

Climate Change: Sinks and Sources

By Garrett Westmacott

Earth's atmospheric climate is changing, threatening both human health and the environment. One particular change in the atmosphere is the concentration of carbon dioxide (CO₂). It has been increasing at an alarming rate since the Industrial Revolution over 200 years ago, primarily from the burning of fossil fuels, but also due to land-use changes, especially deforestation. As a result, our planet is also heating up—kind of like a person sick with a fever.

A few years ago this fact was still in question, but it is now generally accepted by the vast majority of scientists. The accumulation of anthropogenic greenhouse gases (such as CO₂) in the atmosphere is primarily responsible for the increasing average global temperature (about 0.6° C over the last century, and predicted to rise to between 1.4 and 5.8° C over the next century.¹)

Efforts are now being undertaken by the international community via the Kyoto Protocol to mitigate the threatening effects of climate change.² Here in the Province of Manitoba we are not exempt from taking responsibility for our own actions, which—depending on what we do now—could be critical for the future of our province, as well as for the planet.

A recent report by the Manitoba Climate Change Task Force, commissioned by the provincial government, states that Manitoba, specifically, can expect an average temperature increase of 4 to 6° C within a century—just a few family generations away. The report discusses the many ways in which climate change will affect our province. One important concern this report raises, though unfortunately does not emphasize, is the effects climate change will have on parks and wilderness. As an example of the predicted impact on parks, consider Riding Mountain National Park (RMNP): a report by Environment Canada and the

Faculty of Environmental Studies at the University of Waterloo concluded that such warming in and around RMNP will lead to a lowering of local water tables, an invasion of exotic species adapted to higher temperatures, a decline of native species, an almost doubling of the amount of forest fires, and an increased mortality rate of large mammals who cannot survive the changing habitat within the finite boundaries of the park.³

Even without the science, intuitively we know that climate change will affect wilderness—not to mention our economy and industries—in Manitoba. So what can we do about it? One mitigation strategy that is getting a lot of attention lately is to use wilderness, particularly forests and plant life to help off-set (soak up) our CO₂ emissions.

Sinks and Sources

It is scientifically well established, though not fully understood, that there is a carbon cycle in nature: CO₂ is taken from the atmosphere and converted into organic material through photosynthesis by plants (this process is often referred to as sequestration in a carbon "sink"), and CO₂ is released back into the atmosphere by the natural decomposition of or-

ganic matter (a natural carbon "source"). Another source of carbon is natural disturbances, such as insects and fires, which can release large amounts of carbon from organic material in a relatively short period of time. In general, with respect to climate change, sinks are considered good because, by definition, they soak up and reduce greenhouse gases in the atmosphere, whereas sources, especially unnatural sources like the burning of fossil fuels, are considered bad because they release greenhouse gases.

During negotiations on the Kyoto Protocol on climate change, Canada has strongly argued that our forests act as net carbon sinks and, thus, should be counted as credit towards reducing greenhouse gases and to meeting Canada's carbon dioxide emission targets set in the Kyoto protocol. (The perceived advantage for acquiring "credit" for sinks is that Canada would not have to reduce its emissions from fossil fuel/energy consumption as much as we would if there was no credits for sinks.) To this end, the Manitoba Climate Change Task Force specifically recommends that "forests [in Manitoba] could be managed as carbon sinks."

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own and do not represent the views of the
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Climate Change Hub Established

Manitoba Eco-Network is pleased to announce the beginning of a pilot project to create a Climate Change Public Education and Outreach Hub in Manitoba. This project is being co-chaired by the Eco-Network and Fort Whyte Centre, and hosted by the Network at the Eco-Centre. Funded by the Federal Climate Change Action Fund, the Provincial Climate Change Action Fund and Manitoba Hydro, the Hub will have as its primary objectives increasing public awareness about climate change, and encouraging Manitobans to become involved in activities and lifestyle changes that will aid in reducing greenhouse gas emissions.

Our plan is to bring together organizations and stakeholders already active in climate change education and outreach to share their energies and successes and to work collaboratively to increase the reach of their programs. A Steering Committee representing a wide range of sectors has been set up to guide the work of the 18-month pilot project.

Hubs are underway, or being created in other provinces and territories of Canada and we will be able to learn and share much from their experiences.

We are pleased to welcome Jennifer Duggan as the Manager for the Manitoba Hub. Jennifer's most recent work was with the ETC group (formerly Rural Advancement Foundation International). She has also worked for the Canadian Cancer Society and as an intern at the International Institute for Sustainable Development. Jennifer hails from Prince Edward Island, where rising sea levels resulting from climate change pose a future threat to her family's land in the small community of French River. Jennifer said "Climate change is a personal area of concern for me and I feel fortunate to be able to now make it a focus of my work. The Hub will be a terrific resource for concerned Manitobans."

We are at the point of developing a workplan for the Hub pilot phase and it seems likely that areas of focus will include urban transportation, agriculture and northern aboriginal communities. The Hub will also be creating a website with an emphasis on Manitoba information and activities, and sponsoring public workshops on impacts and actions. Stay tuned for further info on the Manitoba Climate Change Hub!

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Apologies and Errata

Please accept our apologies for the late publication of this issue of Eco-Journal. No excuses...we're just real busy!

Welcome back to the Network:
Mixedwood Forest Research and Advisory Committee

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Contact: Dan Soprovich 204-734-3054
Email: dsop@mb.sympatico.ca
Or Lindy Clubb 204-475-9608
Email: lindy@frozen.ca

Also, we inadvertently left out the Institute of Urban Studies in our listing of member groups in the December Eco-Journal. Here's their contact information:

Institute of Urban Studies
346 Portage Ave, Winnipeg, MB R3C 0C3
Contact: Michael Dudley 204-982-1140
Fax: 204-943-4695
Email: ius@uwinnipeg.ca
Website: www.uwinnipeg.ca/~ius/

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Eco-Network Steering Committee, 2001-2002

Amanda Aziz, University of Manitoba Recycling and Environment Group

Scott Kidd, Canadian Parks and Wilderness Society, Manitoba Chapter

Glen Koroluk, Waterwatch

Joseph Prymak, Eco-MAFIA

Steve Rauh, Campaign for Pesticide Reduction! Winnipeg

John Sinclair, Resource Conservation Manitoba

Simplot Hearing: Insufficient Information

By Liz Dykman and Glen Koroluk

As reported in Volume 11, Number 4 "Simplot: Reduced Flow for Assiniboine" by Lindy Clubb, J.R. Simplot Inc. hopes to develop a potato processing plant in Portage la Prairie. The Clean Environment Commission hearings on the project were held Dec. 11-12 and reconvened Jan. 8-9 in Southport. A Joint Group of intervenors, consisting of the Coalition to Save the Assiniboine, Resource Conservation Manitoba and the Canadian Nature Federation made presentations to the hearings and argued that insufficient information was available to make a decision on this development proposal.

The Joint Group of intervenors raised several concerns during the hearings including the lack of key information, failure to perform Sustainable Development Impact Analysis and Climate Change Modeling or assessment of the treatment process to be used for wastewater, and failure to address cumulative impacts.

Key reports not available

Several key reports were not available at the time of the hearings. Of particular note are the Instream Flow Requirement Study and the Preliminary Report on All Point and Non-Point Sources of Nutrients. It was specifically set out in the terms of reference for the CEC hearings that the Commission's report include recommendations regarding instream flow requirements of the Assiniboine River as a result of the projected withdrawal of water from the river for irrigation purposes, and quality of the water and downstream uses of the Assiniboine. All of these reports are expected to be complete in early 2002.

No Sustainable Development Impact Analysis was performed on the proposed development. This is required under section 12(1) of the Sustainable Development Act when provincial funds are involved.

Impacts of drought?

Climate Change Modeling was not performed even though climate change is likely to have a dramatic impact on water availability. If climate change results in drought the demands put on the Assiniboine River for irrigation and processing purposes are even more likely to be greater than available supply.

It is not clear whether there has been an environmental assessment of the sequential batch reactor (SBR) wastewater treatment process to be used at the expanded Portage la Prairie Water Pollution Control Facility. Dr. Paton, one of the numerous experts hired by the Joint Group, pointed out that SBRs work at only 60-70% efficiency.

Cumulative impacts of other developments along the Assiniboine were not addressed. Phase 2 of the development, which will require another upgrade of the Portage treatment plant and the effects of a second shift at the Maple Leaf Hog Processing plant in Brandon will have cumulative impacts downstream.

Other problems

An obstacle faced by the Joint Group was the inability to obtain information about the costs of the proposal and the value of subsidies provided by government.

Incomplete information was obtained through a Freedom of Information request and is still under appeal. This prevented the economist engaged by the group from conducting a cost-benefit analysis of the proposal.

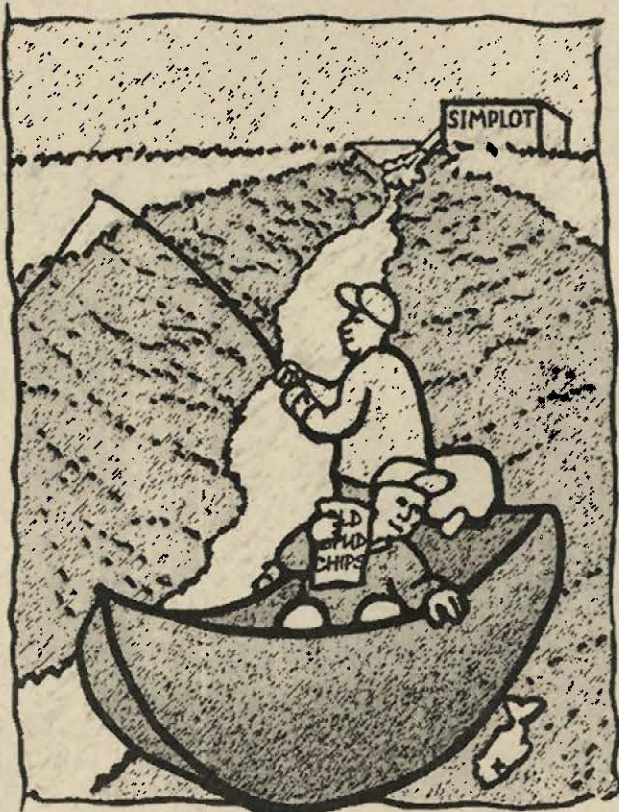
Also at issue in these CEC hearings is the potential conflict when the province is both acting as proponent by providing subsidies to the development and undertaking the review of the project.

An extremely positive aspect of this process was that it set a precedent regarding participant funding. Although the Environment Act, enacted in 1987, allows the minister to require a proponent to provide financial assistance to any person or group participating in the assessment process, this had never before been done in the province. Hopefully in the future it will be less difficult to argue that participant funding be established to help intervenors participate fully in the environmental assessment process.

Although the Joint Group was not successful in delaying the decision until all relevant reports were available, the contribution of the Joint Group was considered significant and drew attention to deficiencies in the process. The CEC will be hard pressed to recommend that the development be approved, given the concerns that were raised at the hearing.

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What's Happening

Wed. Feb. 20 Media Jam—A Festival of Alternatives, University of Winnipeg, 12-8 pm. Tradeshow, Workshops and Speaker Judy Rebick. Call UW Students Association for more information at 786-9792.

Wed. evenings Feb. 27–Mar. 20—Fort Whyte Centre Workshop: "Landscaping Your Yard, Naturally" with landscape architect Barb Haffner. Make a beautiful, biodiverse habitat in your backyard. To register call 989-8364, members \$100, non-members \$115.

Mon. March 4—Manitoba Naturalist Society Annual General Meeting 7:00 pm followed by "Australia: Plants of the Desert and the Rainforest" with Dr. Karen Johnson. Call Ruby Tekauz 338-0767 or the MNS office 943-9029 for more information.

Tue. March 5—Manitoba Clean Environment Commission and the Manitoba Model Forest Network are co-sponsoring a public forum on the future of the Boreal Forest. The purpose of this free one-day forum is to share perspectives on, and raise awareness of, the boreal forest ecosystem. To register contact Rory Grewar rgrewar@gov.mb.ca or 945-7091 (800-597-3556 toll free).

Tue. March 19—Organic Food Council of Manitoba is holding a meeting open to all interested individuals. Room 218 Plant Science Bldg, University of Manitoba. Call 873-2676 for details.

Friday March 22–Thursday March 28—U of M Environmental Awareness Week. The theme of this year's environmental awareness week is Environmental Issues in Manitoba. Presentations will feature speakers on Hog barns, alternative transportation, Hydro issues (and Cross Lake's struggle), straw bale housing, vegetarianism and others! Environmental displays and movies will also be shown. All presentations take place in University Centre. Call 474-9118 for more info or to get involved.

Thurs. April 4—Coalition to Save the Elms Workshop on Insect Pests of the Home Landscape, with Ken Nawolsky, City of Winnipeg Insect Control Branch. 7-8:30pm, \$5 for non-members, members free. (Membership in the coalition is only \$15 per year). Call 832-7188 for details.

Mon. April 8—Manitoba Eco-Network Organic Lawncare Workshop at Seven Oaks Wellness Centre, 7-8:30pm. Call 947-6511 for details.

Thurs. April 25—Coalition to Save the Elms Workshop on Woody Plants for the Prairie Landscape—choosing the right trees and shrubs for the home landscape. With Dr. Bill Remphrey of the University of Manitoba. 7-9pm. \$5 for non-members, members free. Call 832-7188 for details.

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Seedy Saturday takes root in Manitoba

By Margaret Brook

Manitoba's second annual Seedy Saturday will be held March 2, 2002, 10:00am to 3:00 pm, at the beautiful Assiniboine Park Conservatory, with the co-operation of The Friends of the Conservatory and Seeds of Diversity Canada. The day will celebrate the horticultural heritage of the prairie region, and give gardeners a full day of inspiration and conversation.

The heart of Seedy Saturday is the swap table, where people exchange seeds they have grown and saved in their own gardens. These are seeds from open pollinated (non-hybrid) varieties of vegetables and flowers. After years of selection by home gardeners, these varieties are well adapted to the local growing conditions. They may be treasured for flavour, the ability to withstand drought, cold or disease, a heavy yield, an unusual colour, or as a family heirloom.

Please prepare individual packages of seed for the swap table with information on variety, colour, etc as well as your name and phone number in case the recipient has more questions for you. If you can't find just what you are looking for on the swap table, resource lists, featuring seed companies selling more of these heritage varieties, will be available.

Prairie plants represented

Native prairie plants are well represented at Seedy Saturday by local nurseries selling seeds and books, and offering advice on growing native species. Presentations and displays on a diversity of topics will run throughout the day. The program will wrap up with a questionnaire panel taking questions from the crowd.

Displays include: Recycling Council of Manitoba on compost-

ing, Eco-Network on organic lawn care, Living Prairie Museum, Metis Horticulture and Heritage Society, Pip's River Nursery, Prairie Habitats, Prairie Originals, Sage Garden Herbs, the Herb Society of Manitoba, and special guests, the Quack and Cluck Poultry Club of Anola.

Set amidst the lush greenery of the Assiniboine Park Conservatory, this unique educational and social occasion is a great way to warm up a winter day. Admission is by donation. If you have questions please call the Friends of the Conservatory at 837-4324.

Schedule:

10:00 am Displays open

11:00–11:45 am Ted McLachlan, University of Manitoba Department of Landscape Architecture. "Winnipeg Wild: Bringing Biodiversity Home", landscaping with native plants to improve wildlife habitat in your yard.

12:00–12:45 pm Hugh Skinner, Skinner's Nursery and Arboretum Trail, Roblin, Manitoba. "Hardy Roses, Lilies, and Lilacs", varieties developed for the prairies by Dr Frank Skinner.

1:00–1:45 pm David Neufeld, Room to Grow Greenhouse, Boissevain, Manitoba "Growing Food for Love and Profit", farming, food, and the link between urban and rural folk; from the perspective of a Manitoba farm family who have travelled through North and Central America. David's letters from his travels were broadcast on CBC Radio Noon.

2:00–3:00 pm Questionnaire Panel, moderated by Reg Sherren of CBC TV's "Country Canada". These women have the answers to your gardening and seed saving questions! Wendy Mackie, Director of Horticulture, City of Winnipeg; Anne Lindsey, Manitoba Eco-Network; Shirley Froelich, Prairie Originals Nursery; Charlene Rowland, Organic Food Council of Manitoba.

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Down to Earth

Guide to Organic Food in Manitoba

With concerns about food safety and the effects of industrial agriculture growing, more and more people are taking a closer look at the sources and production methods behind the food they eat. Other issues to consider in our food choices are the cost and pollution associated with long distance transport of food, soil degradation and water pollution, and health effects of pesticides. In response to these concerns, there is an increasing demand for organic and locally produced food. Tracking down sources of organic food can be difficult, especially outside major urban centres, but a new booklet is available to help people find sources of organics in their area.

The Organic Food Council of Manitoba (OFCM) has just released the 2002 edition Guide to Organic Food in Manitoba. The guide provides information on local sources of organic food (organized by region), including farms, stores and restaurants. It also includes articles on topics such as how to make a sheet mulch garden and the OFCM Farm Mentorship program.

The Guide outlines the many reasons to buy organic/local and includes contacts for more information. Annual updates of the Guide are planned for the future.

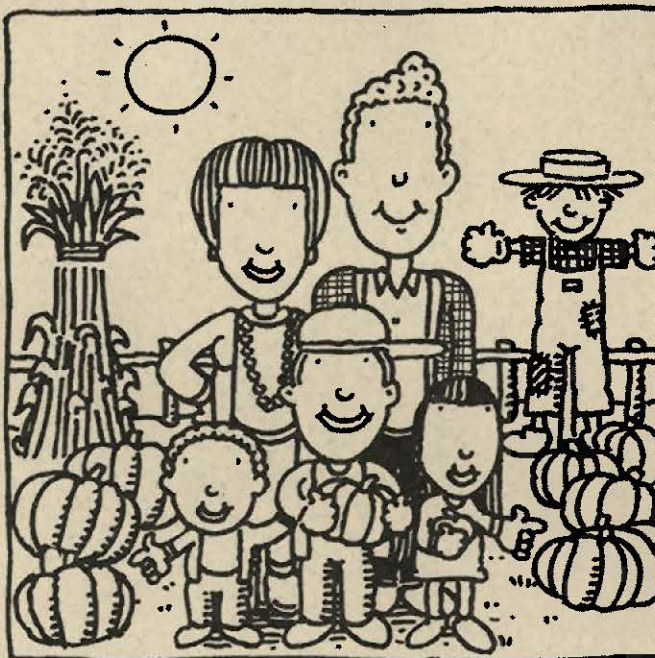
Copies of the guide can be purchased at local organic food stores or from Manitoba Eco-Network for \$4. More information on OFCM or its parent organization Canadian Organic Growers can be found at www.cog.ca.

Turning the Story

The following is an excerpt by David M. Neufeld, from "Down to Earth: Guide to Organic Food in Manitoba":

Not long ago most of the people of Manitoba knew where and

how their food was grown and who was growing it. Today most urban children are hard pressed to name a farmer. And we are equally hard pressed to find young persons in our rural communities who are preparing to be farmers. The Guide to Organic Food in Manitoba is one part of the effort to turn this story around.



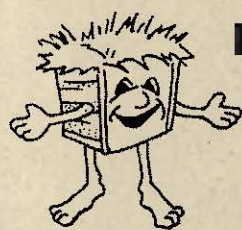
We who live on the prairies have become accustomed to exporting most of the food we grow and to importing most of the food we eat. That we have a food system based on transporting goods great distances should not be a surprise to us.

Ever since there have been cities and armies, the powerful have found ways to extract what they need from the more vulnerable—usually rural—areas. This continent was explored and settled in order to feed the appetites of European investors. The pattern continues to this day. Some of the most powerful companies in Canada depend on the transportation of food to maintain their wealth.

We who labour to feed the exporters and power centres hardly ever question what value this system is to ourselves and to our communities. Nor do we often enough imagine and plan for a renewed and more intimate economy that depends on our growing more food in a sustainable way for ourselves and each other. And this guide is about changing our world in a thoughtful, gentle, yet determined way.

We increasingly have more choices in what we eat. Perhaps organic, locally-produced options are not yet available at your corner grocery store, but with your dedicated involvement we'll see the options and their accessibility improve every year.

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FREE Composting Workshops!

Some dates for Resource Conservation Manitoba's Composting Basics Workshops this spring have been set:

- April 30: Pembina Trail Library, 7-8 pm
- May 1: St. Boniface Library, 7-8 pm
- May 4: Assiniboine Park Conservatory, 2-3pm
- May 7: Henderson Library, 6:30 - 7:30 pm
- May 9: Wellness Institute, Seven Oaks Hospital, 7-8 pm
- May 14: Sir William Stephenson Library, 7-8 pm

Call the Compost Infoline to register, at 925-3777

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Big Effects on Little Bodies

Extreme weather events associated with climate change are bringing added threats to child health and safety

By Elaine Murkin

Climate influences many of the key determinants of health: temperature extremes and violent weather events; the geographic range of disease organisms and vectors; the quality of air, food and water; and the stability of ecosystems. For countries like Canada, the most significant risks of climate change will likely be related to changes in the frequency, intensity and duration of extreme weather, particularly heat waves and intense storms.

Among the predictions generated by sophisticated climate change models, one of the clearest is that there will be a notable increase in the frequency, intensity and duration of heat waves. Because children's bodies are still developing, and they may not recognize the signs of heat stress, children are more susceptible to the adverse effects of extreme heat.

Periods of extreme heat are likely to have a greater impact on poorer children, who tend to live in low quality housing with poor ventilation and without air conditioning. Extreme weather events such as heavy rains and intense storms, hurricanes, hail, tornadoes, floods and droughts can cause injury and death, illness from contaminated water supplies, or the loss of homes. These impacts are especially difficult for children because they often do not have any experience handling abnormal situations and are, therefore, psychologically vulnerable.

Reducing Deaths and Injuries

Improved warning and preparedness systems can help inform people of extreme weather events and may help to reduce deaths and injuries, damage to property and disruption to food and water supplies. Philadelphia's "watch-warning" system, developed in 1995 to warn people of stressful weather conditions such as extreme heat, is a good example of what can be accomplished. This system helped save over 300 lives during the heat wave of 1995.

Land use planning and zoning can help maintain control over development in high-risk zones and discourage settlement in these areas. Ensuring buildings and urban and rural infrastructures are built to withstand extreme weather events can also help reduce the negative impacts of these events.

Project "Storm Shelter", currently underway at the University of Western Ontario, is assessing the vulnerability of standard and low-cost housing to natural hazards and developing construction methods to reduce damage during these types of events. This project was under taken to help developing countries design training programs to improve construction methods.

Warmer temperatures may also have implications for disease and human health in Canada. Climate models show that disease-bearing insects that carry malaria, dengue fever and viral encephalitis might extend their geographical range and increase in numbers as the climate warms. Diseases carried by ticks, already present in some parts of central Canada may also extend their range with climate change.

Improved surveillance and response capability for the public health sector, which includes the development of vaccines, better treatment options and better awareness of the potential risks will help reduce the negative impacts of exposure to disease-bearing insects.

When they are aware of the potential health effects related to climate change and the special physical and emotional vulnerabilities of children, parents and caregivers can do much to limit the potential harm to children. But governments at all levels must move forward in research and measures to reduce greenhouse gas emissions, provide better warning systems for extreme weather events and train health care professionals to recognize the health effects of climate change.

Developing Policy

One good sign was Health Canada's National Policy and Planning Conference on Climate Change and Health and Well-Being, which took place this September in Canmore, Alberta. The purpose of the conference was to strengthen links among organizations and individuals involved in policy issues, provide and update on the development of federal health impact assessment guidelines and begin work on priority health issues that will help Canada adapt to climate change. Vulnerable populations, which include children, were specifically addressed.

Elaine Murkin is project manager for Environmental Health at the Canadian Institute of Child Health in Ottawa, Ontario.

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Old Growth or New Growth?

... continued from page 1

The Science

Indeed, there is scientific evidence that supports such a recommendation, claiming that conserving natural landscapes-forests in particular- is important for reducing the amount of carbon in the atmosphere via CO₂ sequestration. For example, a report by Schulze et al concluded that "for at least 14 years after logging, regrowth forests remain net sources of CO₂ to the atmosphere. This has important implications regarding...forest management on atmospheric concentrations [of CO₂]. For many years after logging has taken place, regrowth forests remain weaker sinks for atmospheric CO₂ than are nearby old-growth forests."⁴ Furthermore, according to Nigel Livingston, director of the University of Victoria's Centre for Forest Biology, modern logging (harvesting) and processing procedures also release a substantial amount of tree-stored CO₂, where a minimum of 40% of the carbon stored in the trees is released to the atmosphere.

There are other reports, however, that suggest that the carbon sequestration cycle is more complex. For example, Natural Resources Canada states in *Climate Change and Forests* (1999) that "whether Canada's forests are net sinks or sources of carbon depends on timescale. Measured in eons, the tendency is towards a net carbon sequestration. Over a 100,000 year period there is a balance between carbon released and carbon sequestration; and, over 1000 years, the direction of the balance varies within the 1000-year segment chosen." A more recent report by Schimel et al in the prestigious scientific journal *Nature* states that, as forests age, they do not soak up as much carbon dioxide, and, furthermore, mature forests release about as much carbon as they produce. They concluded that most of the carbon uptake is due to new forest growth, such as young forests growing on farms abandoned in North America in the 1980s and 90s.

A Simple Analogy

The science about sinks and sources is complex, but I propose this simple analogy: Think of forests as sponges for CO₂ gas. When forests are relatively young and, thus, rapidly growing (like second growth forests), they can soak up CO₂ from the atmosphere, like water soaking into a dry sponge. It is this "soaking up" of CO₂ that is helpful for climate change mitigation. However, as forests age, they will soak up less and less until they are mature, old-growth forests, where, like a saturated sponge, the amount of CO₂ absorbed is balanced by the amount of CO₂ released (at least over a long enough time period-tens or hundreds of thousands of years). When a

forest is mature and there is an equilibrium between the amount of CO₂ absorbed and released, if we start chopping and cutting (harvesting), much of the CO₂ that has been stored up in the forest will be released-just as water is released when we poke or cut a saturated sponge. Of course, the release of CO₂ works against our climate change mitigation efforts.

Questions, Questions, Questions

The Manitoba Climate Change Task Force and the government of Canada recommend that the forests be managed as carbon sinks. Well, according to science, forests can be carbon sinks and long-term "carbon-warehouses," but, practically speaking, what exactly does it mean to "manage" forests as carbon sinks? How much can forests actually offset our fossil fuels emissions here in Manitoba? How will forestry operations and park management plans need to be refined to ac-

count for carbon sequestration? A scarier question for conservationists is whether second growth forests can be used to offset the emissions from the harvesting of old-growth forests? These are important questions that need to be answered soon so we can quickly move ahead with our efforts and strategies to mitigate climate change.

Despite the science and all the unanswered questions about carbon sinks and sources, one of our main goals as environmentalists should remain no less clear: we need to protect and conserve the remaining wilderness in our province, and strive to increase the amount of protected natural areas. Moreover, whether or not the remaining different types of natural areas are proven to be carbon sinks or sources, they still deserve protection from any further development.

Garrett Westmacott is a board member with the Manitoba Chapter of the Canadian Parks and Wilderness Society (CPAWS). His e-mail address:

Garrett.Westmacott@mts.net.

1 To put this in perspective, the average temperature difference between now and the coldest point during last ice age about 20,000 years ago is about 5° C. Thus, a few degrees makes a significant difference.

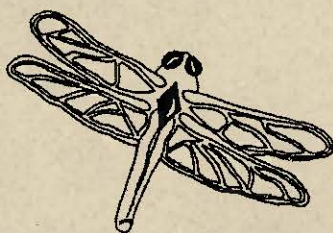
2 For more information, see the web site for International Institute for Sustainable Development (IISD) at <http://www.iisd.org/climatechange.htm>. Also visit the web site for the Intergovernmental Panel on Climate Change (IPCC) at <http://www.ipcc.ch>.

3 See www.msc-smc.ec.gc.ca/airg/pubs/parks.htm for more information.

4 E.D. Schulze et al, in *Global Change Biology* 6 (Aug 1999) p. 703-722.



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Improving the Public Registry System

From the Alice Chambers Memorial Library

The public registry (PR) provides a window into events that have shaped and continue to shape Manitoba's environmental landscape. Any proposed developments that require approval pursuant to Manitoba's Environment Act must be filed in the PR. It includes a wealth of information on proposals, including environmental impact statements (EIS), management plans, maps and facility diagrams, reports from technical advisory committees and verbatim transcripts of Clean Environment Commission hearings.

Recommendations about improving the public registry system are contained in two recent documents that will shape the PR of the near future. These are the Report of the Consultation on Sustainable Development Implementation 1999 (COSDI) and Building a sustainable future: proposed changes to Manitoba's Environment Act: a discussion paper 2001 (DP) which reiterates some of the COSDI recommendations. This article examines the recommendations that deal with access to information, specifically section 5M of COSDI. This section contains recommendations that are meant to ensure ease of access to current, and historically relevant information.

5Ma—Expand the PR system to include planning and resource allocation activities, in addition to the current environmental approvals information. The main result of 5Ma will be an increase in the material released through the PR. This potential growth of documents reinforces the importance of recommendation 5Mb and its many sub-points.

5Mb—Improve public registries and access to registry information, which should include: i. effective cataloguing ii. positive outreach functions v. long-term retention of registered information viii. ease of access to registry information for those seeking information and x. user friendly, plain language summaries of technical documentation.

i) Cataloguing would greatly improve the utility of the PR by allowing users to search for documents based on keywords such as location or type of development. A less intensive process that would also make the PR easier to use would be indexing the contents of files. This would help keep heavily used files complete and give users a quick overview of a file.

v) Long-term retention of, and public access to, all registered information Retention ensures that the PR continues as an important historical depository of Manitoba's environmental approvals.

x) User-friendly, plain language summaries of technical documentation provided to registries by proponents. This would aid researchers in getting to the nuts-and-bolts of a proposal as well as helping individuals digest large and multi volume reports quickly in order to develop a response. The turnaround time from a proposal landing into the PR to deadline for comments is a narrow one and simplified summaries of technical documents would allow for more effective public comment.

Positive outreach functions are dealt with in sections 5Mbii and 5Mc-e with recommendations to create project-specific, "local" and "regional" registries, and joint federal-provincial registries where applicable, encourage proponents / departments to meet with the public to explain registry contents and to clearly define the role expected of the proponent with respect to these registries (such as positive outreach on a project specific basis). These recommendations would serve to increase the number of registries and improve the dissemination of information to the public.

5Mf) Establish an electronic registry for computer access, while recognizing the present limited access to electronic media. Essentially, this recommendation will influence how the PR is served up and accessed over the Internet and could greatly increase the accessibility of the PR. The only web presence at the moment for the PR is in the form of file summaries and the text of the licence issued.

The Alice Chambers Memorial Library at the Eco-Centre is anode for the Public Registry Network. For further information, for a tutorial guide to the registry, or simply to view files, please contact Larry Laliberte at 947-6511 or library.mbeconet@mts.net.

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Shaking Off Distractions

By David M. Neufeld

Editor's note: Patrick Moore was the guest speaker at the recent Annual General Meeting of the Manitoba Canola Growers Association. His speech was arguing against criticism of genetically-modified crops—a topic of great interest to canola farmers, much of whose crop is of the genetically-modified variety. David Neufeld of the Organic Food Council of Manitoba was on hand for Mr. Moore's speech and posed some questions. Here is David's view of Mr. Moore's responses. This letter was previously published as a Letter to the Editor in the Manitoba Co-operator.

Would you agree that the best environmentalist is the land owner who knows the value of maintaining a good measure of 'wild' on the farm, is part of a supportive family and community and gets enough for the food he/she grows to be able to afford to keep a healthy balance on the farm? It seems to be a no-brainer, but when I asked Patrick Moore (formerly of Greenpeace) that question at Ag Days, he couldn't answer. He seemed to distrust my question.

In his speech Mr Moore proved to be no friend of environmentalists or farmers. It simply seems to satisfy his agenda to fuel the fire between farmers and environmentalists. But whether or not there is a difference of opinion between these professionals is not the question. The question, it seems to me, is How can we change the agricultural economy to ensure that farmers can afford to be environmentalists?

The cheap food policy is clearly the enemy here. Playing to the dictates of ever increasing efficiency will ensure that we all drain, burn and plow down every habitat that is not dominated

by machines. We'll destroy every earthworm and microbe in our soils. And we won't have one child who wants to buy in to our lunacy. This, as I tried to articulate at Ag Days, is what I have seen happening in Africa, Mexico and Central America. The corporate driven chemical and seed companies have been contributing to farmers leaving the land - as they have in Manitoba. Can someone please help me understand why farm organizations and governments support a process and policies that discourage farmers from farming?

Take the GMO issue. It's clear enough that consumers in Europe, Asia and increasingly in North America do not want GMOs in their food. They don't trust the science and when we embrace the science they don't trust us. We are losing markets due to our embracing of this technology. I don't get it. Why would we embrace the dead end GMO technology over and above the booming organic market possibilities? And please don't tell me this is about feeding hungry people in Africa or that African leaders are begging for this technology. Does our Prime Minister speak for the interests of our farmers? No, this is about very big business wanting to manipulate the situation to satisfy their over-the-top salaries and profits. Why would we as a farming community let ourselves be distracted so? Do we or do we not want more farmers—more people thriving on the land—here and in Africa?

At the end of my little tussle with Mr Moore, I asked him if we couldn't work together to nurture more farmer-environmentalists. He must have been too stressed out to think by then because he said, "Maybe we don't need more farmers. Maybe we need more machines doing the work." Surely I didn't hear you agreeing with him.

Lets call it straight folks. Mr Moore is being hired these days because he is promoting the GMO industry. He isn't interested in what is good for Manitoba farmers or rural communities. It worries me that the Manitoba Canola Growers Association would, first of all, pay Mr Moore to speak, and secondly, that they billed him as being with Greenpeace. He has not been with Greenpeace for some time and he clearly has no love for that organization. I have no connection with Greenpeace but I can't imagine them being as anti farmer and as anti rural vitality as Mr Moore seems to be.

Hopefully we can shake off distractions such as this and get back to the work of forming a united voice—as Mr Dewar of KAP expressed so well through the farewell interview he gave to The Co-operator. I look forward to the day when the Organic Food Council of Manitoba and Organic Producers Association of Manitoba see the benefit of sitting at the KAP table along with MCGA and the other member groups. How do we hasten that day? Because, as another story covered in last week's Co-operator states, Environmentally sustainable agriculture is no passing fad. I trust farmers farther than any other professionals and I know that we all want our children and grandchildren to be free thinking, quality food growing farmer-environmentalists—if we can work out a way of ensuring they can make a good living doing so. Get behind us Mr Moore.

David lives with his family in the Turtle Mountains where they run an organic greenhouse and an eco-retreat business. He is active with the Turtle Mountain Community Development Corporation and the Organic Food Council of Manitoba. **ECO**

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Erosion Control in the Northern Plains

A Volunteer's Report

by Lindy Clubb

Over this past year, in volunteering for the Northern Plains Chapter of the International Erosion Control Association (IECA NP) I have learned a bit more about erosion control. Some of it comes from direct experience, like finding out that hands and knees, at least for me, is the best approach for stapling blankets into place. Squatting is a poor second choice.

I've also been warned not to build on the bend of a stream or river, since it is the area most likely to move and erode with the stream's hydrology. After visiting a large concrete house, within three feet of being cantilevered over a bank sweeping several feet down to the shores of the Favel River, that message stuck. I met with homeowners who have lost not only the large old trees that drew them to the riverbank location in the first place, but have recognized, with horror, that their house is on the few remaining yards of grass that separate it from a steep undercut bank, also over the Favel River. Both of these places are in the Swan River Valley, a floodplain that gets the spring runoff in volume from the escarpment of the Duck Mountains. I happened to be with two trouble-shooters for erosion control and was in awe of their ability to solve problems. Children had built a weir out of sight around the bend of the river, by the second house. The homeowners need to undo this little project to help save their house, among several other remedies. Revegetating the banks of the Favel river, and scooping out the sediment depos-

its across the water will help re-direct the river's course away from undercutting the banks and destroying the property above. We like to live by rivers and lakes, but do we care about the consequences? I'm meeting the people who do care about consequences and solutions.

Putting solutions into practise

It takes expertise and experience to know how to prevent the problems of erosion, and how to help mitigate problems. Each site is different and needs to be evaluated. There are lots of choices. There are plans to put in place, formulas like the universal soil loss equation to be worked out, and a growing variety of products that suit and solve the specific problems.

Logging companies like LP (Louisiana Pacific) are learning about solutions and putting them into practise. In turn, the employees they've educated and taught are making presentations to enlighten other people. Manitoba Hydro is solving some of their erosion problems in visible and remote locations. Manitoba Highways are installing erosion control blanket on the side of slopes and over areas they want nature to carry on with, giving the grasses a head start with a green cover. That sends a good message to passersby, if they know what that funny stuff is by the side of a construction project. (The artificial green of hydroseeding spray—a wet mix of seed and mulch—was de-



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scribed as 'alien blood' by interested spectators north of Thompson, Manitoba).

I've learned something about the process of erosion, too, not just its control. Soil is displaced in particles by raindrops, and sediment sheets or runs off to new places when plants aren't there to stop it. Chemicals and contaminants go along for the ride. One of the ways to prevent this from happening is for water to permeate or percolate through openings in the soil. I found out from the main speaker at an erosion control symposium in Swan River last fall that concrete lets in more water than sod. Who knew? Sod is dense, with short close roots that form a mat so that water can't get in. That means all our nice urban, suburban, rural and lakefront lawns and golf courses—groomed, green and gleaming—are causing water to sluice off faster than from our paved streets, sidewalks, driveways, and highways. They don't call it runoff for nothing. Stormwater control has become an issue in the States, and it's just beginning to be recognized here.

Seeing erosion everywhere

Of course, now I see erosion everywhere I go. On the banks of the Assiniboine where huge new houses bear down and cause slumping, on the scars of treeless slopes that line the Minnedosa valley, and by the front entrance to the Southport facility where the latest Clean Environment Commission Hearings were held, in part, ironically, to address issues like the erosion impacts from fields of potatoes grown for Simplot's new plant. All we had to do was step out the door to see an example of what happens when soil is exposed and allowed to drift with the forces of wind

and water. The message sticks with the same weight as the mud clinging to my boots from an area without plant cover.

Public and professional education

Education is a good beginning for some progress on our erosion control problems. Northern Plains has partnered up with organizations, institutions and individuals to put on some conferences and seminars for public education this past year. The high school in Swan River held one in November with Jennifer Hildebrand from Jackson Landscaping in Minnesota (a lively, intelligent, personable professional—great to see a woman at the front of the room) speaking to a rapt audience of students, teachers, contractors, construction companies and Manitoba Conservation staff. Unlike some of the other erosion control seminars, there was more than one environmental activist in this audience. That was nice for me.

Jay Michels, an instructor with the Minnesota Erosion Control Association, spoke to an audience of 80 people during a successful October conference in Minnedosa called 'Rules and Tools'. It was the following day that I got a chance to brave a cold wind and staple erosion control blanket into place on the Neepawa golf course (I love field days). Manitoba Transportation and Highways personnel, Fisheries and Oceans biologists, Conservation District managers and Woodlot Association members all enjoyed the newly renovated Minnedosa conference centre and the town's hospitality. A technical course, sponsored by IECA NP, held in Winnipeg last spring, featured David T. Williams as an instructor. A manual was distributed with the

course. The presentation material was comparable to a university course (at least for me) and designed for professionals. These types of courses are really important to advance the progress of erosion control in the field, on our highways, on logging roads, on streambanks, and on our lake shores. I just need someone else to do the math for me. Requests are still coming in from various municipalities for presentations on erosion control techniques. Word is getting around.

Another new thing for the chapter is our own phone line. If you would like to learn more about native plant sources, erosion control techniques, educational activities, or just ask questions, please call the IECA NP resource line at 204 478-1322 in Winnipeg, or check out the IECA website at www.ieca.org. A website for Northern Plains Chapter is in the works and will be ready sometime in 2002, at IECANP.org. **ECO**



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Groups Call for Full Federal Review for Proposed Dam

A number of Manitoba environmental groups are calling for the Federal government to assess the impacts of a proposed new Hydroelectric dam for Manitoba.

Manitoba Hydro (MH) has applied for environmental licences to build the Wuskwatim Generating Station and Transmission Line (File #'s 4724 and 4725 respectively, in the Public Registry). Hydro has been proposing the generating station project as a joint venture with the Nisichawayasihk Cree Nation (NCN), with whom they have been in consultation for several years, and with whom they have signed an Agreement in Principle for the project. NCN is likely to become co-owner of the generating station and thus would become a co-proponent for the project.

Federal Issues

While these are proposals for development in Manitoba, they have also been reviewed by the federal Canadian Environmental Assessment Agency (CEAA). The Agency has determined that there are federal issues involved, and that the Responsible Authority for the project would be the Department of Fisheries and Oceans (DFO). At the Federal level, a minimum of a Comprehensive Study will be carried out. (This is a kind of intermediary step between a basic "screening" and a "full panel review"). Under the Harmonization Agreement for Environmental Assessment Co-operation, an agreement is in place between Manitoba, CEAA and DFO with Manitoba identified as the Lead Party for the assessment. Manitoba's Minister of Conservation, the Hon. Oscar Lathlin, has instructed the Clean Environment Commission to hold public hearings for the proposals.

However, several environmental groups, including Manitoba's Future Forest Alliance, Canadian Parks and Wilderness Society, Consumers for Responsible Energy, Canadian Nature Federation and Resource Conservation Manitoba, have examined the proposals for these two projects and have concluded that all would be better served if the environmental assessment were carried out by the Federal Government with a Full Panel Review under the Canadian Environmental Assessment Act.

This would allow the broadest possible consideration of impacts, as well as the need for and alternatives to the project, under a Panel qualified to examine these issues. The groups are joining together to call on the Federal Minister of Fisheries and Oceans to order a Full Panel Review.

Letters

The groups have enumerated their concerns in letters being sent to the Federal Minister of Fisheries and Oceans and to other relevant parties, summarized as follows:

1. Possibility of conflict of interest: The Manitoba government is essentially a co-proponent, given that Manitoba Hydro is a Crown Corporation governed by Acts of the Legislature. Federal review alleviates the situation of the "proponent reviewing itself".

2. Need for full consideration of the need for and alternatives to the project, given that Hydro has stated that new generation will not be needed for domestic use till at least 2018 and will be utilized for export sales until that time. The groups argue that other means of energy creation must be examined. Federal EA demands that these aspects be taken into consideration. In addition, Manitoba's Consultation on Sustainable Development Implementation (COSDI) recommended that need for, and alternatives to, projects, be taken into consideration in environmental assessments. The COSDI recommendations were adopted by the Doer government.

3. Fiduciary responsibility for aboriginal peoples: recent legal judgements have confirmed that governments have responsibility for full and meaningful consultations with any First Nations which stand to be affected by a development. There is concern that the resources to fulfill this responsibility may not be available at the provincial level.

4. Federal requirement for Panel members with expertise relevant to the proposal, which would provide the review with greater capacity for its work.

The groups are now awaiting the Federal response. **ECO**

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Group members are entitled to nominate representatives for a position on the Eco-Network Steering Committee. Group membership is open to any non-governmental, non-profit group which has as one of its objectives the enhancing or furthering of environmental quality, protecting the environment or environmental education.

A supporting membership includes a subscription to **Eco-Journal** as well as notice of events and regular updates on issues and is open to any individual.

