

Current News



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Concerns for Water Quality

I remember the phone call, probably in 1997 or 1998, from an inspector of the Department of Health of New Brunswick. I was then director of the Beaubassin Planning Commission. Tests on the water quality of Parlee Beach showed abnormally high levels of coliform bacteria in bathing waters of the beach. Similar phone calls were made to the authorities of the Town of Shediac, of the Greater Shediac Sewerage Commission of the South East Economic Commission, of the Department of Tourism, of the provincial and federal Departments of Environment and other

relevant agencies. What to do! An emergency meeting is called, an interim committee was formed. We can not close Parlee Beach, it is one of the economic engines of the region, it is a place of recreation for the population. We can not allow people to swim in a polluted and unsafe water. It was decided that before alerting the public that the new tests would be carried out. Fortunately, new tests have produced different results, the first results were influenced by laboratory errors. The beach water was then and continues to comply with federal standards for swimming. However as elsewhere, precautions must be taken, particularly after a large rainfall. We learned a lesson, there is a need to closely monitor the water quality in the bay. This interim committee was active for several months, until the time that the Watershed Association of the Shediac Bay was formally formed in 1999.

More than 15 years later I became a volunteer on the board of the Watershed Association. The committee was then in trouble, lack of staff and volunteers, finances in poor condition. Thanks to the extraordinary efforts of the previous president, Dave Dunn, and with the help of outstanding employees like Jim Weldon and Helen Hall and with the arrival of Rémi Donelle as manager and Jolyne Hébert as technician our association is now in much better shape. We got several new grants and we have retaken our role as guardians of the environment. Since last summer I am chairman of the board. The water quality is always our main focus but we are working on other projects like planting trees, protecting habitat for common terns, ... we can chew gum and walk at the same time.

If you are interested in the water quality and in the environmental protection of Shediac Bay, join our association. Together we can make a difference.

Armand G. Robichaud - President
Shediac Bay Watershed Association

Water Quality Monitoring



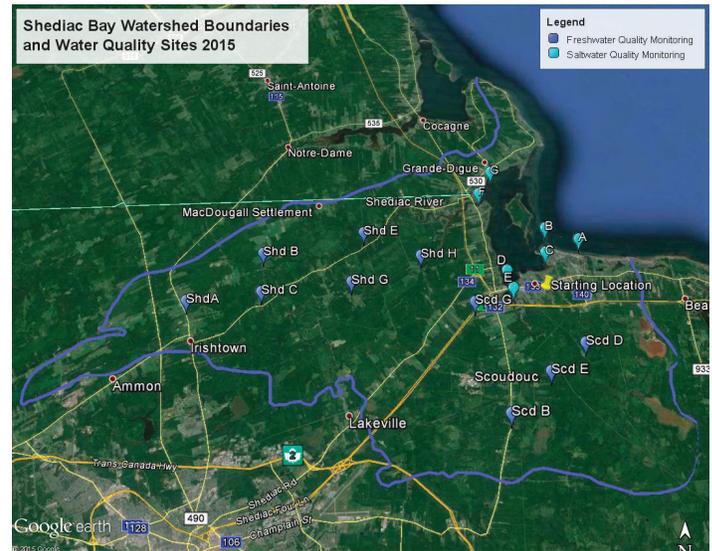
The Association has been monitoring the water quality in the Shediac and Scoudouc River since its conception in 1999. In the summer of 2015, we expanded our sampling to the salt-water areas in and around the Shediac Bay. Our monitoring program helps us to better respond to environmental threats to the health and safety of aquatic life, and to the people that depend on the bay for recreation, commercial fisheries, and a quaculture. The parameters that we have been measuring are:

- Water Temperature
- pH
- Conductivity & Salinity
- Dissolved Oxygen
- Nutrients (Nitrates & Phosphates)
- Bacterial contents
(E. coli & Total coliforms)

(Continued on page 2)

Water Quality Monitoring (Continued from page 1)

This fall, all the water quality data since the beginning of the Association in 1999 has been compiled and organized into a usable format, thus creating an updated database for further studies by the Association itself and interested organizations. The water quality database allows us to create graphs that will tell the story of our rivers. There are many possibilities for the use of this data, for example; showing the evolution of each site over the years, showing the averages of any parameters on a short-term or long-term basis, etc.



Fish Ladder

A new project in 2015 has helped open up the upper Shediac River for fish. Elevated culverts are a real problem for fish migration. For many species of fish, elevated culverts can mean the end of their journey. This fragmentation of freshwater habitats has a negative impact on reproduction of fish, including Atlantic salmon and brook trout. It also has negative impacts on the reproduction capacity of freshwater mussels, including the rare Brook Floater mussel (*Alasmidonta varicosa*), due to their need for host fish to carry freshwater mussel offspring's for a certain period of time.

The SBWA, along with an amazing team of volunteers, has installed a 10 foot heavy-duty aluminum fish ladder on an elevated culvert on Scotch Settlement Road. The river passing through here is the McQuade Brook, a major tributary of the Shediac River and an important spawning river for Atlantic salmon.

This particular model of aluminum fish ladder is the first of its kind in New Brunswick. It was purchased in Maine from Sheepscot fishways. Other types of fish ladders exist in NB, but most are made of wood, metal or cement. This model is made to be detachable, it can be relocated to a new location when this culvert is scheduled to be replaced.

There were many partners in this project that provided financial and in-kind support. These



include Department of Fisheries and Oceans Canada, NB Department of Environment and Local Government, the Atlantic Salmon Conservation Foundation, NB Department of Transportation and Infrastructure, Tri Province enterprises, Paul's Welding, adjacent landowners and a group of retired teachers who physically carried the 460 pound ladder to the site.

The installation of the fish ladder was covered by CBC news, the sequence can be found on



our website www.shediabaywatershed.com, News and Articles.

Fish Habitat Restoration

The SBWA identified a zone in the Scoudouc River that had an erosion problem, near the convergence of the Dionne Brook with the main branch of the Scoudouc River. This erosion issue has been causing heavy loads of sediment to enter the river, which negatively impacted habitat on over 1 km stretch of river downstream of the site. The restoration project involved three stabilization techniques:

- Building a retaining wall of 18 ft. in length in the eroding meander;
- Installation of balsam fir trees against the eroding banks to serve as deflectors, and will also contribute in rebuilding the riverbanks by soil accumulation;

- Native trees were planted on the riverbanks to create a root system that will hold soil in the long term.

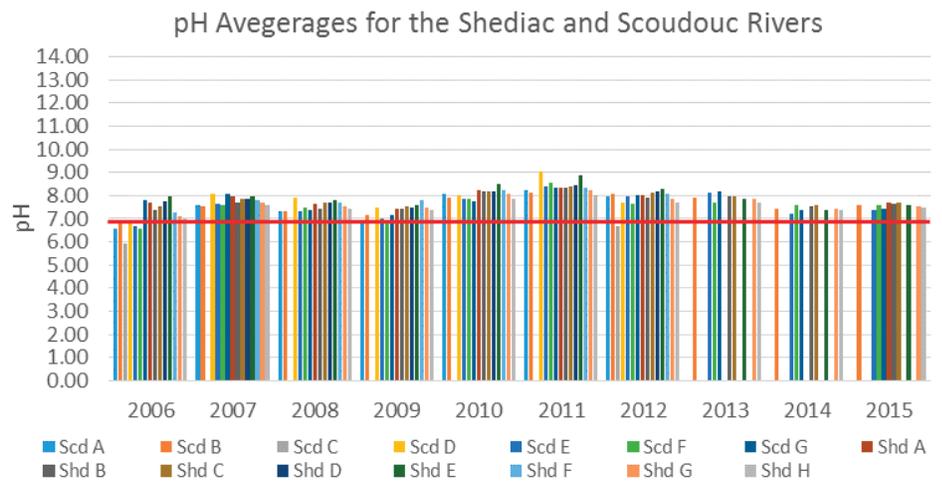
This project will help reduce the release of sediment thus protecting fish spawning habitats. A promotional project panel was placed near the site, on route 132 in Scoudouc.

We would like to thank the following funding programs for their assistance: Recreational Fisheries Conservation Partnerships Program (DFO-RFCPP), the Atlantic Salmon Conservation Foundation, NB Wildlife Trust Fund (NBWTF), and the NB Environmental Trust Fund (NBETF).



Are our rivers Acidic or Alkaline?

The pH levels in our rivers are very stable throughout various parts of the watershed. The averages of the pH values are normally neutral, or they lean more on the alkaline side rather than acidic. The recommendation for the protection of aquatic life for pH is between 6.5 and 9.5. Therefore, our river's historical pH values (figure 1) shows the Shediac and Scoudouc River remained safely within those margins.



Electrofishing Surveys

As part of our restoration and monitoring programs, the SBWA uses a technique known as electrofishing surveys to measure fish ecosystems dynamics. This process uses electricity to temporarily immobilize fish, allowing us to scoop them up with a fish net. We then identify, measure, weigh, and release the fish without harm.

This data is then used to measure fish populations and the impacts of our restoration programs. We conduct electrofishing surveys before and after restoration projects.



We will continue to do electrofishing surveys periodically over the years to come, to give us a long-term perspective of the transformation of fish populations in our rivers.

One of the main objectives of the SBWA is to bring back healthy populations of brook trout and Atlantic salmon to the Shediac and Scoudouc River. That is why we were enthusiastic to find juvenile salmon in the McQuade Brook (see fish ladder article) and in the Scoudouc River, near the Dionne Brook (see fish habitat restoration story) in our 2015 electrofishing surveys.





Contact Info

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For more information and pictures, please visit our website at www.shediabaywatershed.com



Current News

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Tree Planting

You may have seen new trees and shrubs in the public parks of the Town of Shediac. As part of a project to increase biodiversity, the SBWA reached its goal of planting over 550 small and medium trees and shrubs native to our region.

More than half of these trees were planted at the Shediac Baseball Field, located behind the Mgr-François-Bourgeois elementary school. In partnership with the TD Friends of the Environment Foundation, a *TD Tree Days* event was organized on September 26, 2015. A wonderful group of volunteers showed up motivated to plant 277 trees and shrubs throughout the field. A mini Acadian forest arboretum was created for the purpose of teaching students about the species of trees found in their forest next to the schoolyard.

Having met our goals of planting 550 trees, the SBWA received additional funds from Environment



planted around the brook near the Ohio road. The area had been previously flooded by beaver dams, which has killed the trees surrounding the stream. These newly planted trees will, once grown, create shade to keep low water temperatures for the fish.

This project is funded by Environment Canada's EcoAction program. Special thanks to the Town of Shediac for their continued support of this project.

Bird Houses

The SBWA reached its goal of installing 60 bird houses in the Town of Shediac, benefiting black-capped chickadees, tree swallows, American robins and wood ducks. We were grateful to receive additional funding from EcoAction program to build and install 25 more bird houses, bringing our total to 85 nesting boxes for our beautiful winged friends.

A workshop was organized in the

fall with the 4th graders at the MFB elementary School. We had the pleasure to welcome Lewnanny Richardson from Nature NB, to host this workshop. This time, all 25 bird houses were made by the students for tree swallows.

Most of the bird houses have been installed behind the Notre Centre community centre in Grand-Digue, and the remaining will be found at MFB School in the spring. This project is funded by Environment Canada's EcoAction program.

Special thanks to Nature NB's Lewnanny Richardson for his invaluable contribution to the success of the project.



This project was undertaken with the financial support of:
Ce projet a été réalisé avec l'appui financier de :



MEMBERSHIP Yes, I want to help protect the Shediac Bay and rivers!

Mail to: Shediac Bay Watershed Association, 612D Main St., Shediac, NB, E4P 2H3

Donation

Name: _____

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Town/City: _____

Postal Code: _____

Telephone: _____

E-mail: _____

Method of Payment: Cheque Cash Money Order

I would like to make a contribution of: \$25 \$50 \$100 \$150 \$200 Other