BAWG

2022

FIELD & ACTIVITY REPORT

Prepared by: Sherry Pelkey, Jenna Smith, Sophie Lannigan

Belfast Area Watershed Group

Contents

President's Message

In our 5th year, we included lofty goals to preserve, enhance and improve the structural conditions of our watersheds, including supporting healthy communities of plants and animals with attention given to species-at-risk and invasive species. We would be remiss not to mention the arrival of hurricane Fiona, which we all experienced in various ways. For BAWG, we understand that our environment is always changing, although it is usually at a slower pace! We will continue to forge ahead, although our work plans have changed somewhat due to accessibility to some areas - but we will prevail and continue to work with nature in all its changing forms.

Alongside our various annual monitoring activities, BAWG secured funding over four years to implement a rehabilitation project funded by Fisheries and Oceans Canada Small Crafts Harbours (DFO-SCH) for the rehabilitation/restoration of degraded aquatic habitats. The project site on the upstream side of Garfield and Camp Rd, Melville, began in September 2022; however, getting to this point took over two years of field assessments and planning. These activities included the support of the PEI Watershed Alliance and PEI Forests, Fish and Wildlife.

While our partnerships with various organizations to perform boots-on-the-ground activities are highly valued, so is the ability to provide our community with an avenue to support our goals. In 2022 we partnered with the Community Foundation of PEI to be our conduit to provide charitable tax receipts to all.

Additionally, we are appreciative for the financial support from donors and funders to provide meaningful work experiences, which without we would not be able to perform the multitude of restoration and monitoring activities. That brings us to our dedicated staff and crew. We now have two full-time employees and a summer crew of six, and two fall crew. Furthermore, we were pleased to have had the assistance of the Transitions East Holland College students at various projects, 2 UPEI Environmental Studies interns, and 1 NSCC student assisting with spring and fall watershed activities.

The following activity report will give you a glimpse into our field activities. However, the community support that happens behind the scenes is more challenging to report on, as we cannot express enough our gratitude—every volunteer hour, email, text, or land access permission counts towards protecting our watersheds. We recognize the value of our volunteers, landowners, local organizations, and partners, who are critical in protecting and preserving our natural resources – we thank you!

Andrew Henry

President, Belfast Area Watershed Group

BAWG Summer Crew 2022

Isaac Edward, Carson Wight, Morgan Gill, Sophie Lannigan, Jenna Smith, Miranda Ings, River Waterman.

Funders and Supporters

Funding Partners	
PEI Wildlife Conservation Fund (Spring and Fall funding)	PEI Wildlife Conservation Fund PRINCE EDWARD ISLAND WILDLIFE CONSERVATION FUND
– PEI Watershed Management Fund – J. Frank Gaudet Nursery – PEI Department of Social Development and Housing – PEI - Employment Development Agency – Department of Economic Growth, Tourism and Culture (Skills PEI – Post-Secondary and Graduate Mentorship programs	Prince Edward Island CANADA
Canada Summer Jobs - Government of Canada Fisheries and Oceans Canada (DFO)	Canada
Rural Municipality of Belfast – Community Grants Wood Islands Area Development Corporation	RMB Rural Municipality of Belfast

Monitoring & Surveys

Smelt Surveys

In April we began surveying the watershed for rainbow smelts (*Osmerus mordax*). In the spring, smelts migrate in groups to freshwater rivers to breed. We monitored 15 locations ranging from Point Prim to Wood Islands. While we did not find any rainbow smelts this time around, we plan to survey for them again next season.

Macroinvertebrate Monitoring

BAWG began **aquatic macroinvertebrate*** sampling this year at 2 locations. Normally, this process is done with a specialized D-Frame kick-net. However, this type of net is quite expensive. Instead, a make-shift kick net was made using 2 wooden dowels and a window screen. To collect the invertebrates, you place the net in the water and hold it perpendicular to the river's flow, then someone else kicks up the substrate upstream of the net. Benthic macroinvertebrates live on and around small rocks and vegetation within the river so stirring up the substrate dislodges them into the net. Once collected, the net is taken to the river's edge where the crew quickly sorted and identified the macroinvertebrates. We identified each macroinvertebrate down to their family name. Afterwards, our results were compiled into a spreadsheet and used to determine the Hilsenhoff Biotic Index for each location. This is a type of water quality index that can help determine stream health in the sample area. Benthic macroinvertebrates are important bioindicators, meaning they can help tell us about how healthy a stream is.

Survey Locations & Results

1. Flat River (Above Hughies), *GPS: 46.016621, -62.851030*
    a. Results: Hilsenhoff Biotic Index of **3.05 = Excellent**
2. Pinette River (Below McPherson's), *GPS: 46.080144, -62.876306*.
    a. Results: Hilsenhoff Biotic Index of **5.04 = Fair**

Table shows categorizations for organic pollution levels using Hilsenhoff Biotic Index

Biotic Index	Water Quality	Degree of Organic Pollutants
0.00-3.75	Excellent	Organic pollution unlikely
3.76-4.25	Very Good	Possible slight organic pollution
4.26-5.00	Good	Some organic pollution probable
5.01-5.75	Fair	Fairly substantial pollution likely
5.76-6.50	Fairly Poor	Substantial pollution likely
6.51-7.25	Poor	Very substantial pollution likely
7.26-10.00	Very Poor	Severe organic pollution likely

Headwater Surveys

Headwater surveys were conducted on each of the 3 main river systems in the watershed (Pinette River, Belle River, Flat River); a survey was also done on 1 headwater area within the Little Sands Shore watershed in Wood Islands. The first set of surveys were done during the spring (May) to monitor high water flow and the second set of surveys were done during the fall (September) to monitor low water flow. These surveys will help determine the extent of some of our **first order streams*** and their headwaters. They will also be used to monitor the variability in the river's seasonal flows from year to year.

Left: headwater in spring. Above: same headwater in fall

Belfast Area Watershed Group coverage area (light green shade)

Amphibian Call Surveys

Between May & June we conducted amphibian call surveys. These surveys are done just after dusk, when we take 5-minute audio recordings at a pond or other body of water. The recordings are analyzed back at the office where we then ID all amphibians heard. We also categorized each type of amphibian based on their loudness. This helps estimate the quantity of individuals. The main goal of these surveys is to determine what types of amphibians are present throughout the watershed.

Survey Location	Wood Islands Pond	MacLeod Rd. Pond	Belle River (Garfield Rd)	Flat River (Camp Rd)	Roseberry Twins
Species Identified	Spring Peeper Green Frog	Spring Peeper Wood Frog	Spring Peeper Wood Frog	Spring Peeper American Toad Wood Frog	Spring Peeper

Amphibian Board Surveys

We also conducted amphibian board surveys throughout the watershed. To do this we first built 1 m^2 survey boards using untreated lumber. These boards were then placed in wooded areas near bodies of water by June 1. The boards are left undisturbed for 2 months, this gives the amphibians time to find the boards and move-in. After 2 months the boards are lifted to check for the presence of any amphibians (frogs, salamanders, toads). The checking was done randomly during different times and types of weather. This reduces any bias in results. We placed a total of 4 survey boards: Roseberry Twins, Wood Islands Pond, Flat River (Hughies dam), and Belle River (Munns Rd). Amphibians were found only at the Roseberry Twins location. 2 Eastern Red-Backed Salamanders (*Plethodon cinereus*) were found during the mid-August board checks.

Fun Fact: eastern red-backed salamanders have no lungs! Instead, they breathe oxygen through their skin. This means that they must remain constantly moist because the water is what allows the oxygen and carbon dioxide to diffuse through their skin. So, remember to always have clean, wet hands when handling any type of amphibian!

Bank Swallow Surveys

This summer we surveyed approximately 46 km of shoreline and found bank swallows at 11 different locations (New Cove Road, Cameron Island, Point Prim Lighthouse, Pinette Provincial Park, Ponds Road, Morrisons Beach, Nicholson Road, Stewart Point, Wood Islands, Guernsey Cove, and Beach Point). We found a total of 31 active colonies and 2 non active colonies. There were 667 nesting cavities (378 active, 288 non-active) and approximately 303 bank swallows found.

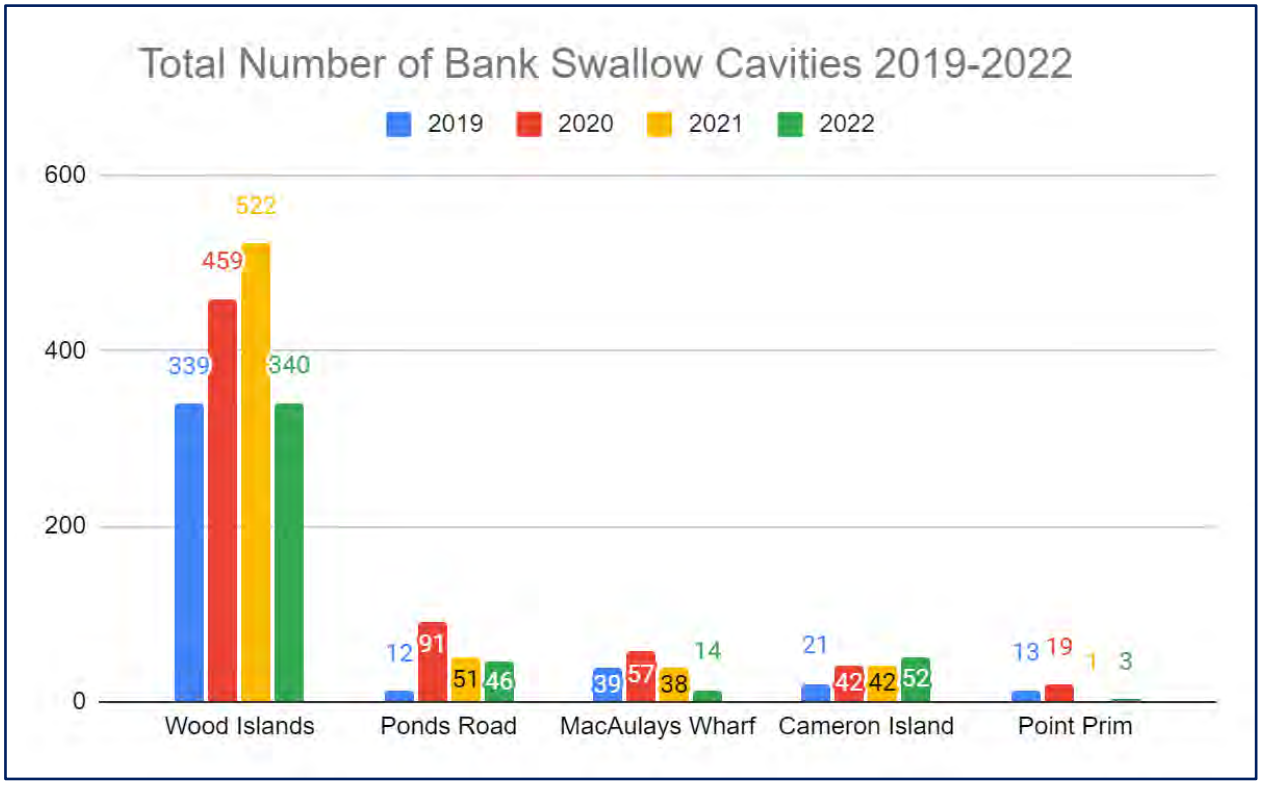


Figure 1 Includes active and non-active cavities.

Our results show that the Wood Islands colonies are still the most numerous in the watershed, with 340 total cavities found. This location was showing an annual increase in nesting cavities until this year (2022). The Ponds Road colonies experienced an increase in nesting cavities during 2020 but has been experiencing a decline in the years since. Similarly, the MacAulay's Wharf population had an increase in nesting cavities in 2020 and a decrease in the years following. The Cameron Island colonies have experienced an increase in the number of nesting cavities since 2019. The Point Prim population had a slight increase in nesting cavities this year where it went from 1 nesting cavity in 2021 to 3 nesting cavities in 2022.

Click here to view bank swallow survey map

Bank Swallow Banding

On June 29 before sunrise, we had the opportunity to assist with the banding and tagging of bank swallows as part of a project run by the Canada Wildlife Service (CWS). This was done at the Wood Islands lighthouse bank swallow colony. The process included: catching the bank swallows, processing them (weighing, sexing, aging, determining body fat

%), placing a small band around the bird's leg with a unique identification number, and finally fitting them with a tiny, lightweight transmitter. The antennae the birds were fitted with belonged to an organization known as Motus. "The Motus Wildlife Tracking System (Motus) is an international collaborative research network that uses coordinated automated radio telemetry to facilitate research and education on the ecology and conservation of migratory animals." This transmitter was also designed to naturally fall off ensuring it would not remain on the bird for life. Automated radio telemetry is a system that uses receivers to record radio transmissions, and it is particularly useful for tracking the migration of bank swallows. It can also be used to track a variety of species, from bats to dragonflies to piping plovers, even aquatic life. Motus has radio towers stationed across the world, with higher concentrations in North America, Europe, and Australia.

The hope for this study is to learn more about the bank swallows' migration, in efforts to help protect these remarkable bird

s.

The bank swallow is listed as a threatened species by the COSEWIC (Committee on the Status of Endangered Wildlife in Canada), and so research like this is vital in the conservation and protection of these birds.

Canada Goose Banding

BAWG helped band Canadian geese at the Wood Islands Lighthouse & in Murray River along McInnis St. It was done with Ducks Unlimited Canada, EHJV, and CWS. Volunteers strategically circled around the flock of geese (by foot and kayak) and herded them towards a pen that was set up using snow fences. Once herded in the fence the geese were trapped and taken one by one to get processed. Young geese were released almost immediately with banded adults. All adult geese were banded on the ankles. The adult geese were also all swabbed to test for Avian flu (no positives were found at these sites).

In photo: Carson Wight

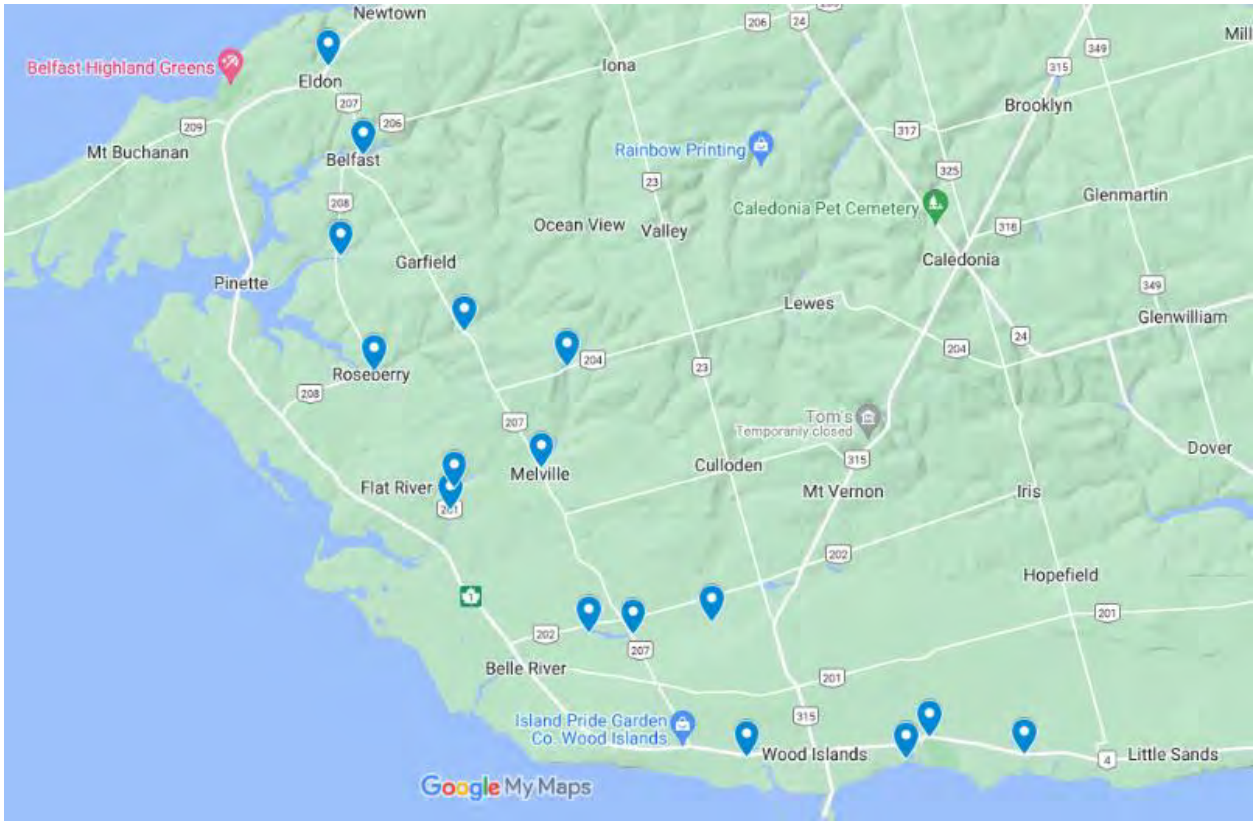
Banding geese helps to provide information on the population and ensure they can be monitored in the future.

Water Quality Monitoring & Stream Flow

Stream flow and water quality were monitored at the following locations: Portree Creek, downstream of MacPherson's Dam, upstream of Roseberry Road stream crossing for Roseberry Twins, downstream of Roseberry Pond, upstream of Camp Road stream crossing for Flat River, downstream of Hughie's dam on Flat River, upstream from the Garfield Road stream crossing on Flat River, downstream of Munns Road stream crossing for Belle River, downstream from Compton's Pond on Belle River, downstream of MacLeod Road stream crossing, and downstream of Highway crossing for Littoral Lane.

In addition, a total of three-monthly tours was conducted, adding the following survey locations: upstream of Roseberry Pond at the Garfield Road crossing, upstream of the Gairloch Road crossing on Flat River, upstream of the Garfield Road crossing on Belle River, and upstream of the Shore Road crossing at Little Sands Creek.

All data is entered to Atlantic DataStream. We encourage you to visit BAWG at Atlantic DataStream for complete details of water quality testing, explanations and maps.



Map of all YSI & Flow locations 2022

Rapid Geomorphic Assessments (RGA's)

BAWG began conducting rapid **geomorphic assessments*** (RGA's) this past August. We were able to complete a section of river along the MacLeod Road system (end of the **estuary*** upstream to the first pond). We found that this section of stream was mainly in a state of **aggradation***. RGA's are used to help understand what our streams are trying to do. This helps us decide what (if any) stream enhancement work needs to be done.

Taking depth measurements for the RGA

Roseberry Pond PIT Tagging

This summer we conducted **PITT (Passive Integrated Transponder Tags)*** tagging (including installation of arrays) at 46°02'21.6"N 62°52'27.4"W Roseberry Pond, south branch - Pinette River. With the installation of a steeppass fishway at Roseberry Pond in September 2021, the goal of evaluating its performance was undertaken with the PIT tagging of 52 Brook Trout on August 3, 2022. As of October, of the 52 trout tagged, 23 detections were recorded upstream. Of the 23 detections, 5 were unique. The average size of brook trout tagged were: 15.29 cm; largest being: 22.8 cm. These results indicated that fish passage was now restored at Roseberry Pond and that our fishway was a success!

Flat River Counting Fence

In 2022 we completed a third year of fish population monitoring on Flat River with an in-stream **counting fence***. This allows us to gauge fish movement upstream and provides important ecological information on fish species and populations. Final report submitted to DFO and Government PEI. The results at the counting fence: 819 fish species captured in total. Brook trout: 519, Rainbow trout: 103, American Eel: 3, Gaspereau: 194.

Bat Surveys

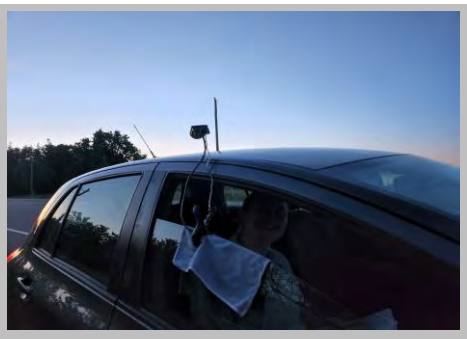
*Under the **Environment Climate Change Canada's Habitat Stewardship Program - Bats** and in partnership with PEI Forests, Fish and Wildlife, Parks PEI, Canadian Wildlife Health Cooperative, PEI Watershed Alliance, we conducted bat surveys within the community.*

Acoustic Bat Monitoring Stations:

4 monitors were set up from June 13 - June 20 to monitor for any bat activity. These monitors are specialized recording devices that can pick up bat noise/calls. These monitors were set-up at in areas on Belle, Flat and Pinette watercourses. Calls captured gathered is now being processed. The good new is bat calls have been detected.

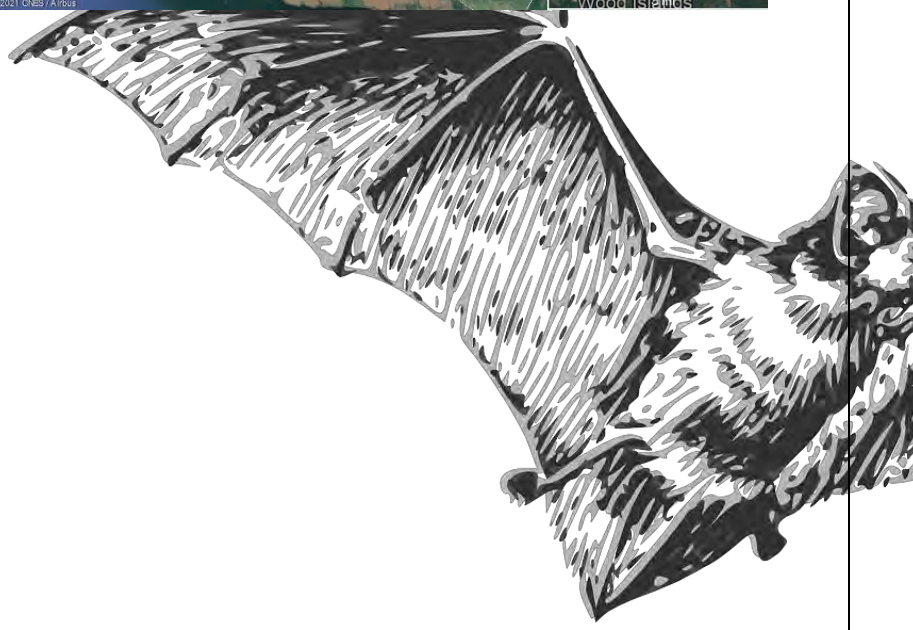
Mobile Bat Monitoring Transect

We also drove along a predetermined route (see map below) with a specialized recording device attached to the top of a car. This route had to be driven at a slow, constant rate of speed, and would listen and record any bat activity it heard in the vicinity. This survey was conducted during the night of June 15.



Mobile bat monitoring transects, specialized recording device attached to car.

Rebecca Ramos (PEI Watershed Alliance) discusses bats with Liz Dacombe



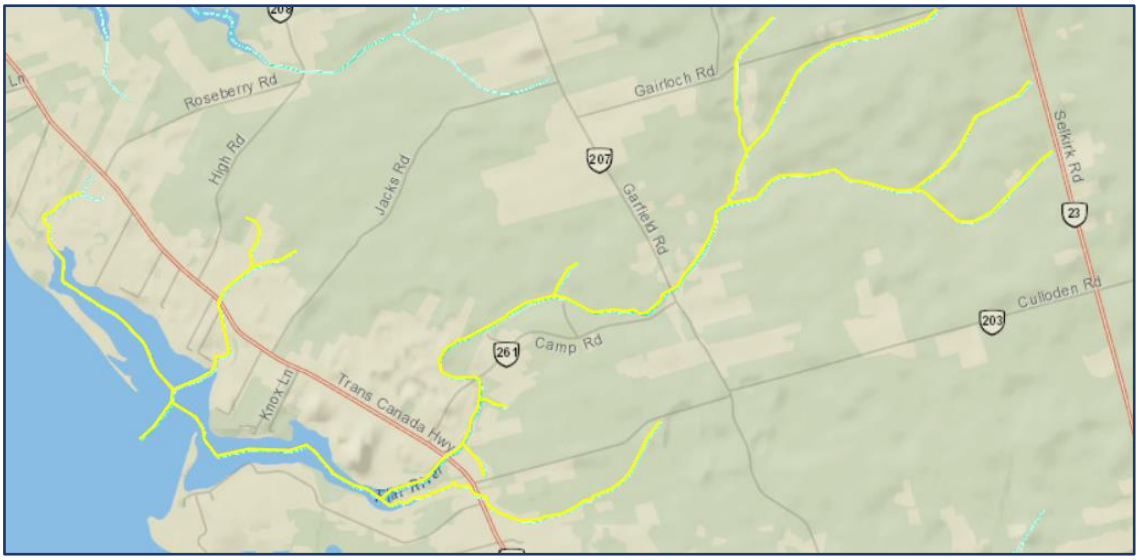
Abandoned Well Bat Monitoring Station

In late fall, a protective frame was installed over an abandoned well site which has been part of our acoustic bat monitoring program for three years. This bat hibernacula is a shelter occupied during the winter. Funding from the PEI Wildlife Conservation fund was critical to protecting this area.

In progress installation of protective cage at bat monitoring station

Activity by Watershed

Flat River Watershed



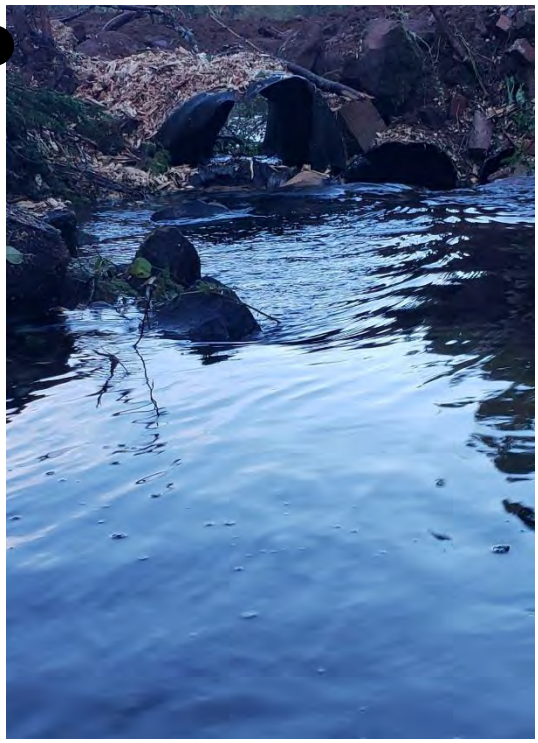
Flat River Watershed basin indicating stream branches (yellow). Left: Gascoigne Watershed drainage pattern

Rehabilitation Project (Beaton's Mill area)

In September 2022, a rehabilitation project funded by Department of Fisheries and Oceans Canada - Small Crafts Harbours (DFO-SCH) began with Phase 1. The aim is to rehabilitate degraded aquatic habitats and remove fish passage impediments. The project site on the upstream side of Garfield and Camp Rd, Melville. These activities included the support of the PEI Watershed Alliance and PEI Forests, Fish and Wildlife. In addition, we thank our

contractors, Kings County Construction and Grandview Welding who, despite the aftermath of hurricane Fiona were able to meet our obligations with professionalism and care.

The removal of the road and culverts will eliminate the existing head pond and the second phase of the project will include restoration of the upper reaches of the river system. The restoration work in this area will involve bank stabilization, deflectors, cross vanes, digger logs and channel blockers to develop and restore a more natural river channel and thalweg. To meet our obligations for this project, a Monitoring Report was submitted to DFO that included all our biological sampling with the aim of providing a baseline from which we will be able to monitor the project's success.



1. Drone image taken by Souris and Area Branch of the PEI Wildlife Federation (Jake MacKinnon)
2. Pre-construction debris removal
3. Post-construction bank protection
4. The new channel

MacPherson Mill Pond (Hughies Dam)

In December, our fall crew assisted the Province of PEI with the rehabilitation efforts at the fishway at the MacPherson Mill Pond (Flat River). The aim of the reconstructed weir and fish ladder baffles is to improve fish passage and improve habitat conditions. BAWG will continue with monitoring (fish counting fence) to document the success of this project, including native species planting (in spring 2023) to decrease the potential of any erosion at site.

Rehabilitation at MacPherson Mill Pond (Flat River). Centre: Alan McLennan discusses the plan with BAWG fall crew – Billy Gamble, Andrew Gamble. Right: opening of newly contructed baffles

The crew also foraged further upstream this year (from Gairloch Trail above Gairloch Rd. until landowner permission stopped. Approx. 850m). Major blockages were removed from above the Garfield Rd. stream crossing.

No brush mats were completed on Flat River this year. No electrofishing was completed on Flat River this year due to damage caused by Hurricane Fiona. A total of 42 trees and shrubs were planted above the Camp Road stream crossing.

Foraging further upstream (Flat River above Gairloch trail - Gairloch Rd.)

Belle River Watershed

This section of the river was cleared of any main blockages. No brush mats or plantings were done on Belle River this year. We were unable to electrofishing along Belle River this season due to extensive damage from Hurricane Fiona. A habitat assessment trial was done, with the PEI Watershed Alliance, from Garfield Rd. to Munns Rd.

Belle River before clearing.

Section of Belle River after clearing

Pinette River Watershed

Pinette River (North Branch)

Stream assessments were conducted from MacPherson's Dam to a stream crossing upstream from the Iona Road. No clearing was done on Pinette North this year. No brush mats were required, and no plantings were added. Due to damage caused by Hurricane Fiona, no electrofishing was completed.

Roseberry Twin Ponds

No stream assessments were completed at Roseberry twins this year. No clearing was done on Roseberry twins and no brush mats were added. No trees or shrubs were added this year. One **cover log*** was placed below Roseberry Rd. to create additional fish cover.

Cover Log Roseberry Twins, Aug 2022.

Pinette River (South Branch) - Roseberry Pond

Stream assessments were conducted from Roseberry Rd. to above Garfield Rd. Major blockages were removed from this section. Two **brush mats*** were made above Roseberry Pond, three braided stream sections were plugged with brush, and previous brush mats from 2021 were topped up. Two cover logs were also placed below Roseberry Rd. The crew rebuilt/repaired a rock weir in the **fishway*** at Roseberry Pond. 30 shrubs were planted on the banks of Roseberry Pond Fishway (bayberry, wild rose, red-berried elder).

Brush mat above Roseberry Pond, Aug 4, 2022.

(Before) Aug 24 brush mat

(After) Aug 24 brush mat

Plugged braid above Roseberry Pond (1/3)

Plugged braid above Roseberry Pond (2/3)

Plugged braid above Roseberry Pond (3/3)

Topped up brush mat from 2021

Rock Weir at Roseberry Pond

Cover log installation – Roseberry Pond, August 2022

Before clearing – Pinette River south branch

After clearing – Pinette River south branch

Shrub Planting along Roseberry Pond fishway. Funding provided by PEI Wildlife Conservation Fund

Little Sands Shore Watershed

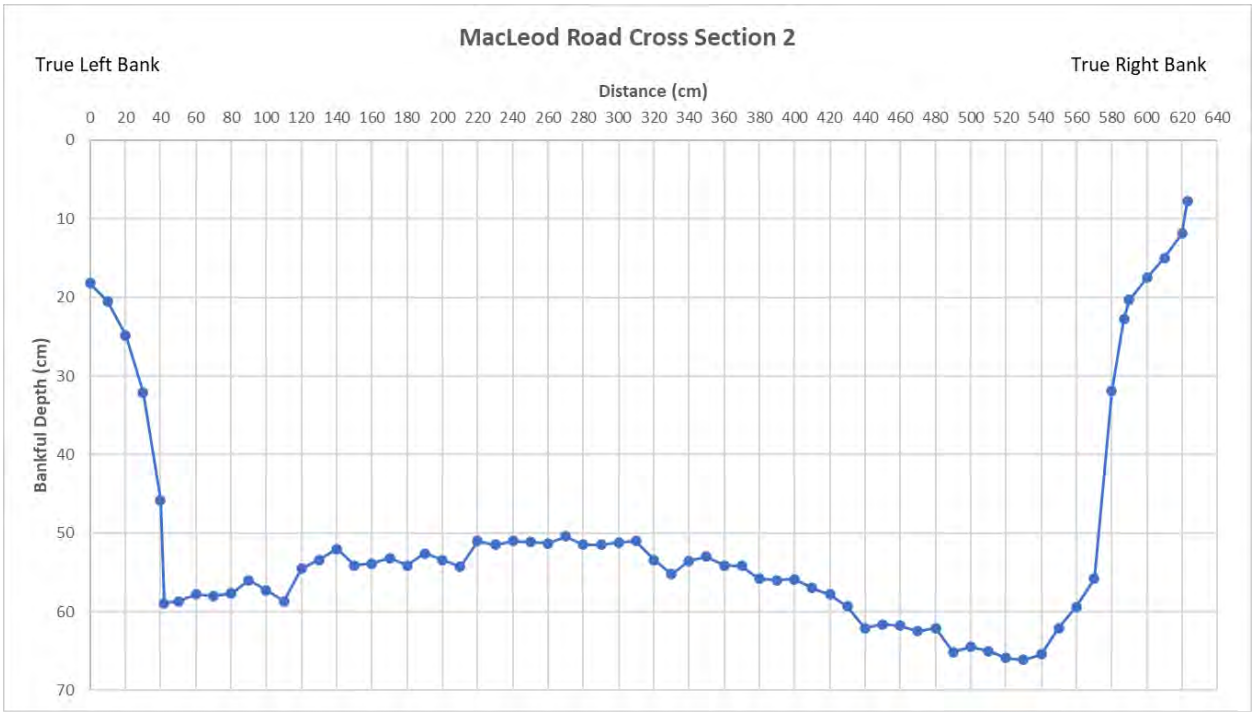
Littoral Lane

Stream assessments were completed on Littoral Lane this year. Major blockages were removed between the head of the pond at Littoral Lane and the stream crossing at Shore Rd. No brush mats or plantings were done on this section this year.

MacLeod Road

A stream assessment from the estuary to the pond above MacLeod Rd. was completed. Downed trees were removed below the culvert at MacLeod Rd. No brush mats or plantings were done along this section this year. A rapid geomorphic assessment (RGA) was completed from above the estuary to the pond above MacLeod Rd. including 5 detailed cross sections used to graph the stream bed.

Removal of downed tree within the stream on downstream section of MacLeod Rd.



Example of a stream cross section completed. This is a visual representation of the stream bed with the left and right sides showing the stream banks. The water would flow through the middle of the graph.

Newtown Watershed (Sub-watershed- Portree Creek)

In 2022, BAWG officially was granted this section of the greater Newtown Watershed.

No stream assessments were completed this year, thus there was no blockage removal or brush mat installation. A total of 63 trees & shrubs were planted downstream of the Trans-Canada Highway stream crossing. Upstream of this crossing 24 trees & shrubs were planted. Water quality monitoring began at this site this year.

Nurturing Nature Activities

Provincial Climate Fund Challenge

The following projects were made possible with our partner, the PEI Watershed Alliance with funding under the provincial stream of the Climate Fund Challenge. This fund is aimed at mitigating impacts of climate change or to increase carbon storage.

Wetland Riparian Restoration - Wood Islands

Restoration of a degraded wetland riparian area using a combination of soil amendment and landscaping strategies to establish native vegetation in an area of dredged sediment. The project will increase resiliency of the area by establishing vegetation that will recruit additional species and increase the carbon capture potential of the area and wetland. This fund is aimed at mitigating impacts of climate change or to increase carbon storage. Local partner: Wood Islands Area Development Corporation

Wildflowers, No Mow and Carbon Capture

With support of the Wood Islands Area Development Corporation (WIADC) a parcel of land was sectioned off, tilled and planted with wildflowers and shrubs to support pollinator species. This No mow area will also aid in increasing soil stability and carbon capture.

Coastal rehabilitation based on living shorelines

Runoff from the surrounding lawn area combined with storm damage had resulted in an area of shoreline being eroded. To prevent additional erosion and stabilize the bank we used a "living shoreline" approach to maintain continuity of the natural land water interface and reduce erosion while providing habitat value and enhancing coastal resiliency. A combination of woody material (logs and root wads), stakes, hay bales and natural vegetation was used to prevent further slumping of the eroded area, secure the bank and prevent further loss of material. A post hurricane Fiona check-up showed little damage, although some maintenance will be conducted. This initiative was made possible with the support of the landowners, PEI Watershed Alliance, and Environmental Climate Challenge Fund.

Tree Planting & Pruning

The crew, volunteers and members helped with the planting of 756 native trees and shrubs this season. We planted trees along streams (Flat River, Portree Creek, Roseberry Pond), along trails (Portree Trail, Hancock-MacDonald Trail, Harvey Moore), in barren areas (Wood Islands), Point Prim Lighthouse, and to aid in erosion control (living shoreline area, private landowner's roadway). In addition, a successful community tree & shrub drive saw appropriately 300 native trees and shrubs distributed to residents. We also looked at the trees/ shrubs we had planted in previous years and, if needed, pruned them to encourage better growth.

Wood Islands planting

Portree Trail shrub community shrub planting

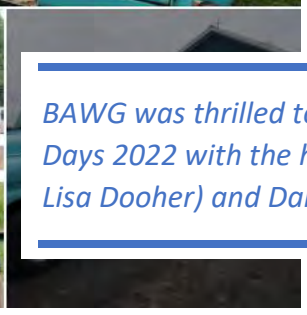
50 Red Oak seedings at Harvey Moore Sanctuary

Jenna has been busy at Harvey & Dot Moore Legacy Waterfowl Sanctuary Inc.

Beach Clean-ups & Trail Clearing

Beach clean-ups were conducted as weather and tides permitted with approximately 30 km of local beaches having trash removed.
A trail was created in Wood Islands for access to a barren area that we began to replant. The planting was done in partnership with the PEI Watershed Alliance with assistance from the Holland College Transitions East students. Materials funding provided through the Environmental Climate Fund Challenge.

Beach Cleanup at Stewart Point



BAWG was thrilled to win "Best Parade" entry at Belfast Days 2022 with the help of crew, volunteers (Andy Henry, Lisa Dooher) and Daisy – 58 GMC!

Invasive Species Management

Bittersweet Nightshade (*Solanum dulcamara*) is an invasive perennial vine that can out-compete and choke out native species. This is a toxic, climbing vine that can often be found growing along streams, hedgerows, and forests. This summer we removed bittersweet nightshade at 3 separate locations. Members from the PEI Invasive Species Council came out to help with the removal and disposal of nightshade at all locations. We removed the nightshade by pulling out the entire plant and the roots. To limit any further spread the removed plants are bagged and then taken for proper disposal (incinerated).

1. **Roseberry Twin Ponds**
    a. Several locations along the large pond and in the surrounding woods
2. **Stream behind Private Landowners Property (Wood Islands)**
    a. Several locations along the stream and stream banks
3. **Belle River above Garfield Rd**
    a. 4 locations along the stream banks

Bittersweet nightshade flowers and berries

Internships

BAWG was pleased to have been able to provide meaningful experiential internships for three students in 2022. David MacKinnon a student from Nova Scotia Community College, Natural Resource Environmental Technology program spent 1 month assisting with various assessments and developing our monitoring protocols, such as our Smelting surveys. In the fall, two students from the UPEI Environmental Studies program assisted with elevation surveys, restoration activities and developing educational materials, including our Bat Week social media content.

David MacKinnon conducting YSI (water quality testing)

Selfie break during elevation surveys Maggie Reed, Sherry Pelkey, Melissa Prieto

Maggie and Melissa taking on the physical during reconstruction of fish ladder activities

Community Events, Staff Training and Webinar Learning

Community Events

1. Roseberry Pond Fishing Day - May 21, 2022
2. Roseberry Pond Bird Walk - June 4, 2022
3. Native Tree & Shrub Drive - June 4, 2022
4. Holland College Transitions East - June 3 & June 6
5. Community Shrub Planting - June 11, 2022
6. Belfast Days Parade Float - June 25, 2022
7. Go!Nature Camp - July 11, 2022 - July 14, 2022
8. Critter Dipping & Lady Bug Picnic: July 22, 2022
9. Let's Go Fly a Kite Children's Event - August 5
10. Wood Islands Seashore Adventures - August 18
11. Islander Day - February 20, 2023 with partners WIADC and Wood Islands Women's Institute
12. Cool Bugs! Invertebrate ID Pop-in - February 21, 2023
13. Annual Tree Swallow Nesting Box Pop-up Cooper's Red & White - March 25, 2023

Staff Training & Continued Learning (in-person, webinar)

- July 22, 2022 - Watershed worker Training - 3 attended
- July 24, 2022 - First-Aid Training - 2 attended
- June 2022 (4 day) - Rapid Geomorphic Assessment Training - PEIWA/5R Environmental - 2 attended

- May 22, 2022: Smelt Walk & Talk with Hillsborough River Association
- November 21: REDD Walk with Central Queens (PEIWA)
- November 28: Science Beyond the Ribbons of Life: Vegetated Shoreline Buffers (webinar) - Watersheds Canada
- January 18, 2023: Creating Healthy Natural Freshwater Systems for freshwater fish (webinar) – Watersheds Canada
- February 27, 2023: Erosion & Sediment Control (webinar) Stratford Area Watershed Management

Note from Coordinator,

The past year has been gratifying, not only in realizing the environmental goals set out in our work plan with our team and Board of Directors but with the tremendous support we have from our community members. Additionally, I would like to acknowledge the expertise and support provided by Mary Finch, PEIWA Ecologist and Alan McLennan (PEI Environment, Energy and Climate Action Fish and Wildlife) – they assist no matter the weather or the task; we are grateful.

Whether support is in-the-field, financial, participating in events, volunteering, or granting permission to access a property - each contribution counts in realizing our mission of nurturing nature.

Thank you,

Sherry Pelkey

Participants of Seashore Adventures at Wood Islands

We've got Monarchs!

Glossary

Aggradation: the deposition of material (sediment) within a stream.

Aquatic Macroinvertebrate: small insects in their nymph and larval stages that spend at least part of their lives in water. For example, dragonfly larvae, snails, mosquito larvae.

Brush mat: installed on the inside of stream bends to collect sediment. They also concentrate stream flow toward the outside bend of the stream, deepen the stream channel, and encourage undercut banks.

Counting Fence: a mesh fence that is placed into one of the fish ladder cells, prevents fish from moving through a cell. They can provide data on species present, run timing, run strength, and size ranges of fish.

Cover log: devices that mimic large organic debris by providing resting and hiding areas for juvenile and adult fish where in-stream cover is limited.

Estuary: a semi-enclosed coastal body of water that has a free connection with the open ocean and within which ocean water is measurably diluted with freshwater derived from land drainage

First Order Stream: perennial streams-- carry water throughout the year--that have no permanently flowing tributaries. They are found at the upper reaches of main rivers.

Fishway: a series of pools arranged like ascending steps at the side of a stream, enabling migrating fish to swim upstream around a dam or other obstruction.

Geomorphic assessment: collects and maintains geomorphic data for watershed planning and detailed characterization of riparian and instream habitat, stream-related erosion and flood hazards.

Invasive Species: introduced species that overpopulates and harms its new environment. They adversely affect habitats and bioregions, causing ecological, environmental, and/or economic damage.

PITT (Passive Integrated Transponder Tags): commonly referred to as PIT tags – contain the same technology as the "microchips" used in pet dogs and cats and are widely used in fisheries studies to track fish movement, survival, and growth over time.

Thalweg – a line connecting the lowest points of successive cross-sections along the course of a valley or river.