



Photograph taken at Priest Pond Beach; courtesy of Isobel Fitzpatrick.

Souris & Area Watershed News

Souris and Area Branch
of the PEI Wildlife Federation

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Agriculture & Agri-Food Canada's Living Lab - Atlantic

SAB has been expanding its agricultural monitoring activities in the last two years via Living Lab - Atlantic, headed by Agriculture and Agri-Food Canada (AAFC). PEI has become a hotbed of agricultural testing thanks to our participation in a Canada-wide project, called the Living Laboratories Initiative. The aim of this endeavour is to increase sustainable management activities in agriculture through collaboration between a variety of interested groups such as producers, industry partners, scientists, and conservation groups. With this close partnership and a more field-test oriented method of research, it is hoped that Living Labs can allow more rapid adoption of beneficial and sustainable best practices by farmers.

With an understanding of the ideas behind Living Labs, you might be wondering how SAB has been involved. We've worked in partnership with a number of local farmers on a variety of projects, each described as a different Best Management Practice, or BMP.

Farmers have been trying things such as seeding fall cover crops following either fall ploughing, or potato harvest, for BMPs 1 and 2. The aim of these BMPs is to reduce soil erosion over the winter and spring, as well as helping to build organic matter during what would normally be downtime for the field.

One of the more popular BMPs is BMP 3, "Full-Season Soil-Building Rotation Crops for Building Soil Organic Matter"; put simply, this BMP involves replacing what would be a production crop with a strictly soil-building one, usually a mix of a dozen or more plants that help in increasing organic matter content in the field. This increase then helps in moisture retention for future crops and discourages erosion and soil-borne disease. You may have seen some of these fields around (even outside of Living Labs, they've become popular for soil building) with their rich variety of flowers and foliage.

BMP 4 involves the planting of nurse crops alongside row crops; in our area, this has meant corn. The idea with this BMP is that until the row crop has grown, the soil is mostly bare and susceptible to erosion. To aid in quickly covering bare soil, a nurse crop is planted that grows and covers the soil much faster than the row crops, improving soil and moisture retention until the row crop is large enough to do the job itself.



Equipment used to take soil samples for Living Labs.

We've also been helping to introduce BMP 8, which will involve constructing wetlands and vegetated waterways, with the goal of improving water quality and increasing biodiversity in marginal habitats like headlands and low-lying areas that are too wet to farm. BMP 8 is in partnership with the PEI Watershed Alliance, AAFC and Ducks Unlimited. Sites are currently being monitored, and we hope to begin work this year.

In addition to the Best Management Practices, SAB is involved with several Supporting Activities working with AAFC scientists. One of these is Supporting Activity 3, which involves comparing fields that do or do not have a BMP in place. For us, this means monitoring water quality via a number of wells in a local field, similar to what had been done via the WEBS program several years ago.

We're also participating in Supporting Activity 5, a comparison of conventional tillage (moldboard ploughing) to reduced tillage (shallow wheel harrowing). The hope with this project is that reducing the depth of disruption to field soil during fall ploughing could help to improve soil quality and organic matter retention for crop production, as well as reducing erosion as a result of this greater organic matter.

Lastly, this year we've begun assisting AAFC with an internal project, BMP 2.4. The project involves different sections of a field being treated with varying levels of fertilizer, and a comparison of the greenhouse gas emissions from these treatments. Normally AAFC scientists would do this monitoring, but we've been handling it this year as a result of uncertainty and restrictions due to COVID-19, thanks to our proximity to the area.

SAB has been excited to be involved in a collaborative effort like Living Lab - Atlantic, and we're hopeful these assorted projects will work to benefit agriculture and the environment in the Souris area. It will be a multi-year initiative, and we'll have more thorough results to report on at the end of the year.



Frances Braceland taking GHG samples.

Field Staff Update



Stream Enhancement in Fortune River.

Our 2020 field crew has been hard at work this field season completing various tasks and projects around our management area. Some of our projects include stream enhancement, green house gas sampling, soil sampling, water quality monitoring, and tree planting, just to name a few. Our 2020 field staff includes Luke Chaisson, Mike Jacklyn, and Jake MacKinnon as our Field Supervisors, who combined have 20+ years experience working in our management area with Souris Wildlife. Our Basin Head leads, Madelyn Stewart and Tyler Kristiansen, and summer Field Technicians Isaac Chaisson, Tessa MacKinnon, Chris Outhouse, Tyler Dill, Nathan Deagle, Daniel MacIntosh, Camden Jenkins, and Connor Ching are an absolute asset to have around to complete all of our deliverables for our 2020 field season. Our field season this year had wrench thrown into the works dealing with the coronavirus pandemic. We have had to alter our workplans to adhere to SAB's and Public Health's COVID-19 guidelines, but now are full steam ahead and fully plan to get just as much, if not more, done in our management area as last year.

With our stream enhancement we are counting our blessings as our field crews are finding our streams and waterways to be in better condition than expected after Hurricane Dorian last fall. Our stream enhancement includes the removal of blowdowns and blockages on our streams that can or will inhibit fish passage, the installation of brush matting to gather silt washing downstream and rebuild stream bank at the same time, installing digger logs to deepen and create holes for fish to rest in shallower sections of stream and a beaver management plan. This year, we also planted 800 trees and shrubs around management area, mostly focusing our planting efforts around our waterways and streams/ivers to help with bank

stabilization and help catch any soil run-off. We planted a wide variety of species from Eastern larch, Yellow birch, Red maple, Dogwood, and Bayberry, among others.

Our work with Fisheries and Oceans Canada in Basin Head's Marine Protected Area was late starting but we are in the process of preparing for our yearly monitoring efforts. Within our workplan with DFO is Green crab trapping and removal, nutrient monitoring, and Giant Irish Moss restoration.

We are pleased to begin our third year of Salt Marsh Restoration funded by the Coastal Restoration Fund to restore salt marsh in Souris River. Our previous site had taken some damage from Dorian last year but it's nothing that can not be fixed and with the addition of two new pumps we plan to increase our output from previous two years.



Salt Marsh Restoration in Souris River.



Coir Fibre Logs installed at Souris River Salt Marsh Site.

Along with our work we do in our streams and rivers, we also do a lot of work revolving around agriculture in our area. Partnered with Agriculture and Agri-Food Canada, our workplan includes water and nutrient quality monitoring, planting of willow trees in buffer zones along selected fields, and soil sampling. Under the Living Labs program, we also do a large amount of soil and nutrient sampling in over 10 fields spanning across our whole management area.

These are just some of the projects we have on the go here at Souris Wildlife this summer. This fall, electrofishing, salmon, and trout redd counts, and Atlantic salmon monitoring, among other projects, will also be taking place. It may sound like the list goes on forever but with a great crew, nothing is out of the realm of possibility. No matter how many setbacks or problems we might run into along the way, we always complete and exceed our deliverables.

Of course, none of this work would be able to be completed without our funders and terrific Project Managers, Keila Miller and Frances Braceland, and our Coordinator, Fred Cheverie. So, if you see us out and about in your travels this summer or fall give us a wave or a honk, we will be doing what we love.

North American Beaver

The situation between Souris Wildlife and the North American Beaver has always been very much a balancing act. We as an organization have been battling with the beavers for 20+ years and have developed Beaver Management Plans to better handle them. Beavers have very interesting and unique characteristics!

The North American Beaver, also called the Canadian or American beaver, was used in the fur and castoreum trade. Castoreum is located in the beavers' scent gland used to mark their territory and socialize. It was harvested from the animal and widely used in food and in perfumes due to its vanilla like scent. Today, the most recent population estimates show about 400 active colonies or 2000 beavers in PEI.

The beaver is a semi-aquatic mammal meaning they spend a large portion of their time on both land and in water. They are most safe in water and will quickly retreat to a water source if they feel at all threatened. The main reason beavers do come on land is to look for and cut down food sources. Beavers are herbivores, proving the



North American Beaver.

old myth saying that beavers eat fish is simply not true. Poplar and Aspen trees are a beavers' preferred meal as it has an exceedingly high amount of cambium (the soft inner layer of bark) compared to other trees. They also snack on leaves, twigs, among other things, but dislike eating Red maple and Coniferous trees, like Spruce, due to their high sap content. A beaver can hold their breath underwater for 15 minutes while still chewing and eating underwater without fear of drowning due to having a second set of lips.

While swimming in the water they look no bigger than a muskrat, but the average beaver grows to be around 40-60 lbs, with some being recorded up to 100+ lbs. Litter sizes can vary from 2-6 kits with a 3 kit average. The kits stay with the parents for two years until they are around 25-30 lbs, then the mother or father will kick them out of the territory, and they are off on their own to begin their own colony.

Beavers never hibernate, they stay active year-round. Underneath the ice, they build a house called a lodge made from sticks and mud that can support their whole colony. Within this lodge, there are underwater channels that lead to a stockpile of food, called a cache, comprised of twigs and branches that is taken back to their lodge for the whole colony to dine on. What the beaver is famous for is their dams, and these dams can stretch for over 100 meters. The largest recorded beaver dam was over 850 meters and located in northern Alberta. Dams are comprised of branches, sticks, mud, reeds, and rocks; they build these dams near prominent food sources and/or wherever they believe the dam will best hold up. Here at Souris Wildlife while dismembering an old beaver dam we once found that the beaver had built it around an old bathtub! Dams allow the water to deepen so that the whole pond will not freeze and they can maintain their channel from their lodge to cache in the winter, while in the warmer months allowing them easier access to the safety of the water when foraging for food. Now, the dams are where the problem between the beavers and Souris Wildlife begins. In bigger river systems like in Alaska and Colorado, beavers and their dam building has proven beneficial to trout and salmon populations but is sadly not the case here in PEI. With our much smaller river systems, beaver dams have the capability to completely block fish passage to trout and salmon, thus cutting off important spawning ground. These dams in our small systems also do not allow a natural flush of the system from sediment leading to a stockpile of sediment behind the dam, resulting in the destruction of spawning habitat and a sudden flush of sediment to the rest of the river system when removed.



Beaver Dam in Bear River.

Every year while doing stream enhancement in our watershed area we come across new colonies of beavers that have moved into our area. With these new colonies we devise a Beaver Management Plan best suited to each individual river. So far into the 2020 field season, we have removed 12+ beavers and 26 beaver dams as of July 15, 2020. It will always be an ongoing issue between fish passage and beavers since they are here to stay, but as long as we have a great crew and good management practices here at Souris Wildlife, it'll never be too much for us to handle.

Fan's Final Fleet

Fan's Final Fleet, it was just as amazing as it sounds. A long-time supporter of Souris Wildlife and Outdoorsmen, Fan MacIntyre, was given the final send off a man of his stature deserved. Rain and poor weather threatened the memorial, but it was full steam ahead as the weather could not keep away more than 30 boats from Annandale and surrounding harbours, and then steamed to Souris harbour for the memorial. With Fan's ashes leading the way aboard his daughter and son in law Tammy and Scotty Jenkins boat, the Angel Brailyne, 38 boats followed behind coming from all over Kings County to pay their respect to such a great man. The 1 ½ hour steam to Souris was met with rain and choppy waters, but Fan would not want it any other way, the weather never could keep him from enjoying the outdoors. Upon arrival into Souris Harbour, family members and the memorial procession were met with a harbour lined with friends, family and locals alike who all came to pay their respect and witness a truly once in a lifetime spectacle. As the procession left the harbour, they were met with a lineup of Fisheries Officers saluting a former officer. He was lastly laid to rest in St. Mary's Church in Souris. The whole memorial was truly a beautiful event and one nobody will soon forget. The staff and Board of Directors of Souris Wildlife would like to thank JJ Chaisson for taking us out on his boat to witness this special event.



Fan's Final Fleet.

Basin Head Activities



Luke Chaisson assisting in the surveying of Giant Irish Moss.

Souris and Area Wildlife uses the Basin Head Marine Protected Area (MPA) for many things. We assist Fisheries and Oceans Canada in restoration and monitoring efforts to rehabilitate the Giant Irish Moss population, complete nutrient monitoring, survey eelgrass beds, and conduct a Green crab removal program.

The Giant Irish Moss rehabilitation is lead by Marine Botanist Irene Novaczek, and has been ongoing for almost six years, to much success. Through the combined efforts of SAB and DFO, the population of this unique moss has grown, and continues to expand with every new year of work!

We are now entering our second year of the new nutrient monitoring program for the Basin Head watershed, involving collecting water samples, taking YSI measurements (a multiparameter measuring device), and calculating stream flow rates. Determining the amount of nutrients in our streams will allow for better management of our waterways and provide a healthier environment for aquatic flora and fauna.

The Basin Head estuary was once thick with eelgrass beds, but its density is far less than it used to be. In 2017 and 2018, eelgrass was transplanted into Basin Head to establish new eelgrass beds, which SAB has been monitoring the growth of since. Eelgrass provides a nursery habitat and a way of protection for aquatic organisms.

Through the Green crab removal program, over 60 000 invasive Green crab have been removed from the Basin Head MPA over the last two years. As we have wrote before, Green crab are an invasive species that has the ability to outcompete native crabs for food and habitat. Green crab love to eat the small Blue mussels that are anchoring the Giant Irish Moss as well as the shoots of eelgrass. By removing them, we are creating a hospitable environment for many species that call Basin Head their home.

A lot of this work is conducted out of the newly built research building at the Basin Head Interpretive Park. Not only is the Interpretive Park a great space for our research and monitoring activities, it is a great spot to have a picnic, enjoy the view, and peruse the informative signs of the history, flora and fauna of the area. Relax at the picnic table under the gazebo or launch your canoe or kayak at the renovated slipway to explore the beauty that is Basin Head!

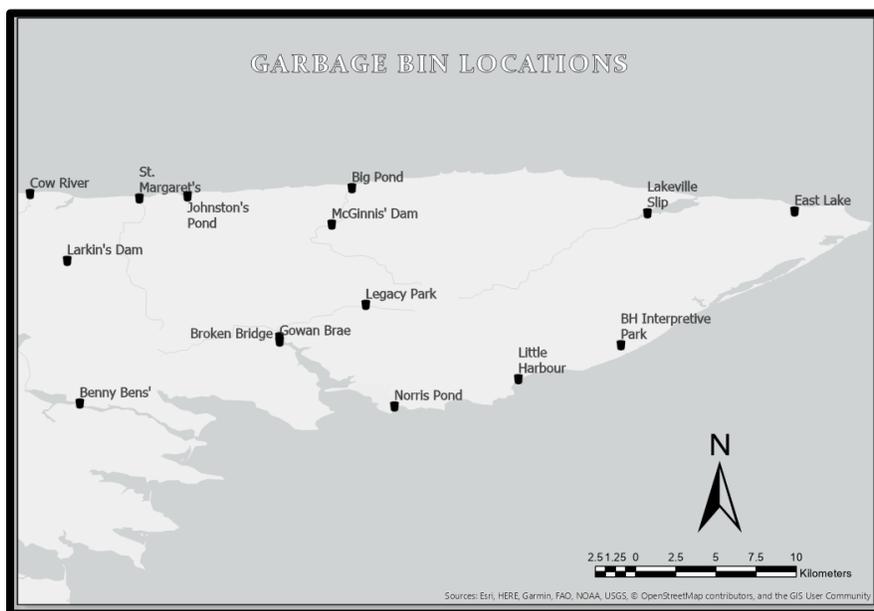
Angling in PEI

Here at Souris Wildlife we are a proud supporter of all angling and fishing activities around the Island and our management area. Whether that be chasing some Steelhead in Souris or Fortune River, catching Striped bass from the surf, or fishing for “Brookies” or White perch in any of our streams. Striped bass fishing has quickly become a huge draw for locals and others in the area. New guidelines this year no longer require the use of circle hooks, but barb-less hooks are still enforced. While circle hooks are no longer mandatory, they are recommended, as it seems that by the time the bass make it around the Island from Miramichi, only big fish outside the slot size are left. With the slot size being 18-25 inches this year, we have noticed from local talk that most of the fish caught in our area fall outside this slot size. Circle hooks allow for an easier catch and release of the fish, causing as little harm as possible. We pride ourselves in having some of the best Steelhead and Brook trout habitat on the Island and with this comes great opportunity for anglers and people alike. Whether bait or fly fishing, our area provides some of the top fishing you will find anywhere on PEI. We work extensively in the spring and summer to cut trail and clear areas to make it easily accessible for seniors and mobile handicap persons to fish in the area. Accessible locations can be found in Souris River, Larkin’s, Johnston’s Pond, East Lake, and Grove Pine in Fortune to name a few. This year it was implemented that treble hooks are illegal to fish trout with, even on lures. That being said, we still have reports of people jigging trout in our management area, and all complaints are all reported to conservation and will result in the loss of fishing licence and gear, and hefty fines. Another important thing to take into consideration this year is the considerable amount of warm weather we have been having. With warmer weather comes a rise in water temperature which puts added stress on fish. Around springs and in deep holes is where fish gather to cool down while the water temperatures are high. Anglers should think about taking a break and wait for rain to cool down the rivers. Whenever you catch a fish during these high temperature events, the fish may look alright when it swims off, but the added stress can lead to the fish dying soon after. PEI Fish and Wildlife regularly puts out statements when these high-water temperature events occur, and Souris Wildlife shares this information on our Facebook page. All in all, if you spend enough time along our rivers, streams, and beaches you are in for some great angling. Just remember to clean any garbage you might have, abide by the angling summary and rules, and most of all to enjoy all our Island has to offer.



Angler fishing at Johnson’s Pond.

Check Out Our Bins!



Map of Garbage bin locations around Eastern PEI.

Garbage, in short, is really anything people leave somewhere it does not belong. So, by adding trash cans in strategically placed areas such as popular beaches and fishing holes, we hope to reduce the amount of garbage being left behind in these areas. By simply not littering, you can have a huge positive impact on our environment. Souris Wildlife has created areas to dispose of your trash instead of tossing it out your window and polluting our beautiful streams and forests, which are teeming with fish and all sorts of wildlife. We began putting out garbage bins in 2016, with one at Legacy Park, and now have placed 15 bins all around Eastern PEI. This was done in response to Souris Wildlife staff cleaning piles of garbage from popular areas and disposing of it ourselves. All of our bins are labelled with our logo and easily identifiable. Please do your part and don't litter, future generations will thank you.



Garbage bin located at Norris Pond, Souris.

2020 FUNDERS

We'd like to kindly thank the following funders: you have made our work over the past year possible! Thank you!!



Agriculture and Agri-Food Canada



Fisheries and Oceans Canada / Pêches et Océans Canada

Wildlife Conservation Fund



Agriculture and Fisheries



Souris and Area Branch of the PEI Wildlife Federation Membership & Donation Form

Name: _____

Address: _____

City/Province: _____

Postal Code: _____

Telephone: _____

Email: _____

Payment

Please check one or both:

- Membership (\$10)
- Donations

Amount enclosed: \$ _____

Note: An official tax receipt can only be issued for the value of the donation and will not include the \$10 membership fee.

PRESIDENT’S COMMENTS: NATHAN CHEVERIE

With much consideration, the Souris and Area Branch of the PEI Wildlife Federation Board of Directors and staff have respectfully decided to cancel our annual fundraising lobster dinner for this year. We have also decided to cancel all our Basin Head Beyond the Beach experiential excursions as well this summer. The COVID-19 virus has had an immense effect on the health of our population and global economy. It was truly felt by our organization’s Directors and staff that due to the pandemic, Provincial restrictions and also due to the shortened lobster fishing season with unresolved market projections that we would simply be requesting too much of the fishers that have always been so supportive of all of our environmental endeavours. Our dinner has evolved into a wonderful community event that was also greatly supported by so many volunteers, farmers, restaurants, local businesses, and vendors and of course by the many people who bought meals to support us. We want to wholeheartedly thank you all for your many years of support and we hope to see you all again in August 2021! We will also be bringing our Basin Head Beyond the Beach experience back in July 2021.

COORDINATOR’S COMMENTS: FRED CHEVERIE

This field season has progressed a little differently from usual, to say the least. We usually operate with just managers working over the winter months to submit reports, write new applications proposals, prepare for the next field season, and generally to keep things in the office ticking over. This spring, as we were preparing to launch feet-first into another busy season, COVID-19 hit. We immediately followed Provincial advice and began working from home in March, with just one Field Supervisor working out in the field to complete deliverables related to our agricultural projects, as these were deemed an essential service. Most of our other projects were put on hold by our funders, with deliverables cancelled, so we delayed hiring back our usual crew. As things progressed, we slowly brought back our other two regular Field Supervisors but ensured that they followed Provincial regulations by working apart and not car sharing. Luckily, the work we were still required to do involved being outside taking soil and water samples, so keeping the staff socially distanced and not sharing equipment was relatively straightforward. As the Province moved towards Phase 3, we developed an Operational Plan, bought PPE equipment, organised regular sanitation routines and trained all our staff, when brought back on, with our “new norm” way of working. Our staff have been excellent in following the guidelines and we hope to be able to complete the rest of our projects successfully for the rest of the year.

ABOUT US:

The Souris and Area Branch of the PEI Wildlife Federation is a non-profit, environmental organization dedicated to the conservation, protection, and enhancement of watersheds in north eastern Kings County. Our management area accounts for approximately 62,000 hectares representing about 9.6% of PEI, including 27 individual watersheds.

The goals of our organization include:

1. To establish North Eastern Kings County as the “Sports Fishing Capital” of Prince Edward Island.
2. The management of natural resources and enhancement of fish, wildlife and their habitat through watershed planning, protection, and restoration initiatives
3. To become the model watershed group on Prince Edward Island
4. To bring unprecedented environmental awareness to our stake holders to create a more informed general public capable of eliciting progressive environmental action
5. To promote our management area as one of the most pristine natural areas in Prince Edward Island through ecotourism ventures to attract visitors to the local area

We meet the 2nd Wednesday of every month at the Souris Wildlife Lodge, 1358 Souris Line Road.

Meetings start at 7 pm and all are welcome to attend.

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