The Atlantic Salmon Conservation Foundation ANNUAL REPORT 2021

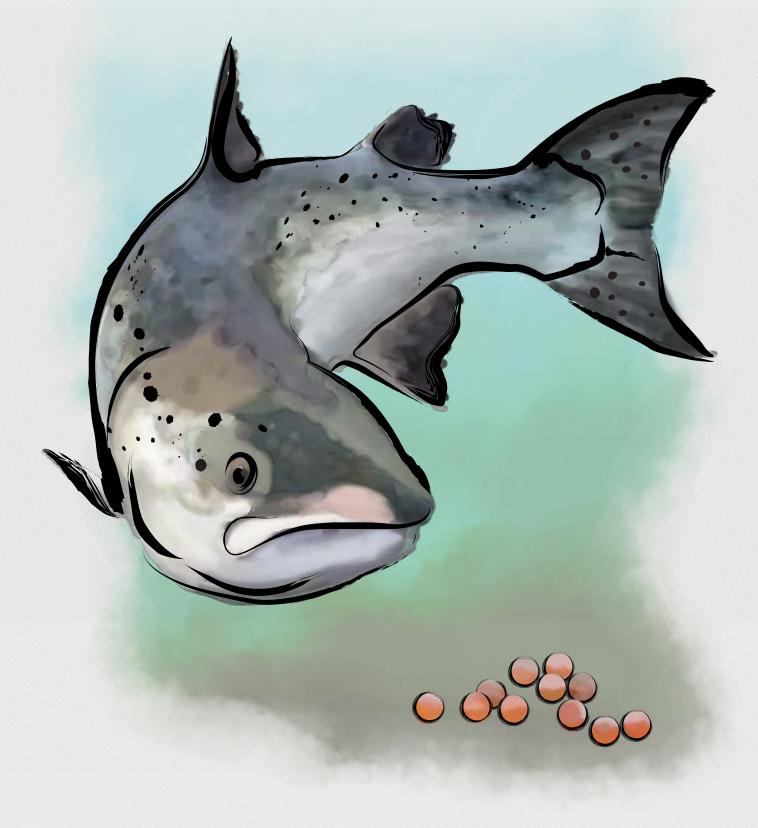


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IN MEMORIAM

Dr. Lawrence Felt (1942-2016)



Larry holds the distinction of being a founding member of the ASCF Board of Directors as well as being a past member of the Scientific Advisory Committee. He was an ardent salmon angler and a leading voice in conservation of wild Atlantic salmon through the Salmonid Council of Newfoundland & Labrador, the Atlantic Salmon Federation and the ASCF.

Dr. Jeffrey Hutchings (1958-2022)



A long-term member of the Scientific Advisory Committee, Jeff was an eminent researcher and a defender of science. He was a professor of biology at Dalhousie University and a mentor and inspiration to countless students, as well as an important friend to wild Atlantic salmon.

MESSAGE FROM THE CHAIRMAN

Proud to be a partnership-based conservation organization.

In this annual report we are reviewing the year 2021, our fifteenth year in operation. As in previous years, 2021 was an exceptional year of progress by our recipient organizations in improving the conservation of wild Atlantic salmon. Despite Covid-19, multiple community groups, Indigenous organizations, researchers and others persevered in their efforts to operate their projects or pursue research across Atlantic Canada and Ouébec.

The Atlantic Salmon Conservation Foundation has an excellent record in helping improve the conservation status of wild Atlantic salmon in Canada. It is not the Foundation that is doing the important work of conserving this iconic fish species, that is the role of the recipient groups. Our role is to put funding into their hands as effectively and efficiently as possible. Ours is a role we take very seriously, which is why we introduced several process improvements during the year.

Our facilitative approach to business is simply explained by reviewing our business model as outlined in our annual Business Plan. First, we listen carefully to our expert advisory committees for their advice on conservation priorities and the project proposals they recommend to the Foundation for funding. Secondly, we are fully responsive to the advice we receive from our recipient groups on how we can improve our processes. Thirdly, we continually seek improvements to make our Foundation as responsive and facilitative as possible, while observing proper due diligence, in all of our activities.

Today we stand on the verge of the fifteenth anniversary of the first year of operation. In this short period since 2007, we have been rewarded to witness how far this Foundation has progressed in becoming a strong and permanent force helping to improve wild Atlantic salmon conservation. At the same time, we have a much clearer recognition of how much conservation action is necessary if we are to save this iconic animal species.

In 2021 we were proud to have been able to maintain our annual conservation grant to \$1.2 million. Significantly, the annual pool of funding we make available to conservation project funding is derived from our long-term financial plan. Financial markets in 2021 improved significantly over 2020 to enable a rebound in our investment portfolio during the year. This ensured resilience in maintaining conservation grants, while observing the fiscal prudence expected by our Funding Agreement with the Government.

Partnership is central to our business approach, whereby the contribution of diverse individuals is brought together and focussed to help achieve greater conservation results. Our most

"One of the first conditions of happiness is that the link between man and nature shall not be broken."

- Leo Tolstoy

Honourable Rémi Bujold, P.C., C.M. Chairman of the Board of Directors

dedicated partners are the sixty committed volunteer experts serving on our Board of Directors and our six advisory committees. The Board guides our policy, while the advisory committees guide the quality of the projects that we help support. These volunteers freely dedicate their time and expertise to this Foundation thereby enabling us to support the most effective wild Atlantic salmon conservation initiatives.

That we are able to be effective and efficient is due to the exceptional work of our talented staff. Our staff, Charline, Gert and Stephen provide the daily leadership and solid management of to the Foundation that allows it to carry-out our good work.

I am proud of the great team represented by our volunteers, staff and the many recipient organizations. They are the true leaders of the conservation of wild Atlantic salmon.

am Bugala

Hon. Rémi Bujold, P.C., C.M. Chairman of the Board of Directors

EXECUTIVE DIRECTOR'S REPORT

Continuing our open, transparent and effect approach to funding worthy initiatives.

The Atlantic Salmon Conservation Foundation is a unique entity for its open, transparent and effective approach to funding worthy conservation initiatives. The ASCF is an excellent example of how the Government can create a self-sustaining source of funding to benefit the community, forever.

In 2021, the Foundation funded sixty-eight grants. These projects represented a balanced mix of one-year and multi-year conservation project grants, bringing our overall contribution to \$10.8 million with 666 funded projects. By selecting the best funding proposals, our leveraging (cash and in-kind) reached \$58.8 million, providing an impressive five to one ratio.

With stats like these, it is a pleasure to reflect on 2021 as one more successful year in helping the many community groups, Indigenous organizations and researchers across Atlantic Canada and Québec. Yet, it is also rewarding to know that we are on the leading edge of yet another year of helping fund many interesting and beneficial wild Atlantic salmon conservation projects in each the five provinces we serve. Importantly, we continue to witness significant depth of effort exhibited by our recipient organizations, all of which contribute to the advancement of wild Atlantic salmon conservation, river by river, community by community.

In our fifteen years experience we have encouraged ever higher-quality funding proposals. The improved focus of these projects is directly related to our priority of funding initiatives based on river and watershed management plans, with the goal of supporting the most effective projects with the limited resources we have available to us.

We continue to witness significant growth in the genuine need for funding over our first fourteen years of issuing grants. The most significant factor in this growth of recognized need for funding is increased focus on planning and priorities by the community and



Indian Bay Ecosystem Corporation - NL

Our mantra is to *"facilitate, not frustrate"* and we live by this code every day.

> Stephen Chase Executive Director

Indigenous groups. Increased demand (need) for funding flows directly from improved understanding of issues, causes and effects.

We work hard to be a reliable granting entity and a true partner to conservation groups. Our mantra is "to facilitate, not frustrate" and we live this mantra every day. At the same time, we follow careful due diligence in managing project approvals and in project oversight. I believe this way of managing this exceptional organization has contributed to the success of our project partner recipients and our success.

I have come to understand that wild Atlantic salmon conservation is only possible is we encourage and sustain the committed volunteers who stand ready to pursue salmon conservation at the local level. Governments cannot save the salmon on their own. Therefore, it is imperative that the volunteer element remain engaged in salmon conservation action.

Often lost on observers is the fact that ASCF project funding helps sustain hundreds of jobs, primarily in rural areas of Atlantic Canada and Québec. Many of these jobs are seasonal workers, as well as students gaining valuable work experience on which to base their careers. These jobs represent an important and significant contribution to rural economies often in areas where other economic opportunities are difficult to establish.

Stephen Chase Executive Director

ANNUAL REPORT 2021

An Effective and Permanent Supporter of Wild Atlantic Salmon Conservation!

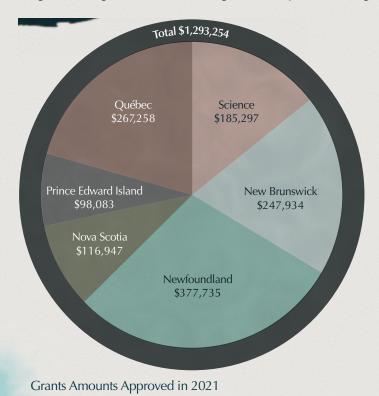
Introduction

The Atlantic Salmon Conservation Foundation is a permanent source of funding and conservation advice supporting community groups, First Nations, researchers and other organizations across five provinces. With 15 years experience to granting conservation project funding, the Foundation is a mature, reliable and facilitative factor in helping improve conservation of wild Atlantic salmon in the Atlantic provinces and Québec.

We fully understand the many challenges affecting salmon conservation and entirely subscribe to the long-term goal of achieving abundant wild salmon populations. That's why we strive to facilitate conservation action though rigorous processes to help ensure both wise use of funding and the attainment of project outcomes. We are proud of our business-like and user friendly approach.

The Atlantic Salmon Conservation Foundation is a non-profit, charitable organization dedicated to improving and strengthening the conservation of wild Atlantic salmon and its habitat in perpetuity. The Foundation is a volunteer-based organization that opened our doors in February 2007. The Board of Directors of the Foundation are volunteers, along with all of the volunteer experts on our six advisory committees, who have come together to ensure the wise use of the trust fund for the conservation purposes for which it was designed.

The Foundation has the dual mandate of prudently investing the trust funds to generate income while preserving capital and ensuring that the organization is well-managed so it can provide funding



to eligible salmon conservation initiatives in Atlantic Canada and Québec on a permanent, go-forward basis.

A significant feature of the Foundation model is the inclusion of volunteer experts drawn from conservation groups, Aboriginal organizations and federal and provincial governments in all of its advisory processes. It is a model of partnership and inclusiveness that is unique in the conservation world. The Board of Directors of the Foundation actively relies on advice and recommendations provided by the six technical-advisory committees to guide the work of the Foundation.

This annual report reflects the Foundation's fifteenth year of operation. In 2021 the Foundation continued to build on the successful operational structure it created commencing in 2007 to support and extend salmon conservation initiatives. The year also witnessed completion of the Foundation's fourteenth round of grants in support of community salmon conservation projects as well as the 2022 call for funding proposals which closed in November 2021.

Background

The Atlantic Salmon Conservation Foundation was formed by a group of volunteers who incorporated a non-profit organization in 2005 to prepare a proposal to the Minister of Fisheries and Oceans to accept responsibility for the Atlantic Salmon Endowment Fund (ASEF) Program. The ASEF was created by the Government of Canada as a permanent source of funding to help conserve, restore and protect wild Atlantic salmon and their habitat in Atlantic Canada and in Québec.

The ASEF reflected, and continues to reflect, the calls of conservation organizations, Aboriginal groups and government officials for a permanent source of funding to help watershed and community organizations working on a range of wild Atlantic salmon habitat, enhancement, monitoring and conservation initiatives.

The organization that was created as a result of the federal investment was structured to meet the following objectives:

- 1. Be managed at arms-length from DFO by an incorporated organization;
- 2. Be a charitable organization;
- 3. Invest appropriated funds and hold them in trust;
- 4. Draw on contributions from other public and private sources;
- 5. Deliver the program from interest raised on the principal amount; and
- 6. Facilitate partnership with the provinces, Aboriginal groups and community volunteer organizations.

These objectives have been attained very successfully and continue to drive the organization and its way of doing business. The ASCF operates in the large and complex geographic, political and stock status environment of Atlantic Canada and Québec. To address these complexities, the Foundation relies completely on inclusive,

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An Effective and Permanent Supporter of Wild Atlantic Salmon Conservation!

expert advisory committees that are unique in opening all processes to broad and meaningful involvement as well as full transparency.

In addition to the requirement to submit an annual report and an annual business plan to the Minister of Fisheries and Oceans, the Foundation is subject to periodic review of its performance by the Government of Canada. A value for money audit conducted by the Department of Fisheries and Oceans found that the Foundation represents excellent value for money, is demonstrating measurable progress on several fronts, while being strongly supported by its recipients and others interested in salmon conservation.

Foundation Mission Statement and Goals

The mission statement of the Foundation is "To promote enhanced community partnerships in the conservation of wild Atlantic salmon and its habitat in Atlantic Canada and Québec".

Four goals flow from this statement, around which our strategic direction is built and from which our granting process flows:

- To be an effective source of funding for community volunteer organizations in conserving, restoring and protecting wild Atlantic salmon and its habitat.
- To enhance cooperation and partnership among governments, Indigenous organizations, community volunteer groups and others in the interests of conserving, restoring and protecting wild Atlantic salmon and its habitat.
- To promote and improve conservation planning and management at the watershed level as the basis for ensuring effective use of and accountability for funds made available for wild Atlantic salmon conservation initiatives.
- To improve public awareness, education and research respecting the conservation of wild Atlantic salmon and salmon habitat.

The Granting Process

The Foundation is interested in funding innovative projects that will have a high probability of success with measurable results for on-the-ground conservation of wild Atlantic salmon and its habitat. It considers eligible projects related to the following categories:

- Development of salmon and salmon habitat conservation plans for a watershed or sub-watershed (watershed planning)
- Conservation, rebuilding and restoration of wild Atlantic salmon and salmon habitat
- · Restoring access of wild Atlantic salmon to salmon habitat
- Public education and awareness of the importance of conservation of wild Atlantic salmon and its habitat

Emphasis is placed on improved conservation planning and management at the watershed level, as an ecological and geographic unit, to promote the most effective use of, and accountability for project funds.

The Foundation holds one call for proposals each year. Proposals are submitted online from April to a closing date for receipt of proposals in mid-November. Proposals for funding are reviewed by staff for completeness then forwarded to the advisory committees for review and recommendation during the period January to March.

Each advisory committee follows a standard proposal assessment and scoring procedures designed by the Scientific Advisory Committee. The proposals recommended by the advisory committees are reviewed and approved by the Board in early spring to enable all final approvals to be given, and successful recipients notified, well before the opening of the conservation field season. In addition, each unsuccessful project proponent is provided an explanation why it was unsuccessful both for information, and to encourage future submissions.

Advisory Committees

The Foundation relies heavily on its expert volunteer advisory committee structure to make good decisions on the projects that should be funded. The advisory committee model is unique in the world of salmon conservation. It is a strategic direction that promotes inclusiveness of the many interests in wild salmon conservation and partnership among them. Most importantly, however, the advisory committees ensure that the Foundation continually receives excellent advice in the selection of conservation projects that respond to the unique salmon conservation imperatives faced in each of the five provinces.

There are six advisory committees consisting of a Scientific Advisory Committee and five Provincial Advisory Committees. Each appointee to these committees is an expert volunteer identified in consultation with stakeholder groups and governments. The advisory committees are a very successful way of including people in decision-making processes while also ensuring full transparency in the granting process.

The Scientific Advisory Committee (SAC) is the natural evolution from the former Central Advisory Committee. This committee is representative of world-class expertise in the salmon domain and carries the dual roles of ensuring wise investment in applied research scientific projects, as well as assisting the Board of Directors to develop and maintain effective policy, procedures and strategic direction.

Each of the five provincial advisory committees is responsible for identifying the salmon conservation priorities unique to their province; reviewing proposals for conservation funding and making recommendations on which projects should be approved for funding. They also participate actively in monitoring approved projects to help ensure they are progressing as intended. These committees meet twice annually to carry out their responsibilities.

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FOUNDATION OBJECTIVES 2021

A report on objectives met, as stated in the 2021 Business Plan.

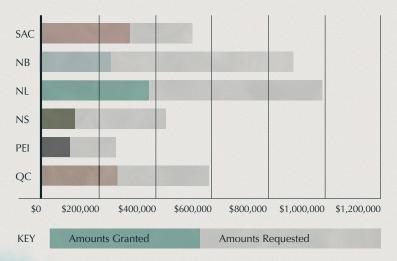
The following objectives were stated in the 2021 Business Plan. The following is a report on the extent to which those objectives were met:

Objective 1: To strengthen our prudent investment and financial strategy to maintain the Atlantic Salmon Endowment Fund at or above Funding Agreement requirements.

2021 Actions: The Foundation's investment portfolio is managed in accordance with a very prudent long-term investment and financial management plan overseen by the Investment Committee. This plan conforms to an Investment Policy and an Investment Strategy developed pursuant to the requirements of the Funding Agreement with the Government. This approach to investment and fiscal management enables the Foundation to ensure a minimum of \$1 million dollars is available for project funding on a go-forward basis.

The long-term financial plan, the investment policy and the investment strategy are annually reviewed by the Board of Directors. They have been designed to ensure the investment fund to an inflation adjusted value while making provision to maintain an annual distribution of project funding over the same period, taking into account financial market performance, and Funding Agreement requirements.

The Foundation's investment portfolio experienced a significant improvement in 2021 after a decline in the months following the onset of the Covid-19 pandemic. Our prudent investment strategy was successful in enabling this recovery to occur making it possible for the market value of the trust fund to return to again exceed the inflation adjusted book value of the trust fund as required by the Funding Agreement. Importantly, sufficient income was generated to elevate the annual grant pool to \$1,500,000 for 2022.



Amounts granted & amounts requested in 2021

Objective 2: To observe a funding allocation model that is reflective of and responsive to the various conservation needs and priorities of each province.

2021 Actions: As at 31 December 2021, the market value of the fund was reported as just over \$43 million.

The Foundation follows a funding allocation model developed by the Scientific Advisory Committee (SAC) and intended to ensure that "fair geographic distribution of funds" required by the Funding Agreement. The formula is designed to optimize the Foundation's response to the respective conservation needs of each province with a basic fixed allocation to each province, supplemented with a funding distribution reflective of individual provincial conservation variables. In 2021, the Board incorporated minor adjustments to the various elements of the funding formula, resulting in some changes to provincial funding allocations going forward.

The funding formula also provides ten percent of the overall grant pool to fund applied research and other scientific projects identified as conservation priority topics by the Scientific Advisory Committee.

Objective 3: To strategically allocate funding to key, priority applied research scientific projects.

2021 Actions: The Scientific Advisory Committee has identified a range of range of critical conservation issues affecting the survival and strengthening of wild Atlantic salmon populations in Canada. These conservation issues are reviewed annually and are designed to guide the allocation of funding to the most critical applied research initiatives being funded by the Foundation.

The prioritization of applied research funding represents an intelligent and proactive approach to awarding ASCF funding for applied scientific research. Funding is directed to specific applied research topics that are considered to have the greatest on-theground impact for salmon conservation. A Request for Proposal process is followed with the RFP sent to potential respondents and with responses evaluated and funding awarded by the SAC.

Objective 4: To maintain and strengthen a results-based management approach to funding Foundation projects.

2021 Actions: The Foundation conducts its business in accordance with its comprehensive Audit and Evaluation Strategy, as part of the annual Business Plan. All projects report their performance in a uniform manner, which facilitates population of a database developed by the Scientific Advisory Committee.

The standard project report for each project grant is designed to reflect the performance of each project and to enable cumulative reporting against the Foundation's performance measures as

FOUNDATION OBJECTIVES 2021

The following objectives were stated in the 2021 Business Plan

outlined in the Funding Agreement. The performance measures contribute to a database which enables the Foundation to report clearly on its attainment of objectives and other performance criteria. Thus, the Foundation fulfils its commitment to being a resultsbased management organization.

During 2021 additional refinements were made to project report forms, through feedback from grant recipients and advisory committees, to ensure that necessary data was reported and also to simplify required reporting. In addition, the Foundation implemented a new database reporting system to facilitate data access and reporting ability.

Since 2008, ASCF has granted **\$10.8 million** to **666 projects** from nearly 1000 funding proposals, following a rigorous assessment process.

ASCF total funding distributed to the five provinces (all years) is as follows:

New Brunswick	\$2.65 million
Newfoundland & Labrador	\$2.68 million
• Nova Scotia	\$1.17 million
Prince Edward Island	\$1.1 million
• Québec	\$2.7 million
Scientific Advisory Committee	\$1.18 million

ASCF funds have leveraged more than **\$58.8 million** in overall project valuation from other sources for an impressive **leveraging ratio of 5:1** (to 2021).

ASCF funded projects have resulted in major conservation improvements (to 2020):

- 76 million square meters of habitat access opened
- 1.8 million square meters of improved habitat
- 8,394 volunteers contributed 203,601 hours of effort
- 136,032 individuals involved in education & awareness
- \$1.1 million contributed to 60 Indigenous organization projects
- **\$2 million** contributed to **64 applied scientific research grants,** aimed at improving the effectiveness of conservation effort
- 2,667 jobs sustained, mostly in rural areas
- **Eco-tourism** opportunity improved: ASCF funded projects help strengthen an eco-tourism industry worth several hundred million dollars annually in 5 provinces

Objective 5: To broadly share information through innovative methods such as the web-based "Salmon Hub" utility and the webinar series.

2021 Actions: The "Salmon Hub" is a "one stop" web-based source to facilitate access to salmon conservation information. This portal provides easy access to ASCF funded project reports, government and NGO created technical and scientific reports and other sources of material related to salmon conservation. Information sharing is major line of business for the Foundation and the Salmon Hub builds on the already significant Foundation website sharing of project reports, and social media.

The Salmon Hub experiences high access and has been widely acclaimed, nationally and internationally. Throughout the year staff and several subscribers have added more new material to the Salmon Hub. Recruitment of new sources of information and links to build content is a priority initiative.



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FOUNDATION OBJECTIVES 2021

The following objectives were stated in the 2021 Business Plan

Objective 6: To strengthen the Foundation's relationships and communications with current and potential stakeholders/beneficiaries, the public and potential supporters.

2021 Actions: Throughout 2021, the Foundation carefully followed the direction identified in the communications plan, which is designed to facilitate the Foundation in establishing a distinct profile; enhancing public understanding of wild Atlantic salmon conservation needs and building public support for salmon conservation.

The Foundation posted several items on its website and sent periodic email messages to its constituents and interested stakeholders throughout the year. The Annual Report and the Business Plan are both designed to promote understanding of and support for the Foundation and are frequently shared with external groups. Also in 2021, the Foundation regularly posted on Facebook and Twitter to keep followers informed of developments. The number of followers on both social media increased significantly during the year.

In addition, a schedule of webinars, featuring a of well-known speakers on a broad range of fish and freshwater issues, was held. Several expert individuals from Canada and abroad were invited to present the topics and lead discussion online with regular attendance by representatives of First Nations, NGOs, governments, academic institutions and businesses. The series has provided major new opportunities for information sharing and partnership building. In 2021, 7 webinars were hosted with a total of 1224 participants; up from 793 in 2020.

Objective 7: To seek new sources of funding to build the Foundation's trust fund in support of meeting increased and reasonable demand for conservation project funding.

2021 Actions: By 2021, with fourteen years of experience in issuing project funding grants, the Foundation was in an excellent position to assess the degree to which available funding is meeting the actual need for conservation project funding. The number and the quality of funding proposals received by the Foundation has consistently increased over the years. An analysis by the expert advisory committees indicated that approximately 50 percent of the demand for project funding in 2021 was being met and that several, very reasonable and strong conservation project proposals could not be funded.

The fiscally prudent business model, followed by the Foundation and required by the Funding Agreement, places a limit on the annual allocation of grant funding at a level that will not erode the capital of the trust fund. To meet the additional and demonstrated need for conservation project funding, the Board has determined that a larger trust fund is necessary. This matter will be raised with the Minister.



Margaree Salmon Association - NS

2021 PROJECT PROFILES • NL

Salmonid counting fence on Parker's river.

In 2007, char populations in Parker's River in Newfoundland reached critical levels and led to the formation of a conservation group, the Save Our Char Committee. The group found an ally in their efforts with St. Anthony Basin Resources Inc. (SABRI), which manages the allocation of Northern Shrimp on behalf of the 16 communities on the Great Northern Peninsula.

"They were looking at ways to save the char, and there was a fair bit of work done," said SABRI Executive Director, Sam Elliott. "We invest in economic opportunities for our region and I felt that this could end up being an opportunity down the road if we could turn it into an area where PhD students and people like that could come out and do scientific work on the brook and study how they adapt in that environment."

In 2010 and 2011, a counting fence installed to monitor salmonids moving into Parker's Brook counted approximately 200 each of Atlantic salmon, Arctic char and Brook trout; said to be a fraction of historical estimates for those species. With such small numbers, ensuing die-offs could be devastating to those populations.

The underlying causes were determined to be sediment building up in a channel area of the river, causing limited water flow. In response, a project to restore the channel area was carried out in 2020, through funding from and in partnership with the World

Wildlife Fund Canada, DFO and Environment and Climate Change Canada.

While that funding covered the restoration efforts, it did not cover any means of measuring the success of the project. For that reason, SABRI applied to the ASCF and was granted \$35,000 to install a new counting fence to assess salmonid numbers in Parker's Brook and to increase community stewardship. The fence was installed in June 2021, though it will be some time before there is enough data to truly measure the impacts of the restoration efforts.

Elliott says he hopes the project will be a steppingstone to further efforts to support the fish species in the area.

"Down the road, I would love to see someone take that project and get some broodstock out of the brook and restock it and put sensors on them and see what really happens. You could take that and tie it into an educational class with one or two schools here and get kids to go down and put the brood in the brook and they could name them and follow them with the sensors. You could end up with four or five scientists coming out of that class."

SABRI have applied for further ASCF funding to reinstall the counting fence in 2022 and to continue assessing the success of the restoration efforts.



St. Anthony Basin Resources Incorporated

2021 PROJECT PROFILES • QC

Development of the educational program Histoire du saumon.

The Histoire du saumon program has been in existence for over 20 years but when the Fédération québécoise pour le saumon atlantique (FQSA) took over the program several years ago, they redesigned it from the ground up.

"We're taking this program to another level," said biologist and project leader, Alexandra Déry. "This program has been running for a while and we do it because the teachers really appreciate it. I think it's a good way to spread awareness about what's in the rivers in Québec. We have over 50 schools each year in the province that have an aquarium and follow the steps and release little smolts into the rivers."

In 2021, the group wanted schools to be able to access the materials even if they didn't have the budget to purchase and maintain their own classroom aquariums. With that and the COVID-19 pandemic in mind, the FQSA created an online experience that could be experienced by anyone.

"We've created new materials and we were able to do it in big part because of the ASCF funding we received last year. Most of the money went towards an online game that's like a quiz with information about the salmon's life cycle."

The FQSA also developed educational capsule videos specifically for teachers, to help them in their instruction on these topics. In addition to developing the online project for Québec schools, the ASCF funding also helped in translating the materials into English.

"So now it can be available for the schools in New Brunswick and other provinces. That was a big plus for us, to be able to give that opportunity to those schools and also for First Nations in Québec. In Gaspesia, there's a lot of English communities. So it was a way for the program to be accessible for other minorities."

FQSA was granted \$37,000 in funding from the ASCF for the project, bolstered by support from a variety of other partners and donors. In 2022, the FQSA will apply for further ASCF funding for other projects not related to the Histoire du saumon program.

"We've very lucky to be able to count on the ASCF to help us with our projects."



Fédération québécoise pour le saumon atlantique

2021 PROJECT PROFILES • NB

Broken Brooks habitat improvement.

Between 1999 and 2001, a series of 169 in-stream structures such as digger logs, wing deflectors and bank stabilizers were installed in Jonathan Creek with the intention of enhancing fish habitats by creating pools, narrowing streams and reducing erosion. However, when Petitcodiac Watershed Alliance staff noticed that many of these structures were not performing accordingly, it became the focus of the Broken Brooks project's 2021 efforts.

"The overarching goal is to increase upstream habitat access for migrating fish, particularly salmon and brook trout," said project leader, Shawn Boyd.

Broken Brooks started in 2014 in response to issues surrounding the causeway on the Petitcodiac River in Moncton. When erected in the 1960s, the causeway caused a major decline in the number of Atlantic salmon that travelled the river. With the causeway opened permanently in 2010 – and now removed entirely and replaced with a bridge – stakeholders and partners are hoping to see those numbers improve.

"We took over efforts to improve conditions further upstream, like structures such as culverts and areas that might need improving for further use or habitat improvement," said Boyd. "Now that they can get upstream of the causeway, they could still end up encountering problems, so our idea was to do everything we can to restore that habitat as well."

The 2021 Broken Brooks effort saw the PWA assess and remove 18 structures that had been causing erosion related problems. The PWA also conducted habitat assessments at sites that had previously been improved as well as debris removal. The project was funded for 2021 through a \$15,000 grant from the ASCF as well as contributions from partners such as the Government of New Brunswick's Environmental Trust Fund.

Boyd compares the Petitcodiac watershed to a house. The removal of the causeway was equivalent to opening the front door, and efforts such as Broken Brooks are needed to unlock the rest of the rooms in the house. Broken Brooks project does not have a specific end goal – the PWA will continue the effort until it is no longer needed.

"We're going to go until we can't improve it anymore," said Boyd. "With development always happening, it seems like it will be a while before we could say that its complete. We make progress every year and raise awareness on the side as well. We've been in contact with the city of Moncton and different areas and attempted to raise awareness of poorly designed culverts and other structures that can become barriers. We're going to keep working on it until its done."



Petitcodiac Watershed Alliance

2021 PROJECT PROFILES • NS

Fish habitat restoration and enhancement in the Fales River and Round Hill River sub-watersheds.

The Clean Annapolis River Project Society are an environmental nonprofit organization, working to enhance the ecological health of the Annapolis River watershed. They do so though communitydriven and volunteer-based efforts to protect, conserve and restore habitats for species at risk. In recent years, electrofishing and reports from anglers have confirmed the presence of Atlantic salmon in both the Fales River and the Round Hill River watershed.

"Both of these rivers and their watersheds are affected by human alteration and land use changes like agriculture, forestry and land development," said Aquatic Ecosystem Programs Lead, Rachel Walsh. "This results in habitat being lost through channel modification, sedimentation and alterations to water quality."

Restoration efforts have been ongoing in those watersheds for several years but in 2021 a \$15,125 grant from the ASCF (and support from other partners such as the Nova Scotia Salmon Association's Adopt-A-Stream program) facilitated several specific efforts.

"This project resulted in over 3,000 square meters of interim habitat being enhanced in the Round Hill River through the installation of four log deflectors," said Walsh. "We had four temperature data loggers deployed in both the Fales River and the Round

Hill River to monitor thermal pollution. We had 21 sediment traps installed on the Fales River to identity input sources of fine sediments. And we did 20 habitat suitability index assessments throughout both systems."

In addition to those efforts, CARP also developed educational materials such as signage and brochures to raise awareness of known threats to Atlantic salmon and their habitat and held field outreach activities such as inviting the public to come on site and learn about the structures and their purpose.

The success of CARP's 2021 efforts will be measured in the years to come, but they all serve the organization's long-term aim of restoring both systems to benefit Atlantic salmon and other native freshwater fish species.

"The goal is to have sub-watershed management plans created for both of the systems, which is in partnership with the Nova Scotia Salmon Association," said Walsh. "Next spring, we expect to have finalized plans that will provide recommendations to address additional threats and limiting factors that were identified in each system."



Clean Annapolis River Project Society

2021 PROJECT PROFILES • PEI

Restoration of cold, freshwater habitat for Atlantic salmon on the West and Clyde Rivers.

Several waterbodies on Prince Edward Island, including the West and Clyde Rivers, have been known to have siltation problems. As such, much of the work of the Central Queens branch of the PEI Wildlife Federation has focused on targeting that limiting factor. However, their 2021 project, which received \$19,500 in support from the ASCF, approached the issue from a different angle.

"Recently, we devised an Atlantic salmon habitat management strategy, which identifies the life history requirements of each life stage," said Watershed Coordinator, Jordan Condon. "This year we targeted the very early life stages and focused on spawning habitat enhancement activities."

One of the issues with siltation is that it cements and compacts the substrate that salmon use to spawn. The 2021 project focused on installing 'soft engineered structures', such as logs and boulders, to alter the flow velocity characteristics and draw spawning female salmon to areas of the river with fewer siltation issues.

Making such alterations to salmon habitat may take time to see results; doubly so in a year with weather like PEI had in 2021, which saw low water flows throughout October and then heavy

rain during spawning season. Condon, however, was heartened to see salmon this year making use of a spawning area the group had enhanced several years ago. The success of the PEI Wildlife Federation's efforts are being seen over time.

"Ten years ago, when I started, the West River was... I guess you could say it was a fixer-upper," said Condon with a laugh. "We've had some major accomplishments. We basically went from not having much restoration down at all to pretty much having the entire West River covered now. We've seen some major indicators that our work has been successful. We've had salmon return to areas of the watershed that they weren't seen in for decades, taking advantage of areas that we've restored. But we've still got a long way to go."

The Central Queens Branch of the PEI Wildlife Federation have been regular beneficiaries of ASCF funding. Condon says that the group plans to continue applying for further funding as their habitat restoration efforts continue in the future.

"We're super thankful to the ASCF for their support. I don't think we'd be where we are now with salmon restoration in PEI without it. We're improving and building on restoration tactics."



PEI Wildlife Federation (Central Queens branch)

2021 PROJECT PROFILES • SAC

How physiography and climate change influences the effects of forest harvesting on Atlantic salmon habitats.



Antóin O'Sullivan

During his PhD study with the University of New Brunswick, Antóin O'Sullivan studied river temperature regimes and found that the geologic structure in New Brunswick is a significant factor in how their temperature changes over time. He was surprised to find that as water levels drop in streams, sometimes deep groundwater reserves become more dominant and temperatures actually drop with lower flow.

"This is interesting because it means, conceptually, that you would have a different effect from forest harvesting dependent upon the geology and topography of the area," said O'Sullivan.

O'Sullivan and collaborator Allen Curry were granted \$75,000 from the ASCF to

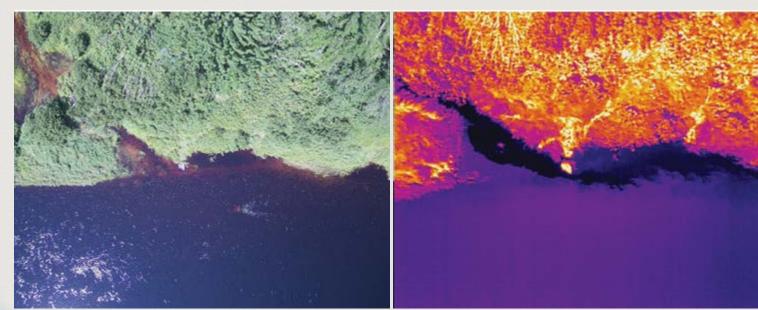
continue a project examining the influences of forest harvesting on stream flow, temperature and geomorphology in differing physiographic regions in watersheds in the Edmunston Highlands, Chaleur Uplands, Miramichi Highlands and the Maritime Plains.

"The overall aim of the project is to develop a land use management plan that accounts for these structural and compositional variations in the landscape – the topography and geology," said O'Sullivan. The project, which initially started in 2019, will take another five years or so before completion. In the end, O'Sullivan hopes that they will be able to fairly measure, for example, how cutting 30% of a subcatchment would affect water flow in different geological areas. As noted in a paper the pair published in 2021, while solar radiation is a major driver of stream temperatures, it is offset by hydraulic conductivity (how easily fluid can move through material).

"Tributaries that flow through areas with shallow, low hydraulic conductance bedrock are likely to be warmer than tributaries that incise into areas with shallow, hydraulically conductive bedrock," said O'Sullivan. "We also found that upland wetlands can significantly warm stream temperatures."

Between the ASCF and other partners such as the province of New Brunswick, the project has been funded through 2023 but O'Sullivan hopes that the project continues much longer than that.

"For us to see signals for many of these things, it's going to take a long time. To get to the point of being able to make a management plan that's actually good for the ecosystem will take us longer. We're getting the instrumentation in now and then we'll monitor them add to that network. That will allow us to test different hypotheses and conceptual models. So all of these are going to coalesce over time. Ultimately, we're hoping that this is going to be multi-phase and we can add different sites and keep integrating the salmon data with the forest data."



University of New Brunswick

2021 Project Grants

Science Advisory Committee

Project Number: SAC-2019-01

Recipient: University of New Brunswick (Gray)

Title: Atlantic Salmon embryo development and population assessment in the Tobique River Basin: potential for impacts from industry activities

Approved amount: \$5,150 for 2021 (3 of 3 year project, total: \$54,590)

Funding provided to date: \$53,302.50

Summary: The Tobique River catchment is a major spawning area for Atlantic Salmon in northwestern NB and features industrial landuse practices adjacent to rivers. This project will investigate a salmon embryo deformity phenomenon that has been observed in parts of the Tobique system. Relative abundance and condition of salmon populations will be assessed. Additionally, salmon embryos will be placed in incubators, buried in river substrates and monitored for development and survival.

Project Number: SAC-2020-01

Recipient: Conseil de gestion du bassin versant de la rivière Restigouche **Title:** Linking Equivalent Cut Areas with Atlantic salmon habitat

quality in the Restigouche River watershed

Approved amount: \$12,000 for 2021 (2 of 2 year project, total: \$23,000)

Funding provided to date: \$19,400

Summary: This project is studying the impact of the size and distribution of logging on Atlantic Salmon habitat. The calculation tool "Equivalent cut areas" (ECA) will be updated and the impact of different percentages of ECA on water regime and salmon habitat will be evaluated. Forest harvesting methods will be synthesized to develop mitigation measures. CGBVRR will also coordinate a workshop to bring together researchers studying the impact of forestry on salmon.

Project Number: SAC-2020-06

Recipient: University of New Brunswick (O'Sullivan & Curry) **Title:** How physiography and climate change influences the effects of forest harvesting on Atlantic salmon habitats **Approved amount:** \$35,000 for 2021 (2 of 2 year project,

total: \$75,000)

Funding provided to date: \$64,500

Summary: The project will examine the influences of forest harvesting on stream flow, temperature, and geomorphology in differing physiographic regions in watersheds in the Edmunston Highlands, Chaleur Uplands, Miramichi Highlands, and the Maritime Plains. Gaining an understanding of how the landscape regulates hydrological processes is absolutely imperative to (a) identifying hydrological resilient regions (both flow and thermal), and (b) developing management plans that best protect habitats for Atlantic Salmon.

Project Number: SAC-2021-01

Recipient: INRS (St-Hilaire)

Title: Development and implementation of a modelling tool to investigate how freshwater ecosystems (e.g. temperature, hydrology, land-use practices) influence wild Atlantic salmon populations **Approved amount:** \$47,884 for 2021 (1 of 3 year project,

total: \$143,652)

Funding provided to date: \$47,884

Summary: This project aims to develop and implement a model that will 1) simulate historical flows and water temperature on index rivers identified by the ASRJV, with some, few or no historical data; 2) expand the modelling effort to a large (up to 20) number of Atlantic salmon rivers; and 3) generate future scenarios of Atlantic salmon freshwater habitat conditions in the context of climate change.

Project Number: SAC-2021-02

Recipient: Nova Scotia Salmon Association **Title:** Development of a decision-tree to guide stream restoration interventions

Approved amount: \$19,966 for 2021 (1 of 2 year project, total: \$47,932)

Funding provided to date: \$19,966

Summary: This project will include the development of a decisiontree to guide salmon restoration implementation that will be refined using knowledge and understanding of salmon restoration through the Adopt-A-Stream program, as well as contributions from scienceexperts and stakeholders across North America. Existing work will be incorporated to identify priority areas for salmon restoration and test the applicability of the decision-tree under these realistic scenarios. Ultimately, a web-based tool will be created to make the decisionmaking process surrounding salmon restoration efficient, accessible, customizable and scalable for a range of end-users.



Central Queens Branch of the PEI Wildlife Federation - PEI

2021 Project Grants

Project Number: SAC-2021-03

Recipient: University of New Brunswick (Curry & Samways) **Title:** Lower trophic level subsidies for juvenile Atlantic Salmon production: Can primary and secondary production be linked to juvenile salmon production?

Approved amount: \$32,833 for 2021 (1 of 3 year project, total: \$65,297)

Funding provided to date: \$32,833

Summary: This project will amalgamate existing data, create a public database, and then examine the potential relationships between juvenile production and lower trophic level production with the goal to add this factor to modelling of juvenile production for fisheries managers. By testing potential linkages between juvenile production and lower trophic level productivity across climatic and geologic gradients, changes in the spatial and temporal elements of habitat will be examined on how it affects the overall juvenile productivity.

New Brunswick

Project Number: NB-2020-16

Recipient: University of New Brunswick (Linnansaari & Helminen) **Title:** Effects of striped bass predation on Atlantic salmon smolts in the Miramichi River using new predation technology

Approved amount: \$14,000 for 2021 (2 of 2 year project, total: \$28,000)

Funding provided to date: \$26,600

Summary: This Project will use new 69 kHz acoustic "predation tags" to tag pre-smolt Atlantic salmon and follow their migration through the Miramichi estuary in two consecutive spring seasons when striped bass enter the river to spawn. Intensive active (CRI/UNB and



Oromocto River Watershed Association - NB

the Anqotum) and passive (the ASF and the OTN) tracking will be utilized in spring. Predation tags produce explicit signal of predation occurrences, and a combination of receiver lines and active tracking will pinpoint the specific location of any predation events.

Project Number: NB-2021-01

Recipient: Atlantic Salmon Federation **Title:** Miramichi Smallmouth Bass Eradication

Approved amount: \$10,000

Funding provided to date: \$7,500

Summary: This project aims to eradicate invasive smallmouth bass from the Miramichi watershed. World-leading experts will be hired to develop a responsible, safe, and practical eradication plan using a Health Canada-approved rotenone product called Noxfish Fish Toxicant II; a common fisheries management tool used throughout the world each year. The project includes treatment of Miramichi Lake, Lake Brook, and a 15 km reach of the SW Miramichi River followed by deactivation to neutralize rotenone, and monitoring to evaluate success and ecological recovery, which typically occurs rapidly after the use of rotenone.

Project Number: NB-2021-02

Recipient: Conseil de gestion du bassin versant de la rivière Restigouche

Title: Barrier - 10 Miles Pool

Approved amount: \$14,000

Funding provided to date: \$14,000

Summary: This project replaced the existing salmon barrier at the site of 10 Miles pool on Northwest Upsalquitch River with an updated version, a floating barrier. Following heavy rainfall and disrepair, the existing metal and aluminum barrier was damaged and was replaced. The barrier was built and installed on the site in the spring of 2021 is made of pvc pipe and steel cables.

Project Number: NB-2021-03

Recipient: Fort Folly First Nation

Title: Ongoing restoration of endangered inner Bay of Fundy Atlantic salmon to the Petitcodiac River 2021

Approved amount: \$30,000

Funding provided to date: \$30,000

Summary: This project carried out iBoF Atlantic salmon recovery actions on Petitcodiac River tributaries. All activities contributed to the continuing strategy and objective of realizing higher presence, at all life stages, of endangered iBoF Atlantic salmon in the Petitcodiac River watershed working towards achieving historic levels.

Project Number: NB-2021-04

Recipient: Friends of the Kouchibouguacis **Title:** Population Recovery, Monitoring and Stewardship – Kouchibouguac and Kouchibouguacis Watersheds **Approved amount:** \$14,500

2021 Project Grants

Funding provided to date: \$10,875

Summary: Different sampling and monitoring initiatives will be utilized to collect information on Atlantic salmon populations. The instream incubation program will improve salmonid hatch rates, while also allowing for full life-cycle development in their natural habitat to occur and eliminating captivity requirements. Restoration work will improve habitat quality and fish passage, and an updated Atlantic salmon conservation plan will be developed.

Project Number: NB-2021-05

Recipient: Kennebecasis Watershed Restoration Committee **Title:** Enhancing Millstream River Tributaries **Approved amount:** \$15,000

Funding provided to date: \$15,000

Summary: This project improved the aquatic habitat of the tributaries to the Millstream River for Atlantic salmon. This work reduced stream temperatures by increasing vegetation cover and a reduction in sediment input. Rock/boulder clusters or rock groynes were implemented where appropriate to increase the oxygen levels in the water and provide fish cover and hydraulic continuity. 2-4 landowners were engaged along these tributaries to improve their riparian zones and volunteers were engaged to accomplish some of this work.

Project Number: NB-2021-06

Recipient: Miramichi River Environmental Assessment Committee **Title:** Atlantic Salmon Management Plan – Black River

Approved amount: \$11,000

Funding provided to date: \$11,000

Summary: This project prepared an Atlantic Salmon Conservation plan for the Black River, Northumberland County, NB. Significant effort was applied to current water temperature monitoring and exploring habitat conditions on the main branch and significant tributaries.

Electrofishing sites were selected and assessed for juvenile salmon to establish the current status of juvenile salmonids on this watercourse.

Project Number: NB-2021-07

Recipient: Miramichi Salmon Association **Title:** Atlantic Salmon Smolt Research Miramichi 2021 **Approved amount:** \$10,000

Funding provided to date: \$10,000

Summary: This project aimed to understand if smolt targets are being met for the Northwest Miramichi and the Cains River. This is important for determining if lack of smolt leaving the river is responsible for the reduced number of adults returning, or if it is mortality of smolts migrating to the ocean and back.

Project Number: NB-2021-08 Recipient: Nashwaak Watershed Association Title: Assessing and restoring aquatic connectivity in the central Nashwaak watershed Approved amount: \$13,000

Funding provided to date: \$13,000

Summary: A comprehensive and collaborative approach was taken to identify, prioritize and restore barriers to fish passage using up-todate tools and techniques. Available data was combined to create an "Aquatic Barrier Strategy" for future project prioritization. This project built on successes over the last four years in assessing and improving fish passage for road-stream crossings to improve the aquatic connectivity within the Nashwaak Watershed.

Project Number: NB-2021-09

Recipient: Nashwaak Watershed Association **Title:** Dam removal on Campbell Creek 2021

Approved amount: \$15,000

Funding provided to date: 15,000

Summary: This project removed a dam and restored access to Campbell Creek. The Campbell Creek Dam, property of the City of Fredericton, has been impeding fish passage to a cold-water tributary for almost a century and was one of the worst barriers to fish passage (and the only remaining dam) in the watershed. By removing the dam, anadromous species like Atlantic salmon were provided with a net gain of quality spawning and rearing habitat, water quality was improved, and cold water provided salmon thermal refuge both in the brook and at its confluence with the Nashwaak River.

Project Number: NB-2021-10

Recipient: Nepisiguit Salmon Association

Title: Nepisiguit Salmon Enhancement and Assessment 2021 **Approved amount:** \$15,000

Funding provided to date: \$9,050 (project was underspent and remaining funds returned to pool for future grants)

Summary: This project included the processing of approximately 76,000 eyed salmon eggs from the Charlo SEC hatchery using streamside incubation boxes and the resulting swim up fry was stocked in the Nepisiguit and tributaries. Electrofishing wase conducted in the Nepisiguit and local rivers in the Chaleur region. NSA will continue to inventory obstructions to fish passage, breach beaver dams and trap beaver in problem areas.

Project Number: NB-2021-11

Recipient: North Shore MicMac District Council **Title:** Miramichi Cold-Water Enhancement Program 2021

Approved amount: \$25,000

Funding provided to date: \$15,416 (project was underspent and remaining funds returned to pool for future grants)

Summary: This team saught to address the warm water issue and create a climate-change resilient river system by enhancing cold-water habitats to serve as thermal refugia for adult and juvenile Atlantic salmon during high-temperature events. The program identified refugia sites with high potential to serve as more effective refugia and then implemented enhancement work using principles of fluvial geomorphology to ensure sustainable, long-lasting projects to benefit the future of wild Atlantic salmon.

GRANTS & STATUS 2021 Project Grants

Project Number: NB-2021-12

Recipient: Oromocto River Watershed Association **Title:** Population Monitoring of Atlantic Salmon 2021 **Approved amount:** \$12,434

Funding provided to date: \$12,434

Summary: This project aimed to protect the Atlantic salmon residing in the St. John River and educate others of their continued presence. Using closed site electrofishing, the group focused on ascertaining population densities of Atlantic salmon in sites that had historically healthy populations, good water quality and adequate water temperatures. This allowed focus of future resources to those areas which require additional work such as culvert remediation or removal, additional buffer zones, or public education.

Project Number: NB-2021-13

Recipient: Petitcodiac Watershed Alliance **Title:** Broken Brooks: Improving Habitat for Inner Bay of Fundy Atlantic Salmon Through the Continual Refining of Remediation Techniques

Approved amount: \$15,000

Funding provided to date: \$15,000

Summary: This group conducted habitat assessments in Jonathan Creek to determine the impacts of 169 in-stream structures and identify which of these structures needed to be removed to prevent potential unintended negative 3 impacts to the watercourse. The PWA conducted habitat assessments at and around sites previously improved via tree planting and bank stabilization in North River and Little River. Finally, the PWA continued to collect aquatic connectivity data at watercourse-crossing sites in their watershed to expand Atlantic salmon recovery efforts in the Bay of Fundy.



Morell River Management Cooperative - PEI

Project Number: NB-2021-14

Recipient: University of New Brunswick (Harrison) **Title:** Assessing mortality and injury during turbine passage for Atlantic Salmon smolts passing downstream of Mactaquac Dam using autonomous "sensor fish"

Approved amount: \$20,000

Funding provided to date: \$14,000

Summary: This project will use autonomous "sensor fish" to quantify passage mortality and to better understand the physical conditions Atlantic salmon smolts experience during downstream turbine passage at Mactaquac Dam. This study will identify the precise location in the turbine where damaging forces (barotrauma, strike and shear forces) occur and quantify how these forces differ among operating conditions (turbine power) and among approach depths. These metrics will then be compared with lab-based Atlantic salmon specific dose-response relationships to estimate mortality and injury.

Project Number: NB-2021-15

Recipient: Wolastoqey Nation

Title: Identification and prioritization of barriers inhibiting fish passage within the St. John Watershed

Approved amount: \$17,000 for 2021 (1 of 2 year project, total: \$29,000)

Funding provided to date: \$17,000

Summary: This project presents a framework in using publicly available LiDAR and orthophotography to locate and identify road crossings and evaluate fragmentation and passability for various fish species at the landscape-scale. This approach provides a valuable and cost-effective means of identifying potential stream crossing issues for multiple management objectives, e.g., fish passage and thus the approach is an important step in the development of prioritization tools for restoration decisions by resource managers.

Newfoundland & Labrador

Project Number: NL-2019-10

Recipient: Memorial University of Newfoundland (van Zyll de Jong) **Title:** Evidence synthesis and analysis of river restoration effort in Newfoundland and Labrador

Approved amount: \$18,000 for 2021 (3 of 3 year project, total: \$64,000)

Funding provided to date: \$55,000

Summary: This project aims to fill the gap of knowledge of the collection, synthesis, and evaluation of restoration projects as data can be fragmented or incomplete by building a database by cataloguing all projects in Newfoundland for the past 30 years. The research team will also undertake a survey with restoration practitioners to assess project motivations, metrics and project evaluation to estimate the proportion of projects that set and met criteria for ecologically successful river restoration projects.

2021 Project Grants

Project Number: NL-2020-03

Recipient: Canadian Parks and Wilderness Society of Newfoundland and Labrador

Title: Special Aquatic Areas (SAA) in Newfoundland and Labrador interactive map

Approved amount: \$40,000 for 2021 (2 of 3 year project,

total: \$98,224)

Funding provided to date: \$75,724

Summary: The Special Aquatic Areas (SAA) Interactive Map will be a beneficial tool for an array of users, hosting data layers of aquatic industry activities, habitats, protected areas, tourism, and more. It will focus on providing users with knowledge of salmon rivers (and historic salmon rivers), population trends, freshwater quality such as temperature, scheduled salmon rivers and be able to visualize the interaction these concepts have with human activities and habitats in Newfoundland and Labrador.

Project Number: NL-2020-05

Recipient: Environment Resources Management Association **Title:** Rattling Brook creel census

Approved amount: \$23,795 for 2021 (2 of 2 year project, total: \$28,795)

Funding provided to date: \$5,000

Summary: ERMA will conduct a creel census for the 2021 winter angling season within the Rattling Brook watershed. The purpose of this project is to determine if misidentification of fish by recreational anglers is negatively impacting kelt returns and thus possibly effecting the restoration of Atlantic salmon populations in this watershed. Biological data will be collected through the physical sampling of angled fish. With DFO analysis, identification as either kelt or Quananiche will prove if overwintering kelt are being accidentally angled and therefore reducing kelt populations returning to sea.

Project Number: NL-2021-01

Recipient: Bay St. George South Area Development Association **Title:** Develop habitat conservation plans and restoration for rivers in Bay St. George 2021

Approved amount: \$49,372

Funding provided to date: \$37,029

Summary: This project will further develop Habitat Conservation/ Improvement Plans for rivers in Bay St. George and will involve compiling existing available habitat information and conducting surveys of tributary streams to compile a current inventory of habitat factors that could or are affecting salmon production. Natural barriers will be removed, manmade obstructions will be recorded and recommendations made on how to remove these barriers.

Project Number: NL-2021-02

Recipient: Bay St. George South Area Development Association

Title: Evaluate the success of the 2004 watershed conservation strategies for Atlantic salmon in Bay St. George rivers, and develop a new conservation strategy 2021

Approved amount: \$49,986

Funding provided to date: \$37,489

Summary: This is the final year for collecting salmon stock status information that will be used to evaluate the success of the Atlantic Salmon Management Plan for Bay St. George Rivers, implemented in 2004. The results will be used to develop a new conservation management plan. In 2021, the status will be determined by monitoring salmon returning to Little Barachois Brook with a counting fence and estimating spawners on Middle Barachois Brook and Robinsons River and/or Crabbe's River from snorkel surveys. Catch and effort data and biological characteristics data will be collected from anglers by River Guardians and fence attendants on Little Barachois Brook.

Project Number: NL-2021-03

Recipient: Friends of Salmonier Nature Park **Tide:** Salmon awareness days 2021 **Approved amount:** \$7,500

Funding provided to date: \$5,625

Summary: Friends of Salmonier Nature Park will organise three, full day "Salmon and its habitat" awareness days planned throughout the province. The games and activities will be fun with learning components on Atlantic salmon built into all of them. In addition, some smaller scale sessions on salmon will be incorporated in Friends of Salmonier Nature Park events, such as Becoming an Outdoors Woman and Family Fun days at Salmonier Nature Park.

Project Number: NL-2021-04

Recipient: Humber Arm Environmental Association Inc.

Title: A conservation plan for the Burgeo watershed, Newfoundland and Labrador

Approved amount: \$20,000

Funding provided to date: \$20,000

Summary: This project was overseen by an advisory committee including representatives from the Town of Burgeo, the Burgeo First Nations and relevant government departments. Consultations were held to better determine the issues and opportunities as they relate to the conservation of the Burgeo watershed. The end result was a plan that identified issues and opportunities, facilitating greater coordination between stakeholders and guided more efficient and effective conservation efforts of this important salmon habitat.

Project Number: NL-2021-05

Recipient: Indian Bay Ecosystem Corporation

Title: Thwart Pond restoration

Approved amount: \$34,820

Funding provided to date: \$34,820

Summary: This project removed as much pulpwood as possible from the Adurt Brook, removed beaver sites to allow easier flow of water and movement of salmon/trout, and removed the remaining portions of the old dam to allow for better water flow and fish movement.

2021 Project Grants

Project Number: NL-2021-06

Recipient: Intervale Assocates Inc.

Title: Living rivers: Education, engagement and signage to conserve wild Atlantic salmon and protect salmon habitat in Newfoundland and Labrador 2021

Approved amount: \$38,262

Funding provided to date: \$38,262

Summary: This project targeted four objectives through Intervale's "Living Rivers" salmon conservation initiative: 1) reduce illegal fishing and sale of wild salmon, 2) prevent threats to salmon habitat, 3) teach best practices and educate about salmon conservation in NL, and 4) extend awareness to vastly more people and in new areas of the province.

Project Number: NL-2021-07

Recipient: NunatuKavut Community Council **Title:** Watershed management/conservation plan - Muddy Bay Brook, Labrador

Approved amount: \$32,000

Funding provided to date: \$24,000

Summary: NCC will assist in the development of a watershed management/conservation plan for Muddy Bay Brook that will be used to direct conservation efforts within that watershed. Incorporation of Aboriginal Traditional Knowledge (ATK) and education to public stakeholders on how the conservation and management of resources benefits users will also be critical.

Project Number: NL-2021-08

Recipient: St. Anthony Basin Resources Incorporated **Title:** Salmonid counting fence on Parker's river Newfoundland and Labrador

Approved amount: \$35,000

Funding provided to date: \$35,000

Summary: Parker's is home to Newfoundland and Labrador's southernmost confirmed anadromous population of Arctic char (also Atlantic salmon and Brook trout). Salmonids in this system are subject to cumulative stressors (fishing, climate change and habitat degradation). A counting fence was installed which was needed to understand the current status of Parker's salmonid populations.

Project Number: NL-2021-09

Recipient: Stewardship Association of Municipalities **Title:** Municipal Atlantic salmon education and leadership in habitat securement

Approved amount: \$25,000

Funding provided to date: \$25,000

Summary: This project targeted priority NL municipalities by utilizing a GIS map product (GIS analysis to detect and prioritize important salmon habitat within municipal planning boundaries) and signed agreements which conserved at least 1000 acres. Each municipal agreement was accompanied by a Habitat Conservation Plan. This target audience was engaged through educational outreach to bring to their attention their role in protecting Atlantic salmon and promoting the awareness and implementation of their Habitat Conservation Plan.

Project Number: NL-2021-10

Recipient: Town of Hughes Brook

Title: Revitalization and restoration of the Hughes Brook nature trail and surrounding habitat

Approved amount: \$4,000

Funding provided to date: \$4,000

Summary: This project restored the Hughes Brook Nature Trail that was originally developed as a salmon education and environmental monitoring station by the Aquatic Centre for Research and Education. The area had fallen into disrepair as they were not involved with the trail. This trail follows amazing salmon habitat, providing access through the forests and wetlands to the mouth of Hughes Brook. Fixing this trail allowed the trail users to keep this area safe from litter and poaching activities through increased foot traffic and reporting while also increasing awareness and providing scientific and Indigenous education regarding this special system.



Stewardship Association of Municipalities - NL

Nova Scotia

Project Number: NS-2021-01 Recipient: Bluenose Coastal Action Foundation

Title: LaHave River watershed project (LRWP) 2021

Approved amount: \$15,000

Funding provided to date: \$15,000

Summary: Activities for this project included the creation of a Sub-watershed Fish Habitat Restoration Plan for the West River

2021 Project Grants

sub-watershed, installing fish habitat restoration structures such as digger logs in identified salmon nursery areas, installing structures such as chutes and baffles in culverts impeding fish passage, and public education relating to watershed health and Atlantic salmon conservation.

Project Number: NS-2021-02

Recipient: Cheticamp River Salmon Association

Title: Mitigating climate change impacts on Atlantic salmon on the Cheticamp river; Farm Brook habitat restoration and subwatershed plan development

Approved amount: \$14,000

Funding provided to date: \$14,000

Summary: This project undertook activities to help mitigate climate change impacts, elevated water temperatures in combination with low flows that threaten to negatively impact Atlantic salmon on the Cheticamp River. Specifically, rock structures were installed to restore passage at a critical thermal and physical barrier during these conditions. CRSA also continued its water temperature investigation to quantify cool-water inputs identified in 2020, collected additional thermal imagery and prioritized sites for implementing coldwater conservation/enhancement measures



Nova Scotia Salmon Association - NS

Project Number: NS-2021-03

Recipient: Clean Annapolis River Project Society Title: Fish habitat restoration and enhancement in the Fales River and Round Hill River sub-watersheds Approved amount: \$15,125 Funding provided to date: \$15,125 **Summary:** Primary activities proposed for this project included: the installation of in-stream restoration structures in the Round Hill River, the collection of data to inform the development of subwatershed management plans for both sub-watersheds, targeted outreach to engage landowners/managers in restoration planning at sites to reduce sediment pollution and targeted education and outreach to prevent illegal ATV use and threats related to aquatic invasive species. Educational programs were delivered to increase community engagement in stewardship activities that benefit Atlantic salmon and their habitat.

Project Number: NS-2021-04

Recipient: Inverness South Anglers Association:

Title: Continuation of habitat restoration on the Southwest Mabou River and tributaries 2021

Approved amount: \$18,000

Funding provided to date: \$18,000

Summary: ISAA continued improving in-stream habitat by installing a series of structures such as deflectors, digger logs, rock sills, bank stabilization and channel blockers. The structures created habitat for spawning, rearing and adult fish, along with creating a more narrowed and meandering channel with deeper pools, and also providing migratory access throughout the watershed.

Project Number: NS-2021-05

Recipient: LaHave River Salmon Association

Title: LaHave river watershed habitat restoration, invasive species research and removal project

Approved amount: \$5,000

Funding provided to date: \$5,000

Summary: This project organized and attended public events to educate the public about Atlantic salmon in the Southern Upland Region and installed educational/interpretative signage in high traffic/popular fishing areas along the LaHave river. The project also continued an invasive species removal project in areas where Atlantic salmon presence has been confirmed. The group also performed in stream and riparian restoration work in the West Branch sub-watershed of the LaHave river.

Project Number: NS-2021-06

Recipient: Margaree Salmon Association: **Title:** Margaree river salmon habitat restoration 2021 **Approved amount:** \$12,822

Funding provided to date: \$12,822

Summary: This project focused on developing a riparian reforestation plan for the Margaree watershed to identify and prioritize restoration sites and include georeferenced assessments and prescriptions. Flood damage was assessed and damage to existing structures was repaired. MSA continued to work with DFO on salmon assessment with a smolt wheel, redd counting, kelt sampling/tagging and other scientific studies they undertake. MSA focused on

2021 Project Grants

public education and awareness through written and published articles, social media, member updates, educational outreach, website updates and public meetings.

Project Number: NS-2021-07

Recipient: Maritime Aboriginal Peoples Council

Title: Expansion of Inner Bay of Fundy Atlantic salmon in-situ egg incubation project

Approved amount: \$11,947 for 2021 (1 of 2 year project, total: \$23,947)

Funding provided to date: \$0 (grant funds were returned to grant pool for future grants)

Summary: This project was cancelled as it was unable to secure adequate match in funds to complete its objectives. Grant funds were returned to Nova Scotia grant pool for 2022 projects.

Project Number: NS-2021-08

Recipient: Nova Scotia Salmon Association **Title:** The West River acid mitigation project 2021 **Approved amount:** \$22,000

Funding provided to date: \$22,000

Summary: This project focused on: (a) the spring smolt estimation program, (b) the installation and maintenance of an adult salmon counting facility, and (c) a fall electrofishing program. NSSA required defensible and scientifically-sound monitoring data to assess the impact of restoration activities. Since 2005, the West River Acid Mitigation Project had been mitigating the impacts of acid rain and resultantly increasing the annual production of wild Atlantic Salmon smolts > 300%. The West River was developed as a model for the restoration of acid-stressed rivers in the region and are in the process of planning for similar projects on 7 other priority watersheds.

Project Number: NS-2021-09

Recipient: St. Mary's River Association **Title:** Salmon habitat assessment East Branch (St. Mary's River) **Approved amount:** \$15,000

Funding provided to date: \$15,000

Summary: In 2021, this project focused on increasing access to the East Branch of the St. Mary's River by working with landowners. The 2013 Recovery Strategy identified the need to address years of erosion from floods and spring ice conditions, which has caused sections of the main river to become wide and shallow resulting in warm shallow water flows in the summer and excessive winter ice.

Prince Edward Island

Project Number: PE-2021-01

Recipient: Abegweit Conservation Society

Title: Midgell river conservation for Atlantic salmon project **Approved amount:** \$19,000

Funding provided to date: \$9,500 (final payment was withheld and returned to pool for future grants)

Summary: This project was unable to fully complete the majority of its objectives. The final payment was withheld and returned to the provincial pool for future grants.

Project Number: PE-2021-02

Recipient: Central Queens Branch of the PEI Wildlife Federation: **Title:** Restoration of cold, freshwater habitat for Atlantic salmon on the West and Clyde Rivers, PEI 2021

Approved amount: \$19,500

Funding provided to date: \$19,500

Summary: This project had the main goal of improving and maintaining Atlantic salmon habitat along various reaches of river by utilizing a variety of restoration tactics. One of the end-goals involved improving spawning habitat to increase embryo survival, which translated into increased juvenile recruitment. Restoration efforts were focused on restoring sections of the Clyde River. Lastly, CQWF finished developing the Atlantic Salmon Habitat Management Plan and continued to monitor juvenile densities and spawning activity.

Project Number: PE-2021-03

Recipient: Hillsborough River Association Inc.

Title: Atlantic salmon habitat restoration and enhancement, phase 3

Approved amount: \$14,083

Funding provided to date: \$14,083

Summary: This project continued implementing recommendations from the Conservation Strategy for Atlantic Salmon on PEI. They maintained beaver-free zones on Pisquid and Clark's, continued consulting landowners to expand beaver-free zones, exposed cobble, remove log jams to maintain fish access, continued temperature and nitrate monitoring, continued salmon redd surveys and electro-fishing, and mentored and educate student employees, elementary school students and landowners.

Project Number: PE-2021-04

Recipient: Morell River Management Cooperative:

Title: Creating an Atlantic salmon management plan for the Morell river watershed

Approved amount: \$21,500 for 2021 (1 of 2 year project, total \$44,000)

Funding provided to date: \$21,500

Summary: The goal of this project is to create a comprehensive salmon management plan for the Morell Watershed to guide the future salmon conservation and habitat enhancement work of the Morell River Management Cooperative. This will include gathering historical data, completing habitat assessments and creating river maps with detailed notes. The management plan will include restoration and enhancement recommendations for each branch of the river.

Project Number: PE-2021-05

Recipient: Souris and Area Branch of the PEI Wildlife Federation

2021 Project Grants

Title: Atlantic salmon population baseline watershed survey in Hay River, phase 3

Approved amount: \$24,000

Funding provided to date: \$12,000

Summary: SAB will conduct extensive monitoring in Hay River to compile benchmark data to validate and challenge previous assumptions of population numbers. Sex ratio of total returning adult salmon in comparison to redd numbers will be used to help us understand watershed health and what effects they may have on salmon production and survival. Analyzing monitoring data will help to determine correlation between environmental conditions and limiting factors which will aid in retaining and improving salmon stocks in PEI through future restoration and monitoring initiatives.



Central Queens Branch of the PEI Wildlife Federation - PEI

Québec

Project Number: QC-2019-04 Recipient: Contact Nature Rivière-à-Mars Title: Knowledge acquisition on sedimentary dynamics of Rivière-à-Mars for Atlantic salmon habitat restauration Approved amount: \$8,750 for 2021 (3 of 3 year project,

total: \$31,500)

Funding provided to date: \$29,312

Summary: In partnership with the Université du Québec in Chicoutimi (UQAC), Contact Nature will start by developing sedimentary balances of Rivière-à-Mars. Those balances will help characterize transport intensity before the rockfill dismantling in the short and long term to quantify processes on a large time scale and to ensure monitoring after the dismantling. The long-term goal is to preserve and rebuild wild salmon habitat on the first 10 kilometers of Rivière-à-Mars.

Project Number: QC-2020-01

Recipient: Conseil de la Nation huronne-wendat **Title:** Identification and characterization of thermal refuges potentially used by salmon in Jacques-Cartier River

Approved amount: \$17,3621 for 2021 (2 of 3 year project, total: \$32,620)

Funding provided to date: \$27,540

Summary: The goal of this project is to complete an inventory of thermal refuges in Jacques-Cartier River and its main tributaries using a thermal camera attached to a helicopter and to characterize this sensitive habitat by aquatic and terrestrial monitoring to identify key zones for resource conservation. The specific objectives of the project are to locate thermal refuges, identify and characterize them, validate their use by salmon, and prioritize them for resource protection and conservation.

Project Number: QC-2020-02

Recipient: Corporation de gestion de la rivière à saumon des Escoumins

Title: Characterize short-term and long-term sediment transport to restore hydrogeomorphological (HGM) processes in order to improve Atlantic salmon habitat

Approved amount: \$8,000 for 2021 (2 of 3 years; total: \$24,000) Funding provided to date: \$16,000

Summary: The goal of the project is to solve the most urgent problem identified in the conservation plan developed in 2019, namely the lack of habitat especially for juveniles. This project will analyze historic hydrogeomorphological pathway of the Escoumins River using aerial photos and analyze the sediment dynamics using a morphologic approach as well as active transponders. Ultimately, this information will be used to develop a preliminary plan that shows targeted and relevant interventions and the prioritization of these activities.

Project Number: QC-2020-09

Recipient: INRS (St-Hilaire) **Title:** Salmon habitat in Nunavik

Approved amount: \$10,000 for 2021 (2 of 3 year project, total: \$30,000)

Funding provided to date: \$17,500

Summary: Climate change is leading to major changes which may increase the number of Atlantic salmon in Nunavik watercourses. This project will give managers an initial appreciation of future changes related to availability of salmon habitats in Nunavik. To this end, we will 1) use models to generate future water temperature scenarios for Nunavik major watercourses, 2) select rivers that might show an adequate thermal system for salmon in the 2050-2100 window and 3) using remote sensing data, complete an initial assessment of quality of new habitats.

2021 Project Grants

Project Number: QC-2020-11

Recipient: Organisme de bassin versant du Saguenay

Title: Characterization of Atlantic salmon habitat on Saint-Jean-Saguenay River and three of its tributaries

Approved amount: \$5,000 for 2021 (2 of 2 years; total: \$15,000) Funding provided to date: \$13,750

Summary: The Atlantic salmon population of the Saint-Jean-Saguenay River has not been attaining its optimum conservation threshold and better knowledge of disturbances affecting the watershed is necessary. Since the 1996 flood, this river has been subject to several anthropogenic disturbances. Characterization of the river's morphology, riparian habitat and fish habitat will help increase the understanding of the scope of the disturbances and to identify sensitive areas where restoration is needed to help improve salmon habitat.

Project Number: QC-2021-01

Recipient: Corporation de gestion de la rivière Saint-Jean Saguenay: **Title:** Caractériser la dynamique du transport sédimentaire dans la Rivière Saint-Jean, Saguenay

Approved amount: \$13,344 for 2021 (1 of 3 year project, total: \$30,000)

Funding provided to date: \$6,672

Summary: The goal of this project is to characterize and to segment the river to restore natural river processes which are essential to the river dynamics of the watercourse. The method which is recommended consists in acquiring knowledge of the hydro-sediment dynamics, through interannual sediment balances, which will facilitate the characterization of the transportation intensity processes and the description of its evolution in time and in space. Finally, this will enable us to propose scenarios for restoring natural river processes to increase the morphological quality and, in the longer term, to preserve, rebuild and reinstate salmon habitat in Saint-Jean River.

Project Number: QC-2021-02

Recipient: Fédération québécoise pour le saumon atlantique **Title:** Développement du programme éducatif Histoire de saumon **Approved amount:** \$39,800

Funding provided to date: \$39,800

Summary: An interactive educational platform, Le grand voyage de Salmo, was first launched in 2020, which allowed people to learn more about the life cycle of Atlantic salmon with 3 capsules of scrolling texts and 3 interactive games. Two new modules (2 text capsules and 2 interactive games) will be added to the existing platform and all material will be translated in English, which will expand the reach to a larger scale.

Project Number: QC-2021-03

Recipient: Fédération québécoise pour le saumon atlantique **Title:** Développement d'une méthodologie d'évaluation de la sensibilité hydromorphologique liée à l'exploitation forestière des bassins versants des rivières à saumon de la Gaspésie et du Bas-Saint-Laurent

Approved amount: \$28,980 for 2021 (1 of 2 year project, total: \$48,300)

Funding provided to date: \$28,980

Summary: The project will focus on an assessment of watercourses hydro-morphological sensitivity in relation to logging operations with regards to Atlantic salmon habitat. The goal of this project is to provide managers (forestry, salmon rivers) with a decision-making tool specific to each watershed of salmon rivers in Gaspésie and Bas-Saint-Laurent to better protect salmon population habitat of these two areas and to complement general standards/rules to consider more specifically hydro-morphology features of each salmon river of Gaspésie and Bas-St-Laurent, in the province of Québec.



Contact Nature Rivière-à-Mars - QC

2021 Project Grants

Project Number: QC-2021-04

Recipient: Gespe'gewaq Mi'gmaq Resource Council **Title:** Localisation et classification de toutes les traverses de cours d'eau sur le territoire de la Gaspésie : Utilisation de la technologie Lidar

Approved amount: \$30,550 for 2021 (1 of 2 year project, total: \$50,350)

Funding provided to date: \$30,550

Summary: This project will help develop an elevation numeric model of extreme precision with LiDAR data. Afterwards, GMRC will create a new hydrographic model (more precise than current hydrolines). All water crossings (bridges, fords and culverts) are identified with an automated method. Then they will classify the culverts inclination and identify perched culverts which act as a barrier for fish passage. This will enable the creation of a sites data bank for compensation and habitat restoration and environmental monitoring projects. Data will be hosted on the interactive mapping already in place at GIRT Table.

Project Number: QC-2021-05

Recipient: Municipalité de Rivière-au-Tonnerre

Title: Projet de mise en valeur du potentiel salmonicole de la rivière Sheldrake 2021

Approved amount: \$25,461 (new amount of \$50,000 due to reallocation of funds from a cancelled project)

Funding provided to date: \$50,000

Summary: Stocking will accelerate the restoration of the salmon population for Sheldrake River and will allow for the colonization of a 62-kilometer section that is now available above the falls. The goal was to release approximately 1.25 million fry in Sheldrake River in 2021 (cumulative number of fry released since 2015).

Project Number: QC-2021-06

Recipient: Organisme de bassin versant Matapédia-Restigouche **Title:** Circuit de marche éducatif sur les infrastructures vertes avec panneaux d'interprétation sur la gestion durable des eaux de pluie vers une cohabitation durable avec le saumon dans deux municipalités riveraines

Approved amount: \$6,800

Funding provided to date: \$0 (recovered grant funds were returned to the funding pool for 2021 grants)

Summary: This project was cancelled as it was unable to complete its objectives and secure adequate match. Grant funds were recovered from the project and re-allocated to another viable project.

Project Number: QC-2021-07

Recipient: Organisme de bassins versants Manicouagan **Title:** Acteurs en herbe à l'école : une occasion d'éducation relative à la conservation du saumon atlantique par le théâtre!

Approved amount: \$10,000

Funding provided to date: \$0 (recovered grant funds were returned to the funding pool for 2021 grants)

Summary: This project was cancelled as it was unable to complete its objectives and secure adequate match. Grant funds were recovered from the project and re-allocated to another viable project.

Project Number: QC-2021-08

Recipient: Regroupement pour la restauration des trois rivières Pabos:

Title: Plan de conservation du saumon atlantique et de mise en valeur de la pêche sportive sur les trois rivières Pabos

Approved amount: \$17,750

Funding provided to date: \$17,750

Summary: The development of an Atlantic salmon conservation plan on Pabos rivers identified problems, weaknesses and issues which are specific to the river. The conservation plan is a decisionmaking tool for the organization that has identified priority restoration activities. The paper and the web versions of the conservation plan were issued to the different local partners and all the data was shared with the Conseil de l'Eau Gaspésie Sud, who is updating the PDE of Pabos Rivers.

Project Number: QC-2021-09

Recipient: Société de gestion de la rivière Cap-Chat

Title: Conservation et restauration de l'habitat du saumon atlantique (sauvage) de la rivière Cap-Chat

Approved amount: \$20,000

Funding provided to date: \$0 (recovered grant funds were returned to the funding pool for 2021 grants)

Summary: This project was cancelled as it was unable to complete its objectives and secure adequate match. Grant funds were recovered from the project and re-allocated to another viable project.

Project Number: QC-2021-10

Recipient: Société saumon de la rivière Romaine

Title: Programme de restauration du saumon de la rivière Romaine 2021

Approved amount: \$25,461 (new amount is \$37,722 due to reallocation funds from a cancelled project)

Funding provided to date: \$37,722

Summary: Since 2015, approximately 658,500 fry were released in these two rivers, and this project plans to release approximately 200,000 fry each year between 2021 and 2023. Genetic monitoring upon the return of the adults will facilitate the collection of scientific information on salmon life cycle.

2015–2020 Project Grants

ASCF Grants 2015 - 2020

Note: This statement reflects only those projects that were completed in 2021 or are ongoing. All other projects from previous years have been finalized.

Scientific Advisory Committee

Project Number: SAC-2017-02

Recipient: Memorial University (van Zyll de Jong)

Title: Assessing the impact of instream barriers and climate change on wild Atlantic salmon population persistence and production in forested boreal watersheds

Approved amount: \$23,300 for 2019 (3 of 3 year project, total: \$63,300)

Funding provided to date: \$57,475

Summary: The purpose of this project is to provide a comprehensive understanding of the cumulative effect of road placement, instream barriers and climate change on wild Atlantic salmon population persistence and accessibility of suitable habitat. This knowledge will be used to develop a novel assessment methodology and decisionmaking framework.

Project Number: SAC-2018-01

Recipient: University of New Brunswick (Linnansaari & Curry) **Title:** Effects of striped bass predation on Atlantic salmon smolts in the Miramichi River, NB

Approved amount: \$26,200 for 2019 (2 of 2 year project, total: \$59,003)

Funding provided to date: \$45,903

Summary: This project will build a smolt-threat based model that will estimate consumption of salmon smolts as a function of striped bass population numbers and size distribution (data from DFO collaboration), space (estuary / riverine spawning-grounds), time (relative to peak smolt migration; data from MSA and ASF), and environmental parameters such as water temperature, flows, and tides.

Project Number: SAC-2020-02

Recipient: Dalhousie University (Hutchings) **Title:** Temperature-dependent effects of sea lice on Atlantic salmon

Approved amount: \$40,350 Funding provided to date: \$28,245

Summary: To investigate the temperature-dependent effects of sea lice on Atlantic salmon, a laboratory experiment was conducted in which juvenile Atlantic salmon were infected with sea lice across a range of temperatures. Using these results, this project will evaluate how temperature and sea-louse infestation affect stress and immune responses, growth, mortality, and organ development of Atlantic salmon.

Project Number: SAC-2020-03

Recipient: Dalhousie University (Sterling) **Title:** Are toxic ionic aluminum concentrations increasing or decreasing in high priority salmon rivers in Nova Scotia

Approved amount: \$49,805 for 2019-20 Funding provided to date: \$34,863.50

Funding provided to date: \$54,805.50

Summary: Ionic aluminium (Ali) is toxic to Atlantic salmon and is known to be a key cause of population declines. Total aluminum (Alt) consists of Ali + organically complexed aluminum (Alo). A critical knowledge gap remains: is Alo driving the Alt trends and Ali levels staying stable or decreasing? Or are Ali levels increasing as well? This project will answer this question by extend Ali monitoring programme in four key indicator NS Rivers, using models calibrated to field observed Ali concentrations to project Ali trends.



Margaree Salmon Association - NS

Project Number: SAC-2020-04

Recipient: Fédération québécoise pour le saumon atlantique Title: Development of a methodology for assessing the hydro-geomorphological sensitivity associated with logging in the watersheds of the salmon rivers of Gaspésie and Bas-Saint-Laurent Approved amount: \$25,000 for 2019-20 Funding provided to date: \$18,750

2015–2020 Project Grants

Summary: This project will conduct a literature review on: hydrogeomorphological and biological risks associated with forest harvesting standards for minimizing the negative impacts; watershed assessment methods, and ecological risk analysis grids. The project will also propose grids and/or decision trees and/or indicators to assess sensitivity as a decision-making tool. Geomorphological features of watersheds, forestry operations and forest hydrology considerations as well as river habitat of salmon will all be considered.

New Brunswick

Project Number: NB-2020-03

Recipient: Conservation Council of New Brunswick **Title:** Teaching New Brunswick children and youth about the Atlantic salmon and the need for conservation

Approved amount: \$5,000

Funding provided to date: \$3,750

Summary: CCNB has developed hands-on Atlantic salmon modules, each consisting of a number of outdoor activities that teach students about Atlantic salmon biology, its economic and cultural importance, and what we can do to help salmon populations survive and increase in number. In this project, CCNB will continue to deliver the curriculum linked salmon activities linked to existing curriculum outcomes around the province in elementary, middle and high school levels. CCNB will also purchase materials to create additional activity kits to be available for teachers to borrow.



Indian Bay Ecosystem Corporation - NL

Newfoundland & Labrador

Project Number: NL-2018-10 Recipient: Town of Holyrood Title: Fishway construction support, Mahers River. Approved amount: \$50,000

Funding provided to date: \$0 (recovered grant funds were returned

to pool for future grants)

Summary: This project was cancelled as it was unable to complete its objectives and secure adequate match. Grant funds were recovered from the project and returned to the provincial pool for future grants.

Project Number: NL-2019-11

Recipient: NunatuKavut Community Council Inc. **Title:** Watershed management/conservation plan – Shinney's Brook, Labrador

Approved amount: \$40,862

Funding provided to date: \$40,738.14 (unspent funds were returned to pool for future grants)

Summary: This project developed a comprehensive environmental management system that incorporated freshwater, terrestrial, estuarian and marine ecosystems for greater management and conservation of resources. They assisted in the development of a watershed management/conservation plan for Shinney's Brook and incorporated Aboriginal Traditional Knowledge and education on the benefit of conservation and management of resources.

Project Number: NL-2020-07

Recipient: Freshwater Alexander Bays Ecosystem Corporation **Title:** Evaluation of success of habitat expansion and enhancement on Upper Terra Nova River Atlantic, phase 5

Approved amount: \$41,300

Funding provided to date: \$41,300

Summary: This project helped to create a valuable time series of data on the health of salmon stocks in the upper Terra Nova River. The project continued to evaluate whether the Terra Nova River conservation plan was appropriate or needed to be reevaluated. The project monitored salmon returns at Mollyguajeck and Grant Falls and the data helped to evaluate changes in abundance of salmon prior to and after enhancement activities. The effectiveness of the new water diversion wall at Mollyguajeck Falls fishway continued to be evaluated.

Project Number: NL-2020-08

Recipient: Friends of Salmonier Nature Park Title: Atlantic salmon and wetlands awareness Approved amount: \$9,000 Funding provided to date: \$7,118.22 (unspent funds were returned to the funding pool for future grants)

2015–2020 Project Grants

Summary: The goal of the project was to increase awareness, understanding and education on Atlantic salmon and wetlands in Newfoundland & Labrador. The project had 3 components:

- 1. Interpretive signage was placed along this back-country trail addressing best practices on wetland management and Atlantic salmon.
- 2. Delivered provincial outreach programs addressing salmon conservation and freshwater ecology throughout the province.
- 3. Expanded the salmon ecology trailside exhibit area within Salmonier Nature Park to better educate visitors.

Project Number: NL-2020-09

Recipient: Humber Arm Environmental Association Inc.

Title: Restoring connectivity on tributaries throughout Western NL; addressing hanging culverts

Approved amount: \$28,091

Funding provided to date: \$21,068.25

Summary: The project will use data acquired through the 2019/20 culvert surveys to identify hanging culverts that disrupt the connectivity of the river system. Using a weighted matrix that considers the culvert drop, area of upstream habitat to be made assessible, etc. culverts will be prioritized for the installation of 20 chutes to facilitate the passage for Atlantic salmon and other species.

Project Number: NL-2020-10

Recipient: Intervale Assocates Inc.

Title: Using education, engagement, and signage to conserve wild Atlantic salmon and protect salmon habitat in Newfoundland and the Labrador straits

Approved amount: \$39,640

Funding provided to date: \$39,640

Summary: Intervale strengthened and enlarged the "Living Rivers" initiative with four objectives: 1) encouraged reports of illegal fishing and sale of wild salmon, 2) prevented threats to salmon habitat, 3) taught best practices and educate about the importance of salmon conservation in NL, and 4) extended the reach to new areas of the Province. Partners assisted with posting and maintaining 177 signs in Eastern, central, and Western Newfoundland.

Nova Scotia

Project Number: NS-2020-02

Recipient: Dalhousie University (Sterling)

Title: Acidification mitigation plan for high priority salmon watersheds: effectiveness of liming to reduce toxic aluminum levels

Approved amount: \$10,000

Funding provided to date: \$7,000

Summary: Ionic aluminium (Ali) is toxic to Salmo salar and is known to be a key cause of population declines. The results of the 2014-17 ASCF Dalhousie Ali survey show that all rivers tested have toxic levels of Ali. This project will be using the past survey information to determine how best to address the problem using liming by sampling Ali levels in control and treatment catchments in NS. This information will be used to determine which liming method is best for reducing Ali levels.

Project Number: NS-2020-04

Recipient: Margaree Salmon Association

Title: Margaree River watershed in-stream restoration activity for 2020

Approved amount: \$18,000

Funding provided to date: \$18,000

Summary: In 2020 Margaree Salmon Association looked at several brooks to improve the habitat and repair damage done during high water events. MSA hired a consultant to help identify priority projects on the main river (including tree planting for bank stabilization) and help develop a long-term feeder stream plan for our watershed.

Project Number: NS-2020-06

Recipient: Sackville Rivers Association Title: River restoration 2020 Approved amount: \$18,000

Funding provided to date: \$18,000

Summary: The project restored habitat through the installation of habitat restoration structures on two watercourses in the Sackville River Watershed – Jackladder Brook and the Little Sackville River. Electrofishing also took place to track progress of our past and current projects.

Prince Edward Island

Project Number: PE-2019-05

Recipient: University of Prince Edward Island – van den Heuvel **Title:** Determination of factors affecting poor survival from egg to juvenile in Northeastern PEI

Approved amount: \$5,000 for 2020 (2 of 2 year project, total: \$19,627)

Funding provided to date: \$15,970.25 (unspent funds were returned to pool for future grants)

Summary: This project examined survival from two rivers on PEI, North Lake Creek and Priest Pond Creek. Instream and hyporheic environmental variables were monitored such as temperature, oxygen, conductivity, ice cover, flow, spawning habitat and interstitial cover from redds located in the mainstem of each river. Emergence traps were used to quantify the density of alevins emerging from redds and water temperature was used to build models for climate change scenarios.

Project Number: PE-2020-03

Recipient: Souris and Area Branch of the PEI Wildlife Federation **Title:** Atlantic salmon population baseline watershed survey in Hay River, phase 2

2015–2020 Project Grants

Approved amount: \$25,000

Funding provided to date: \$25,000

Summary: SAB conducted extensive monitoring in Hay River to compile benchmark data to validate and challenge previous assumptions of population numbers. Sex ratio of total returning adult salmon in comparison to redd numbers was used to help us understand watershed health and what effects they may have on salmon production and survival. Analyzing monitoring data helped to determine correlation between environmental conditions and limiting factors which will aid in retaining and improving salmon stocks in PEI through future restoration and monitoring initiatives.

Project Number: PE-2020-04

Recipient: Trout Unlimited Canada Prince County Chapter **Title:** TUPCC salmon habitat maintenance, rehabilitation & management planning 2020

Approved amount: \$25,000

Funding provided to date: \$25,000

Summary: This project focused on clearing out major blockages created from blow downs from hurricane Doiron. All three Atlantic salmon rivers in the TUCPCC watersheds required this work. The goal was to address approximately 15 km of river. This project included stream channel work to establish floodplain access during flood events in the MacAusland's Pond basin. The work helped the stream establish proper stream meander pattern that will naturally result in salmon habitat creation.

Québec

Project Number: QC-2017-07

Recipient: Fondation pour le saumon du grand Gaspé **Title:** Characterization of three Gaspé Rivers: York, Dartmouth and St-Jean.

Approved amount: \$8,000 for 2019 (3 of 3 year project, total: \$24,000)

Funding provided to date: \$22,000

Summary: The goal of the project is to characterize salmon habitats on Dartmouth, York and St-Jean Rivers with high resolution aerial imaging to map habitat, identify potential spawning grounds, pools and thermal refuges. Project results will be used by managers to identify and protect the most productive areas as well as identify areas that can be developed to increase productivity.

Project Number: QC-2019-02

Recipient: Association de protection de la rivière Moisie

Title: Impact of rail transport on Atlantic salmon embryos survival in Nipissis River

Approved amount: \$21,900 for 2020 (2 of 2 year project, total: \$43,940)

Funding provided to date: \$38,465

Summary: The project will determine if trains passing repeatedly along Nipissis River increases the mortality rate of salmon eggs laid

on the riverbed. The project will 1) quantify vibrations of the Nipissis riverbed caused by passing trains, 2) quantify by a lab experiment the impact of measured vibration ranges on Nipissis riverbed on the survival of Atlantic salmon embryos, and 3) develop, as the case may be, management recommendations to limit the impact.

Project Number: QC-2019-05

Recipient: Corporation de Gestion de la Rivière Saint-Jean-du-Saguenay Inc.

Title: Restoring connectivity between Saint Jean River and an abandoned meander

Approved amount: \$30,000

Funding provided to date: \$22,500

Summary: This project will improve hydrological conditions for salmon in a meander approximately 1,400 meters long which was abandoned after the completion of a major infill and bank protection project. On the left bank, which was infilled and raised, all water circulation was stopped between the watercourse and the meander. The CGRSJS will install a pipe to let the river water in, which will restore its original ecological functions.



Nova Scotia Salmon Association - NS

2015–2020 Project Grants

Project Number: QC-2020-07

Fédération québécoise pour le saumon atlantique **Title:** Challenges, concerns and solutions concerning the adaptation of Québec salmon fishing industry to climate change **Approved amount:** \$12,800

Funding provided to date: \$9,600

Summary: The FQSA, river managers, anglers, MFFP and MELCC are concerned about the adaptation to climate change. The FQSA will assess the challenges, concerns and anticipated impacts and solutions proposed by managers. It is important to better understand the angler's perception of these challenges and educate them on this subject. This process will enhance the discussion already started by MFFP which includes consideration of changes to water temperatures and regimes connected to climate change.

Project Number: QC-2020-08

Recipient: Fédération québécoise pour le saumon atlantique **Title:** Development of educational component "La vie de Salmo avec les Premières Nations" for Histoire du saumon educational program

Approved amount: \$32,000

Funding provided to date: \$24,000

Summary: FQSA is working to increase awareness among young people of the history and culture of First Nations of Québec. Work-

ing in partnership with local organizations, FQSA will collect salmon stories built around First Nations. FQSA will create partnerships with communities close to salmon to help them create their own committee where they will write their story about salmon. FQSA will coordinate the project, create collective efforts, help communities based on their needs and prepare educational material as an online activity in the form of a story map (ArcGIS Online).

Project Number: QC-2020-12

Recipient: Organisme de bassins versants de Kamouraska, L'Islet et Rivière-du-Loup

Title: Salmon development projects adapted to Ouelle River hydrology - preliminary design study

Approved amount: \$25,000

Funding provided to date: \$25,000

Summary: This project was comprised of two components. The first is a preliminary hydrogeomorphological study to determine if the solutions put forward will solve the problems are sustainable and to identify areas for action. The second component is a characterization of pools. As the Ouelle River has a significant dynamic of sediment transport, known pools identified in the conservation plan may no longer exist. It is necessary to characterize those pools and, as required, locate new ones.



Corporation de gestion de la rivière à saumon des Escoumins - QC

SUMMARY OF PROJECT AUDITS

Summary of Project Audits and Evaluations

In 2021 random audits of 22 Foundation funded projects were conducted. The audit process follows a structured method of assessing whether the project is being carried-out in accordance with the funding agreement entered into between the Foundation and the recipient, including project photos and an examination of minutes of meetings and accounting records. The project audits supplement the assessment of performance completed by staff through review of the draft funding agreement, together with interim and final project reports received from recipients.

Note: Project audits are not conducted on every project each year. This is due to limited staff resources being available or, that the same recipient group had recently undergone a project audit. In addition, due to COVID-19 fewer audits were conducted in comparison to previous years.

In 2021 the following recipient groups were audited for performance:

New Brunswick Projects

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Miramichi River Environmental Assessment Committee
Miramichi Salmon Association
Nashwaak Watershed Association (Aquatic Connectivity)
Nashwaak Watershed Association (Campbell)
Wolastoqey Nation

Newfoundland & Labrador Projects

NL-2021-01 Bay St. George South Area Development Association - Habitat	
NL-2021-02	Bay St. George South Area Development Association - Evaluate
NL-2021-04	Humber Arm Environmental Association
NL-2021-06	Intervale Associates Inc

Nova Scotia Projects

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NS-2021-01	Bluenose Coastal Action Foundation	
NS-2021-02	Cheticamp River Salmon Association	

NS-2021-03	Clean Annapolis River Project Society	
NS-2021-04	Inverness South Anglers Association	
NS-2021-05	LaHave River Salmon Association	
NS-2021-06	Margaree Salmon Association	
Prince Edwa	ard Island Projects	
PEI-2021-01	Abegweit Conservation Society	
PEI-2021-03	Hillsborough River Association Inc.	
PEI-2021-04a	Morell River Management Cooperative	
PEI-2021-05	Souris and Area Branch of the PEI Wildlife Federation	
Québec Pro	jects	
QC-2021-02	2 Fédération québécoise pour le saumon atlantique	
QC-2021-05	Municipalité de Rivière-au-Tonnerre	
QC-2021-10	Société Saumon de la Rivière Romaine	



Nashwaak River Association - NB

REPORTS & STATEMENTS Auditors' Report

MacMillan Lawrence & Lawrence

Chartered Professional Accountants

Report of the Independent Auditor on the Summary Financial Statements

To the Directors of The Atlantic Salmon Conservation Foundation

Opinion

The summary financial statements, which comprise the summary statement of financial position as at December 31, 2021 and the summary statements of operations and changes in net assets for the year then ended, are derived from the audited financial statements of The Atlantic Salmon Conservation Foundation for the year ended December 31, 2021.

In our opinion, the accompanying summary financial statements are a fair summary of the audited financial statements, in accordance with Canadian accounting standards for not-for-profit organizations.

Summary Financial Statements

The summary financial statements do not contain all the disclosures required by Canadian accounting standards for not-for-profit organizations. Reading the summary financial statements and the auditor's report thereon, therefore, is not a substitute for reading the audited financial statements and the auditor's report thereon.

The Audited Financial Statements and Our Report Thereon

We expressed an unmodified audit opinion on the audited financial statements in our report dated March 24, 2022.

Management's Responsibility for the Summary Financial Statements

Management is responsible for the preparation of the summary financial statements in accordance with Canadian accounting standards for not-for-profit organizations.

Auditor's Responsibility

Our responsibility is to express an opinion on whether the summary financial statements are a fair summary of the audited financial statements based on our procedures, which were conducted in accordance with Canadian Auditing Standard (CAS) 810, *Engagements to Report on Summary Financial Statements*.

Fredericton, NB March 24, 2022

Mac Millan Lawrence & Lawrence

Chartered Accountants

REPORTS & STATEMENTS

Statement of Financial Position

	December 31, 2021	December 31, 2020
Assets		***************************************
Current		
Cash and cash equivalents	\$ -	\$ 8,733
Receivables	19,109	44,254
Prepaids		17,763
	19,109	70,750
Investments	46,977,846	43,372,665
	<u>\$ 46,996,955</u>	<u>\$ 43,443,415</u>
Liabilities		
Current		
Bank indebtedness	\$ 11,377	\$ -
Payables and accruals	574,094	273,153
	585,471	273,153
Net Assets		
Reserve Fund – Internally Restricted	289,995	270,438
Endowment Fund – Externally Restricted	46,121,489	42,899,824
,	46,411,484	43,170,262

Approved on behalf of the Board:

Man Alenny -Director

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REPORTS & STATEMENTS

Statement of Operations and Change in Net Assets

Year ended December 31,	2021	2020
Revenue	<u>\$ 5,115,067</u>	<u>\$ 2,436,135</u>
Expenses		
Administration	408,722	435,427
Grants	1,260,790	1,126,757
Investment management fees	204,333	184,597
	1,873,845	1,746,781
Excess of revenue over expenses	<u>\$ 3,241,222</u>	<u>\$ 689,354</u>
Net assets, beginning of year	\$ 43,170,262	\$ 42,480,908
Excess of revenue over expenses		689,354_
Net assets, end of year	<u>\$ 46,411,484</u>	<u>\$ 43,170,262</u>

For the 2021 Fiscal Year total remuneration paid to one Foundation employee whose remuneration exceeds \$100,000 per year was \$150,369.62 consisting of the following: Salary = \$130,000; fees = \$0; travel expenses = \$3,175; CPP = \$0.00; EI = \$889.54, allowances \$0; and benefits = \$16,305.08

ASCFVOLUNTEERS & PERSONNEL

Officers, Directors & Board Committees

Officers



Hon. Rémi Bujold, P.C., C.M., Chairman & President, Québec, QC

Directors



Réné Aucoin Chéticamp, NS

Board Committees

Investment:

Staff

R. Bishop (Chair) lames Burton Marie-Hélène Lacroix John LeBoutillier Daniel Tremblay



Kastine Coleman Corner Brook, NL



Robert Bishop, C.A.,

St. John's, NL

Vice-Chairman & Vice-President,

Michael Durant



Jim Jones Secretary, Moncton, NB



Mark Delaney, C.A., Treasurer, St. John's, NL



Allyson Heustis

Program Coordinator

Conservation

Charlottetown, PEI



James Lawley Halifax, NS



David Peter Paul Pabineau First Nation, NB



Marie-Hélène Lacroix New Richmond, QC



Audit & Finance: Robert Bishop Rémi Bujold Mark Delaney (Chair) Mike Durant

Charline McCoy

Program Manager

(From March 2021)

Conservation

Policy & Program: Réné Aucoin Kastine Coleman

Jacqueline Girouard Jim Jones (Chair) Sylvie Tremblay



Gert Lawlor **Conservation Program** Coordinator (Acting)



Darla Saunders Conservation Program Manager (To February 2021)



Stephen Chase Executive Director



ASCF VOLUNTEERS Advisory Committees



New Brunswick Advisory Committee

David Dunn, Allyson Heustis (ASCF), Kathryn Collett (chair), Michelle Gray, Todd Kennedy, Charline McCoy (ASCF), Stephen Chase (ASCF), Sara Richard, James Marriner and Richard DeBow.



Newfoundland & Labrador Advisory Committee Fred Parsons, Allyson Heustis (ASCF), Richard Maddigan, Graham Roome, Jim McCarthy, Carl McLean, Brian Dempson, Travis Van Leeuwen and Gregory Jeddore.



Nova Scotia Advisory Committee

Jason Leblanc, Allyson Heustis (ASCF), Pat Wall, Michael Pollard, Gert Lawlor (ASCF), David MacNeil, Shane O'Neil, Keith Christmas, Darryl Murrant, Jennifer MacDonald and Stephen Chase (ASCF).



Comité consultatif provincial du Québec Frederic Levesque, Charline McCoy (ASCF), Véronique Gilain, Richard Firth, Sébastien Ross, Thomas Buffin-Bélanger, Syvie Tremblay, Stephen Chase (ASCF) and Jean-Pierre LeBel.



Prince Edward Island Advisory Committee Ruby Sharp, Allyson Heustis (ASCF), Rob Burnett, Brad Ledgerwood, Shawn MacDougall, Stephen Chase (ASCF), Mary Finch, Rosie MacFarlane, Gert Lawlor (ASCF) and Ottis McInnis.



Scientific Advisory Committee David Reddin (Chair), Stephen Chase (ASCF), Brian Dempson, Charline McCoy (staff), Dr. Ian Bradbury, Dr. Carole-Anne Gillis, Peter Cronin and Francois Caron.

Meet a few of ASCF's stellar volunteers, who are crucial to realizing ASCF's work for Atlantic Salmon conservation.



Dr. Ian Bradbury

Meet Dr. Ian Bradbury, a member of the Scientific Advisory Committee.

Bradbury grew up in Dunville, Newfoundland, a community where many of his friends and their families were commercial fishermen. He began attending classes at Memorial University just shortly after the province's cod fishery had collapsed which had led to a great deal of active research into cod survival and oceanographic conditions.

"I think a lot of my interest in fishing and biology was fostered during my undergrad at Memorial," said Bradbury. "That really spurred my interest in continuing to look at spatial structure and fish movements and connec-

tivity and then that led me to genetics and genomics."

Bradbury earned a master's degree at Memorial and then went to Dalhousie and did a PhD study on fish population genetics and worked on rainbow smelt throughout Atlantic Canada. He was hired by DFO in 2010 as a research scientist and has continued there ever since. His current work focuses on using genetic and genomic tools to inform fisheries management and conservation.

"I would say half my time is spent on Atlantic salmon – mixed stock fishery issues like who's catching salmon at West Greenland or St. Pierre & Miquelon or Labrador – and the other half is aquaculture interactions. What happens to escapees when they get out of the cages? Do they interbreed with wild salmon? What does that mean for wild populations and trying to understand how the hybrids do and what that means for population decline and stability."

Bradbury was connected to the ASCF by DFO colleagues and joined the scientific advisory committee, using his experience and expertise to assess project proposals. In that time, some of the projects that have stood out to him have involved finding ways to make the best use out of existing datasets.

"I really like the mechanistic ones, the ones that help us try to understand these bigger questions, such as why do we have less salmon, that we haven't really been able to tackle through other means. This is a great opportunity to try and take a different angle on some of these questions and really make some headway."

In addition to facilitating research that might otherwise have fallen through the cracks, Bradbury is also very proud of how the ASCF's work has empowered the community groups who carry out the projects.

"It allows us to engage a lot of these community and Indigenous groups that otherwise would not have the resources to really make a difference for the salmon populations and habitats and so forth. It's an interesting mix of being able to focus on the science but also engage community groups in the process. That's been incredibly powerful."

Meet Rémi Bujold, Chairman of our Board of Directors.

Growing up on the shores of the Cascapedia River in Quebec, Bujold took an interest in fishing, wildlife and ecology at a young age, stemming from his father's involvement in efforts to support salmon populations in that river.

"When I was a kid, I was always hearing about the river, how could we save the salmon, what could we do to help salmon coming back to the river," said Bujold. "That's when it started."

Bujold earned a law degree from Laval University and embarked on a



Rémi Bujold

long career in government. He began at the provincial level in the early 1970s and in 1975 was appointed Special assistant to Prime Minister Pierre Trudeau. In 1979, he was elected as Member for the riding of Bonaventure – Îles-de-la-Madeleine. Throughout the 1980s he served as Chief of Staff for Opposition Leader and Quebec Premier Robert Bourassa before being appointed Associate Secretary General of the Executive Council Department.

In the 1990s, he founded Consilium, a government relations firm in Quebec City. Through that work, he met Stephen Chase of the Atlantic Salmon Federation who asked Bujold to join him in a campaign to lobby government to provide funding for salmon habitat enhancement efforts. That campaign would develop into the Atlantic Salmon Conservation Foundation in 2007 and Bujold has served as Chairman since day one.

"We were able to convince the federal government that we needed local individuals to take care of small projects – they may be small projects but through small projects you can do big things," said Bujold. "If you don't work to help all rivers for spawning grounds for salmon, the species will disappear."

Meet a few of ASCF's stellar volunteers, who are crucial to realizing ASCF's work for Atlantic Salmon conservation.

Bujold sees the ASCF and the local organizations who are provided funding as equal partners. Neither is more important than the other.

"We have a good organization to manage the money. We have local groups who request funding for projects and then do the work on the river. Add to that, others who partner with them like universities and larger groups. You put all that together, it results in our success. You cannot take only one part."

In addition to his work with the ASCF, Bujold has also served as a chairman and board member for organizations such as the Grand Cascapedia River Museum, the Foundation Camp Odyssée, the Cégep François-Xavier Garneau, Canadian Unity, the Canadian Foundation on Anti-Personnel Mines, the Fondation du Théâtre du Trident, Fondation du Centre Robert-Giffard, Fondation de Lauberivière, and the Fondation de la Maison Michel Sarrazin, among others.



Véronique Gilain

Meet Véronique Gilain, a member of the Québec Advisory Committee.

While most ASCF volunteers were born somewhere close to the waterbodies where Atlantic salmon reside, Gilain was born in what is today known as the Democratic Republic of the Congo. At age six, her family moved to Montreal and for the past 30 years she has resided on the North Shore.

Gilain is an avid scholar, earning degrees (three of them master's degrees) in fields such as engineering, environmental management, telecommunications and project management. She started her own project management business

in 1998 and, shortly after moving to the North Shore, she took up salmon fishing.

"There's many rivers in the area where I live, that's why I started salmon fishing," said Gilain. "It became a passion for me."

At the same time, her business partners were also involved in salmon fishing and salmon protection efforts, and she ended up

working with efforts to analyze the socio-economic impact of river enhancement projects. That was how she connected with the ASCF and in 2019 she became a volunteer on the advisory committee.

"There have been many projects on the North Shore in the past three years. All of them had good potential for protecting Atlantic salmon. When I analyze a project from an impact point of view, I'm more interested in projects that are done on the river itself, compared to projects that are aimed at providing information on the salmon situation on the rivers. For me, educational and information projects are required, but on a short-term basis might have a lesser impact on the salmon situation."

One such project was an effort to increase the salmon population in the La Romaine River, carried out in conjunction with Hydro Québec with the support of the local Innu community.

"To me, that's a very interesting project because everyone involved in that river rehabilitation identified that as a priority and they were able to get some funding from the ASCF and a lot more from partners. They produced a lot of young salmon that were reintroduced to the river. It will hopefully have a very positive impact on the salmon population in that river."

Gilain says that the ASCF makes many projects possible that would not have materialized otherwise. She's also heartened to see how many projects having funding from other sources beyond the ASCF, which demonstrates more broad community support for their efforts.

"To me, that shows that the promoters have been doing their homework to find funding and to involve different organizations into the projects to make it successful."

Gilain's time with the ASCF has largely been during the COVID-19 pandemic so she has yet to meet her fellow committee members in person. But she is looking forward to in-person meetings in the future and has greatly enjoyed learning from her fellow committee members via webcam.

"The ASCF members are pretty representative of the territory covered in Québec for the funding. All together, we know pretty well the rivers and the organizations that submit projects and we're able to make a better analysis of what has been submitted."

Meet a few of ASCF's stellar volunteers, who are crucial to realizing ASCF's work for Atlantic Salmon conservation.

Meet Todd Kennedy, a member of the New Brunswick Advisory Committee.



Growing up, fishing was always a big part of Kennedy's life. His father was a schoolteacher and during his summers off from work father and son would spend much of their time fishing on the Restigouche River.

"Our first house was right along the banks of the Restigouche, we were pretty well born into it," said Kennedy.

So it's very meaningful for him not only to take his own sons fishing on that same river but also to work there. He is the manager of the Restigouche Salmon Club, a private fishing camp where he had previously worked several summers as a student.

Todd Kennedy

"When the previous manager approached me to see if I'd be willing to

come back and take over when he retired, it was a pretty easy decision to come home. We get to raise our kids with their grandparents – my parents still have a house on the river. I can see the river when I look out my front window."

Three years ago, Kennedy was approached to see if he would be interested in volunteering with the ASCF. Given his personal and professional connections to the river, it was another easy decision to make.

"Hopefully fish stocks and global warming don't retire me from the Restigouche River. The things that we've helped get done with the funding will hopefully allow us to bring some of the fish stocks back to where they were and to stop some of the effects of global warming. The rivers just seem to be getting warmer and warmer. The work that is being done is very important."

That important work is being done by many smaller organizations that operate within watersheds in the region. Those organizations depend on ASCF funding to accomplish their goals.

"In every river and every tributary in the watersheds within New Brunswick, I think that any little project that can be done to help Atlantic salmon is worthwhile."

He's also greatly enjoyed making connections with the other members of the New Brunswick advisory board; like-minded people who are also interested in helping the future of Atlantic salmon.

"You get to know them on a personal level, it's been good. Everyone is there for the same reason. We get together once a year, though the last two years we haven't been able to because of COVID-19. But I think we still have a good time, even on the web-chats. We really enjoy each other's company."

Meet Jennifer MacDonald, a member of the Nova Scotia Advisory Committee.

Born in Ontario, MacDonald's family moved around a lot when she was younger, but she spent much of her childhood in Nova Scotia. She developed a keen interest in the environment and conservation issues and eventually obtained a master's degree in environmental studies that led to her taking a position with DFO.



"I started working with the Species at Risk program at DFO in Ottawa, spent eight years there and then moved back to Halifax in

2016 and continued working with DFO," said MacDonald. "Currently I'm a biologist in the integrated planning unit, primarily working on administration of DFO funding programs, particularly the Canada Nature Fund for Aquatic Species at Risk."

Through that work, MacDonald became aware of the ASCF and when a DFO colleague's term with the Foundation came to an end, it was suggested that she would be a suitable replacement.

"It was suggested that I could participate, given my role in other funding programs, to bring that experience to the group. And there's certainly an alignment between many groups and types of restoration project that receive funding through DFO that also apply for funding through the ASCF."

As someone with a passionate interest in conservation and environmental issues, MacDonald is always impressed by the variety of projects that apply for ASCF funding. Projects aimed at education or public awareness and those working on habitat restoration efforts are both valid. The passion on display by the applicant groups is always inspiring.

"What stands out to me is the number of proposals that we see and the scope of the work that they're doing right across the province. It's great to see all the amazing work that's happening."

Meet a few of ASCF's stellar volunteers, who are crucial to realizing ASCF's work for Atlantic Salmon conservation.

MacDonald is thrilled to be involved with an organization that supports so many groups undertaking diverse efforts. And she is delighted to have met so many people with a shared interest in this important topic on the Nova Scotia Advisory Committee, even if she's only been able to meet them once in person.

"I joined the group in late-2019 and with COVID-19, we've been meeting virtually. That's something I look forward to in the future, hopefully getting to meet in person again or the opportunity to see a project that's underway. I'm enjoying participating with the group and look forward to the opportunity to see more fantastic proposals."



Charline McCoy

Meet Charline McCoy, our Conservation Program Manager.

Born in Dieppe, New Brunswick, Mc-Coy studied psychology at the University of Moncton before moving to Fredericton and earning a bachelor's degree in business administration at the University of New Brunswick. She started her career with the provincial government and worked as a senior analyst for departments such as Post-Secondary Education, Training and Labour and Service New Brunswick.

"In 2006, I had the opportunity to work outside of government with the Agricultural Alliance of New Bruns-

wick as a Chief Executive Officer," said McCoy. "This experience eventually led me in the role of Executive Director with the Cities of New Brunswick Association".

Her background in managing finances, working with board members, staff, stakeholders and all levels of government gave her the skills set to build relationships and trust within and outside an organization.

"The areas that I enjoy the most are working with details, analyzing, and turning strategy into action to achieve positive results," said McCoy.

On 4 Mach 2021, Charline McCoy became the new Conservation Program Manager for ASCF. Charline's experience brings many important skills to supporting the work of the Foundation particularly conservation projects in New Brunswick and Quebec, as well as applied scientific research grants guided by the Scientific Advisory Committee.

McCoy says she is inspired by the passion that is displayed by the local groups and all volunteers who are motivated and engaged in maintaining and improving the conservation for Wild Atlantic Salmon.

As a relatively new hire for an organization celebrating its 15-year anniversary, McCoy says that it's motivating to learn about the history and evolution of the ASCF and she is very excited to be part of its next chapter.

Meet Ottis McInnis, a member of the Prince Edward Island Advisory Committee.

McInnis has always had an interest in the outdoors, wildlife and fishing. You could say it's in his blood; his parents were also involved in commercial fisheries and aquaculture on Prince Edward Island.

Through a summer position with PEI's watershed program, McInnis became aware of the work being done by the Central Queens branch of the PEI Wildlife Federation and began working with them. After he earned a diploma in resource management technology at



Ottis McInnis

Holland College, a friend who had become a fisheries officer with the Department of Fisheries and Oceans suggested he would be a great fit with the department.

"That was 15 years ago, I've been a fisheries officer ever since in Charlottetown, PEI," said McInnis. "For the first 14 years I was in the field directly enforcing, but for the last year I've been acting in a different capacity. I'm still in conservation protection but more of an administrative role around our fisheries aerial surveillance and enforcement program."

Through his work with the PEI Wildlife Federation, McInnis participated in a variety of organizing fundraisers over the years which led to him connecting with Chris Mills, an ASCF board member at the time.

"He knew that I had some involvement with watersheds and salmon, as well as a personal interest as an angler. His term with the ASCF board was up, so he asked if I'd be interested in taking over his seat and that's how I ended up there in 2016."

McInnis' role with the ASCF has been with the grant application process; evaluating applications and providing feedback on the proposed projects. With his long history in watershed operations and fisheries, he is always happy to share his perspective wherever it can benefit applicants.

Meet a few of ASCF's stellar volunteers, who are crucial to realizing ASCF's work for Atlantic Salmon conservation.

"Just being part of a group that's responsible for ensuring that the funds themselves are going to worthy causes and are going to actually make a tangible difference for Atlantic salmon is really rewarding."

McInnis takes a great deal of pride in his work with the ASCF, noting how crucial the funding is and how much important work would not get done without it. The volunteers and not-for-profits who apply to the ASCF are the only ones doing this work, which allows recreational users to more fully enjoy the watersheds.

"It's kind of a cycle – that maintained involvement by recreational user groups means there's extra attention on the systems and they can raise alarms if they see something that doesn't look right. And that can trigger additional work by the watershed groups which results in requests to groups like ASCF for funding."

"It's an important cog in the wheel of how these systems stay healthy," he added.



Dr. Travis Van Leeuwen

Meet Dr. Travis Van Leeuwen, a member of the Newfoundland and Labrador advisory committee.

Hailing from Port Moody, British Columbia, Van Leeuwen grew up on the water and pursued an interest in fish and aquatic lifeforms to a PhD, looking at life history strategies in salmonids. He spent the formative years of his career with the Cape Eleuthera Institute in the Bahamas, working with small scale, commercial and emerging fisheries.

In 2018, he started work with the Department of Fisheries and Oceans as a research scientist in the salmonid section, providing assessment on the numbers of salmon in monitored rivers. More recently, he has started taking an interest in the realm of catch and release fishing – trying to put numbers on the survival of fish following catch and release and applying those numbers to the fishery.

"I'm trying to understand what are the main characteristics or survival estimates around catch and release angling for the fishery in terms of warm water protocols and when most of the fish are caught. It goes beyond just understanding what the survival chances of Atlantic salmon are following catch and release, but then applying that to the real-world fishery."

A co-worker at DFO, Brian Dempson, suggested that Van Leeuwen get involved with the ASCF, seeing it as an ideal way for a newcomer to the province to understand the passion for salmon conservation and some of the important projects being undertaken in Newfoundland's watersheds. Van Leeuwen said that the sheer volume of projects and the enthusiasm around Atlantic salmon in the province has been inspiring.

"The proposals that I most like to see are around education and awareness, whether that be teaching school kids life cycles of Atlantic salmon, fly-tying and fly-fishing classes and educational efforts in the broader community on the issues facing Atlantic salmon in the province, whether it be climate change or various aspects of the recreational fishery."

Salmon counting fences are another project that are meaningful to Van Leeuwen, which he says can go a long way to helping DFO assess these watersheds. While DFO have their own counting fences, data from community-led fences supported through the ASCF also factor into their assessments.

"I always like to see those projects go forward. They also get active participation of the community into those assessments so the people can see firsthand the numbers that we're producing. They actually had a part in that and they can see how much effort goes into actually providing an assessment on Atlantic salmon for the province."

Beyond the importance of the work itself, Van Leeuwen said that he has also greatly enjoyed the camaraderie that has developed between himself and other ASCF volunteers.

"Being introduced to other people in the region that share similar interests, whether it be fishing or conservation of Atlantic salmon, has been really good!"

ASCF STRUCTURAL MODEL



CONSERVATION PARTNERS

The 2021 List of Our Conservation Partners

Abegweit Conservation Society Adam Chateauvert Consulting Agence Mamu Innu Kaikusseth Agriculture and Agri-Food Canada Anqotum Resource Management Association de conservation de la vallée du Gouffre Association de protection de la rivière Moisie Association de gestion halieutique autochtone Mi'kmaq et Malécite Atlantic Canada Fish Farmers Association Atlantic Canada Opportunities Agency Atlantic Coastal Action Program Saint John Atlantic Salmon Conservation Foundation Atlantic Salmon Federation Atlantic Water Network Bay St. George South Area Development Association & Local Service District Bay St. George South Ride for Ages Inc. Bedford Bay Limited Bluenose Coastal Action Foundation Burgeo Band of Indians Camp de pêche de la rivière Moisie inc. Canada Nature Fund for Species at Risk Canada Summer Jobs

Canadian Foundation for Innovation Canadian Heritage - Patrimoine canadien Canadian National Railway Company Canadian Parks And Wilderness Society of Newfoundland and Labrador Canadian Rivers Institute Cecelia Brooks Central Queens Branch of the PEI Wildlife Federation Cheticamp River Salmon Association Charlo Salmonid Enhancement Center City of Fredericton Clean Annapolis River Project Society **Clean Foundation** Coastal Action Collaboration for Atlantic Salmon Tomorrow College of the North Atlantic Comité de bassin de la baie des Ha!Ha! Conseil de Gestion du Bassin Versant de la rivière Restigouche Conseil de la Nation huronne-wendat Conseil de l'Eau de la Gaspésie Sud Conseil de l'Eau Nord de la Gaspésie Conservation Corps Newfoundland and Labrador

Cooke Aquaculture Corner Brook Port Corporation Corporation de gestion de la rivière à saumons des Escoumins Corporation de gestion des rivières Matapédia et Patapédia Corporation de gestion de la rivière St-Jean Saguenay Corporation du bassin de la Jacques-Cartier Corporation du bassin de la Jacques-Cartier -Année Internationale du Saumon Corporation du saumon de la rivière Malbaie Conservation Corps Newfoundland and Labrador Conservation Council of New Brunswick Contact Nature Rivière à Mars Dalhousie University Ducks Unlimited Canada Eastern Shore Wildlife Association Echo Foundation Eddy Out Depot Eel River Bar First Nation Elsipogtog First Nation Employment and Social Development Canada -Emploi et développement social Canada

CONSERVATION PARTNERS

The 2021 List of Our Conservation Partners

Énergie NB Power Environmental Coalition of Prince Edward Island Environment and Climate Change Canada -Environnement et Changement Climatique Canada Environment and Natural Resources Canada -Environnement et ressources naturelles Canada Environment Resources Management Association Fédération québécoise du saumon atlantique Fisheries and Oceans Canada - Pêches et Océans Canada Flat Bay Indian Band Fondation de la Faune du Québec Fondation Hydro-Québec pour l'environnement Fondation pour le saumon du grand Gaspé Fondation Saumon Fort Folly First Nation Fort Folly Habitat Recovery Freshwater Alexander Bays Ecosystem Corporation Friends of the Kouchibouguacis Friends of the Salmonier Nature Park Fundy Trail Development Authority Inc. Gespe'gewaq Mi'gmaq Resource Council Glencore Greening Spaces Groupe du bassin versant de la région de Cap-Pelé Inc Hammond River Angling Association Hatheway Group Hillsborough River Association Inc. Houlton Band of Maliseets ACAP Humber Arm Environmental Association Inc. Hydro-Québec Indian Bay Ecosystem Corporation Institut national de recherche scientifique Intervale Associates Incorporated Inverness South Anglers Association J Frank Gaudet Tree Nursery Jijuktu'kwejk Watershed Alliance Kennebecasis Watershed Restoration Committee New Brunswick Department of Post-Secondary Kopit Lodge LaHave River Salmon Association Listuguj Fisheries Liber Ero Listuguj First Nation Mabou River Inn Mactaquac Biodiversity Facility Maliseet Nation Conservation Council Maritime College of Forest Technology Margaree Salmon Association

Medway River Association Memorial University Metepenegia First Nation MicMac Rod and Gun Club Ministère des Forêts, de la Faune et des Parcs du Ouébec Miramichi River Environmental Assessment Committee Miramichi Salmon Association Miramichi Watershed Management Committee Mitacs Moncton Fish and Game Association Morell River Management Cooperative Municipalité de Rivière-au-Tonnerre Nashwaak Watershed Association Inc. Natural Resources Canada - Ressources naturelles Canada Natural Sciences and Engineering Research Council - Conseil de recherches en sciences naturelles et en génie du Canada Nature Conservancy of Canada Nepisiguit Salmon Association New Brunswick Aboriginal Peoples Council New Brunswick Community College - Collège communautaire du Nouveau-Brunswick New Brunswick Department of Agriculture, Aquaculture and Fisheries - Ministère d'Agriculture, aquaculture et pêches New Brunswick Department of Transportation and Infrastructure - Ministère de transport et infrastructure New Brunswick Department of Energy and Resource Development - Ministère du Développement de l'énergie et des ressources New Brunswick Department of Environment and Local Government - Ministère de l'environnment et des gouvernements locaux du Nouveau-Brunswick New Brunswick Department of Natural Resources and Energy Development - Ministère de ressoures naturelles et Développement de l'énergie Education, Training and Labour - Ministère de l'éducation postsecondaire, de la formation et du travail de Nouveau-Brunswick New Brunswick Salmon Council New Brunswick Wildlife Federation New Brunswick Wildlife Trust Fund - Fonds de fiducie de la faune du Nouveau-Brunswick Newfoundland & Labrador Department of Advanced Education, Skills, and Labour

Newfoundland & Labrador Department of Environment and Climate Change Newfoundland & Labrador Department of Fisheries, Forestry, and Agriculture Newfoundland & Labrador Department of Fisheries and Land Resources Newfoundland & Labrador Department of Immigration, Population Growth and Skills Newfoundland & Labrador Department of Municipal Affairs and Environment Newfoundland & Labrador Department of Tourism, Culture, Industry, and Innovation Newfoundland Ride for Ages Norris Arm Economic Development Committee North Shore MicMac District Council Nova Scotia Community College Nova Scotia Department of Fisheries and Aquaculture Nova Scotia Department of Lands and Forestry Nova Scotia Guides Association Nova Scotia Salmon Association NSLC Adopt A Stream Nunatukavut Community Council Ocean Tracking Network Organisme de bassin versant du Saguenay Organisme de bassins versants Manicouagan Organisme de bassin versant Matapédia-Restigouche Organisme de bassins versants de Kamouraska, L'Islet et Rivière-du-Loup Organisme de bassins versants de la Haute-Côte Nord Oromocto First Nation Oromocto River Watershed Association Pabineau First Nation Parks Canada - Parcs Canada Parc national de la Jacques-Cartier Patagonia Perennia Research Inc. Petitcodiac Watershed Alliance Pirates Haven Chalets & Adventures Pourvoirie Moisie Nipissis Première Nation Malecite de Viger Prince Edward Island Department of Communities, Land & Environment Prince Edward Island Department of Environment, Energy and Climate Action Prince Edward Island Department of Transportation, Infrastructure & Energy Prince Edward Island Department of Forests, Fish and Wildlife Prince Edward Island Department of Fisheries and Communities

CONSERVATION PARTNERS

The 2021 List of Our Conservation Partners

Prince Edward Island Employment Development Agency Prince Edward Island Jobs for Youth Program Prince Edward Island Post Secondary Program Prince Edward Island Water Management Fund Prince Edward Island Watershed Alliance Prince Edward Island Wildlife Conservation Fund Programme de mise en valeur des habitats du saumon atlantique de la Côte-Nord Qalipu Mikmaq First Nation Québec-Labrador Foundation Rides for Ages Incorporated St. Ignace Golf Club Québec-Labrador Foundation R A Currie Biological Consultant Regis and Joan Duffy Foundation Regroupement des organismes de bassins versants du Québec Regroupement pour la restauration des trois rivières Pabos **Rio Tinto IOC** Royal Bank of Canada Sackville Rivers Association Sage Environmental Fund Salmon Preservation Association for the Waters of Newfoundland

Salmonid Association of Eastern Newfoundland Service New Brunswick Société d'aménagement de Baie-Trinité Société de gestion de la rivière Madeleine Société de gestion de la rivière Ouelle Société d'Énergie Rivière Sheldrake Société de gestion des rivières de Gaspé Société saumon de la rivière Romaine Souris and Area Branch of the PEI Wildlife Federation Stantec Stewardship Association of Municipalities St. Anthony Basin Resources Inc. St. Mary's First Nation St. Mary's River Association Sussex Fish and Game Association Table GIRT Gaspésie Telus Three Rivers Mi'kmaq Band **Tobique First Nation Tobique Watershed Association** Town of Burgeo Town of Hampton Town of Indian Bay Town of Norris Arm Trout Unlimited Canada Prince County Chapter Tuckamore Lodge

Uashat Mak Mani-utenam (ITUM) Unama'ki Institute of Natural Resources United States Environmental Protection Agency United States Geological Survey Université Laval Université de Moncton Université du Québec à Rimouski Université du Québec à Chicoutimi University of Hull University of New Brunswick Village of St. Louis University of Prince Edward Island Village de Cap-Pelé Ville de Cap-Santé Village of Grand Manan Vision H2O Wild Salmon Unlimited Willowbrook Watershed Services Wolastoqey Nation of New Brunswick Women in Science and Engineering Newfoundland and Labrador Woodmillers Inc. Wood PLC World Wildlife Fund