

ASF Strategic Plan Report to Boards of Directors, May 2022

Robert Otto - COO

Once again, I am pleased to provide an update on ASF's progress against our Strategic Plan (Blueprint for Saving Wild Atlantic Salmon) for the Spring 2022 joint Board meeting. I'm sure you will join me in welcoming an opportunity to meet in person, as well as virtually, as a sign that we are hopefully on our way to a return to predominantly in-person meetings. ASF, like so many of us, thought we were on our way quickly out of the pandemic in late autumn 2021 but were then faced with increased Covid cases through highly contagious variants. Winter 2021-22 brought a loosening of emergency mandates, government restrictions and guidelines, and now increasing numbers of cases. We've had a number of staff infected by Covid, but thankfully so far no serious cases or complications.

ASF staff continued with planning efforts to carry out the eradication of smallmouth bass from Miramichi Lake by working with our partners to plan for 2022 operations anticipating protests similar to what occurred in 2021. ASF Regional Programs staff participated in various science and management meetings held by the DFO, taking the time to once again provide consistent, sound and reasoned input into those processes. It has been a very busy time with US Operations preparing material for our court proceedings to see salmon migrations to and from the marine environment protected from hydro operations on the Kennebec river. Winter is when our Research and Environment department is busy preparing and ordering equipment for the spring s field season of tagging both adult and juvenile salmon in freshwater, and at the time of writing, tagging of kelts has already started.

ASF continues our assessment of progress against the Objectives and Activities contained in ASF's Strategic Plan. As previously described in reports, this Plan attempted to measure progress against Goals and Objectives based on ASF's own actions and not be dependent on other organizations for successful action. In the previous report ASF identified several areas where a pivot was needed after concluding limited progress was possible against the original activities – this practice continues in this report. Further, this report summarizes efforts to make progress against those new or revised actions. For example, advocating for expanded implementation of DFO's Precautionary Approach for salmon management has been paused as DFO is working with ASF and other groups to establish a pilot approach to it's implementation on the Miramichi river. The pilot needs to be designed and launched so we can learn whether this is the best approach to support.

Below please find a short overview of progress for each of the four Goals of the "Blueprint" Strategic Plan, and a more detailed assessment of ASF's progress against planned activities.

Goal #1 – Ensure Fisheries are Sustainable

Good Progress continues to be made for this Goal overall.

The 2021 Greenland salmon fishing season included changes from previous years put in place by the Greenland government, specifically staggered opening dates from south to north Greenland and a separation of the overall quota between these areas. This was intended to ensure access to salmon for more northerly communities where salmon typically arrive later in the season. The latest figures available indicate a harvest of approximately 40 metric tonnes (MT). As outlined in the President's report, the Greenland agreement was paused this year due to uncertainties and delays with elections for KNAPK, the agreement's Greenland partner.

ASF continues to support the First Nations fishery for striped bass in the Miramichi and the fishery for spring 2021 employed four nets, up from two previously. An early spring resulted in the fish moving upstream very early, and only the tail end of the run was effectively fished. Autumn proved to be excellent for harvest and the traps were fished until late November 2021 and allowed the season's harvest to exceed 18,000 striped bass, the largest annual total since the fishery was re-opened. Planning for the spring 2022 fishery is well underway with preparations for deploying trap nets beginning before the end of April. Conditions are anticipated to be good for net deployments in advance of the spring run of striped bass into the fishery area.

ASF partnerships and relationships with indigenous groups and communities continues to grow. Our well-established partnerships in New Brunswick and Quebec on smallmouth bass eradication, the striped bass fishery, fish capture and tagging, and cold-water refugia programs continue to build connections between our organizations. Relationships are developing and deepening in Nova Scotia, Newfoundland and Labrador, and with additional communities in New Brunswick with the Wild Salmon Watersheds program a new focal point of discussion for partnership.

DFO is developing a pilot program on the Miramichi river for their Precautionary Approach (PA) to wild Atlantic salmon management and ASF is heavily involved in the development of that pilot. ASF hopes that the use of the PA will require additional locally available data on salmon populations that will catalyze expanded population assessment and monitoring sites across eastern Canada. However, this remains to be seen until the pilot is put in place and operating, and whether population level impacts from sources beyond angling are included in the pilot. Experience gained through involvement in the development of the pilot will determine ASF's level of support for the overall approach.

Goal #2 – Understand Salmon Mortality - Tracking Programs

Good Progress has been made overall for this Goal.

ASF is a major partner in the Environmental Studies Research Fund (ESRF) program which is expanding wild Atlantic salmon tracking programs across eastern Canada. ESRF tags and transmitters are being deployed on rivers where ASF traditionally captures fish for tagging studies including the Restigouche, Cascapedia, and Miramichi. The following chart outlines the target number of tags for deployment in 2022:

	<u>Restigouche</u>	<u>Cascapedia</u>	<u>Miramichi</u>	<u>Other</u>
ASF smolts	80	60	160	-
ESRF kelts PSAT	2	-	-	48
ESRF kelts acoustic	18	-	-	-

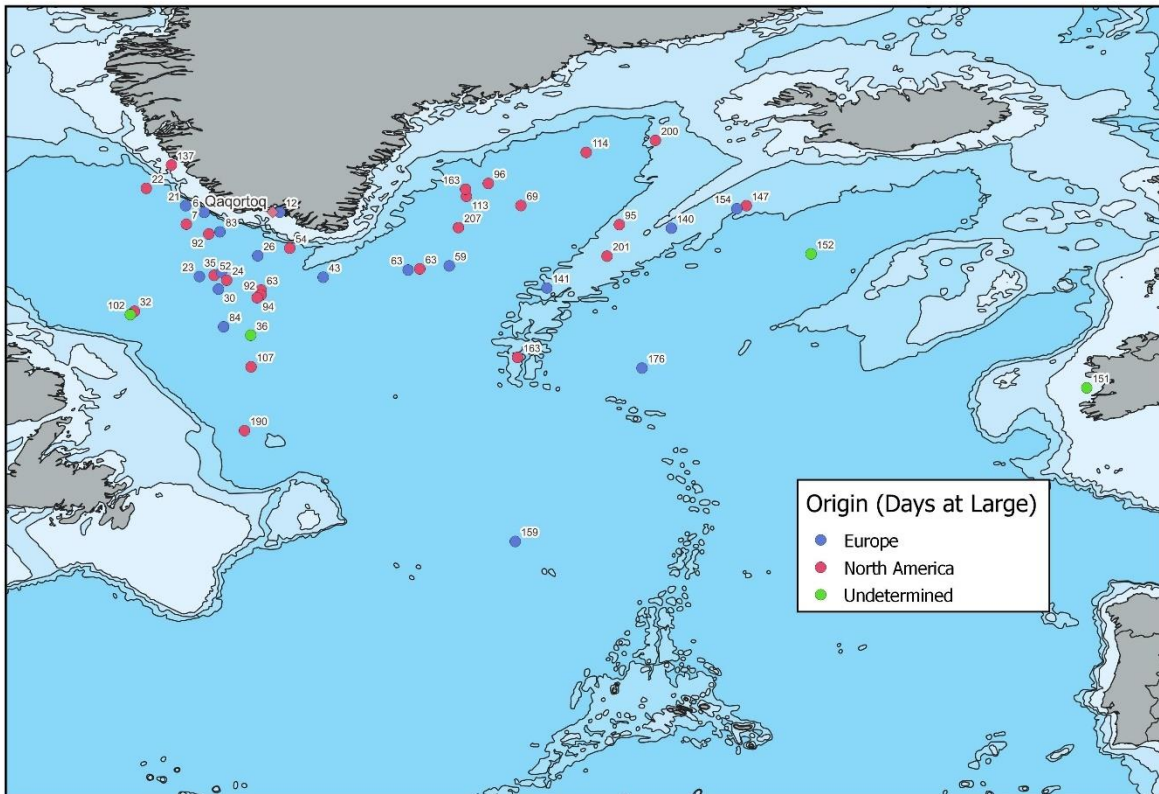
Additional salmon will be tagged as part of the ESRF program (Other) and include the following rivers: Clybyrn (NS), Hammond (NB), Margaree, (NS), Moisie (QC), St. Mary’s (NS), and York (QC). Specific rivers in NL have not been identified at the time of writing. Partners involved in the ASF smolt tagging included Miramichi Salmon Association, Anqotum Resource Management, GMRC (Restigouche), DFO, Cascapedia River Society, and Gespe’gewaq Mi’gmaq Resource Council.

ASF’s Research team has already been in the field capturing and instrumenting salmon as part of our involvement in the Environmental Studies Research Fund program headed by DFO, with kelts captured and tagged with both acoustic and satellite tags on the Margaree river in Nova Scotia. Kelts were captured on the Hammond river, a tributary of the Saint John, in New Brunswick but the two captured fish were in relatively poor condition and the decision was made not to tag the individuals. Tags not deployed on the Hammond river will be added to deployments in 2022 on other rivers as part of the program. Preparations are underway to deploy smolt wheels to capture smolts for both acoustic tagging and to enumerate smolts numbers (on the NW Miramichi). We anticipate the wheel on the NW Miramichi will be deployed during the week of May 2nd.

Following from our success in deploying 70 satellite tags on salmon at West Greenland in 2021 ASF is planning for the same number of deployments in 2022. Experience garnered from our field efforts in 2021 will hopefully ensure a smooth field operation for 2022 should we encounter any complications from Covid or related travel restrictions or limitations.

Data from satellite tags deployed at west Greenland in 2021 continues to transmit and a map showing preliminary (not finalised) latest locations for 22 April 2022 and continent of origin is presented below. “Days at Large” represents the number of days between tag deployment and when the tag pops off the fish, rises to the ocean surface, and transmits data through the satellite constellation.

2021 West Greenland Satellite Pop Locations to 22 April, 2022.



Goal #3 – Contain and Reduce Impacts of Open Net-Pen Aquaculture

Good progress has been made for this Goal.

As noted in the November 2021 Strategic Plan report, ASF has designed and started our Aquaculture Campaign based on four objectives:

1. DFO resolve its conflict of interest (industry promoter and regulator) by focusing the proposed federal aquaculture act exclusively on its core responsibility of environmental protection.
2. DFO take action to meet Canada's commitments to NASCO regarding the impacts of escapes and sea lice on wild Atlantic salmon.
3. DFO apply regulations and solutions consistently from coast to coast.
4. No further expansion of the ONP industry until its environmental impacts are adequately addressed.

The key message of the campaign is that Open net pen salmon aquaculture is having significant negative impacts on Canada's wild Atlantic salmon and their marine habitat and that Canada must take responsibility for these impacts and develop timely and effective solutions. The

campaign will ensure decision-makers accept the science surrounding ONP aquaculture and build a broad base of support across the conservation community to demand change.

John Burrows and Steve Sutton are leading ASF's response to the American Aquafarms massive salmon farm proposal for Frenchman Bay, Maine. Since last fall, ASF has been working to support local groups fighting the American Aquafarms semi-closed containment salmon farms proposed for Frenchman Bay in Maine. ASF helped to organize and improve communications between the local groups and brought them together with state, national, and international organizations. A substantial coalition was coalescing around opposition to salmon farms, and we were beginning to develop a public outreach and engagement campaign when the Maine Department of Marine Resources (DMR) terminated their site lease permitting process for the farms in the middle of April. Maine DMR's decision was based on the inability of American Aquafarms to provide the genetic and pathogen information for the strain of salmon eggs they wanted to use for the project, which were going to come from AquaBounty. Without the information required by state law to approve the strain, Maine DMR had no option but to deny the egg importation request. At the time of this writing, the company has not yet indicated whether they will continue to pursue the project or move on.

Goal #4 – Improve Freshwater Connectivity and Productivity

Good progress has been made for this Goal.

ASF is improving fish passage, particularly in Maine under our US Programs. This summer, construction for the Walton's Mill Dam Removal and Park Project in Farmington, Maine, will begin. ASF staff have been working on this project on Temple Stream since 2016 and, once complete, will restore access to more than 54 miles of high-quality spawning and rearing habitat on this tributary of the Sandy River in the Kennebec River watershed. This is the largest dam removal project that ASF has undertaken under the Maine Headwaters Project to date. ASF staff are also working to secure funding from various federal grant programs to support construction of several fish passage projects in the Penobscot in 2023 and to support feasibility and assessment work at various potential project sites.

Jon Carr is serving as one of our three expert witnesses in the Kennebec River ESA lawsuit against Brookfield. Late last fall, Jon worked with Heather Perry, John Burrows, and our legal counsel to prepare and file his affidavit for the lawsuit in federal court. Jon's affidavit focuses on the significance of the Kennebec in the recovery of Atlantic salmon in the U.S. and on the myriad negative impacts of hydropower dams and impoundments on Atlantic salmon. Jon has met with our legal counsel and also visited the four Kennebec dams this spring. Heather and John are reviewing and preparing the affidavits from Brookfield's two experts that critique the affidavits provided by Jon and our other experts and assisting with developing responses and rebuttal points.

Wild Salmon Watersheds (WSW) conceptual development has continued during winter 2021-22 headed by Geoff Giffin and now Kris Hunter. At the time of writing, we have largely negotiated a program charter agreement for two watersheds (NL and NS) and have a meeting scheduled to discuss indigenous involvement and agreement with a third (Pabineau First Nation, NB). We've carried out an internal analysis of prospective locations for a fourth pilot in Quebec and are working with staff at FQSA to finalize one or two sites and start discussions with the local watershed groups. A facilitation process and program is in development and should be developed to the point we can schedule initial facilitated sessions with our partnered groups before summer. A presentation is scheduled for the Board meeting on 12 May 2022.

ASF continues to engage with the Province of New Brunswick on the expansion of provincial protected areas from 4% to 10%. ASF's proposals to government included additional known cold-water sources across the province as part of the expanded protected areas. The government of New Brunswick continues to make announcements of new areas protected, and ASF continues to be pleased with the locations identified. You can find the maps of currently identified areas within New Brunswick on the following site:

https://www2.gnb.ca/content/gnb/en/departments/erd/promo/nature_legacy/involved.html

Scroll down the screen and click on the "View Map" button.

Work continues on the smallmouth bass eradication project on several crucial fronts: legal, enforcement, engagement, and planning and logistics. We received a legal opinion from the law firm in Saint John, NB that worked on our court injunction application in August 2021, regarding ability of the eradication crew to proceed with the project in the event protesters are present at project sites in 2022. Other legal options are also being considered. Our project working group has outlined our requirements for enforcement and we will need a decision in the coming days and weeks from those agencies on their commitments supporting the project. ASF and our partners continue to engage with representatives of the protesting Grandmothers group to provide information and explanation about the project and reasons for it. We remain hopeful that these efforts will contribute to reducing the chances of protesters derailing the project in 2022. All the while ASF continues to refine the planning and project management of the project adapting from lessons learned in 2021.

The cold-water refugia project partnership between ASF, indigenous, academic and eNGO organizations continues. The current program focusses on sites lower in the river system where enhancing refugia has the greatest benefits. Three sites have been completed so far (Wildcat Brook, McKenzie Brook, and Grey Rapids Brook), with five planned for construction in 2022 including Morse Brook (SW Miramichi), Butty Brook (Renous), Casey Springs (Renous) and Sutter Springs (SW Miramichi). The design work has been completed for these four sites. An additional site will also be completed in 2022. Surveys, designs, and construction are primarily funded through DFO's Nature Fund, with additional funding support from the Atlantic Salmon Conservation Foundation.

Appendix 1 – Assessment of 2018-19 Strategic Mileposts in Support of ASF Blueprint

A “stoplight” approach is being used to monitor and report on progress of the Blueprint:

- **Green** – On track; good progress being made consistent with plan
- **Yellow** – Some progress being made; needs attention to avoid falling behind planned targets
- **Red** – Little progress; requires focused effort to get back on planned track

The reporting structure below within each of the four goals in the Blueprint follows this example:

Blueprint Activity

Blueprint Outcome/Output

Milepost

Each Activity of the Strategic Plan (SP) is included in the assessment below. We gauged progress against each of the Outcomes / Outputs associated with the various Activities from the Strategic Plan (multi-year) by determining Mileposts for the 2020-21 ASF fiscal year (annual) that move us substantially toward our targets. Each Milepost was included in at least one of the Operations Departments (Regional Programs, Research and Environment, Communications, and Outreach and Engagement) workplans for 2020-21 and will be for 2021-22, unless otherwise indicated.

Goal #1 – Ensure Fisheries are Sustainable

- **Pursue and maintain conservation agreements for Greenland and Faroes commercial WAS fishery.**

Signed agreement to suspend commercial fisheries.

COMPLETED

- **Advocate to Canada, USA, and Greenland to set a low annual subsistence quota for Greenland through NASCO that is consistent with scientific advice (ICES), including reliable monitoring and reporting systems.**

Greenland implements an annual limit on their subsistence fishery and introduces effective monitoring/reporting of catch for the Greenland subsistence harvest.

Some Progress

- **ASF actively engages communities and fishers in Greenland in salmon research.**

Build sense of cooperation with other WAS conservation partners.

Good Progress

- **Establish and develop strong and productive working relationships with leading First Nations (FN) as partners in conservation.**

A well-established network of contacts in select FN communities and aboriginal groups throughout the regions through which ASF can regularly connect and share information;

Good Progress

FNs have the opportunity to showcase how they value the resource.

Some Progress

Invitations to attend meetings on WAS conservation as a trusted partner, including First Nations, DFO, and the Province of Quebec.

Good Progress

- **Increased engagement and direct involvement of FN in salmon research, including joint research projects that bring real benefits to FN communities.**

Develop a sense of partnership in defining and understanding salmon conservation issues of mutual interest through the application of both traditional knowledge and scientific methods of understanding.

Good Progress

Direct and meaningful inclusion of Indigenous people (e.g., placements, cooperative work and training opportunities) in ASF research and conservation activities.

Good Progress

- **Actively advocate for, where abundance permits and is agreeable by FN communities, alternative species (e.g., striped bass, snow crab, lobster) substitution for salmon in FN fisheries.**

Increasing FN harvest of alternate fish species with a corresponding decrease in salmon harvest.

Little Progress

Adjustment / Pivot: Continue to support FN harvests in other fisheries, but ASF cannot effectively advocate for corresponding decreases in FSC salmon fisheries.

- **Actively participate in DFO’s Working Group to develop implementation plans for the recently (2017) revised WAS Conservation Policy. These plans must respect new inputs available since the WASCP was first drafted in 2009 (MAC recommendations, DFO Forward Plan, Standing Committee recommendations and Minister’s response).**

A clearly defined policy and regionally based and focused implementation plans for conservation and restoration of WAS based on the Precautionary Approach.

COMPLETED

A single policy document with detailed implementation plans that will be presented to ASAC in spring 2019 and reviewed every two years going forward; number of ideas and suggestions adopted by Working Group

Little Progress

- **Advocate to and work with the appropriate management agencies to institute river-specific recreational angling through the Precautionary Approach (PA) framework in all WAS recreational fishery regions.**

Sustainable, abundance-based harvest levels and fishery management plans based on the Precautionary Approach;

Some Progress

Increased sustainability in other fisheries (i.e., First Nations, Greenland, SP+M).

Some Progress

Additional rivers and regions selected for use of Precautionary Approach in Gulf Region, as well as Maritimes and Newfoundland and Labrador.

Little Progress

Adjustment / Pivot: DFO has selected the Miramichi as a pilot site for establishing the PA. Until that project is completed and implemented (ASF is part of that working group with DFO) this outcome, and work in support of it, is paused.

- **Advocate for and participate as appropriate with management agencies to expand river-specific monitoring, stock assessment, in-season review(s) and fishery/harvest management.**

Abundance-based harvest levels (Precautionary Approach); Expand existing index river monitoring;

Some Progress

Increased accuracy and precision of assessments through new approaches, partnerships, and technologies;

Little Progress

New index rivers established in key/under-represented areas;

Little Progress

Improved catch reporting and statistics in all Provinces, including expansion of electronic systems

Little Progress

Adjustment / Pivot: DFO is limited at least by budget and will not on their own expand the number of index rivers or monitoring sites. Covid has resulted in DFO struggling to maintain their existing portfolio of sites. ASF will work through our partners and also the Wild Salmon Watersheds program to help achieve these outcomes.

Goal #2 – Understand Salmon Mortality - Tracking Programs

- **Expand tracking within GoSL, Newfoundland and Labrador, and Greenland, both in types and numbers of tags and receiver arrays / positions through ASF and partnered programs.**

Determine specific spatial distributions in the marine environment throughout their residency (i.e. from the time they leave freshwater to their return from Labrador Sea and Greenland); Determine migration success through defined stages of the marine migration.

Good Progress

- **Preparation and publication of peer-reviewed manuscripts and technical reports through in-house research staff and other partnerships; ensure circulation to Councils, affiliates, partners and other interested groups and availability of all materials on the ASF website.**

Peer-reviewed publications; presentations at conferences and symposia; internal / field report series established.

Some Progress

- **Analyze results from tracking programs with known patterns of oceanographic and environmental conditions.**

Determine why fish are detected where they are and when they are there. We do this by comparing/contrasting biotic and abiotic variables from locations where fish are and where fish aren't to infer what type of factors determine their marine distribution; Determine how annual variation in identified biotic and abiotic predictors of the marine distribution of Atlantic salmon covary with migration success through different migration stages.

Engage with various institutions to scope out next steps for linking ASF tracking data with physical and biological oceanographic features.

Good Progress

- **Advocate to the relevant management agencies in Canada and the USA, as well as NASCO to implement effective mitigation measures to protect and conserve WAS in coastal and marine ecosystems.**

Minimize unintended population-level impacts on WAS.

Seek out partnerships and R&D opportunities for novel technologies that will advance our understanding of spatial and temporal distribution of salmon in the marine environment.

Good Progress

Advising on policy development to conserve and protect wild Atlantic salmon.

Some Progress

Respond to ASF science needs. Conduct reviews and assessments, work with councils and affiliates, speaking engagements.

Some Progress

Goal #3 – Contain and Reduce Impacts of Open Net-Pen Salmon Aquaculture

- **Engage with appropriate partners to ensure ASF contributes to the potential development of a federal Aquaculture Act, and to the strengthening of the Fisheries Act and associated regulations and policies resulting in an appropriate legislative framework to better protect WAS from impacts of the salmon aquaculture industry.**

Any development of an Aquaculture Act contains provisions to protect WAS populations and focuses on industry best practices and strong regulation and enforcement.

Some Progress

Inclusion of protections from aquaculture industry in Fisheries Act legislation and associated regulations, policies and codes of practice.

Good Progress

- **Advocate for the creation of ONP salmon aquaculture-free zones based on current distribution of aquaculture sites, areas suitable for industry expansion, and WAS rivers; integrate with efforts to establish protected WAS watersheds.**

Agreement and support from appropriate management authorities on concept of aquaculture free zones.

Little Progress

Adjustment / Pivot: ASF will continue to work to eliminate impacts of ONP aquaculture through our advocacy and legal options as necessary, but we should not continue expending any money and time to establish aquaculture-free zones in collaboration with provincial governments in Atlantic Canada. Involvement with the GSFR alliance will be valuable to ASF's open net pen salmon farming campaign, the development of which is well underway.

Good Progress

Goal #4 – Improve Freshwater Connectivity and Productivity

- **Advocate for and support establishment of wild WAS watersheds where WAS populations can flourish.**

Identify candidate watersheds; Identify stakeholders and prepare communication plan.

Good Progress

Introduce concept to stakeholders; Determine levels of support and main challenges; Collaborate with stakeholders to achieve as many common targets as possible.

Good Progress

- **Work in coalitions to address the impacts of hydropower and non-hydropower dams through removals, better upstream and downstream fish passes, and improved policy, regulations and license requirements that improve flows for fish.**

Further progress to eliminate barriers to fish passage, particularly in N.E. USA;

Good Progress

Update inventory of barriers to fish passage in Atlantic Canada and Quebec, coordinated with Councils and local affiliates.

Little Progress

Adjustment / Pivot: This is a huge effort to complete and is currently not a high priority. ASF and partners will work to remove any barriers, as necessary.

Improved access to river and lake habitats;

Good Progress

Increased knowledge of barriers limiting freshwater production of WAS;

Good Progress

Increased production potential of WAS in high quality habitat where fish passage is improved;

Good Progress

Increased resilience of watersheds to climate change;

Good Progress

Increased populations of other species salmon depend on such as river herring and shad.

Good Progress

- **Advocate to the appropriate agencies for stricter licensing processes and consultations during planning and design phases of new hydro dams.**

Intervention in license, legal, and regulatory procedures.

Good Progress

ASF, Councils, and affiliates play key collaborative role in all discussions regarding new licensing for proposed and existing hydro dams, ensuring that the needs of functional fish passage facilities for WAS are a top priority to be addressed by proponents and regulators.

Good Progress

- **Further develop and promote the content in ASF's WAS Freshwater Recovery Strategy to make it more consumable by affiliates, watershed and FN groups conducting habitat restoration programs.**

Materials and documentation readily available and updated as needed on ASF's website to assist and guide groups that are planning WAS restoration work in their watershed(s); Meetings with, presentations to Councils, Affiliates and other conservation groups to highlight value of the Strategy; Expert advice given to groups and collaborative efforts to restore and improve freshwater productivity based on the tenets of the Strategy.

Some Progress

WAS freshwater conservation and restoration activities follow guidance provided by the Strategy.

Good Progress

- **Encourage and actively support identifying land-use issues in all regions that impact WAS and use results to guide focused, collaborative regional advocacy and restoration efforts.**

Regional advocacy plans to address prioritized land-use impacts on WAS.

Little Progress

Adjustment / Pivot: Developing these plans is currently not a high priority to complete. ASF and partners will continue to work and solve land use impacts on WAS as they become known to us. Wild Salmon Watersheds will include land use issues in those watersheds that become part of the network.

- **Support and undertake baseline requirements, help to secure funding sources, and ensure all permitting is completed for smallmouth bass (SMB) eradication from Miramichi Lake by 2019, and similarly for any other invasive species threats that arise.**

Proponent is identified for eradication program;

COMPLETED

Permits obtained, consultations undertaken, funding secured;

Good Progress

Physical infrastructure for eradication activities in place.

COMPLETED

SMB eradication completed by September 2020.

NOT POSSIBLE