

Summer 2026

NEWSLETTER

Hammond River Angling Association

Operations

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Projects

2026 is shaping up to be one of HRAA's biggest and busiest years yet! From restoring salmon habitat and planting thousands of trees, to youth programs, community science, water monitoring, and exciting volunteer opportunities, our team has a lot planned for the months ahead.

We Have Gone Willow-Wild: Riparian Restoration in the Hammond River Watershed

One of our major restoration priorities continues to be Crowley's Pool, where severe bank instability has created an enormous restoration challenge. The steep slope and scale of the erosion mean that a conventional engineered restoration of the entire site would carry an equally enormous price tag. Rather than waiting for the day when enough funding might exist to reconstruct the entire slope, we have been asking a more practical question: what can we do now? One answer is willow.

Willows are remarkably useful streambank restoration plants. Dormant branches can be harvested as live stakes and driven directly into moist soil. When conditions are favourable, those seemingly simple sticks develop roots and new shoots. Below ground, the growing root network helps bind soil together and increase resistance to erosion. Above ground, stems and leaves slow rainfall, interrupt surface runoff, provide shade and gradually rebuild the protective riparian vegetation that a healthy riverbank needs.

So far this sumer, HRAA staff and volunteers have planted more than 7,500 willow stakes at Crowley's Pool. This work is a continuation of last year's planting effort. When we returned this season, approximately half of the previous year's stakes had survived. A 50 percent success rate may not sound extraordinary until you consider what those plants experienced. Riverbanks in New Brunswick are not gentle gardens. Spring freshet brings flooding, high velocities, shifting sediment and ice that can scrape, shear and uproot young vegetation. Seeing roughly half of those stakes make it through that first difficult year gave us confidence that the approach is worth continuing. So we are continuing at full speed!









Another major restoration project is now moving from planning into construction at Salt Springs Brook. Our silt boom has been installed and heavy equipment has arrived on site. This summer, approximately 100 meters of unstable bank will be stabilized using root wad revetments.

Root wad revetments are one of the most exciting tools in natural channel restoration because they solve more than one problem at once. Large trees are placed into the bank with their root masses projecting into the stream and their trunks anchored securely into the bank. The complex tangle of roots breaks up fast current, absorbs hydraulic energy and protects vulnerable soil from direct scour. Instead of water repeatedly striking a bare eroding bank, the root mass creates roughness and redirects flow.



The ecological benefits are equally important. Natural rivers are not empty channels- fish need complexity. Root wads create overhead cover, pockets of slower water, refuge from predators and current, and small hydraulic differences that can provide feeding and resting opportunities. Woody structures can collect organic material and support aquatic insects, which in turn become food for fish. In a system supporting Atlantic salmon and brook trout, restoring that physical complexity can be just as important as stopping erosion!



The Salt Springs Brook project will also include riparian planting, soil work, habitat monitoring and follow-up assessments so that we can evaluate not only whether the bank remains stable, but whether the project is improving the stream as habitat.



Construction is only the beginning- keep an eye out for updates in our fall newsletter, including progress photos and information about our upcoming volunteer tree planting event! There will be plenty of opportunities to get your boots muddy with us!

During the school year, HRAA's Conservation Centre is often full of students. More than 3,000 students visited us for hands-on environmental education, learning about rivers, wildlife, water quality and the many small creatures that can tell us a surprising amount about ecosystem health. Then summer arrived, the classes emptied out and it was our turn to become the students!

HRAA staff took part in hands-on hydro-geomorphology training with the Petitcodiac Watershed Alliance. The training focused on how water moves through a landscape and how that movement shapes stream channels, banks, sediment, pools, riffles and aquatic habitat.

That may sound highly technical, but it is directly connected to almost everything we do. A stream is constantly responding to energy. Water accelerates, slows, curves, drops sediment, picks sediment back up, scours banks and reorganizes wood and gravel. A restoration project can look perfect on construction day and still fail if it does not account for those forces.

Building staff capacity in hydrology, geomorphology and habitat assessment means we can read streams more carefully before recommending interventions. It helps us understand why a bank is eroding rather than simply observing that erosion is happening. It improves our ability to identify sediment problems, recognize healthy natural channel processes, select appropriate restoration techniques and monitor whether a project is actually working.

The Riverkeepers program has always been about connecting education with action. Sometimes that means teaching a child how to find a caddisfly larva under a rock. Sometimes it means sending our own staff back into the classroom so that the next restoration or monitoring decision we make is better informed!







Water Quality Monitoring: The Work That Never Really Stops

Our monthly water quality sampling has continued throughout the summer at sites across the watershed. Staff collect laboratory samples and in-situ measurements that help us build long-term records rather than isolated snapshots. Those records allow us to compare sites, track seasonal changes and identify unusual conditions that deserve a closer look.

Our 2026 water quality work includes regular chemistry monitoring, temperature data, cyanobacteria surveillance, continuous Tracker stations, municipal lake and stream monitoring, petroleum-spill follow-up and a collaborative glyphosate and AMPA project.

These projects are different, but they all serve the same larger purpose: seeing what is happening in our water early enough to understand it, respond to it and make better decisions.

Our monofilament recycling program also remains in full swing throughout the summer, and we have recently built new bins for the City of Saint John- keep a look out for them at lakes across the city!





Upham Gypsum Mine: Environmental Compliance Monitoring

HRAA continues environmental compliance monitoring associated with the Upham gypsum mine.

Compliance monitoring plays a different role than exploratory research. The objective is to repeatedly measure environmental conditions so that potential changes associated with an active or developing site can be distinguished from naturally occurring background conditions.

To date, HRAA's monitoring results have not identified concentrations above established background levels. Continued monitoring provides an environmental record over time. If conditions remain stable, the data document that stability. If something changes in the future, the existence of pre-impact and early-stage monitoring gives us a much stronger scientific basis for recognizing and evaluating that change.







Some water-quality events happen slowly. Others happen between monthly sample days and disappear before anyone arrives with a bottle- that is why continuous monitoring has become such an important part of HRAA's work.

Our solar-powered CyanoTracker units continuously measure key environmental parameters including water temperature, turbidity, chlorophyll-a and phycocyanin. Temperature tells us about thermal stress and conditions that can favour blooms. Turbidity helps us understand changes in suspended material. Chlorophyll-a provides an indication of general algal productivity, while phycocyanin is particularly useful as an indicator associated with cyanobacteria.

Together, those measurements create a moving picture rather than a single point in time.



This summer, HRAA staff have continued travelling across the Wolastoq-Saint John River system to deploy, maintain and troubleshoot Trackers with partner watershed organizations. The network grew from a local monitoring tool into a collaborative regional system involving organizations throughout the Kennebecasis, Belleisle, Grand Lake, Jemseg, Saint John, Oromocto, Nashwaak and Tobique watersheds, along with locations on the main stem of the Wolastoq-Saint John River.



The Wolastoq-Saint John River watershed covers approximately 55,000 square kilometres across New Brunswick, Quebec and Maine. No single organization could monitor a system that large effectively on its own. A distributed network allows local watershed groups to maintain equipment and understand their own sites while contributing to a shared picture of regional freshwater conditions.

Previous monitoring demonstrated exactly why high-frequency data are valuable. Some sites showed sustained periods of elevated cyanobacteria-related signals, while others experienced brief but intense spikes that conventional monthly sampling could easily have missed.



Each Tracker therefore becomes more than a piece of equipment. It is another set of eyes on the water, collecting information day and night and helping us decide when a site needs closer attention!

On April 8, 2026, a gasoline tanker spill near Nauwigewauk released approximately 36,000 litres of gasoline into the upper Whalen Brook system, a tributary within the Hammond River watershed.

The spill was contained before reaching the Hammond River, but an incident of that magnitude demanded follow-up. Petroleum contamination can involve compounds such as benzene, toluene, ethylbenzene and xylenes, commonly grouped as BTEX, along with total petroleum hydrocarbons, or TPH. These compounds are important to monitor because petroleum can move differently through soil, groundwater and surface water depending on rainfall, geology and site conditions.

HRAA began independent surface-water sampling downstream in Whalen Brook. Our sampling strategy was designed not only to look immediately after the incident, but also to capture conditions after rainfall, when runoff and subsurface movement could potentially mobilize contaminants that were not evident under dry conditions.

To date, HRAA has collected four water samples associated with this follow-up monitoring. All four have returned results below laboratory detection limits for the petroleum-related parameters tested.

For HRAA, this incident was also a reminder of why local watershed monitoring capacity matters. Environmental emergencies do not schedule themselves around annual work plans. Having trained staff, sampling equipment, laboratory relationships and long-term knowledge of the watershed allows us to respond when something unexpected happens.







Another of this summer's water-related research projects is asking a question that is both scientifically important and publicly relevant: are herbicide applications having a measurable effect on water within salmon habitat?

HRAA is partnering with Fort Folly Habitat Recovery to collect water samples for laboratory analysis of glyphosate and its primary breakdown product, AMPA. The project includes sites associated with both Outer Bay of Fundy and Inner Bay of Fundy Atlantic salmon habitat, allowing the work to look beyond one watershed and consider potential exposure across important salmon systems.

The project began in spring with post-freshet sampling. Spring freshet is a useful monitoring period because snowmelt and high flows can mobilize material across the landscape and into streams. All samples from that first phase returned below laboratory detection limits for glyphosate and AMPA.

We have now moved into Phase 2: before-and-after sampling.

Using herbicide application mapping, the project team is selecting locations expected to receive spraying within their surrounding landscapes. Water is sampled before application to establish a baseline, then sampled again afterward. This paired approach is much more informative than collecting a single sample and trying to determine what it means without context.

Our 'before' samples have been collected and we are currently awaiting laboratory results. Once application occurs, the corresponding post-application samples will allow comparison.

The goal is not to begin with an assumption that herbicide applications are causing impacts, or an assumption that they are not. The goal is to collect defensible data capable of answering the question.

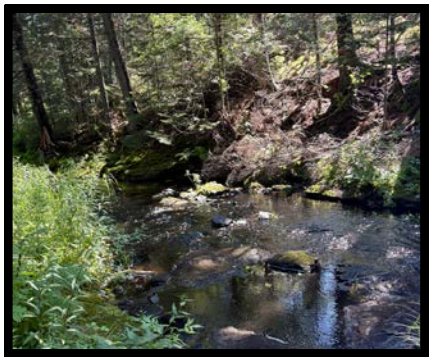
For Atlantic salmon conservation, understanding water quality means looking beyond the fish themselves. Salmon depend on an entire freshwater environment: clean water, suitable temperatures, functioning food webs, intact riparian zones, appropriate substrate and access to habitat. Evaluating potential chemical exposure is therefore one piece of understanding whether those habitats continue to provide the conditions salmon need.











If there is one HRAA project that can reliably produce muddy sneakers, tangled line, enthusiastic storytelling and very big smiles, it is our Youth Fishing Club.

This year's club has already taken young anglers to Lily Lake, Camp Glenburn, McCrea's Fishing Farm, Gagetown Fish Farm and fishing locations on the Kennebecasis and Hammond rivers. We have caught plenty of fish, but the number of fish has never really been the point.

The club is designed to help children become confident, responsible and curious around water. Members learn how to choose tackle, tie knots, identify fish, read a river and recognize where fish are likely to find food, shelter and slower water. They learn that undercut banks, woody debris, boulders, shade, riffles and current seams are not just features of a stream. They are habitat.

We have also been fortunate to have guest speakers and experienced guest anglers join the club. There is something special about watching a young person learn directly from someone who has spent decades reading rivers and understanding fish. Those conversations pass down more than fishing techniques. They pass down a relationship with the outdoors.

A child who learns to love a river is far more likely to care what happens to it- that may be the most valuable catch of the season!





















This is HRAA's second season participating in the Ritchie Lake Management Advisory Committee, and it continues to demonstrate what watershed management can look like when residents, municipal staff and environmental organizations work together.

HRAA is conducting monthly water quality sampling at Ritchie Lake and its associated inflows and outflow, along with water-column depth profiling. Depth profiles help us understand how conditions change from the surface to deeper water, including temperature and dissolved oxygen patterns that may not be visible from a surface sample.



One of our real-time CyanoTrackers is also deployed in the lake, allowing us to monitor conditions continuously between monthly visits. The next major piece of field work requires something environmental field crews cannot order: a good, heavy rainfall.

Following a significant rainfall event, HRAA plans to collect samples for environmental DNA analysis intended to help investigate contributing nutrient sources to the lake. Storm events are particularly valuable because runoff connects the surrounding landscape to the waterbody. Material that remains on land during dry weather can be transported through ditches, small tributaries and overland flow when rain arrives.





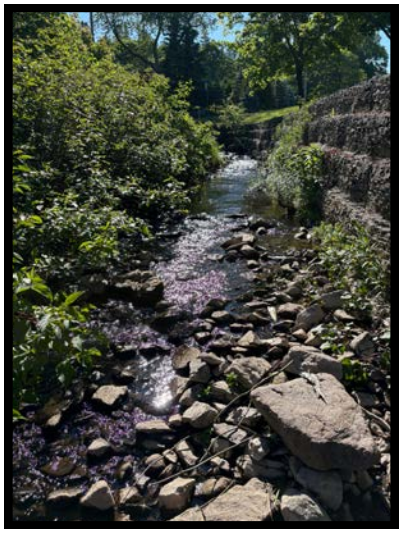




Ritchie Lake does not end at its shoreline. Water leaving the lake flows through Salmon Creek before continuing toward the Kennebecasis River, making the creek an important part of understanding the larger system. HRAA is conducting water quality monitoring in Salmon Creek and, earlier this summer, staff completed a detailed habitat assessment along approximately 2.8 kilometres of the watercourse. Four 700-metre sections were surveyed from the Kennebecasis River confluence upstream toward Ritchie Lake. At 100-metre intervals, staff recorded physical chemistry, channel dimensions, substrate, embeddedness, bank stability, riparian vegetation, woody cover, signs of nutrient inputs, invasive species, anthropogenic stressors and fish observations.



The survey became especially important following a substantial gaspereau mortality event. At fixed assessment points, staff counted 468 dead gaspereau, while the field crew estimated approximately 3,000 dead fish across the surveyed reach.



Gaspereau are anadromous fish, and spend much of their lives in the marine environment and return to freshwater to spawn. Adult mortality after spawning is not unusual, so the presence of dead fish alone does not prove a pollution event. The number and concentration observed in Salmon Creek, however, warranted careful documentation.

The assessment did not identify evidence of an acute dissolved-oxygen collapse during the survey. Average dissolved oxygen across the four transects ranged from approximately 11.36 to 12.85 mg/L. Water temperature at the uppermost section reached 20.7 C, but because the transects were surveyed on different days and at different times, this highlights the importance of the two temperature data loggers we have installed in Salmon Creek that will remain there all season long!



With support from Encorp, HRAA hosted a volunteer cleanup targeting areas of Salmon Creek that had become illegal dumping hotspots. Volunteers removed more than one tonne of garbage and debris from the creek corridor.

The haul included one full bag of recyclables, eight full industrial-size garbage bags, two shopping carts, two bicycles, a large broken plastic bench, six broken chairs, wheelchair parts, a pool noodle, two car tires, significant scrap metal and assorted debris!



As New Brunswick undertakes modernization of the Clean Water Act, HRAA was invited to present to the Standing Committee on Climate Change and Environmental Stewardship. We approached that opportunity from the perspective we know best: what water protection looks like when legislation meets an actual landscape.

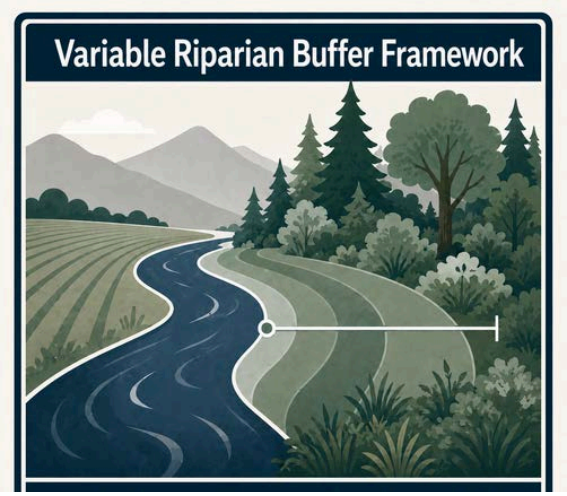
For years, watershed organizations have worked downstream of policy. We see the eroding banks, altered wetlands, nutrient inputs, warm-water events, failing culverts, development pressure and cumulative changes that may appear small when considered one permit at a time but become significant when viewed across an entire watershed.

Our presentation therefore focused not only on what should change, but on how stronger protection could actually be implemented.

HRAA presented a proposed Variable Riparian Buffer Framework. The central idea is straightforward: watercourse protection should not be based solely on one uniform setback that treats every location as environmentally identical. A flat buffer distance may be simple to administer, but watersheds are not flat and they are not uniform.

Our recommendation was not simply to make every buffer wider. It was to make buffers smarter, more predictable and more defensible. Under HRAA's conceptual model, regulated watercourses and wetlands would begin with a standardized minimum 30-metre buffer. That base distance could then increase according to transparent, science-based adjustment factors such as slope, soil erodibility, habitat sensitivity, drinking-water vulnerability, disturbance intensity, cumulative watershed pressure and climate-related risk. That approach offers two benefits that are sometimes treated as opposites: stronger environmental protection and greater regulatory predictability.

A landowner or developer should be able to understand why a particular setback applies; a regulator should be able to defend the decision using standardized criteria; a watershed organization should be able to see how local ecological information is incorporated; the public should have confidence that decisions are not simply negotiated project by project without consideration of the larger watershed.





Environmental Education at CKRC: Bringing Nature to Rural Youth





Not every child can travel to the HRAA Conservation Center, so sometimes the Conservation Center needs to travel to them! Throughout the summer, HRAA has been providing environmental education activities at the Central Kings Recreation Center. We have helped with the center's garden and brought hands-on nature experiences directly into CKRC's Summer Fun programming.

One of the favourites has been a tank full of milkweed and monarch caterpillars! Monarch butterflies offer an extraordinary way to teach ecology because their story unfolds quickly enough for children to watch it happen. A tiny caterpillar begins eating milkweed, grows at an almost unbelievable pace, forms a chrysalis and eventually emerges as a butterfly capable of an extraordinary migration.

Along the way, children learn why milkweed matters, why native plants matter, how insects fit into food webs and how something as simple as what grows in a garden can influence the survival of a species.

Programs like this are especially important in rural communities. Environmental education should not depend on whether a child lives close to a major nature centre or whether their family can travel to specialized programming. Children in rural watersheds are growing up beside the forests, fields, wetlands, lakes and streams that future conservation decisions will affect.

Outer Bay of Fundy Atlantic Salmon: Currents of Collaboration

HRAA's Outer Bay of Fundy work began with a practical goal: improve coordination among watershed organizations working on salmon rivers below the Mactaquac Dam. That meant looking at standardized electrofishing and redd-count methods, identifying monitoring gaps, coordinating tissue sampling and tagging, considering eDNA and benthic monitoring, sharing restoration priorities, improving data compatibility and finding opportunities for joint funding. The concept was simple but important- rather than treating each watershed organization as an isolated project recipient, we could function as a distributed monitoring network. Then the conversation changed dramatically with the announced closure of the Mactaquac Biodiversity Facility.

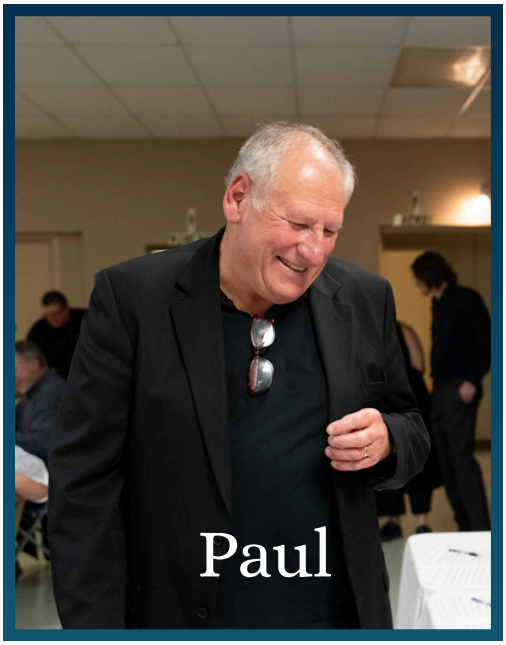
DFO advised partners that science operations at Mactaquac and Coldbrook were expected to end by October 2026 as part of a broader departmental expenditure reduction. For organizations working on Outer Bay of Fundy salmon, the issue could not be treated as simply the closure of a building.

The Mactaquac Biodiversity Facility has supported broodstock and juvenile holding, smolt-to-adult supplementation, release programs, live-gene-bank functions, cross-border egg support, science and assessment logistics, education and cold-water infrastructure associated with salmon conservation. At one point, DFO information indicated approximately 3,700 Saint John River fish were on site, demonstrating the scale of the biological programs tied to the facility. HRAA coordinated a multi-organization response and formal questions regarding the closure. Support came from a broad group of salmon and conservation organizations. The questions focused on issues including fish passage, conservation responsibilities, program continuity, the 1968 DFO-NB Power agreement, transition planning and the risk of losing decades of institutional knowledge.

Canada's National Strategy to Ensure the Future of Atlantic Salmon emphasizes habitat restoration, focal rivers, collaboration and place-based action. Those are positive directions, but habitat investment and monitoring must be connected to functioning fish passage and credible conservation infrastructure if recovery is to succeed. At the time of this newsletter, the future of the Mactaquac Biodiversity Facility remains unresolved and the working group remains at an impasse on several critical questions.

HRAA Office Staff





HRAA Field Staff



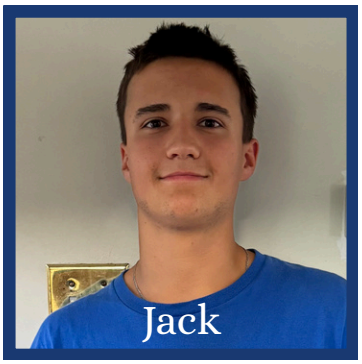


HRAA Summer Field Staff





Summer Camp Staff

























Summer Camp

Summer camp 2026 was a total blast! 9 weeks full of super cool eco tech lessons, fishing, outdoor wilderness adventures, waterfront skill development and so much more. Incredible memories and friendships were made along the way! Our new outdoor learning structure hosted themed crafts, daily activities and supported additional space for our campers to have snacks and lunches. It was a truly amazing summer and thank you to our awesome staff , CIT's and guest presenters for adding extra education and fun. See you all next summer!

~ Sarah















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