



RenewablesNB—MREAC Becomes North-East Coordinator

RenewablesNB provides access to information on renewable energy technologies of residential and small-scale commercial/institutional systems. Case studies are developed and showcased on the RenewablesNB website. This renewable energy project links and provides networking opportunities among NGO's, businesses, government agencies and citizens to promote renewable energy technology, with access to real world examples and experiences by renewable energy pioneers.

Provincial coordination for RenewablesNB comes from [Cape Jourimain Nature Center](#), who also serves as the South-Eastern New Brunswick Hub. The province has been divided into four quadrants. [Falls Brook Center](#) is the North-West and the [Conservation Council of NB](#) is the South-West coordinators for this project.

In 2010, MREAC joined RenewablesNB by becoming the North-East hub for the project. MREAC began this project by collecting small scale renewable energy case studies throughout our north-east sector of New Brunswick. These case studies were then placed onto the RenewablesNB



website. However, due to some recent changes in the requirements for case studies to be published, many of these are currently not available on the website pending review.

In 2011, MREAC will continue to add case studies and deliver these for website publication. Some case studies will be expanded to provide more information to the end-user. Also, this year will have a greater focus on networking and promoting, to increase the public's awareness of RenewablesNB and what it has to offer. To help in this effort, MREAC will be hosting a booth at the Miramichi Home Show this spring for RenewablesNB. Information about the group and renewable energy will be available for those who visit the booth. Some renewable energy items will be on display to help illustrate how they work.

For more information about RenewablesNB, visit the website site at www.renewablesnb.ca.



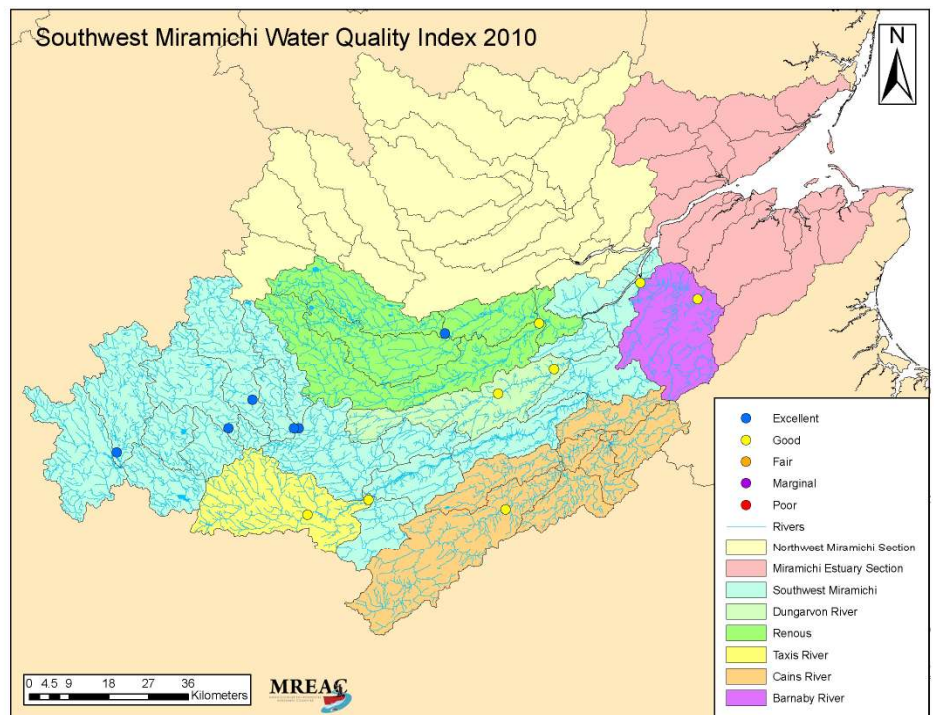
Water Classification Results for Southwest Miramichi

MREAC in partnership with the NB Department of Environment completed the field work for the Southwest Miramichi for the Water Classification Program. During the summer of 2010, water samples and benthic samples were collected throughout the "Southwest". Once a month from June to October, fourteen water sampling sites were visited, nine sites collected by MREAC staff and five collected by JD Irving staff. Water quality samples were sent to the NB Environment Laboratory where they were tested for general chemistry, nutrients, metals, nitrate and bacteria. Seven of these sites were re-visited by MREAC and DENV staff in September when benthic samples were collected, using the standard provincial collection protocol. These benthic samples were also sent to the Canadian Rivers Institute Benthic Invertebrate Laboratory for analysis of aquatic insect populations.

The results will serve as a baseline for water quality of the river system and will be used to help with the classification of these rivers and in determining actions plans. When a class is given to a river system, goals are then set in order to achieve or maintain the desired water quality result. If the current water quality does not meet the standards for the given class, then action plans are required in order to improve the water quality to reach the set goals. This part of the process will happen in the following years.

The fourteen sites sampled in the Southwest Miramichi area were as follows (* indicates benthic sample site):

- Barnaby @ Mouth*
- Barnaby @ Hwy 126
- North Branch of the Renous River @ Hwy. 108*
- Dungarvon @ Mouth*
- Bartholomew @ Mouth*
- Bartholomew @ Mid
- Cains River @ Hwy. 123*
- Taxis River @ Mouth*
- Taxis River @ Hwy. 625*
- Rocky Brook @ Mouth
- Sister Brook
- Clearwater Brook
- Burnthill Brook
- North Branch Southwest Miramichi @ Juniper station



John O'Keefe of DENV showing bio-monitoring sample collected.

Water Quality Index Results for Southwest Miramichi

The water chemistry results from the fourteen sites for the Water Classification on the Southwest Miramichi 2010 were compared with past water chemistry data collected by MREAC at the same sites, and used in the Water Quality Index calculator. This calculator uses the parameters ammonia, arsenic, chloride, copper, dissolved oxygen, iron, nitrate, pH, phosphorus, turbidity and zinc, and compares them with the current Canadian Water Quality Guidelines for the Protection of Aquatic Life, in order to categorize the sample sites based on their water quality condition.

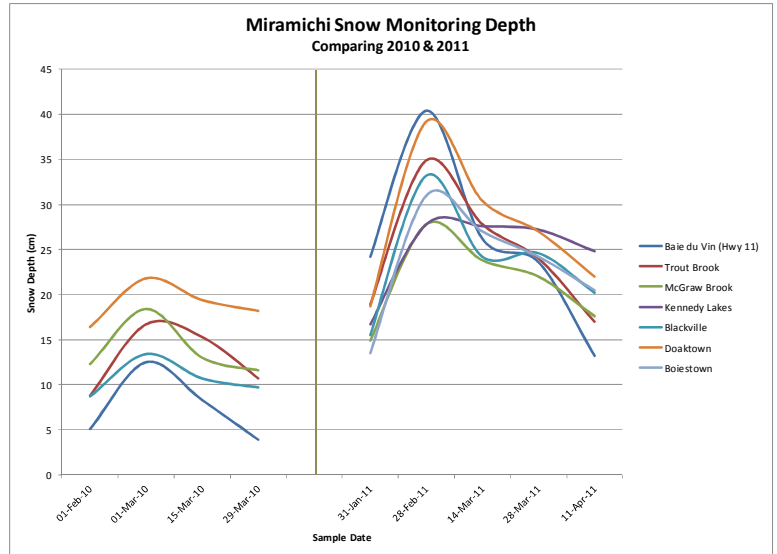
The map above indicates the WQI results for the Southwest Miramichi.

The Winter That Was

Love it or hate it the winter returned with a vengeance in 2010/11 when compared to 2009/10. MREAC staff and volunteers have been out sampling snow depth and the water equivalency of the snow pack since late January and there is a remarkable contrast between this winter and last (see graph below). Our deepest measure of accumulated snow was found at the Bay du Vin site at 48" (or 122 cm.). All of the seven Miramichi snow monitoring sites, Boiestown, Doaktown, Blackville, Kennedy Lakes, McGraw Brook, Trout Brook and Bay du Vin had significant snow depths. The potential risks associated with such high snowfall comes with the spring melt which has thankfully been tempered so far by freezing and thawing cycles that have not resulted in a rapid melt of the snow pack. While there is still a large quantity of snow (as of mid April) in the woods, the biggest threat is past due to the steady decline of the snow load to date.



Similar findings are resulting in hopes for a controlled release of flood waters on the St. John River which is more prone to flooding due to the higher level of development on river flood plains.

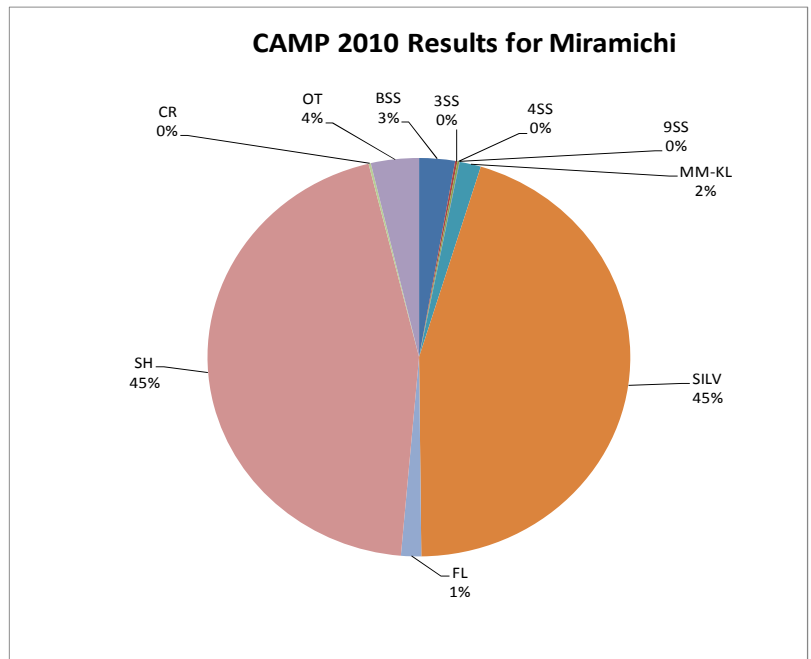


CAMP Results for 2010

MREAC has been participating in the Community Aquatic Monitoring Program (CAMP) since 2004. Over thirty groups within the Southern Gulf of the St. Lawrence River collect a variety of aquatic species using a beach seine net in an effort to assess the health of ecosystems. From June—September, once a month, MREAC collects, identifies, counts and releases the catch of aquatic species. In 2010, MREAC recorded 18 different species of fish or crustaceans during this project. A summary of those results can be found in the table and graph below.

Species	Abbrev.	Total
Blackspotted Stickleback	BSS	745
Threespine Stickleback	3SS	47
Fourspine Stickleback	4SS	40
Ninespine Stickleback	9SS	10
Mummichog & Killifish	MM-KL	447
Atlantic Silverside	SIVL	12264
Flounder Species	FL	416
Shrimp Species	SH	12189
Crab Species	CR	48
Other Species	OT	994
TOTAL		27200

Table 1—Totals for Miramichi 2010 of common aquatic species found during CAMP

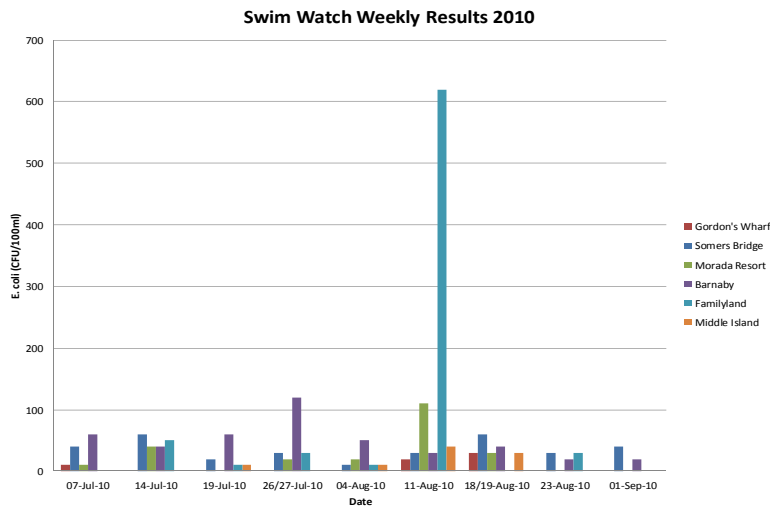


Swim Watch Result for 2010

Since 1993, MREAC has been collecting water samples at a number of sites throughout the Miramichi River watershed as part of the Swim Watch Program. These water samples are then tested at the NB Environment Laboratory for fecal coliform contamination and compared with the Guidelines for Canadian Recreational Waters, in order to ensure the safety of recreational users at common swimming holes and beaches.

MREAC completed another year of this program in 2010, sampling 6 sites weekly from the beginning of June to the end of August, and twice during that time period 22 additional sites were sampled. If sites are considered to be a health risk to humans, NB Health and Wellness will close the beach. In 2010, no beach closures were issued.

The graph below illustrates the E. coli totals for the weekly samples. The dramatic spike at Familyland Beach has an unknown cause, and results were back to normal the following week.



MIRAMICHI RIVER ENVIRONMENTAL ASSESSMENT COMMITTEE

PO Box 85
21 Cove Road
Miramichi, NB
E1V 3M2

Phone: 506-778-8591
Fax: 506-773-9755
Email: mreac@nb.aibn.com
Website: www.mreac.org

Executive Committee

Mr. Patrick McMahon	President
Mr. Linwood Dunham	Vice-Chair
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Mr. Denis Hare	Treasurer
Mr. Elwin Sherrard	Past President



Northern Pipefish caught during CAMP

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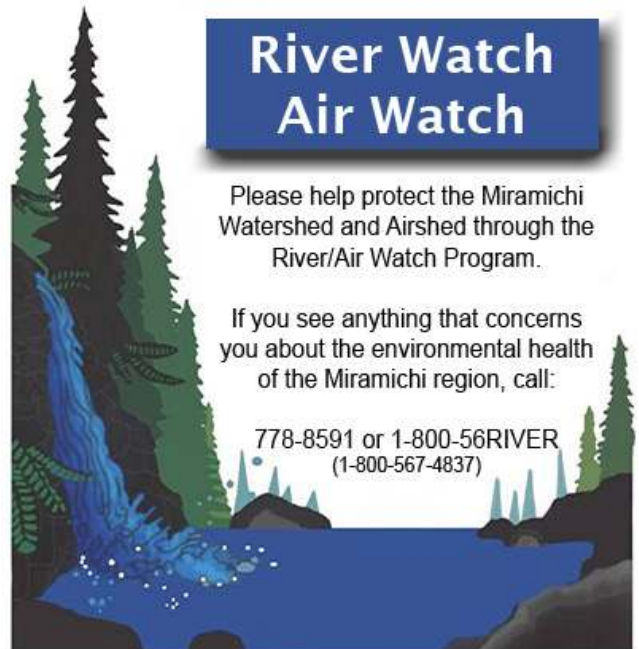
A special thank you to our Executive, Technical Advisory Group & all of our MREAC members for their continuing support!

River Watch Air Watch

Please help protect the Miramichi Watershed and Airshed through the River/Air Watch Program.

If you see anything that concerns you about the environmental health of the Miramichi region, call:

778-8591 or 1-800-56RIVER
(1-800-567-4837)



This is a program of the
Miramichi River Environmental Assessment Committee
(MREAC)

