



# Fractured Community



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PHOTO: ERIC REIDER

By Eric Reider

**AN OPEN-PIT SAND MINE PROPOSAL** on the shore of Lake Winnipeg is fracturing the lands, waters and community of Hollow Water First Nation — all for a dangerous fossil fuel project that should simply never move forward. Details of the silica sand mine are neither finalized nor publicized and an Environment Act licence hasn't\* been issued. Yet the forest has already been clearcut for the processing plant and roads. The Manitoba government is hiding behind antique and dysfunctional environmental licencing regulations while endangered species are being imperilled. All this is shining a glaring light on their mismanagement of the environment.

Canadian Premium Sand is the junior exploration company proposing to quarry silica sand from a massive deposit lying under the boreal forest adjacent to the townsite of Hollow Water First Nation. Talk about mining this sand for the oil and gas industry came to light in 2014 when a drill program cleared pathways through the forest. Although the operators of

the company have been floating rumours of what the project would look like since then, it wasn't until an Environment Act Proposal (EAP) was published last winter that the dangers of this project became apparent.

The proposal states a newly built processing plant will clean silica sand to be hauled away by truck — one every few minutes, 24 hours a day, for the next 53 years. This project is a loud, pervasive, half-century-long commitment for local community members.

The silica sand here is being sought after for hydraulic fracturing, or fracking, to extract oil and gas. When a blast of water and chemicals is shot in to fracture the Earth's crust to break free oil and gas deposits, these sand crystals mixed with the chemical slurry prop the fractures open for oil and gas to seep out.

Fracking for fossil fuels is a serious problem, as its destructive operations are proven to cause earthquakes and contaminate drinking water aquifers. In fact, fracking is banned in several countries already. But the

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\* The MB gov't issued a license Friday, May 17



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## What is 5G?

### How could it affect our health and environment?

*By Marg Friesen M.Sc., Safer Wireless Radiation Manitoba*



Microcells – Mission, B.C. Canada

PHOTO: WEBMASTER OF EMR HEALTH ALLIANCE OF BC

**WE ARE HEARING A LOT OF BUZZ** about faster  
“5G” for a new interconnected world, but do  
we really know all we should know on how it  
may affect us and the environment?

What is 5G?

5th Generation (5G) radiofrequency (RF)  
technologies follow 2G, 3G and 4G. So far, we  
can communicate and research on the move,  
with cell phones, texting, Internet connectiv-  
ity and more. The long-term goal with 5G  
technologies is that anything that can be con-  
nected, will be connected with an emphasis on  
“machine to machine” connections. The motto  
of the CTIA, the organization that represents  
the wireless communications industry in the  
USA is, “Everything wireless”.

5G is intended to carry more data and down-  
load faster. To accomplish this, 5G technology  
needs to use higher and shorter frequency mil-  
limeter radiowaves, in addition to the current  
spectrum. The problem is that, unlike 2G to 4G,  
the higher frequencies for 5G are more easily  
blocked by trees, buildings and other structures.  
Therefore, a dense buildout of small cell antennae  
(microcells) is required – one transmitter every  
few hundred meters. Microcells will show up on  
streetlight poles, attached to apartment build-  
ings, etc., directly outside our homes and schools.  
Many locations will be flooded with overlapping  
coverage from multiple transmitters.

The upsides of upcoming 5G technologies  
have been widely touted: driverless cars and the

vast interconnected Internet of Things (IoT),  
to the point of even tracking the number of  
eggs in your fridge.

We hear very little about the downsides,  
such as possible implications for our health  
and the environment. In 2017, scientists and  
doctors, leaders in RF radiation and electro-  
magnetic field (EMF) research, launched “The  
5G Appeal” calling for the European Commis-  
sion to stop the deployment of 5G. Previously,  
scientists specializing in non-ionizing radia-  
tion launched the “International EMF Scien-  
tist Appeal” (11) that states that today’s “safety  
guidelines” from health authorities, including  
Canada, are outdated, and, for telecommuni-  
cations frequencies, aim only to prevent exces-  
sive heating (thermal effects). Put simply: no  
heating, no harm.

There is ample scientific evidence that ther-  
mally-based guidelines and standards are ob-  
solete. Evidence is strong that cell phone type  
radiation causes cancer and can damage sperm  
and DNA. In 2011, the International Agency  
for Research on Cancer of the World Health  
Organization (IARC-WHO), classified wire-  
less radiation in the RF range (including Wi-  
Fi and millimeter wavelengths) as a possible  
(2B) human carcinogen. Since then, newer  
science on humans and animals has supported  
an upgrade of RF radiation to probable (2A)  
or Group 1 known human carcinogen, in the  
same group as cigarette smoke and asbestos.



PHOTO: WEBMASTER OF EMR HEALTH ALLIANCE OF BC

“There is ample scientific evidence that thermally-based guidelines and standards are obsolete. Evidence is strong that cell phone type radiation causes cancer and can damage sperm and DNA.

Following smaller animal cancer studies, the \$30 million USA National Toxicology Program of the National Institute of Environmental Health Sciences (NTP-NIEHS) found statistically significant “clear evidence of carcinogenicity” with non-thermal exposures in the same type of cells found in human tumours. The NTP-NIEHS findings were replicated in a large-scale study by Italy’s Ramazzini Institute that used even lower intensity exposures. Adverse effects on sperm quality and quantity at everyday exposure levels of RF radiation have been detailed in three systematic reviews published from 2014 to 2016.

When a potentially game-changing study showing DNA damage from RF radiation was published in 1995, there was a quick “war gaming” of these results into inconsequential findings. This is described in an article called “How Big Wireless Made Us Think Cell Phones are Safe” by investigative reporters Mark Hertsgaard and Mark Dowie. (In the 1970s, Mark Dowie exposed the Ford Pinto story where fatal accident claims were considered to be part of the cost of doing business). Since the mid-1990s, more than 30 studies published in peer-reviewed journals have reported that RF radiation can damage DNA at non-thermal exposure levels.

Although RF radiation is non-ionizing and has lower energy than ionizing radiation (e.g. X-rays), it has been shown to cause oxidative stress. A review of 100 peer-reviewed studies found: “in general, 93 confirmed that RF radiation induces oxidative effects in biological systems”. Prolonged oxidative stress basically causes biological dysfunction, leading to many conditions including cancer, Parkinson’s and other degenerative diseases.

Environmental implications also merit major consideration. Adverse effects related to RF radiation have been found in wildlife including amphibians, birds, insects, fish and mammals. RF radiation at ambient levels can disorient birds. A study on trees found that they were visibly damaged on the sides nearest the cell tower antennae. Of particular concern are effects, both thermal and non-thermal, of millimeter waves on insects. A major field study on insect pollinators and cell towers found that abundance of beetles, wasps and hoverflies were negatively affected. The authors conclude: “... these changes ...associated with electromagnetic smog may have important ecological and economic impacts on the pollination service that could significantly affect the maintenance of wild plant diversity, crop production and human welfare”.

In Europe, some jurisdictions are heeding the 5G Appeal. Regions, such as the Cantons of Geneva, Vaud and Neuchâtel in Switzerland, are issuing decrees calling for moratoriums on the rollout of 5G technology until the health effects are better understood. Brussels, Belgium and parts of Italy are reevaluating 5G deployment. In the USA, tough battles are being waged to retain local control over placement of microcells.

Will Canadians have a say, as some places in the USA do, on the placement of microcells that could be in front of our homes and schools? Not likely. Innovation, Science and Economic Development Canada (ISED) CPC-2-0-03 excludes microcells placed on existing structures like utility poles from requiring local and public consultation. Excluded structures are meant to be those that have “minimal impact” on communities. Are we to understand that higher risk of cancer and DNA damage are “minimal impacts”?

To address the original question... there is no clear definition of what 5G is, or will be. We do know that the public health and environmental consequences could be substantial. Experience has shown us that once cell antennae are in place, it is difficult to have them removed. In Ripon, California, it took intense pressure from the community to force the removal of a cell tower located close to a local school, and only after four children and three teachers were diagnosed with cancer in a three-year period.

There are safer alternatives. A report, “Re-Inventing Wires: The Future of Landlines and Networks” by Dr. Timothy Schoechele of the National Institute for Science, Law and Public Policy, Washington, DC, goes into detail on alternatives, as well as privacy, security and long-term sustainability issues of communication networks. Relevant to climate change is a section on these networks’ energy consumption, approaching 5-10% of the world electricity supply - and growing.

There seems to be a great sense of urgency for 5G rollout. In reality, what we need to do is outlined in The Lancet comment article “Planetary electromagnetic pollution: it is time to assess its impact”.

Until such an assessment is properly done, and we can find out what those halting the deployment of this technology in Belgium, Italy, Switzerland and the USA know, that we don’t know, in reality, we urgently need a moratorium on 5G.







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## Fractured Community cont'd...



PHOTO: ERIC REDER

“Fracking for fossil fuels is a serious problem, as its destructive operations are proven to cause earthquakes and contaminate drinking water aquifers. In fact, fracking is banned in several countries already.

oil-drunk governments in Canada and the US are hell-bent on petro-destruction. Allowing this mine will guarantee we export ecological destruction elsewhere.

At the same time, a comprehensive new climate change report is telling us we need to halve our fossil fuel use in the next 11 years to prevent catastrophic climate change. We are being told the fate of human society is at risk. Authorizing a new frack sand mine to increase fossil fuel extraction will only fuel the climate crisis.

Yet silica sand carries a far greater problem for the immediate vicinity — silicosis. Breathing in silica sand dust, which is created when the sand is extracted and processed, can lodge in people's lungs causing silicosis. With no way to expel the sand dust, the lungs build up scar tissue around the sharp crystals and it gets hard to breathe. This can eventually lead to death. Canadian Premium Sand's EAP filing states the dust generated will be two to five times greater than allowable air quality guidelines — an incredible hazard for people living and working here.

The risks from this mine weren't publicly posted until the EAP filing in December 2018. However, the First Nation consultations required under section 35 of the Constitu-

tion were nearly completed without this vital information — meaning the majority of the consultations were over before the company even published any environmental data. This illustrates how dysfunctional the Manitoba government approvals process for industrial projects is. It also indicates how Hollow Water First Nation can be so divided on this issue. It's hard to reach an informed consensus when only partial information gets shared. People should also be sceptical if the only information available is coming from the proponent — it's like a used car salesperson trying to sell you the lemon as a Lexus.

Around the world, the standard for resource projects on traditional territory has been enshrined in the United Nations Declaration of Indigenous Rights (UNDRIP). Canada is a signatory and it is on its way to becoming law in Canada. Among other things, UNDRIP requires “free, prior, and informed consent” for developments. There was no chance for informed consent because consultations were nearly completed before the company had filed all the information required by the government.

This disconnect between what the company says and the actual documents they filed was in

part what caused concerned folks from Hollow Water First Nation to establish Camp Morningstar — on their traditional territory Canadian Premium Sand is destroying. Since February, a sacred fire has been burning at the camp and folks opposed to the destruction of Mother Earth are attending ceremonies and supporting each other at the camp. They are asking for provincial Clean Environment Commission hearings, a federal environmental assessment and proper section 35 consultation before any more construction continues on this project.

The Wilderness Committee and other independent experts found Canadian Premium Sand's EAP filing from December to be grossly deficient. These concerns were mirrored by the government's own Technical Advisory Committee (TAC). The TAC is made up of government employees who oversee the different departments the EAP might affect, such as Wildlife, Highways or Health. The TAC acts as our public experts. They are specialists in their field and their expert testimony informs the public of the negative impact of the project. However, just like the First Nation consultations, the public comment period for this proposal concluded before we were allowed to hear from our experts.

The Environment Act process for approvals has been failing us for years — highlighted by 98 hectares of forest clearcut in Hollow Water First Nation territory in 2012, months before the Environment Act was issued or community consultation was completed. In 2013 Huiday Minerals built an entire mine INSIDE a provincial park in endangered species habitat before the EAP was publicized. This last transgression caused the government of the day to ask the Manitoba Law Reform Commission to review the Environment Act. And in 2015 they produced 160 pages of recommended improvements to the act. Unfortunately, Premier Brian Pallister has ignored calls to heed this expert advice and the responsibility for the travesty unfolding in Hollow Water rests squarely with the premier and his cabinet.

The problems with government process are overshadowing the actual ecological travesty forecast for this project. Before mapping of wetlands or peat bogs was done, the forest was clearcut. Endangered species such as the little brown bat are almost certainly on the project site. The common nighthawk has been documented in the project area by the Wilderness Committee, yet the forest has been bulldozed. The wildlife and plant survey — done on a

*continued to page 8 >>*

# Nuclear Manitoba

By Anne Lindsey

**MANITOBA****N CAN BE FORGIVEN** for thinking we are not a nuclear province. Our electricity emphasis is on hydro, and we don't have any actual power generating reactors. But nuclear, like some of its components, has a habit of not going away, and the decades old federal government research campus at Pinawa is still one of the industry's focal points.

Historically, the site has hosted a wide variety of research and experimentation, including everything from food irradiation to trials of prototype smaller reactors such as the ill-fated Slowpoke. One of the biggest projects was supporting research on the long term "disposal" (really, storage) of nuclear fuel waste deep in the Canadian Shield, which connected to the massive Underground Research Lab (URL) at nearby Lac du Bonnet. All these activities have contributed to a significant inventory of radioactive materials, some of which are very long-lived and toxic.

The research reactor was shut down in 1985, but most of that inventory has remained, necessitating the current big project: planning work to decommission the old reactor. In 1963, when it was built, the agreement was that the site would eventually be restored to "green field" (ie. natural) conditions. The original license to decommission the reactor planned exactly that: (the spent fuel having already been moved), the reactor would be dismantled and its remaining radioactive inventory, consisting mostly of contaminated reactor parts, taken off-site to await "disposal" in whatever Canada's final nuclear waste solution was going to be. While the residual contamination remaining from the multiple accidents and leaks this reactor experienced would persist, the "green field" promise would be honoured.

Now however, Canada (and its consortium of private nuclear contractors, which includes SNC Lavalin) wants a different solution and instead prefers "in-situ decommissioning", (ISD) a proposal which leaves all the (non-spent fuel) radioactive inventory (some of which will remain deadly for tens of thousands of years) grouted in place in a shallow grave next to the Winnipeg River. Is this because Canada still doesn't have a final disposal solution for its nuclear waste? Even though it attracted international attention and participation (all nuclear countries are seeking waste solutions), the URL closed shortly after a major public



“ Is this because Canada still doesn't have a final disposal solution for its nuclear waste?

review panel essentially sent the waste siting process back to the drawing board, resulting in a long extension of the time horizon. "In situ" decommissioning seems like a convenient alternative to get the contaminated old reactor out of sight, and out of mind. The question is: will the radioactive contaminants be kept out of the environment? This new "project" is now subject to an environmental assessment and licensing process.

Unfortunately, that assessment will not be all it could be. Changes to environmental laws under the Harper government placed responsibility for nuclear developments in the hands of the regulator, the Canadian Nuclear Safety Commission (CNSC), sometimes referred to as a "captured regulator" due to its cozy relationship with nuclear proponents. CNSC has never actually denied a nuclear reactor license,

and demonstrably does not understand the planning necessary for sound environmental assessment. For example, it has no mandate to look at the socioeconomic impacts of a nuclear development. It's hardly comforting to know that in nuclear matters, Canada is now reputed to have a "benign regulatory environment" according to the World Nuclear News. In other words, bring your nuclear business here, we won't be watching you very carefully!

And that is important because the next big project that some people would like to see at the Pinawa site is a prototype of the new so-called "Small Modular Nuclear Reactor" or SMR. Nuclear proponents, along with Natural Resources Canada, are giddily excited about the potential for SMRs to combat climate change and herald a new era of "safe and af-

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# Protect Coastal Wetlands

It's time to uphold the law

By Jeffrey Smith, member of the P4PWICW

LET'S SAY YOU HAVE LAND ON THE SHORES OF LAKE WINNIPEG, and let's say you wish to develop that land for use as a holiday home. Except that land is comprised entirely of rare protected coastal wetland. However, you own the land, so you decide to simply fill in the part you need to be able to construct that holiday home. Can you? The short answer should be no.



If you try, as was the case for the land pictured above, you should get a response similar to this one:

"It is understood that in order to develop the property, a substantial amount of fill needs to be brought into the property to build it up to appropriate lot and building site grades.

It is the undertaking of this infill activity that is in contravention of not only the Water Rights Act, but also the Rural Municipality of Gimli development bylaws as well as provisions of the Planning Act."

Strong words from the Directorate of Drainage and Water Control Licencing responsible for enforcing existing legislation and regulations as they pertain to the province's ever dwindling number of wetlands. On the face of it, this is an absolute statement reflecting both the intent and substance of current law.

And yet, half way through 2019, this very same wetland now looks like this:



How does this happen? Have the laws changed? No. Are our wetlands no longer protected? Again, no. Are there provisions in one set of laws that provides a work around for developers wishing to develop wetlands...again no.

In fact, there is a general desire by our lawmakers to be seen to support the preservation of our fast changing, and in some cases dying eco-system. History is a harsh judge, so governments, like the Pallister Government, announce initiatives like the Conservation Trust Fund. A fund whose primary purpose is to undo some of the damage done to the environment in previous years. No

government wants to go down in history as one that helped bring about ecological or environmental nightmare scenarios.

Manitoba laws, as they pertain to wetland preservation, are for the most part, quite robust, easy to read and understandable. For example, the Planning Act contains many references and specific direction with respect to wetland and water developments. Chapter 5 (Water) is unequivocal in its stated policy aim of protecting wetlands. Section 5.1.5 states: "Development must not result in alteration to permanent, semi-permanent or coastal wetlands by the consolidation of wetlands or by ditching, filling, pumping, subsurface drainage or other works or means, unless it is for the purpose of flood mitigation. Flood mitigation must maintain the natural boundaries of permanent, semi-permanent or coastal wetlands."

And yet...we still find the site described above being subjected to the depositing of some 1200 truck loads of fill accompanied by the digging of a trench some 100 m long, 8 meters wide and 4 meters deep! What happened to "**must not result in alteration to permanent, semi-permanent or coastal wetlands...**"? The infill of coastal wetland, accompanied by the digging of a substantial trench in that wetland, can only be viewed as a violation of existing legislation.

The Manitoba Government recently passed legislation in the form of the Sustainable Watersheds Act in the 3rd Session of the 41st Sitting (2107-18) of the Manitoba Legislature. This act was introduced as a means of both simplifying and integrating a number of mutually supporting Legislative Acts. These acts include: The Conservation Districts Act, The Manitoba Habitat Heritage Act, The Water Protection Act, and The Water Rights Act.

Each one of these Legislative Acts, along with attendant regulatory instruments are designed to afford distinct protection to various linked elements of the environment and the people of Manitoba. In effect, to complement the provisions of not only the Planning Act, but also the Environment Act as well as a number of Federal Laws. Violation of our laws, including the aforementioned ones are subject to significant punitive and remedial options which may be imposed by the respective regulatory group. However, regulatory bodies seldom, if ever, invoke penalties or require the offending party to restore the damaged eco system to its original state.

Consider the 2012 case of a developer who without any licences, permits or approvals, dug a 1.68 km canal near Lac Du Bonnet Manitoba with a view to linking a private campground with Lake Winnipeg. Importantly, a significant amount of the land being dredged was not even his own! It was, in fact, Crown Land forming part of the Brokenhead Ojibway First Nation. Ministry of Sustainable Development inspectors advised the developer that he was in violation of the Water Rights Act, the Environment Act, the Water Power Act, the Crown Lands Act and the Federal Fisheries Act and was facing prosecution and potential fines of \$300,000 or be ordered to restore the land to its original condition.

Caught dead to rights, it would be reasonable to assume that the fallout from this blatantly illegal activity would be significant and substantial. However, such was not the case! The developer did not face prosecution, was never fined and according to available information,

“ The infill of coastal wetland, accompanied by the digging of a substantial trench in that wetland, can only be viewed as a violation of existing legislation.

was not ordered to return the land to its pre-construction state. In the end, no action of any kind was taken, as the developer stated he did not know he needed any approvals. Ignorance of the law is not supposed to be an excuse in a society governed by the rule of law, and yet...it presented this developer with his personal “get out of jail free” card.

Some will say that the Lac Du Bonnet Case happened in 2012, surely in 2019 the same thing can not happen...and yet it does. The Ministerial decision rendered in 2014 regarding the land in Miklavik was “sort of” overturned in 2016 with the Ministry of Sustainable Development stating it “is willing to consider a single one-time development of a portion of the property in question” with a number of conditions. Chief among these conditions was the need to “contact the RM of Gimli... to obtain the appropriate approvals related to lot and building grade requirements.” Apparently, the change of heart came about because a portion of the wetland had been used to help diking efforts during a 2005 high water event.

Between 2016 and 2019, work continued until the trench described earlier appeared. A local group, The People for the Preservation of the Willow Island Coastal Wetlands (P4PWICW), lodged a number of formal complaints the result of which was a stop work order that was applied to the development by the Ministry of Sustainable Development. It was determined that the trench was well outside the Developer/Ministry of Sustainable Development agreed work plan. It should be noted that no evidence of any work plan has been presented by the developer

or is available from Sustainable Development for review. Importantly, the developer has not been ordered to return the land disturbed by the trench back to its pre-construction state.

The group, P4PWICW, conducted its own investigation of the overall development and found that all work that had been performed between September 2014 and April 2019 had been performed without the issuance of a single licence, permit or approval as required by law. There were no surveys conducted nor were technical drawings available for review to ensure any work being performed complied with existing regulations or guidelines. These findings were formally passed to the Minister of Sustainable Development on 30 April 2019. A response has yet to be received.

The issue with our laws is clearly not with the laws themselves, but rather with enforcement. Developers know and understand there is virtually no chance they will be penalized should they actually be caught breaking the law, and when they are caught, they plead ignorance. This ambivalence to the enforcement of our laws encourages and indeed enables developers, large and small, to bypass the legal protection afforded to all of our wetlands, allowing the destruction of significant habitat essential to the health of Lake Winnipeg and all Manitobans.

Until such time as the regulatory bodies adopt a zero-tolerance policy towards law breakers, developers will feel free to do whatever they please wherever they please. It is past time for this to stop, or we risk losing our coastal wetlands. 🌱







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## Fractured Community cont'd...

small portion of a varied landscape — took place in October, which is far too late in the season to be effective. Before another opportunity to examine the area came up, the forest was bulldozed.

A public outcry about these concerns and many more prompted the Environmental Approvals branch to require Canadian Premium Sand host a public meeting with a facilitator this past April. It couldn't have gone much worse for the company. The facilitator was so offensive the meeting degraded into protest and not enough time was allocated to even look at the impacts on nature. The company spokespeople refused to commit to any of the basic conditions asked of them, such as publishing monitoring data, let alone their work permits they claim are already public (they're not). A meeting summary published by the facilitator paints a glowing and false portrait of what was a painful and conflict-filled evening. The most glaring omission was when asked if there were representatives from the government present, no one spoke up. It was only the used car salesfolk pitching their lemon of a project again.

There are three responsible ways forward for this project. Provincially, the project has been so tainted by Sustainable Development Minister Rochelle Squires' department that it must be sent to the Clean Environment Commission for public hearings. Due to strong indications from the Manitoba government, they will approve this project no matter what, the federal government must also step in and conduct an impacts assessment under the Canadian Environmental Assessment Act. Finally, after the information posted by the company, government and public experts is available, a proper section 35 consultation which follows UNDRIP must be undertaken so community members of Hollow Water First Nation can make an informed decision.

The Wilderness Committee will never support continued fossil fuel expansion and advocates for a ban on fracking everywhere. With proper public reviews of this frack sand mine by the federal and provincial governments, we believe a majority of people will come to recognize the importance of maintaining nature, acting on climate and will end this frack-sand fiasco. 🌱

*Eric Reder is the Wilderness and Water Campaigner for the Wilderness Committee. He has been working on the ground with community members in Hollow Water First Nation since 2009.*

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## Nuclear Manitoba cont'd...

fordable" electricity production (wait, haven't we heard that before?) primarily for off-grid remote locations and resource extraction sites. Premier Scott Moe in Saskatchewan is going even further — speculating about SMRs replacing the province's dirty coal-fired power plants, while industry is reviving an old vision of using SMRs to make bitumen extraction in the tar sands less carbon intensive.

But critics are pointing out the flaws in the SMR propaganda, notably that this is as yet a completely untried technology. Dr. Gordon Edwards of the Canadian Coalition for Nuclear Responsibility notes there are "over 100 different unbuilt and untested designs... Each of these reactors would use unconventional fuels that have never previously been commercially employed in Canada". Also, the massive financial investment needed to get the technology up and running would have much higher value for emissions reductions if applied to already proven alternatives to fossil fuels. Just to break even, analysts have noted, SMRs would have to be mass produced and sold in the hundreds of thousands. Other major concerns include the dangers of siting multiple highly radioactive sources across remote locations, and a complete lack of planning for the resulting radioactive waste products.

All these issues would rightly be considered in an impact assessment such as is proposed under the current federal government's Bill C-69, the Impact Assessment Act. Stemming from a Liberal campaign promise to restore some of Canada's environmental protections, this bill resulted from intensive consultation across industry, provinces, indigenous communities and civil society. One of its goals was to take back assessments from regulators, such as the National Energy Board and the CNSC, and thus ensure proposed projects are given a thorough and credible sustainability-based assessment of their environmental, health, economic and social impacts, before they proceed.

However, it now appears unlikely that most future nuclear developments will be subject to rigorous impact assessments. Once the bill passed second reading, the oil and gas, pipeline and nuclear industries went into full lobby mode at both the Senate and the Commons levels, prompting loud and largely ill-informed protests from communities dependent on fossil fuel extraction, and at a less public level, substantial influence on a government and bureaucracy already strongly favourable to and dazzled by nuclear dreams.



PHOTO: COSMOS 954 DEBRIS IN TRANSIT FROM CFB EDMONTON | FLICKR

Despite sound arguments from environmental law leaders, the proposed "project list" (projects that would automatically trigger an assessment under the Act) predictably excluded nuclear developments such as refurbishment/life extension of nuclear power plants, decommissioning of nuclear power plants, and Small Modular Reactors under 200 MW. In fact, it fell nicely into line with Natural Resources Canada's "Road Map for SMRs" which holds that their requirement for vast capital investment to be deployed quickly makes full assessment a roadblock.

So what is the future of nuclear in Manitoba? Environmental reviews notwithstanding, it seems inevitable that a radioactive pit will be constructed some 500m. away from the Winnipeg River. Monitored for a few years, it will eventually be abandoned and left to slowly leak its contents into the river. And if the current Mayor and Council of Pinawa get their way, that corner of the province will once again play host to another nuclear experiment, thus creating yet more waste for which there is no real solution, or even solid public policy. Certainly our provincial government won't be making a fuss. Currently, it is on the one hand, mostly ignorant of what is going on in Pinawa, and on the other, blindly cheerleading for supposed "economic development" of the region. In the future, most of us are going to be so focused on dealing with global warming impacts, perhaps the only people who will notice will be area residents seeing potential health and environmental impacts of radioactive contamination, and those who wonder why financial resources were squandered on nuclear fantasies instead of on meaningful responses to climate change. 🌱

*Anne Lindsey volunteers with Concerned Citizens of Manitoba. She is formerly the Executive Director of the Manitoba Eco-Network, a long-time observer and activist on nuclear and environmental issues, and is a Canadian Centre for Policy Alternatives Mb. Research Associate. An earlier version of this article was published in the Winnipeg Free Press.*



# A Month Without Plastic

By Bethany Daman, Green Action Centre, Living Green, Living Well Coordinator

*People around the world are gearing up for the month long “Plastic Free July” challenge, where they will commit to living without single-use plastic for 31 days.*



PHOTOS: GREEN ACTION CENTRE ARCHIVE

**A RECURRING QUESTION ARISES** when we tell people to skip taking plastic bags at the grocery store.

“But what will I line my garbage can with?”

You mean the garbage can that’s filled primarily with more plastic?

Shopping carts are filled with plastic waste. Delivery vehicles are filled with plastic waste. Garbage and recycling bins are filled with plastic waste. Landfills, soil, and oceans are filled with plastic waste.

There’s so much plastic waste.

Why does it matter?

1. Plastic is made from fossil fuels. As we face the dire realities of climate change and learn about the importance of reducing our reliance on fossil fuels, we need to think about decreasing the use of materials that are dependent on fossil fuels.
2. Plastic takes a very long time to break down and even then, microplastics are always left behind. These microplastics, which never fully go away, are littering our soil, oceans and bodies at an alarming rate.
3. There is too much plastic for us to solve the problem through recycling. A lot of plastic is challenging to recycle and given how much is available, the market for it is low. You know there’s too much plastic when the countries we are shipping our recycling to are sending it back.

Reducing single-use plastic is challenging, but not impossible.

Talk to your local grocery store, retailers and elected officials about the importance of reduction. Push for additional regulations and policies to govern the amount of plastic being distributed in the first place. Find ways to cut back at an individual level.

This Plastic Free July, we are encouraging Manitobans to start by evaluating and then eliminating.

1. **Evaluate** the plastic that’s entering your home by placing it all in a separate bin. See how much of your waste is plastic and determine what you can do to prevent it from entering your home again.
2. Select items to **eliminate**. This could be plastic drink bottles or plastic produce bags. Maybe it’s plastic waste associated with take-out food. Or what about unnecessary packaging from items that could rather be filled from the bulk section into reusable bulk containers?

When making a purchase, think about the environmental and social impact of both the product and its packing. Find creative solutions and make realistic choices that mitigate negative impacts as much as possible.

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Still wondering about a creative alternative to “free” garbage bin liners if you’re not taking plastic bags home from the store? Compost as much as possible and for the rest, go bagless. If you still have wet garbage you’re wanting to place in a bag, use an old bread bag or frozen fruit bag that’s destined for the landfill anyway.





# Learning from the Land, In the City

By Matt Carreau



PHOTO: HILLARY BEATTIE

**IN OUR EVER MORE URBANIZED WORLD**, the way we plan and design cities is often at odds with natural systems, resulting in devastating consequences for vulnerable communities and environments. Finding new ways to address challenges like climate change and ecosystem collapse requires more holistic ways of thinking about the links between urban, environmental and social issues.

Learning from the Land, In the City is a new series of seasonal walks that aims to do just that by bringing together experts from diverse backgrounds to explore these issues in a place-based and immersive way. Following the cycle of the four seasons, the aim of this project is to reconnect people with the land they live on, building better understandings of how cities and ecosystems interact, and the impacts that humans have on the land.

The first walk on this series was all about WATER systems in Winnipeg, corresponding to the spring thaw and return of the floodwaters. Gathering on the banks of the Red River along Waterfront Drive, this walk brought Winnipeggers together to hear from local leaders:

- **ELDER ALDEEN STAR MASON** shared teachings on the traditional cultural and spiritual significance of water for Indig-

enous peoples, and on Indigenous struggles to defend and promote safe and clean water for all people.

- **ALEXIA LEGERE** spoke on community relationships with the rivers, both as a place of healing and solace, and as a place with risk and uncertainty. She shared the experiences of Mama Bear Clan volunteers in patrolling the riverbanks, connecting with people, and building resilient communities.
- **BILL RANNIE** shared information on the geological history of the Red and Assiniboine watersheds, including the cycles of flooding and the changes with colonization and massive infrastructure projects.
- **ADELE PERRY** and **ANGELINA MCLEOD** offered insight on Winnipeg's drinking water aqueduct and the ways in which the city's colonial approach has had devastating impacts on the Shoal Lake 40 First Nation. They demonstrated that the city's water links Winnipeg to other communities, raising the issue of how colonization and racism privilege certain communities over others.
- **CHRIS PENNER** explored the issues facing our city's riverbank habitats, discussing the

roles of flooding in creating ever-changing ecosystems, and the challenges facing urban ecosystems, including invasive species. Paul Mutch then shared ideas on approaches to riverbank habitat management, and the importance of community partnerships in restoring and maintaining our rivers' ecosystems.

- **DIMPLE ROY** discussed options and opportunities to reduce the downstream impacts of storm-water runoff and sewage spills on Lake Winnipeg, highlighting the need to protect Winnipeg's "back yard".
- **GLEN MANNING** brought walk participants to John Hirsch Way to see examples of how green infrastructure solutions can help Winnipeg manage water in more resilient ways.

The summer walk in this series is all about URBAN FORESTS AND HABITATS and will explore topics related to soil health, urban greenspace and habitat corridors, the future of Winnipeg's urban forest, and the intersection between public health, community wellbeing, and social and environmental justice.

For more information, visit [www.urbanecologywinnipeg.ca](http://www.urbanecologywinnipeg.ca) and follow us on Facebook and Instagram @urbanecologywinnipeg 🌿



## Brokenhead Wetland Interpretive Trail

### Discovery Day

By Peggy Bainard Acheson, Debwendon Inc.



PHOTOS: DEBWENDON INC. ARCHIVE

**BRING THE FAMILY TO DISCOVERY DAY** at the Brokenhead Wetland Interpretive Trail, our annual open house and fundraiser, on Saturday, June 22, 2019 from 10am – 2pm.

Learn about aboriginal medicinal plants along with our native orchids and carnivorous plants while supporting this local initiative. The trail, boardwalk and washrooms are completely wheelchair and stroller accessible. There is a parking lot and picnic tables. Guided tours will run continuously from 10am to 2pm (last tour leaves at 1 pm). The trail is located on Highway 59 north approximately 2km north of Stead Road or 1km south of the intersection of Highway 12 and 59. Watch for the blue signs saying, “Brokenhead Wetland” at the access road and also 1km north and 1km south of the access road.

Tickets are \$10 and include a guided tour along the boardwalk, and a hot dog and a bottle of water upon your return. Children under 10 are free. Canned drinks, cookies, and souvenirs will be available for sale. Tickets may be purchased on site the day of the event, but, if possible, please reserve tickets ahead so we know how much food to order. Call Peggy at 204-261-9179 or send an email to [info@debwendon.org](mailto:info@debwendon.org) or check out our website for more information about the trail. 🌿

## Native Orchid Conservation Inc. Field Program

By David Troop



PHOTOS: DAVID TROOP

**NATIVE ORCHID CONSERVATION (NOCI)** is a non-profit group dedicated to documenting and preserving Manitoba's native orchids. NOCI is best known for its contributing role in the preservation of the Brokenhead Wetland. We have also published the field guide book “Orchids of Manitoba”.

Manitoba is home 37 species of wild orchids. Most are found hidden away in bogs and fens, forest and prairie. Many are located in roadside ditches and some have managed to make it, even in the city. If you frequent wild areas, you may have seen wild orchids and not realized it. Some are large and distinctive, like the lady's slippers. Others are small and green. Manitoba is an orchid hot spot. Some are locally common, others are endangered, but all are special. No matter where you go in Manitoba, there is probably an orchid not too far away.

Manitoba has two walking trails dedicated to observing orchids. In early July, you can walk the Agassiz trail near Stuartburn and view the impressive and rare western prairie fringed orchids. On the Brokenhead Interpretive Trail, near Patricia Beach, it is possible to see a variety of orchids from late May through August from the boardwalk trail. While the orchids are there, they are often small in stature. Having a guide will help you to spot them.

NOCI offers a spring and summer field trip program, which runs on selected Saturdays. Field trips provide a chance to learn about orchids and their habitat and to see places in Manitoba you might not otherwise venture into. Our group gathers Saturday mornings, and we drive to various sites and explore those locations. Trip leaders help with identification of wild plants. Our walks are an easy pace as we stop to smell the roses. Usually the trip wraps up by early afternoon. Be sure to join Native Orchid to be informed of our activities. Like us on Facebook to keep on top of events, or check our website. 🌿



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