

## Adopt-A-River School Program



The school-based program Adopt-A-River is designed to teach the concept of biomonitoring a river's ecosystem using macroinvertebrate sampling. In October, a field trip was organized to bring the 7<sup>th</sup> and 8<sup>th</sup> graders from Shediac Cape School to a popular spot on the Scoudouc River called Edna's Pond.

They collected insects, took measurements, and learned about the river's ecosystem and health. This program is a great tool to get kids outside and surrounded by nature, with hands-on learning activities.



## Green Boating in the Shediac Bay

It was in 2005 that the Watershed Association launched a green boating program.

This educational project, first step in a long-term program aiming to protect water quality in the Bay of Shediac, has made it

possible to raise awareness among boaters about best boating practices.

In 2018, we increased boaters' awareness about the use of pumping stations to prevent sewage from being discharged in the bay. In 2019, an interpretation panel on the importance of protecting eelgrass was produced and a poster was distributed in the surrounding marinas. This program, in collaboration with the marinas in the region, will continue in 2020.

## Message from the Association's Manager



Rémi Donelle is the Manager of the Shediac Bay Watershed Association since 2013. A board of directors, consisting of 20 citizens from the region, is responsible for administering the organization.

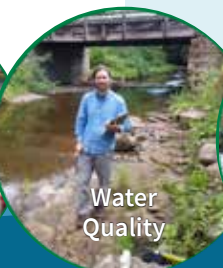
The Shediac Bay Watershed Association had a busy year in 2019. Several environmental assessment, habitat restoration and education programs took place in the watershed.

In particular, during 2019, the partnership with the town of Shediac on stormwater management continued this year with the naturalization of a retention basin at the municipal garage.

The Association also had the opportunity to join a research and restoration project on the Grande-Digue dune coordinated by the Université de Moncton.

Our educational program has also grown with students from Polyvalente Louis-J.-Robichaud who went out for the first time to a marsh in Pointe-du-Chêne.

More details on these projects will be available on our website in the final reports which will be published in March 2020.





## Transformation of a Rainwater Drainage Ditch into a Naturalized Retention Basin

As a way to address the quality of surface water runoff from impervious surfaces such as parking lots and rooftops, we are turning towards natural methods of filtration.

Cattails are plants that grow in wetlands, and they provide the enormous benefit of

removing pollutants from the water. This year, we transformed a regular stormwater basin on the property of the municipal garages on Ohio Road into a naturalized filtration system, by forcing the rainwater runoff to slowly flow through a bed of

cattails. By creating more of these kinds of green infrastructures, we are working towards improving the quality of water entering our streams, rivers and our beautiful Bay.

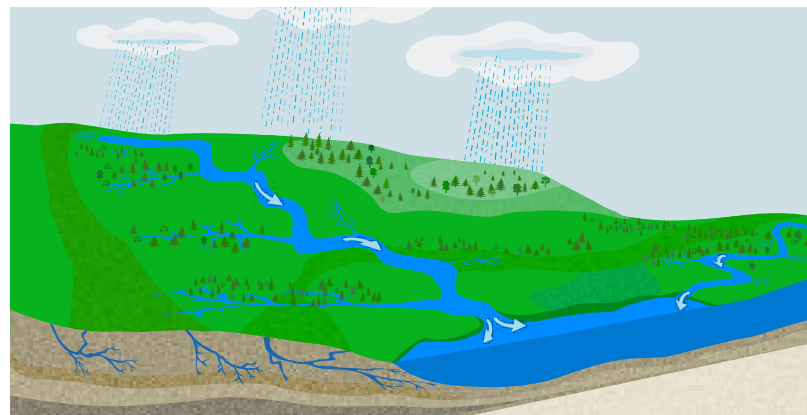
## Eelgrass Research in Shediac Bay continues

In 2016, the SBWA began to study eelgrass (wrack). Four sites were chosen around the bay for an annual assessment of their density and health.

This year, the most recent site was added in Grande-Digue, which is also the location of a study conducted by the Université de Moncton around the Grande-Digue dune.

We are monitoring eelgrass to grasp what can occur because of climate change or green crabs. The results show that while it is currently in excellent health in the Grande-Digue region, eelgrass seems to be affected by excess nutrients where the Scoudouc and Shediac rivers meet the sea.

## We all live in a Watershed



A watershed is a region in which rainwater and snowmelt flow toward a common body of water, such as a river, lake, or bay. Following the natural slope of the landscape, water travels over the surface and across farm fields, forests, lawns, parking lots and streets, or it seeps into the soil and travels as groundwater.

Our watershed is composed of various ecosystems like streams, rivers, forests, fields, wetlands, marshes and coastal estuaries. They serve as habitats to numerous species of fish, animals and plants. Just like them, we all live in a watershed, since our towns and villages are a part of them.

The Shediac Bay watershed area covers 420 km<sup>2</sup> of land and stretches along approximately 36 km of coastline, from Cap-de-Cocagne to Cap-Bimet. Its boundaries extend inland from Scoudouc to Lutes Mountain.



## Distribution of Rain Barrels to Residents of the Watershed

As part of our Water Conservation and Stormwater Management Program, the SBWA collected names at the Shediac Market in the Park and held a contest on social media to recruit those willing to install a rain barrel at home.

We gave away 22 rain barrels to residents living within the Shediac Bay watershed boundaries.

These barrels will help residents conserve drinking water by using rain as a resource for gardening and for other purposes. Another benefit is how they capture rooftop runoff water, which is a responsible way of managing water from impervious surfaces. Follow our Facebook page for future contests.



## Invasive Species: Green Crab Population Continues to be Monitored

Since 2013, the Shediac Bay Watershed Association (SBWA) has been fishing with a scientific purpose in order to assess the invasive green crab population in the Bay.

In 2016, we captured a record number (928) of these crabs. Their population remained high in 2017 (608 crabs) and in 2018 (571 crabs).

However, in 2019, the crab population dropped and its total number (127 crabs) resembled what it was in 2014 and 2015. Harsher winter conditions may have contributed to the green crabs' decline.

Find more details about this project in the "Reports and Archives" section of our website.

	May	June	July	August	Sept.	Total
2013	15	28	22	43	59	197
2014	5	47	67	106	46	271
2015	3	1	5	9	59	77
2016	119	154	275	263	117	928
2017	65	72	116	197	158	608
2018	39	49	222	99	162	571
2019	3	9	23	29	40	103

The figures in the table indicate the total number of crabs for each of the sampling periods.



## The Platform Continues to be Successful with 148 Nests Identified in 2019

The SBWA has been maintaining a floating platform for common terns to build their nests in the Shediac Bay. The tern platform was unfortunately damaged by hurricane Dorian on September 7. Strong winds and high tides fragmented the platform. It was found up in the

marsh near the Shediac walking trail. We got rid of the debris with the municipality's help.

Luckily, the nesting season had already been over and no nests were lost. The platform continues to be a success with 148 nests having been surveyed in 2019.

We asked for funding from the New Brunswick Wildlife Trust Fund to build a new platform. The Shediac Bay Yacht Club will provide the docks, which were damaged by the storm but can be saved. The new platform will be set up by May 2020, before the birds arrive.





## Salt Marsh Education Field Trip

This year, the SBWA partnered with 10<sup>th</sup> grade science teachers from L.-J.-R. High School for a field trip with their students to the salt marsh in Pointe-du-Chêne.

The students learned about the different types of wetlands, the importance of preserving these productive ecosystems, the species of plants and birds that are found there, and much more. The hope is that this will become a regular yearly activity in our education program for years to come.




### Contact Info

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For more information please visit our website or follow our Facebook page:

[www.shediacbayassociation.org](http://www.shediacbayassociation.org)

 [www.facebook.com/shediacbaywatershedassociation](https://www.facebook.com/shediacbaywatershedassociation)

### Current News

#### Contributors:

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## Featured Species - Eelgrass

Also known as seawrack, eelgrass (*Zostera Marina*) grows on the seabed of bays and estuaries. Of great importance to the biodiversity of marine ecosystems, it forms vast eelgrass beds that provide critical habitat for a wide diversity of species.



Eelgrass is an aquatic plant and not a seaweed. Measuring between 20 and 50 cm in height, it can reach up to two metres in deeper waters. Its long green leaves are supported by an underground stem (rhizome), from which appear roots that anchor the plant in the seabed.

This aquatic plant also has the function of oxygenating the water in the bay. Thanks to the sun's energy (photosynthesis), eelgrass beds capture and store carbon from seawater, releasing oxygen. To ensure the growth of its stem and leaves, the plant transforms this carbon into glucose.

When eelgrass leaves die, they detach from the plant and form organic matter that decomposes, thus becoming an important part of the coastal food chain.

Eelgrass beds are fragile environments, likely to be affected by pollution, dredging, boat propellers, aquaculture and fertilizers. In addition climate change, invasive species and sediments caused by erosion, also pose a threat to these coastal habitats.

A major threat to eelgrass comes from a process called eutrophication. When rain washes fertilizers

from farms and homes located at water's edge, excessive amounts of phosphorus and nitrogen enter the water, causing algal blooms that prevent vital sunlight from reaching the eelgrass beds.

The presence of eelgrass beds in Shediac Bay has significant ecological value. In addition to retaining sediments and stabilizing the seabed substrate with their roots and rhizomes, they serve as a nursery, refuge and food source for a multitude of species.

In the 1930's, a disease almost caused its disappearance in the North Atlantic. Eelgrass is currently declining in Nova Scotia and eastern New Brunswick. To monitor its evolution and health, the Shediac Bay Watershed Association participates in the Seagrassnet.org program.

Kingdom: Plantae  
Superclass: Angiospermae  
Class: Monocots  
Order: Alismatales  
Family: Zosteraceae  
Genus: *Zostera*  
Species: *Zostera marina*



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