



# Upstream

Spring 2014

A Commitment by Nature to Conservation



## President's Creel

2013 has brought both new and old challenges to the forefront for the Nova Scotia Salmon Association (NSSA). Aquaculture has been in the news and on our plates throughout the year. As bleak as the situation may seem, we must remain optimistic. Society is becoming aware of the negative impacts associated with open-pen aquaculture, and I believe that the tide will eventually turn in our favour.

Another longstanding but not forgotten issue that resurfaced is acid rain. Some rivers in the acid affected Southern Uplands appear to have decent pH yet seem to suffer the same fate as those rivers with lower pH. Early information seems to point to aluminum as a possible culprit. Our own Bob Rutherford is focusing his research on the aluminum content within these acid rain affected rivers. Could it be the smoking gun? Come to the AGM on March 22 to hear more.

For the moment, we must face and deal with the fact that the future of wild Atlantic salmon in the Bay of Fundy and in the Southern Uplands of Nova Scotia rivers is bleak. Inner Bay of Fundy salmon stocks have been

listed as endangered for several years now without any real recovery plan implemented to date. Eastern Cape Breton and Southern Upland wild Atlantic salmon populations are presently going through the Species at Risk Act (SARA) consultation process.

The NSSA's response to the SARA consultation questionnaire for the Southern Upland stock is posted on the NSSA website ([www.nssa.ca](http://www.nssa.ca)) and we'll soon be posting our comments for the East Cape Breton population as well. To add your voice to the consultation process please submit your comments before March 24, 2014 at: [www.sararegistry.gc.ca/involved/consultation/default\\_e.cfm](http://www.sararegistry.gc.ca/involved/consultation/default_e.cfm)

On the brighter side, the salmon stock on the Northumberland Strait rivers in the Gulf of St Lawrence, from the River Philip near the New Brunswick border to the Aspy River at the tip of Cape Breton Island and many rivers in between, seem to be holding their own and doing quite well.

Other environmental concerns like fracking and biomass harvesting are now being discussed and their potential impacts

need to be better understood by the NSSA.

In the past, provincial and federal governments seem to have been content with managing wild salmon stocks (here and in British Columbia) to extinction. We now have a new government in Nova Scotia and a federal election is coming soon. The pendulum swings and we must continue our efforts to make it swing the correct way.

The NSSA deals with all of these issues and more. We struggle! We don't have enough volunteers to adequately address all of the issues that are affecting wild Atlantic salmon. We need new blood, new ideas, and new voices. If you enjoy angling for wild Atlantic salmon in Nova Scotia you should be concerned about their future. Please consider volunteering your skills, your time, and your opinions to one of NSSA's many working committees. There has never been a more important time for you to become involved in the conservation of wild Atlantic salmon.

Yours in conservation,  
George Ferguson  
President NSSA

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### READ ONLINE:

[www.nssalmon.ca](http://www.nssalmon.ca)

## A Brief History of Finfish Aquaculture in the Maritimes

The first commercial salmon aquaculture farm was a small, land-based operation in Nova Scotia in 1972. This operation failed due to lack of financing. The next attempt was in 1978 with an experimental, open-pen operation in southwest New Brunswick.

1984 saw the opening of five commercial marine operations. The industry, until this time, was limited in expansion because it depended on the Department of Fisheries and Oceans (DFO) to provide salmon smolts. Starting in 1985 the industry established its own hatchery for growing smolts. By 1992 there were 56 farms in operation.

In the early years, recreational fishermen applauded the industry as aquaculture was thought to be the saviour of wild salmon.

1992 marked the first year of the Inner Bay of Fundy Recovery Team for Wild Atlantic Salmon as this population plummeted from 40,000 salmon in the 1980s to less than 200. While aquaculture salmon farms increased, wild Atlantic salmon populations decreased during the same time frame.

From the 1990s and forward to 2014, the industry had problems with escapes (230,000 in 2010), sea lice, disease, and bottom fouling. Infectious salmon anemia (ISA)

outbreaks began in New Brunswick and have carried over to Nova Scotia and Newfoundland. Government has given millions of tax payers' money to industry in compensation for millions of diseased fish.

In the spring of 2010 the federal and provincial governments allowed industry to open two separate open-pen salmon farms in St. Mary's Bay. These governments stated that there would be minimal negative impact to other species in the area. The approvals were made despite DFO Science stating that this area was a staging point for three endangered populations of wild Atlantic salmon (Inner Bay of Fundy population, Outer Bay of Fundy population, and Southern Upland population). More farms were then opened in Shelburne Harbour, Port Mouton, Jordan Bay and Coffin Island. Industry also applied for three separate sites on the Eastern Shore.

The NSSA has been addressing the issue of aquaculture in the Bay of Fundy since the first meeting of the Inner Bay of Fundy Recovery Team in 1992. In spring of 2010, the NSSA became increasingly concerned about the new sites in Saint Mary's Bay, as farms along the south shore were opened, and with the application for the three sites on the Eastern Shore.

It should be noted that there have

been ISA outbreaks in Shelburne Harbour, Coffin Island and the south coast of Newfoundland within the past year and a half.

Since 2010 - with the sharp increase in new sites and more proposed - salmon, conservation, and community groups have asked our provincial government to place a moratorium on marine open-pen salmon farms. For over two and a half years this request was refused until mounting community pressure caused the Province to suspend further aquaculture operations and to appoint a two-person panel to produce new aquaculture regulations for Nova Scotia. This panel was to be assisted by an advisory committee of eight individuals including representation by the NSSA.

The process began in May of 2013, has a multi-pronged approach, and consists of:

1. 42 community meetings in 21 different provincial areas in order to seek community engagement. These meetings took place between July 15 and September 9, 2013.
2. The Panel and Advisory Committee meets monthly and continue to meet until May 2014.
3. A Round Table committee of 20 individuals with diverse backgrounds meets monthly for 2-day meetings.

*The Nova Scotia Salmon Association, Atlantic Salmon Federation, and other councils support the development of land-based closed-containment aquaculture. The closer this technology is examined, the more convincing the case is for it being the future of salmon farming. In fact, some commercial operations are gearing up now. – See more at:*

[www.asf.ca/landbased-aquaculture.html](http://www.asf.ca/landbased-aquaculture.html)

## Nova Scotia Lieutenant Governor's Award for Conservation

### *Finfish Aquaculture (continued)*

The role of this committee is to recommend their findings to the two-person panel. This process will continue until April 2014.

4. The two-person panel has implemented specific targeted meetings for specific organizations and agencies.

5. A pool of scientists is available for discussion, advice, and for identifying scientific knowledge gaps in regards to the aquaculture industry. Targeted meetings with the scientific community are centered around pollution, effects on wild salmon, and effects on other marine species. To date one meeting has been held and two others are scheduled.

This entire process should end in mid-April of 2014 after which the two-person panel will draft regulations for the aquaculture industry. This draft will be available for reaction from the various committees and the general public. The two-person panel will then finalize its findings and present its proposed regulations regarding the Nova Scotia aquaculture industry to the provincial government. This should take place by late fall of 2014.

The entire process has been open so that any individual or organization can present its comments to the panel. Proceedings of all activities can be found on the aquaculture panel website ([www.aquaculturereview.ca](http://www.aquaculturereview.ca)).

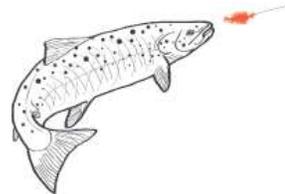
Carl Purcell

Past President, NSSA  
Member of the Regulatory Review  
Advisory Committee and Stakeholders  
Roundtable



*C Purcell (left) and his Honour, Brigadier-General, The Honourable, JJ Grant.*

On April 11, 2013, his Honour, Brigadier-General, The Honourable, JJ Grant acknowledged Carl Purcell's long-standing and ongoing shoulder-to-the-grindstone efforts on behalf of Atlantic salmon by presenting him with the 2013 Nova Scotia Lieutenant Governor's Award for Conservation at the 24<sup>th</sup> Annual ASF/NSSA Halifax Dinner.



### 25<sup>th</sup> Annual NSSA/ASF Halifax Dinner

Thursday, April 10, Casino Nova Scotia, Halifax

6:00 pm Reception & Silent Auction

7:30 pm Dinner & Live Auction

James C. Lawley -25th Annual Halifax Dinner Honouree

The Atlantic Salmon Federation and the Nova Scotia Salmon

Association will be paying special tribute to Jim for his steadfast commitment to both organizations. Jim has been the driving force behind this Annual Fundraiser acting as Chairman since its inception 25 years ago.

**For more information and to RSVP contact:**

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Tel. 902-453-2121

## West River Sheet Harbour Project Update

Here we sit, some 18 months out from the end of the 10 year Acid Mitigation Project. I remember the trepidation, anxiety, and hope that filled the air as the first shot of lime filled the tea-stained water of the West River, Sheet Harbour (WRSH) in September 2005. As North America's first (and currently only) lime doser operating on an Atlantic salmon river, the project has been the fruition of endless work; from project planners to fundraisers and countless other volunteers generously completing any task that was needed.

There is a lot to be proud of, and a time to celebrate will soon be here. First, however, there is some important work to finish. The two most pressing issues that loom on the horizon are: the fate of the project at the end of the 10 year commitment, and the final report describing the ecological impacts of the project. First, the fate of the project is very important and has worried the Board of Directors of the NSSA for some time. They have worked diligently to explore avenues for someone to assume ownership of the project, and I'm sure it will be a topic for

discussion over the next few months. There is a lot of value in a project with ten years of history, and letting the river revert to its acidified state should be the very last option on the table.

The completion of monitoring and writing of a final report will be the issue I focus on over the next year and a half; it will be both challenging and important.

The original objectives for the WRSH Acid Mitigation Project as outlined by the Acid Rain Mitigation Committee (i.e., NSSA, Environment Canada, DFO, NS Power, NS Fisheries and Aquaculture) were as follows:

1. Increase the likelihood of persistence for Atlantic salmon in the WRSH (i.e., stave off extirpation of the salmon population).
2. Increase freshwater salmon productivity in WRSH.
3. Monitor the efficacy of lime dosing and associated biological response.
4. Demonstrate the efficacy of using lime dosing as part of a larger conservation effort.

Our operational goal was to buffer the

river to a pH of 5.5 throughout the main branch of the river.

Any project of this scale is bound to encounter difficulties, and we have had ours. Precision liming of a wild, acidified river is not easy. None-the-less, at this point in the game I feel confident that we have had a positive effect on the Atlantic salmon population of the West River. If we hang our hats on the last seven years of smolt estimates, we can make a pretty good case that this population is unlike other monitored populations within Nova Scotia's Southern Uplands – growing. With annual smolt production rising from approximately 3500 to over 11 000, the lime doser and the larger project, that includes some supportive rearing, has undoubtedly had a positive effect.

Eddie Halfyard

Project Biologist and PhD Candidate,  
Biology Department, Dalhousie  
University



*In addition to monitoring smolt production, juvenile salmon densities have also been monitored at seven sites throughout the West River watershed.*

*Pictured left to right: volunteers Heather Negus, James Gaudet, and Eddie Halfyard.*



## Community Action – Restoring Nova Scotia’s Waterways

The NSSA’s partnership with the Nova Scotia Liquor Corporation (NSLC) is entering its fifth year, and we are thrilled with the ways in which the NSLC is helping to improve and expand our capacity to support community groups restoring and protecting our waterways.

Coupled with the significant contribution of Nova Scotia anglers through the Nova Scotia Sportfish Habitat Fund, the NSLC’s annual pledge of \$100,000 allows us to provide hands-on training, technical support, and project funding for community groups that restore and protect their local waterways.

Stream habitat restoration and improved fish passage through culvert assessments, remediation, repair, and blockage removals, are making our rivers and streams more livable for Atlantic salmon, trout, and other aquatic species.



*Ten groups participated in culvert assessment training sessions held at four locations across the province.*

In 2013, NSLC Adopt A Stream supported the projects of 21 community groups. The focus of most

projects is on restoring the productivity of degraded stream and riparian habitat. This past year crews worked on 63 watercourses to improve 111,600 m<sup>2</sup> of spawning, rearing, and migration habitat, and planted 2,225 streamside trees.



*NSLC River Days were held in August, linking community groups with NSLC employees to volunteer on projects such as this one on the Little Sackville River.*

Over the past few years, NSLC Adopt A Stream has also been putting more resources towards assessing fish passage and improving habitat connectivity in watersheds. To that end, we collaborated with the Clean Annapolis River Project in delivering a program to provide community groups with training on how to assess culverts for fish passage, survey equipment loans, data analysis, and prioritization. Over the summer, 66 culverts were assessed and 22 remediation actions taken, resulting in re-established fish passage to 88.5 km of stream.

The assessment process locates culverts that require blockage removal, as well as those with more complicated problems related to

outflow drops, water velocity, or shallow flows. Since culvert replacement often is not a realistic option, there’s lots of interest in finding ways to retrofit culverts to provide fish passage. We are actively supporting innovation in the development of flexible, low-cost fish passage solutions that could be implemented in Nova Scotia.



*In July, habitat restoration teams gathered in Pictou County for training in digger log installation, a technique commonly used to reestablish pool and riffle sequencing in cobble-gravel streams. Similar sessions were held in Mabou and Dartmouth.*

The field season will soon be upon us. A suite of great habitat projects has been proposed. Again this year we plan to provide hands-on training in restoration methods and structure installation as well as culvert assessments. Watch our website ([www.adoptastream.ca](http://www.adoptastream.ca)) for upcoming workshops and events!

Amy Weston, NSLC Adopt A Stream Program Manager

[amyweston@adoptastream.ca](mailto:amyweston@adoptastream.ca)

## Checking Out Nova Scotia Fishways and Baffled Culverts

Habitat connectivity is a key part of watershed based restoration. Within Nova Scotia's watersheds, culverts and dams are some of the more significant forces contributing to aquatic habitat fragmentation. But in some cases the very devices installed to provide access at these structures – fishways and baffled culverts – end up impeding fish passage.



*An example of a site where remediation is planned for this summer. This culvert will be retrofitted with an additional baffle and a chute into the plunge pool. Button Brook, Annapolis Co.*

In mid-October, the Nova Scotia Salmon Association's NSLC Adopt A Stream program launched a new initiative to ensure migrating salmon and other fish species have better access to the habitats they require. The NSSA received funding through the new federal Recreational Fisheries Conservation Partnerships Program. Over the course of the project, NSSA

field technicians will be locating, assessing, and where possible, clearing blockages from as many as 150 fishways and more than 100 baffled culverts. The purpose of this project is to provide a better understanding of the status and condition of Nova Scotia's baffled culverts and fishways as well as to locate and remediate sites that are contributing to habitat fragmentation. So far over 150 sites have been visited with more planned for this field season.



*NSLC Adopt A Stream Technician Lauryn LeBlanc helping to place debris that had been removed from the fishway onto the bank of Davis Lake, Colchester Co.*

In addition to the assessments that were made while on site, 18 debris jams were removed to restore fish passage immediately. Several larger debris jams have also been identified and plans are underway to work with our community partners to have them removed this summer.

During the assessments many sites were identified that require more involved remediation. Ten of these sites have been selected for remediation. We are currently developing work plans to correct fish passage at these sites. NSLC Adopt A Stream plans to collaborate with community partners and structure

owners to improve fish passage at these locations.



*When restoration of the culvert on Button Brook baffled is completed it should resemble this project that was completed by the Cornwallis Headwaters Society this past year.*

This project is providing a better understanding of the current condition of baffled culverts and fish ways in Nova Scotia. With the further assessments and restoration of these sites we expect to ensure more of these structures do what they were intended – provide clear passage to fish.

Will Daniels

Field Technician, NSLC Adopt A Stream

## Assisting the spring salmon run on the Cheticamp River: An environmental mitigation project

The Cheticamp River Salmon Association (CRSA), in cooperation with Parks Canada, has a plan to improve fish passage on the lower section of the Cheticamp River. In low water conditions, these wide, shallow areas create significant barriers for migrating fish. While low water conditions were extremely rare during the spring salmon run in the past, the current trend of warmer winters and drier springs with earlier and less snow runoff, combined with less rainfall, contribute to lower water levels during the crucial month of June. These conditions prevailed in 2012 and resulted in an aborted spring salmon run. Without intervention, these human induced environmental conditions will continue to negatively impact Atlantic salmon and other migrating fish and this important spring salmon run and the recreational fishery that it supports may eventually be lost.

Restoration work on the Cheticamp River is particularly important as the river has one of only two healthy spring salmon runs left in Nova Scotia (the other is the North River, Victoria

County). The CRSA and Parks Canada have agreed to join forces and work together on a project that will address the problems that Atlantic salmon face during this important spring migration.



*A view of the over-widened lower Cheticamp River looking downstream towards the Cabot Trail Bridge. In low water conditions, these wide, shallow areas create significant problems for migrating fish.*

The restoration project will focus on improving fish passage on the lower river, in a section where the main channel has become severely over-widened. The area of concern is along the river directly above and below the Cabot Trail Bridge (see photo left).

This stretch of river is easily accessible, making it a candidate area for restoration. Some portions of the lower river have been negatively impacted by human activities, including past logging (pre-formation of the Park) and poor bridge placement and design.

In order to encourage the main channel to narrow and deepen back to historical width and depth, the project proposal calls for the installation of a number of in-stream structures. In particular, a series of large rock retarding bars (or groynes) will be installed through the over-widened sites, projecting from the banks and directing flow toward the centre of the channel (see photos below). There are five or six similar areas on the lower river and the CRSA hopes to continue to work with Parks Canada in the future to identify and restore those impacted areas.

R n  Aucoin and Jillian Baker

Cheticamp River Salmon Association



*Diagrams showing approximate locations and orientations of the proposed in-stream structures at the two work sites. Aerial view of site above Cabot Trail bridge (left) and aerial view of site below Cabot Trail bridge (right).*

## Fate of the Mersey Biodiversity Facility

On May 22, 2012, we attended the four day Recovery Plan Assessment Conference for Southern Upland Atlantic salmon held at the Bedford Institute for Oceanography, DFO. Alain Vézina, Regional Director of Science, Maritimes Region (DFO), addressed the group on the 1<sup>st</sup> day. He advised that due to budget cuts, the Mersey Biodiversity Facility would be shut down. Other DFO facilities would fill the void, and recovery support for the endangered Atlantic whitefish held at Mersey would stop. Vézina stated that Science Branch staff at DFO Halifax had not been previously consulted by Ottawa.

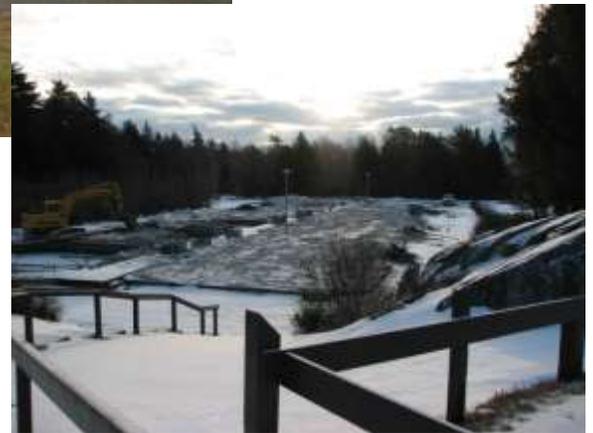
Knowing the future potential contribution of Mersey to support the recovery of salmon in the Southern Uplands and the Inner Bay of Fundy, we were baffled. The Whitefish Recovery Team was blind-sided by this announcement, and has been unable to provide whitefish population support since the facility has been shut down.

We soon pressured Ottawa through correspondence and our elected MPs to have them reconsider this poorly conceived decision. What we did not know at that time, was how much DFO and NS Power actually wanted to destroy Mersey. Fisheries Minister Ashfield later responded with the standard DFO denial letter.

A number of watershed and conservation groups formed a coalition and registered the Mersey Biodiversity Facility Supporters Society (MBFSS) in April 2013. The goal was to obtain DFO permission to operate the Mersey Facility and resume salmon and whitefish population support. Both NSSA and ASF support was obtained.



*The Mersey Biodiversity Facility before (above) and now (right).*



Minister Gail Shea was contacted, and DFO Ottawa appeared supportive from late summer until early fall, then communication from Ottawa basically died. The Minister was not prepared to change the destruction focus of DFO Halifax.

Queens County Fish and Game Association, through 10 projects in the 1980s and 90s, accessed \$1.5 million to upgrade and triple Mersey facility fish production capacity. NSSA partnered on the 1<sup>st</sup> project, with Carl Purcell and myself being the signing officers. DFO has spent almost two million dollars since 2002 to fully modernize this "world class" facility. Its replacement cost is estimated at \$14 million. DFO operates 26 hatcheries in British Columbia, and none have been closed within the last 20 years.

The DFO facility at Coldbrook is too small to even partially meet the need created by the Mersey closure, with its limited cold well water issues. As recently as February 7, 2014, DFO has advised that the capacity to support additional salmon programs at Coldbrook in 2014 will be limited to 30 adults.

The land owner, NS Power was approached by the MBFSS during this process, which told the Society to talk to DFO about closure and operating the facility. DFO told the MBFSS to talk to NS Power. The Society was constantly bounced back and forth, making progress very slow.

Fish applications were submitted to DFO for each river to be supported. Eventually, all were rejected by DFO, so revised applications were submitted

in December 2013. No approval or rejection decision was received from DFO on these critical approvals. It seems that final destruction of Mersey is the answer.

Many remaining Mersey assets were tendered out for destruction. Hundreds of thousands of dollars worth of nearly new equipment was smashed by excavators and hauled away. And, in early February 2014, hundreds of loads of gravel were placed in the 36 large rearing ponds. Deep financial pockets would be required to restore ponds to a usable condition.

DFO is blaming NS Power for requiring destruction, and NS Power is stating that it was a DFO decision. The Society was caught in the middle of what now appears to be a successful struggle by both parties to destroy the facility. During hatchery divestiture efforts in 1997, DFO worked hard to find a new operator. Times do change!

Volunteers involved in this effort are very disappointed with the unprofessional manner in which both DFO and NS Power have treated them.

The Minister of Fisheries will be making a decision on the Endangered listing of Atlantic salmon in the Southern Uplands of Nova Scotia this spring, and if a Recovery Plan will be required. We wonder if salmon recovery is now possible with the destruction of Mersey, and if DFO really has their heart in the future of restoring salmon populations. Anglers need to have hope that DFO will soon start doing its job.

David Dagley, Secretary

Queens County Fish and Game Association

## Atlantic Salmon Forum and Workshop

March 20, 2014, 10:00 am – 3:00 pm

Wandlyn Inn, Exit 3, Trans-Canada Highway 104, Amherst, NS

To register: [nairn@fundymodelforest.net](mailto:nairn@fundymodelforest.net) or

Tel: 506-432-7575

### Meeting topics:

- Current science
- An opportunity to network with individuals from organizations working in NS, PEI, and NB
- Full agenda to follow



*ECO EVENT is held annually in April to support the NSLC Adopt A Stream program. In-store displays and product promotions raise money and awareness for the program and also highlight local community groups with signs like this one! Global Maritimes will be airing NSLC Adopt A Stream ads and public service announcements.*



## Saving Wild Atlantic Salmon From Rivers to Sea

ASF has been busy throughout the North Atlantic this year and we were at the forefront of a great conservation story. The removal of the Veazie Dam on Maine's Penobscot River began in July to help restore access to 1,000 miles of spawning and rearing habitat for Atlantic salmon and other sea run fish. The Penobscot River, once famous for providing the Presidential salmon, now flows freely to the sea for the first time in over 150 years.



*Veazie dam removal on the Penobscot River, ME.*

Accomplishments by ASF and our affiliates that restore habitat, such as acid rain mitigation in Nova Scotia, are crucial, as wild Atlantic salmon populations across North America are under constant threat. Returns on some of our most revered salmon rivers dropped unexpectedly in 2012 following two excellent years, reminding us of the need for continued vigilance to ensure the future of wild Atlantic salmon. The 2013 season has been much improved with good water levels for the most part, more salmon and good fishing on the Margaree, Cheticamp and Northumberland Strait rivers. However salmon populations in rivers of the Southern Uplands area continue to be depressed. For example, while the run to the Lahave River improved from 2012, it amounted to only 185 fish.

To inform and guide these efforts, ASF

continues to invest in targeted research that contributes to salmon restoration. Our internationally-recognized smolt and kelt tracking programs are providing new insights into the causes of salmon mortality at sea. This year we continued our tracking on the Grand Cascapedia, Restigouche and the Miramichi rivers. This research is leading to a better understanding of salmon migrations and their interactions with other species including predators such as striped bass, seals, and cormorants. Understanding these interactions is one of the keys to developing effective conservation and management plans.

We also inform and influence decisions that affect Atlantic salmon survival through our participation and leadership in the North Atlantic Salmon Conservation Organization (NASCO). At meetings held in Ireland earlier this year, we advocated for continued suspension of Greenland's commercial salmon fishery. NASCO's failure to stop an escalating harvest that now includes sales to factories could result in significant losses to the wild salmon populations of North America, including many rivers in Nova Scotia. ASF is working with the North Atlantic Salmon Fund, the Canadian and US governments and Greenland's fishermen towards an agreement that will conserve salmon while respecting Greenland's international rights.

Closer to home, we are working hard to improve the sustainability of the salmon aquaculture industry, which under its current practises, poses serious threats to wild Atlantic salmon. We have been actively involved in a Clean Up Salmon Farming campaign in Nova Scotia that aims to inform the public of the threats posed by the salmon farming industry to wild fish. The campaign includes billboards, full page ads in the Chronicle Herald, and social media, including Facebook. We have also invested in the research and

development of a sustainable alternative: closed containment aquaculture in cooperation with the Conservation Fund Freshwater Institute. Visit [www.asf.ca](http://www.asf.ca) to follow our progress on the aquaculture issue and comment on our Facebook postings.

ASF continues to work with First Nations organizations when the opportunities arise and projects like tree planting to help restore watersheds, smolt counting on the Middle River and the development of educational materials are being accomplished.

Last, but certainly not least, please get involved in the aquaculture review taking place in Nova Scotia. This is your chance to put pressure on the Nova Scotia government to enact legislation to ensure that Atlantic salmon are farmed in an environmentally-sustainable manner. Follow this progress and comment by visiting [www.aquaculturereview.ca](http://www.aquaculturereview.ca).

Lewis Hinks

ASF Program Director for Nova Scotia

For more information on this and other issues contact Lewis Hinks at 902-275-3407 or [lhinks@auracom.com](mailto:lhinks@auracom.com)



## River Rangers and Fish Friends: A history

### *The SRA's commitment to educating its community's children*

By 1993, the Sackville Rivers Association (SRA) was making good progress in the restoration and protection of the Sackville River and its watershed. The SRA recognized that a long-term strategy, based on educating the public was needed.

The River Rangers Program was introduced to schools at the Grades 4, 5, and 6 levels in the Bedford/Sackville area as a way of educating children and instilling a sense of stewardship towards the Sackville River.

The key individuals behind the creation of River Rangers were Beth Lenentine and Richard Van Ingen (SRA employees), Richard Peckham (SRA volunteer), and Surjit Verma (Halifax County School Board). Nova Scotia Power Inc. was an early supporter of this program as well.

From September to early November, aquariums hosting many of the fish species of the Sackville River became a focal point for instruction in the classrooms. Students learned what the fish needed for survival and on field trips to the river near the school, students saw which species lived in their river and participated in learning stations focused on aquatic insects, water quality testing, and habitat assessment. A manual with essential information and activities was developed for use in the classroom.

Around the same time as River Rangers was started, the Atlantic Salmon Federation launched its own educational program – Fish Friends. A more classroom-based program focused on Atlantic salmon, participating classes were provided with insulated aquariums and a

refrigerating unit to keep water around 4 °C. In late January or early February, each aquarium received about 300 eyed (fertilized) salmon eggs from brood stock that had been collected from the Sackville River. Students observed the salmon from egg through to fry stages, at which time they would release their small salmon at various points along the Sackville River.



*River Rangers in the field.*



*Fish Friends in the classroom.*

Not wanting to leave the River Rangers tanks idle after November, the SRA offered the Fish Friends program to the same (and additional) classes that had been involved in River Rangers. With support from ASF and the Department of Fisheries and Oceans, Fish Friends was introduced to these classes.

While ASF found it necessary to drop

its ongoing support of Fish Friends in the fall of 2011, the program continues in many schools through the efforts of individual volunteers and a few organizations such as SRA.

Over the first 20-year period of operation, River Rangers and Fish Friends typically involved 12-21 classes per year (350-500 students) for well over 6,000 students, chaperones and teachers in total.

It was also recognized that the level of commitment that SRA required to continue to support the programs at a high standard also required the involvement of a full-time Education Coordinator to be responsible for the smooth operation and interacting with all classes involved under SRA, so that all classes enjoy a consistently high standard of support.

Since 1997, SRA has had two retired teachers take on the programs, (Ernie Hill and Walter Scott) in turn. The workload has steadily increased along with the commitment of energy and time required. Both programs draw enthusiastic praise from students, teachers, and parents. Every year, demand exceeds the ability of the SRA to fund all interested classes.

Over the last 10 years, funding has become a critical concern. Each program cost about \$15,000 for a total yearly cost of \$30,000. SRA has found it harder and harder to get the funding needed each year. This may be the final Fish Friends Program for SRA as a new Education Coordinator is required, and finding a successor for this position is as critical as the overall funding issue.

*Continued on page 12.*

*River Rangers (continued from page 11)*

River Rangers and Fish Friends, as supported by the SRA, provides an amazing opportunity for elementary students in the Sackville, Bedford, and Halifax areas to experience, hands-on, the natural history and environment near where they live.

The future of these students will be all the poorer should River Rangers and Fish Friends be lost to them.

Walter Regan

President, Sackville Rivers Association

### Nova Scotia Salmon Association

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[www.nssalmon.ca](http://www.nssalmon.ca)

#### Upstream editorial team:

R n  Aucoin, Amy Weston,  
Katharine Mott, and Susan Heaslip.

### Fun and Fundraising - Support Your Local Associations Upcoming Dinners and Auctions!

#### 25<sup>th</sup> Annual NSSA/ASF Halifax Dinner

Thursday, April 10 – Casino Nova Scotia, Halifax  
Contact: Jim Lawley, [hfxsalmondinner@gmail.com](mailto:hfxsalmondinner@gmail.com)

#### Cobequid Salmon Association – Dinner and Auction

Friday, April 4 – Jenkins Hall, Dalhousie University Agricultural Campus (NSAC), Truro  
Contact: Bill Yarn, [billyarn@live.ca](mailto:billyarn@live.ca), 902-895-2132

#### Sackville Rivers Association – Dinner and Auction

Saturday, September 13 – Sackville Legion, Sackville  
Contact: [sackvillerrivers@ns.sympatico.ca](mailto:sackvillerrivers@ns.sympatico.ca), 902-865-9238

#### Margaree Salmon Association – Dinner and Auction

Saturday, October 11 – St Patrick's Hall, N.E Margaree  
Contact: John Hart, [margsalmon@ns.sympatico.ca](mailto:margsalmon@ns.sympatico.ca)

#### Antigonish Rivers Association and St.Mary's River Association – Fly Tying Forum/Dinner and Auction

Saturday, October 18 – MacKay Room, Students Union Building, StFX University, Antigonish  
Contact: Gerry Doucet, [doucet.gerry@merck.com](mailto:doucet.gerry@merck.com), 902-863-8585

#### Lahave River Salmon Association – Dinner and Auction

January 2015 (date TBA) – Bridgewater Legion, Bridgewater  
Contact: Carroll Randall, [dacara@eastlink.ca](mailto:dacara@eastlink.ca)

### NSSA Annual General Meeting

**Date:** Saturday, March 22, 2014

**Location:** Future Inn, corner of Fairfax Drive and Lacewood Drive, Halifax

For driving directions please visit: [http://www.futureinns.com/index.php/maps\\_and\\_directions\\_halifax](http://www.futureinns.com/index.php/maps_and_directions_halifax)

**Time:** Commences at 11:30 am

**Please Note:** There is no registration fee but up to date membership is required to participate. Membership is \$20.00 and is payable at the door.

Following the AGM session, members are encouraged to discuss issues of interest with members of the Executive.

Please make an effort to come out and hear about the many activities of the Association in 2013.

