THE CONSERVER

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LETTER FROM THE EDITOR

Dear National Council of Women of Canada and NCWC Education Fund Members and Supporters,

It's just past the half way mark in our Water/Energy Connections Project, and we have certainly made many very disturbing "connections" between water and energy. A most startling and worrisome one for all Canadians, particularly westerners in Alberta and Saskatchewan, was revealed by our guest speaker Andrew Nikiforuk at our June 6th AGM in Prince Albert Saskatchewan.

A well known environmental advocate and author and winner of the 2009 City of Calgary W.O. Mitchell award for his book Tar Sands: Dirty Oil and the Future of the Continent, Mr. Nikiforuk drew a crowd of NCWC members and several environmental activists from around this northern Saskatchewan district - and a standing ovation- for his stirring description of the havoc the tar sands are wreaking on the waterways, boreal forests, wildlife and the health, safety, and way of life of affected communities.

We've posted Andrew Nikiforuk's AGM power point remarks on our web site, along with our NCWC brief to the Parliamentary Standing Committee on Environment and Sustainable Development regarding the Oil (Tar) Sands' impact on water. The latter highlighted our NCWC Emerging issues Resolution which asked the Government of Canada to *"cease supporting the irresponsible production of oil from the tar sands of Canada..."*. In the months ahead we will keep you informed of further developments in this very troublesome story.

This edition of the CONSERVER features another urgent water issue-that of the many threats to our Canadian waterways. These are vividly described by our featured writers, Great Lakes expert John Jackson, in his editorial "*The (1909) Boundary Waters Treaty: can it adequately address environmental needs"*? and NCWCEF researcher Dr. John Bacher, in his review of Margaret Wooster's new book "*Living Waters*" and his personal account of an 8 day walk to help stop a planned dump on top of the Alliston aquifer, which is considered the source of the *"purest water in the world.*"

On a more, practical note, I am asking members to continue to broaden our circulation of the Water/Energy Connections survey. I have over 200 surveys in hand, but would like to bring that number to 300. Please endeavor to hand out surveys at your early Fall meetings and urge your Local and Provincial Council of Women affiliates to take a bundle to distribute to (and collect from - for mail back to me) their members. Your answers to our questions and your comments will form the heart of our recommendations to the Government next Spring. You can also fill out the survey on line at www.ncwc.ca

Enjoy this issue, which is also on our NCWC web site, and circulate to others. Comments are most welcome at gracia.janes@bellnet.ca

Gracia Janes, *Project Co-Ordinator*

P.S. If you live in or near Edmonton, Calgary or Vancouver, plan to attend Sarah Spring's showings of her film "H2Oil", a startling newly launched film about the ravages of the oil sands. Locations are at the :

Edmonton International Film Festival
Screenings
Saturday September 26th
(opening weekend) 4:45 p.m.
Thursday October 1st
in the afternoon (hopefully with students)
ACTION EVENT: Sunday September 27th

Calgary International Film Festival
Screenings
Saturday October 3rd
Cineplex Eau Claire @2 p.m.
ACTION EVENT: Sunday October 4th

Vancouver International Film Festival
Screenings (to be confirmed)
Monday October 5th and Tuesday October 6th
ACTION EVENT: TBA

QUOTABLES

THE 1909 BOUNDARY WATERS TREATY: Can it adequately address environmental needs? - John Jackson, Project Director, Great Lakes United

On June 13, U.S. Secretary of State Hillary Clinton and Canadian Minister of Foreign Affairs Lawrence Cannon marched from the U.S. and Canadian shores of the Niagara River to meet in the centre of the Rainbow Bridge. The Commissioners of the International Joint Commission and approximately 200 other invited guests joined them in the march. With Niagara Falls as a backdrop, they celebrated the 100th anniversary of the signing of the Boundary Waters Treaty in 1909.

Hillary Clinton described the significance of the event: *"The Boundary Waters Treaty of 1909 made official something that people on both sides of the border have known for generations: that the rivers, the lakes, streams, the watersheds along our boundary do not belong to one nation or the other, but to both of us. And we are therefore called to be good stewards in the care of these precious resources*." She and the other speakers went on to talk about the accomplishments of the two governments in taking care of the border waters.

Unfortunately, they failed to recognize the critical role of citizen activists in protecting the shared waters shared along the Canadian-U.S. border. For example, none of them remembered a similar march across the Niagara River thirty years earlier. In 1980, dozens of community activists walked from the Canadian and U.S. sides of the river to meet in the middle of the Queenston-Lewiston Bridge to protest a permit that New York State had given for a huge hazardous waste disposal plant near the shores of the river. From the centre of the bridge they tossed a funeral wreath into the Niagara River to symbolize their fears that life in the river would be damaged by a toxic stew that would eventually flow from the dump site, adding to the toxic legacy from the estimated 200 hazardous waste dump sites already leaking into the river.

Why the Boundary Waters Treaty?

As we celebrate the hundredth anniversary of the Boundary Waters Treaty (BWT), we frequently hear it touted as the first environmental treaty. In order to understand some of the problems that this treaty creates for us today, we must recognize that protection of the environment was not the objective of those who drew up the BWT at the beginning of the last century. Their aim was to avoid or solve conflicts over water use along the 5,000-mile-long Canadian-U.S. border stretching from Yukon and Alaska to New Brunswick and Maine.

The Great Lakes, a water abundant area, was one of the driving forces behind the treaty. The other was the Prairies – an area in which conflicts were raging over access to scarce water supplies.

In the Great Lakes, one of the potential and already

occurring conflicts in 1909 was over access to the great navigational potential that the Great Lakes provided. To fully understand the critical importance of this issue, we must realize that at the beginning of the last century transportation by ship was a much more significant component of the transportation network than it is today. The BWT guaranteed ship access by both Canadian and U.S. ships to all the waters of the Great Lakes and St. Lawrence River, including Canadian access to Lake Michigan - a lake that Canada does not border.

The other area of conflict in the Great Lakes region was over access to the tremendous hydro-power potential that the connecting channels in the Great Lakes provide – especially at that time in the Niagara River. Later the St. Lawrence River and the St. Marys River at Sault Ste Marie would be added to this. The BWT set up a mechanism to resolve conflicts over access to the waters of the Great Lakes to generate electricity. One of its provisions is that Canada and the U.S. will have "*equal and similar rights in the use of the waters."*

Further west, one hundred years ago, settlers in Montana and Alberta were building competing canals to divert the waters of the St. Mary and Milk Rivers for their own primarily agricultural use. This was the other major stimulus behind the negotiation of the BWT.

Water Levels and Use:

Over the past century the International Joint Commission (IJC), which was created under the BWT to resolve conflicts, has been called in to resolve numerous conflicts along the border outside of the Great Lakes region. These include:

- proposals to build dams for hydro-power purposes in the Skagit Valley to provide power for Seattle, which flood major areas in B.C.;
- numerous on-going proposals for dams and allocation of waters on the Columbia River, which flows from B.C. across the border into the state of Washington, for power generation and flood control;
- on-going conflicts over the use of the waters of the St. Mary and Milk Rivers, which weave back and forth along the Alberta-Saskatchewan-Montana border, for irrigation purposes;
- conflicts over flood control structures on the Red River, which flows from North Dakota, through Minnesota and into Manitoba;
- proposals for diversions in the North Dakota-Manitoba area such as the Garrison diversion and the Devils Lake proposal;
- regulation of water levels in the Lake of the Woods area in Minnesota and North-western Ontario;
- proposals to regulate water levels in the Lake Champlain and Richelieu River area of Quebec and Vermont and New York state; and
- concerns with water levels in the St. Croix and St. John Rivers between Maine and New Brunswick.

In making decisions on the use of boundary waters, the IJC is bound by an "*order of precedence*" among the differing interests. The following order of priorities is clearly laid out in the treaty:

(1) Uses for domestic and sanitary purposes;

(2) Uses for navigation, including the service of canals for the purposes of navigation;

(3) Uses for power and for irrigation purposes [Article VIII].

Nowhere in this list nor anywhere else in the treaty is protection of the environment and ecological function for non-human purposes mentioned. This puts us in the situation that we are in today where decisions to protect navigational, power generation, and agricultural interests have resulted in major destruction of the environment. Among the examples of this are concerns that control structures along the Columbia River are having major negative consequences for the salmon. Another example is in the Great Lakes-St. Lawrence River region where the stabilization of the natural rises

and falls of water levels upstream of the Moses-Saunders power plant in the St. Lawrence River has had major negative impacts on wetlands.

Article VIII does include a provision for the *"protection and indemnity against injury of all interests on the other side of the line which may be injured thereby*." However, the interests here have traditionally been defined as direct human interests, such as shoreline owners – not the environment!

This non-environmental nature of the BWT is a major cause of the conflicts that the IJC now finds itself in several areas along the Canadian-U.S. border. This situation will only get more conflict-ridden as climate change makes water more scarce in many areas across the continent, including the Great Lakes-St. Lawrence River basin.

The strictures of the BWT will take all the creativity the IJC can muster to protect the environment. What is really necessary is for the Canadian and U.S. federal governments to revise the BWT to turn it into an environmental treaty. However, the prospect of getting a revised treaty through the U.S. Senate and the Canadian Parliament is an overwhelming thought.

Water Quality:

Where the BWT has been seen as leading on environmental matters is in what appears as an add-on sentence at the end of Article IV: "*It is further agreed that the waters… shall not be polluted on either side to the injury of health or property on the other side."* This sentence has been developed over the one hundred years of the BWT to result in some of the most significant and forward thinking developments in pollution prevention and control in the world.

This provision has been used in disputes in the Flathead River (B.C. and Montana), the Poplar River (Saskatchewan and Montana), the Red River (Manitoba, North Dakota and Minnesota), the Rainy River (Ontario and Minnesota), Lake Champlain (Quebec and Vermont and New York), the St. Croix River (New Brunswick and Maine), and the St. John River (New Brunswick and Maine).

It is, however, in the Great Lakes-St. Lawrence River region that the water quality provision of the BWT has had most impact. It is the source for the Great Lakes Water Quality Agreement, which was signed by Prime Minister Trudeau and President Nixon in 1972. It is important to note, however, that, consistent with the rest of the BWT, the reference to pollution is only concerned with human health and property interests – not the ecosystem.

The other significant aspect of this sentence is its absolutist nature. It implies that no injury is allowed. This strong language has led to phrases such as *"virtual elimination*" and *"zero discharge*" in the Great Lakes Water Quality Agreement.

Equal Rights and Binationalism:

The other critical aspect of the BWT is the equal rights that the treaty gives to Canada and the U.S. This is an essential safeguard for a Canada that always feels under threat of being dominated by the much more powerful U.S.

Critical guarantees for Canada include: 1) the provision that each country will have equal rights to the use of the waters, 2) guarantees of access to waters for navigation purposes throughout the Great Lakes system, and 3) an equal number of Canadian and U.S. appointees on the IJC and on all its boards [this means that no decision can be made without support from commissioners on both sides of the border (traditionally the IJC has made decisions by consensus)]

The binational approach of a cooperative search for shared solutions to problems across the Canadian-U.S. border is an invaluable outcome of how the BWT has developed over the past century. Scientists predict that climate change will make water a more scarce item all along the border. Conflicts over water use will escalate and the Canadian and U.S. governments may find it harder to come to shared solutions around the use and flows of water along the border. And the damage to the ecosystem will also increase. The BWT – a treaty not based in an environmental approach - and the regime set up under it may not be up to the challenges of the next hundred years – espe-

cially to the challenge of protecting the environment. When water is scarce, will we be able to ensure that enough water is left to protect the fish and other wildlife that depend on those waters? Wildlife interests – not just human interests – should be protected by the Boundary Waters Treaty.

THE GREAT LAKES: a personal trip and a wider view - Dr. John Bacher

It is a challenge to think of the Great Lakes as a living system, and to understand the big picture of the profound influence they exert. The lakes exist because the glaciers of the last ice age were able to scour deep below sea level, allowing only one per cent of the lakes' flow to move to the sea annually. But like the tip of an iceberg, these magnificent lakes are only a small part of the visible mass of water locked away in near - surface aquifers, entombed ancient lakes and buried rivers. The lakes receive not only the surface flow from annual precipitation, but base flow from underground sources, which also replenish the streams flowing into these lakes and keep them alive in the arid summer months. This is why urban sprawl, which threatens to pave over the recharge areas that provide this base flow, is such a terrible threat to the health of the Great Lakes.

Government scientists in Canada and the United States are well aware of this threat and of another significant, and related, one - deforestation. For instance, it is recognized by the Ministry of Natural Resources of Ontario and the Canadian Department of Environment that about forty per cent of a watershed should be in forest cover to provide healthy habitat for critical indicator species of ecosystem health such as the native Brook Trout.

While in the past deforestation was associated with farmers, the danger now comes from land speculators. This is seen most vividly in the case of the Oak Ridges Moraine, north of Toronto, which was rescued from the ravages of logging and poor farming methods years ago through the reforesting work of the pioneer Ontario forester, Edmund Zavitz, and more recently by the environmental group Save the Ganaraska Again (SAGA). SAGA's rescue work was not in reforestation, but in fighting developers, and it helped secure the passage of the Oak Ridges Moraine Protection Act, which was subsequently strengthened by the Ontario Greenbelt Protection Act. The latter legislation essentially freezes urban zonings on the developer-threatened moraine until 2015.

For their part, the governments of Ontario and New York have commissioned the Nature Conservancies of both areas to do a report on watersheds at risk. They understand that Lake Ontario cannot survive if the watersheds of the rivers that feed it are continually subject to more urban sprawl. This is vividly shown by the poor condition of the Don River in Toronto, which is rated as Canada's worst river, and has lost 82 per cent of its watershed to urban development. Meanwhile, a difficult battle is being waged to save a 200 acre forest in Richmond Hill around the David Dunlop Observatory, which was planted with Zavitz's assistance beginning in 1938. Although the Nature Conservancy's report has been written, it has still not been released, being subject to endless reviews that delay its essential but politically controversial message - that sprawl must end!

I have lived in Niagara for over a half century and have been deeply immersed in a great variety of Great Lakes land use issues related to development-threatened waterways and lands, such as the Oak Ridges Moraine, the Don River, the St. Lawrence Seaway and the Niagara Fruit Belt

All this knowledge paled however in comparison with what I learned while walking from Barrie to Toronto in November of 2008 over eight days, through heavy showers and a blizzard, with dedicated Mohawk environmentalist Danny Beaton and farmer Steve Ogden. Our *Walk For Water* was taken with the ultimately successful purpose of educating the Ontario public about the construction of a dump site above an aquifer in Alliston Ontario (Site 41) that provides the world's purest water,

which is used by scientists as a base line to measure impurities in other waters. Imagine! Until our protests succeeded, eventually resulting in the drama of the arrests of 16 people for blockading trucks that were assisting in the excavation of the dump, Simcoe County was prepared to pump out the worlds' purest water to facilitate the construction of the dump.

But there is far more to know about the Alliston Aquifer- a recent creation of the inter-glacial period on the sands laid down by the now- covered-over Sunnybrook Lake, which was a lake in the conventional sense 25,000 to 40,000 years ago. Below this buried lake, is a far more ancient underground river called the Laurentian River. It is the pre-glacial ancestor of the St. Lawrence River. Before glaciation 2.5 million years ago, it stretched like a great fiord of the Atlantic Ocean, from what is now Quebec City to Chicago. This buried bedrock channel links a web of aquifers from Dump Site 41 all the way to the Oak Ridges Moraine. These areas are called the Alliston, Holt, Mount Albert, Oak Ridges and Schomberg moraine complexes.

What hammered home the importance of protecting groundwater for me was the route we took along 'old' Yonge Street from Barrie to Toronto, where it is one of the city's main arteries. I soon learned that what Ogden too modestly described as the Alliston Aquifer, was really a branch of the important Yonge Street aquifer, a term favoured by geologists because the street is so prominent. The water towers that once stored a municipal water supply along Yonge Street were all part of this aquifer complex. Young Street is also above the buried Laurentian Channel, which to my amazement still flows underground from Georgian Bay to Lake Ontario. The streams we walked over all receive critical base flow from the aquifer complexes we walked over.

Upon leaving the Site 41 pure groundwater spring on our way to Toronto's section of Young Street, we walked past miles and miles of restored forests planted under the supervision of Edmund Zavitz, that turned this area from a dust bowl to the scenic landscape it is today. This sadly, however, is being destroyed by the grotesque sprawl surrounding Barrie, which is a major threat to the waters of Lake Simcoe. Once famed for the wonders of its County Forests, Simcoe County is now known as the "Wild West" of urban sprawl in Ontario.

Along our path the most eerie time for me was when we walked across the Oak ridges Moraine lands where environmentalists fought so hard to stop urban sprawl. Here we saw the site of one wonderful victory - Bond Lake, a beautiful kettle lake, lined with a forest of magnificent White Pine Trees. However, although the land around Bond Lake is destined eventually to become a provincial park, through a complex land exchange that became the subject of bitterly contested court battles, it still has the look of a war zone. This is because the homes purchased by speculators hoping to cash in on development are still boarded up and no park facilities can be seen.

This trip was an amazing one for me, both restorative and worrisome , and my message to those of you living in Ontario, or perhaps visiting at some time in the future, if you want to appreciate both the Great Lakes watershed and the threats it faces, see the work of both human assisted ecological restoration and the wanton destruction of this extraordinary ecological resource, one of the best things to do is to get out and walk.

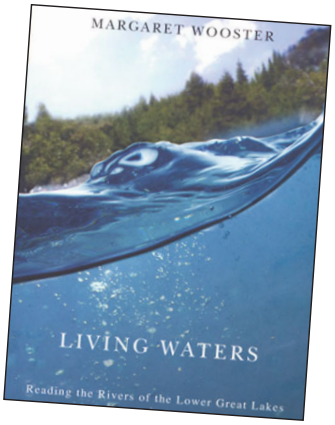
BITS AND BYTES

Survey Comments on Water: Quebec respondents

- Keep Canada's water secure! It is not a world-resource yet!
- A daily shower is not a must but a luxury. One can wash oneself off with a bowl of water and still be clean
- I cut down on the frequency I do things e.g. I only do laundry every 2-3 weeks.

FROM THE PEN OF

"Living Waters": Reading the Rivers of the Lower Great Lakes.
University of New York Press 2009,
Author Margaret Wooster
Reviewed by John Bacher



In her book *"Living Waters",* Margaret Wooster paints a moving portrait of the rivers of the lower Great Lakes in Quebec and New York State in all their majesty and ruin. We get a hopeful view that balances both the triumph of hard won environmental victories and restoration triumphs with a realistic understanding of the remaining challenges and threats. She makes a heartfelt plea for the realization of Aldo Leopold's call for a "*land ethic*", as the critical way to heal the damaged ecosystems of the Great Lakes.

Wooster contrasts Leopold's love for the land, shown in the footprints of deer in the snow near his famous woodland shack, with the harsh, technocratic approaches to environmental problems based on pouring concrete. One such spectacular example of such wrong headed approaches, which waste billions of scare dollars to improve environmental problems, is the experience of Milwaukee. Here she notes, a *"$716 million, 20-mile-long underground sewage storage tunnel has not only failed to eliminate overflows into the city's watercourses, but also now pollutes groundwater in some areas of the district."*

One of the most moving portraits Wooster makes of the need to work in harmony with nature, based on the traditional Iroquoian wisdom of the *"Good Mind"*, is the example of the Scajaquada Creek, in her home city of Buffalo, New York. She observes that *"if the history of Scajaquada Creek has taught us anything, it is that more diversions of its natural flow, even if the city could raise the money for the most expensive deep tunnel project, will lead to more problems down the line*." Astonishingly, much of the original course of this stream, originally buried underground, was resurrected in order to serve as an outlet for the overflow from an overloaded Buffalo sewage treatment plant.

Wooster identifies an important problem in the Great Lakes region - what she terms *"the sprawl of stagnation*." Although in general Erie and Niagara counties have a declining population, the urbanized area has tripled. One of the worst examples of this is in the watershed of Scajaquada Creek, in particular the recently constructed Galleria Mall. This complex was constructed as a result of official plan changes that removed previous designations for flood plain protection and wildlife habitat. The rezonings to permit the Galleria Mall's construction were justified on the basis of misleading environmental impact studies and over - optimistic assessments of the potential of mitigation measures.

In the development of the Galleria Mall, Wooster shows that in reality, things did not work out the way the developers' consultants predicted. She notes of the end outcome, "*The question of wet weather runoff to sewers and consequent flooding and pollution downstream was answered with stormwater detention basins; vast rubbish-collecting wastelands encircled by the highway ramps to the mall. The question of wildlife habitat was answered with developer's agreements to replace it somewhere else and, de facto, by the fact that many of the deer and other animals living on the site were killed on the highway during construction."*

Still despite all the problems on Scajaquada Creek, Wooster shows that where it has not been buried in concrete, the stream is improving in its water quality and diversity of life. Part of the problem it faces, is that some simply write it off, like one curmudgeonly resident who curses it based on floods that have not taken place for forty years. Wooster contrasts this nay sayer complainant with the Creek's champion, Jesse Kregal, a timpanist with the Buffalo Philhar-

monic Orchestra. Kregal is *"the principal visionary of the Scajaquada Pathway "*, a two mile path that links Buffalo's largest park with the Niagara Riverwalk. On a walk with Kregal, Wooster documented carefully a number of inspiring signs of the Creek's recovery from a former abandoned industrial wasteland. They observed giant Snapping Turtles sunning themselves on rocks, red wing black birds trilling, beaver-cut trees and *"grown men fishing all along the Scajaquada."* The most spectacular sight was that of a *"Great blue heron following the creek like a map upstream*."

Wooster shows that nothing about how to protect the environment in the Great Lakes is dull, but is however, terribly under- reported. She describes the drama of the debates concerning the status of the American eel as an endangered species, where she was expelled from one study session for not being properly invited. She gives a glimpse of the debate over whether there is a migratory oceanic population of Atlantic Salmon in the upper St. Lawrence River, and of the Onondaga's plan to restore it to the lake in whose waters their ancient Iroquois Confederacy was founded. She also informs us that Americans are planning to launch a NAFTA challenge to Ontario's coal burning emissions at the Nanticoke Generating Plant, one of the major sources of acid rain emissions contaminating the lakes of the Adirondacks.

In a quite moving fashion Wooster shows the dedication of the many environmental champions who work to restore Great Lakes ecosystems, without the appreciation they deserve. One astonishing figure from Buffalo, Stan Spisak, is shown on the Buffalo River with the then New York State Senator Robert Kennedy. Spisak was also able at this time to meet with US President Lyndon Johnson, show him samples of contaminated sludge, and persuade him to issue an Executive Order to prohibit the dumping of dredged materials into Lake Erie. Another is the Mohawk artist Ray Fadden, founder of the Six Nations Museum in Onchiota. Aware of the problem of the continuing disruption of the Adirondacks with acid rain and mercury, he has taken the unusual step of *"feeding the wildlife, including eleven bears, to help them survive the loss of natural food sources and valuable habitat."*

Throughout *"Living Waters*", Wooster explains how easy healing the earth would be if we simply used the "*good mind*" to work with nature rather than making war upon it. As with many of her best examples, this is shown most vividly in her home city of Buffalo. It is committed to the most costly way of handling its garbage, incineration. As a result it has *"a garbage recycling rate of only 6.5 per cent compared to a national average for cities of about 30 percent, with cities like Guelph recycling well over 50 percent of their municipal waste*." Another, technically at least, painless path for ecological restoration, is to dissuade the New York State Thruway Authority from annually pouring multi-millions of dollars into what now has become the purely recreational Erie Canal, *"in light of its continuing potential as an invasive species vector and its impacts on the Oswego River, Montezuma Swamp, and other wetland ecosystems across the state*."

One of the reasons that *"Living Waters*" is such good reading is that it will help the environmentalists who are blessed by reading it, feel better about what they do. You will certainly see yourself as the dedicated orchestra timpanist, rather than the grumpy short sighted curmudgeon .

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