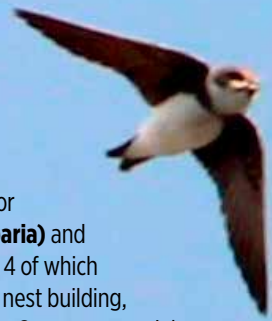


SPECIES AT RISK



NWAI surveyed 62 km of the watershed for endangered Bank Swallows (*Riparia riparia*) and identified 10 locations with BANS activity, 4 of which were highly active colonies. We observed nest building, incubation activity, and fledgling presence. Current, potential, and past nesting habitats were surveyed, and we witnessed burrow digging, hatchling feedings, and fledglings preparing to fly. This information will help support future protection and awareness around this bird species.



NWAI ANNUAL GENERAL MEETING

Our Annual General Meeting will take place **November 20th, 2024 at 7:00 pm** at the **Penniac Rec Centre (23 NB-8, Fredericton, NB)**

We hope to see you there!

WITH THANKS TO OUR FUNDERS

- | | |
|---|---|
| <p>BUFF
CITY OF FREDERICTON
DEPARTMENT OF FISHERIES AND OCEANS CANADA
ENVIRONMENT AND CLIMATE CHANGE CANADA
EMPLOYMENT AND SOCIAL DEVELOPMENT CANADA
FOUNDATION FOR CONSERVATION OF ATLANTIC SALMON
NEW BRUNSWICK DEPARTMENT OF POST-SECONDARY EDUCATION, TRAINING AND LABOUR</p> | <p>NEW BRUNSWICK ENVIRONMENTAL TRUST FUND
NEW BRUNSWICK POWER CORPORATION
NEW BRUNSWICK WILDLIFE TRUST FUND
PROVINCE OF NEW BRUNSWICK
WORLD WILDLIFE FUND - 2 BILLION TREES</p> |
|---|---|



Membership

The Nashwaak Watershed Association aims to promote, conserve, and restore the Nashwaak ecosystem by using science-based methods, community collaboration, and advocacy for the watershed and its inhabitants.

If you share this objective, we would appreciate your membership. There is a suggested \$10 fee. Membership is available through our website or by sending us your name, address, phone number and e-mail address to:

info@nashwaakwatershed.ca or
Nashwaak Watershed Association Inc. PO Box 314, Station "A" Fredericton, NB, E3B 4Y2.

Let us know if you're interested in volunteering!



NWAI STAFF



Allyson Heustis
Executive Director



Daria Wisniewska
Aquatics Program Coordinator



Adam Lanto
Education and Outreach Program Coordinator



Kate Turner
Forest Stewardship Program Coordinator



Tanya Germaine
Restoration Program Coordinator



Juan Sanchez
Watershed Technician



Ian Smith
Outdoor Educator

NWAI BOARD

2023-24 Board of Directors

Ian Lodge, President

Stephanie Merrill, Vice-President

Marta McClure, Treasurer

Dorothy Diamond, Secretary

Julia Carpenter, Peter Toner, Shaylyn Wallace, Parker Menzies, Martha McClure, Michael Chamberlain, Tom Cheney, Jean-Guy Leaman (Ex-Officio)



WaterWays

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info@nashwaakwatershed.ca
www.nashwaakwatershed.ca

WaterWays

NEWSLETTER OF THE NASHWAAK WATERSHED ASSOCIATION, INC.



Fall 2024

President's Report

As we approach another winter, I want to take a moment to celebrate the progress we have made at the Nashwaak Watershed Association and share our vision for the future. Your dedication and support have been invaluable in driving our mission forward, and I am excited to highlight some significant achievements.

We are approaching a monumental milestone—our 30th anniversary in 2025. This upcoming celebration offers us a wonderful opportunity to reflect on our journey, honour our accomplishments, and recommit to our mission of preserving and protecting the Nashwaak Watershed.

We are now in the fourth year of implementing our strategic plan, which has provided us with a clear framework for our initiatives. This plan has been instrumental in guiding our activities and ensuring we remain

focused on our goals.

This past year, we have successfully planted over 20,000 trees and shrubs as part of our ongoing efforts to restore and enhance our natural environment. This initiative not only contributes to biodiversity but also plays a crucial role in improving our watershed's health. In our commitment to maintaining a healthy watershed, we have continued our monitoring of water health and quality. This ongoing effort is essential in assessing the health of our ecosystems and making informed decisions to protect our water resources.

Education and outreach remain a cornerstone of organization proud to share that we have expanded our educational offerings this year, reaching over 1,000 people, including 770 students. By engaging young

minds and the broader community, we are fostering a deeper understanding of our environment and inspiring future stewardship.

On a personal note, I want to take a moment to express how continually impressed I am by the strengths of our organization and the effectiveness of our small team. Our new Executive Director, Allyson Heustis, has brought fresh energy and ideas that have already made a significant impact. Her leadership, combined with the unwavering commitment of our staff and volunteers, exemplifies what we can achieve together. I am excited to see where we can go from here!

Thank you for your continued commitment to the Nashwaak Watershed Association. Together, we are making a significant impact, and I look forward to what we can achieve in the coming years.

— Ian Lodge

EXECUTIVE DIRECTOR'S REPORT

— Allyson Heustis

In 2024, our team of 10 accomplished tasks with ease and brightness. As new staff we have learned a lot this summer and fall as we continue to adapt and improve programming offered across the watershed.

In exciting news, the Nashwaak Watershed Association turns 30 in 2025! Keep an eye out for various events, fundraisers, and raffles that will take place to celebrate 30 years promoting, conserving, and restoring the Nashwaak ecosystem. Our goals would not be achievable without the support from our funders, community partners, and dedicated community members. We sincerely thank you all for your continued support.

If you would like to sponsor a prize for our raffle, be involved in our 30th Anniversary celebrations, or have the NWAI attend your event please do not hesitate to email director@nashwaakwatershed.ca.

AQUATICS

Nashwaak Watershed Health

2024 was an excellent year for our aquatic monitoring programs. We monitored 20 sites for Water Quality. Results were mostly stable; however, one site with an active beaver dam (and visible feces) showed elevated levels of E. Coli, which was expected! A total of 38 temperature loggers were deployed across the watershed and will be retrieved this fall; however, we expect warmer temperatures as water levels were relatively low this summer. Surveys were conducted to assess aquatic connectivity within the watershed, and no novel major barriers were detected. We continued to monitor for Cyanobacteria in partnership with ACAP Saint John, and none of the sites showed elevated levels of cyanotoxin.

Full summary documents, "Aquatic Connectivity" and "Health of the Nashwaak", will be available online this winter.



38 temperature loggers were deployed.

Over 3500 red-tipped willows and red osier dogwood planted.



Over 2500 swamp milkweed distributed to promote pollinator gardens and Monarch butterflies.

Highlights 2023-2024

Implemented Year 4 of our 2021-2030 strategic plan.

Over 18,900 trees planted this year. The top 3 trees planted were silver maple, burr oak and butternut.

62 km of the watershed was surveyed for bank swallow colonies. 196 banks were surveyed, with 13 locations identified with activity, 4 of which were highly active.

20 sites were monitored for water quality.



Hosted the second annual volunteer salmon redd survey event and found 6 salmon redds.

Have hosted 10 public programs and workshops that have reached 264 people since May 2024.



Delivered 14 outdoor programs to over 778 students since May 2024.

5 volunteer tree and shrub planting events hosted +4 school planting events.

Lead 4 elementary school tree planting events which lead to the planting of over 200 trees both on school property and Nashwaak restoration sites.



Education & Outreach

What an incredible year for our Education and Outreach programs within the watershed. New partnerships and working groups have led to numerous collaborations and information sharing which strengthens our programs and capacity.

From nest box installations to species-at-risk monitoring and tree planting, the youth of the Nashwaak watershed have been hard at work stewarding this special ecosystem and modeling the importance of being active in your community.

The winter of 2023-2024 had the NWAI tackling fun outdoor events such as Owls,

Stars and Snowshoes during FROSTival and Animal Tracks, Snowshoes and Snacks, which also took place during FROSTival.

Other new programming offered this year included an educational mushroom walk with local expert Anthony Brooks, a mushroom watercolour painting workshop with local artist and summer student Lena Beckley, and an indoor bird watching with the Fredericton Public Library.

As we look forward to the coming year, it's hard not to be motivated by the amazing community in which we find ourselves. Keep an eye on our social media and e-newsletter to find out about upcoming events. If you are an educator in the area and would like to book a field trip or are a community member with skills you think might make sense for a workshop offering, please reach out!



RESTORATION

Tree Planting

Restoring flood plains within the watershed continued in 2024, and we are thrilled to report our achievements in tree planting and riparian restoration. Over 18,900 trees were planted within the watershed this year by tree planters, volunteers, and staff; what an accomplishment! We extend our sincerest thanks to organizations who joined us for tree planting events. This includes: Gibson Niell Elementary, New Maryland Elementary, Barkers Point Elementary, Ecole Les Eclairiers, St. Mary's First Nation, and McInnis Cooper. We are looking forward to continued restoration partnerships and plantings along the watershed next spring.

It is well known that forests and water share a vital connection, safeguarding against erosion, regulating temperatures, and providing habitat for wildlife. As climate change continues to bring challenges, forests play a key role in maintaining and even improving water quality. Our collective efforts have made considerable strides in the restoration of our historical silver maple floodplain forests and the illustrious Nashwaak Greenway. Together, we have added silver maple, bur oak, red oak, red maple, white elm, and butternut seedlings to this growing legacy.

Culvert Remediations – Kaine Creek and Porters Brook

NWAI has begun coordinating two major culvert remediation projects in 2024. A culvert was installed at Kaine Creek, a tributary of the Nashwaak. The installation of a culvert restored flow and access to 11 km of upstream habitat.

Porters Brook is an important cold-water refuge for many important aquatic species. The culvert was collapsing and threatened to damage ecologically significant habitat downstream in the Nashwaak river. Removing the culvert and restoring the riparian area alongside the brook will ensure the preservation of cold-water refuge, habitat, and will restore fish passage.

Atlantic Salmon Redd Survey

Fall 2023 was the second year for our volunteer run Atlantic salmon redd survey, and we identified 6 salmon redds! This event saw volunteers from government, conservation, and recreational angling groups come together to count salmon redds in key tributaries and main branch of the river. The survey will take place again in the fall of 2024 in partnership with the Maritime College of Forest Technology as part of their curriculum.



Natural Edge

The Natural Edge program was utilized by several properties within the watershed. This program works to protect water quality and restore wildlife habitat and restoring riverbanks on private properties. The dedication and impact that our community members have left on the land is profound. Interested in being a part of the Natural Edge Program? Reach out to restoration@nashwaakwatershed.ca for more information!

FOREST STEWARDSHIP

NWAI's Forest Stewardship Program continues to provide free, ecologically-focused forest management assistance to forest owners in the Nashwaak Watershed. We offer free site visits with a forester to discuss the state of the forest and to provide recommendations on restoration, conservation, adapting to climate change, and succession planning. We have carried out six of these site visits in 2024 and have received positive feedback on the reports and recommendations we provide. Our spring forest management workshop in 2024 was about woodlot cleanup, where we learned about windfall, climate change, fire risk, and the importance of

dead wood as habitat. This popular topic required the offering of two sessions, one for environmental professionals and one for woodlot owners. At the end of summer we also offered another workshop, in partnership with the New Brunswick Federation of Woodlot Owners, on smartphone apps that can be used in the woodlot – Avenza, Merlin and iNaturalist. All our workshops were very well attended.

New to our program this year was the use of autonomous recording units (ARUs) to track bird diversity on various woodlots. We were so pleased to confirm that various species at risk like Canada warbler, wood thrush, and Eastern wood-pewee are nesting in our watershed, and we are promoting management actions that protect habitat for these species. We are grateful for the support of our partners and funders (including Environment and Climate Change Canada and the New Brunswick Wildlife

Trust Fund), and are keen to continue providing free, conservation-focused forestry advice in the watershed.

Do you have forested land or know someone who does? Are you interested in finding out more about how you can manage and restore your forest to offer important environmental benefits? Please reach out to us at forest@nashwaakwatershed.ca or check out our project page on the NWAI website.

Atlantic Salmon Assessment on the Nashwaak

– Derek Hogan

Salmon assessments in the Nashwaak river were conducted by DFO and Aboriginal Fisheries Strategy partnering communities. Spring came early this year and smolt wheels were installed on April 15th when the river temperature was 4.1°C. Fishing continued through 14 May. A total of 149 smolt were caught and 146 were marked and released upstream of the smolt wheels to estimate smolt wheel efficiency. In addition to the smolt wheels, two fyke nets were installed downstream to increase catch for the

mark-recapture study. One was a standard fyke net, the other was a custom designed floating fyke net pilot project. The floating fyke net operated between 26 April - 14 May and the fyke net operated between 1 May - 14 May. Together they caught 84 smolt, all of which were marked and released upstream of the smolt wheels. Three marked fish were recaptured at the smolt wheels. From these data the preliminary statistical estimate of the smolt population leaving the river above the Durham Bridge is approximately 11,400 fish an increase of more than 100% over last years' estimate.

Electrofishing surveys were conducted throughout the Nashwaak River this summer to assess populations of fry and parr. Preliminary assessment of the data show that fry and parr were detected at 12 of 15 sites surveyed. The average densities were 1.5 fry and parr/100m². These densities remained well below the reference values for juvenile abundances in Maritime rivers (29 fry/100m², 38 parr/100m²).

The salmon counting fence started operation downstream of the Durham Bridge on 3

June and is still operating at the time of this writing (September 23). Novel floating fence panels were installed on part of the fence. The floating panels will automatically adjust to water levels and should prevent the need to lower fence panels in high water events when fish are most likely to move. Counts at the fence were very low this summer. Only 2 salmon and 8 grilse were caught. We believe that the addition of more floating panels will help to address these low catches. Despite the low catch at the fence, swimming and seining surveys of historical salmon holding pools in September showed that fish moved upriver before the fence was installed, or through gaps in the fence. We surveyed two pools by seining, and five pools by swimming. We observed a total of 42 salmon, one of which had been previously caught and marked at the counting fence. Based on these numbers our preliminary estimate of the adult population in the river is 420 fish (both grilse and salmon), however the fall run had not yet started at the time of this writing, more fish can come up later in the season once the fall rains begin.