Current News

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President's message

It is indeed a pleasure and a privilege to once again have an opportunity to offer the message as President of the Shediac Bay Watershed Association (the association).

The theme of this message is: the importance of public participation in and for the association.

I encourage everyone who lives, visits or works in our watershed to get to know us better. This can be accomplished by visiting the association office, tell us about what's important to you and your neighbours, help spread the word that "**our water is important**", offer ideas and if you have time, volunteer.

As I write this it's after a week or two of beautiful Shediac weather, I suggest everyone is on a natural high after enjoying the water and or the view from any shore of Shediac Bay and its inland waters.

My concern is we take this beauty for granted and unless we are vigilant and active in education, promotion of good water use practices, continually monitor, improve and protect the water systems we all enjoy, we will all loose.

If you have a chance to meet our dedicated, hard working coordinator Ms. Dominique Audet please do so, she and her capable staff can bring you up to speed on all the projects in progress or are planned for the future. I know meeting Dominique will be rewarding, just give her a call (506) 533-8880 or stop at her office 164-A Pleasant Street, Shediac.

One of the many privileges in volunteering for the association is developing partnerships in our community; please note the names and logos of sponsors and currant partners in this publication.

I sincerely thank each member of the board of directors, the coordinator, staff and the many others who assist with our quest to protect and improve the water that flows through the Scoudouc and Shediac river systems and the Bay it's self.

In keeping with the public participation theme "I thank every one who has offered assistance to date and welcome your future support"

Please enjoy Shediac Bay and its water systems,

William (Bill) Murray

The Shediac Rotary Club, a strong partner in water quality!

The Shediac Bay Watershed Association (SBWA) and the Shediac Rotary Club have announced in 2006 a program to sustain a high quality aquatic environment in Shediac Bay. Under the program, the Shediac Rotary Club offered a much appreciated financial contribution of $20,000 for water quality monitoring equipment and public awareness tools for the importance of water quality.

The equipment acquired now allows the SBWA to measure multiple water quality parameters simultaneously. The monitoring program is taking place in Scoudouc and Shediac rivers as well as in both estuaries and throughout the bay. Basic physico-chemical parameters, such as dissolved oxygen levels, water temperature and conductivity will be recorded on a monthly basis at each sampling site. Indicators for nutrient loading ([N], [P]) and fecal contamination (*E. coli*) will also be measured.

Erika Dawson and Victorine Swertvaegher, interns with the SBWA, taking water quality measurements in the Scoudouc River.

A long-term monitoring program based on the use of environmental indicators is being developed to evaluate, understand, and track changes in the watershed's ecosystems. Targets representative of healthy ecosystems will be established for each indicator. The monitoring of all indicators will provide basic information on the status of the Shediac Bay watershed. A "report card" document will be produced annually to inform the public on the status of the watershed. Results will also be used to establish priorities and in the elaboration of an efficient action plan.

With an integrated management approach in mind, the SBWA in partnership with the Shediac Rotary Club is committed to ensure the consistency of all actions related to water quality and the health of the aquatic ecosystems in Shediac Bay and its watershed. We hope this marks the beginning of a strong partnership.

New Nouveau Brunswick
Your Environmental Trust Fund at Work

Profile of a volunteer

JOSEPH (JOE) CAISSIE

Joe Caissie from Grande-Digue has more than thirty years of experience as a fisherman/aquaculturist. He is a hard working and dedicated man who devoted himself to his family and his work as a fisherman. His fish market, Joe Caissie Seafood, is well known in the area where he offers local quality products. Most species found at his market are fished or cultivated in Shediac Bay by the Caissie family.

Joe is a member of the Board of Directors with the Shediac Bay Watershed Association (SBWA) since 2005 and he has been closely involved in the Oyster Restoration Project performed in 2004. Since then, Joe frequently participates in various projects with the SBWA and he generously offers his time and expertise. Joe possesses valuable knowledge of Shediac Bay and the information are very useful for our group whose mandate is to protect habitats and water quality.

We take good advantage of Joe's knowledge by building an historical knowledge information bank to help track the bay's evolution and changes. Over time, changes are becoming more and more obvious. Joe indicates among other things that the bay's navigable area appears to be decreasing, that there is a larger quantity of algae, and that there is more sedimentation. Joe also mentions that an algae species, *Codium fragile,* was introduced in the bay during the last decade and that it can affect oyster cultures. This invasive species, also called oyster theft, attaches to oysters and can transport them offshore after storms.

The SBWA enjoys Joe Caissie's passion and his great generosity. We whish to sincerely thank him for his participation in numerous projects organized by the SBWA and hope that he will remain with us for many more years.

Peat Filtering Onsite Systems - A Success Story

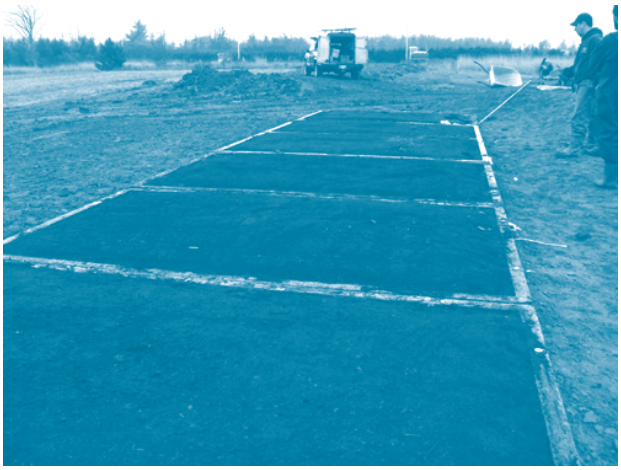
Our Association deals with issues affecting water quality and a frequent contamination source found in the watershed comes from faulty septic or sewage systems. Through its monitoring efforts, the SBWA identified a very serious polluting activity that has been occurring at a provincially sponsored senior's home in Scoudouc, namely the direct outflow of raw sewage into the Scoudouc River.

In partnership with the senior's home, the SBWA began the process to have this system repaired in 2005 seeking support from various governmental organizations. The SBWA initiated steps to organize a meeting with interested stakeholders to develop a plan to co-operatively put a stop to this illegal and very damaging activity. With a little bit of persistence we were able to found an attentive ear and support from the Department of the Environment to develop the ideal long-term solution for this ongoing problem.

The installation of a regular septic bed and the replacement of the actual sewage treatment system were not considerable solutions for the problematic site. Among several suggestions to rapidly remediate the situation, it was proposed to install a septic system connected to peat moss cells acting as draining fields. This system is very compact and can accommodate large households or small institutions. The peat moss filtering system is very advantageous for those who have soil type or space issues. Extensive water quality testing revealed that these types of systems are very efficient and therefore acceptable for residential use.

The peat moss filtering system installed in Scoudouc in October 2006 was the third of its kind in New Brunswick. The technology is however much more developed in Nova Scotia where hundreds of these systems are in activity.

We invite all interested residents to contact the SBWA for more information regarding this type of environmentally friendly septic system. Visits to the site can also be organized to explain the concept of the system.



Installation of a peat filtering onsite system and observation of the finish product.

Contact info

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2007 Field Projects

Stream Restoration

The Cornwall Stream restoration project is supported by the NB Environmental Trust Funds and will help restore fish habitat and enhance water quality by reducing sedimentation problems. The SBWA carried out the first phase of the Cornwall Brook restoration project in 2006 and is now pursuing the work on the damaged 1.7 km stream section.

A stream habitat inventory performed in 2006, allowed us to gather useful information related to the morphology (e.g. substrate type, stream depth, stream width, etc.), the biology (e.g. fish species, vegetation), and the water quality (e.g. temperature, dissolved oxygen, conductivity) of the tributary. Stream alteration sources were also precisely identified during the stream habitat inventory. The major problems observed included two stream bank sites heavily damaged by cattle leading to erosion and massive in-stream siltation. Overabundant alders along the banks, in-stream debris jams, and excessive algae growth were also observed as a result of inadequate water circulation and aeration.

New Nouveau Brunswick
Your Environmental Trust Fund at Work

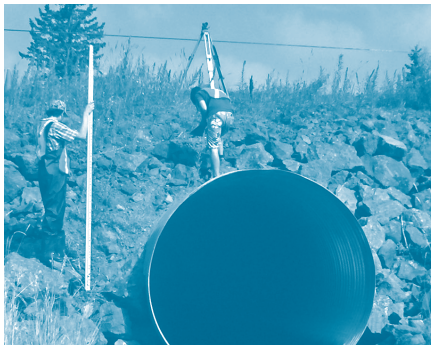
Phase II of the restoration project includes clearing overabundant alders, completing the selective clean-up of in-stream debris-jams, and installing multiple deflector trees. Three riparian sites have to be restored by improving bank stabilization and restraining cattle access to the stream. The SBWA will also work in partnership with local farmers to restrain cattle access to the river.

Fish habitat fragmentation study

Migration barriers at stream crossings have been identified as a fish conservation concern in many North American areas. The installation of culverts is the most common method to provide access over small and medium size streams. These road crossings can become barriers for fish migration, create habitat fragmentation and alter stream and riparian habitat integrity. Ensuring river systems and landscapes connectivity, as well as habitat integrity is a critical component for maintaining healthy fish populations. A single barrier culvert can block access to kilometres of habitat. Consequently, the restoration of fish passage at these impasses appears to be an efficient way to improve the overall stream productivity and habitat integrity.

An electro-fishing survey performed in 2005 revealed that Atlantic salmon parrs *(Salmo salar)* and other salmonids such as the brook trout *(Salvelinus fontinalis)* were present in both main river systems within the Shediac Bay watershed. According to local anglers, various fish species densities drastically decreased over the last two decades in Shediac and Scoudouc rivers.

Over 300 public and private culverts were identified in the watershed, among which an unknown number could contribute to habitat fragmentation and degradation. In order to identify potential fish passage barriers, the SBWA is undertaking a Culvert Inventory for the entire watershed with financial support from the NB Wildlife Trust Fund. The project, performed in partnership with the Department of Fisheries and Oceans, includes conducting overview assessments of fish passage and bank stability at all crossings within the watershed. This survey will help determine culverts that are either barriers to fish passage and other aquatic life or contributing to erosion and stream siltation. The findings will be communicated to stakeholders and will contain recommendations for improvements, and a priority list for decision makers.



Julien Bourgeois (ABVBS) and Rémi Gionet (MPO) taking measurements at a culvert in the Shediac area.

Riparian and Coastal landowners Awareness Program

Shell Environmental Fund
+10 million and growing!

The Riparian and Coastal landowners Awareness Program implies raising awareness regarding best environmental landscaping practices along a body of water (buffer zones importance, use of alternatives for pesticides, alternatives for breakwaters). This program supported by the Shell Environmental Fund will allow landowners to manage their landscaping project in a more environmentally friendly way.

Erosion is a natural process in coastal ecosystems; however, it can be accelerated by human activities such as the clearing of buffer zones. Much land-based erosion contributes to silt loading in our estuaries and affects spawning habitats for several fish species. Buffer zones also act as natural filters by retaining sediment, debris and toxins.

For the past 7 years, the SBWA has been working with farmers in riparian zones to help minimize their impact on our waters. We now undertake this new initiative to raise awareness among private landowners. It is envisaged that the long-term benefits of this project, in conjunction with our other efforts, will be the improvement of water quality in our watershed.

KIDS CORNER

Hey kids, help us find our new mascot!

Send us a drawing and the name of the mascot. We will receive all suggested mascots until January 2008 and choose the best representation for the watershed group. Keep in mind that we work for the protection of habitats and water quality, so you can suggest an animal (birds or mammal found within the watershed) or any objects related with water quality.

We offer fun presentations to school classes and community groups. Contact us if you would like to help spread the word about environmental practices.

Animals in our bay

American Sand Lance

Image from Michigan Science Art

Latin name: *Ammodytes americanus*

Appearance: They have a slender body that can measure up to 7 inches long when mature. A long dorsal fin stretches throughout the whole body while the ventral fin is absent. They have a toothless jaw, a sharp pointy nose and a forked tail. The color of their scale varies depending on the individual. Some may have olive colored dorsal surface, others brown and sometimes bluish green.

Distribution: Sand launce, also called Sand eel, is a fish who can be found on the Atlantic coast of North America from North Carolina to Labrador. It is also possible that their distribution extends northward to the Hudson Bay.

Habitat: They can often be found in the water column over sandy bottom type but rarely seen in rocky costal habitats or in deep water's with muddy bottom.

Behavior: They are known to hide in the sand about 4 to 6 inches deep in shallow waters. They usually gather in schools of thousands of individuals.

Reproduction: Spawning occurs in autumn and early winter (November to March) and they attain maturity in their first or second year. Spawning activity mainly occurs inshore in shallow water. The sand eel deposit their eggs on or in sand substrate where the eggs stick on sand grains.

Feeding: The sand launce's diet mainly includes various small crustaceans such as copepods, worms and fish eggs (including their own kind).

Interesting Fact: The pointy nose of the sand launce is very sharp and can pierce through the stomach of their predators and can become encysted in the body wall.

Did you know that more than 80% of the drinking water contamination cases in our area are related to faulty septic systems!

The New Brunswick Environmental Trust Fund has awarded funds to the Shediac Bay Watershed Association to help reduce the negative impacts of faulty septic systems. Through this program, citizens of the Shediac Bay Watershed (Cap-Bimet to Caissie Cape, and Scoudouc to Irishtown) can receive **information** concerning septic systems and possibly **financial support** to improve their septic installation.

Contact us to find out whether you qualify for financial support.

Bald Eagle

Latin name: *Haliaeetus leucocephalus, Haliaeetus meaning* « sea eagle » and *l eucocephalus* refers to its white head.

Environment Canada

Appearance: The bald eagle is easily identified by its white head and tail as well as its yellow bill. There distinctive plumage appears when the bird becomes an adult, (i.e. during the forth or fifth year). The length varies between 71 and 96 centimetres. The wingspan of the bald eagle can reach up to 245 cm, which makes it the largest prey bird in Canada.

Distribution: They are present in all Canadian regions except in the Prairies and the Arctic. There are two distinctive populations of bald eagle in NB; one remains in the province all year long and the second population migrates annually in the southeastern part of the US.

Habitat: The bald eagle's territory is very large and usually includes riparian or coastal areas as well as forested sections. The bald eagle's nest is made out of branches and vegetal materials and established at the top of large trees or posts reaching 20 meters or more. The nest is often use during several years before being abandoned.

Feeding: The bald eagle is an active predator mainly preying on large fishes. Their diet also includes aquatic birds and small mammals.

Interesting Facts: In peril in the region since 1976 because of the wide use of pesticides and due to habitat destruction such as deforestation. This bird build the largest nest of all North American birds…it can reach up to 2 meters in diameter!

Help put a stop to illegal dumping

If you are aware of an illegal dump site, please contact the Illegal Dump Hotline:

1-877-777-4218

Come visit us!

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

Mail to:

Shediac Bay Watershed Association
164 Pleasant St., Suite A, Shediac, NB E4P 2L8

Donation

Name: _____

Address: _____

Ville : _____

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
☐ $500 ☐ $1000 ☐ Other

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