



### Of Special Interest

Petitcodiac EIA has been released!

New Coordinator

Partnership with the City of Moncton

Water Quality Results

Mapleton Park

## PETITCODIAC EIA RELEASED AT LAST

On October 11, 2005, AMEC released its final report on the Petitcodiac River Causeway. There is a considerable amount of information including copies of the report available at [www.petitcodiac.com](http://www.petitcodiac.com). PWMG also has an English hardcopy of the entire report here in the office. Feel free to come and reference this document.

Highlights of the report include the major conclusion that the causeway will have to be altered to return fish passage to the upper portions of the River. Four options have been selected as the best options for remediation: (1) replacing the fishway; (2) keeping the gates open during peak fish migration times; (3) keeping the gates open always; or, (4) replacing the causeway with a partial bridge. Only options (3) and (4) would both meet the fish passage Project Objective as they allow free tidal exchange and the movement of fish species that require passage. Option (4), replacing the causeway has been split into three possibilities with costs varying from \$47 million to \$107 million.

What's next? Now the provincial and federal government will review and comment on the report. It is expected that the 'partial bridge' option will be selected. Then work will begin over the next few years on how best to return free flow to the river.

PWMG plans to conduct fish sampling upstream of the causeway to record pre- and post-removal biodiversity (what types of fish species are present?). Would you like to help? Please contact me, Bronwyn Pavey, at 384-3369. Work will begin next Spring.

I wish for ...



## COORDINATOR'S CORNER

As the newly minted coordinator of PWMG, life has been hectic to say the least. I began mid-June and have been working hard since.

Our key projects this summer included a Stream Habitat Assessment in Mapleton Park, Suspended Sediment Sampling in Jonathan Creek and identification of sediment point-sources, Bi-weekly Monitoring of 20 sites in the Petitcodiac and Memramcook Watersheds and building relationships with the City of Moncton and Dieppe. We are also working to create a map book for the Fundy Biosphere Reserve Initiative. Very cool.

Two excellent students were hired to work with me this summer: Will Kingston and Lindsay Doiron. Both were enthusiastic and ready to work in all weather conditions.

PWMG held a Quarterly Meeting with the Board of Directors in September where I filled them in on activities of the past few months. There will be a day-long workshop for the Board in April. We will work on resource capacity (funding strategies, people power and using our connections). It should be a great day.

The picture in this article are moose tracks I saw while sampling Meadow Creek in Memramcook. Gorgeous.

I have a lot of ideas for projects over the next few years. I can always use more however. Feel free to contact me at the office. I get lonely over the winter months!

Eric will be returning to PWMG for January and February while I attempt to finish an MSc. in water sciences. I plan to hit the ground running when I return so get ready for a call to action. Volunteers are incredibly important to this organization.

Merry Christmas and Happy Holidays to you and yours.  
Bronwyn Pavey, Project Coordinator



### Questions, Comments, Suggestions?

po box 23046, Moncton NB, E1A 6S8    Tel: 384.3369    Fax: 854.4824  
Email: [petitcodiac@rogers.com](mailto:petitcodiac@rogers.com)    Web: [www.pwmq-gsbp.org](http://www.pwmq-gsbp.org)

### PARTNERSHIP WITH CITY OF MONCTON... MOVING TOWARDS SUCCESS

With the help of members from the City of Moncton Engineering Department, PWMG is one step closer to restoring the highly degraded habitat in Rabbit Brook. In August 2005, PWMG presented results from this summer's sampling period. These evidenced high levels of *E.Coli* in the stream at all 3 sampling sites. The guidelines for recreational activities (contact with the water) is set at 200 MPN\*/100 mL. Our results indicated levels in excess of 2424 MPN/100 mL on some sampling days. Following that meeting, City of Moncton engineers joined PWMG on the field to see how the tests are performed and get a better idea of the situation.

\* MPN: Most probable number of colonies

Both groups decided that the best plan of action would be to determine the sources of *E.Coli* entering into the system and clean all large debris from each outfall grate. Consequently, PWMG was hired by the City of Moncton to conduct End Pipe Sampling where Rabbit Brook daylight (is exposed to air) at Plaza Blvd. There are currently 3 outfalls at this spot.

Once the source outfall has been isolated, the City will conduct dye tests to detect locations where a sewer cross-connection may be present. A cross-connection means that raw sewage is entering the storm sewer system and outfalling to the stream instead of being directed to the wastewater treatment facility. Conversely, storm water may be directed to the wastewater treatment plant.

The next step will be to upgrade the outfall system at Plaza Blvd. in an effort to improve water quality. The existing outfall grate located on the large diameter outfall will be upgraded to allow for ease of regular inspection, maintenance and cleaning as required.

Preliminary results indicate that by simply removing the accumulation of debris from the storm outfall grate (middle one), *E.Coli* levels were reduced significantly (62 MPN/ 100 mL on October 12, 2005). Other reasons for the reduced *E.Coli* level may be the dry/wet weather or colder temperatures which can kill bacteria. Unfortunately, on a return trip to the outfall, debris re-accumulated and *E.Coli* levels returned to their former high levels (>2424 MPN/100 mL). PWMG is reassured however that the City proposes to mitigate this problem in next year's construction season. Look for an update in the next newsletter.



Bronwyn Pavey, Project Coordinator  
End pipe sampling, Rabbit Brook



Rabbit Brook following the removal of  
large debris by the City of Moncton

### PWMG WISHES EVERYONE A HAPPY AND SAFE HOLIDAY SEASON

Interested in  
Volunteering?  
We NEED you.  
You can be involved in  
field work, office work  
or fundraising...  
Come join our team.  
Call 384.3369 or email  
[petitcodiac@rogers.com](mailto:petitcodiac@rogers.com)

### Water Quality Results

Every two weeks from June to October, PWMG staff sampled approximately 20 sites in the Petitcodiac and Memramcook watersheds. PWMG staff collected 178 samples during this time. On each field visit, dissolved oxygen and water temperature was taken. Each water sample was tested for Total Coliforms and *E.Coli*.

On several days, Jonathan Creek showed elevated levels of *E.Coli* combined with low oxygen levels. Rabbit Brook demonstrated the highest levels of *E.Coli* in both watersheds. Other watercourses within the Hall's Creek watershed, notably West Branch Hall's Creek and North Branch also demonstrated high *E.Coli* levels on several sampling days.

Conversely, 9 other rivers including Upper Petitcodiac River, North River, Humphrey's Brook, Pollett River and Gorge Brook demonstrated acceptable levels of *E.Coli*, below the Canadian Water Quality Guidelines Limit for recreational use (200 MPN/ 100mL).

Both total coliform count and *E.Coli* are used to assess the microbiological quality of the water. Faecal coliforms, including *E.Coli*, indicated that there are mammal or bird feces in the water. The Petitcodiac Watershed is highly urbanized and thus subject to numerous human pressures. Tell your neighbours to minimize washing their car in the driveway, bring oil to a proper receptacle and limit or stop pesticide use.

If you are ever curious about a river, contact PWMG and we can give you the latest details. If you notice any questionable activities, you can also call us and we will direct you to the right place or people.

A more detailed summary will be available shortly on our web site, [www.pwmg-gsbp.org](http://www.pwmg-gsbp.org)



"Your Environmental Trust Fund at Work!!"  
"Votre fonds en fiducie pour  
l'environnement au travail!!"



Marie-Hélène Thériault,  
PWMG Volunteer

### Did you know?

- Every single sewer in the City of Moncton runs into the Petitcodiac River
- Every ton of paper that is recycled saves 17 trees
- Earth is 2/3 water but all the fresh water streams only represent one hundredth of one percent.
- 84 percent of all household waste can be recycled
- The average person spends less than 1 % of his or her total personal expenditure dollars for water, waste water, and water disposal services.
- Annually, Canada's rivers discharge 7% of the world's renewable water supply – 105 000 cubic metres per second.
- Approximately 60% of Canada's fresh water drains north, while 85% of the population lives along the southern border with the United States.
- One litre of oil can contaminate up to 2 million litres of water.



Water Strider in Mapleton  
Park, Summer 2005  
© BPavey

The practice of conservation must spring from a conviction of what is ethically and aesthetically right, as well as what is economically expedient. A thing is right only when it tends to preserve the integrity, stability, and beauty of the community, and the community includes the soil, waters, fauna, and flora, as well as people.

- Aldo Leopold

### Mapleton Park

In February 2005, the City of Moncton sold 23 acres of Mapleton Park to AVIDE, the land development branch of Atlantic Coop. There were no transfer of funds but rather the property was exchanged for land required to access the new Gunningsville Bridge.

Following public outcry over the transfer, AVIDE and Coop set up a stakeholders group to determine how best to proceed. PWMG decided to join this group, choosing to be part of the process in order to provide as much information as possible about the streams running through the property.

Initially, the streams in the North-East section of the Park were deemed to be ditches. In fact, the outermost stream did start off as a ditch but over time has developed into an aquatic habitat. The Petitcodiac Riverkeepers moved to get stream designation for both streams and they can now be found on NB government 1:10 000 maps. Brian Keating, DFO Area Habitat Coordinator also joined PWMG and Petitcodiac Riverkeepers on the field to determine whether any fish were present. Brook trout and Creek Chub were found in both small tributaries.



The stakeholder group consisted of the PWMG project coordinator, members of the Guardians, Rotary Club representatives, City officials and AVIDE/Coop staff. Each group discussed their priorities for the area. PWMG stressed the importance of keeping the streams daylighted (no culverts), the importance of buffer strips and our concerns about increased sedimentation entering the stream.

As a rule, PWMG does not 'take sides' on particular issues but will provide the best available scientific information to decision makers. To this end, PWMG staff conducted a detailed stream habitat survey. This will be available at the PWMG website, [www.pwmg-gsbp.org](http://www.pwmg-gsbp.org) shortly. The conclusion reads:

*Common methods were used to undertake this stream habitat assessment. The descriptions given provide baseline information regarding the current state of the Mapleton brook stream habitat. The Mapleton Park Brooks are part of a healthy aquatic ecosystem. Negative effects of urban development are present throughout the stream area but have yet to greatly alter the habitat or physiochemical qualities of the streams.*

No development will take place prior to Spring 2006. AVIDE has indicated that they will protect a stand of old growth trees and will not culvert any section of the stream except the primary road crossing. Several bridges are in the preliminary plans. PWMG has also been invited to oversee construction activities to ensure that all necessary precautions are being taken to protect the streams during the building process.

In short, PWMG felt that this experience was worthwhile and will work with AVIDE/ Coop in the future to ensure that area streams are protected, particularly on the lands North of Wheeler Blvd.



### Upcoming Events

**17 January 2006: Gayton Quarry Public Meeting, Ecole Abbey Landry, 6 pm**

**23 January 2006: Federal Election, Get Out and Vote!**

**AGM to be held in June 2006**

**Look for announcements of a stream clean-up of Rabbit Brook or Micheal's Creek for spring 2006**

**22 March 2006, World Water Day**

**22 April 2006, Earth Day**

### "Petit" Notes

- ☺ We currently have 36 members. My goal is to have over 100 by this time next year.
- ☺ PWMG is considering a name change to better reflect a broader mandate
- ☺ PWMG is now a member of Two Countries, One Forest. 2C1 Forest is an innovative science-policy collaborative committed to the long-term ecological health of the Northern Appalachian/ Acadian region of the US and Canada.
- ☺ PWMG is strongly considering getting charitable status. This will make it easier for people to give and make our organization more attractive to donors.
- ☺ PWMG will produce 3 more reports by year's end: *State of Jonathan Creek, Rabbit Brook Water Quality Report and Petitcodiac and Memramcook Water Quality Report*

Give a PWMG membership for Christmas!!!

Members are entitled to receive the newsletter, Current News, invitations to PWMG special events, and attend/vote at the yearly Annual General Meeting. It is the best way to know what is going on in the Petitcodiac Watershed. Join today.

Tear off lower portion



**Membership form / Formulaire d'inscription pour devenir membre  
Petitcodiac Watershed Monitoring Group/Groupe de  
Surveillance du Bassin de la Petitcodiac (2005-2006)**

Name / Nom :

Organization / Organisation (optional):

Address / Adresse :

Tel. / Tél. :

E-mail / Courriel :

Fee / Frais : ? Individuals / Individu(e) \$5.00 ? Organization / Organisation \$10.00

Checks should be made out to PWMG-GSBP Inc. and sent to:

Bronwyn Pavey  
Petitcodiac Watershed Monitoring Group  
PO BOX 23046  
Moncton, NB E1A 6S8

OR drop by the office  
236 St. George, Suite 109