



RIPARIAN READS

Newsletter of the Kennebecasis Watershed Restoration Committee

Winter 2024



Photo by Ellen MacGillivray

Manager's Message

What to write here? We have been doing a quarterly newsletter since 2019 and honestly, it seems like just yesterday. I'm entering my 18th year here at the KWRC, so I can provide a lot of stories but the challenge is, which one to tell? Which one will you read? Do you want to hear about the restoration projects we undertook this year or the ones we are planning for next season? Maybe you would rather hear about all the fish we caught as part of our electrofishing exercise? Are trees your thing? Then I could tell you about all the trees we planted and the sites we planted them at. Maybe maps really get you going. If so, I could tell you about the biodiversity mapping we are working on.

2024 was our 30th year, and instead of focusing on the things we have accomplished or the things we have done, I'm going to focus on the who. There are a ton of folks who have helped us plant over 300,000 trees, install over 400 habitat structures, and enhance a crazy amount of riparian zone. As stated in our previous newsletter, we have employed over 100 people through the years; but to

make an organization work, we need a committee. The KWRC is a stakeholder committee, which means we recruit interested folks who have a vested interest in the watershed. It means we have a broad range of people on our committee and while this could cause challenges, we are lucky that everyone at the table understands that the health of the watershed must come first.

Our committee has representation from forestry, agriculture, and mining industries. The SNB Wood Co-op and Fundy Model Forest provide time to review our proposals and reports and offer advice when we are undertaking tasks related to tree planting and floodplain management. The Agriculture Alliance of NB and the Kings County Soil and Crop Improvement Association represent the agriculture sector along with the Federal and Provincial departments of Agriculture. Nutrien provides us with input and perspective from the mining side of the equation. Each of these representatives help us seek solutions to watershed issues that their respective sector might face.

Our municipalities (Sussex, Hampton, Butternut Valley, Valley Waters, and the Kings Regional Service Commission) also provide representation at our table. They often see the KWRC as a worthwhile partner that can help maintain a healthy, climate resilient community. We've worked with municipal partners to build monitoring capacity, mitigate stormwater runoff, plant pollinator friendly landscapes, and more. We also have provincial and federal government departments represented on our committee such as Environment, Natural Resources, Fisheries, Transportation, and as stated earlier, Agriculture; all have a voice around our table ensuring a broad perspective is considered.

Other community groups also play an important role in helping us gather input and perspective on the watershed. Sussex Fish and Game Association, Nature Sussex, and the Sussex Valley ATV Club have all aided in project delivery and development. Whether they are helping host fly

fishing events, building better trail corridors, or assessing riparian biodiversity, the input they provide at the committee level is valuable in making sure we are creating the most balanced approach in managing our watershed.

To make sure we have solid science and outreach, we have academic partners to provide insight on potential research projects and local schoolteachers to advise on outreach programs. The Canadian Rivers Institute has been a long-standing resource that have completed extensive research on our trout populations, bacteria, thermal conditions and more.

~ Ben Whalen
Project Manager



Calling Farmers in the Kennebecasis Watershed

If you're a farmer in the Kennebecasis watershed with a river, stream or creek on your property that you would like to see flourish, please feel free to reach out for an assessment. The KWRC is interested in implementing BMPs, or Better Management Practices, used in agricultural settings, and having conversations with farmers and other landowners about current, modern, historical, and alternative farming practices. BMPs have benefits for both the environment and the landowners by enhancing farm resiliency and lessening agricultural impacts on the environment. Implementing BMPs can benefit farmers even further by helping to reduce loss from erosion while also taking advantage of a financial incentive for providing vital habitat services, such as reducing the speed and volume of runoff and sediment that enters rivers during extreme weather events, preventing fertilizer from entering systems, and supporting wildlife by tree planting and protecting riparian habitats.

Farming is a necessary sector, essential for providing food and boosting the economy. Our society couldn't exist without the work of farmers. The KWRC recognizes this, and wants to work with farmers to improve current agricultural systems while enhancing ecosystem resiliency through BMPs. If you are a farmer interested in learning more about these practices, some of which can be funded by the Government of New Brunswick,

through the Resilient Agricultural Landscapes Program (RALP), then the KWRC would be happy to assist you.

At this time we are seeking interest to better understand the positive impact we can cooperate in, but we are currently looking to fill the position of Agricultural Stewardship Coordinator (see our [website](#) to learn more), which will allow us greater capacity to visit sites, conduct riparian assessments, and work closely with farmers to recommend and implement the appropriate BMPs based on the specific needs of the farmer. For more information on eligibility, land requirements and initiatives that have funding available, please visit the Government of New Brunswick's [website under the Sustainable Canadian Agricultural Partnership \(SCAP\)](#). If you are interested in applying for provincial funding through the SCAP program, make sure your Environmental Farm Plan has been updated in the last 5 years! We look forward to working with you in your farming operations.

~ Miranda Crawford
(former) Agricultural
Stewardship Coordinator



Improving Biodiversity Starting with Species at Risk

I joined the KWRC team in October and immediately dove headfirst into the reporting, grant application, and project proposal season. The team quickly got me caught up on the projects they completed over the summer and introduced me to the Kennebecasis river watershed.

My focus has been largely on bank swallows (*Riparia riparia*) since starting in the position of Biodiversity Coordinator. They are a threatened species under the Species at Risk Act (SARA) and have declined throughout Canada by a shocking 98% since the 1970s. The Kennebecasis watershed is no exception; bank swallow observations within the watershed during annual North American Breeding Bird Surveys (BBS) have gone from over 200 in 1979 to zero in recent years. Bank swallows are still here, however, but observations are scarce. I have been using tools like iNaturalist and eBird to track down this elusive species, but the data is insufficient to draw population conclusions from. That's why the KWRC has committed to monitoring the bank swallow population in the watershed, improving the habitat in which they live, and providing educational material for bank swallow observers.

The KWRC is part of the Atlantic Bank Swallow Working Group, and with help from the Nashwaak Watershed Association, we will develop a monitoring protocol and collect as much data as we can about these little swallows, including the estimated number of indi-

viduals within the watershed, active nest locations, and suitable bank nesting habitat. We are looking forward to floating down the river on kayaks, searching for swallows and their nesting habitats during the upcoming bird breeding season. The data we collect this spring and summer will be critical to inform conservation action toward protecting this species at risk. The KWRC is planning more exciting projects related to swallows and other species at risk that will be revealed later this year.

I have also been working on a comprehensive inventory of all the plant, animal, and fungi diversity in the Kennebecasis watershed, building on observations made and recorded by our team at various sites over the years. This resource will help us understand what species are where, especially species at risk as well as invasive species. Understanding the composition of organisms within the watershed will allow us to know where to focus our conservation efforts, where to be extra considerate of restoration plans, and to build more projects aimed at enhancing biodiversity or tackling priority invasives.

~ Caitlyn Duncanson
Biodiversity Coordinator



Cold Weather Cuttings: Experimenting with Elderberry



Sprouting willow stake

Brr, it has become chilly! Exciting—now it is cold enough to begin harvesting our tree cuttings for the 2025 field season! We use these cuttings to establish root systems which help stabilize eroding streambanks. The KWRC has been harvesting willow cuttings and staking them into riparian soil since our organization started

in 1994, a whopping 30 years!

We take stem cuttings from willow trees during their dormant season (throughout the winter before the buds

break) and freeze them until the spring which is when they are staked directly into streambanks. These cuttings, referred to as 'live stakes', are an effective way to establish root networks and help prevent further soil loss. Willow is a great species for this task because they are fast growing and have extensive fibrous root systems. These types of roots are ideal for erosion prevention because they are widespread networks (over 95% of the roots are in the top 50m of ground) and hold in place much more soil than if they were to run deep. Willow is also beneficial for pollinators, as it is one of the earliest blooming native trees.

Recently, we discovered that some organizations have been using elderberry and red osier dogwood cuttings as

live stakes. We are eager to collect cuttings of all three of these native species this winter season: willow, red osier dogwood, and elderberry, to increase the level of biodiversity in our restoration work and watershed.



Elderberry is very beneficial to pollinators, they provide food for birds and wildlife, and they prefer a different soil type than willow trees—this means we can stake elderberry & dogwood cuttings in areas where the willow may have struggled to grow. Elderberry is also incredibly hardy and fast growing,

which means the roots will establish quickly to mitigate erosion, just as our trusted willow stakes have been doing for 30 years.

If you have an elderberry bush growing on your property and would be open to sharing some cuttings with the KWRC, please send me an email at restoration@kennebecasisriver.org.

~ Annie McMullon
Restoration Coordinator



Keeping Busy in the Winter: River Watch and Other Monitoring

This winter is turning out to be just as busy as the fall months, during which we completed many monitoring activities such as electrofishing with the Hammond River Angling Association (HRAA), monthly water quality sampling, soil carbon monitoring, freshwater mussel surveys, and CABIN (Canadian Aquatic Bio-monitoring Network) assessments! The KWRC also hosted our 30th anniversary event in November, bringing together current and past staff and those who have contributed to our organization over its lifetime.

Although our team isn't in the field as often during the winter, we are still busy in the office catching up on data entry, attending workshops and webinars, and writing proposals and reports. Even though this can mean long days sitting at our desks, these are necessary tasks to secure funding for future projects. Recently, we submitted several project proposals for 2025 work, and it's looking like the next field season will be an exciting one—we may even have help from a few goats!

During the winter months, our team will monitor river ice conditions and measure snow depth at various locations across the Kennebecasis watershed and surrounding area. This allows us to get out of the office for some much-needed fresh air and scenery! We will observe and take notes on different ice formations that can develop on rivers during freeze-up or break-up periods such as frazil ice and border ice.



Ice build-up before a bridge could cause flooding

We also keep our eyes peeled for any potential ice jams. Jams occur during significant ice break-up events when the broken ice accumulates in one area, backing up the flow of water, which can lead to flooding and damage of the riparian area. This information and data are reported to the Department of Environment and Local Government (DELG) and Emergency Measures Organization, and will aid in flood forecasting models. For more information visit GNB's River Watch website [here](#).

~ Kate Vey
Monitoring Coordinator



Reflections on New Year's Resolutions

The New Year is an excellent reflection point in our lives, which is why the concept of creating annual resolutions to better ourselves is so appealing; a new year can symbolize a fresh start, to finally slough off the bad habits of the previous year. Some of us stick to our resolutions, but many are familiar with the feeling of falling behind until we give up and think, “next year”. The first few days of January certainly feel charged with a special kind of energy that inspires visions of an improved self. That envisioned self can be achieved, if only one puts in the work. Maybe that’s why we often fail to reach our goalposts, because bettering ourselves *is work*, especially when we set high expectations that we struggle to fit into our schedules. I want to introduce a few, hopefully helpful, ideas here, and be prepared, I *will* be relating it all to Nature and encouraging you to spend more time out there—even as an employee of an environmental nonprofit, it’s one of my resolutions, too!

Idea One: don’t feel the need to start right away. Like I said, the new year is an excellent time for reflection, so be sure to take that opportunity, as the prior Christmas season is quite the hustle and bustle for many folks. If you fail to start on your brand-new resolution(s) on January 1st, you’re not setting yourself up to feel successful. If Nature still sleeps at this time, why push yourself so soon? I recommend looking back on the year, practicing gratitude, assessing what you’ve accomplished, what didn’t work, the things and people you want more of, and coming up with the appropriate tasks. It’s okay to catch up on rest; you’re just powering up! Though the Spring Equinox is in March, many traditions, like the Gaelic Imbolc or Irish St. Brigid’s Day, even North America’s Groundhog Day, celebrate the first day of Spring at the beginning of February. This is when the belly of Nature begins to rumble, in my opinion. Welcome those feelings of motivation.

Idea Two: manage your expectations. If you live a sedentary life and want to change, don’t make a resolution to work out everyday. I mean, if you’re fully committed to that, kudos to you. But if you fall behind, it might make you feel bad and you’ll have less motivation to continue. Try three times a week, or once a week, even. And start simple. Try stretching a certain pose for 3 minutes in the morning, 5 minutes in the evening. You might find it feels good! I recently learned of a formula

for spending time in nature that has scientifically shown to improve physical and mental well-being, and that’s the 20-5-3 rule developed by neuroscientist Rachel Hopman-Droste. We should all know by now that being in nature helps us feel better, but this formula suggests that different types of natural settings make a difference, too, and so do minimum timeframes: 20 minutes at least three days a week in a nearby natural setting, such as a park; 5 hours monthly in semi-wild nature, such as a preserve; and 3 days yearly in true wilderness, such as backcountry camping. This made me realize that very little of us are getting the nature time we need. Even monthly visits to a national park seem unattainable in our busy lives. But that’s all the more reason to make an effort, even in the smallest segments of time that we can manage, because *any* time in nature is beneficial! Set a goal to get out for a walk once or twice a week. You could also create a habit tracker in an agenda or journal to see your progress at a glance. Google ‘habit trackers’ for inspiration.

I can’t help but encourage time spent in nature; I know it to be very nourishing for myself. If you’re reading this you probably have an inclination toward the environment as well. Still, getting outside in the winter can be intimidating even for nature lovers. The goal doesn’t have to be a day-long expedition like snowshoeing or skiing; it could be simplified to a walk around the block, one lap around a trail; you could stand in the backyard, with a goal to identify one bird using the Merlin app or observe other species and upload them to iNaturalist. I’ll just add, if you’re not using iNaturalist (or Seek, the same app but more privacy-sensitive for kids), make this your year to get started! It’s free, fun, and useful.

Idea Three: strive to be of service. I’ve recently been reading about the idea of improving one’s own well-being not through self-centered goals, but through acts of compassion. It’s possible that the idea of sacrificing your own time to help someone else gives you some anxiety, especially in a time where people are already feeling overworked. You might think, “when I get my act together, then I’ll be more fulfilled and able to help”. I want to argue that being of service to others and to the environment is fulfilling, for both you and the receiver of your kind deeds. This is something I too want to incorporate more of in my life. I bring it up here because

earlier I discussed the work involved with ‘self betterment’, and how we often fall short of our resolutions. Shifting our attention from self to helping others, our community, our environment, would contribute meaningfully to society while still accomplishing the goal of self-improvement, killing two birds with one stone! Not that we’re in the business of killing birds. Plus, studies show that acts of compassion aid in mental and even physical well-being.

If you don’t know how to help, I would suggest that starting with the environment is the best way to ease into it, since a healthy environment and ecosystems are essential to the well-being of a community, including the wildlife community. If your actions are compassionate toward pollinators for example, you may be supporting an important species at risk, and helping to reverse a global crisis of biodiversity loss! If this sounds appealing to you, here are a few ways to support pollinators and wildlife: plant native plants; educate yourself on invasive species; come spring, don’t rake leaves until around May.



Environmental work is never finished, so at the KWRC there will always be opportunities to help out as a volunteer. Each year we host a couple of tree planting events, where everyone is welcome to join us in riparian restoration work, no experience required. If one of your resolutions is to volunteer more, please consider us as a resource; or, if inspired by this article you want to be of service more, the same applies.

This winter we are planning to host a volunteer willow-cutting event, so stay tuned for that on our social media. I want our readers to know that, unless stated otherwise, our volunteer opportunities seek any and all willing participants; do not feel that you should have any prior experience or acquaintance with us, all are welcomed and appreciated! Happy New Year!



~ Ellen MacGillivray
Education Outreach Coordinator

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