



Fracking in Manitoba

By D.M. LeNeveu



PHOTO: GEOFF WILSON

Oil derricks pumping in western Manitoba.

YES VIRGINIA, FRACKING DOES TAKE PLACE IN MANITOBA, and like a Santa Claus it provided \$42.4 million in revenue to the provincial government in 2011. In the fracking process, horizontal wells are drilled into tight rock formations containing oil and gas. Fresh water mixed with chemicals and sand is injected at high pressure to fracture the rock and mobilize the oil and gas which are then pumped to the surface. In 2012, 570 new horizontal wells were drilled in Manitoba, and more than 600 are projected for 2013.

In Manitoba, fresh water withdrawals by the oil industry are normally less than the licensing threshold of 25 thousand litres a day and are not recorded. Manitoba Water Stewardship estimates the fresh water for fracking in 2012 was about half the amount used by the town of Virden. In the Bakken formation in North Dakota, which extends into Manitoba, it is reported

that more than ten times more water is used for fracking of one well than estimated in Manitoba. The sustainable rate of withdrawal from the Oak Lake Aquifer used to supply the oil fields could be exceeded if the estimates of water use in North Dakota are representative and if poorly producing wells are refracked, as is common in the Bakken and elsewhere. The use of membrane technology to purify deep saline water or recycle water produced with the oil would be more sustainable but is expensive and has not yet been implemented in Manitoba.

Fracking fluids injected into the horizontal wells could potentially contaminate groundwater. In Manitoba the wells are relatively deep and many layers of impermeable rock protect fresh water aquifers. Gas is released during the fracking process in Manitoba along with the oil. Gas is known to be far more mobile in the subsurface than contaminated fluids and could travel up oil

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wells through faulty cement seals, through old wells and through interconnected geological pathways. In the relatively deep Marcellus shales in the US, studies have shown that contamination of well water with methane is correlated with fracking operations. According to Manitoba Petroleum, no contamination of groundwater from fracking has occurred in Manitoba.

Oil Field Wastes

The four main oil field wastes in Manitoba are saline water pumped from the formations, solids recovered from oil storage tanks, mud recovered from the drilling of the wells, and sour gas produced with the oil.

In 2012 the 12.7 million cubic meters of saline water produced from the oil fields in Manitoba was disposed of by deep injection. This waste water contains some of the toxic fluids injected during fracking and saline formation water. Several layers of deep saline aquifers between 50 and 150 meters thick are available for disposal in Manitoba. Based on volume considerations, disposal of the saline water in these aquifers should be sustainable.

According to the Manitoba Petroleum Department solid waste recovered from oil storage tanks is disposed of in approved facilities such as the class 1 landfill site in Virden. In the Bakken in North Dakota, filter socks used for oil

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is published four times per year by the
Manitoba Eco-Network/
Réseau Ecologique du Manitoba Inc. at
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Manitoba Eco-Network is affiliated with
the Canadian Environmental Network.

*EcoCentre groups gratefully acknowledge the
contributions of Mountain Equipment Co-op.*

Individual subscriptions to *Eco-Journal*
are available as part of a supporting
membership to the Manitoba Eco-Network at
a cost of \$30. Group membership dues are
\$50. Associate membership dues are \$100.

The opinions expressed by contributors
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**The advertising deadline for the
January 6 edition is December 15, 2013.**

Keeping Water on the Land

Floods ain't getting cheaper.

Anika Terton & Megan Krohn, Manitoba Eco-Network Water Caucus

MANITOBA IS A PROVINCE RICH IN WATER. It
is home to thousands of lakes, including Lake
Winnipeg, the 10th largest freshwater lake in
the world, which is predominantly fed by three
rivers.

Every spring the Assiniboine River, Red Riv-
er and Saskatchewan River, and the tributaries
that feed them, swell with melt water and spring
rains, putting the whole province on flood alert.

Flooding in Manitoba has a long and expen-
sive history. In 2011, flooding cost the taxpayers
more than \$1 billion. Severe flooding does not
only cause economic damage, but also creates
untold social and economic costs. It results in
extensive clean-up operations, leaves affected
landowners uncertain about their rights and fu-
tures, and often leads to conflict.

The Lake Winnipeg Basin covers approximately one million square kilometres and crosses four
Canadian provinces and parts of four US states. We have very little control over what is done in the
other seven provinces and states that are part of the Lake Winnipeg Basin, but we can make a dif-
ference on what is done here. The human use of natural water systems in Manitoba has long lasting
effects on how water moves, how nutrients enter the lake, and the severity of flooding. With Lake
Winnipeg being named the world's most threatened lake by the Global Nature Fund, we would be
foolish to ignore the need to manage our water differently.

When discussion turns to what can be done about overland flooding, fingers often point at ag-
ricultural and wetland drainage. While there are other factors to consider, drainage practices are a
significant contributor to flooding, and must be addressed. Increased wetland drainage reduces the
ability of the land to uptake flood waters and hold back nutrients which end up in our lakes. Con-
versely, keeping water on the land and allowing it to drain slowly can reduce severe overland flooding,
prevent drought, and filter out nutrients. Changes must be made to outdated regulations that allow
for extensive agricultural drainage.

Unfortunately the costs of flood mitigation do need to fall on someone. Some argue that we all
share the landscape, ecological goods and services and therefore we all have to pay our share to keep
our water clean. One example of this is subsidizing farmers for keeping wetlands on their land. This
seems to make sense until you think about the precedent this sets for other industries. Agriculture is
a business, and just like other businesses, they are operating in a changeable environment with respect
to the standards and enforcement attitudes. There is no justification for compensating a business
when outdated regulatory standards are changed.

To put this into perspective let's think about how this would look in other industries. Let's say
higher fuel efficiency standards lessen the market for gasoline-guzzling cars. Are taxpayers supposed
to subsidize these auto-makers for their lost market share? Would we use this model to regulate toxic
waste, polluted air, or food safety? No government could afford this!

We need to overcome our short-sighted economic views and embrace a bigger concept of water
management. For example, the ALUS (Alternative-Land-Use-Services) program is an ecological
goods and services program proposal that is unique because it's designed by farmers, for farmers.
While ALUS won't compensate farmers for the impact of environmental regulations, it will provide
them with the tools and capacity to build on their already sound environmental practices. Another
successful project is the Tobacco Creek Model Watershed where small dams on the escarpment have
reduced peak flows and flooding and the dams act as nutrients in the waterway.

Governments are short on cash, and the question remains: How many billion-dollar floods can
we afford? The economic, social and ecological impacts of every flood demand a proactive and com-
bined response. There comes a point when we have to set aside significant financial resources for flood
mitigation and adaption to these new extremes – ideally before the next billion-dollar flood. Work is
being done. If we do not support more solutions of keeping water on the land we will see more flood-
ing, more damages, higher taxes and more conflicts.



Sandbags in Brandon, MB during flood of 2011.

PHOTO: STAN MILOSEVIC, MANITOBA PHOTOS.COM

SEPTEMBER

26 Manitoba Eco-Network Annual General Meeting

All members of the Manitoba Eco-Network are welcome to attend our Annual General Meeting. Please join us to mingle with other members, to enjoy a light meal, and learn about MEN's accomplishments and plan for the upcoming year. For more information contact mbeconetwork.org or call 204.947.6511.

OCTOBER

1-31 Celebrating Sustainability Month

Manitoba's first Sustainability unConference is a month-long celebration of the people, organizations, and businesses inspiring and empowering us to live more sustainably.

1-31 IWALK

International Walk to School Month (IWALK) gives schools a chance to promote active transportation to students over a day, a week, or the entire month of October. International Walk to School Week is October 7-11. International Walk to School Day is October 9th. Register and learn more at greenactioncentre.ca



4 Green Drinks

An informal monthly get together of individuals working for the environment, be that in government, consulting, nonprofit, or in your spare time. Make new friends, reconnect with old acquaintances, and unwind at the end of your week. 4:30 p.m. until whenever at King's Head Pub, 120 King St. RSVP on Facebook and invite friends and colleagues. Organized by Manitoba Eco-Network.

6 Migration Madness

Join Oak Hammock Marsh for an unforgettable day at the marsh during the peak of migration. Many activities for all ages. oakhammockmarsh.ca

16 Golden Carrot Awards

Join Food Matters Manitoba in celebrating and honouring Community Food Champions who are working hard to create a just and sustainable food system. For tickets and information visit foodmattersmanitoba.ca.

21-25 Waste Reduction Week

Waste Reduction Week is a chance to join hundreds of schools, businesses, organizations and individuals in Manitoba and across the country in taking steps to cut waste and improve the environment. Learn more at greenactioncentre.ca.

22 Basic Backyard Composting Presentation

Learn how to recycle your kitchen scraps and yard waste into a rich natural soil amendment. Learn the benefits of composting, how to get started, key factors for successful composting, and how to use your finished compost. 7pm-8pm, St. Vital Library, 6 Fermor Ave, Winnipeg.

23 Vermicomposting Workshop Presentation

No yard or space for an outdoor compost bin? No problem! Vermi-composting is an easy and compact way to reduce your waste. Learn the basics behind composting with Red Wiggler worms, including setting up a bin, feeding your worms, keeping them healthy, and harvesting your finished compost. 7pm-8:30pm, Eco-Centre, 303 Portage Ave, 3rd Floor.

NOVEMBER

1 Green Drinks

4:30 p.m. until whenever at King's Head Pub, 120 King St. RSVP on Facebook and invite friends and colleagues. Organized by Manitoba Eco-Network.

1-2 Global Justice Film Festival

Seeks to engage people in dialogue and information sharing through the use of films, displays, and music. globaljusticefilmfestival.ca

7 Wild at Heart fundraising banquet

Attend Manitoba Wildlife Federation's "Wild at Heart" fundraising banquet at the Victoria Inn, with guest speaker, Shel Zolkewich. Tickets \$45 to \$65. Proceeds will benefit MWF's outdoor education and conservation programs. Visit mwf.mb.ca.

24 FWA Popcorn & a Movie: Dirt! The Movie

Dirt! The Movie takes a humorous and substantial look into the history and current state of the living organic matter that we come from and will later return to. 1pm at Fort Whyte Alive. fortwhyte.org.

29 Buy Nothing Day

An international, informal annual event dedicated to raising awareness of overconsumption. For local information check out greenactioncentre.ca.

30 We Day

Youth, educators, and friends will inspire and celebrate the youth movement for global change at the MTS Centre. weday.com

DECEMBER

6 Green Drinks

4:30 p.m. until whenever at King's Head Pub, 120 King St. RSVP on Facebook and invite friends and colleagues. Organized by Manitoba Eco-Network.

Please email your event notices to info@mbeconetwork.org.



Fracking cont'd...

fluid waste contain such high levels of naturally occurring radionuclides that they are banned from waste landfills. Solid wastes from fracking in North Dakota are commonly disposed of in plastic or clay lined pits that have been known to overflow. References to two pits containing oil waste, near Melita and near Sinclair were found in Manitoba. However, the overall number could not be determined. Treatment plants that generate solid waste from Bakken oil fluids have been built in Stoughton, Willmar, and Midale, Saskatchewan. Detailed information on treatment and disposal of solid waste from oil fields in Manitoba could not be obtained, despite repeated requests.

Guidelines in Manitoba specify the maximum safe land spraying rate of drilling

mud and drilling fluids and the allowable concentrations of potential contaminants and salts in the spray. From drilling records it can be estimated that about 36 thousand cubic meters of drilling mud would be generated

from 600 horizontal wells and sprayed on a minimum of 12 square kilometres land per year. There have been reports in Texas of miss-application of spray that has required land reclamation. The guidelines in Manitoba require that any necessary reclamation, if discovered, be done by the oil companies. However, the location and extent of land spraying in Manitoba could not be determined. Produce from sprayed lands cannot be identified.

In Manitoba sour gas, recovered along with the oil, is either flared or vented directly to the atmosphere. Sour gas contains extremely toxic hydrogen sulphide that forms sulphur dioxide when burned.

Flaring and venting adds to the global greenhouse gas burden and sulphur dioxide contributes to acid rain. The Petroleum Branch of Manitoba uses computer models and has done air monitoring to verify that air quality standards for flaring are met. Regulations in Manitoba do not require reporting of the volumes of gas vented and flared, however the amount can be estimated from the gas to oil ratio (25 to one) and the percentage flared and vented. From this information, about 58 million cubic meters of gas was wastefully flared or vented in 2012; enough to heat 36 thousand Manitoba homes. By contrast, in North Dakota about 45 times as much was flared in 2012. The North Dakota flare fires are visible from space and outshine the city of Minneapolis.

We might question why the Manitoba government is trying to curtail the use of coal burning in farm operations yet allowing flaring which produces more greenhouse gas than from the coal? Our government is, in fact, encouraging fracking and flaring through royalty holidays for drilling of new horizontal wells.

Two gas plants recently built near Waskada will decrease flaring by about 40 per cent when an approved sales gas pipeline is built. The hydrogen sulphide recovered by the plants and most of the sweetened gas is currently flared producing air-borne pollutants. Deep injection of recovered hydrogen sulphide commonly used to avoid flaring pollution, entails the risk of future toxic leakage, especially in oil fields that are penetrated with thousands of wells whose cement seals could eventually degrade.

We are facing a global crisis of overproduction of greenhouse gasses from the burning of fossil fuels. Estimates show that existing reserves of hydrocarbons if used at the present rate will lead to runaway climate change. One of the worst examples of profligate burning of fossil fuels is flaring of sour gas as is being done in Manitoba. It could be argued we are only a tiny portion of a global problem but every producer of greenhouse gasses can make the same claim. If measures were taken to end flaring and to prevent potential contamination and squandering of fresh water, the price of fossil fuels might reflect their true cost and render carbon free sources such as hydro, wind and nuclear more competitive. It is up to us to insist that the rate of fossil fuel extraction and use be sustainable and to demand our government allocate the resources and enforce the regulations necessary to carry this out.



Oil derricks in Bakken Oil Field, North Dakota.

PHOTO: JIMMY EMERSON

Richard, St. Norbert Farmers' Market
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Stopping Nutrient Loading in Lake Winnipeg

An Ode to Our Waste

By Alex Paterson

I BET YOU NEVER THOUGHT ABOUT what Karl Marx might teach us about the health of Lake Winnipeg. I know I didn't. Surprisingly, Marx can point us in a direction that provides insight into reclaiming a healthy lake. He teaches us to shit where we eat.

According to John Bellamy Foster, in the mid-19th century Marx wrote about the "social metabolism" between the town and country. Marx analyzed the findings of soil scientists that a nutrient rift was developing between the places we grow our food and where our waste went. Our food production was no longer directly related to our waste disposal. It was alienated, similar to labour, because of the capitalist mode of production.

We were not returning enough nutrients into the soil and this was slowly killing the soil. It is partially in this context the use of inorganic fertilizers developed. The agricultural green revolution allowed us for a time to create synthetic products

use as fertilizer due to health concerns around contaminating the soil. If we are willing to deploy pesticides and chemical biosolids on our food, are we actually scared of a little composted poop on our corn stocks? We already let other barnyard animal manure be spread all over our crops. If we let our own excrement sit for a few years and compost, it could be safer than the biosolids currently deployed. Or do we believe more in chemicals than ecosystem services?

Human waste has been and continues to be collected as night soil in many countries, such as China. Similarly there are many people beginning to reclaim composting toilets for personal use. But



chemical free, mass compost, which can be returned to the places we grow our food.

Part of bringing Lake Winnipeg back to health is stepping away from the old cliché, "Don't shit where you eat." We actually have to do exactly that. We need to shit where we eat. Maybe it is time to let Marx help us step away from other old clichés holding us back? 🌱

“We forgot about composting, manure, and fallowing. We created expensive chemicals to replace natural processes.

to overcome the fact our way of feeding ourselves was disconnected from our desire to replenish the soil. We forgot about composting, manure, and fallowing. We created expensive chemicals to replace natural processes. We ignored ecosystem services.

Our current model of agriculture has created disconnection. Our waste is not being used properly. We are whisking it away in the sewer system and deploying huge amounts of money to run this city-wide water-park for our excrement. We're wasting clean water in a water-starved world to run this poop playground. We are deploying dangerous chemicals to treat the sewage, then selling it as fertilizer to start the harmful cycle over again. All the while Lake Winnipeg deteriorates.

Currently biosolids are spread on our fields in North America. Biosolids are processed sewage waste remaining after effluent water is released. Many European countries, such as Sweden and the Netherlands, have considered banning their

in a mass society we need mass solutions. We need a municipal human waste composting program.

So what can we do about it? Some have been advocating nifty geo-engineering projects to keep water on the land. I know it always seems like a good idea to jump in a bulldozer and move the earth to our image, but remember there are always consequences to our actions we can't foresee.

Maybe the path of least resistance is best?

I want to make a partial alternative proposal. We need to step away from agriculture based solely on turning a profit and instead focus agriculture on rebuilding the soil's health. We are intimately connected with the microorganisms in the soil and need to become better partners in managing the soil together. Therefore, we need to return to sustainable practices that minimize the loss of nutrients and close the loop between our food and our poop. Municipalities ought to collect human waste and make sanitary yet

Resources:

<http://www.eoearth.org/view/article/152758/>

<http://www.npr.org/blogs/thesalt/2013/05/07/182010827/is-it-safe-to-use-compost-made-from-treated-human-waste>

https://en.wikipedia.org/wiki/Night_soil

<http://news.nationalgeographic.com/news/2008/08/080821-human-waste.html>

<http://www.bvsde.paho.org/bvsars/i/fulltext/agricul/agricul.pdf>

"Biosolids" organic versus chemically treated:
http://www.naturalnews.com/034546_biosolids_fertilizer_human_waste.html

<http://www.nature.com/scitable/knowledge/library/soil-the-foundation-of-agriculture-84224268>

Most fertilizers are applied to feed crops:

<http://www.vaclavsmil.com/wp-content/uploads/Jeremy-Grantham-Starving-for-Facts-%E2%80%944-The-American-Magazine.pdf>

<http://www.hindawi.com/journals/aess/2012/265783/>



CounterPoint

Where Everyone Counts

by Adam Prokopanko, Green Action Centre



PHOTO: GREEN ACTION CENTRE

Testing out the new CounterPoint app at École St. Avila in Fort Richmond.

HEATHER WAS THE NEW PRINCIPAL of a Winnipeg middle school. The school year was only a few weeks old and she cringed every day seeing her students crossing the street near the school. Traffic was steady and the cars seemed to barely slow down upon seeing the school zone signs. Many drivers were oblivious to the fact that two faded white signs marked a crosswalk where they should be stopping to let the kids cross.

Heather knew that something needed to be done to make the street safer. Perhaps flashing lights for the crosswalk or speed humps for traffic calming. But when she contacted the city, the engineer at the department of public

works told her that these sorts of infrastructure improvements “are implemented where volumes warrant,” and that nothing could be done in the immediate future.

These frustrations are all too real here in Manitoba. You don’t have to be an engineer to see that there are instances of unsafe infrastructure right in your own neighbourhood. The general approach by municipalities starts with taking a baseline traffic count, to get a picture of how traffic moves in the area, and can also include other surveys. Even if your site is determined to be suitable for some infrastructure improvements like a crosswalk or curb-bump, this can take years to get built.

However, things are changing, and because of some new technology being developed by Green Action Centre’s Active and Safe Routes to School Program (ASRTS), now you don’t have to be an engineer to start doing something about it! ASRTS is working in partnership with some key funding partners (including the Heart and Stroke Foundation) in developing CounterPoint, a new tool that will empower Heather, her students, or anyone in her community to go out and gather data about the traffic around their school. Working with the tool, users can create CounterPoints, which allows them to count the traffic at a specific location at a specific time.



Screenshot of the new CounterPoint App

By empowering community stakeholders to collect this important data on their own, it can help speed things along when looking at infrastructure improvements, student drop-off planning at the school, and more.

Users can create counterpoints anywhere, or look at the map to find an existing point nearby to contribute more data. The counting screen has different categories of pedestrians, cyclists, and vehicles that can be counted. The count duration, time of day, and weather conditions are added to the counting tally and submitted online.

Schools can use CounterPoint to coordinate traffic counts by students, parents, teachers, and community members. However, the true power of CounterPoint lies in its ability to gather together crowdsourced data. If you're staring at traffic while waiting for the bus, why not put that time to good use by counting that traffic! School travel planners, traffic engineers, and other professionals will all have access to the resulting information, with the potential for gathering much more data than existing methods. This past summer, the beta version of CounterPoint was tested extensively in Winnipeg as well as in other Canadian and European cities. It's so easy to use, Grade 4 students at École St. Avila in Fort Richmond were eagerly counting traffic within minutes!

Most importantly, CounterPoint allows children, adults, and professionals to all take an active role in observing and improving the transportation infrastructure in their neighbourhood. When everyone helps count, then everyone has a stake in improving the status quo for a safer future. Check it out for yourself by going to www.counterpointapp.org on your computer, tablet, or smartphone and try it out today!



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Get your compost ready for autumn!

Some tips to make the most of the fall season

By Dave Elmore



Collecting kitchen waste to put into the compost.



Compost with a good layer of browns on top.

FALL IS A GREAT TIME to start composting!

Most people who start composting do so in the spring, but then come to the quick realization that they don't have an essential ingredient for making compost: browns! Browns are the dry materials. The easiest brown material to obtain are leaves. Sure, there are other materials that you can use like straw, sawdust or even paper, but none are as readily accessible or in the large quantities that leaves are in autumn. You have to rake them up, anyway!

Now all you need is a bit of knowledge and you can turn much of your waste into a free, rich and natural fertilizer for your home and garden.

Let's start with why you should compost. Up to 40 per cent of our waste is organic and therefore compostable. However, this same waste when compacted into a landfill produces methane, a green house gas 21 times more powerful than CO₂. Combine that with the additional emissions from transporting the waste, it is a significant contributor to climate change. Organics buried in the landfill can also produce toxic leachate which leads to ground water pollution.

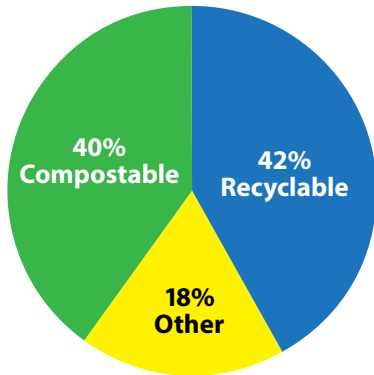
Composting on the other hand produces a nutrient rich fertilizer which improves the texture, water retention and drainage characteristics of soil. It also reduces the use of chemical fertilizers that leach into our lakes and streams. It's your pollution free alternative.

Composting requires no special equipment and you decide how much work you want to put into it. Depending on the space you have available, you may want to start by purchasing or building a compost bin. But you can also just start with a pile in your yard.

The next step is knowing what you can put into your compost. There are two types of organics, "greens and browns." We've already discussed browns, while greens are the wet materials like vegetable/fruit scraps, coffee grounds, tea bags, garden waste and grass clippings. The many organisms needed to produce your compost need both of these materials. Greens provide protein and help them reproduce while the browns provide the energy they need. You should avoid

PHOTO: DAVE ELMORE

PHOTO: DAVE ELMORE



“Save money, improve your soil for growing and reduce your impact on the environment, why wouldn't you compost?”

things like meat, fish, dairy products, pet waste, weeds (with seeds), and diseased plants/produce.

It is important to always cover your greens with about two to three times as much browns, by volume. Not only does this provide the right balance, but as browns are rich in carbon, they also provide a filter for any odours.

There are a few other things that you should consider. Your compost pile is full of living organisms and like us they need water and air to

depends on how much effort you want to put into it. It can be difficult to know exactly when your compost is fully mature, so here are a few simple things to look for. It should be dark brown and have an earthy smell. There should be no visible food matter, however there may be twigs or other hard materials that have not yet broken down. These can always be screened out as needed. If you dig down into the pile and feel that it is still generating heat, it would be best to let it sit a few more weeks.

You can use your finished compost on pretty much anything that grows, inside or out. If you are mixing into potting soil, use only about 25 per cent compost. Top dress your grass, spread it on your garden, or fertilize your plants... the potential uses are endless.

If you are asking yourself if you can keep composting in winter, the answer is absolutely!

In fact it is easier because you don't need to cover the greens with browns. They will freeze anyway and that will actually help to break down the materials.

Composting is easy and worth it! It is a win for you and a win for the environment. Since now is a great time to start, why not give it a try? If you have questions Green Action Centre is always there to help.

Green Action Centre promotes composting for all Manitobans by providing information, resources, and support. We offer education through workshops and courses, printed materials, and a toll free compost info line. (1-866-394-8880 or in Winnipeg at 925-3776)

Check events on page 3 for some DIY composting seminars this October



PHOTO: DAVE ELMORE

Compost Aerating tools.

be healthy. If they are healthy and happy, their population and activity will increase. However, if you are not concerned with how quickly you get compost, then just keep piling it up and eventually it will breakdown.

Keeping your pile about as moist as a wrung out sponge is just about right. If your pile is too wet it can lead to odour issues. Turn your compost every two to three weeks and you will have happy, healthy little workers to churn out your free fertilizer. Turning your pile sounds like a lot of work, but it doesn't have to be. Many garden centres sell compost aerating tools that work great for not only mixing, but also creating channels down into the pile so air and water can get to where they are needed.

That's all there is to it! Finished compost can take a few months or a few years to mature. It all

Nominate a Local Environmental Champion

FIRST ESTABLISHED IN 1990, the Anne Lindsey Protecting Our Earth Awards are presented by Manitoba Eco-Network annually in recognition of achievements in protecting and stewarding Manitoba's environment. The environmental community acknowledges the creativity, diligence and commitment of our peers in presenting the Youth, Individual, and Group awards.

In 2011, Anne Lindsey retired from Manitoba Eco-Network after serving for 23 years as Executive Director. In recognition of her extensive service, the Board of Directors voted to rename Manitoba Eco-Network's Protecting Our Earth Awards in her honour.

For over 20 years, Manitoba Eco-Network has provided recognition to groups and individuals for their contributions in promoting sustainability and protecting ecosystems with its annual awards. Anne, an award winner herself, provided inspiration and mentoring for many of the groups and individuals who have won the award over the years. Anne has been active on nearly every environmental issue that concerns Manitoba. She helped spearhead the campaign in the 1980s that kept nuclear waste out of this province, led initiatives on children's health, and raised awareness about toxicity in our environment. It was under her leadership that the Manitoba Eco-Network took on important causes like food, climate change, and water.

Nominations for the 2014 awards are now open! Please visit our website at mbconetwork.org/projects/earthies to nominate a Youth, Group, or Individual for the Anne Lindsey Protecting Our Earth Award. Deadline is December 2, 2013.

Working with you for a Greener Future



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GordMackintosh.ca



James Allum

MLA for Fort
Garry-Riverview
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Featured Book Review

Tar Sands Showdown:

Canada and the New Politics of Oil in an Age of Climate Change

By Tony Clarke

TONY CLARKE'S MOST RECENT BOOK, *Tar Sands Showdown: Canada and the New Politics of Oil in an Age of Climate Change*, makes no secret of its anti-tar sands bias.

Clarke's history of Canada over the past quarter-century consists of successive governments falling over themselves to sell the country's resources to the United States. He does not attempt to argue that the Connecticut-born explorer Peter Pond's pioneering visit to the tar sands, in what is now northeastern Alberta, in 1778 served as the beginning of their recent importance to the United States. Rather, that dubious honour belongs to Sun Oil founder J. Howard Pew of Pennsylvania. From his opening of the "world's first oil mine" at the Great Canadian Oil Sands in 1967, to his influence on US president Ronald Reagan in his crusade to make Canadian prime minister Pierre Trudeau drop his National Energy Program in 1981, Pew works as the prototypical 20th-century villain in this book.

This sordid history may have ended there if George W. Bush and Dick Cheney didn't serve as more unsavoury villains and easier-still punching bags. American exploitation of Canadian resources would be abhorrent enough if the total environmental cost of turning tar into oil did not damage the environment to a far greater overall degree than refining conventional petroleum. With the second Iraq War, America's goal of oil dominance would seem to have been fulfilled—except that Iraq became politically unstable after the invasion, requiring America to look elsewhere for its massive energy needs. Canada, its northern neighbour, now looked to be a convenient source of fuel—and the 2006 election of Alberta resident (and avid Kyoto Protocol opponent) Stephen Harper to Ottawa was highly beneficial.

In an era of rampant global warming, burning further oil is among the last actions humans should be taking. But, according to a Pembina Institute study cited by Clarke, the Alberta tar sands emit nearly 199 per cent more CO₂ per barrel than conventional oil. Moreover, one barrel of Alberta bitumen takes between 21 and 42 cubic metres of natural gas—a significantly less nasty hydrocarbon—to refine into a synthetic crude light enough to transport.

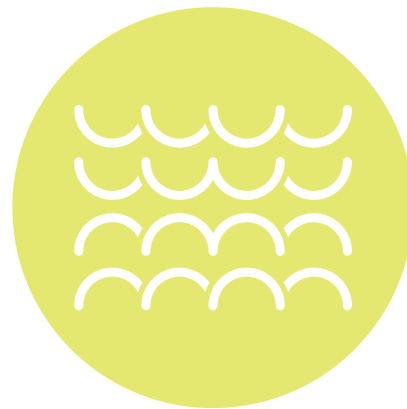
Fort McMurray, Alberta, where the action is concentrated, has become the Wild Rose province's third-largest city in 2008, breaking the 80,000-person barrier, albeit one that could at the time of writing only manage a population one-eighth that size. Wages, he notes, are inadequate for anyone not working in the oil patch, while crime rates in McMurray are alarming: "Assaults in Fort McMurray are reportedly 89 per cent higher than in the rest of Alberta. Arrests for drug-related offences are 215 per cent higher, and arrests for impaired driving 117 per cent higher than those recorded elsewhere in the province."

The story remains true for nearly all of Alberta: the province's wealthiest residents have received a disproportionately high share of the boom's benefits. Among them, naturally, are the oil executives whose companies have reliably received sweetheart tax breaks from the Alberta and Canadian governments since the early 1990s.

There is, however, hope to truly stop the tar sands, he writes. Indigenous peoples, public interest, community, consumers' advocacy, legal, political, faith-based, financial and working-class organizations have all had a hand in attacking them as engines of doom. Since its publication, the mass arrests of protesters against the notorious Keystone XL pipeline have made headlines.

The question is whether we can actually stop global warming and the tar sands overall. 🌱


—Reviewed by Michael Bagamery



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