NOVA SCOTIA

Nova Scotia Department of Fisheries and Aquaculture
Inland Fisheries Division

Recreational Fisheries Advisory Council
Minutes of the 2016 RFAC Meeting — Area 4

Date Prepared: March 2017 — Digby, Queens, Shelburne & Yarmouth Counties

The RFAC meeting for Area 4 was held on November 15th, 2016 at the Atlantic Superstore, Digby, Nova Scotia. Nova Scotia Department of Fisheries and Aquaculture, Inland Fisheries Division staff present were: Jason LeBlanc, Mike McNeil and Andrew Lowles. There were 7 people in attendance. There were also representatives from Mersey Tobeatic research Institute and Clean Annapolis River Program. The meeting was chaired by Andrew Lowles.

2016 Regulation Changes and Proposed Changes for 2017

Jason reviewed the regulatory change protocol that has been followed for several years. Regulatory changes may be proposed from government or the public. The regulations are reviewed internally and some are presented at the RFAC and published under the proposed changes in the Angler's Handbook. At the following RFAC, proposed changes and data relevant to those changes are presented for input from anglers. A decision is then made with DFO on the implementation of proposed regulations.

The results of the River Denys study were presented by Andrew. The River Denys sea trout fishery and population was previously assessed in 2008 and 2010 as well as 2016. Regulations were changed in 2012 and included a change in the season opening to 1 May, a reduction in the daily bag limit to three trout and a size limit that allowed for the retention of one trout over 35cm. The preliminary results of the 2016 study indicated that the regulations improved the quality of the sea trout fishery. The percentage of large trout (>30cm) caught by anglers increased from 47% to 70% and the percentage of very large trout (>35cm) caught by anglers increased from 17% to 29%. Improvement in the quality of the sea trout fishery has also been observed in the West River of Antigonish after that system was designated a Special Trout Management Area. Reducing harvest can improve seatrout fisheries.

The practice of catch and release has increased from 25% in 1980 to 60% in 2010. Andrew reviewed tips to improve survival rate of released fish. Ten out of ten fish prefer water and it is important to keep air exposure to a minimum. When unhooking a fish try to keep the fish in the water. Photos can be stressful and if you decide to take a picture, keep air exposure to a minimum (10 seconds). If the fish has swallowed the hook deeply or is bleeding, consider adding fish to your creel or cut the line and release immediately. Cutting the line can reduce mortality significantly. Water Temperature is also related to handling mortality. In May, cool water temperatures can benefit survival and as water temperatures warm to 20C there is a greater incidence of release mortality. Handling your catch with wet hands instead of using a net is beneficial. The type of net used can impact release mortality. The

use of knotted coarse mesh can damage fish by removal of protective slime and scales. If the use of nets is warranted or preferred the use of rubberized nets or knotless mesh can reduce harm to your catch.

Currently regulations in Special Trout Management Areas vary in bag limit, season, and size limit. A more consistent approach is needed to reduce the complexity of regulations on Sea trout fisheries. For all Special Management Areas that have a bag limit of more than one trout, proposed changes include a change in the bag limit to 3 trout with a size limit of 35cm that allows for the retention of one large (>35cm) trout. Changes to a season opening to 1 May will also be considered in the future.

Freshwater Fisheries Research Cooperative

The Freshwater Fisheries Research Cooperative (FFRC) was established several years ago to facilitate applied research with universities. This initiative was set up to address fisheries management questions and address the research interests of anglers and the Inland Fisheries Division. In 2016, a total cash investment of 35k dollars was made toward FFRC projects and a total in-kind was 99k dollars. In-kind contributions were associated with labour, supervisory, and equipment from partners. In 2016, the following four FFRC partnerships received funding: 1) Evaluation of stream restoration, Kris Hunter, St FX University, 2) Impacts of Aluminum toxicity on salmon and trout, Dr. Shannon Sterling, Dalhousie University, and 3) Evaluation of angler catches in the Upper Medway River, Amanda Lavers, Mersey Tobeatic Research Institute.

Kris Hunter, Saint Xavier University, 2016 was year six of an eleven-year study on water chemistry, habitat and electrofishing results to evaluate the impacts of commonly used in-stream restoration initiatives to improve habitat for trout and salmon. The eight sites were monitored on an annual basis to assess habitat and fish populations. This year, three of the eight sites were restored and monitoring will continue for another five years post-restoration. Long term studies are needed to evaluate annual natural fluctuations in order to obtain a true picture of the impacts of restoration.

Dr. Shannon Sterling, Dalhousie University is evaluating the toxicity levels of Aluminum and PH in streams in the Southern Uplands of Nova Scotia. The information to be produced by this survey is important for planning the initiatives to restore wild salmonid populations, such as terrestrial liming, habitat restoration and increasing habitat connectivity. The purpose is to identify streams in the Southern Upland regions that have high aluminum levels and the data collection will focus on key periods in the life cycle for salmon and trout (smolt stage in May, etc.). This project is a part of the West River Sheet Harbour Project where a lime doser is in place to improve water quality by reducing acidity.

Guest Speaker

Amanda Lavers, Mersey Tobeatic Research Institute, conducted an angler creel survey in the Upper Medway system. Anglers expressed concern about overfishing and the spread of invasive smallmouth and pickerel in the Upper Medway region as these lands have been turned over from Bowater Mersey to the Province and they are now more accessible. Volunteer angler check points were established on main access roads in May and June. These data will allow for comparison of the results of similar surveys in Keji Park and in the Tangier Grand Lakes Wilderness Area, as well as, provide a baseline for the evaluation of any future changes in regulations in this region.

A question was asked about the Ali study and how long it will take before the results are available. John responded that this is a three-year study and the results will be made available after next year (year three).

Hatchery Report / Trout & Salmon Enhancement

Mike McNeil gave a brief overview of the provincial fisheries enhancement programs. The Dept. of Fisheries & Aquaculture operates three hatcheries; Fraser's Mills Hatchery in Antigonish Co., McGowan Lake Hatchery in Queens Co., and Margaree Hatchery in Inverness County. Spring and fall stocking lists were made available and Steve noted they are both on the Departmental web site, http://novascotia.ca/fish/sportfishing/hatchery-stocking/

In an effort to sustain the very popular recreational trout fishery, each spring the hatcheries stock approximately 200 lakes across Nova Scotia. Most of these are stocked with brook trout; additionally, over 20 lakes are provided with Rainbow trout from the Fraser's Mills Hatchery. In recent years much of this stocking activity has been directed to lakes in populated centers, providing recreational angling opportunities to an increasingly urban population and helping to maintain an important sportfishing industry. There are now over 25 wheelchair accessible, barrier–free facilities in Nova Scotia. Most are located on sites that receive trout from the hatcheries. Last year trout were made available to support 63 of the Department's Learn to Fish projects. As well, approximately 50 trout fishing derbies, sponsored by volunteer organizations, received trout from the hatcheries.

Fall Trout Stocking

Trout stocking with finger-sized juvenile trout is carried out in October and November. Lakes stocked in the fall are typically more remote than the spring-stocked lakes, but still have significant fishing pressure. These fish are presumed to grow for a season before becoming large enough to contribute to the creel. Approximately 175 lakes receive brook trout in the fall. Most brown trout stocking takes place at that time of year. The majority of brown trout stocking takes place in rivers where the fingerlings have access to estuaries where they can grow quickly.

Mike also noted that the spread of invasives species such as smallmouth bass and chain pickerel have negatively impacted hatchery operations and stocking site selection.

Winter Trout Stocking

Nova Scotians are encouraged to remain active all year and many do so by getting out and enjoying time ice fishing for trout. Twenty lakes, including the Bras d'Or Lakes, are stocked with either rainbow or speckled trout in November and December, in anticipation of the winter season. Several other lakes which are stocked in the spring remain open year-round, as well.

Community Based Enhancement Facilities

Several community- based fishery organizations operate small scale hatcheries or incubation boxes. Trout eggs are delivered to these in late winter. The fry hatch in early spring and when they have developed to the point where they can begin feeding on their own, they are released. This usually takes place in early to mid-May. There are long running operations in New Waterford, Port Morien, Coxheath, Isle Madame and Mulgrave. For the past few years a unit has been set up on the Medway River.

Fish Friends

Fish Friends is an educational program, sponsored by the Nova Scotia Salmon Association and maintained through the hard work of many dedicated volunteer organizations. Aquarium units are set up in participating school class rooms and teachers are provided with educational material about the trout and salmon life cycle. Children get to watch the eggs hatch, and the fry develop. They feed them for a few weeks and then release them into a local stream. Last year the hatcheries were able to provide eggs to approximately 70 Fish Friends projects.

Promotion and Development Programs

Former Sportfish Development Officer, Andrew Lowles reviewed several provincial programs in place to promote fishing within Nova Scotia. There are two demographics that are underrepresented and continue to be a focus of Nova Scotia's recreational angling community: young people and women. These two demographics are deliberately targeted through the delivery of two programs: **Learn to Fish** and **Becoming and Outdoor Woman**. The Learn to Fish (L2F) Program focuses on exposing young anglers across the province to recreational angling. This year was the largest year ever for the Learn to Fish Program, seeing more than 3,000 students in 2016, nearly doubling our efforts over the past 3 years. The program was delivered in school classrooms, but has been extended to include high school students. Again, this year, Andrew visited IWK Children's Hospital, Scouts and Guides Canada, and 4-H groups. As last season's effort was lacking representation from certain areas of the province, additional effort was made to more evenly spread across the province this year. This was successfully achieved with increased representation from RFA 1 (Cape Breton).

Andrew wants to thank the provincial hatcheries; Frasers Mills and McGowan Lake, for their efforts in meeting the increased stocking demands associated with the growth of the program. Andrew also wants to thank the Hants West Wildlife Association and Mark Weare, along with his volunteers for their continued support of the program.

Becoming an Outdoor Woman (BOW) was again a great success. Hatchery Technicians, Marielle Turner and Rebecca Blank, instructed several modules at the fall BOW program. Thanks to Don Taylor for his continued support of the program and volunteering his time. In February 2016, Winter BOW was a great success in Cape Breton. The Ice Fishing portion of the program was increased to include a 3rd session as well as Saturday evening Fly Tying. Andrew thanked Gordie MacKinnon and Cole Porter for their continued support of the program.

Andrew will be continuing to manage the Anglers Handbook and Summary of Regulations in 2017. The National Sportfish Survey was distributed by mail and a trial online version this year. Data is returned to Fisheries and Oceans for sorting, formatting and will be returned to Nova Scotia Department of Fisheries and Aquaculture in early 2017.

Nova Scotia has initiated a commissioned report to evaluate the Sportfishing Industry in the province, as well as to make suggestions on growing the industry. This report will evaluate the current fisheries and infrastructure resources available within the province and compare these to other fishing destinations in Canada and the eastern United States.

Funding Programs

Nova Scotia Sportfish Habitat Fund

Jason LeBlanc reviewed the Nova Scotia Sportfish Habitat Fund, which received a budget of $273k in 2016, based on 2015 licence revenues. Twenty-four community groups were involved in 2016. Total funds to Adopt-a-Stream were $237k in addition to $100k in funding from the Nova Scotia Liquor Commission. Two other projects received funding in 2016; $18k to the West River Sheet Harbour Lime doser project, and 20k to the West River Sheet Harbour helicopter liming project. The Sportfish Habitat Fund provides money to projects that improve angler access to the resource such as boat ramps and fishing piers, and encouraged anglers to review the on-line application and consider submitting projects before the March 1 deadline.

Amy Weston provided an update on Adopt a Stream activities for 2016.

Atlantic Salmon Conservation Foundation

Jason also reviewed projects funded by the Atlantic Salmon Conservation Foundation. Several projects were supported by the Fund and included: 1) acid rain mitigation plans for the 13 priority watersheds for Southern Upland Salmon in Nova Scotia, 2) improving fish passage on lower Chéticamp River (Phase II), 3) initial South River watershed planning and restoration including the installation of a temperature device, 4) LaHave River watershed project, 5) ongoing enhancement of the Mabou and Inverness watersheds, 6) Sackville Rivers Association river restoration, and 6) West River Sheet Harbour liming and counting fence projects.

Discussion/Agenda Items from the Floor

Amanda Lavers asked about increasing the bag limit for smallmouth bass to help control invasive species. There was discussion around how the Department manages smallmouth bass as invasive in some areas with a liberal bag limit of 25. In others areas this species has been established since the 1940s, is very popular and provides substantial sportfishing opportunities. Jason indicated that for chain pickerel the department will be considering bag limit increases. For several years MTRI has incorporated aquatic invasive species monitoring and education in their angler engagement projects.

The group also discussed new occurrences of smallmouth bass in the region including Mistake Brook, a reservoir above Sissiboo Falls, the base of Weymouth falls and possible Fourth Lake in the Sissiboo system (unconfirmed), Matt Mullen mentioned that Bear River watershed does not has invasive species at this point.

Mathew Mullen began a discussion regarding the use of barbless hooks to promote catch and release.

Reg Baird spoke about local knowledge of guides in the region (eg. Milford House). It would also be beneficial to have a special guide licence to facilitate guiding and make it easier for clients.

Peter Hope asked about stocking the upper Medway river in both the spring and fall. Mike McNeil indicated that our priority in that area is to learn more about current catch rates and angler activity in that region which is the reason for the MTRI angler creel survey project. He added that we stock over

10,000 fall fingerlings in the lower portions each year and based on fin clipping he believes return rates to the anglers' creel is in the range of 10-20%.

Jason LeBlanc asked anglers to be on the lookout for a newly introduced large, freshwater snail called the Chinese mystery snail. Very little is known about its current distribution in Nova Scotia or potential impacts to native species. It is thought that it has been illegally introduced or via aquarium trade. Anglers can report possible occurrences of this snail to our Department.

Photos courtesy of the Lake George Association and Ontario Invading Species Awareness Program