

Petitcodiac Watershed Monitoring Group

Groupe de surveillance du bassin de la Petitcodiac

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Merry Christmas and Happy New Year!

The year 1999 is almost over, the holiday season is fast approaching. Is your Christmas shopping all done? Around here we are already preparing upcoming activities for the year 2000. For instance, you will all be invited to a workshop that we will be hosting on February 26, 2000, details of this workshop will be sent to you in January.

The third number of Current News contains a variety of information, including an article on the new sustainable communities initiative of Greater Moncton, an article about benthic macro invertebrates, also there is an article on Geographic Information Systems and, as always, I offer you web site addresses that will complete this month's information.

Are there any articles that you would like to see in Current News? Or would you like to write an article? If so, do not hesitate to contact me to let me know. In the mean time, I hope you enjoy your holiday season and we will see you again in February for the 4th edition of Current News.

Isabelle

A toolkit for water quality management

On November 2 and 3, we participated in a two-day workshop in Hampton, near St-John. The New Brunswick Department of the Environment (NBDOE) and the Hammond River Angling Association hosted this workshop entitled: A toolkit for water quality management.

During the two days of the workshop, we had a series of invited guest who gave presentations on a variety of topics. Among the guests, there was the Honorable Kim Jardine, Minister of Environment, Faye Cowie from the New Brunswick Aquatic Data Warehouse who talked about the importance of GIS as a planning tool, Nelda Craig from NBDOE talked about the importance of action plans, Dr. Alyre Chiasson from UdeM and Dr. Allen Currie from UNB both talked about aquatic macro invertebrates, Lee Sochasky from the St-Croix International Waterways Commission talked about her experience in a multi-jurisdictional project. This workshop was very beneficial to all participants. If you, or your group, would like to find out more about this workshop, please contact me.

Action 2000: Towards a sustainable community

"Sustainable development" has become a popular word in our language. The United Nations World Commission on the Environment and Development defines sustainable development as "meeting the needs of the present without compromising the ability of future generations to meet their needs". A sustainable community is a place where strong ties between the region's urban and rural communities are encouraged to ensure healthy social, environmental, economic, and political connections.

On November 18, the three urban communities of the watershed, Dieppe, Riverview and Moncton, held a press conference to launch their new initiative called: Action 2000: towards a sustainable community. The goal of this initiative, which started in May 1997 with a conference on sustainable cities at the Université de Moncton, is to gather individuals from the community to discuss a common vision for a sustainable community for the entire watershed. In order to achieve a sustainable community, our collective challenge will be to focus on the impact issues that need to be integrated into our urban plans and to identify strategies and action plans that will ensure the ongoing economic and environmental sustainability of the Greater Moncton area in the 21st century. Some of these issues are: water quality, transportation, solid waste management, green spaces and education.

A steering committee, made up of people from the three communities, has been formed; their challenge is to lead us towards a more sustainable community. The task of this steering committee will be to delegate task forces on the different issues facing the watershed, hold public consultations and finally report on their findings by the end of 2001.

Questions, comments, suggestions?

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Benthic Macro invertebrates

Benthic macro invertebrates are the organisms that live in our streams and rivers; they are fly larvae, mayflies, caddis flies, stoneflies, leeches. These organisms are excellent indicators of the health of the stream in which they live in. A lot of these organisms require clean, cool water and adequate oxygen to complete their life cycle. Human activities that alter a watershed and interfere with the natural processes of a stream have immediate as well as long lasting effects on the animals that live in the stream. Streams that have been impacted will likely have a low biodiversity of invertebrates and the organisms that are present will be different from the ones that would live in a pristine stream. For example, in a stream where water quality is excellent, there will be a high biodiversity of invertebrates; mayflies, caddis flies and stoneflies will be present in important numbers. In a stream where water quality is moderate, biodiversity will be less important and stoneflies and mayflies will be present in lesser numbers than in streams of excellent water quality. Finally, in a stream where water quality is poor, biodiversity will be low and soft-bodied worms (larvae, leeches) will outnumber other organisms; stoneflies will not be present.

This past summer, we collected macro-invertebrates from different locations in the watershed. The results (coming in a future issues of Current News) of this sampling will allow to better classify the streams of the watershed.

Examples of benthic macro invertebrates...

Geographic Information System

This year, PWMG has undertaken the classification of the different watercourses in the watershed. One of the important steps of classification is to compile data in a geographic information system (GIS) format.

A GIS is a system composed of hardware and software that is used to create, manipulate, analyze and show geographic data. A GIS can be used for simple tasks like creating a map or doing a query in a database, but it can also be use to perform very complex analyses. For instance, a GIS can be used to determine where a new highway should be located to ensure that it is useful for a high number of people, that it minimizes costs and also that it minimizes environmental impacts.

The Moncton community college is offering a new 8-month program on GIS. On November 19, the students and professors of this course hosted an open house, which coincided with the International GIS Day. During this open house we had a chance to visit their labs, view the equipment they use and some of their work. If you would like to find out more about this program please visit their web site (the address appears below).

Web sites

www.action2000.nb.ca

www.seanet.com/~leska/Online/Guide.html

www.co.mo.nb.us/dep/Watersheds/Biomap/Bugs/bug_main.htm

www.moncton.nbcc.nb.ca/gis/default.htm

www.esri.com

PWMG activities

For the past month, we have been going around the watershed to give presentation on our objectives and on water classification to interested groups and communities. We have met a lot of groups, including, the environmental committee at Mathieu Martin high school, the Petitcodiac Riverkeepers, the Lake Petitcodiac Preservation Association, Jonathan Creek Committee, the environmental studies masters students at the Université de Moncton and the Dieppe town council. Other presentations scheduled for December and January include: the village of Memramcook, Salisbury, Hillsborough, Petitcodiac and the city of Moncton and Riverview, we will also meet with Les amis de la nature and students from the geography department at the Université de Moncton.

Are you a member of a group or organization and you would like to find out more about water classification. Please do not hesitate to contact us, we will be more than happy to meet with you and your group in the coming year.

Reminder:

Next issue of Current News will be in February...

