



2003-2004 ANNUAL REPORT

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- Beaubassin Planning Commission
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- **Many** other groups and individuals who have contributed throughout the year, it is much appreciated!

Preface

The Shediac Bay Watershed Association remains committed to working with communities and fostering partnerships with the various interest groups within the Shediac Bay watershed. The 2003-2004 fiscal year proved a very productive year where obstacles were overcome and numerous accomplishments were made. This Annual Report summarizes the activities of the SBWA during the 2003-2004 fiscal year and projects for the upcoming year.

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1.0 Description of the Shediac Bay Watershed Association (SBWA)

1.1 Background

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 established

The New Brunswick Environmental Trust Fund mainly provides funding. Other contributions obtained through grants, donations or in-kind by various organizations also support the SBWA.

The Shediac Bay Watershed Association has the following vision and mission statements:

Vision – Communities working together to foster a healthy ecosystem that will sustain the quality and quantity of water for future generations.

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

1.2 Board of Directors, partners and stakeholders

The Shediac Bay Watershed Association is managed by a Board of Directors consisted of sixteen members who represent various regions and interest groups. The Board of Directors meets on a monthly basis and includes the following:

Mr. Pierre E. Landry, President	Mr. Neil LeBlanc
Mrs. Odette Babineau, 1 st Vice-President	Mr. Frank Boudreau
Mr. André Veniot, 2 nd Vice-President	Mr. Ronald Boudreau
Mr. Armand Bannister, Treasurer	Mr. Adrien Léger
Ms. Helen Hall, Secretary	Mr. Louis LeBlanc
Mr. William Murray, past President	Mr. Greg Murphy
Dr. André Touchburn	Mr. Edgar Hachey
Dr. Marcel Mallet	Mr. Martin Mallet

Important partners of the SBWA are the many stakeholders found within the watershed boundaries. Over 300 stakeholders are found within the watershed and include, but not limited to, the following: businesses, industries, foresters, farmers, residents, marinas, fish plants, recreationalists, conservation groups and community organizations.

During the 2003-2004 fiscal year, the board of directors met on the following dates:

April 10 2003
May 14 2003
July 8 2003
August 20 2003
September 25 2003
November 13th 2003
January 22nd 2004
March 11th 2004

In addition, the SBWA Technical Committee met on September 3rd, 2003 to discuss and share information on the various issues pertaining to water quality within the Shediac Bay watershed area. This committee plays an integral role and serves as a forum of information exchange between the various government and non-government agencies involved with the watershed. This committee includes representatives of the Greater Shediac Sewage Commission, the Department of Fisheries and Oceans, the NB Department of Health and Wellness, the NB Department of Environment & Local Government, the NB Department of Agriculture, Fisheries and Aquaculture, Parlee Beach Provincial Park and staff and members of the Shediac Bay Watershed Association board of directors.

These meetings are vital to help plan a remediation action plan for the Shediac Bay Watershed. As well, the open communication forum between the various agencies serves to prevent duplicating efforts, with respect to sampling a problem area, and it also serves as an efficient means of solving problems within the watershed. Another meeting with the Technical Committee was scheduled for March 4th, but had to be postponed a month due to members being absent during March Break.

1.3 Employees

During the 2003-2004 fiscal year, the only full time staff of the Shediac Bay Watershed Association consisted of the coordinator. The field technician and shellfish restoration coordinator were let go as a result of budgetary constraints. Summer students, an intern and Katimavik volunteers completed the SBWA team during the 2003-2004 fiscal year summer. At the moment, the employee of the Shediac Bay Watershed Association includes the following:

Coordinator Lise Auffrey-Arsenault, M. Sc.

2.0 Description of the Shediac Bay Watershed

2.1 Watershed boundaries

The Shediac Bay watershed covers 400 km² of land area that stretch along 40 km of coastline, from Cap Bimet to Cap de Cocagne. The watershed reaches inland as far as Lutes

Mountain near Moncton. The boundaries stretch into both Kent and Westmorland County and into the Shediac and Moncton Parishes.

The Shediac Bay watershed includes two major river systems: the Shediac River and the Scoudouc River that empty into Shediac Bay. The watershed has many smaller tributaries that empty either into one of the two major rivers or directly into the bay. (Please refer to Figure 1 for a detailed map of the Shediac Bay watershed boundaries).

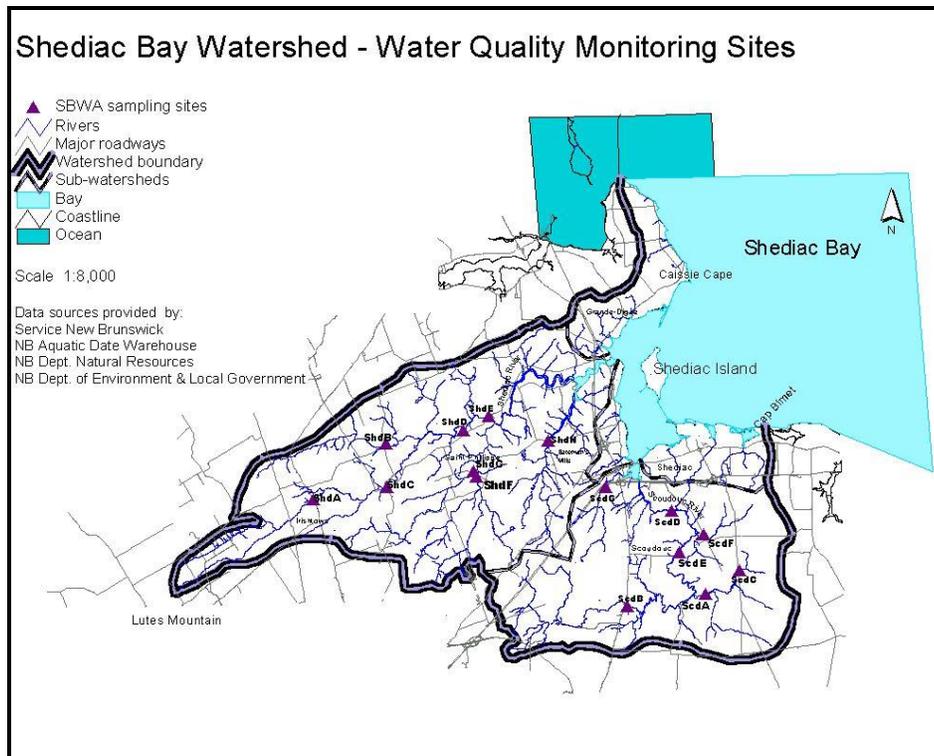


Figure 1. Map of Shediac Bay watershed boundaries and sampling sites

2.2 Communities and Land-Use

The Shediac Bay watershed consists of a population of approximately 15,000 people and includes the following communities:

- | | |
|----------------------------------|------------------------|
| Bateman’s Mill | MacDougall Settlement |
| Boudreau Office | Old Shediac Road |
| Caissie-Cape | Pointe du Chêne |
| Cap Bimet | Scotch Settlement Road |
| Cap Brulé | Scoudouc |
| Cape Breton Road | Shediac Bridge |
| Cap de Cocagne (eastern portion) | Shediac Cape |
| Grand Barachois | Shediac River |
| Grande-Digue | Saint-Philippe |

Irishtown
Indian Mountain

Shediac Road
Town of Shediac

The Shediac Bay watershed is home to a wide variety of flora and fauna where rich ecosystems and habitats, such as wetlands and forested areas, are found. The watershed also plays host to a variety of important activities such as forestry, agriculture, industry and tourism. The area is rich in culture and history. Well-known destinations such as Parlee Beach can be found within the watershed boundaries.

3.0 Environmental issues in the watershed

Many problems, often anthropogenically related, posing serious threats to the environment can be found within the watershed. Sources of impact include: 1) industrial water discharge, 2) agriculture, 3) forestry, 4) public and private sewerage treatment, 5) Parlee Beach, 6) infilling of salt marshes, 7) open quarry mining, 8) abandoned vehicles, 9) coastal flooding and storm surges, and 10) marine vessels.

3.1 Overview

1) Discharge of industrial water: Many industries require the use of water during their operations. Water, taken from streams, ground or the bay, may be used for cleaning, cooling or as an additive. Once used, the water can have adverse effects on the environment by increasing temperature, bacteria levels and sedimentation thus altering environmental conditions for organisms found within impacted areas.



What are we doing about it? Industrial water discharge has been a subject the SBWA has been addressing. We are continuously working to form partnerships with industries and educate them on proper disposal of wastewater and methods, which help improve water quality. The SBWA's communication strategy includes public outreach program with major stakeholders to incorporate their input in remediation planning.

2) Agriculture: Agriculture has an important role in this region's economy and heritage. Poor agricultural practices, however, have been linked to negative impacts to the environment. Improper manure spreading and storage have been found responsible for some increases in bacteria in impacted streams and rivers. Improper use of fertilizers and pesticides are occasionally responsible for polluting runoff water and other water sources. When these enter a watercourse, they increase nutrient concentrations and potentially augment the deposition of heavy metals. The latter may enter the food chain through fish and benthic

invertebrates. Cattle having direct access to watercourses may also increase bacteria levels in watercourses, create erosion problems in buffer areas and potentially damage streambeds.



What are we doing about it? Agriculture is a topic in which the SBWA has demonstrated great interest. Installing cattle fences to prevent access to streams and rivers and establishing alternate drinking sources have proven effective against bacterial contamination in watercourses. Tree seedlings are also planted to help retain bank integrity along the watercourses. Promoting best management practices (BMP) and helping farmers make informed decisions is a priority for the Association.

3) Forestry: Forestry is an integral part of the region's economy and history. Improper cutting of buffer zones and use of machinery in and around streams have been responsible for the destruction of fish and other aquatic habitat throughout the watershed. Increased siltation can be observed where poor practices have been employed. Silt can have adverse effects on habitat by altering fish spawning grounds, cloaking their gills and visually impairing them. Fish habitats have also been destroyed by the direct use of heavy machinery in streambeds.

What are we doing about it? Promoting best management practices is a tool the SBWA has used to educate the industry on sound environmental practices. The SBWA's public outreach program promotes individuals or companies within the forestry sector to attend meetings to discuss remediation planning. The protection of buffer zones is crucial to maintaining water quality and must be enforced. Stream restoration projects involving the installation of digger logs and deflectors have proven to be effective in restoring some rivers. By these means, fine sediments that have accumulated and choke the stream can be flushed out. The digger logs and deflectors naturally disintegrate with time. Stream surveys have also been done to determine the health of certain tributaries. Benthic invertebrate sampling is also becoming a useful tool the Association has utilized for determining the health of a river system. Macroinvertebrates are quite sensitive to their environment and their presence gives an indication of environmental conditions.

4) Public and private sewerage treatment: Some homes and cottages found within the watershed may not be equipped with proper septic systems since these were built prior to the implementation of regulations. In these cases, sewerage may be draining directly into the bay thus likely increasing bacterial concentrations. Problems associated with this waste in aquatic environments include impacts on fauna (i.e. shellfish contamination). Human health may also be affected via increased bacterial levels in drinking water as well as water used for

bathing and other household purposes. It is important to note that 3 provincially regulated primary sewage treatment facilities are located in the Shediac area.

What are we doing about it? Public and private sewerage treatment has been addressed in the past. This past summer, funding through Environment Canada and the Environmental Trust Fund allowed us to hire an additional employee to carry out field work and associated computer analysis related to septic systems improvement. This program helped the SBWA gather information, allow site visits to identify faulty septic systems, identify the location of residences with regards to the Coastal Policy zones, offer subsidies to some residences in need and finally educate. A partnership between the Shediac Sewerage Commission and the SBWA exists and will prove helpful when setting up objectives to address the problems associated with sewerage. The NB Department of Health and Wellness is an active partner and donates its time and expertise towards our projects.

5) Parlee Beach: The natural beauty and warm waters of Parlee Beach attract thousands of visitors each summer. The influx of tourists can potentially affect water quality in the area.

What are we doing about it? A technical committee was formed to share information between the different agencies involved in water quality monitoring within our watershed. This committee includes representatives of the SBWA, Fisheries and Oceans Canada, Environment Canada, NB Department of Environment and Local Government, NB Health and Wellness and Parlee Beach. These partnerships allow the SBWA to remain in contact and better understand the existing environmental conditions at Parlee Beach since the park is responsible for its own water quality monitoring.

6) Infilling of salt marshes: The desire to live along the coastline has caused a shortage in available waterfront lots. To compensate for this problem, people are finding new areas and methods to construct their homes. In some cases, the infilling of marshes and estuaries has become a problem. These marshes have a vital role in the protection against storm surges, erosion, providing a habitat for fish, waterfowl and other birds. They also participate in cleaning water that eventually makes its way back to our drinking water supplies.



What are we doing about it? We are currently completing the Community Wetlands Atlas. This project results from a need for a comprehensive digitally represented GIS database for wetlands within our watershed. Further, the province of New Brunswick has developed the Wetlands and Coastal Habitat Program as a conservation strategy that identifies, secures and protects key wetlands and coastal habitat across the province. The atlas will help assess and monitor the status, loss and changes in coastal wetlands through time. We will therefore be

able to develop habitat management strategies, set goals for biodiversity and endangered species recovery plans, target limited resources for conservation and restoration programs, support NB Environmental policies and wetland conservation programs, and finally identify information gaps.

7) Open quarry mining: Many local contractors rely on raw materials that have to be taken out from quarries. One of these quarries is presently at the headwaters of the Shediac River. These open quarries can cause an impact to the environment by increasing the levels of heavy metals found in water. These heavy metals can enter the food chain via fish and benthic invertebrates and can cause impacts throughout the ecosystem.

What are we doing about it? Water testing is a crucial tool in obtaining reliable information on the quality of water in certain areas. Further implementation of sampling sites could also help determine exactly and to what extent the impact these quarries are having on the neighboring streams and rivers.

8) Abandoned vehicles: It is not uncommon to come across abandoned vehicles in secluded regions. These vehicles are sometimes stored indefinitely for parts. They can be unsightly, dangerous to the public and potentially dangerous to ground and surface water. An important environmental hazard associated with abandoned vehicles is the leakage and seepage of petroleum products into the ground or surface water. Once contaminated, this water is not safe for animal or human consumption. Further, impacts to aquatic fauna and flora are also feasible.

What are we doing about it? Public education plays an important role in preventing pollution from abandoned vehicles. Spreading the message on environmental concerns and on the possible hazards related to incorrectly disposing waste material continues to be included in SBWA presentations and educational materials. Partnerships with various agencies are continuously sought to find solutions to properly dispose of such pollution.

9) Coastal flooding and storm surges: Coastal flooding caused by storm surges is of great concern to residents in the area. Many homes have fallen victim to the destructive nature of the sea as a result of waves, high tides and the movement of ice. Coastal flooding and storm surges have lead to millions of dollars in damages in this region alone in the last few years. The loss of coastal land due to land development unfortunately often implies the loss of wetlands acting as natural buffers that protect land from erosion and flooding.



What are we doing about it? Working with agencies such as the Beaubassin Planning Commission, the Greater Shediac Sewerage Commission and by using GIS and GPS

software, we will be better able to suggest areas that may be more vulnerable to coastal flooding and storm surges. These areas could therefore be avoided when identifying land development areas. The Community Wetlands Atlas, a detailed description of the wetlands found within our watershed, will help us identify such lowlands that are vulnerable to flooding.

10) Marine vessels: The Shediac Bay is home to approximately 400 boats that dock at either the Shediac or Pointe du Chêne Marinas. The bay also attracts many boaters from outside the region. An associated problem with boating activities is the possible disturbance of resting and feeding wildlife. Boats may also damage wildlife habitat or disperse young waterfowl. Vegetation may be removed by the actions of propellers, possibly accelerating shoreline erosion. Fossil fuels such as gas and oil and wastewater from boats often seep into the environment through leaks or unintentional acts. Litter from boating activities may also accumulate and affect habitat coastal habitats.



What are we doing about it? Two pump-out stations are found at the 2 marinas in the watershed. The SBWA has applied for funding to promote Green Boating in our bay. The project will educate vessel owners on the importance and methods of minimizing their impacts on coastal areas. The designation of a no discharge zone for Shediac Bay will hopefully be addressed during the implementation of our Green Boating project.

4.0 2003-2004 Projects and activities

In November of 2002, the Shediac Bay Watershed Association hosted a strategic planning session. The session involved initiating an organized and detailed plan of goals that the SBWA will attempt to reach according to its mandate. The strategic planning session provided a step-by-step plan to reach our full potential and work towards the mission of the SBWA as stated in the constitution.

4.1 Remediation

Water management, remediation and community capacity development

As part of the proposed action items described for each sampling site in the *Provisional Water Classification Report 2000-2003*, various remediation steps were proposed. These steps included repairs to previous cattle fencing projects and stream restoration efforts. In addition, one new cattle fencing project and one new stream restoration project were part of

the remediation plans proposed in our Water Management, Remediation & Community Capacity Development project.

Cattle fencing

Repairs to previous projects included maintenance on the Kenneth Kelly Farm located in Indian Mountain, New Brunswick. Labour by staff of the SBWA was needed to repair and adjust the cattle fencing that was erected in 2000. Some posts were replaced or dug deeper into the ground. The cattle fence was also tightened to secure livestock enclosure.



Repairs to cattle fencing (photo: Krista Morrissey)

In addition, the cattle fence on the Jim Bateman Farm had to be maintained. Work included replacing posts and tightening section of the barbed wire fencing.

The 2003 field season also involved erecting a new cattle fence on the Alvin Bourque Farm in Scoudouc. The farmer had already installed an independent well for his cattle, which limited the cattle from accessing the stream. Blocking the entire watercourse was not possible due to spring flooding which would cause damage and other problems to the fencing project. The project will limit bacteria inputs and reduce erosion of the stream banks caused by cattle accessing the stream. Vegetation will have the opportunity to develop and stabilize the sediment hence minimizing the amount of silt in the watercourse.

Stream restoration

The 2002 stream restoration project in the MacDougall stream needed maintenance. A number of deflector trees were replaced. The work included hauling trees selected from the area to the site. The deflector trees were then anchored to ensure that they would function properly. A Fisheries and Oceans habitat biologist inspected the work and was pleased with the result.

The repairs and maintenance work performed during the 2003 field season were most often the result of the weather related incidents such as the ice storm from the previous winter.

The new stream restoration project of 2003 involved the expansion of the 2002 project in MacDougall stream. It was decided that work should continue downstream in this tributary due to the accumulating silt likely as a result of bank erosion due to poor forestry practices.

Debris jams cause the silt to accumulate in areas and eventually altering the ecosystem (*e.g.* prevent fish spawning).

It was determined that a total of 20 structures were needed to improve the condition of the MacDougall stream. The 2003 stream restoration project involved placing 5 of the 20 structures in the stream. The numerous debris jams caused mostly by poor forestry practices, have been removed in the affected areas. A conservation seed mix was planted along the stream banks to help stabilize the bank thus reducing erosion.

Since completion of the work in November of 2003, the SBWA and the Fisheries and Oceans Canada have observed noticeable improvements in the condition of the stream. Higher water levels during the fall and winter months help flush the sediment from the bottom of the stream and further improvements are expected to be observed.



Stream restoration measurements (photo: Justin Poirier)

4.2 Septic system improvement and education project

The aim of this project was to identify and correct failing and problematic septic systems and holding tanks within the Shediac Bay watershed. This was to be accomplished by educating homeowners and cottage-owners on the proper care and maintenance of septic systems and by offering subsidies to those willing to improve their septic systems.

Meetings and consultation sessions took place between the SBWA and project partners such as Diane Fury of the NB Department of Health and Wellness, Ronald Boudreau of the Shediac Greater Sewerage Commission and Bernard Richard of Environment Canada.

Also consulted were the Beaubassin Planning Commission and the Kent Planning Commission. Both agencies provided valuable information needed to create digital maps for the project. Maps were created to demonstrate where coastal zones (zones A, B and C) were situated in comparison to where houses and cottages were located. The maps also contained information on areas where septic systems were located such as Cap Bimet, Grand Digue, Shediac Cape and Caissie Cape. As required, additional surveys relating to the state of the homeowner's septic system were performed.

An information pamphlet on the proper maintenance and care of septic systems was distributed throughout the watershed in August 2003. The pamphlet also served to promote

public information sessions and allow interested individuals to apply as an application was attached.

Information sessions were offered on August 18th in Shediac and on August 26 in Shediac Cape. The project was also broadcasted on CBC radio on July 14, 2003. Articles on the project were written by Times transcript on July 23, 2003 and by l'Acadie Nouvelle on July 24, 2003. Despite our efforts, few people attended the sessions.

In sum, a total of 6 septic systems were repaired or replaced as a result of the project with a total of \$10,300.00 in subsidies given to participants. Most of the successful applicants were located between Shediac Cape and Caissie Cape.

4.3 Other

Water quality

Another SBWA initiative includes dissolved oxygen testing and temperature readings of fifteen sites scattered throughout the watershed. These sites were the same sites chosen for the water quality testing data used in the *Provisional Water Classification Report 2000-2003*. The sampling took place from mid-May to November 24th, 2003.

A partnership with Fisheries and Oceans Canada allowed the SBWA to monitor water quality in the watershed during July to October 2003. This bio-indicator project is expected to determine the effect of fish processing plant effluents on local fish communities. The SBWA assisted DFO with the field work which included net casting, water testing and fish identification. Seven sites located near the Shediac Lobster shop were sampled. Some sites were upstream, others downstream and one was located directly at the output of the effluent pipe. Other areas participating in this project include Lamèque, NB, Bassin Head, PEI and Antigonish, NS. Data collection is expected to continue in 2004.



DFO Bio-indicator Index Project

Community Wetlands Atlas

The Community Wetlands Atlas project includes a detailed listing of the most significant wetlands found within the Shediac Bay Watershed boundaries. The pending completed Atlas, mostly funded by the NB Wildlife Trust Fund, was created to help monitor and protect the wetlands found in our watershed. The Atlas includes information on wetlands as well as a digital map of the watershed indicating significant wetlands found within the watershed

boundaries. A total of 39 wetlands located throughout the watershed were inventoried during late summer and fall. Mr. Robert Capozzi, Department of Natural Resources, offered assistance during this project. In addition, Sabine Dietz, a botanist trained in plant and habitat identification offered her assistance in the field. Once completed, the Community Wetlands Atlas will be available to the public.



Wetlands data collection (Photo: Krista Morrissey)

Oyster monitoring

During the summer 2003, the SBWA participated in Fisheries and Oceans Canada oyster monitoring program. Two cages were deployed in Shediac Bay and monitored regularly by the Department of Fisheries and Oceans with assistance from the SBWA. The oysters were monitored for growth, survival and condition index.

4.4 Public outreach and education

In May 2003, the SBWA participated in the first EnviroExpo. The Expo took place at Global's Festival Place in conjunction with the weekly farmer's market. This outreach program was a great opportunity to promote the activities and goals of the Association.

A kiosk was mounted during the 20th anniversary celebrations of the Shediac Bay marina in July 2003.

In addition, the fifth edition of the SBWA *Current News* was distributed throughout the watershed in August 2003.

The 2nd Annual World's Oceans Day event took place on June 7th, 2003. The event included a beach sweep along the local coastline, a barbecue, and information kiosks from various groups, music, games for the kids and a silent auction to raise funds. Local newspapers such as the *Moniteur Acadien* and *Times Transcript* wrote articles on the event. An interview was also given to Radio Canada. Numerous partners were involved in the event including the Canadian Packaging Association, the Federal Department of Supply and Services, the Department of Fisheries and Oceans and the Shediac Bay Marina. A host of local merchants also supplied prizes for the event and items for the auction.



World's Oceans Day event (Photo: Justin Poirier)

Informative presentations were also made for various groups throughout the year such as the Scoudouc River Canoe Club and the Rotary Club.

The past year also marked the implementation of the SBWA Education Program in local schools. The environmental education program was developed to educate young citizens of our watershed on the importance of our waters and the issues threatening it. The Association collaborated with District 11 and 2 to establish the program in local schools.

The Shediac Bay Watershed Association managed the Shediac Island Nature Interpretation Centre for its first time. Proceeds from the ticket sales were shared between the SBWA and the Town of Shediac. The services offered were a shuttle service to Shediac Island to tourists interested in Shediac Island's natural habitat. Further, the Centre offered information on the history, fauna and flora of the Island. Such collaboration allowed the SBWA to educate the public on the importance of our environment. The service operated from July 2nd to August 27th, 2003.

5.0 Participation and awards

Numerous workshops hosted by a variety of agencies such as Fisheries and Oceans Canada, the Canadian Wildlife Services, the New Brunswick Department of Environment and Local Government, were attended throughout the year.

Other notable events during the 2003-2004 fiscal year, included the Association receiving a merit award on August 4th, 2003 from the Town of Shediac for its excellence in the environmental sector.

6.0 Fundraising

The Shediac Bay Watershed Association received charitable tax status through the Canada Revenue Agency in October 2003. Such status allows the Association to seek funding from a much wider range of agencies and encourages personal donations from the public as a tax incentive.

A variety of fundraising activities took place during the 2003-2004 fiscal year including the Vesey's bulb campaign. As well, the City of Moncton donated \$1000 to the SBWA through profits obtained from the summer's Seafood and Wine Festival held in Moncton. Donation cards available at funeral homes also provided some moneys.

7.0 Sponsors, donors and supporters

7.1 Financial

The Shediac Bay Watershed Association has gained considerable support and funding from various sources to assist the association carry out its many project and activities. The SBWA remains grateful for the support of the following organizations, businesses and departments, without which our efforts would not continue to strive.

Town of Shediac
New Brunswick Environmental Trust Fund
New Brunswick Wildlife Trust Fund
New Brunswick Agricultural Environmental Management Initiative
SEED Program
Workforce Expansion - Department of Training and Employment Development
The New Brunswick Work Ability Program
Fisheries and Ocean Canada
Environment Canada
Community Animation Program - Environment Canada
Maritime Fisherman's Union

7.2 In-Kind

The SBWA has received substantial in-kind support from various groups and individuals during the 2003-2004 fiscal year and continues to attain much needed aid from community members.

Town of Shediac
Westmorland-Albert Solid Waste Commission
Coop Atlantic
Cott's Beverages Ltd
Department of Natural Resources and Energy
JD Irving Ltd
Modern Construction Ltd
SENB Wood Marketing Board
Shediac Bay Marina
Shediac Bay Cruises
Tim Horton's

The list would not be complete without mentioning the many groups and individuals who donated their time and their equipment throughout the year.

8.0 Financial report

Please refer to Appendix A for a complete statement of the financial report for the 2003-2004 fiscal year.

9.0 2004-2005 fiscal year

Shellfish Restoration Project (Funded)

The goal of this project is twofold. The first goal is to enhance oyster beds in Shediac Bay and Cormierville. These are important oyster producing areas in N.B. that never fully recovered from the effect of Malpeque disease. Secondly, this projects aims to create quahaug (*Mercenaria mercenaria*) reproductive sanctuaries in Petit Cap. Populations of this shellfish in the southern Gulf of St-Lawrence have declined over the past five decades, largely due to increasing harvesting pressures. The creation of sanctuaries is hoped to improve the reproductive capacity of the shellfish.

In view of the decline of shellfish populations in many areas of the world, effort has been put into enhancing their abundance because of their ecological, social, historical and economical value. For example, oysters and quahaugs filter the water column thus ameliorating water quality. By creating reef structures, oysters increase biodiversity, provide a viable food source and habitat for many species. Considering these species have an important ecological, historical, sociocultural and economic role in eastern New Brunswick, Shediac Bay and Cormierville would greatly benefit from enhancement efforts.

Two quahaug reproductive sanctuaries will be created in Petit Cap. Hardy (2002) found that quahaug reproductive sanctuaries could be of benefit for the species. His findings suggested successful reproduction, and therefore recruitment would be greater with increased density of large quahaugs in a given area.

Oyster enhancement work in Shediac Bay and Cormierville will be achieved by desilting and/or shelling (adding shell material to sea floor). Two oyster beds will be created in Shediac Bay and Cormierville. In Shediac, desilting and adding shell material will be used to restore oysters. Shelling, on the other hand, and not desilting will be used in Cormierville.

Desilting will involve the use of harrowing equipment that will be towed behind a boat. The work will be done when the tide recedes. Shells will also be added by boat and crates to the area desilted to maximize spat settlement.

Shelling will involve the laying of soft-shelled clam (*Mya arenaria*) shells on the seafloor to increase suitable substrate for settling larvae. Approximately 3 kg/m² of shell will be added to areas intended for shelling. Tools and equipment used in adding shell material to the ocean floor would include crates for the shells, a vehicle to transport shell material to the docks and a boat. The shell material will be transported by boat to the enhancement site and placed on the bottom by emptying the crates on the sea floor.

Water Quality Remediation & Public Outreach Program (pending funding)

The project will focus on completing the provincial water classification project of tributaries within the watershed, and continue remediation efforts that were included in the Provisional Water Classification Report of March 2003. As such, it is hoped that a cattle crossing project, one fencing project and one stream restoration project will be achieved. Further, it is anticipated that comprehensive remediation plans will be created by collaborating with stakeholders. Finally, the SBWA also intends on continuing public outreach sessions.

Septic System Improvement and Education Project – Phase II (pending funding)

This project aims to continue to identify and correct failing and problematic septic systems and holding tanks along the watershed's coastline. Homeowners and cottage-owners will be educated on the proper care and maintenance of septic systems. Subsidies will also be offered to low-income homeowners seeking to improve their septic systems. The second year of this project continues the efforts of the previous year and attempts to increase the general awareness of this great program.

Rain Barrels and Water Conservation (pending funding)

The goals of this project are to 1) conserve potable water by increasing the awareness of water issues and, 2) promote the use of rain barrels as an alternative water supply source for outdoor use. An awareness campaign will be developed to promote the importance of conserving water. In addition, the use of rain barrels that collect rain water will be encouraged by explaining their use and benefit throughout the various communities located within the Shediac Bay watershed. The SBWA will provide assistance to interested residents into the proper installation and utilization of rain barrels.

Green boating – Get on board! (pending funding)

The SBWA wants to develop and implement a program aimed towards marine vessel operators. The "Green Boating – Get on board!" project will make use of information sessions, pamphlets and signage to promote green boating in our bay. Green boating implies the promotion of minimizing the impact boating activities (*e.g.* sewage, grey water, and bilge water discharge) have on our bay. Two pump-out stations are located in the watershed. The SBWA wants to educate boaters on the importance of using these pump-out stations so to avoid direct discharge in the bay thus avoid polluting.

Other activities

Ducks Unlimited Green Wing program (delivered week of May 31)

The SBWA has partnered with Ducks Unlimited to offer its Green Wing program to grade 4 students. Students will be brought to a wetland located in Pointe-du-Chêne and taught on the importance of wetlands. Fun activities and bird watching are part of the curricula which will be delivered by our 3 Katimavik participants.

World Oceans Day – 3rd Annual Beach Sweep (June 12)

June 8th, declared a decade ago at the United Nations Earth Summit in Rio de Janeiro, is known internationally as the day we celebrate our oceans. The SBWA will be organizing a Community Beach Sweep to celebrate this important date.

A kiosk will also be set up at the Superannuating Branch on June 8th to promote the importance of our Oceans and how we can help them by cleaning the coastline.

APPENDIX A

FINANCIAL REPORT FOR THE 2003-2004 FISCAL YEAR

APPENDIX B

MEDIA