



Annual 2025

Field & Activities Report

Prepared By :
SHERRY PELKEY
JENNA SMITH



bawgpei@gmail.com



www.bawg.ca

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The Belfast Area Watershed Group respectfully acknowledges that our work takes place on the unceded territory of the Mi'kmaq People of Epekwitk (Prince Edward Island). We recognize and honour their enduring relationship with the land, waters, and ecosystems that sustain all communities on this Island.

From the President

Taking on the role of President this year was both an honour and, I'll admit, a little humbling. I stepped into some big shoes, and I quickly learned that the best way to find my footing was to show up and get to work alongside the people who make BAWG what it is.

I was lucky enough to get my hands dirty this year — helping with bridge construction on our connectivity projects and getting trees in the ground during our planting days. Those experiences gave me a real appreciation for the effort and care that goes into every single thing BAWG does. It's one thing to read about watershed restoration; it's another to be standing in it.

I am deeply grateful to our incredible staff, our volunteers, our funders, and our community partners. The passion in this organization is something special, and I feel fortunate to be part of it. Thank you for welcoming me — I can't wait to see what we accomplish together in the years ahead.

Richard Greenwood

President, Belfast Area Watershed Group



Executive Director's Note

Every year, I find myself looking back at what the BAWG team has accomplished and thinking — how did we do all that? And every year, the answer is the same: people.

Since joining BAWG in 2019, I've watched this organization grow from a small but mighty group into a true cornerstone of environmental stewardship in our community. This year was no different. Our nine summer staff brought energy, curiosity, and real care to every project they touched — from wading into rivers to count fish, to pulling invasive plants in the heat of July, to connecting with neighbours at community events.

Our volunteers and Board members are the backbone of everything we do. Whether it was moving timber for a bridge, showing up for a planting day, or lending their expertise around the table — their dedication and generosity of time make the impossible feel routine. We are so grateful for each and every one of them.

None of our work happens in isolation, either. Our project partners and supporting organizations bring knowledge, resources, and a shared commitment to healthy watersheds that multiplies what we're able to achieve. These relationships are something we don't take for granted — they are built on trust, and we value them deeply.

We celebrated a major milestone in 2025 — completing three connectivity projects across the Pinette, Flat River, and Little Sands Shore watersheds. Watching those streams open back up for fish is the kind of thing that makes you want to keep going. And we will.

Thank you — to every funder, partner, volunteer, Board member, and community supporter. You make every bit of this possible.

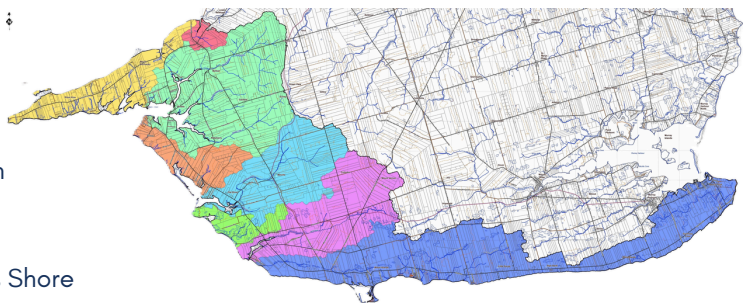
Sherry Pelkey

Executive Director

Watershed Management Area

BAWG manages 7.5 watersheds draining into the Northumberland Strait:

- Pinette River
- Newtown (sub-watershed)
- Point Prim
- Gascoigne Cove
- Black Marsh
- Flat River
- Belle River
- Little Sands Shore



OUR MISSION

Inspire watershed stewardship through hands-on restoration, education and community engagement.

OUR VISION

Thriving watersheds for our community.

2025-26 BY THE NUMBERS

1,063

Volunteer Hours

13

BAWG Events Hosted

935

People Reached at Events

1,400+

lbs of Invasive Plants Removed

~600

Trees, Shrubs & Wildflowers Planted

FIELD WORK HIGHLIGHTS



CONNECTIVITY PROJECTS

Completed **3 connectivity projects** in the Pinette, Flat River, and Little Sands Shore watersheds — restoring seamless flow between aquatic habitats to support healthy ecosystems and biodiversity.



FOREST BIRD SURVEYS

Surveyed **21 properties** (31 survey points)
39 species · 350 individual birds

Species at Risk (SARA) found at **3 sites** — including Eastern Wood Pewee and Olive-sided Flycatcher.



BANK SWALLOW SURVEYS

Surveyed **~85 km** of shoreline between Beach Point and Newtown, discovering **37 colonies** and **1,203 nesting cavities** — vital data for protecting this Species at Risk.



SPECIES AT RISK (SARA) — SUITABLE HABITAT IDENTIFIED

Our surveys found suitable SARA habitat across multiple surveyed areas for three protected species:

Eastern Wood Pewee

Canada Warbler

Olive-sided Flycatcher



WATER QUALITY TESTING

Monitored **20 sites** from April to November, plus Water Ranger testing on Belle River — tracking watershed health across the full season.



COMMUNITY EDUCATION

225 Wildlife Wonder activity booklets distributed to Belfast Consolidated School and at various community events, nurturing the next generation of watershed stewards.



PARTNER EVENTS

Participated in **10 events** alongside partner organisations, engaging **300+ attendees** as part of our collaborative community network.



Special News: In 2025, a **river otter** was spotted on a trail camera in our region — a remarkable sign of a recovering, healthy watershed ecosystem!

Funders

- Clean Foundation
- Department of Fisheries and Oceans
- Government of Canada – Aquatic Ecosystems Restoration Fund
- Government of Canada – Canada Summer Jobs
- Government of Canada – Nature Smart Climate Solutions Fund
- Innovation PEI
- PEI Environment, Energy and Climate Action
- PEI Forested Landscape Priority Place for Species at Risk
- PEI Forests, Fish and Wildlife
- PEI Jobs for Youth
- PEI Transportation and Infrastructure
- PEI Watershed Alliance
- PEI Wildlife Conservation Fund
- Private donors
- Rural Municipality of Belfast
- Skills PEI Post Secondary



Clay Cutting, PEI Invasive Species Council display information booth

Partners & Supporters

- PEI Watershed Groups
- Atlantic DataStream
- Belfast Community Development Corporation
- Belfast Historical Society
- Belfast Lions Club
- Board of Directors and Volunteers!
- Canadian Centre for Climate Change and Adaptation
- Cardigan Excavators Ltd
- Cooper's Red & White
- Crawmac Forest Service
- Ducks Unlimited
- Dustin Jewell and family
- Eastern Graphic
- Fleece and Harmony
- Gillis Lodge
- Grandview Welding
- Harvey & Dot Moore Legacy Waterfowl Sanctuary Inc.
- Holland College
- Island Nature Trust
- Island Pride Garden Company
- J. Frank Gaudet Tree Nursery
- JD Marine
- Kings County Construction
- Landowners and residents!
- MacPhail Woods Ecological Forestry Project
- Nature PEI
- PEI Forests, Fish and Wildlife
- PEI Invasive Species Council
- PEI Watershed Alliance
- Red Clay Construction
- Rural Municipality of Belfast
- Water Rangers
- Wood Islands Development Corporation
- Wood Islands Women's Institute

WATER QUALITY MONITORING

Water quality was routinely measured at 20 sites from April to November using a handheld YSI meter, plus Water Ranger testing on Belle River — tracking watershed health across the full season. Parameters include temperature, dissolved oxygen, conductivity, salinity, and pH. Results are available on Atlantic DataStream.

The following charts provide a visual summary of the key water quality findings across all monitoring locations for the 2025 season.

Dissolved Oxygen by Location

Dissolved oxygen (DO) is one of the most important indicators of aquatic ecosystem health. Most sites recorded average DO levels well above 80%, which is a positive result. The chart below compares average DO at test (blue) versus control (orange) sites at each location.

Dixons Creek stands out with lower average DO at both test and control sites, particularly in the control location, which dropped significantly in summer months. Little Sands control also showed a notable mid-season dip. These locations warrant continued monitoring.

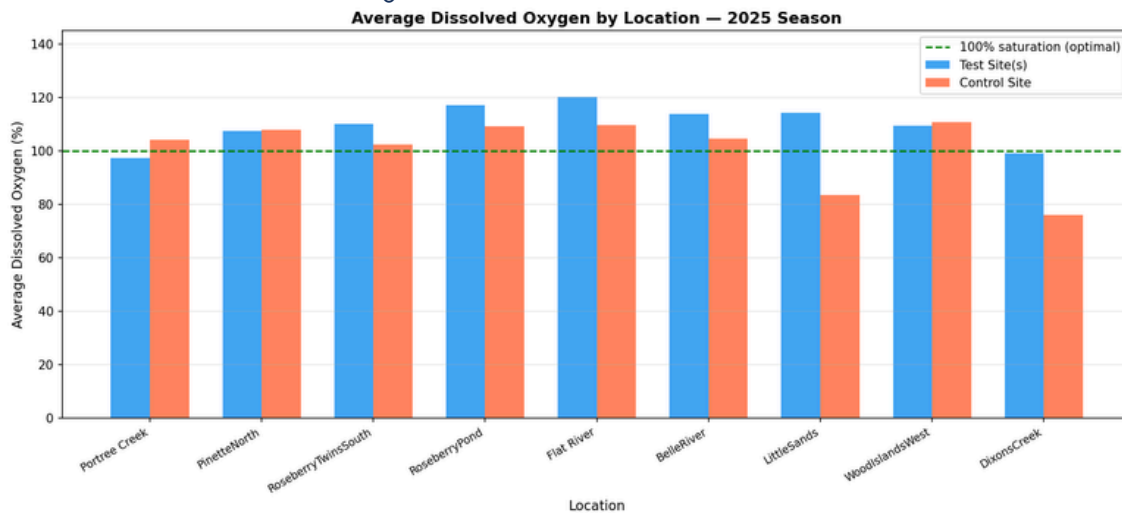


Figure 2. Average dissolved oxygen (%) at test and control sites by location. The dashed green line marks 100% saturation — the ideal level for most aquatic life.

pH by Location

pH levels were generally within the healthy range of 7.0–8.5 across most locations. Flat River and Roseberry Pond showed slightly elevated pH values, likely reflecting active plant and algae growth, which is typically a positive ecological sign. Dixons Creek control site recorded notably lower pH values across the season — some readings approaching 7.0 or below — suggesting possible organic matter decomposition or reduced biological activity at that location.

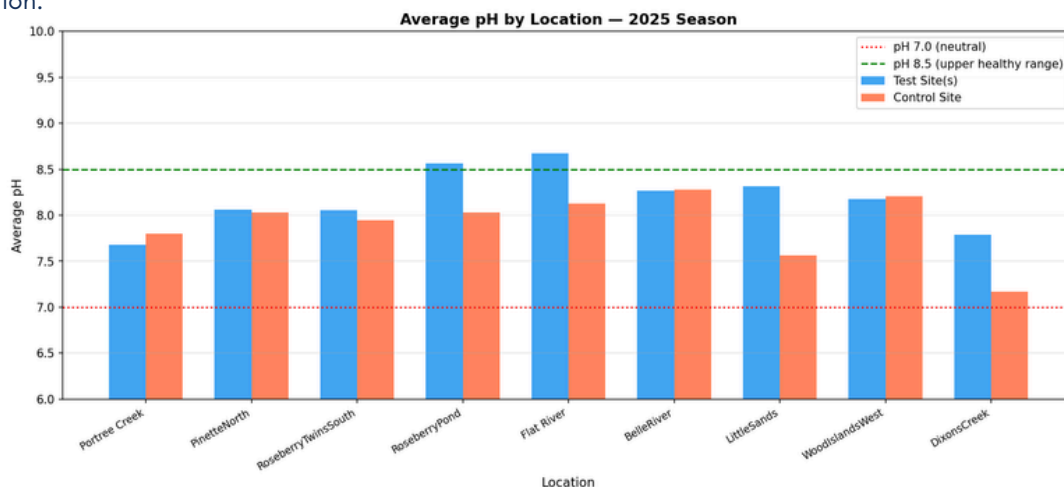


Figure 3. Average pH at test and control sites by location. Dotted red line = neutral (7.0); dashed green line = upper end of healthy freshwater range (8.5).

Seasonal Temperature Trends

Water temperatures followed the expected seasonal pattern across all sites: coolest in spring and fall, with a peak in summer months. Test sites and control sites tracked each other closely throughout the season, which is a sign of consistent monitoring and good site pairing.

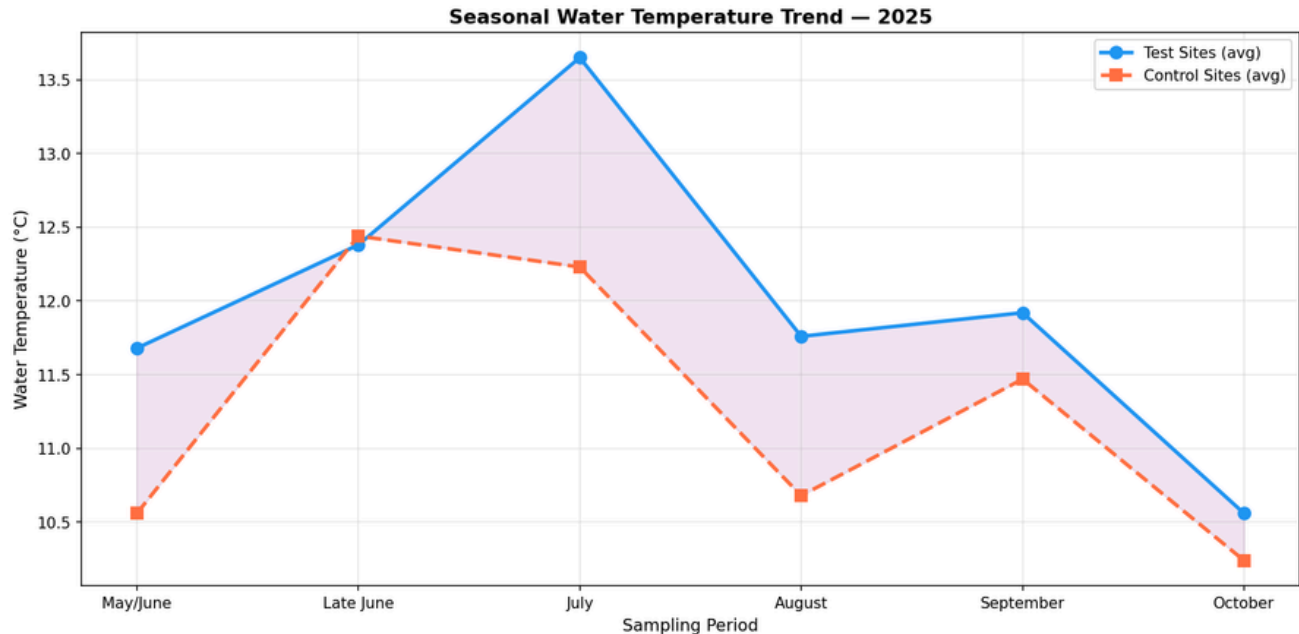


Figure 4. Average water temperature trend across the 2025 monitoring season, averaged across all test and control sites. The shaded area represents the range between test and control averages.

Control site: A selected location on a stream that is not (generally) affected by nearby land use activities. It provides a baseline measurement of natural water quality conditions, allowing us to understand what the stream looks like without any outside influence.

Test site: A location on the same or a nearby stream that is potentially affected by land use activities in the area. By comparing water quality readings at the test site to those at the control site, we can identify whether those activities are having an impact on stream health.

Water Rangers!

In 2025, BAWG contributed to the Water Rangers citizen science platform for the first time as part of the Nature Club project, funded by the Rural Municipality of Belfast community grant. Volunteers trained by BAWG staff collected monthly water quality observations at a single monitoring location on Belle River (Munns Rd) from May through to late November — seven visits in total. This established a valuable open baseline dataset for this waterbody, shared publicly via the Water Rangers data platform and flagged for inclusion in Atlantic DataStream.

Dataset Highlights

7 Site Visits	78 Datapoints Recorded	1 Monitoring Location	10 Parameters measured
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Monitoring location: Belle River — Munns Rd, Prince Edward Island (45.9907°N, 62.7803°W)

Monitoring period: May 26 – November 24, 2025 (7 visits, monthly frequency)

Water flow: Recorded as steady on all visits where assessed (Aug–Nov)

Parameter Summary

The table below summarizes the range and average for each quantitative parameter measured across the seven monitoring visits.

Parameter	Min	Max	Average	Unit	Notes
Water temperature	9.0	15.7	12.5	°C	Peak in July; steady seasonal decline into autumn
Air temperature	5.0	21.0	15.1	°C	Range reflects May-November monitoring window
pH	7.0	7.5	7.3	std units	Consistently neutral; ideal for aquatic life
Dissolved oxygen	8.0	11.0	9.4	mg/L	Above 6.5 mg/L threshold at every visit
Conductivity	194	212	202	µS/cm	Very stable — no indication of pollution events
Alkalinity	50	120	93	ppm	Moderate buffering capacity throughout season
Chlorine	0	0	0	ppm	Undetectable at all visits — positive indicator

Seasonal Readings by Visit

Individual readings recorded at each monitoring visit throughout the 2025 season.

Date	Water Temp (°C)	Water Temp (°C)	pH	DO (mg/L)	Conductivity (µS/cm)	Alkalinity (ppm)	Chlorine (ppm)
May 26	11.8	14.0	7.2	11.0	196	80	0
Jun 30	15.1	19.0	7.5	9.0	202	100	0
Jul 28	15.7	21.0	7.5	8.0	204	120	0
Aug 29	11.8	14.0	7.2	11.0	196	80	0
Sep 29	14.2	21.0	7.5	9.0	212	100	0
Oct 29	9.6	12.0	7.2	8.5	212	120	0
Nov 24	9.0	5.0	7.0	9.5	194	50	0

Interpretation

Results from the 2025 monitoring season indicate a healthy river system at Belle River (Munns Rd) throughout the monitoring period.

Dissolved oxygen remained well above the 6.5 mg/L threshold considered necessary for most aquatic life at every visit, with the highest reading of 11.0 mg/L recorded in May and August – typical of cooler water holding more oxygen. pH was stable across all visits within the neutral range of 7.0–7.5, which is ideal for freshwater aquatic ecosystems. Chlorine was undetectable at every visit, a positive indicator for a natural watercourse with no upstream treatment influence.

Conductivity was notably stable across the season (194–212 $\mu\text{S}/\text{cm}$), suggesting consistent catchment conditions and no significant pollution or runoff events between visits. Water temperature followed an expected seasonal pattern, peaking at 15.7°C in July before declining to 9.0°C by the November visit. Alkalinity showed moderate variation (50–120 ppm), with the lowest reading in November consistent with reduced soil biological activity in autumn.

Overall, the data collected in this first year on the Water Rangers platform provides a solid baseline for Belle River and demonstrates the capacity of trained community volunteers to generate high-quality, open water quality data.

Landowner Testimonial

"The Flight to the Future – Forest Habitat Stewardship Program report on my woodlot was wonderful - the result of a wonderful June morning spent with Jenna, Emma and Miranda on my woodlot. That morning was both enjoyable and eye-opening as I learned how many bird species live on my woodlot. The report exceeded my expectations, and several parts stood out in particular.

- 1. The identification of the Canada Warbler, Eastern Wood-Pee-wee, and the Northern Myotis Habitat Models on my woodlot. I also found the description of the forest conditions these species depend on very helpful, along with the Island Nature Trust materials in the binder and the added resources from Flight to the Future.*
- 2. The unploughed land section explains why I have some very tall and large trees at the back of my woodlot that borders on Dixon Creek.*
- 3. The aerial photos from 1935, 1968, 2000, and 2010 were especially striking, showing how previously clear-cut areas can recover when left to grow without interference – just a little thinning here and there to encourage more of a mixed stand.*

As my woodlot was purchased for purely enjoyment purposes the report has added an extra layer of understanding to the history of my woodlot. But it has also contributed an awareness of when I do a tree thinning to encourage the growth of hardwoods that I account for bird habitat.

Before I purchased the woodlot my knowledge of birds and trees was rather limiting. This report has contributed another layer of understanding. Thank you.

As well, Sherry, thank you for your advice on protecting bird habitat, particularly during mating and nesting season. Anytime BAWG wants to come on the woodlot – please do – as I always learn something new.

I am also happy to learn that my woodlot will be part of BAWG's Forest Habitat Stewardship Program.

J. Volesky

WILDLIFE MONITORING

Forest Bird Surveys

Point count surveys were conducted across 21 properties (31 survey points), identifying 39 bird species and 350 individual birds. Species at Risk (SARA) suitable habitat was identified at 3 sites.

SARA Species – Suitable Habitat Identified

- Eastern Wood Pewee
- Canada Warbler
- Olive-sided Flycatcher



Tree Swallow Surveys (Wildlife Conservation Fund project)

In 2025, partnerships were established with watershed groups across Prince Edward Island to monitor and band tree swallows. Ten swallow boxes were installed between Eldon and Wood Islands, with seven boxes yielding successful nesting and a total of 35 birds banded. Tree swallows serve as riparian bioindicators, providing valuable insights into watershed health.



Bank Swallow Surveys

Approximately 85 km of shoreline was surveyed between Beach Point and Newtown. All data entered into NatureCounts (Birds Canada). In 2025 we teamed up with Island Nature Trust as part of the Community-Nominated Priority Places (CNPP) for Species at Risk program.

Metric	Results
Shoreline surveyed	~85 km
Colonies found	37
Nesting cavities	1,203



Other Surveys, Assessments

Throughout the year BAWG conducts a variety of survey's and assessments throughout the region, including:

- Headwaters
- Macroinvertebrate
- Smelt
- Amphibian
- Beaver
- Bat
- Electrofishing
- Redd (fish)
- Bathymetrics
- Fresh water springs
- Wildlife trail cameras
- Rapid Geomorphic Assessments (RGA's)



SPECIAL NEWS:

In 2025 a River Otter was captured on trail camera footage on Belle River

CONNECTIVITY PROJECTS OVER THREE WATERSHEDS

In 2025, BAWG completed three aquatic connectivity restoration projects across the watershed — a landmark year for fish passage and ecosystem health. Each project involved close collaboration with landowners, government partners, and community volunteers. In streams and rivers, "connectivity" refers to the seamless flow and interaction among aquatic habitats, which are essential for maintaining healthy ecosystems and supporting biodiversity.

Project 1 — Pinette North: Fish Barrier Rehabilitation

BAWG, together with staff, volunteers, and significant support from the landowner, completed an important connectivity project on the Pinette watershed. This effort quickly grew into a true community collaboration. Local forester Rory MacDonald donated transportation of timber from the mill, Island Pride Garden and Farm Centre contributed silt fencing, and BAWG Board members contributed many hours of hands-on work helping move timber and construct the bridge. Other supports for this project came from the Province of PEI and the PEI Watershed Alliance. In addition, services provided by local contractors and suppliers helped bring this connectivity project all together!

Raw hemlock used for the bridge was salvaged from trees downed during post-hurricane Fiona on the same property, allowing materials to be repurposed in support of watershed restoration. This project has improved stream connectivity and reopened approximately 2 kilometres of stream habitat for fish and aquatic species.



Project 2 – Flat River Wetland Connectivity

BAWG recently completed a wetland connectivity restoration project in the Flat River watershed. The project involved removing degraded culverts that restricted natural water flow and replacing them with a steel-frame, timber-deck bridge. This upgrade helps restore natural hydrology while strengthening the health, resilience, and biodiversity of the wetland ecosystem.

By restoring natural water flow, this project has improved habitat connectivity for aquatic species and supports fish movement and breeding. The improved hydrology also helps reduce flooding risk, improve water quality, and support diverse wetland plant and wildlife communities. This restoration helps protect and strengthen wetland habitat for the long-term health of the watershed.

This project was made possible through the support and cooperation of the landowner, the Province of PEI, and the PEI Watershed Alliance.



Project 3 – Restoring the Run: Little Sands Shore Watershed Fish Barrier Rehabilitation

BAWG completed an Aquatic Ecosystem Restoration project focused on restoring a stream run connected to an abandoned fishway to improve fish passage and overall watershed health. The work included assessing water flow, clearing obstructions, improving stream conditions for fish movement, and installing a new walking bridge to support safe access while restoring natural floodplain function. Early observations have already shown fish using the reopened fishway. Baseline monitoring of the pond and stream was also completed to help track ecological improvements over time, and monitoring will continue as we support healthy, thriving aquatic habitats. This project was made possible thanks to the support and cooperation of the landowner, and valued partners including the Province of PEI, PEI Watershed Alliance, Morell River Management Cooperative, dedicated volunteers, and the BAWG team.



OTHER PROJECTS

Eelgrass Monitoring & Coastal Habitat

As part of the Nature Smart Climate Solutions Fund (NSCSF), BAWG continued its eelgrass monitoring and restoration project in the Pinette River estuary in 2025. This work is focused on understanding the role of coastal habitats in climate resilience, carbon storage, and ecosystem health — all critical priorities for the future of our watersheds.

Field surveys were carried out by kayak using the Seagrass Net protocol, with underwater GoPro cameras and anchored quadrats used to assess eelgrass presence and health at the Colonsay Lane monitoring site. Monitoring results showed limited eelgrass recovery at the transplant site in 2025, with low shoot density and cover remaining from the 1,500 shoots transplanted in 2024. Mapping of the broader estuary identified existing eelgrass beds, with the healthiest growth found in the deeper boat channel where conditions are more stable.

The project also included a hands-on WESP-AC (Wetland Ecosystem Services Protocol — Atlantic Canada) training session for watershed groups at Cantalo Creek, a 3-hectare tidal wetland on the Pinette River estuary. This regional capacity-building session introduced standardized tools for assessing wetland functions and ecosystem services, supporting consistent monitoring practices across PEI.

Two community outreach events were hosted showcasing the project through a poster board and a children's seashell activity. Project outcomes were also shared through BAWG social media and newsletters.

Key Findings

- 1,500 eelgrass shoots transplanted in 2024; 69 shoots remained in 2025
- Three eelgrass beds mapped within the Pinette River estuary
- Healthiest eelgrass found in deeper subtidal areas of the boat channel
- Stressors identified: sea lettuce, sedimentation, shellfish harvesting, boat traffic, and invasive green crabs
- Findings will inform future restoration site selection, with a focus on subtidal areas
- WESP-AC training delivered to partner watershed groups at Cantalo Creek (3.04 ha assessed)

Flat River Restoration Project — Year Four

In its fourth, the Flat River Restoration Project is seeing a successful transition of the upper river back to its original watercourse. What was once a blocked, degraded system — held back by a mid-section berm and collapsed culverts — is now a naturally functioning river, with native floodplain grasses, shrubs, and riparian vegetation thriving along its banks.

A highlight of the final year: brook trout measuring approximately 20–25 cm were observed moving through the middle of the restored section — a stretch that was previously completely impassable. Water temperatures in formerly ponded areas have returned to conditions suitable for fish, aquatic invertebrates, and benthic macroinvertebrate communities.

Planting & Stream Enhancement

In May 2025, approximately 175 native trees, shrubs, and wildflowers were planted at the project site, including round-leaved dogwood, skunk currant, swamp milkweed, steeplebush, hawthorn, northern bush honeysuckle, willow, and several fern species. An additional 52 native plants are scheduled for the riparian zone in spring 2026.

Following expert advice from a provincial ecologist, select large woody debris was carefully removed or modified in reaches where sediment had accumulated, helping to deepen the channel and improve substrate conditions. Three brush mats were also installed to support sediment management.

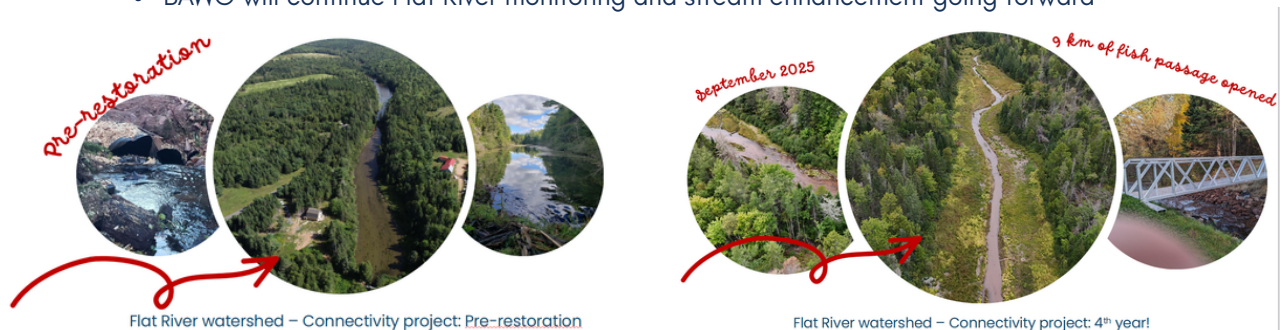
Fall electrofishing at one location (October 2025) found: 49 rainbow trout, 30 brook trout, and 5 threespine stickleback. 32 freshwater springs were mapped as critical brook trout spawning habitat. Redd surveys in November documented 32 brook trout redds between Camp Road and upstream of the project site.

Community Engagement

On September 18, Executive Director Sherry Pelkey presented “From Headwaters to Shorelines” to the Belfast Historical Society, featuring the Flat River restoration project. On November 15, BAWG held an Open House with poster boards and a presentation on the project, attended by partner organizations including the PEI Watershed Alliance and PEI Invasive Species Council.

Project Outcomes

- Upper river successfully restored to its original watercourse (ongoing process)
- Brook trout now moving through previously impassable sections
- Native floodplain vegetation well-established along restored banks
- 175 native plants installed in 2025
- 32 brook trout redds documented — a strong indicator of habitat recovery
- BAWG will continue Flat River monitoring and stream enhancement going forward



Flight to the Future: Forest Habitat Conservation



The PEI Forested Landscape Priority Place for Species at Risk Initiative (FLPP) is a joint initiative co-led by Environment and Climate Change Canada – Canadian Wildlife Service and PEI Forests, Fish and Wildlife Division. Through this project, BAWG engaged local landowners in conserving forest habitat for Species at Risk, with a focus on bird species that serve as indicators of ecosystem health.

For the second year, funding was secured from the PEI Forested Landscape Priority Place for Species At-Risk initiative. The project focused on at-risk forest bird species within the Rural Municipality of Belfast. In June, a total of 31 point count songbird surveys were conducted on private lands, resulting in the identification of 350 individual birds. The data collected contributed to the Forested Habitat Conservation project - Flight to the Future. This program offers landowners an opportunity to actively participate in bird conservation. The program is designed to increase awareness of forest bird species present on private properties and to provide best management practices for maintaining and enhancing forest habitats in a bird-friendly manner. Furthermore, the program will supply valuable data on forest birds within the watershed management areas of the Belfast Area Watershed Group (BAWG), which will be shared with relevant conservation organizations to support bird conservation efforts on Prince Edward Island.

Watershed groups across Prince Edward Island were invited to participate in workshops that introduced the stewardship program and provided training in conducting point-count bird surveys.



COMMUNITY OUTREACH & EVENTS

Wildlife Wonders and Family Fishing (Wildlife Conservation Fund project)



225 Wildlife Wonder activity booklets were distributed to Belfast Consolidated School and at various community events, nurturing the next generation of watershed stewards. The booklet was crafted by staff and focused solely on PEI related environmental fun and games. Additional activities included the annual Family Fishing Day at Roseberry Pond.

