Biological Services



Photo by Biological Services



Photo by Biological Services

Above left to right: BMIC Biological Services staff set nets in Lake Superior to be left out overnight for a Lake Trout population assessment. A staff member gently holds a fish during Back Bay population assessment; length and weight measurements were collected. Staff use a beach seine to assess the populations of minnow and juvenile fish in the shallow water, especially whitefish and salmonids.

Bay Mills fisheries staff also monitors commercial and subsistence fishing by its members. Mandatory catch reports for both activities are collected and tracked by fisheries staff. Catches of commercial and subsistence fishers are sampled by staff at landings or onboard fishing boats. These data are used to monitor fish populations and make informed management decisions.

If you have questions about the fisheries program, please contact the program manager, Paul Ripple at (906)248-8649, [pripple@baymills.org](mailto:pripple@baymills.org).

## ELECTRONIC WASTE COLLECTION A SUCCESS

Biological Services hosted a very successful electronic waste collection event in June and will be holding another this fall. Nearly 60% of electronics needlessly end up in landfills although many components are recyclable. Contact Biological Services for more information.

### Accepted Items:

Computers, printers, cables, speakers, televisions, radios, telephones, calculators, software, cameras, routers, switches, cash registers, metal carts/ racks, toys, some microwaves.

### Unaccepted Items:

Coffee makers, toasters, refrigerators, stoves, washer/dryers, dishwashers, lighting, office furniture.



Photo by Biological Services

## GOT OLD TIRES?

Biological Services is collecting old tires from community members. Last year, 14,250 lbs of tires were recycled! Tires (on or off rim) may be dropped off at Biological Services on Plantation Rd and stacked in the yard until October 15, 2017.

## HOUSEHOLD HAZARDOUS WASTE COLLECTION SUCCESSFUL

Biological Services hosted a very successful Household Hazardous Waste (HHW) collection event this past September. Community residents dropped off a range of hazardous items including empty aerosol can, batteries, stains, cleaners, and more. These items contain chemicals that can leach out of regular landfills contaminating groundwater and entering the food chain. HHW items were sorted and transported to a facility that can dispose of those items safely.

670 lbs stain/polyurethane/ oil-based paint

143 lbs batteries

66 lbs aerosol cans

750 lbs automotive liquids/ motor oil

1854 lbs other chemicals

This year was our largest collection event yet! This recycling event was made possible by the Great Lakes Restoration Initiative. For more information on how you can keep harmful chemicals out of our environment, or for future HHW events, contact Biological Services at 906-248-8652.



Photo by Biological Services

Above: Collected hazardous waste before getting shipped to a specially-designed hazardous waste landfill.

# OIL PIPELINE UPDATE: CALLS TO DECOMMISSION LINE 5

North Americans have been dependent upon petroleum for decades and have used many methods to get the raw material to market. Although pipelines are one of the safest methods of transport of oil products, they still pose significant threats the environment and public health. Enbridge, Inc operates pipeline Line 5 that runs from Superior, WI to Sarnia, Ontario, Canada. Along its 645 mile-long path, Line 5 traverses 50 mi in close proximity to Lake Superior, 140 mi along Lake Michigan coast, and lies exposed under the Straits of Mackinac.

Lakehead Pipe Line Company, Inc, now Enbridge, Inc installed Line 5 over 64 yrs ago (in 1953). Engineers at the time gave it a life expectancy of 50 yrs. It has already been subject to a significant rupture near Crystal Falls, MI in 1999 and small ruptures which have been documented along upland portions of the Line, areas within the 1836 Ceded Territory. Enbridge has also failed to adequately monitor and maintain other pipelines; one which caused the Kalamazoo River oil spill in 2010. In August 2017 Enbridge disclosed that there are at least two areas of bare metal where the protective coating is missing. A third party analysis of the company's ability for emergency cleanup response determined the oil company was unprepared to handle an oil spill in the Great Lakes, especially if it occurred in windy weather or was complicated with winter ice cover. Enbridge announced last summer it would invest \$7 million in safety equipment for the Straits of Mackinac, but to many, it's not enough.

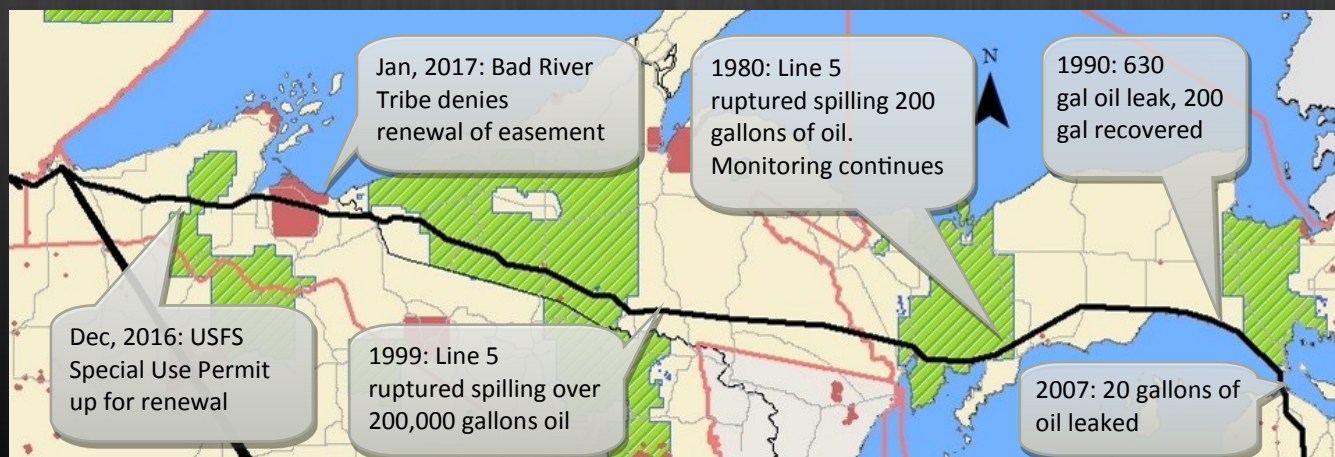
Many local tribes and tribal organizations have passed Resolutions calling for the decommissioning of Line 5. Numerous municipalities have also voiced opposition to Line 5. The threat to our communities and environment is too great. Recently, many land easements for the pipeline have come up for renewal. Approval for an easement on the Huron-Manistee National Forest was renewed in 2016. An easement for the Chequamegon-Nicolet National Forest is currently up for renewal. Early this year, the Bad River Band of Lake Superior Chippewa denied renewal of an easement that allowed the pipeline to traverse their Reservation lands. The Bad River Band took bold steps in calling for the decommissioning of Line 5 and removal of the pipeline from Bad River lands. CORA recently passed a resolution supporting Bad River's courageous decision.

To view pipeline locations and details on reported spills visit

<https://pvnpm.phmsa.dot.gov/PublicViewer/>

Many local tribes and tribal organizations have passed Resolutions calling for the decommissioning of Line 5 in addition to many cities and townships.

- ✓ Bad River Band
- ✓ Bay Mills Indian Community
- ✓ Chippewa Ottawa Resource Authority (CORA)
- ✓ GLIFWC
- ✓ Grand Traverse Bay Band
- ✓ Lac Vieux Desert Band
- ✓ Match-E-Be-Nash-She-Wish
- ✓ Little River Band
- ✓ Little Traverse Bands
- ✓ Nottawaseppi Huron Band
- ✓ Saginaw Chippewa Tribe
- ✓ Sault Ste Marie Tribe
- ✓ United Tribes of Michigan



# WATER QUALITY PROGRAM UPDATE

## Beach Monitoring: I've Got the Itch...Swimmer's Itch!!

Swimmer's itch is an unfortunate, yet common infliction that bathers face during the summer swimming season. This irritating condition is caused by a microscopic, parasitic flatworm that results in itchy red bumps on the skin. The flatworms that cause the condition use snails and waterfowl as hosts during their lifecycle. Humans get swimmer's itch when they come in contact with water that is infested with flatworm larvae. The flatworms burrow into the

Photo by CDC MN Department of Health



Right: The flatworm larvae responsible for swimmer's itch with photo of skin irritation.

skin causing itchy red bumps that last for about a week. Humans are not the correct host for these flatworms, and they cause no other harm to us other than the

irritating itching. The best way to prevent a swimmer's itch infection is to vigorously towel dry immediately after swimming. One could also avoid beaches that are frequented by waterfowl or have large numbers of snails. Bay Mills Biological Services Department does weekly beach testing for *E. coli* bacteria, but it cannot test for swimmer's itch.

*E. coli* bacteria in this area are often due to bird or other wildlife fecal inputs. The bacteria can cause skin and eye irritation or cause infections in cuts or wounds already present. If the source of bacteria is of human origin, there may be an increased risk due to more harmful strains of *E. coli*, other bacteria, parasites, or viruses. Unfortunately, there is no test for swimmer's itch; the only way to know if water is infested is to see the effects of the flatworm on skin.

For more information contact Brian Wesolek at 906 248 8648 or [bwesolek@baymills.org](mailto:bwesolek@baymills.org)

## SEASONAL STAFF in BIOLOGICAL SERVICES

Emily Barkley of Harbor Springs, MI is assisting Water Quality beach monitoring, routine site monitoring, and macroinvertebrate identification. She is studying Fisheries and Wildlife Management at LSSU. She hopes to pursue a career in aquatic biology.

Jake Larsen of Sault Ste Marie, MI is assisting Inland Fish & Wildlife with fish population assessments, wild rice surveys, and maintain equipment. Jake is studying Fisheries and Wildlife Management at LSSU. He hopes to pursue a career in fisheries.

Kierstin Loomis of Vestaberg, MI is assisting Inland Fish & Wildlife with fish and vegetation surveys. Kierstin completed her Bachelor's degree in General Biology at Central Michigan University. She hopes to pursue a career in Great Lakes Fisheries science.

Brandon Carrick of Brimley, MI is helping Biology for his third summer! He is assisting the Great Lakes Fisheries crew by conducting population surveys and maintaining equipment. Brandon continues to study Criminal Justice at Northern Michigan University.



Above: Jake Larsen, Emily Barkley, Kierstin Loomis, and Brandon Carrick



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