



**Manitoulin Streams Improvement Association 2023  
Annual General Meeting**

# 2023 AGM Overview

- Educational Outreach: tours, sessions, booths, youth rangers
- Community Outreach: cleanup events, invasive removals, tree planting, Ontario Stewardship Rangers
- Community Presentations: cattlemen, horticultural society, LMAA, Great Lakes Baseline Coastal Habitat Survey Webinar
- Media: socials, interactive map, website, newspaper
- Fundraising
- Restoration and Management
- Statistic to date
- Crew of 2023



# Educational Outreach

## Salmon Tours 2022



Little Current Public  
School



# Educational Outreach

## Salmon Tours 2022



C.C. McLean Public  
School



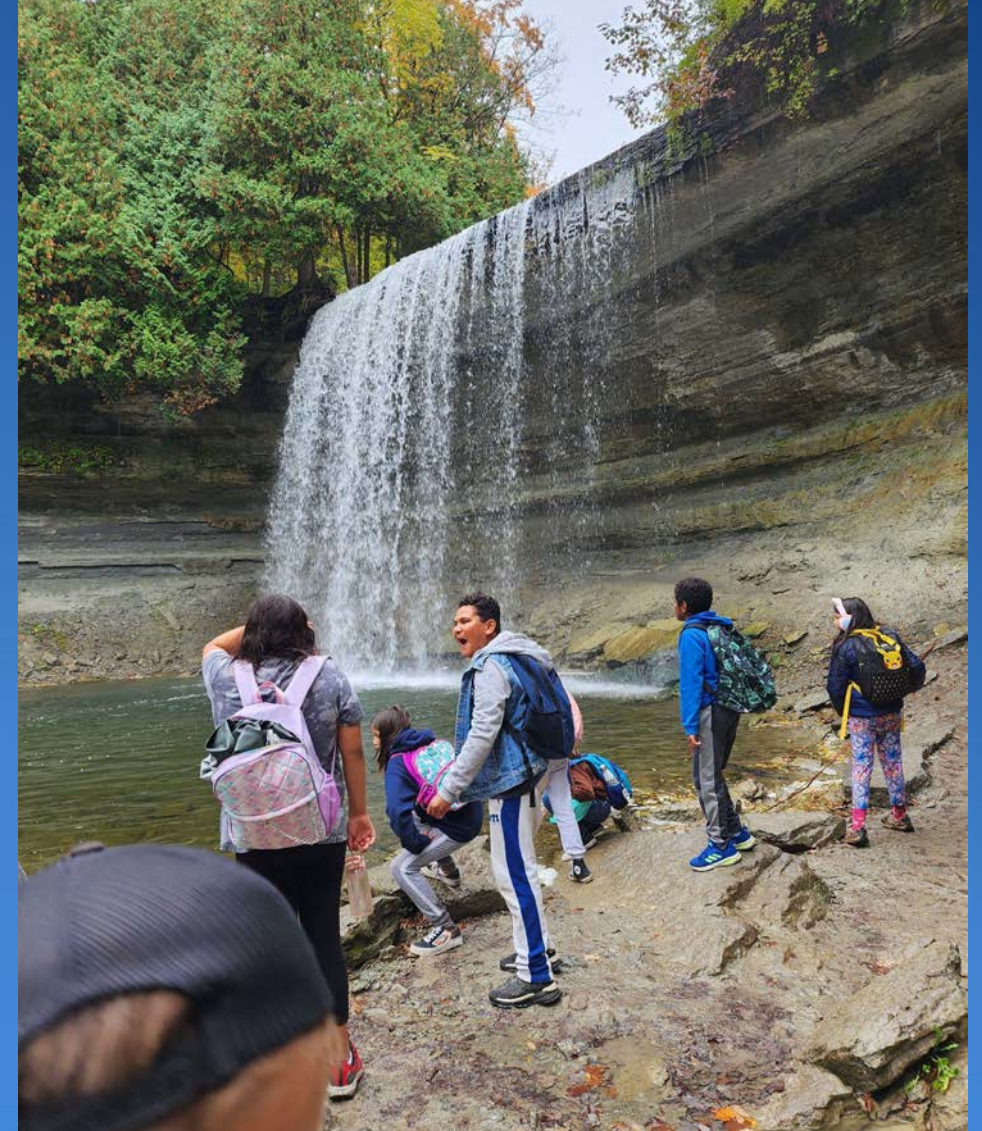


# Educational Outreach

## Salmon Tours 2022



Lakeview School





# Educational Outreach

## Salmon Tours 2022

- Manitoulin Secondary School
- St. Joseph's Anishinabek School
- Bishop Alexander Carter School
- Assiginack Public School
- Lasalle Secondary School
- École Secondaire Catholique Franco-Ouest
- Wikwemikong Tourism Toronto Commision





# Educational Outreach

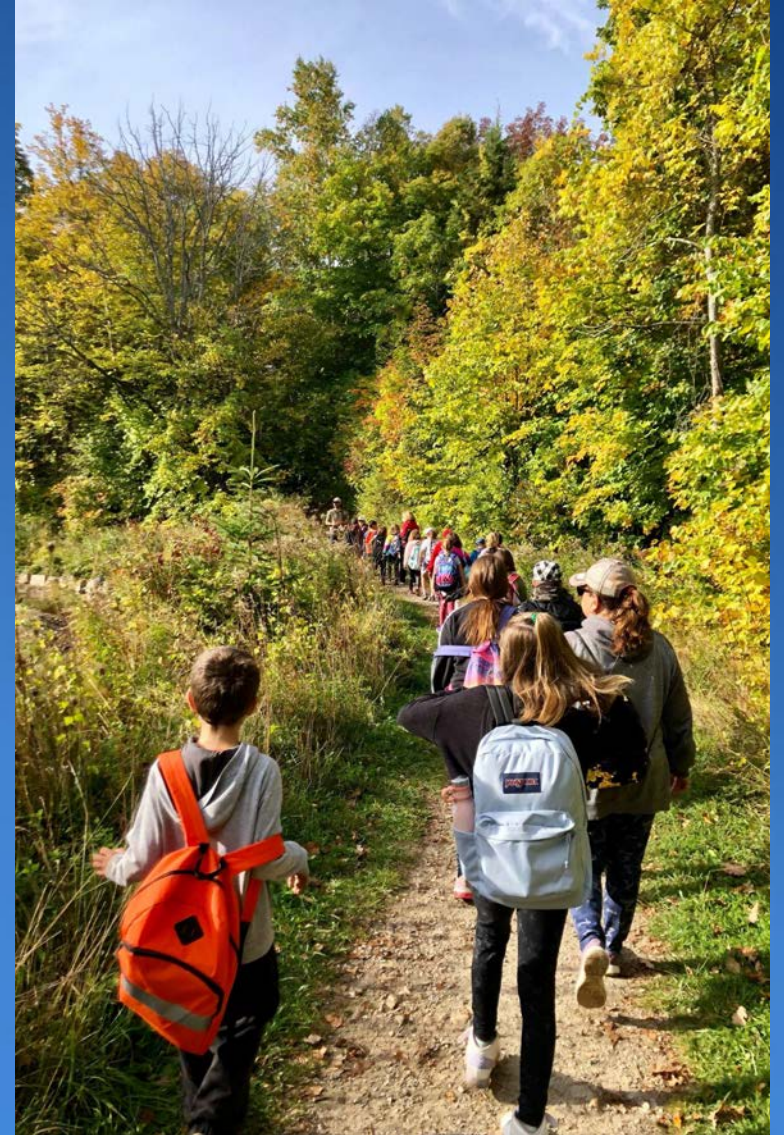
## Salmon Tours 2022

19 Salmon tours given, 2 in Providence Bay and 17 in Kagawong

10 total schools from Manitoulin to Toronto

The Elemental Festival

One birthday party!!!





# Educational Outreach Brook Trout Eyed-Egg Event



110,000 Brook  
Trout Eyed Eggs  
stocked to  
date. First year  
with students  
since covid!!!





# Brook Trout Norton's Creek





# Brook Trout M'Chigeeng Bay





# Educational Outreach Bass Lake Creek

First Time Since covid

Students from:

Little Current

Wikwemikong

Assiginack

Birch Island

Gore Bay

Mindemoya





# Educational Outreach

## Bass Lake Creek



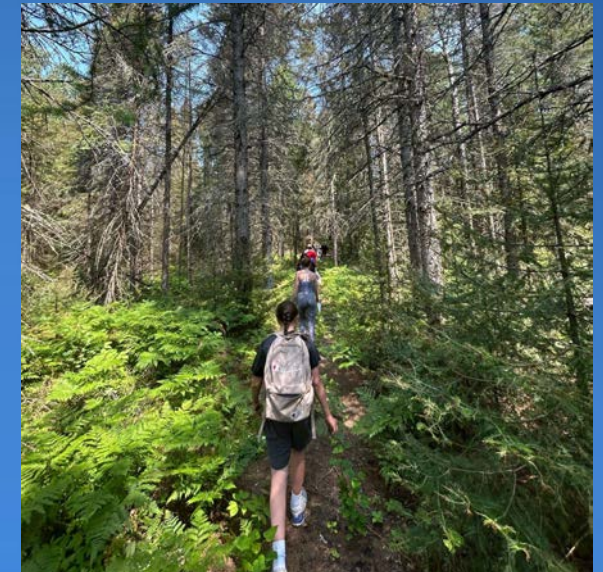


# Educational Outreach

## Sheshegwaning Water First Summer Program



Stream Detective and Silver Creek tour looking for potential restoration areas and talking stream mechanics





# Educational Outreach

## Natural Connections Medicine Walk, Norton's Creek

Debajehmujig Storytellers

Assiginack Family Health  
Team





# Educational Outreach

## Natural Connections Medicine Walk, Kagawong River



49 Shrubs planted and  
milkweed seeds

Odawa Foundational  
Teachings





# Educational Outreach

## Sheguiandah Summer Program Beach Day





# Educational Outreach Booth's

Haweater



Wikwemikong  
World Environment  
Day

Manitowaning  
Summerfest



RDSB Summer School  
Harbour Days

Providence Bay  
Fair



Assiginack Fall Fair

Providence Bay  
Discovery Centre  
Day





# Educational Outreach Youth Rangers

- Winter Tree ID
- Animal Track ID
- Animal Strategies for Surviving Winter





# Educational Outreach Youth Rangers

Maple Syrup tapping event and history

45 kids in attendance





# Educational Outreach Youth Rangers

- Signs of Spring
- Observing Natural History
- Shelter Building
- Fish Cleaning
- Leaf Identification





# Community Outreach Islandwide Garbage Cleanup





# Community Outreach Islandwide Garbage Cleanup



**Assiginack Fire  
Department  
collected 14 bags  
of garbage!**



## **ISLAND-WIDE GARBAGE CLEANUP**

**546 BAGS COLLECTED BY 611 PEOPLE FROM 178 KM OF  
ROADSIDE, STREAMS AND SHORELINES!!!**

### **SCHOOL CLEANUP AWARD**

**1st**  
Wasse-Abin Pontiac  
319 bags  
**2nd**  
Assiginack P.S.  
16 bags  
**3rd**  
C.C. McLean  
15 bags



### **COMMUNITY CLEANUP AWARD**

**1st:** Wiikwemkoong  
386 bags, 273 people  
**2nd:** Assiginack  
41 bags, 73 people  
**3rd:** Central Manitoulin  
31 bags, 54 people  
**4th:** NEMI  
30 bags, 11 people  
**5th:** Gore Bay/Gordon B.I.  
21 bags, 142 people  
**6th:** Billings  
20 bags, 20 people

### **GARBAGE CLEANUP HERO**

**Jaime Pyette: 19 bags  
over 7 days**

### **TALLEST CUP STACK** Roén Deschenes: 20 cups



### **BUSINESS CLEANUP AWARD**

**1st**  
Assiginack Fire Dept.  
14 bags  
**2nd**  
Bousquet Realty  
12 bags  
**3rd**  
LC United Church  
11 bags



### **GARB-AGE-GAP** Luka, Lily and Grandad: 68 years



**FAMILY AND OVERALL DRAW  
WINNERS WILL BE CONTACTED**





# Community Outreach Community Garbage Cleanups

- Providence Bay Beach
- South Baymouth Waterfront
- Gore Bay Waterfront
- Kagawong River
- Little Current Waterfront

20 bags of  
garbage  
removed,  
over 7000  
cigarette  
butts





# Community Outreach Invasive Species Removals

- White Sweet Clover: Kagawong and Providence Bay
- Purple Loosestrife: NCC Burnt Island
- White Sweet Clover: Kip Flemming





# Community Outreach Invasive Species Removals and Surveys

Phragmites

93km roadside surveyed on the island  
78 km of shoreline around Lake Manitou surveyed  
Lake Wolsey, North Channel Little Current, Black  
lake lodge - South Baymouth





# Community Outreach Tree Planting





# Community Outreach Tree Planting





# Community Outreach Ontario Stewardship Rangers





# Community Outreach Tree Planting



Over 300 trees and shrubs planted by 40 volunteers and individuals from partner groups such as the Ontario Rangers and NCC



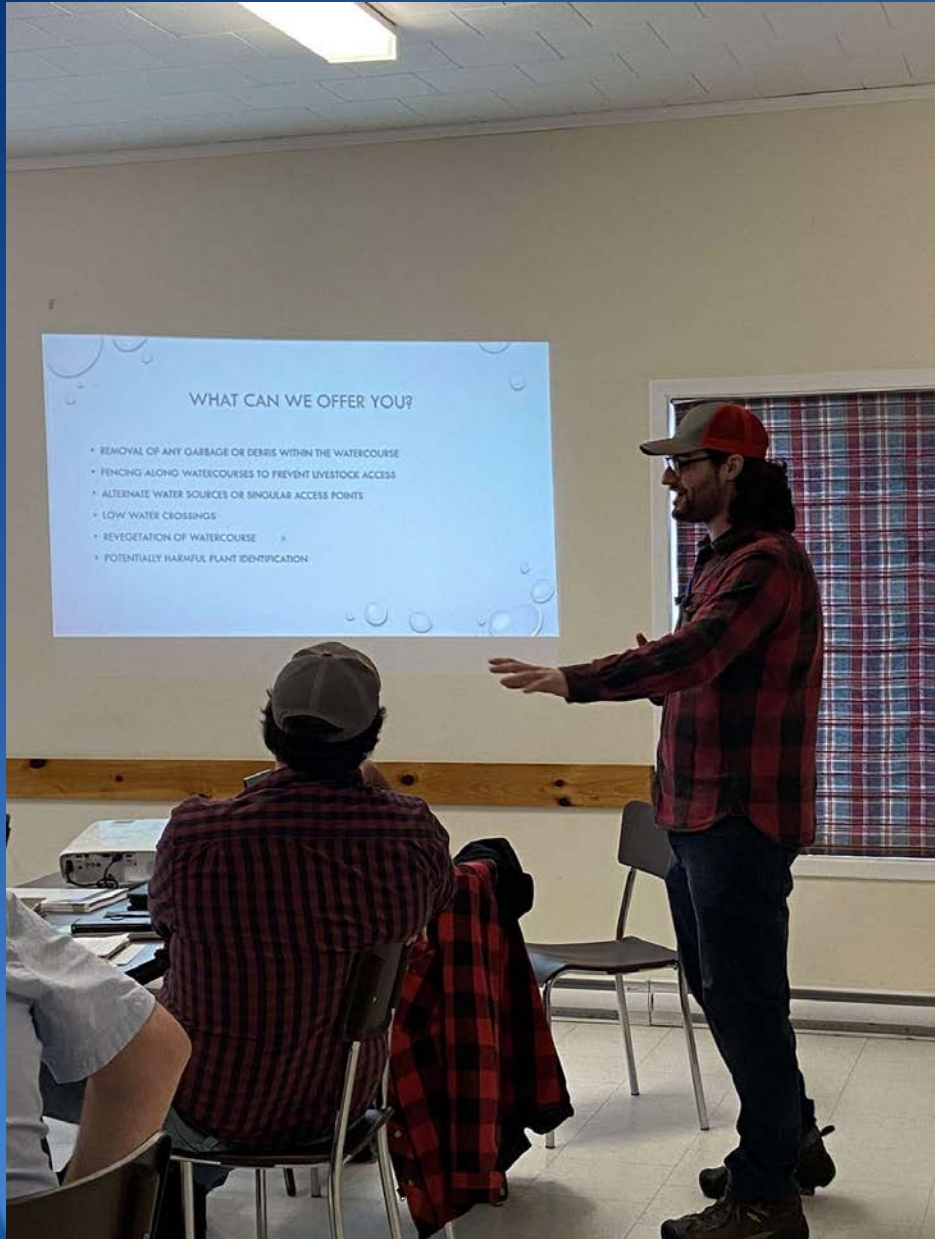


# Trees planted and distributed in 2023

Event	Amount
Kagawong River Sites 180/142 -trees	136
Kagawong River Sites 180/142 – shrubs	190
Grimesthorpe Creek Site S15 - Trees	762
Grimesthorpe Creek Site S15 - Shrubs	200
Tree sales	17
<b>Total</b>	<b>1305</b>



# Community/Educational Presentations



- Campbell Horticultural Society
- Twilight Seniors Club
- Cattlemen's Association and Beef Farmers of Ontario
- Billings Township and Recreation Committee
- Lake Manitou Area Association Info Night
- MSS Earth Day
- LCPS Earth Day



# Educational Outreach

- Stream Tours: 23
- Displays: 13
- Educational Sessions: 46
- Children: 901
- Adults: 1249
- Total participants: 2150
- Total Events: 44



# Educational Social Media Posts – Fish ID

## Rainbow Trout (Steelhead)



### What's the difference?

A Rainbow Trout spends its entire life in rivers. Where a Steelhead migrates to the ocean or large lakes, only returning to the rivers to spawn.

Rainbow Trout have an obvious pink or red line down the sides where Steelhead tend to be more of a silver colour. However, Steelhead get the pink/red line within a few weeks of returning to the rivers to spawn.



The Steelhead are born in a river where they will spend the first 1-3 years before heading to the Great Lakes. Once in the lake they feed on baitfish and quickly double in size before returning to their spawning rivers.

Steelhead are a very popular fish amongst anglers as they put up one of the best fights! They pull hard and fast with endless endurance. They often jump multiple times making them a fun catch.



## Do you know your baitfish?



HINT: Use the numbered features to help in your identification of this fish!

## Brassy Minnow (*Hybognathus hankinsoni*)

### Characteristics:

1. brassy-yellow body
2. diffuse dusky stripe, developed on rear half of side

Size: 65 mm; 96 mm

Similar species: Eastern Silvery Minnow

Ontario distribution: widespread in southern and northwestern Ontario  
Habitat: small, sluggish weedy streams with sand, gravel or mud bottom covered by organic sediment; also common in silt-bottomed, shallow bog ponds, streams and lakes

Use as bait: not commonly used



# LEGAL

This species can be used as bait.

Check out the Baitfish Primer for more info!



# Educational Social Media Posts- SAR

## BANK SWALLOW (*RIPARIA RIPARIA*)

### STATUS: THREATENED

Added to the Species at Risk list June 27, 2014



- A small songbird with brown upperparts, white underparts and a distinctive dark breast band. It averages 12 cm long and weighs between 10 and 18 grams
- Bank swallows eat land and water insects
- Many nests are on banks of rivers and lakes, but they are also found in active sand and gravel pits
- Largest populations are found along the Lake Erie and Lake Ontario shorelines, and the Saugeen River (which flows into Lake Huron)
- Threats include loss of breeding and foraging habitat, destruction of nesting habitat, widespread pesticide use, impacts of climate change and collision with vehicles



Ontario



## AWEME BORER MOTH

### (*PAPAPEMA AWEME*) STATUS: ENDANGERED

Already assessed as endangered when the Endangered Species Act took effect in 2008

- A yellowish or pinkish-brown with darker brown markings on the front wings and yellowish-white hind wings
- The body and head are dark brown and a wing span of 3.7cm
- Not much is known about the habitat needs of the Aweme Borer, it may live in prairie habitats, such as sand dunes and oak savannas
- Four of the five areas where the species has been collected in North America are along the Great Lakes shoreline
- In Ontario, it has only been found at Grand Bend on Lake Huron and on Manitoulin Island
- The greatest threat is habitat loss or degradation as a result of agricultural or recreational development
- Wild fire plays an important role in preventing natural succession and maintaining sand dunes and grasslands, however, fire at the wrong times could also destroy the eggs and host plant



Ontario



## CERULEAN WARBLER (*DENDROICA CERULEA*) STATUS: THREATENED

Added to the Species at Risk list June 8, 2011

- A small songbird - about 10 to 12 cm long - with long wings and a short tail
- They feed mainly on insects during the breeding season and on nectar during the non-breeding season
- usually raise one brood of three or four nestlings each year



- Spend their summers (breeding seasons) in mature, deciduous forests with large, tall trees and an open understory, until late summer when they begin their long migration to wintering grounds in the Andes Mountains in South America
- The main threat to this warbler is habitat loss from degrading and fragmenting forests, since it requires relatively large tracts of forest, and winter foresting grounds are under heavy logging stresses



Ontario





# Educational Social Media Posts Pathogens

## What's ailing the fish?

### Whirling Disease

Other names: *Myxobolus cerebralis*, Black Tail Disease



**Whirling disease** is a reportable disease in Canada. This means that anyone who owns or works with aquatic animals, who knows of or suspects whirling disease in their fish, is required by law to notify the CFIA.

Whirling disease is caused by *Myxobolus cerebralis*, a microscopic parasite that affects salmonid fish such as trout, salmon and whitefish. The organism has a complex lifecycle that requires a salmonid fish and an aquatic-worm. **Overall death of infected fry and fingerlings can reach 90%.** They are related to jellyfish, box jellyfish, anemones, hydra, and corals.

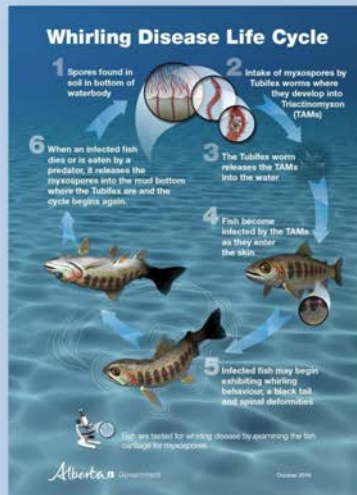
Whirling Disease was first observed in the United States in the 1950s. In Canada, the first detection of Whirling Disease was in Johnson Lake, Banff National Park, 2016. Whirling disease has been confirmed in all watersheds in Alberta, by Alberta Environment and Parks. It is not noted to be in Ontario as of yet, **Lets keep it that way!**

What can you do? Everyone, including anglers, boaters and recreational water users can help stop the spread of whirling disease by following these best practices: Preventing the introduction of parasites to new water bodies and reducing infection of healthy fish populations is currently the best option for managing the disease:

- Refrain from using fish or Tubifex worms as bait
- Do not transport water, sediment, and/or fish (live, dead, or body parts) among water bodies
- Thoroughly clean, drain, and dry watercraft, trailers, and equipment before moving between water bodies
- Report any sick or dead fish to the Canadian Wildlife Health Cooperative. Find your closest regional centre at: <http://www.cwhc-rcsf.ca/>

**RISK TO HUMAN AND DOMESTIC ANIMAL HEALTH** - *Myxobolus cerebralis* does not pose a risk to mammalian health, including humans. However, salmonids raised in captivity for aquaculture or other purposes are at risk of infection if fish are exposed to food, water, or equipment.

There are currently no known treatments for whirling disease. Additionally, the resilience of spores in sediment makes clearing parasites from infected water bodies extremely difficult.



## OAK WILT

Oak Wilt (*Bretziella fagacearum*) is an invasive fungus species that grows on the leaves of oak tree species. The fungus restricts the flow of water and nutrients inside the trees vascular system, eventually resulting in the trees death. The fungus has for the first time been found in May 2023 in Niagara Falls. After another confirmed identification of Oak Wilt in June 2023 was spotted in Springwater, ON., it's now more than ever important to stay vigilant to prevent the spread of this invasive fungi.



## IDENTIFICATION

The most obvious sign of an infected tree is the wilting and discoloration of the trees foliage, starting from the top of the tree, working downwards. Barren tree branches can also be seen depending on the stage of the infection. Other signs include; white, grey or black fungal mats under the bark, as well as visible dark rings inside infected branches.

If spotted, contact OFAH Invasive Species Hotline at 1-800-563-7711, or visit [www.EDDMapS.org](http://www.EDDMapS.org) to report sighting.



## What's ailing the fish?

### Viral Hemorrhagic Septicemia



Viral hemorrhagic septicemia (VHS) is an infectious fish disease. It was first detected in Lake Ontario in 2005.

Outbreaks are most common in the spring when:

- temperatures are fluctuating
- fish are spawning

#### Affected fish species

Fresh and saltwater fish can catch VHS. The Great Lakes strain of the virus affects both game fish and baitfish species.

#### Game fish

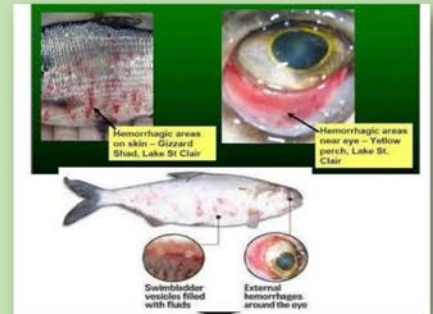
- Walleye
- Yellow perch
- Muskellunge
- Smallmouth bass
- Rock bass
- Chinook salmon
- Black crappie
- White bass

#### Baitfish

- Emerald shiners
- Bluntnose minnows
- Spottail shiners

#### Other species

- Freshwater drum
- Round goby
- Gizzard shad



Infected fish may show the following signs:

- pale gills and organs
  - bloated abdomen
  - bulging eyes
  - hemorrhages (bleeding) on body and organs
  - darker body colour
- Some fish show no signs of infection.

#### People and VHS

VHS is not a risk to human health:

- the virus does not affect humans
- fish carrying VHS are safe to eat and handle

However, it is never wise for people or pets to consume or handle fish that:

- look sick
- are dying
- are already dead

#### How VHS spreads

VHS spreads in water, and by contact with infected fish and their body fluids. The virus can travel from one waterbody to another on anything it has contacted, including:

- fish
- water
- boats
- equipment

#### Ontario lakes where VHS is found

- Lake Ontario
- Lake Erie
- Lake Huron
- Lake Simcoe (since 2011)





# Invasive Species – Call to Action

## The Difference Between Fireweed and Purple Loosestrife



Native Fireweed

(*Chamaenerion angustifolium*)

- Flowers are more pink in colour than Purple Loosestrife.
- Flowers have 4 petals.
- Stem is smooth and circular.
- Usually grows in drier areas.



Invasive Purple Loosestrife

(*Lythrum salicaria*)

- Flowers are more purple in colour than Fireweed.
- Flowers have 5-7 petals.
- Stem is square in shape.
- Grows in marshy or wet areas.

If Purple Loosestrife is spotted, contact OFAH Invading Species Hotline at 1-800-563-7711, or visit [www.EDDMapS.org](http://www.EDDMapS.org) to report sighting.



## DON'T MOVE FIREWOOD

Moving firewood, even just a few kilometers away, can spread invasive species and diseases to our forests

Some invasive species that are spreading through transportation of timber:



### Asian Long-Horned Beetle

Introduced in the 1990s through wooden shipping pallets. It attacks and kills a range of Hardwood trees

### Emerald Ash Borer

Larvae tunnel through an ash trees vascular system; 100% mortality rate of the tree if infested



### Pine Shoot Beetle

Bore under the bark of pine trees, construct a brood chamber, mate and lay eggs



**Buy it locally. Burn it on site. Never bring it back home.**

Something as simple as bringing your own firewood to or from your favorite campsite could threaten and destroy thousands, even millions of trees



## Help Prevent the Spread of Aquatic Invasive Species

### Boater's Checklist

- ✓ Remove and dispose of aquatic plants, mussels and other visible organisms
- ✓ Drain water from your boat including the motor, live well and bilge
- ✓ Do not release live bait! Empty your bait bucket on land or freeze the bait to use later
- ✓ Remove organisms you can't see by either:  
Rinsing with hot water. OR  
Spraying with high-pressure water. OR  
Drying in the sun for 5 days

### How aquatic invasive species affect you

- clog boat engines and jam steering equipment
- clog cottage water intake lines
- choke lakes and waterways and restrict use by boats and swimmers
- reduce the numbers of popular sportfish
- degrade the natural beauty of our lakes and waterways
- reduce waterfront property values

### What are alien invasive species

Any plant or animal occurring outside of its natural range, caused by accidental or deliberate human activity. Thus causing harm to the environment, economy or society.

- Zebra mussel (clam)
- Round Goby (fish)
- Spiny water flea (invertebrate)
- Eurasian watermilfoil (aquatic plant)

### How did they get here

An estimated 3000 species arrived in the ballast water of ocean-going vessels around the world

Other modes of transport:

- recreational boating
- aquarium and water garden trade
- release of live bait
- live food fish trade
- aquaculture
- man-made canals

### facts

When aquatic invasive species are introduced and survive, their population usually increases very rapidly. They may feed on native species and compete for food and space, as well as introduce parasites and diseases.





# Educational Social Media Posts-Invasive Species

## Round Goby

The Round Goby (*Neogobius melanostomus*) is an aquatic invasive species currently found throughout the Lake Huron shoreline on Manitoulin Island. First discovered in Ontario in the 1990s they have rapidly spread throughout the Great Lakes with their ability to spawn multiple times a season. The Round Goby aggressively feeds on mussels, insects, fish eggs and small fish leaving a huge impact on already threatened aquatic species as well as sport fish.



### Identification

The Round Goby is 6-16cm long, with a rounded, brown or olive body with reproducing males being entirely black. The main and most important difference between the Round Goby and other similar native species is their fused, scalloped-shaped pelvic fin.



If spotted, contact OFAH Invasive Species Hotline at 1-800-563-7711, or visit [www.EDDMapS.org](http://www.EDDMapS.org) to report sighting.



## Purple Loosestrife

Purple Loosestrife (*Lythrum salicaria*) is an invasive flower species found in every province in Canada. With the ability to produce two million seeds per year, the flower can easily outcompete native species in wetlands and other marshy areas, decreasing biodiversity and changing the entire ecosystem as a whole. The plant also chemically alters the soil it's in, leaving it less habitable for many native species, perpetuating the decrease in biodiversity while putting native species at risk due to habitat loss.



### Identification

Purple Loosestrife grows between 60-120cm in size but can reach over 2m in height. Their stem is square and wooden with 4-6 sides, which can shoot off 1-15 flowering stems. The flowering stems produce a spike of pinkish purple flowers which have between 5-7 petals per flower which are around 10mm in length.



If spotted, contact OFAH Invasive Species Hotline at 1-800-563-7711, or visit [www.EDDMapS.org](http://www.EDDMapS.org) to report sighting.



## Rusty Crayfish

Rusty Crayfish (*Faxonius rusticus*) are an invasive species that can currently be found in all rivers and streams flowing out into Lake Huron on Manitoulin Island. They are more aggressive in behaviour and after being introduced by anglers dumping bait, they are able to outcompete our Ontario native crayfish species, decreasing biodiversity. They also consume high levels of vegetation, they destroy spawning habitats for native fish.



### Identification

Rusty Crayfish are 7.5-13cm in size, with rusty like patches on the side of their shell. Their claws are usually reddish brown or greyish in colour with a black band near the tip.




If spotted, contact OFAH Invasive Species Hotline at 1-800-563-7711, or visit [www.EDDMapS.org](http://www.EDDMapS.org) to report sighting.




## Periwinkle

Periwinkle (*Vinca minor*) is an invasive ground cover present in many parts of Ontario. After being brought from Europe as an ornamental plant, it escaped captivity and quickly dominated the undergrowth in many habitats. By forming dense mats along the forest floor, periwinkle can easily outcompete other species, which decreases biodiversity and puts native species at risk.




### Identification

Periwinkle does not grow very tall, only reaching 15cm in height but can spread along the ground up to 1m. The plant grows leaves that are shiny and dark green. Periwinkle flowers in early spring with each flower containing 5 petals that are purple or violet in colour.



If spotted, contact OFAH Invasive Species Hotline at 1-800-563-7711, or visit [www.EDDMapS.org](http://www.EDDMapS.org) to report sighting.





# Informational Social Media Posts- Fish derbies

## **AUGUST 12TH 2023 PIKE MASTERS RESULTS**

**1ST PLACE \$335.00**

**JR CORBIERE**

**73 3/4"**

**2ND PLACE \$200.00**

**MIKE ASSINEWAI**

**70 1/2 "**

**3RD PLACE \$135.00**

**CASEY DEBASSIGE**

**66 "**



**PIKE MASTERS POT  
\$2,129.00**

## **WIKWEMKOONG ANGLERS 2023 PIKE MASTER SCHEDULE**

**\$60 / ANGLER 7 AM - 6 PM**

**2 VIDEO SUBMISSIONS / TOURNAMENT**

<b>MAY 6</b>	<b>JUNE 17</b>	<b>JULY 29</b>
<b>MAY 20</b>	<b>JULY 2</b>	<b>AUGUST 12</b>
<b>JUNE 3</b>	<b>JULY 15</b>	<b>AUGUST 26</b>

**VIEW OUR FACEBOOK PAGE FOR TOURNAMENT RULES**

**TWO DAY CLASSIC  
SEPTEMBER 2ND & 3RD**

**EMAIL :**

**WIKYANGLER@GMAIL.COM**



**TimestampCa...**

**DOWNLOAD THE TIMESTAMP CAMERA APP  
FOR YOUR VIDEO SUBMISSIONS**



# Educational Social Media Posts-ID Trivia



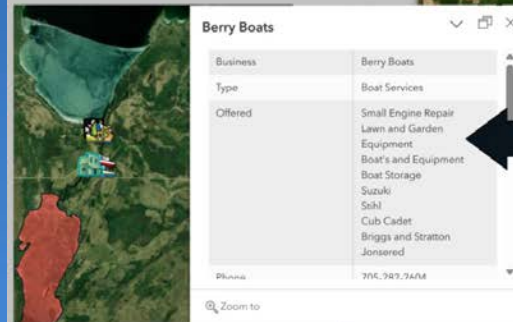
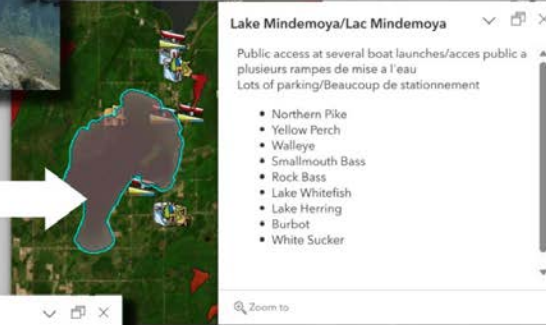


# Interactive Angling and Outdoor Recreation Map: User Guide



Up to date aerial drone photos of Manitoulin Island boat launches

Find an accessible lake and see what fish it holds!



Local businesses in the angling, outdoor recreation, and tourism industries!

Hiking trails, marinas, food and accommodations!  
Everything for a perfect Manitoulin adventure!



Federal Economic Development  
Agency for Northern Ontario

Agence fédérale de développement  
économique pour le Nord de l'Ontario



# Manitoulin Angling/Outdoor Recreation Map

## Interactive Map User Guide



- 1 • Click here to go to the Manitoulin Streams Website
- 2 • Click here to zoom in and out of the map
- 3 • Click here to zoom out and see all of Manitoulin
- 4 • Click here to change basemaps
- 5 • Click here to see the legend
- 6 • Click here to find your current location
- 7 • Click here to search hiking trails, boat launches, businesses and points of interest
- 8 • Click here to toggle map layers on and off



Federal Economic Development  
Agency for Northern Ontario

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économique pour le Nord de l'Ontario



# Manitoulin Angling/Outdoor Recreation Map

## Interactive Map User Guide

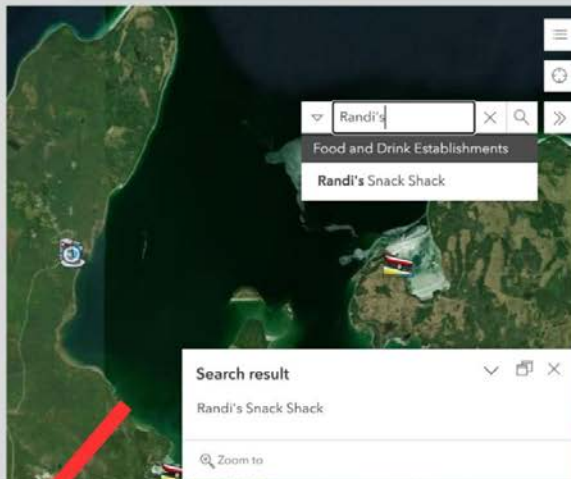


5 • Click on the legend to see the symbols used for each type of map feature.

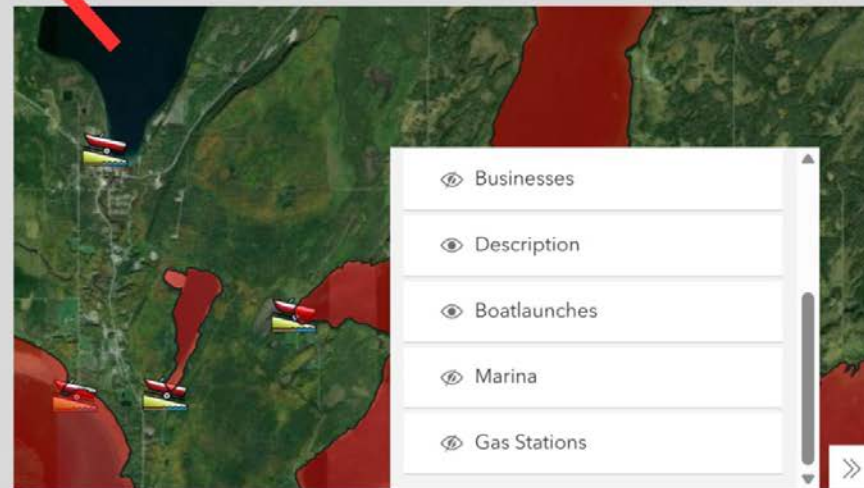
- Hiking Trails
- Food and Drink Establishments
- Businesses
- Boat Launches
- Marinas
- Gas Stations



8 • If you're looking for something specific like boat launches, click here to turn off all other layers.



7 • Use the search feature to look up any businesses, trails, boat launches, etc.



Federal Economic Development  
Agency for Northern Ontario

Agence fédérale de développement  
économique pour le Nord de l'Ontario



# Outreach Online

- Facebook Reach 2023: 112035 up 28%
- Instagram Reach 2023: 6407 up 544%
- Facebook Visits 2023: 10074 up 266%
- Instagram Visits 2023: 591 up 73%
- New Facebook Followers 2023: 291
- New Instagram Followers 2023: 142
- Website: 5848 unique visits and 9650 page visits
- Interactive Angling Map: 1812 views and uses in 2023



# Fundraisers – 5th Jackets & Jeans Gala



Don Tenniswood - Salmon Sculpture



Steel North



6 foot Picnic table - Cody Clarke



A stay at Hutchinson's  
Cottages and Campground



Tickets to Rod Stewart



# 5th Jackets & Jeans Gala



110 local individuals  
and businesses  
support

J&J funds raised:  
\$34,322





# Restoration and Management



# Kagawong 142



Large slump  
occurring due  
to erosion  
causing  
sedimentation  
downstream



Trees falling  
into stream  
causing log  
jam and  
preventing  
fish passage



# Kagawong 142

Bank erosion & sedimentation





# Site KAG 142

30 linear metres  
7 root wads & 30 boulders  
3 gravel spawning beds  
4 boulder clusters





# Site KAG 142

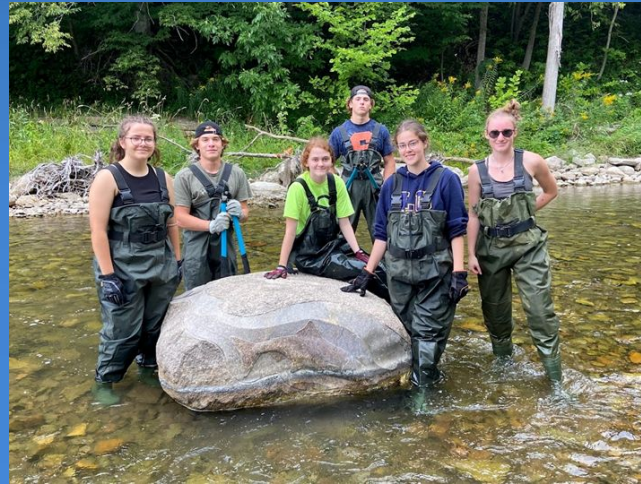


100 m2 of riparian habitat restored  
50 milkweed seeds  
284 trees and shrubs





# Site KAG 142



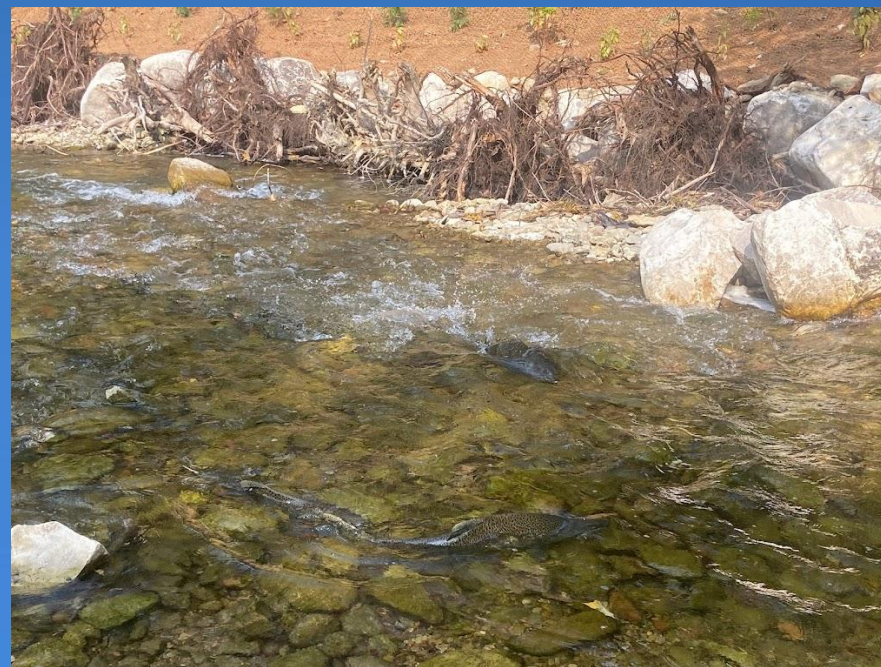








KAG142





# 2023 Restoration Numbers

Kagawong 142:

- # of in-stream structures (44)
  - boulder clusters (4)
  - root wads (7)
  - Boulders(30)
  - Spawning beds (3)
  - linear meters of shoreline restored (30m)
  - # of trees (95) and shrubs (189), milkweed (50) planted
- Total = 334
- Riparian habitat restored (trees, shrubs, milkweed) (100m<sup>2</sup>)



# Kagawong 180





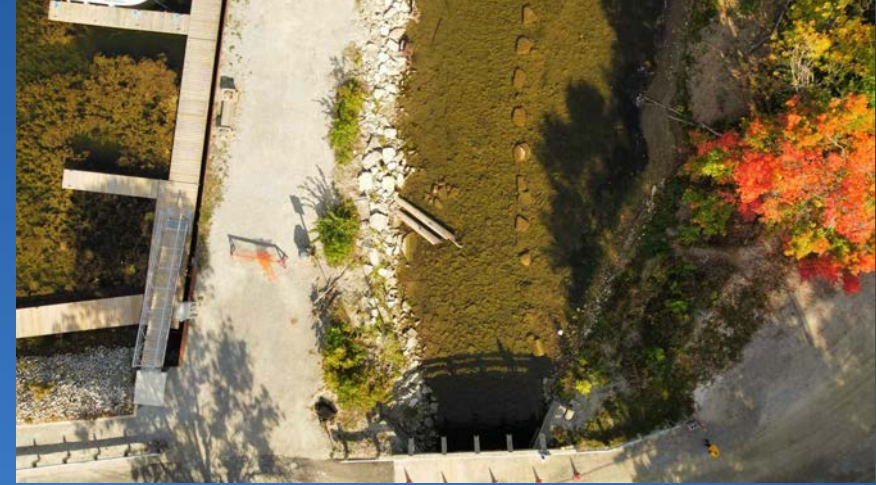
# Kagawong 180

80 linear metres of shoreline  
102 instream structures  
6 root wads  
22 boulders clusters  
2 vortex weirs (72 boulders)





# KAG 180





# KAG 180





# KAG 180



398 trees and shrubs  
230 m2 of riparian habitat





# KAG 180





# 2023 Restoration Numbers

Kagawong 180:

- # of in-stream structures 215
- 2 vortex weirs (170 boulders)
- root wads (6)
- Boulder clusters (37)
- Spawning beds (2)
- linear (m) of shoreline restored (80m)
- # of trees (143) and shrubs (205), milkweed (50) planted Total = 398
- Riparian habitat restored (trees, shrubs) (230m<sup>2</sup>)



# Grimesthorpe S15 & Tributary



Riparian Restoration, loss of habitat  
and vegetation due to cattle access

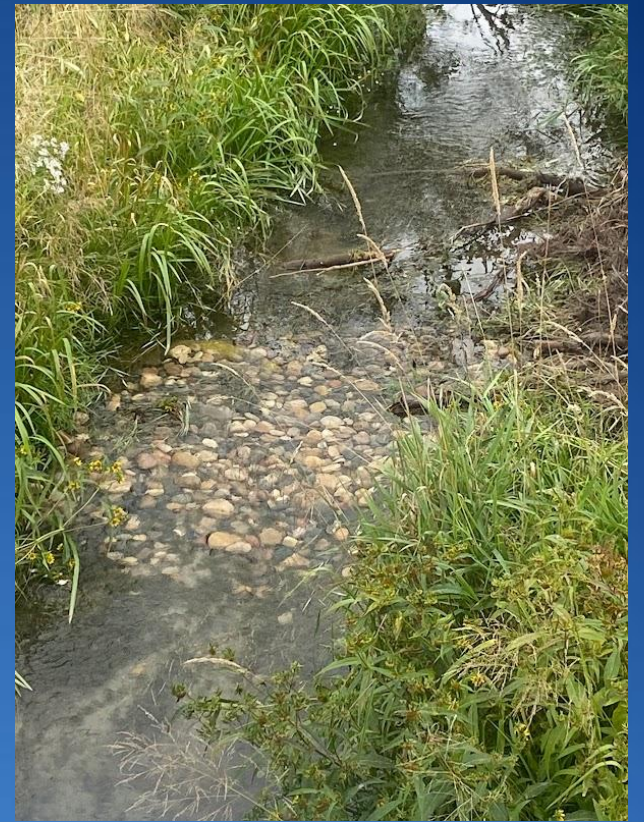


# Grimesthorpe S15



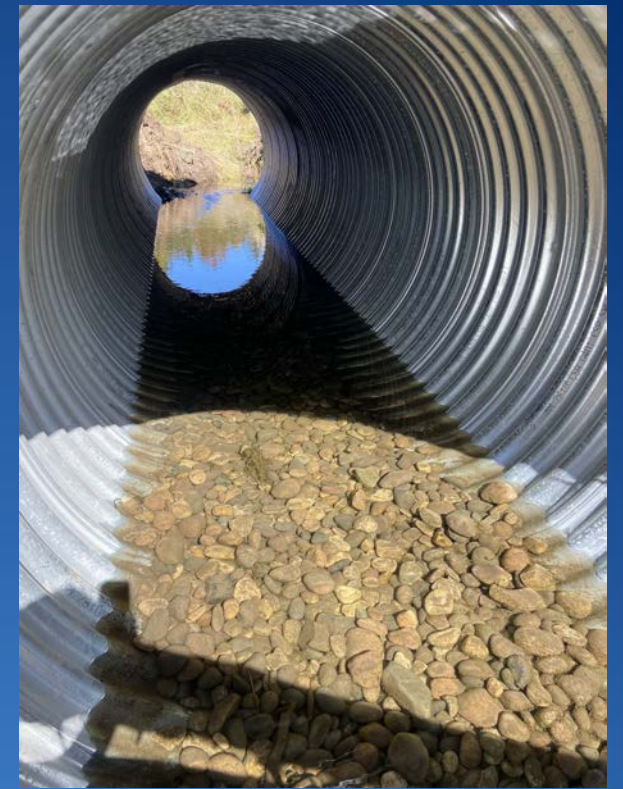


# Site S15





# Grimesthorpe S15





# Grimesthorpe S15 & Tributary





# 2023 Restoration Numbers

## Grimesthorpe S15 and Tributary:

- Large Culvert replacement (1)
- # of in-stream structures (15)
- root wads (7)
- Boulder clusters (2)
- Spawning beds (5)
- linear (m) of shoreline restored (160m)
- # of trees (762) and shrubs (20) Total = 962
- (m<sup>2</sup>) of riparian habitat restored (trees, shrubs) (5975m<sup>2</sup>)

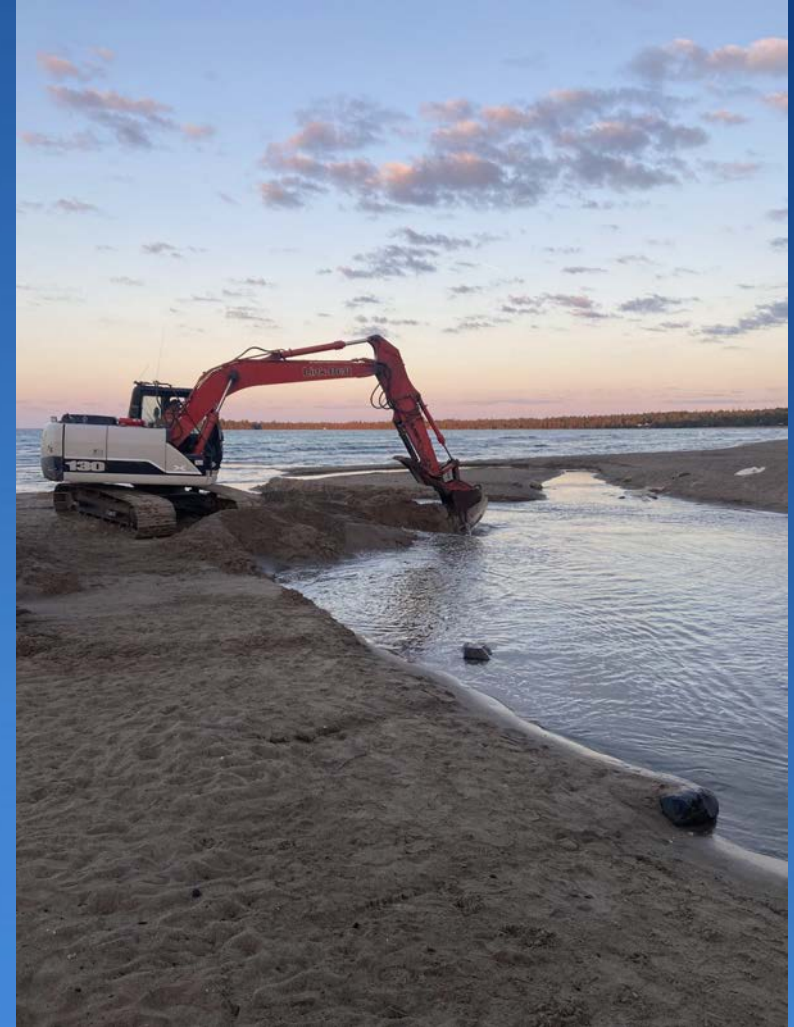


# Total Accomplishments To Date

- 12,567 linear meters
- Repaired 126,501 m<sup>2</sup> aquatic in-stream habitat
- Enhanced 368,571 m<sup>2</sup> riparian habitat
- Planted 60,923 trees
- Installed 6,462 meters of fencing
- 8 nose pumps
- 12 watering ramps
- 110,000 brook trout eggs stocked



# Dredging Mouth of Mindemoya River





# Dredging Mouth of Mindemoya River





# 2024 Projects

Wikwemikong shoreline Restoration  
Wikwemikong Angling Platform

Grimesthorpe Creek S19 A & B  
Grimesthrope Creek S14

Angling Trade Fair



# Funders & Partners

- Local landowners and donors
- Little Current Fish and Game Club
- Little Current Lions Club
- Gore Bay Fish and Game Club
- Manitoulin Nature Club
- OFAH Zone D
- Lake Manitou Area Association
- Little Current Lions Club
- Manitoulin Transport
- Douglas A. Smith Foundation
- Wiikwemkoong First Nation
- Laurentian University
- College Boreal
- Kenjgewin Teg Educational Institute
- Lukeystrike705 – Lukas Arnold
- OFAH Community Conservation Fund
- Lake Huron Forever
- Assiginack Health Unit
- Bruce Power
- The Sustainability Project
- Ramakko's Source for Adventure
- FedNor
- Canada Summer Jobs Program
- Northern Ontario Heritage Fund Corp.
- Ontario Environmental Community Fund – (ECCC)
- Eco-Action (ECCC)
- Environmental Damage Funds – (ECCC)
- Ministry of Natural Resource & Forestry (MNRF) – Canada Ontario Agreement Funds
- Ministry of Environment Conservation and Parks (MECP) – Canada Ontario Agreement Funds
- Township of NEMI
- Township of Assiginack
- Township of Billings
- Town of Gore Bay
- Township of Gordon/Barrie Island
- Municipality of Central Manitoulin



# Economic Stimulus in our Communities

- Economic stimulus for Manitoulin Island to date:  
**\$6.4 million dollars** of funding and in-kind support since 2003
- Employed 2 full time employees, 1 Invasive Species Liaison through OFAH, 1 Community Stewardship Resource liaison - Canada Summer Job position

## **New Partnership:**

Assignack Family Health Team  
OFAH Community Conservation Fund  
lukeystrike705



# Remembering Paul Moffatt





# Remembering Paul Moffatt



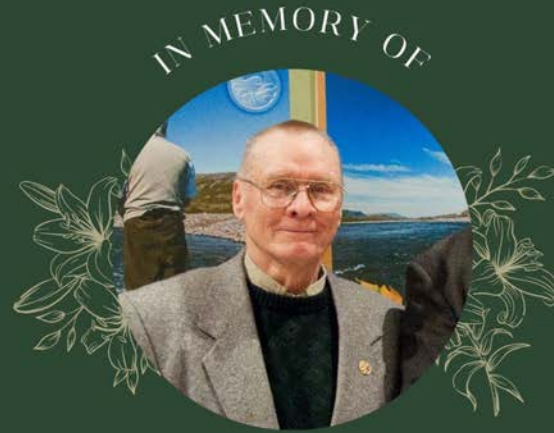


# Remembering Paul Moffatt





# Remembering Paul Moffatt



PAUL MOFFATT

Please join Manitoulin Streams to honour  
beloved community member Paul Moffatt  
with the placement of a memorial bench.

AT 6PM ON SEPTEMBER 27TH, 2023  
BEHIND THE MANITOWANING TOWNSHIP OFFICE  
OVERLOOKING THE WATER



# Crew of 2023

