Education on Water Conservation and Stormwater Management in the Shediac Bay Watershed

Final Report

By:

The Shediac Bay Watershed Association Inc.

March 2022

Acknowledgements

The SBWA would like to thank the Town of Shediac for their invaluable partnership, that has led to the realization of several on-the-ground projects for stormwater management and environmental protection.

We sincerely thank the Anglican Parish of Shediac and Marco Fougère (Maximum Signs and Time2Shine) for their incredible support in the creation of the Association's first commercial bioretention system. Thank you to Pierre Cormier Construction, for their service and expertise during a very busy time.

Thanks also go out to Polyvalent Louis-J.-Robichaud's administration and teachers, who worked collaboratively to create the school's first bioswale. Thank you to our teachers, Robert Bourque (Science de l'Environnement) and Véronique Thompson (Biology) for their dedication to integrate presentations and field trips into their programming.

We also wish to thank the homeowners who participated in the residential rain garden program and rain barrel distribution program. These programs would not be possible without the stewardship of our citizens.

We also wish to thank the New Brunswick Environmental Network (NBEN) for the numerous partnerships that helps us increase our outreach and education goals.

The SBWA wishes to send thanks to our local schools, whose teachers and school administration makes our education programs possible.

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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 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 km² of land area and stretches along 36 km of coastline, from Cap Bimet to Cap de Cocagne (Figure 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 km2, 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 and cross into both Shediac and Moncton.

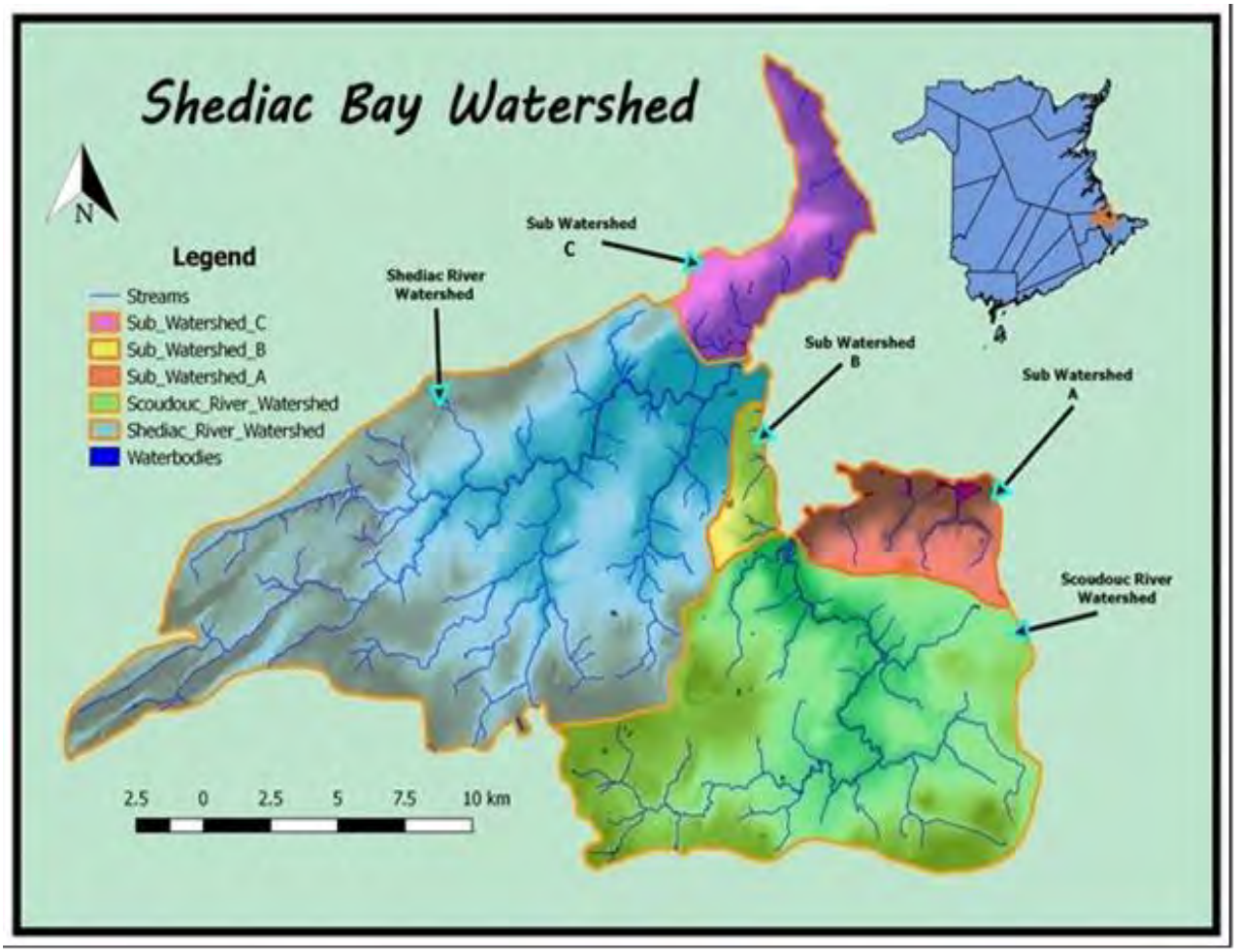

Figure 1: Map of Shediac Bay watershed boundaries

2 Water Conservation and Stormwater Management

The Shediac Bay Watershed Association (SBWA) has a mandate to protect and enhance water quality throughout the watershed. The water quality in the saltwater ecosystems of the bay is influenced by the quality of the freshwater rivers and streams that flow into it. In order to ensure good water quality in the Shediac Bay, there must be proper management of surface water and land uses in the watershed as a whole. Studies have provided data on the levels of bacteria and other pollutants contained in stormwater runoff in the Shediac Bay watershed. Numerous recommendations for watershed management strategies include the use of bioretention systems such as bioswales and rain gardens. By absorbing stormwater runoff, rain gardens help reduce the volume of stormwater entering our storm sewers and small streams, all of which drains into the Shediac Bay. By filtering stormwater runoff, bioswales improves the quality of the water that is discharged into the environment. The SBWA is working to create on-the-ground projects to increase the network of bioretention systems in the watershed.

Figure 2: Bioretention system in the Shediac Bay watershed (2019)

Since 2017, the SBWA's education program has been focused on the theme "Water Conservation & Stormwater Management". The topic of stormwater management revolves around the concerns from the public on the water quality of the Shediac Bay. Bacterial spikes occur primarily after rain events. Common confusions regarding beach closures in relation to rain require greater public education on the watershed system and land uses as a whole.

The program also educates on the use of green infrastructure and rainwater collection for climate change 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). The use of rain barrels helps address the challenges faced with longer periods of drought becoming more frequent. Certain regions in Atlantic Canada have already seen drinking wells runs dry during periods of drought in recent years.

In 2021, the Shediac Bay Watershed Association constructed 2 residential rain gardens, 1 commercial bioswale at *Maximum Signs &Time2Shine*, and a bioswale at Polyvalent Louis-J.-Robichaud (LJR) high school.

The following reports on the new green infrastructure projects and the rain barrel distribution program.

2.1 Polyvalent Louis-J. Robichaud Bioswale

In September, students of the Environmental Science class at Polyvalent L.-J.R. received an in-class presentation on water quality issues in the Shediac Bay watershed as well as the concept of stormwater management using rain gardens and bioswales.

Planning was done with the teacher and school administration to designate a site where the students would build a rain garden, or bioswale, on school grounds. Following the presentation, the class spent the next 4 periods outdoors, working to naturalize a drainage path. Students helped with the entire process which included the removal of the surface lawn, loosening the soil (raking), installing the edging spreading composted mulch and planting the vegetation.

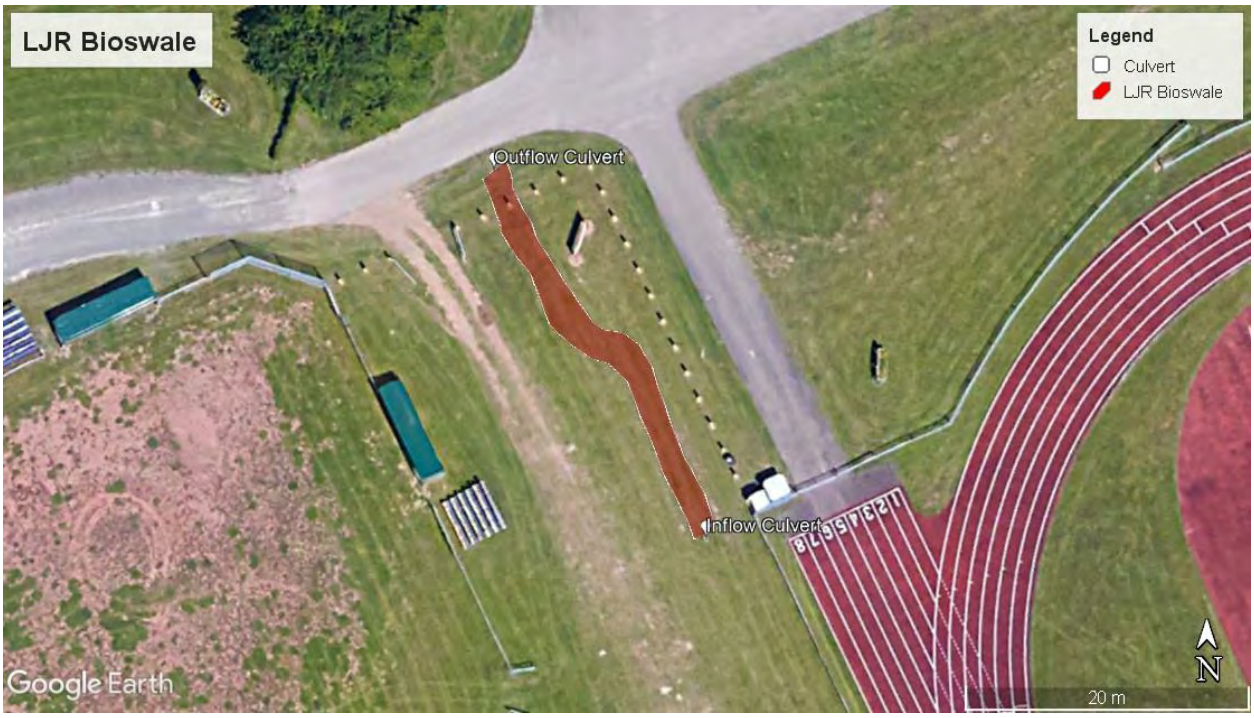

Figure 3: Map of LJR bioswale

The bioswale covers an area of 60 m² and contains 109 plants (Figure 3). A mixture of flood tolerant grasses and flowers for pollinators were used in this project:

- Karl Foerster grass (*Calamagrostis acutiflora*)
- Purple Flame Grass (*Miscanthus purpurascens*)
- Ostrich Ferns (*Matteuccia struthiopteris*)
- Milkweed (*Asclepias sp.*)
- Joe Pye Weed (*Eupatorium maculatum*)
- Blue Flag Iris (*Iris versicolor*)
- Black-eyed Susan (*Rudbeckia hirta*)

These plants will filter runoff from the soccer field and the track that surrounds the ditch. Seagulls and geese are notorious in the fields which can cause bacterial spikes after rain events. As stormwater percolates through the bioswale, the quality of the water runoff will improve before reaching the storm drain below.

Figure 4: Before pictures of LJR bioswale

Figure 5: LJR bioswale under construction with students

Figure 6: LJR bioswale completed

2.2 Maximum Signs & Time2Shine Biorention System

In partnership with the Anglican Parish of Shediac and *Maximum Signs & Time2Shine*, our first commercial bioswale, or bioretention system, was constructed in fall 2021. This new green infrastructure project is located between the two parking lots of the buildings at 612 and 620 Main Street Shediac (Figure 7). The bioswale will collect most of the stormwater runoff from the east parking lot and part of the rooftop runoff from both buildings, which is about 920 m² of impervious surfaces. A piping system was attached directly to the roof's downspout using a custom-built box and PVC piping, to ensure that the maximum amount of the rainwater from the Maximum Signs building will be collected by the bioswale.

Figure 7: Commercial bioswale 2021 at Maximum Signs & Time2Shine

This bioswale is the largest-scale green infrastructure project that has been done by the SBWA to date.. A local construction company, Pierre Cormier Construction, was hired for this project.

The excavator dug down 1.25 m with a width of about 5 m. The first layer to go in was 60 cm of drainage rock that was roughly 1" to 1 ¾. This provides storage space for stormwater retention while is infiltrates further into the ground or gets absorbed by the surface vegetation.

The next layer that was installed was a geo-felt sediment catch, to create a barrier between the drainage rocks and the sand. A layer of 40 cm of sand was added and then topped off with another 25 cm of top soil. River rocks were then place around the planted vegetation for beauty and erosion protection (Figure 8).

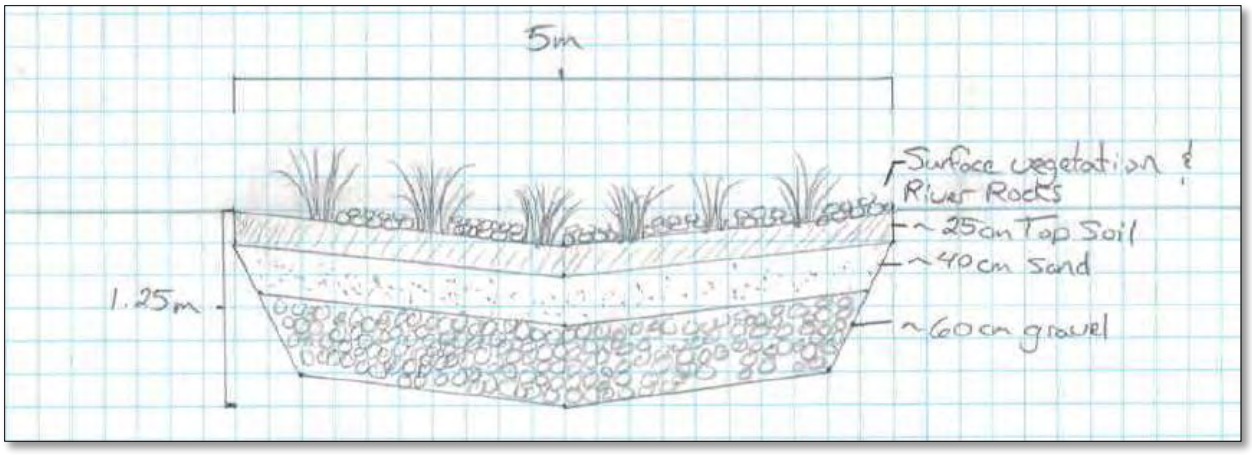

Figure 8: Sketch of Maximum Signs & Time2Shine bioswale

There were atotal of 116 plants planted for this project. They include:

- Karl Foerster grass (*Calamagrostis acutiflora*)
- Purple Flame Grass (*Miscanthus purpurascens*)
- Ostrich Ferns (*Matteuccia struthiopteris*)
- Milkweed (*Asclepias sp.*)
- Joe Pye Weed (*Eupatorium maculatum*)
- Blue Flag Iris (*Iris versicolor*)
- Black-eyed Susan (*Rudbeckia hirta*)

Figure 9: Before pictures of Maximum Signs & Time2Shine

Figure 10: Construction Process Maximum Signs & Time2Shine

Figure 11: Construction Process Maximum Signs & Time2Shine

Figure 13: Completed bioswale at Maximum Signs & Time2Shine after rainfall event

2.3 Residential Rain Garden Rue Rachel

The residential rain garden in Figure 12 was the first one completed in 2021. The rain garden was strategically placed in their front yard and intercepts runoff stormwater from going into the storm drain. The gutter system flows underground through piping directly into the garden as well. A berm was constructed to retain as much water as possible.

Figure 14: First residential rain garden of 2021

A berm was constructed to retain rain water within the garden. The plant list is as follows:

- Karl Foerster grass (*Calamagrostis acutiflora*)
- Ostrich Ferns (*Matteuccia struthiopteris*)
- Sensitive Fern (*Onoclea sensibilis*)
- Purple Milkweed (*Asclepias purpurascens*)
- Joe Pye Weed (*Eupatorium maculatum*)
- Pink Turtlehead (*Chelone obliqua*)
- Solomon Seal (*Polygonatum pubescens*)
- Blue Flag Iris (*Iris versicolor*)
- Purple Coneflower (*Echinacea purpurascens*)
- Autom Joy Sedum (*Hylotelephium telephium*)

- Purple dome Aster (*Aster sp.*)
- Black-eyed Susan (*Rudbeckia hirta*)

The home owner also added a few of his own plants to cover up the remaining topsoil on the berm.

Figure 15: Rue Rachel rain garden under construction

Figure 16: Rue Rachel rain garden under construction

Figure 17: Rue Rachel rain garden completed

2.4 Residential Rain Garden Rue Smith

Another residential rain garden was done late fall which was the SBWA's 10th rain garden project. As per the homeowner's request, this rain garden was made in the shape of a heart on their front yard (Figure 18). The neighbors gutter system runs down the small slope in between the houses and leads to the rain garden as well. A berm was constructed at the base of the heart to further retain rain water.

Figure 18: Second residential rain garden completed in 2021

In this rain garden, 34 plants were planted in total. The plants used were:

- Karl Foerster grass (*Calamagrostis acutiflora)*
- Flame grass (*Miscanthus sinensis)*
- Black Eyed Susan (*Rudbeckia hirta)*
- Joe Pye weed (*Eutrochium purpureum)*
- Swamp Milkweed *(Asclepias incarnata)*
- Blueflag Iris (*Iris versicolor)*
- Ostrich fern (*Matteuccia struthiopteris)*

Figure 19: Rue. Smith rain garden under construction

Figure 20: Rue Smith rain garden completed

2.5 Rain Barrel Giveaway

Since the beginning of this project in 2016, 100 collapsible rain barrels (200L) and 67 rigid plastic food-grade rain barrels (55-Gallons) have been distributed to citizens living within the communities in the Shediac Bay watershed boundaries. This project has sparked interest and high demand in the community, and it has proven to be an excellent tool to promote rain as a resource and the use of rain barrels to manage stormwater runoff.

In 2021, the SBWA continued the free rain barrel giveaway program using the rigid plastic food-grade barrel model, in order to give away a more durable and higher-quality product. The 55-gallon food-grade barrels were purchased from a small Dorchester company Eco-Containers Co., and the parts were purchased from local Shediac Kent and Home Hardware Stores.

The food-grade barrels were still in short supply due to the effect of the pandemic. Eco-Containers was able to deliver 20 barrels in August. The SBWA staff then worked to transform the barrels into rain collectors. A social media contest was launched for the for a draw to distribute the rain barrels to citizens living in the Shediac Bay watershed boundaries. A weather resistant sticker was used to display the project title, the Shediac Bay Watershed Association's logo and the New Brunswick Environmental Trust Fund logo on the white rain barrels (Figure 21).

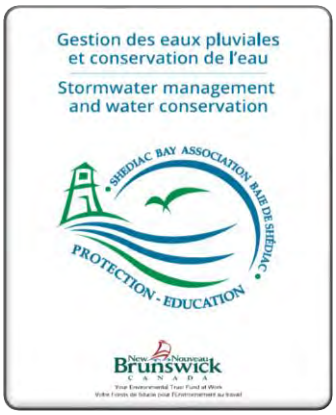

Figure 21: Rain barrel sticker

The social media contest was very successful. The response from social media was very positive, and the purpose of the project was understood and appreciated.

Due to the late delivery of the barrels and the Association was working at reduced capacity due to a transition in management and lack of technicians before fall, the rain barrels were only delivered late fall and recipients were not able to use their barrels this season. Since the barrels will only be installed next spring, no follow up survey was done this year, but it will be sent to the 2021 recipients in 2022

A COVID-19 operational procedure was developed to deliver the rain barrels safely. The barrels were delivered using masks and social distancing. The barrels were unloaded and wiped down with disinfectant. The project documents were pre-prepared in a brown envelope and given with the barrel: a rain barrel pamphlet, the rain barrel usage and maintenance guidelines, a water conservation bookmark and a newsletter.

Figure 22: Photos of rain barrel setups from past recipients

2. General Presentations

Normally, the SBWA does regular presentations to various audiences and stakeholders of our watershed. Due to the COVID-19 pandemic, activities such as public workshops or event were not possible unless they could be done virtually or following public health guidelines. The following reports on the educational activities in the 2021-2022fiscal year.

3.1 Webinar - Rain Garden presentation for NBEN

A virtual presentation was done on "How to build a rain garden" for the School Gardens Initiative, coordinated by New Brunswick Environmental Network (NBEN) on May 10th. The presentation was directed towards New Brunswick teachers who are interested in school gardens of any sort. The presentation was done by SBWA manager (Figure 23).

Figure 23: Cover page for virtual workshop "How to Build a Rain Garden" for the NBEN's School Garden Initiative

3.2 Webinar – Underground Water Workshop

A virtual workshop was co-hosted by Vision H2O, the SBWA, Petitcodiac Watershed Alliance (PWA) in partnership with the NBEN, on the importance of groundwater quality. The workshop was promoted through various mailing lists, social media, as well as in a local newspaper. The workshop was held January 27th, and had approximately 55 participants.

There were 4 presenters: John Sims from EXP Environmental Engineering (presenting on groundwater table studies in NB), Rosmarie Lohnes from Helping Nature Heal (on the importance of plant and other vegetation communities for soil and water quality), Brittany Cormier from the PWA (on the importance of rain garden for environmental quality), and Jolyne Hebert of the

SBWA (on the importance of rain barrels and how to build your own!). The presentations were followed by breakout room discussions and a final wrap-up.

Figure 24: Promotional graphic for virtual workshop "The Importance of Groundwater"

3.3 Webinar – Natural Infrastructure for Climate Change Adaptation

The SBWA manager was requested by LSF – LST (Learning for a Sustainable Future/L'éducation au service de la Terre), to deliver a new webinar focused on climate change adaptation using green infrastructure. LSF-LST is a Canada-wide organization, who provides a platform for various educational school resources and webinar series.

The 45-minute presentations were scheduled for two dates and two age categories; on February 9th for the 5th to 8th grade, and on February 22 for the 9th to 12th grades. Some registered classes attended the live webinar, while others have used and will continue to use the recordings. To date, 54 students from the grades 5-8 were registered and 53 students for the grades 9-12. Registrations were mostly from New Brunswick and Ontario schools. Several rain garden projects were presented as example and each slide contained the NB ETF logo.

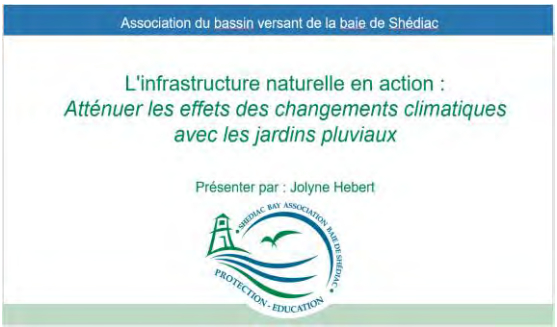

Figure 25: LST-LSF Webinar Cover Slide

3.4 Greater Shediac Community Garden

The SBWA was requested to present a workshop on how to build a rain garden, for the Greater Shediac Community Garden and their members. The session was recorded and made available on the GSCG's Facebook page (Figure 26).

Figure 26: SBWA Manager Jolyne Hebert presenting

3.4 School Programs, Field Trips and Presentations

The SBWA has been working with local schools and teachers on the development of yearly environmental education programs. This long-term relationship 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, aquatic habitats and biodiversity. In addition to the presentation series, annual programs such as Adopt-A-River, presentations on bioswales and importance of habitat include field trips to further immerse the students in nature.

3.4.1 Parlee Beach Field Trip

Normally, Parlee Beach Provincial Park greets school groups that request educational outdoor activities. This year, the park requested the assistance of the SBWA to deliver these activities . On June 4th, SBWA staff hosted École Carrefour de L'Acadie, a Francophone middle school from Dieppe (8th grade level) On June 15th. We hosted the grade 3 students of the Queen Elizabeth School.

Activities included games from the "Great Minds Think Outside!" program, a treasure hunt on the beach, trash cleanup, a presentation on the dunes and the beach's ecosystems, and free time. .


Figure 27: Parlee Beach Field Trip 2021

3.4.2 LJR Tree Planting Activity

Following the Adopt-A-River program activities in the spring of 2021 (find more information in the Water Management 2021 report), an additional activity was planned to plant trees with the two 10th grade biology students at Polyvalent Louis-J.-Robichaud.

Trees were then planted on the Shediac bike trail along highway NB-115, starting from Rue Sackville. These activities took place on June 10th and 11th (Figure 28). A hand washing station was installed and there were enough shovels to avoid equipment sharing. Everyone wore their masks at all times in accordance with the COVID-19 operational plan.

Hand washing station


Figure 28: Students planting trees as part of the Adopt-A-River program

3.4.4 LJR Bioswale Presentation

On October 19th, prior to completing the LJR bioswale, the SBWA manager did a presentation to students and staff of an Environmental Science course on the importance of rain gardens and storm water management for water quality protection.

3.4.3 LJR Virtual Presentation - Degraded Habitats and Restoration (Part 2)

On November 19th, a virtual presentation by the SBWA manager was done on degraded habitats caused by extreme weather events and how to restore them to help wildlife. The presentation was delivered to 2 classes that day; one of 18 students and the other had 19 students. This new activity is a follow up and modification to the degraded habitat presentations delivered in 2020.

3. Education and Outreach

4.1 French Fold Style Mini-Guide

A French fold styled mini-guide was produced by SBWA staff to provide a brief description of rain gardens compared to the rain garden construction guide. The mini-guide was produced in both French and English and contains background information on rain gardens, and the construction and maintenance.

This guide is unique in having a rain garden illustration that depicts plants that are native to New Brunswick. The guide provides a list of 30 plants that are suitable for rain gardens that are native to NB (Figure 29). Additional information on sunlight exposure requirements, benefits to pollinators, and tolerance to inundation and drought are indicated for each plant. An example of a rain garden layout helps the homeowner design their garden using the list. These plants are known to have deeper roots and be water tolerate as well as uses and retains water.

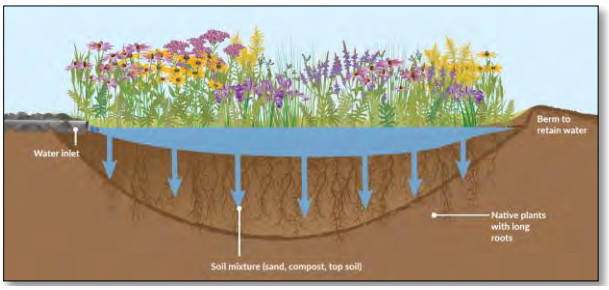

Figure 29: Rain garden illustration containing plants native to NB

There is a construction overview Section when the guide is completely unfolded. It starts with where you should build your rain garden and how to do so safely with illustrations. The second section is why is the soil type important followed by how big a rain garden should be. The guide also goes in depth on a rain garden berm explaining when they should be used and how they are calculated. There is a detailed section on how to build the rain garden complete with illustrations. The last step in the guide in explains the minimal maintenance that rain gardens need.

The last page of the mini-guide has a list the plant list as well as SBWA contact information. The page also has details of the projects financial support including New Brunswick Environmental Trust Fund and Environment and Climate Change Canada.

This guide was distributed during a living shoreline workshop at the Cocagne marina, hosted by *groupe de developpement durable du Pays de Cocagne* (GDDPC). A rain garden was constructed on site that day and participants were pleased to receive resources that had a plant list on it.

4.2 Rain Garden Construction Guide for Home Owners - Update

In 2020, a full bilingual step-by-step guide was produced by SBWA staff as well. It is 10 pages in each language and much more in depth compared to the mini-guide. The guide for home owners serves as an educational tool for home owners ready to start planning their own rain garden on their property. This guide was put to the test while building the 2021 residential rain gardens, and it proved to be complete. Copies of the full guide have been distributed throughout the year, electronically and printed copies.

4.3 Signage and Interpretation Panel

New Signage was designed and produced in French for the Polyvalent LJR bioswale. The sign explains what rain gardens are and why they are important. This sign will be installed next spring.

For the commercial bioretention system at Maximum Signs & Time2Sine, a bilingual interpretation sign that explains the purpose of the bioswale was developed over the winter. The panel goes in depth on how bioswales are a vegetated basin that collects and treats stormwater. It also has a segment on the importance of clean water and how it can affect the surrounding areas (Figure 30). The sign is currently in production and will be installed in the spring.

Figure 30: Polyvalent LJR sign (left) and commercial bioswale panel (right)

4.4 Facebook Group for Residential Rain Gardens

In March 2022, the SBWA will be launching a new Facebook group dedicated to helping home owners within the Shediac Bay watershed further connect and get guidance on rain gardens and stormwater management. A series of posts derived from the rain garden construction guide are ready for a scheduled rollout. The guide and other resources will be available in the "Files" section of the group. This group will be a platform where we will share our rain garden project stories, and for community members to share their own experiences with their rain gardens.

4. Media Outreach

5.1 Newsletter

During the 2021-2022 fiscal year, 3 bilingual newsletters were produced. Two have been released and the third will be published in early March. The newsletters display information and photos on the various projects that the SBWA has been doing in the year. The newsletter is now distributed electronically by email list and is available on our website and Facebook page.

5.2 Social 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 website contains all past and current projects as well as information about the Shediac Bay Watershed Association and the Shediac Bay itself. The SBWA has a dedicated employee who focuses on outreach and communications, and the design and production of educational materials such signs, panels, guides, and booklets. They also keep the website and social pages up to date.

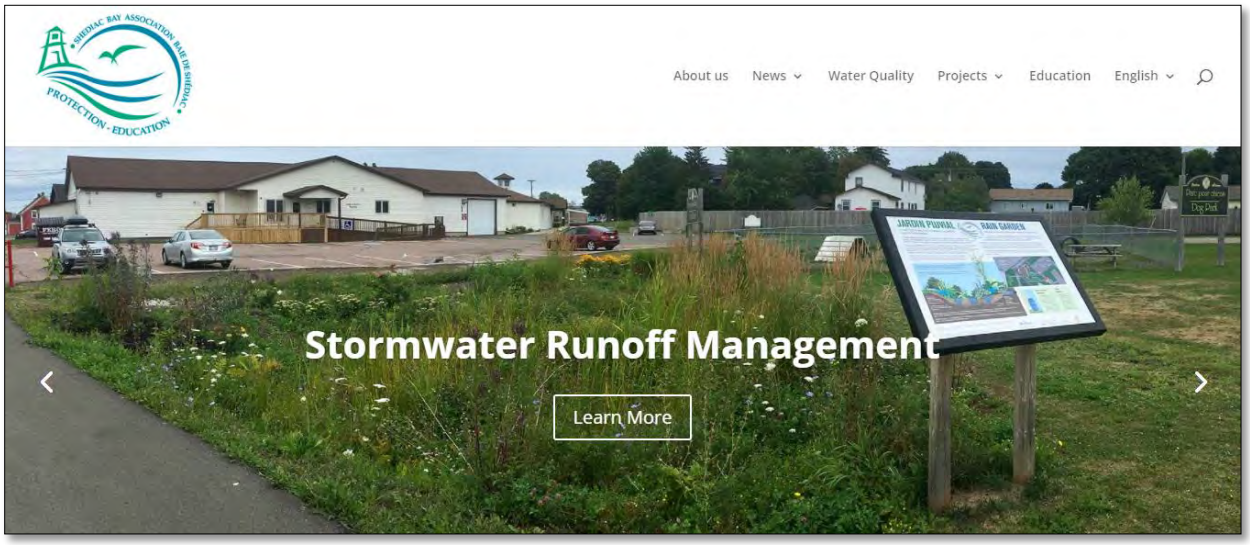

Figure 31: Home page of the Shediac Bay Watershed Association website

Links to SBWA websites and social medias

www.shediacbayassociation.org

www.facebook.com/#!/shediacbaywatershedassociation

https://www.instagram.com/bvshediacwatershed/?hl=en

https://www.youtube.com/channel/UCT1bsN08OyOeIzqqwn9ZhlQ

5. Conclusion

To conclude, the SBWA plans to continue to build rain gardens, bioswales and other green infrastructure projects as we gain more experience. These activities will continue in an effort to control stormwater runoff from impervious surfaces in the watershed, to help improve overall water quality.

This year we built two residential rain gardens, one school bioswale and our first commercial bioretention system. More projects are already in the works for 2022, such as the new Homarus and Rotary Park bioswales.

Our projects are focused on finding solutions to reduce the quantity and improve the quality of surface water runoff, and educating the general public on the impacts of our daily activities in the watershed.

The rain barrel program is continuously improving and citizen of the watershed is benefitting directly from this program. The SBWA has distributed 187 rain barrels since 2016.

The school program for 2021 has suffered due to the COVID-19 pandemic and due to a transition in management and temporary loss of capacity. As the situation evolves, with both the pandemic and changes in employee roles, the SBWA will adapt and continue to work towards environmental implementing educational activities whenever possible.

Education has always been an important part of every project realized by the Shediac Bay Watershed Association. When dealing with local environmental issues, creating dialogue with various members of the community, of any age group, is essential to raise awareness that these issues exist. These issues need to be known and discussed in order to spark interest and change thinking patterns. As they say, knowledge is half the battle.

The Shediac Bay Watershed Association is becoming more and more known for its good work in enhancing the overall health of the Shediac Bay, and that would not be possible without our maintained presence in the public eye through our education programs. The support from the NB Environmental Trust Fund is essential for our group to be able to accomplish the quantity and variety of activities for the community. We hope to continue expanding our programs in future years.

Appendix A

2021 Newsletters

CurrentNews

Number 24 Spring 2021

Message from the Association's Manager

Rémi Gosselin is the Manager of the Shediac Bay Bay Watershed Association since 2013. A board of directors, consisting of 16 citizens from the region, is responsible for administering the organization.

Our final report for our 2020-21 programs are submitted to our funders. The Association has had a productive year with the implementation of several environmental improvement projects.

With spring comes new projects. The stormwater management and coastal restoration programs will continue to expand in the communities of Shediac and Pointe-du-Chêne. Our field crew will be in place in May to begin the various tasks.

This year, we will resume organizing volunteer activities and hosting opportunities while following the recommendations of Public Health. Follow our Facebook page and our website for announcements of events during the spring.

Eelgrass Monitoring Results

Eelgrass is a marine plant that can grow up to 2 metres in deeper waters. The leaves are supported by a rhizome (underground stem) on the seabed. Eelgrass beds provide critical habitat for a wide variety of species.

Eelgrass is threatened by the arrival of an invasive species, the green crab (*Carcinus maenas*) and the impacts of human activities. A monitoring program on eelgrass health was implemented in 2016. The purpose of this study is to establish baseline data in order to assess the evolution of eelgrass in Shediac Bay.

Four monitoring sites were established in Shediac Bay in the coastal communities of Grande-Digue, Shediac Bridge, Shediac and Pointe-du-Chêne.

A decrease in eelgrass cover was noted in 2020. The probable cause is the impact of hurricane Dorian that hit the coast during the fall of 2019. This hurricane caused a lot of damage to the coastal zone. The eelgrass at the Shediac Bridge site is almost completely gone. The Grande-Digue site on the north shore of the bay was more sheltered from the winds and suffered less damage. Long-term monitoring of the sites will allow us to measure the recovery of these eelgrass beds.

The Shediac Bay Watershed Association is a member of a research consortium of the Gulf of St. Lawrence Coalition. A partnership project has been established with Fisheries and Oceans Canada to map the eelgrass in Shediac Bay in 2021 using a variety of methods (sonar, drone and satellite imagery). This data will allow us to see the evolution of eelgrass beds throughout the bay.

CurrentNews

Number 24 Summer 2021

Salt Marsh and Smelt Research Project

The Association is participating on a project on the mapping and assessment of salt marshes in southeastern New Brunswick. This program is led by the *Université de Moncton* in partnership with Fisheries and Oceans Canada. As part of this project, the SBWA conducted smelt spawning ground surveys in several rivers and streams this spring. Smelt swim upstream during the spring tides to the salt water limit. They then lay their eggs among the rocks and gravel on the riverbed.

The field team was able to confirm the presence of spawning grounds on the Scoudouc and Shediac Rivers, as well as on several small streams along the coast. There are spawning grounds in several of our coastal communities such as Grande-Digue, Shediac Cape, Boudreau-ouest and even in the municipality of Shediac.

Winter smelt fishing in Shediac Bay is a tradition for many. It is important to continue to protect and improve the environment of all waterways in order to continue to benefit from this resource.

Annual General Meeting - Save the Date

The AGM is scheduled for this fall on Wednesday, September 29th at the Notre Centre in Grande-Digue. More details will be posted on our website and Facebook page in September.

Message from the Association's Manager

Rémi Doucet was the Manager of the Shediac Bay Bay Watershed Association from 2013 to June 2021. A board of directors, consisting of 10 citizens from the region, is responsible for administering the organization.

This will be my last newsletter as Manager of the Shediac Bay Watershed Association. I have accepted a new job with Parks Canada on their resource management team.

I have had the opportunity to work on a wide variety of projects over the past eight years. The Association has grown a lot since I arrived, with more partnerships, budgets and staff.

I want to thank the volunteers on the Board of Directors and the partners for their support. I have a good team behind to continue the work of the Association. Jolyne Hebert is the new Manager and she will continue the projects to improve the environment of our waterways and the bay.