Shediac Bay Watershed Association

Annual Report 2017-2018

By:

The Shediac Bay Watershed Association Inc.

Acknowledgements

The Shediac Bay Watershed Association Board of Directors sends thanks to the numerous groups and individuals that contributed to making our programs a success again this year. In particular, the SBWA extends its appreciation to following individuals and organizations for their interest and involvement with the Shediac Bay Watershed Association.

Our Funders:
New Brunswick Environmental Trust Fund
New Brunswick wildlife trust fund
Fisheries and Oceans Canada
Environment and Climate Change Canada
Atlantic Salmon Conservation Foundation
TD friends of the Environment
Ville de Shediac
Communauté rural Beaubassin-Est
Uni Coopérative Financière

Our partner organisations :
Groupe de développement durable du pays de Cocagne
South-eastern Anglers Association
Vision H2O
Petitcodiac Watershed Alliance
New Brunswick Environmental Network
Shediac Bay Marina
Pointe-du-Chêne Port Autority
Nature NB
Club les ami(e)s de la nature du Sud-est
EOS Eco-Energy
Amis de la Kouchibouguacis
Southern Gulf of St-Lawrence Coalition on sustainability
Bassin versant de la baie de Caraquet

Local schools:
École Mgr-Francois Bourgeois
Shediac Cape School
École de Grande-Digue
Louis-J-Robichaud

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1 Introduction

1.1 Description of the Shediac Bay Watershed Association

The Shediac Bay Watershed Association (SBWA) was founded in 1999 as a result of growing concerns from local community residents over the ecological health of Shediac Bay. In order to establish a long-term water quality-monitoring program, a community-based association was formed.

The Shediac Bay Watershed Association vision and mission statements are as follows:

Our Vision – A community working together to foster a healthy ecosystem that will sustain the quality of water for future generations.

Our Mission - The Shediac Bay Watershed Association will accomplish its vision through education and community stewardship.

The Board of Directors includes the following members:

Mr. Denis Haché, President	Mr. Gerry Dionne	Ms. Petrina Ferris
Mr., David Dunn Vice-President	Mr. Léo-Paul Bourgeois	Mr. Louis Vallée
Mr.,Armand Robichaud Past President	Mr. Claude Léger	Mr. Gilles Thibault
Ms. Helen Hall, Treasurer	Mr. Marc Fougère	Mr. Bill Belliveau
Ms. Frances Kelly, Secretary	Ms. Germaine Gallant	Ms. Sophie Landry
Mr. Pierre Landry	Mr Arthur Melanson	

The Shediac Bay Watershed Association gratefully receives guidance, donations and in-kind support from various organizations and interest groups consisting of business-owners, industry, foresters, farmers, residents, cottage owners, recreation boaters and swimmers, conservation groups and community organizations within the Shediac Bay Watershed.

Public education has always been an integrated part of all the Shediac Bay Watershed Association's initiatives. Every year, the Association organizes activities meant to engage the public in environmentally friendly practices such as litter cleanup and tree planting, hoping to raise awareness and to build good habits.

Our strong presence in the public eye is a major factor to the success of many of our initiatives, and to keep the public informed of the great work being accomplished by the association.

1.2 Overview of the Shediac Bay Watershed

The Shediac Bay Watershed covers 420 km^2 of land area and stretches along 36 km of coastline, from Cap Bimet to Cap de Cocagne (Fig. 1). The Shediac Bay Watershed is composed of two major river systems emptying into Shediac Bay: the Shediac River and the Scoudouc River. The Shediac and the Scoudouc Rivers are characterized by small tributaries covering a watershed of 201.8 and 143.3 km^2, respectively. The Shediac River is composed of two major water arms. The northern water arm is created by the convergence of the McQuade Brook, the Weisner and the Calhoun Brook. The southern water arm of the Shediac River is the continuation of the Batemans Brook. Water velocity in both rivers is generally weak due to the gentle regional elevation. The watershed boundaries stretch into both Kent and Westmorland County.

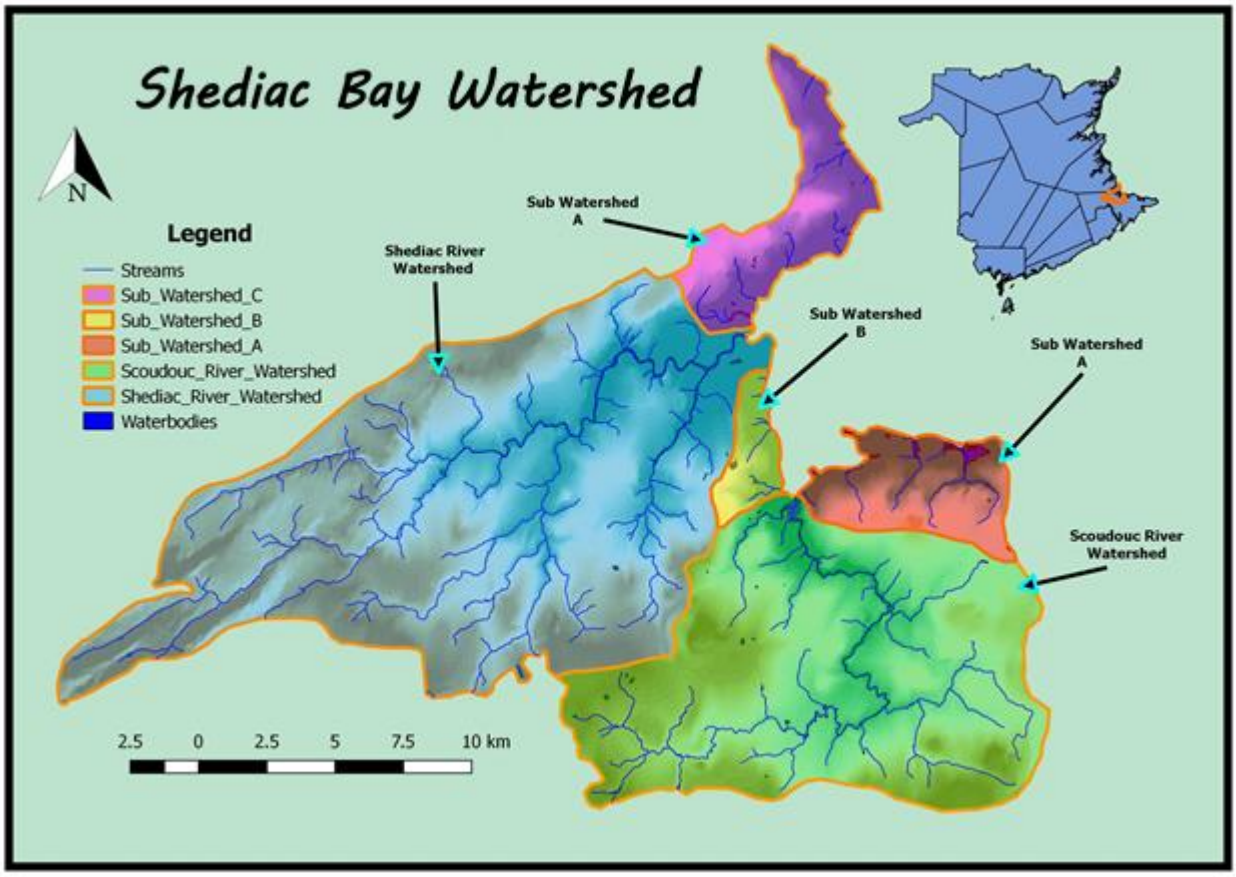

Figure 1: Map of Shediac Bay watershed boundaries and sub-watersheds

2 Water Quality Monitoring

Water quality monitoring was conducted once a month from June to October 2017. Basic water quality parameters (DO, temperature, pH, conductivity and salinity) were measured using a new YSI- *Professional Plus* multi-parameter metre. Water samples were sent to *RPC Laboratory* for analysis of *E.coli* and inorganic elements. All sampling results are submitted to the *Department of Environment and Local Government*.

The purpose of the samples taken by the SBWA is to determine priority areas where the association can create partnerships and implement restoration programs, such as tree planting along riparian buffer zones.

Disclaimer: the SBWA does not by any means proclaim to be water quality experts and is not qualified to determine the safety of the recreational uses of the bay, such as swimming advisories or shellfish harvesting.

2.1 Freshwater Rivers– Water Classification Stations

The SBWA has been monitoring 10 water quality sampling sites in the Shediac River, the Scoudouc River and their tributaries since they were established during the water classification program in 1999-2001. The water quality monitoring program is used to help detect and support the need for remediation actions, that will help protect and improve water quality and aquatic ecosystems.

For the full detailed report on this project (full bacterial, nutrient and inorganic sampling results),, please visit our website www.shediacbayassociation.org, report title **"Improving water quality in the Shediac and Scoudouc Rivers, 2017"**, in **Reports and Archives**.

2.1.1 Site Information

The following describes the sample site information for the 10 water classification monitoring stations established in 1999.

Table 1: Water Quality Monitoring Site Information

Site ID	Latitude	Longitude	Elevation (m) Google Earth	Location Description
Shd A	N46°12'13.42"	W64°47'53.01"	83	**Shediac River** - On route 115, Irishtown Rd, in between junction with Ammon Rd and Scotch Settlement Rd, just upstream of culvert.
Shd B	N46°13'55.17"	W64°44'35.81"	27	**McQuade Brook** - On Scotch Settlement Rd, North of junction with MacLean Crossroad Rd, just upstream of culvert.
Shd C	N46°12'33.10"	W64°44'33.24"	27	**Shediac River** - On Cape Breton Rd, at junction with McLean Crossroad Rd, just upstream from bridge and downstream from tributary.
Shd E	N46°14'43.24"	W64°39'52.21"	7	**Shediac River** - At the covered bridge.
Shd G	N46°12'53.56"	W64°40'29.74"	13	**Weisner Brook** - At bridge on St-Philippe Rd.
Shd H	N46°13'50.95"	W64°37'15.89"	11	**Bateman Brook** - On Bateman's Mill Road.

Scd B	N46° 8'42.74"	W64°33'51.55"	24	**Scoudouc River** - On Route 132, at bridge next to *Mel' Waggin Tail Inn* and chemin Dionne.
***Scd E-2**	N46° 9'57.12"	W64°31'58.13"	11	**Scoudouc River** – Off Scoudouc River Road, accessed through property (156 Scoudouc River Rd.), marked trail through the woods, down the field.
Scd F	N46°10'50.52"	W64°30'17.78"	13	**Scoudouc River** - On Pellerin Rd., (off Lino rd.), culvert located 3.84 km down the road.
****Scd H**	N46°12'12.32"	W64°34'55.49"	17	**Cornwall Brook** - Off Promenade Harbour View, (Seaside Chevrolet Dealership), accessed through farmer's property, brook crossing on the first road to the left

*ScdE-2 - formerly known as ScdE
**ScdH - formerly known as ScdG

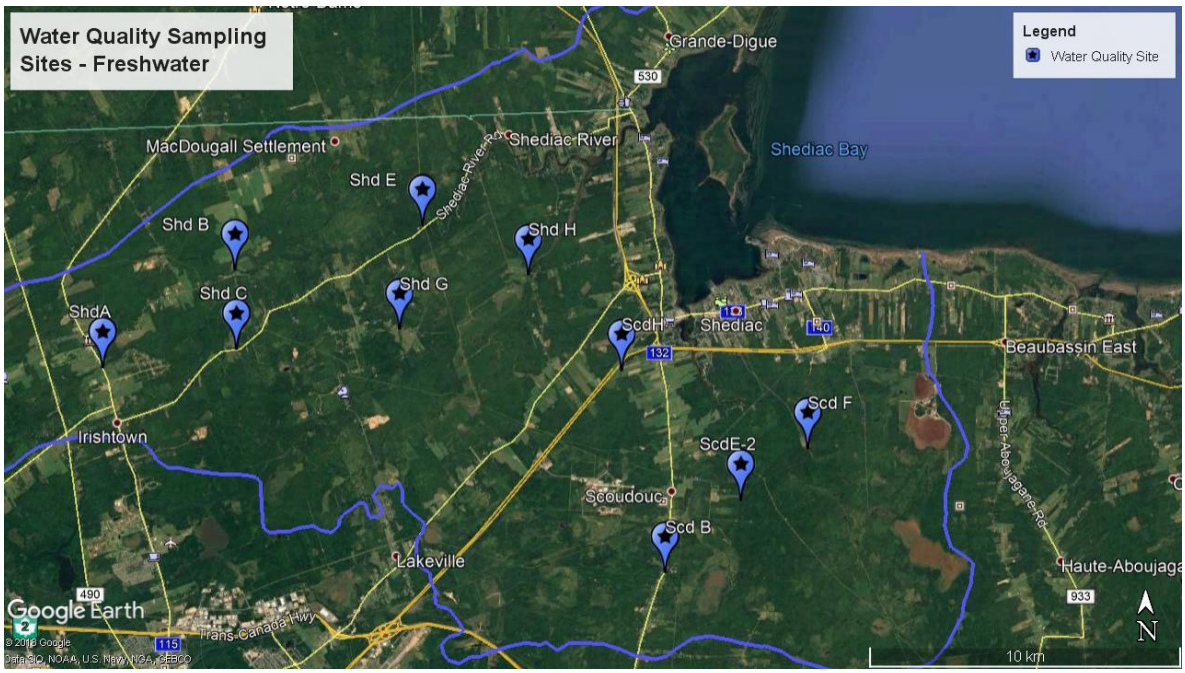

Figure 2: Water Quality Sampling Sites – Water Classification Stations

2.1.2 Bacterial Sampling Summary

The bacterial levels measured in the 2017 sampling of the Shediac and Scoudouc River are relatively very good.

For the Shediac River, there is only one sample that surpasses the 400 MPN/100 mL limits; the site ShdA in June (980.4 MPN/100 mL). There was no rainfall in the 24 hours prior to the sampling in June. The only occurrence of light rainfall (> 5 mm) in the 24-hour period prior to a sample was in the month of September.

For the Scoudouc River, there is only one sample that slightly surpasses the 400 MPN/100 mL limits; the site ScdB in July (488.4 MPN/100 mL).

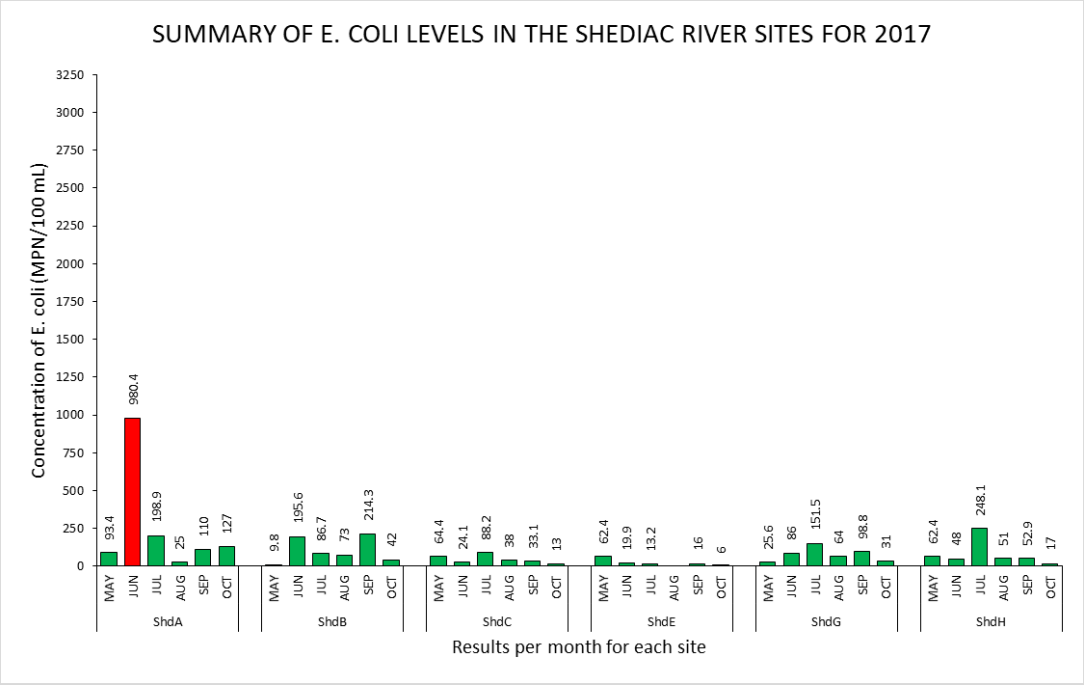

Figure 3: Summary of water quality results for E. coli, Shediac River sampling 2017

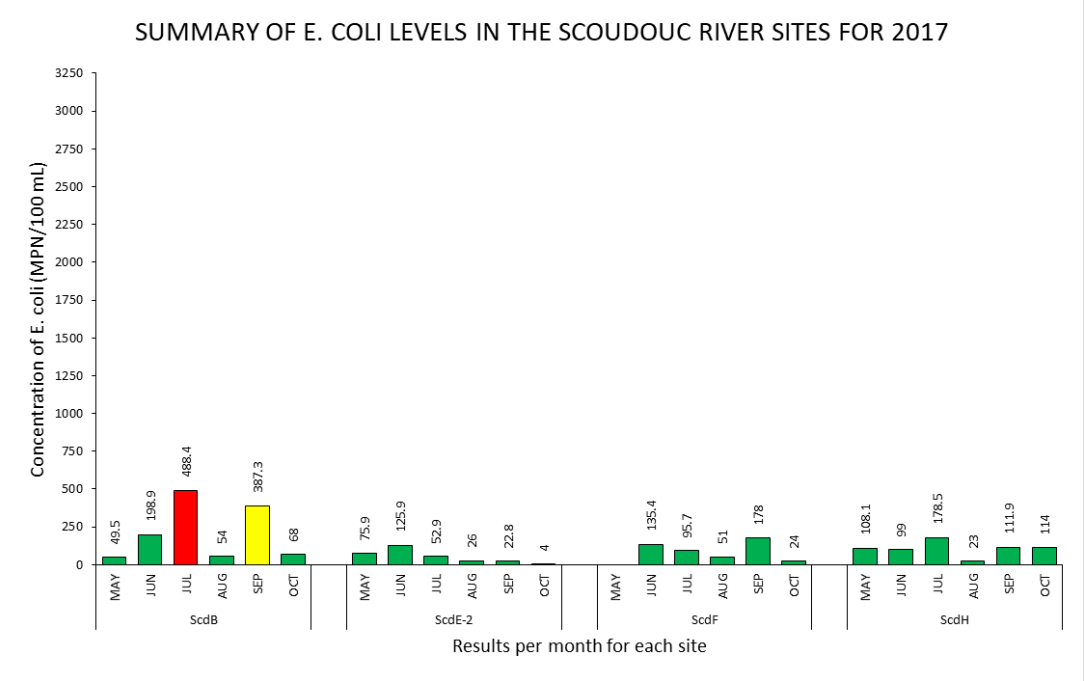

Figure 4: Summary of water quality results for E. coli, Scoudouc River sampling 2017

2.2 Small Tributaries of the Shediac Bay

The SBWA has expanded the water quality sampling program in 2017 to evaluate the smaller tributaries of the Shediac Bay. These small brooks have never been assessed for water contaminants or evaluated for surrounding land uses and buffer zones. Due to the rise of concern for the health of the Shediac Bay, 11 new sites were added along the coastline from Boudreau-Ouest to Grande-Digue, to assess possible bacterial and contamination sources.

For the full detailed report on this project (full bacterial, nutrient and inorganic sampling results), please visit our website www.shediacbayassociation.org, report title **"Evaluation of the Health of the Shediac Bay, 2017"**, in **Reports and Archives**.

2.2.1 Site Information

The following describes the sample site information for the 11 new water quality monitoring stations established in 2017.

Table 2: Water Quality Monitoring – Small Streams Site Information

Site ID	Latitude	Longitude	Elevation (m) Google Earth	Brook Name	Location Description
WQ-1	N46°13'24.19"	W64°28'30.36"	10	Unnamed Brook	907 route NB-133, Boudreau-Ouest, Dirt Road after this address, going through the field (sample upstream of the culvert)
WQ-2	N46°13'35.25"	W64°29'48.39"	9	Unnamed Brook	725 route NB-133, Boudreau-Ouest (sample upstream from culvert)
WQ-3	N46°13'18.25"	W64°31'30.94"	13	Unnamed Brook	482 Main st, Shediac, In front of Shediac Bakery (sample upstream of culvert)
WQ-4	N46°13'11.25"	W64°32'56.17"	3	Unnamed Brook	Shediac Town Hall, 290 Main st, sample downstream culvert
WQ-5	N46°13'22.17"	W64°33'58.17"	8	Unnamed Brook	Park at Atkinson Court, walk on Route 133 (sample upstream from culvert)
WQ-6	N46°14'23.90"	W64°34'2.29"	8	Unnamed Brook	Park at Old Mill Rd (Sample upstream from culvert)
WQ-7	N46°14'43.38"	W64°34'7.29"	3	Unnamed Brook	Brook flows between Bay Vista Lodge at 3521 Route 134, Shediac Cape, (sample upstream from culvert)
WQ-8	N46°15'11.99"	W64°34'14.01"	1	Unnamed Brook	In front of Dr. Chiropractor, 3694 Route NB-134, Shediac Cape, (sample upstream of culvert)
WQ-9	N46°16'41.70"	W64°35'13.77"	1	Albert-Gallant Brook	2487 Shediac rd, (sample downstream from culvert due to beaver flooding)
WQ-10	N46°17'8.24"	W64°34'29.13"	3	Unnamed Brook	Brook is after Antoine Rd, Grande-Digue, (sample from upstream of culvert)
WQ-11	N46°17'52.15"	W64°33'18.27"	1	Unnamed Brook	Brook is before on your left of Chemin des Sœurs, Grande-Digue, (sample from upstream of culvert)

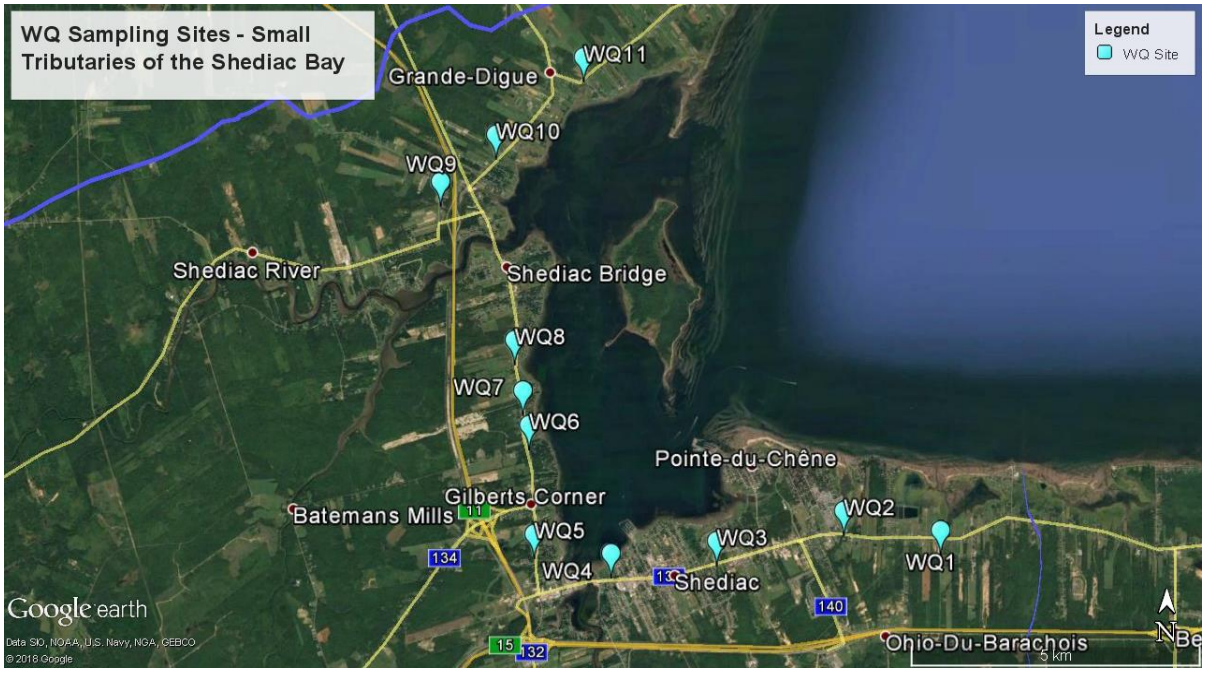

Figure 5: Water Quality Sampling Sites - Small Streams

2.2.2 Bacterial Sampling Summary

The bacterial levels in some of the small streams sites shows the need for more investigation around land uses. Valuable data has been collected in 2017 and will be used in the planning of future studies and remediation action plans.

The sites that did not surpass the 400 MPN/100 mL limits in 2017 are; WQ-1, WQ-2, WQ-4, WQ-5, WQ-7 and WQ-9. The sites WQ-3 and WQ-6 both had only one instance of bacterial spike in the month of July. There was no rainfall in the 24 hours prior to the sampling of July. The only occurrence of light rainfall (> 5 mm) in the 24-hour period prior to a sample was for the months of June and September. Based on the bacterial levels alone, the sites demanding further investigation are; WQ-8, WQ-10 and WQ-11.

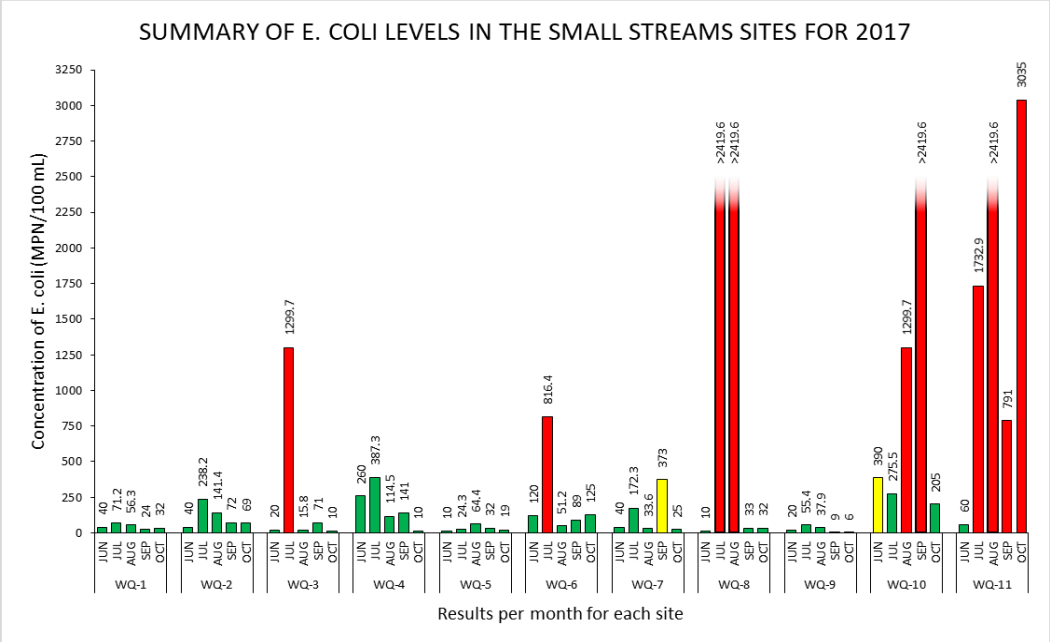

Figure 6: Summary of water quality results for E. coli, small streams sampling 2017

2.3 CABIN (Community Aquatic Biomonitoring Network)

The addition of biomonitoring through the use of macroinvertebrate sampling (CABIN) adds valuable data to our water quality monitoring. By creating a baseline data of macroinvertebrate ecosystems at various sites, we will be able to observe changes in the ecosystem if there are changes in water quality. The use of biomonitoring will help us determine the environmental impacts of climate change, and activities such as urban development, road works, one-time pollution events or long-term pollution impacts. For more information on the CABIN sampling data, please visit our website www.shediacbayassociation.org, report title and view the report **"Improving water quality in the Shediac and Scoudouc Rivers, 2017"**, in **Reports and Archives**.

3 Salmon Conservation Program

3.1 Electrofishing Surveys

Fish population surveys by means of backpack electrofishing have demonstrated exciting results in 2017. This year, three electrofishing surveys were conducted at the same sites established in 2016. Two sites are in the Shediac River, and one in the Scoudouc River. These sites were chosen because they possess habitat characteristics that favour the development of early life stages of Atlantic salmon (*Salmo salar*).

Future goals of restocking and drafting a watershed management plan around Atlantic salmon, brings the need for better information on population numbers and trends in the Shediac Bay catchment basin. The SBWA and Vision H2O of the Cap-Pele Watershed formed a partnership this year to conduct electrofishing surveys on both watersheds. An electrofishing permit was acquired under Section 52 Fishing for Scientific Purposes (SG-RHQ-17-029) from the Department of Fisheries and Oceans Canada.

The Atlantic salmon caught during these surveys are juvenile salmonids, ages ranging between young of the year (0+) to approximately 3-4 years of age.

- In the Weisner Brook, a total of 14 Atlantic salmon and 5 brook trout
- In the McQuade Brook, an amazing total of 38 Atlantic salmon and 11 brook trout
- In the Scoudouc River, a very impressive total of 67 Atlantic salmon and 1 brook trout

For more information on this project, please visit our website for the full report “Fish Habitat Restoration, Evaluation Restauration and Education for the Salmonid populations in SBW-Final Report 2017 Final”, in Reports and Archives.

Figure 7: The SBWA and Vision H20 working together to conduct electrofishing surveys, 2017

Figure 8: Atlantic salmon parr, 2017

3.2 Water temperature loggers

This part of the project is done in partnership with the "*Institut national de la recherche scientifique*" (INRS) in the province of Quebec. In 2016, the SBWA received 3 loggers from INRS to be installed in major tributaries. In 2017, the SBWA purchased 4 additional loggers of the same type (HOBO light pendants), and placed them in strategic locations to monitor temperature fluctuations. Having a total of 7 loggers, the strategy was to monitor temperatures in areas determined to be high risk for thermal stress in juvenile salmonids, and to monitor areas that are determined to be cold zones suitable for thermal refugia.

To see the temperature charts for each monitoring station, please visit our website www.shediacbayassociation.org for the full report **"Habitat Evaluation, Restauration and Education for the Salmonid populations in the Shediac Bay Watershed, 2017"**, in **Reports and Archives**.

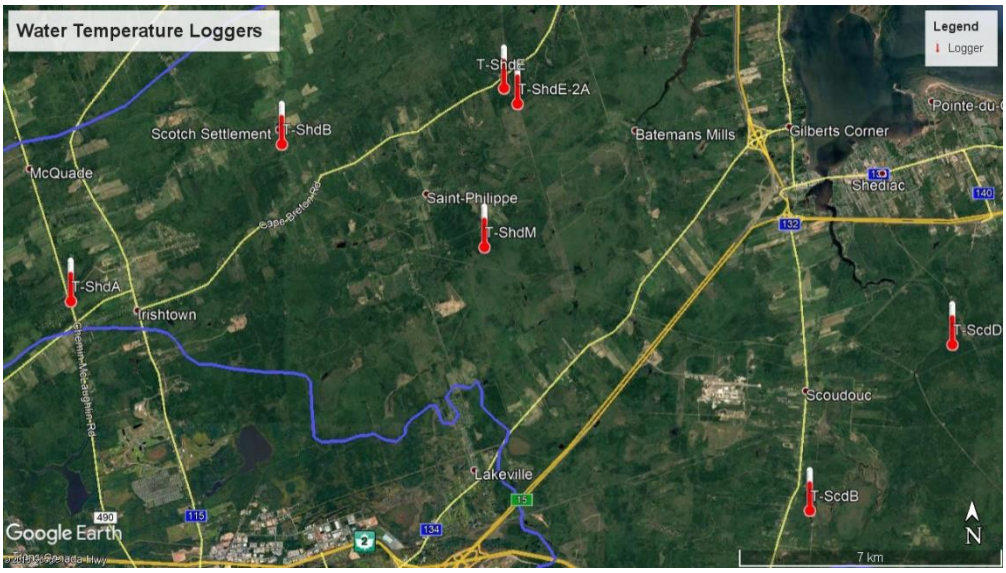

Figure 9: Map of temperature logger placement in the Shediac Bay watershed, 2017

3.1 Redd count survey

The SBWA conducted a redd count survey for the first time in order to identify salmon spawning habitat in the Shediac River. Only one surveys was done as a test site, the location chosen is in the higher reaches of the Shediac River, off Cape-Breton Road near Irish Town. The team walked the river, carefully scanning the substrate for any signs of depressions in the substrate, with small mounds of gravel downstream of the nest (tailspill slope). A total of 14 possible salmon redds were found within the 600 m survey. There is the possibility of false redds, where a female began building a nest, but for whatever reason, moved on to build another more suitable redd for her eggs. This information will be added to the management plan and used for eventual restocking strategies.

4 Wetland Evaluation and Enhancement

In 2017, the Shediac Bay Watershed Association (SBWA) evaluated four different wetlands using the *Wetland Ecosystem Services Protocol for Atlantic Canada* (WESP-AC) of a total of 14.3 acres. The evaluation sites were: the Bateman Mill Marsh, the Lac des Boudreau Marsh, the Shediac River Road Marsh and the Cornwall Brook Marsh. WESP-AC is a standardized method that attributes scores (Lower, Moderate or Higher) to rate various natural functions and benefits of a wetland. The evaluation of the four sites revealed that even though they were all subject to human disturbances, they all appear to exhibit healthy natural self-regeneration capacities. The assessment showed that all the evaluation sites would support anadromous fish (FA), amphibian and turtle habitats (AM) which allows opportunity for possible future projects such as population monitoring, population restocking and habitat restoration.

The SBWA also did restoration work at three wetland sites this year. The three sites were the Cornwall Brook Marsh, the Ocean Campground Marsh and the Ohio Road Marsh. Volunteers helped plant some of the trees at the Ohio Road Marsh during a TD Tree Day event. A total of 634 native trees were planted for buffer zone enhancement and bank stabilization in wetlands in 2017.

Figure 10: Wetland and tree planting, Cornwall Brook 2017

5 Habitat enhancement

Three sites were selected for habitat enhancement, funded by the Recreational Fisheries Conservation Partnership Program by the Department of Fisheries and Oceans Canada, the New Brunswick Wildlife Trust Fund, the NB Environmental Trust Fund and the Atlantic Salmon Conservation Foundation. The sites selected for rehabilitation and clean-up were the Scoudouc River, the Cornwall Brook and the unnamed brook on Ohio Road.

For more details on this project, please visit our website for the full report **"Fish Habitat Restoration, Evaluation and Education for the Enhancement of Salmonid Populations in the Shediac Bay Watershed, 2017"**, in **Reports and Archives**.

5.1 Unnamed Brook Ohio Road/Cap-Brulé

An unnamed brook that crosses Ohio Road and flows into the Shediac Bay between The Bluff and Cap-Brûlé, was the subjects of a stream assessment survey in the fall of 2016. The survey revealed mainly trash and sections that would benefit from alder trimming and debris clearing. Only 6 landowners were able to be reached and gave permission for alder maintenance on their property. A build-up of fallen trees and woody debris was cleaned, and alders were selectively cut using manual tools (distance cleaned 140 m).

Trash cleanup began from Ohio Road and ended at rue Cartier. A total of 130 kg (0.13 Metric Ton) of trash was removed from a 345 m section of the brook. Trash found in the brook consisted of: tires, road signs, road construction cones, bottles and cans, and other assorted plastics and scrap metal. Trash was brought to *Eco360* sanitary landfill.

Figure 11: Map of the alder trimming and cleanup, unnamed brook Ohio Road/Cap-Brulé 2017

Figure 12: Woody debris and trash cleanup, 2017

5.2 Cornwall Brook

The Cornwall Brook stream assessment survey of 2016 revealed clusters of alder overgrowth, fallen trees and debris pile-ups as well as severe bank erosion on each side of the brook. A lack of buffer zone, especially at an area of the stream where an agriculture field began, was identified around the Cornwall Brook. There was a selective trimming of alder overgrowth clusters and debris cleanup done at the site on a distance of 150 m upstream of the road, and 270 m downstream.

The SBWA team used the wood that was cut from the alder trimming and the debris cleanup to build 8 waddle fences each side of the stream. Waddle fences are built by weaving branches around wooden posts hammered in the soil, and filling the back with additional wooden debris. These structures help to protect the banks from further erosion and will also capture sediment over time and rebuild the eroded banks. An additional benefit of the waddle fences is the creation of shelter for fish.

To further help protect the eroding banks, native trees were planted along the stream. Native trees were also planted where an agricultural fields began next to one part of the stream to establish a healthier buffer zone. The SBWA team planted a total of 231 native trees around the Cornwall Brook.

Figure 13: Before photos of a debris cleanup, Cornwall Brook 2017

Figure 14: After photos of a debris cleanup, Cornwall Brook 2017

Figure 15: Before and after photos of the construction of waddle fences, Cornwall Brook 2017

Figure 16: Waddle fencing and trees planted along the Cornwall Brook, 2017

5.3 Scoudouc River

An area in the Scoudouc River was selected for remediation due to erosion and sedimentation problems surrounding sensitive salmon habitat. The site is surrounded by ATV trails and is a popular stop of the annual Scoudouc River canoe and ATV run. The primary trail was causing heavy sediment to runoff in the river after rainfall events. The site is also impacted by erosion problems. The section of ATV trail in question is aligned with the Scoudouc River and has a steep slope, which causes sediment-filled runoff to flow down into the river. The purpose of the restoration work is to control sediment runoff and stabilize the eroding banks, using biotechnical techniques.

The first step was to widen the trail to allow the excavator to come in to do its work. Members of the Scoudouc ATV Club volunteered to help clear cut a small section of trees on the right-hand side of the trail. The excavator began its work by rebuilding the trail to reduce the slope, shifting the soil in several bulldozing passes. Next, four large cross-slope trenches were dug along the trail. Machinery work was done over two days. Trees of similar diameters were selected and cut to serve as channel stabilizers; they were anchored in the trenches using steel rebar (3-feet in length). Once the logs were installed along each trench, strips of geotextile material was stapled along the logs to prevent water from eroding the soil beneath them. Rocks found on site were used to weigh down the geotextile material on the ground. Fall rye seeds were spread over the entire area where soil was disturbed by machinery, to minimize the impact of the work. Trees were replanted along the area cleared for the work and around the riverbanks. A total of 134 native trees were planted.

New signage was designed and installed in various sections where there is ATV activity, in order to educate recreational users of the trail that this area is a sensitive habitat for early life stages of Atlantic salmon.

Figure 17: Map showing where restoration work was done at the Scoudouc River in 2017

Figure 18: Before photos of the restoration area of the Scoudouc River, 2017

Figure 19: Work photos of machinery on the ATV trail, Scoudouc River 2017

Figure 20: Photos of the sediment deflector logs at the Scoudouc River restoration site, 2017

Figure 21: Before and after photos of the main ATV trail restoration, 2017

Figure 22: Photos of the signage installed along the Scoudouc River restoration site, 2017

6 Freshwater Mussels: Rare Brook Floater Mussels

The SBWA continued its quest in the search for the rare brook floater mussel within the boundaries of the Shediac Bay Watershed. During the spring, summer and fall 2017, 10 km of habitat was surveyed or searched for the freshwater mussel. A new partnership with the *Department of Fisheries and Oceans Canada* was formed in 2017 to conduct *Environmental DNA* (e-DNA) sampling for the first time, in an attempt to detect Brook Floater mussels in select sites in the watershed. Unfortunately, no brook floaters were found during the surveys, nor was it detected during the e-DNA sampling.

A new poster was developed on freshwater mussels, their life cycle and on the species at risk. The poster was professionally designed and will be used to complement presentations and communications with stakeholders. The poster was developed in French and English.

The results of each standardized time-search survey, descriptions of all areas searched with habitat descriptions and water quality data, as well as photos and detailed maps, can be found in the final report **"Identifying Habitat of the Brook Floater in the Shediac Bay Watershed, 2017"**, in **Reports and Archives** on our website.

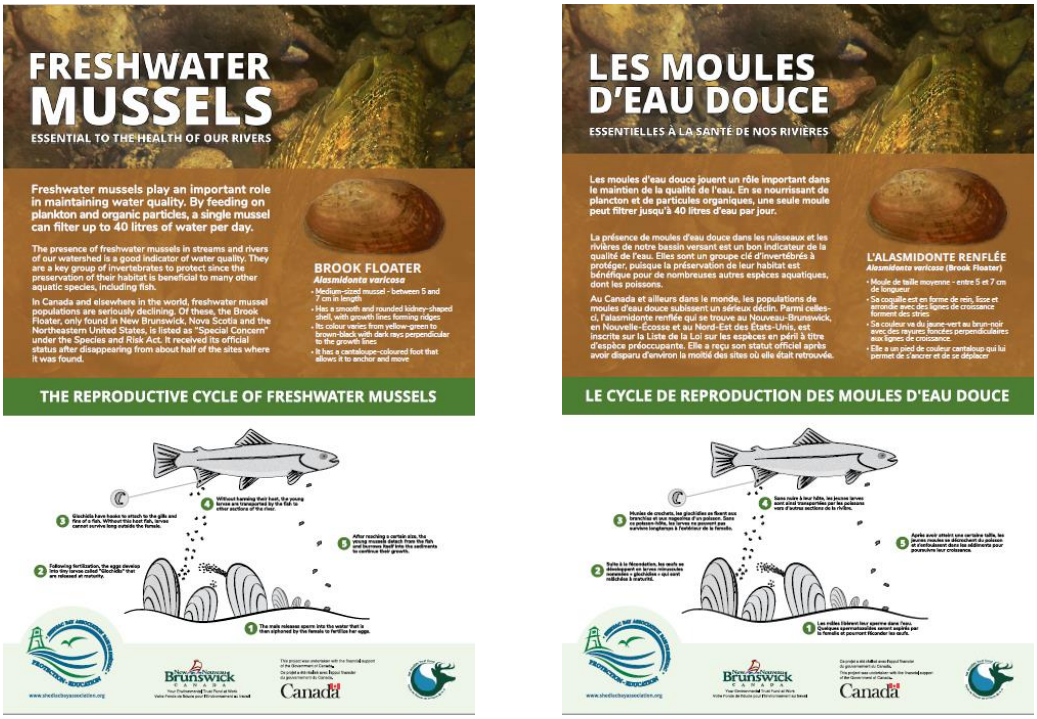

Figure 23: New educational tool – Freshwater Mussel Poster, 2017

7 Groundtruthing Surveys in the Shediac River

In partnership with *Nature NB*, the SBWA conducted groundtruthing surveys to verify the precision of the data displayed on their watershed mapping layers. The map developed for the Shediac River Watershed displays watercourses, wetlands, and various land uses such as agriculture and forest losses due to logging activity. In total, approximately 3 km of the Shediac River was assessed under this part of the project.

Other important data was gathered that will help in future actions within the greater watershed management plan, such as;

- Areas with severe erosion, that might be subject to future stabilization projects;
- ATV crossings causing damage;
- Old garbage dump sites needing cleanup;
- Habitat data such as substrate types, areas with a lot of riffles and deep pools important for fish, suitable areas for future surveys, such as red counts and CABIN samplings.

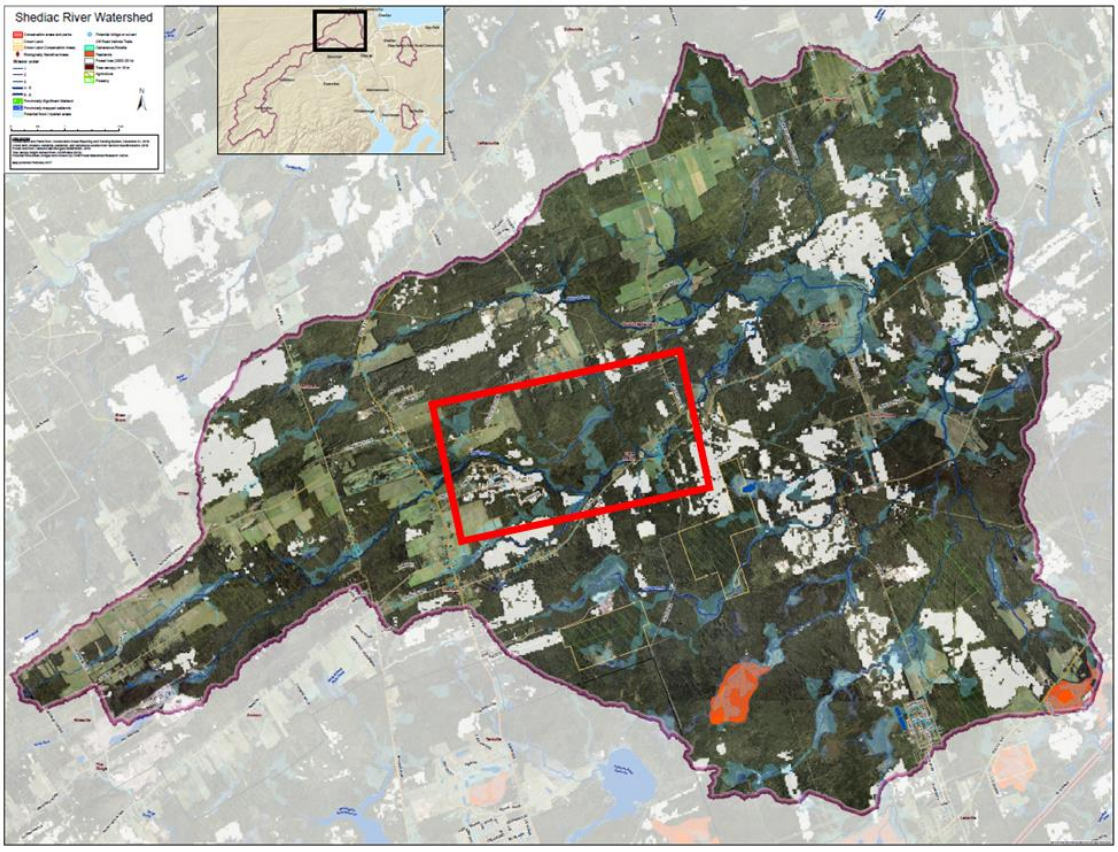

Figure 24: Map of the Shediac River Watershed, *Nature NB* February 2017

8 SeagrassNet Eelgrass Monitoring

The SeagrassNet program is a global seagrass monitoring network that monitors the status of seagrasses and the threats to these ecosystems. The program started in 2001, and now includes more than 126 sites in 33 countries.

The Southern Gulf of Saint Lawrence Coalition on Sustainability (Coalition-SGSL) has implemented the SeagrassNet program in Atlantic Canada since 2015. They have provided equipment and training to the SBWA for the monitoring program to begin in the Shediac Bay. The first site was established in the estuary of the Scoudouc River in 2016, and a second site was established in the Shediac River estuary in 2017.

The data collected from these annual surveys will serve to measure changes in eelgrass densities in these sensitive habitats. Since the first appearance of the invasive green crab in the Shediac Bay in 2010, population monitoring has shown a trend of constant increase in their numbers. The green crab is an invader is capable of devastating eelgrass habitats. The SeagrassNet program provides a protocol to measure the impacts of the green crab in the Shediac Bay.

For the full detailed report on this project, please visit our website www.shediacbayassociation.org, report titled **"Evaluation of the Health of the Shediac Bay, 2017"**, in **Reports and Archives** on our website.

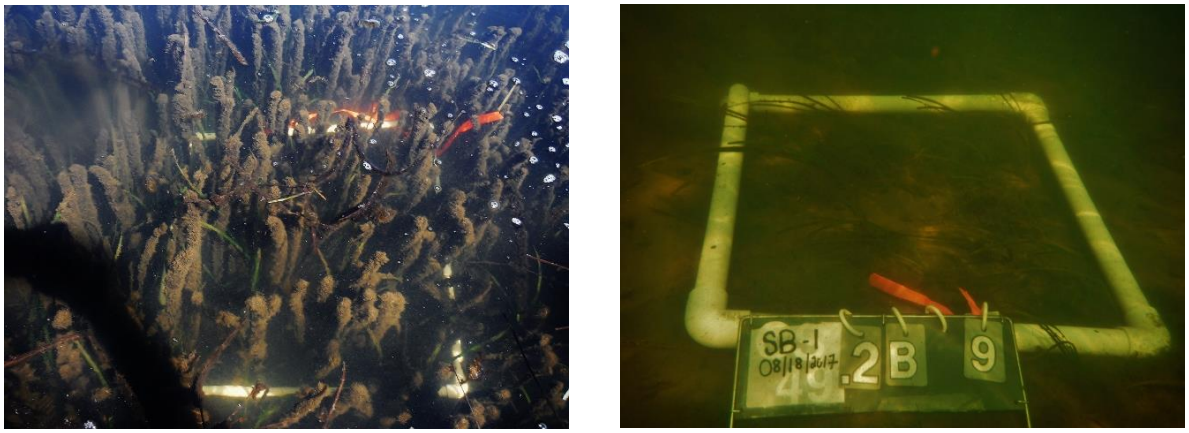

Figure 25: Photo of Shediac Bay, sampling quadrant in the Scoudouc River (Left) and Shediac River (Right) estuaries

9 Community Aquatic Community Program

The SBWA continued its partnership with DFO after 13 years of monitoring fish populations in the estuaries of the Shediac Bay Watershed. From June to August of 2017, 12 sites in total were monitored using the Community Aquatic Monitoring Program (CAMP) This is a long-term monitoring program aiming to study ecosystem evolution and changes over time. Data collection is expected to continue in the 2018.

Figure 26: DFO Community Aquatic Monitoring Program (CAMP), 2017

10 Green Crab Monitoring

The regular green crab monitoring program continued in 2017, to collect data on population trends of this unwanted invasive species. The numbers were slightly lower than in 2016, where we saw an explosion in population compared to 2015. The monitoring is scheduled to continue in 2018 as planned.

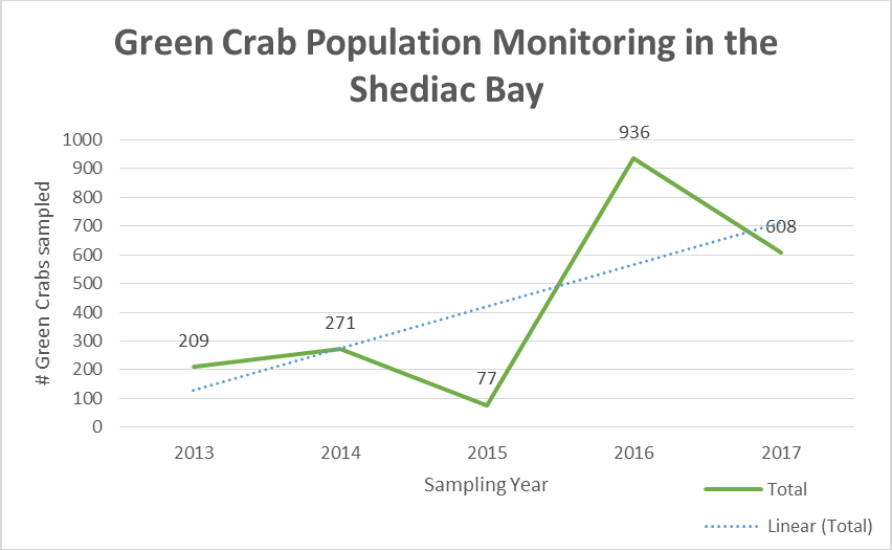

Figure 27: Green crab sampling results 2013 - 2017

11 Tern Nesting Platform

The Shediac Bay Watershed Association (SBWA) has established an artificial nesting platform for the Common Tern (*Sterna hirundo*) seabird colony of the Shediac Bay. This project was made possible thanks to the support from Environment and Climate Change Canada, and the province of New Brunswick.

A first experimental platform was built in 2014, and with a successful couple fledging three chicks, continued with more funding in 2015. The second piece of the platform was built using boat docks, provided by the Shediac Bay Marina. The platform was then filled with gravel, sand and fitted with rows of triangle-style shelters. A portion of the Shediac Bay colony has adopted the artificial habitat to lay their eggs and raise their chicks.

However, in 2016, a predator attack has brought the need for improvements to the structure. In 2017, predator guards made of sheet metal was installed to protect the nests from terrestrial predators from being able to climb aboard. This year was another great success for approximately 50 nesting couples. The details of this year's improvements and the nesting survey results of each year the platform has been in operation can be found in the report titled **"Evaluation of the Health of the Shediac Bay, 2017"**, in **Reports and Archives** on our website.

Figure 28: Tern Platform improvements (predator guards), 2017

12 Water Conservation and Stormwater Management

The education program of the SBWA's has been focused on the theme "Water Conservation & Stormwater Management" over the last 2 years. Those two major categories revolves around the topic of climate change and the need for adaptation. The climate change predictions for the Maritime Provinces, as described by the Department of Environment and Local Government of New Brunswick; "Wetter, Warmer and Stormier". The predictions include an increase in the frequency and severity of heavy rainfall events, which will inevitably cause greater risk of erosion, stress on infrastructure, runoff and flooding. (Government of New Brunswick, 2018)

These changes in our climate brings the need for adaptation using various methods of stormwater management. An important component of this project is to speak about climate change, explain various methods to manage the increase of stormwater runoff at the municipal and domestic level, and implement concrete actions of stormwater management. The focus of these methods has been on rainwater catchment systems (rain barrels) and rain gardens, being the most affordable and effective small scale actions.

12.1 Rain Garden

A new rain garden was built in a public park (Centennial Park) in the Town of Shediac, in the summer of 2017. The garden was placed in a strategic location for both filtration of runoff that eventually flows into the bay, and is also next to a path with heavy foot traffic heading towards the shopping centre of Shediac. The garden was built in a low level of the park where the surface water drains toward a ditch that feed into a small brook. This small brook gets channelled under the city and exists into a coastal wetland, before then being emptied into the Shediac Bay. The Centennial Park includes: a playground area for children (with sand surfaces), a paved skate park area, a paved walking path, a gazebo structure, and a gravel dog park.

The new garden was made with the help of the Town of Shediac for disposal of the top soil, and *EOS Eco-Energy*, who was hired to plan the logistic of the construction of the garden. Plants, shrubs and trees were sources from local nurseries. An interpretation panel has been installed along the walking path.

Figure 29: Rain garden construction photos, 2017

12.2 Rain Barrel Giveaway

Since the beginning of this project in 2016, 100 collapsible rain barrels (200L) have been distributed to citizens living within the communities in the Shediac Bay watershed boundaries. In addition, a public workshop titled "How to build your own rain barrel" was held in 2016, and 16 food grade plastic barrels (200L) were given to the workshop participants.

The collapsible rain barrels were purchased in bulk through the local Kent. The kiosk at the Shediac Farmer's market was a crucial tool for the recruitment of people interested in participating in the project. The conditions for receiving a rain barrel were:

- People must live in or near the boundaries of the Shediac Bay watershed
- They needed to sign an agreement confirming they understood the reasons for the project and promised to install the rain barrel

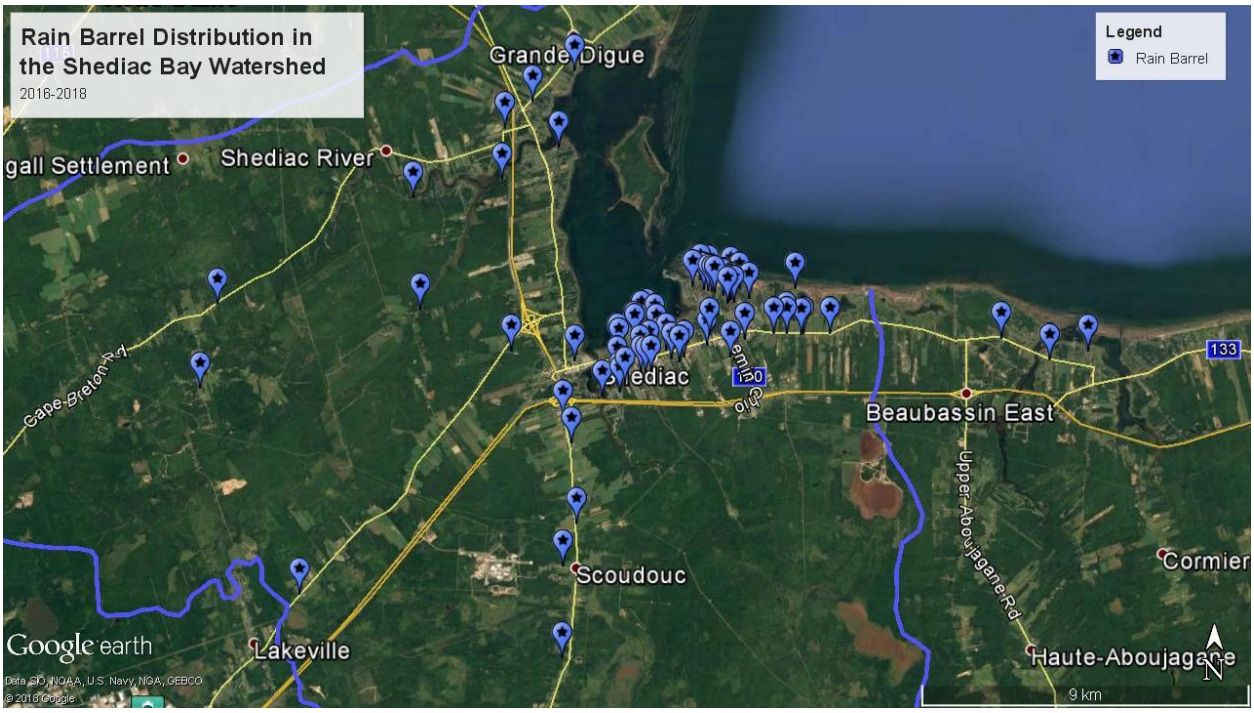

Figure 30: Map of rain barrel recipients within the Shediac Bay Watershed, 2016-2018

12.3 Water Conservation Kits

The SBWA has given out 100 water conservation kits in the first 2 years of the "Water Conservation and Stormwater Management" project; 43 in 2016 and 57 in 2017. The orders were placed with the local Kent store, who was able to provide bulk orders at reduced cost on products from the *EcoFitt* distributor. The items for the conservation kits include:

- 3 L toilet tank bank
- Faucet aerator for the kitchen sink
- Faucet aerator for the bathroom sink
- Leak detection tablet for the toilet reservoir
- Basic 5-minute shower timer (hourglass type)

The items were placed in a reusable bag with the SBWA logo, and included an instruction sheet and a pamphlet. They were given away at the Shediac Farmer's Market to local residents only, to participants of the rain barrel workshop (2016), to recipients of rain barrels, and in schools following a presentation.

Figure 31: Water Conservation Kits given away in 2016-2018

13 Environmental Management, Outreach, Education and Engagement

The Shediac Bay Watershed Association has expanded its education program in 2017-18, thanks to the support of the Environmental Trust Fund and other funding partners. Regular annual activities such as public tree planting events were continued and new school programs and presentations have been developed. The result is that the Association has a greater presence in local schools and in the public eye. The SBWA was also available for special events and presentations when invited.

13.1 Beach Sweep

In celebration of World's Oceans Day, a public beach sweep event is organized every year by the SBWA, in partnership with the Town of Shediac. This activity aims to combat marine litter, to raise awareness, and contribute to the protection and conservation of our marine environment in the Shediac Bay. The event was advertised to begin at the Homarus Eco-Centre, at the Pointe-du-Chêne wharf on Saturday, June 10, 2017.

It was a beautiful warm sunny day, and 19 volunteers showed up to pick up trash along the coastline of the Town of Shediac. People were directed to different parts of the coastline in order to cover as much ground as possible. There were designated drop-off points for their garbage bags, which would then be picked up by staff of the Town of Shediac. A trash inventory was done on the 15 large garbage bags brought back to the Homarus Eco-Centre. It is not a surprise that the items found in greater quantities includes cigarette buds, food wrappers, plastic bags, Styrofoam, cans, bottle caps, etc. Surprisingly, a 20$ bill was found amongst the rocks of the Pointe-de-Chêne wharf. The cash was donated to the SBWA by the volunteer who found it. Based on volunteer feedback an estimate of 4.1 km of coastline was cleaned that day.

Figure 32: Some of the garbage that was picked up at the Annual Beach Sweep June 10, 2017

13.2 Public Tree Planting Events

Every year, the SBWA organizes or assists in public tree planting events around the municipalities within the watershed boundaries, in either public parks or school grounds. This section provides a summary report on the trees planted in 2017.

13.2.1 TD Tree Day

For the third consecutive year, the SBWA has partnered with the TD Tree Day environmental fund and the Town of Shediac to organize a public tree planting event on October 15, 2017. With the help of approximately 25 wonderful volunteers and SBWA staff, 150 native trees were planted in the Ohio Road Marsh. At the beginning of the event, a quick word of introduction was given to the group about the history of the site, having received flooding damage in the past that effectively destroyed the buffer zone, and the importance of replenishing the lost trees to enhance the habitat and protect the sensitive ecosystem.

Figure 33: Group photo of the 2017 TD Tree Day volunteers

13.2.2 Celebrating Canada`s 150th-Tree Canada

In celebration of Canada's 150th anniversary, the Town of Shediac organized a public tree planting event in partnership with Tree Canada. The goal was to plant 150 native trees on the school grounds of the MFB elementary school. The SBWA was asked to assist with the facilitation of the event; ensuring proper planting of trees, providing shovels, placement of trees, etc.

Figure 34: Volunteers planting trees, #Canada150

13.2.3 Tree Planting of the Grande-Digue Elementary School

The *Groupe de développement durable du pays de Cocagne* organized a tree planting event at the Grande Digue School on May 29, 2017. The students from the 6th to the 8th grade all took turns coming outside to plant trees along their school yard. SBWA was asked to provide help in teaching kids how to plant trees, to provide equipment, etc.

Figure 35: Photos of the tree planting event of the Grande-Digue Elementary School, 2017

14 General Presentations

The SBWA is always available to do presentations to the general public, organize workshops and meetings with various other groups. The following section will summarize the activities and meeting for the 2017 fiscal year.

14.1 Presentation to the Town of Shediac

On December 4, the SBWA Manager and President of the SBWA Board of Directors gave a presentation to the Town of Shediac Council members on the various projects of the SBWA. These meetings are important to maintain a good working relationship with the Town of Shediac. These annual presentations keep the council members educated and up-to-date on the strategy that the watershed group is taking to help protect the water quality in the Shediac Bay, mainly the focus on surface water management. These are also opportunities to talk about obstacles and challenges the Association faces, and opens the discussions for ways the Town's employees may be able to help.

14.2 Rotary Club

The manager of the SBWA gave a presentation on the 2017 projects to the Shediac Rotary Club, on August 15. Approximately 20 people were in attendance.

https://portal.clubrunner.ca/658/stories

14.3 Nature NB' "Nature Festival"

During Nature NB's *2017 Festival of Nature* at the Kouchibouguac National Park, the Manager of the SBWA was requested for a guided nature walk and a presentation on the Acadian Forest. The event took place on June 4th, and approximately 20 people participated in the activity, that were mainly families with children.

14.4 Biodiversity Day in Cocagne

In celebration of "International Day for Biological Diversity" on May 22, the *Pays de Cocagne Sustainable Development Group* organized an event at the Cocagne Marina. The activities included four guest speakers on the topic of biodiversity conservation and enhancement in the region. The SBWA was invited to set up its kiosk with displays on our own work on biodiversity.

14.5 Presentation to "Les Ami.e.s de la Nature du sud-est N-B"

The president of the SBWA Board of Directors gave a presentation on the rain garden project to the group "Les Ami.e.s de la Nature du sud-est du N-B" on November 1, 2017. His presentation contained photos of the construction of the rain garden. He spoke of the impact of stormwater on the bacterial levels in the Shediac Bay and the effort of the SBWA towards implementing water quality enhancement measures. Approximately 25 members of the group were present that evening.

Figure 36: Presentation to "Les Ami.e.s de la Nature du sud-est du N-B"

15 School Presentations Series

The SBWA has been working on strengthening the working relationship with local school teachers and on the development of yearly standardized programs. The working relationship with the teachers of the 6-8th grade of Shediac Cape School over the past 3 years has led to the development of a series of presentations that links science curriculum objectives and outcomes to local environmental issues. The main focus of these presentations revolves around water quality, water conservation, and climate change.

The annual educational programs includes; Fish Friends with the younger age groups (3-4th grade), and Adopt-A-River with the 6-8th grade students. A new program began in 2017 with MFB School, Shediac Cape School and Grande-Digue School, which includes the creation of 3 tree nurseries on school grounds or near school grounds (Greater Shediac Community Garden location for Shediac Cape School). The following sections report on activities and results for the 2017-2018 education program.

15.1 Fish Friends Program

In March of 2017, the "Fish Friends" program began with the 3rd graders at MFB and the 4th graders at Shediac Cape elementary schools. Both aquariums received a total of 600 brook trout eggs from the Miramichi Salmon Conservation Centre (Miramichi Hatchery).

During the course of the program, from March to June, all four classes engaged in the program received various presentations on salmonids, various stages of their life cycle, habitat requirements, their great migration, etc. The program ended with a field trip to the Dionne Brook in Scoudouc, for the release of the fish.

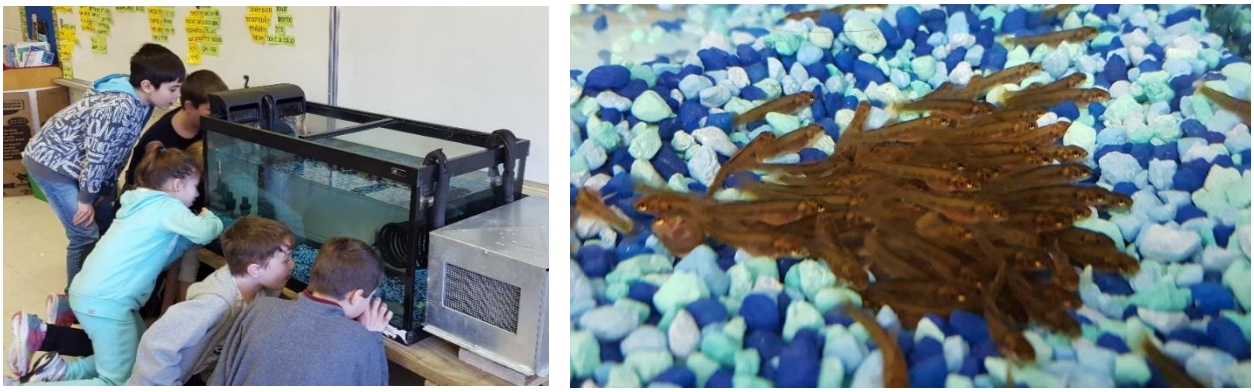

Figure 37: Classroom Aquarium

Figure 38: Fish Friends field trip Shediac Cape School and MFB School, release of brook trout in Dionne brook, 2017

15.2 Tree Nursery Program

A new program began this year with local schools to build tree nurseries in the school yards, as an educational tool to teach kids about trees and to be used as a resource for tree planting for riverside restoration in the future. The SBWA contracted the "Groupe de développement durable du pays de Cocagne" (GDDPC), to get the program started due to their expertise and past experience.

Three nurseries were made in 2017: at the Mgr-François-Bourgeois elementary school in Shediac; at the community garden in Shediac Cape, in partnership with the Shediac Cape School; and at the Grande-Digue elementary school. Approximately 150 children from the age group of the 6th to 8th grade from the three schools participated in creating the nurseries, containing 415 young trees and seeds in total.

Figure 39: Tree nursery planting Grande-Digue School, 2017

15.3 Adopt-A-River Program

Adopt-A-River is a school-based program designed to teach the concept of biomonitoring of a river's ecosystem using macroinvertebrate sampling. It also teaches water chemistry using water quality analysis kits for various physicochemical parameters. The program is designed to be integrated into the school's science curriculum.

The SBWA project manager became a certified project coordinator for the "G3E, Education and Water Monitoring Action Group", the organization that created and manages the Adopt-A-River program. The science teachers for grades 6 to 8, English and French Immersion of the Shediac Cape School, have agreed to integrate the program within their normal curriculum in partnership with the SBWA.

A classroom presentation was given before the field trip on the concept of biomonitoring using macroinvertebrates. It was explained how looking at the composition of the community can provide information on water quality, changes in water quality or habitat over many years, and overall aquatic health monitoring. A description of the field trip activities was given, along with a demonstration of the sampling using the equipment in the classroom.

Figure 40: Group Photo of Adopt-A-River Field Trip, 2017

15.4 Classroom Presentations Series

A strong working relationship with the science teachers of the 6-8th grade at Shediac Cape School, has led to the development of 2 new presentations that fits perfectly in the water unit and in the "Water Conservation & Stormwater Management" education program.

The first new presentation is entitled "WATER – Conservation and Climate Change", focuses on freshwater availability on earth, the problems associated with desalination, water consumption in an average Canadian household, how climate change can threaten availability of drinking water, and what they can do to reduce their consumption. Each child received a copy of the pamphlet, and 6 water conservation kits were given with a draw to all three groups, making a total of 18 kits given to the students.

Figure 41: Winners of the water conservation kits from one class, Feb 2018

The second new presentation is entitled "WATER – Pollution, Stormwater Runoff and Water Purification Systems". This presentation taught them the difference between "Point Source" and "Non-Point Source" pollution in a watershed. They learned how precipitations mobilizes bacteria and pollutants from various surfaces and lead to bacterial spikes in the Shediac Bay.

Presentations were finally given to the Environmental Science class at the local high school Louis-J.-Robichaud. The first presentation was an introduction of the SBWA's projects and monitoring programs. The second presentation was on "Water Conservation & Stormwater Management", where it really focused on the impacts of stormwater runoff on the bacterial contamination of the Shediac Bay. Each of the 13 students and the teacher received a water conservation kit at the end of the presentations.

Figure 42: Presentation to LJR High School on Water Conservation and Stormwater Management, with distribution of a free water conservation kit, 2017

Table 3: Summary of Classroom Seminar Series 2017-2018

Date	School	Language	Grade level	Topics	# Students
04/03/2017	Shediac Cape	French Immersion	6-7	Biodiversity	18
04/03/2017	Shediac Cape	English	6-7	Biodiversity	23
04/12/2017	Shediac Cape	English & French Immersion	4	Fish Friends: Alevin	40
04/21/2017	MFB	French	3	Fish Friends: Alevin	22
04/21/2017	MFB	French	3	Fish Friends: Alevin	24
04/21/2017	MFB	French	3	Fish Friends: Alevin	18
05/23/2017	Shediac Cape	English	4	Fish Friends: Salmonids, life cycle	(24)
05/23/2017	Shediac Cape	French Immersion	4	Fish Friends: Salmonids, life cycle	(16)
05/29/2017	Grande-Digue	French	6	Tree Planting Activity with GDDPC	Unknown
05/30/2017	Shediac Cape	English	4	Fish Friends; Salmon Migration	(24)
05/30/2017	Shediac Cape	French Immersion	4	Fish Friends; Salmon Migration	(16)
06/01/2017	MFB	French	3	Fish Friends: Salmonids, life cycle	(22)
06/01/2017	MFB	French	3	Fish Friends: Salmonids, life cycle	(24)
06/02/2017	MFB	French	3	Fish Friends: Salmonids, life cycle	(18)
06/6/2017	Shediac Cape	English & French Immersion	4	Fish Friends: Field Trip Day	(40)
06/08/2017	MFB	French	3	Fish Friends; Salmon Migration	(22)
06/08/2017	MFB	French	3	Fish Friends; Salmon Migration	(24)
06/08/2017	MFB	French	3	Fish Friends; Salmon Migration	(18)
06/15/2017	MFB	French	3	Fish Friends: Field Trip Day	(64)
New School Year					
09/21/2017	Grande-Digue	French	6	Presentation Tree Nurseries	Approx. 50
09/22/2017	MFB	French	7	Presentation Tree Nurseries	Approx. 50
09/26/2017	Shediac Cape	French Immersion	6-7-8	Presentation Tree Nurseries	Approx. 50
09/27/2017	Grande-Digue	French	6	Tree Nursery – Planning	(Approx. 50)
09/28/2017	MFB		7	Tree Nursery – Planning	(Approx. 50)
10/04/2017	Shediac Cape	French Immersion	6-7-8	Tree Nursery – Planning	(Approx. 50)
10/05/2017	Grande-Digue	French	6	Tree Nursery – Planting	(Approx. 50)
10/11/2017	MFB	French	7	Tree Nursery – Planting	(Approx. 50)
10/12/2017	Shediac Cape	French Immersion	6-7-8	Tree Nursery – Planting	(Approx. 50)
10/10/2017	Shediac Cape	English	6-7-8	Adopt-A-River- Presentation	58
10/11/2017	Shediac Cape	French Immersion	6-7-8	Adopt-A-River- Presentation	42
10/16/2017	Shediac Cape	English	7-8	Adopt-A-River Field Trip	(27)
10/17/2017	Shediac Cape	French Immersion	7-8	Adopt-A-River Field Trip	(26)

11/14/2017	L.-J.-R	French	12	SBWA – Protecting your Watershed; Who we are, what we do	19
12/21/2017	L.-J.-R	French	12	Water Conservation & Stormwater Management	(13) *Absences
01/24/2018	Shediac Cape	English	7-8	Adopt-A-River - Macroinvertebrate identification	(27)
01/24/2018	Shediac Cape	French Immersion	7-8	Adopt-A-River - Macroinvertebrate identification	(26)
01/30/2018	Shediac Cape	English	7-8	Water Conservation and Climate Change	(27)
02/01/2018	Shediac Cape	English	6-7	Water Conservation and Climate Change	(31)
02/01/2018	Shediac Cape	French Immersion	6-7-8	Water - Conservation and Climate Change	(42)
02/07/2018	Shediac Cape	English	7-8	Water – Pollution, Stormwater Runoff and Water Purification Systems	(27)
02/07/2018	Shediac Cape	English	6-7	Water – Pollution, Stormwater Runoff and Water Purification Systems	(31)
02/08/2018	Shediac Cape	French Immersion	6-7-8	Water – Pollution, Stormwater Runoff and Water Purification Systems	(42)
Upcoming Presentations					
02/23/2018	MFB	French	3	Introduction –About SBWA and announcement of 2018 Fish Friends	Unknown
02/26/2018	Shediac Cape	English & French Immersion	3-4	Introduction –About SBWA and announcement of 2018 Fish Friends	39
After March Break	MFB	French	3	Fish Friends: Alevin	Unknown
After March Break	Shediac Cape	English & French Immersion	3-4	Fish Friends: Alevin	(39)
March 2018	Shediac Cape	English	7-8	Adopt-A-River - Water Quality & Analysis	(27)
March 2018	Shediac Cape	French Immersion	7-8	Adopt-A-River – Water Quality & Analysis	(26)

16 Educational Kiosks

16.1 Shediac Farmer's Market

An education kiosk was displayed on Sundays at the Shediac Farmer's market, for 10 weeks out of the summer. The main objective was to speak on water conservation and stormwater management, and giveaway water conservation kits and rain barrels. SBWA staff and summer students talked to visitors of all ages on the various other projects of the year. In the summer of 2017, staff spoke to over 1,400 visitors about the watershed group, local environmental issues and projects realized to mitigate these issues. The market kiosk is always a great tool to find people interested in receiving free rain barrels and water conservation kits for their homes.

Figure 43: Shediac Farmer's Market in the Park

16.1.1 Lobster Festival

In partnership with the Homarus Eco-centre, a kiosk was set up for four days at the Shediac Lobster festival from July 5th to July 8th. Our summer students spoke of our projects in the same fashion as the Shediac Farmer's market in the Park.

Figure 44: Shediac Lobster Festival

17 Communications and Outreach

17.1 Boater Awareness Program

The Shediac Bay received significant media attention in the last few years related to bacterial contamination and public health safety for swimming. In order to address the causes around this issue, different avenues are being explored.

As a first step into mitigating potential causes of contamination in the bay, an educational program was designed in partnership with Transport Canada and the Shediac Bay Yatch club. A new campaign was designed to promote the use of pump out stations for boaters' sewage management.

Local marinas were contacted to confirm the presence of pump out stations, at the various locations in Southeast NB. Five marinas from Bouctouche to Shediac have pump-out facilities (Bouctouche, Cocagne, Cocagne Cape, Shediac Bay Yatch Club and Pointe-du-Chêne). The only local marina that does not have a pump out station is the Aboiteau Marina in Cap Pelé.

A meeting was held on June 6th with Transport Canada and local marinas. It was discussed at the meeting what type of message could be developed for a pamphlet and poster. The materials were designed during June and July, and were finalized and printed in early August. Summer students then distributed the pamphlets and put up the posters in locations around Southeastern New Brunswick.

The education campaign was done later in the season than was anticipated, and could have had a greater impact if done earlier. However, the materials are now ready to be used early in the 2018 boating season. This program will continue in the coming years with more media outreach and communications.

Figure 45: Boater Awareness pamphlet and poster

17.2 Educational Materials

The SBWA has been working on developing a communications strategy to help diffuse information to the local public on the health concerns of the Shediac Bay. A professional designer, Charles LeGresley, was hired to develop new educational materials such as fact sheets, pamphlets, and infographics. The strategy involves using social media to direct more traffic to our website, where these new items will be displayed in a coherent and comprehensive for the laymen person. The goal is to have the scientific facts presented in a positive light, and offer tools for the improvement and protection of the water quality in the Shediac Bay.

Two infographics were designed on water conservation and stormwater runoff. Fact sheets were designed for rain gardens, water quality in a watershed, and stormwater runoff. A pamphlet was done on rain barrels. All produced materials are made in French and English.

Figure 46: Infographics and poster

Figure 47: Fact Sheets on Stormwater Runoff and Water Quality

Figure 48: Rain Barrel Pamphlet

17.3 Interpretation panels

Since 2015, several interpretation panels of various themes have been professionally designed and placed in public parks, along walking trails, and in other green spaces around the Town of Shediac. The collection of panels; The Acadian Forest, Biodiversity, Tree Swallows, The Common Terns, Salt Marshes, Freshwater Marshes, Eelgrass and Rain Garden.

Figure 49: Interpretation panels designed in 2015, installed in the spring of 2016

Figure 50: Interpretation panels developed in 2016-2017

17.4 Newsletter

Two bilingual newsletters were produced during the 2017-2018 fiscal year. The newsletter display information and photos on the various projects that the SBWA has been doing in the year. The Association had 250 copies produced for each edition, printed on 100% recycled paper. The newsletters are distributed to various businesses, medical offices, hair salons, and anywhere else that had a waiting area or that was appropriate to leave newsletters for the public to take. The rest were distributed during the Shediac Market, during public presentations and other meetings. The newsletters can be found on the Shediac Bay Watershed Association website.

17.5 Socials Medias and Website

The SBWA is working to keep its website and social media up to date, posting photos and short description of activities and projects. The SBWA also attended a conference on social media for non-profit organizations, helping us to develop a social media communications strategy. The association is also working on the development of infographic and fact sheets, being professionally designed, to be posted to the website and social media.

www.shediacbayassociation.org
www.facebook.com/#!/shediacbaywatershedassociation

17.6 News Coverages

Tern Platform

CBC News article on the structure improvements to the SBWA's tern platform project, on July 28, 2017. A snapshot of the segment can be found in Appendix 1.
http://www.cbc.ca/news/canada/new-brunswick/tern-birds-platform-colony-nest-shediac-bay-1.4225580

18 ANNEX 1 – SBWA Newsletter Summer 2017

Current News

Number 18
Winter 2018

Tern platform

In its fourth year of operation, the common tern platform continues to successfully provide nesting grounds for terns during the summer months. Following a predator attack in 2016, this year, predator guards were added around the perimeter of the platform to reduce predation from terrestrial predators and to increase the survivability of tern hatchlings. In total, there were 50 nests and 99 eggs for 2017. The adding of predator guards was financed by the New Brunswick Wildlife Trust Fund.

Invasive Species: European Green Crab

Since 2013, the SBWA has been monitoring the invasive green crab using specially designed traps at ten different sites in the Shediac Bay. In 2016, there was an enormous spike in the green crab population compared to 2015. During the 2017 sampling season, the sampling counts are similar to 2016, except for a slight increase in numbers. The SBWA plans to continue this monitoring programs for the next several years. Project details will be posted in the annual report on our website in the coming months. The NB Wildlife Trust Fund supported this project along with eelgrass monitoring.

Eelgrass Monitoring

In partnership with the Southern Gulf of Saint Lawrence Coalition on sustainability and with funding from the NB wildlife Trust fund the monitoring of eelgrass health program was expanded. In Addition to our site established in 2016 at the mouth of the Scoudouc River a new site was added at the mouth of the Shediac River. At each site, different measures are taken on the density and health of eelgrass using the Seagrass.net international protocol. These measures will help better understand the state of eelgrass with the arrival of the green crab and climate change. A few years of monitoring is necessary before obtaining results.

Nouvelles du Courant

Numéro 18
Hiver 2018

Plateforme de nidification des sternes

La plateforme de nidification des sternes communes, qui en est à sa quatrième année d'existence, continue d'être un lieu de reproduction privilégié pour les sternes durant les mois d'été. À la suite d'une attaque de prédateurs en 2016, cette année, on a ajouté des dispositifs de protection contre les prédateurs sur le périmètre de la plateforme afin de réduire la prédation des prédateurs terrestres et d'augmenter la capacité de survie des poussins. En 2017, on a dénombré 50 nids et 99 œufs. L'ajout des dispositifs de protection contre les prédateurs a été financé par le Fonds en fiducie pour la faune du Nouveau-Brunswick.

Espèces envahissantes : crabe vert européen

Depuis 2013, l'Association du bassin versant de la baie de Shediac (ABVBS) effectue la surveillance du crabe vert européen à l'aide de pièges spécialement conçus placés à dix différents endroits de la baie de Shediac. En 2016, la population de crabes verts européens a augmenté considérablement par rapport à 2015. Durant la saison d'échantillonnage de 2017, les chiffres de l'échantillonnage sont semblables à ceux de 2016, sauf pour une légère augmentation du nombre. L'ABVBS souhaite continuer ce programme de surveillance au cours des quelques prochaines années. Les détails du projet feront partie du rapport annuel qui sera affiché sur notre site Web au cours des prochains mois. Le Fonds en fiducie pour la faune du N. B. a appuyé ce projet et le programme de surveillance des zostères marines (herbe à outardes).

Surveillance de l'herbe à outardes

En partenariat avec la Coalition pour la viabilité du sud du Golfe du Saint-Laurent et grâce au financement du Fonds en fiducie pour la faune du N.-B., on a élargi le programme de surveillance de la santé des zostères marines (herbe à outardes). En plus de notre site établi en 2016 à l'embouchure de la rivière Scoudouc, nous avons ajouté un nouveau site à l'embouchure de la rivière Shediac. À chaque site, on effectue différentes mesures sur la densité et la santé de l'herbe à outardes à l'aide du protocole international Seagrass.net. Ces mesures aideront à mieux comprendre l'état de l'herbe à outardes à la suite de l'arrivée du crabe vert et des changements climatiques. Il faudra quelques années de surveillance avant d'obtenir des résultats.