



LAND ADVOCATE

News for Canadians living with oil and gas production

Commentary: Water Takings

Anyone who has read the latest recommendations of a government appointed committee looking at the consequences of flushing freshwater down oil wells, would never know that aridity is a growing fact of life in Alberta. Or that groundwater is a precious resource more valuable than oil.

In fact the preliminary report of the Advisory Committee on Water Use Practice and Policy is one of the most offensive documents to cross my desk in a long time. Even though the subject is industry's abuse of freshwater, the 24-page document can't even call fresh water by its real name. In Alberta freshwater is now, you guessed it, "non-saline water."

Although rural Albertans have loudly protested the use of water from our rivers and aquifers to flush out more oil from aging wells (eight mayors alone in central Alberta stand opposed to the practice), the report largely ignores their concerns as well as widespread evidence of groundwater depletion throughout central Alberta. The Committee concluded (and to be fair nearly half of its members violently disagreed with this finding) that the government was doling out water wisely. Industry, in turn, was doing a great job and, hey, let's continue flushing freshwater down oil wells.

This conclusion not only denies the grim water realities of drought but the chronic over-allocation of water. And it betrays the province's fundamental responsibility to conserve and protect freshwater resources.

The numbers tell a damning story. Industry says it is only using a small amount of water or 276 million cubic metres a year to produce more oil. Of this total approximately 37.1 million is being drawn from the province's lifeblood, freshwater. More than 70% of that water is being sucked from rivers and lakes. The rest comes from ever decreasing groundwater sources located in mostly in bone dry central Alberta where groundwater depletion has forced five municipalities to build a \$60-million pipeline to

the Red Deer River.

Industry argues that the 37.1 million cubic metres is just a drop in the bucket. Compared to the hefty volume of water used by irrigators, that's true. But consider this math: 37 million cubic metres is equal to 37 billion litres of water.

Now let's bottle this 37 billion litres because many people have trouble visualizing water unless it comes in a shiny plastic bottles. Every year consumers drink approximately 89 billion litres of bottled water all over the globe. This means that Alberta now flushes enough fresh water down its aging oil wells to quench the thirst of nearly half the world's bottled water market. That's a big drop and rural Albertans have watched this faucet leak for a long time.

What riles most Albertans who understand fundamentals of water flow is that this water is lost forever. Water used for enhanced oil recovery is like water consumed or diverted out of a basin. It will be never seen again.

Shockingly the Committee concluded that such conspicuous consumption in a drying landscape was acceptable because enhanced oil generated nearly half a billion dollars in royalties in 2001.

continued on page two

What's Inside

Water Takings.....	.....
A Reprieve for the Hills.....	.....
Ten Steps to Responsible Development.....	.....
Boreal News.....	.....
BC's CBM Battle.....	.....
Water Currents: A Groundwater Primer.....	.....
EnCana Watch.....	.....
CBM Update:.....	.....
Board Watch.....	.....
A Pipeline Leak.....	.....
Closing the Gate.....	.....

Our Board:

Don Bester: Butte Action Committee
Gwen Johansson: Hudson's Hope Landowners
Perry Nelson: Alberta Surface Rights Federation
David Schindler: University of Alberta

But the Committee's pathetically bankrupt reasoning simply doesn't add up on any ledger. Bottled water sells for about a dollar a litre. Using that price tag Alberta is spending \$37 billion dollars to collect a mere half a billion. Such calculations are agreeably outrageous. But with the exception of some members of this Committee I've never met an Albertan who thought oil was worth more than water.

The Alberta report cited no real science and said nothing about the dismal state of groundwater policy in the West [See Water Currents p.6]. A recent Ontario report didn't make that mistake. It proposes that water takers, like the oil patch, should have to notify landowners, municipalities and conservation authorities about water takings. It recommends fair public hearings and rigorous water budgets on watersheds to gauge the impact of such takings. It also proposes to charge water users like the oil patch or bottled water industry who permanently remove water out of a watershed for commercial purposes. In fact both British Columbia and the United Kingdom now charge nonessential water users an application fee as well as a volume fee for the simple reason that it discourages waste.

The Ontario report also boldly states what the Alberta report hasn't the courage to utter: that "consumptive uses or losses cause concern when they interfere with the interests of other users sharing the resource or threaten ecological functions that underlie the health of aquatic ecosystems."

So what conclusions would an honest report on water takings have reached? Well, they're pretty simple. Water is a scarce resource and essential to the common wealth. The province is getting drier by the day. Alberta has no reliable groundwater inventory even though groundwater is one of our most precious and irreplaceable resources. There can be no compromise on the destruction of anything that cannot be replaced. The use of freshwater for enhanced oil recovery is folly and must stop. **Andrew Nikiforuk, Editor**

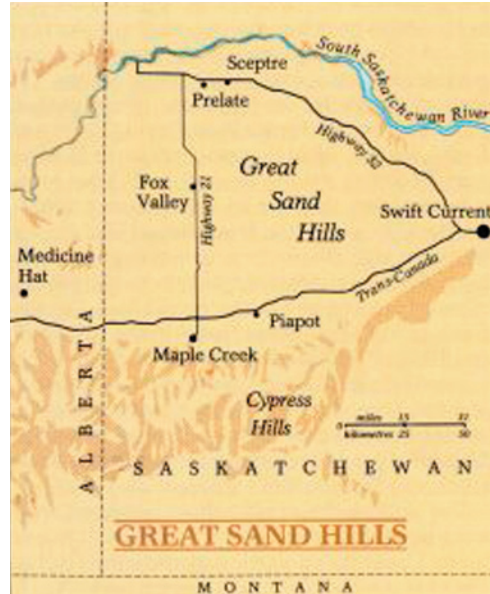
"I think there hasn't been enough scientific work done." Energy Minister Murray Smith isn't convinced that water used to recover oil through deep well injection is lost to the hydrological cycle.

"Shortly, there will be a huge natural gas explosion, but it won't be pipelines or gas wells that blow. The explosion will come from the average Westerner, who is tired of being used by the oil and gas industry, with the help of state and federal officials". **Tweeti Blancett, rancher and self proclaimed Republican in Aztec, New Mexico**

Saskatchewan: Study Ordered for Great Sand Hills

The government of Saskatchewan has given the Great Sand Hills a brief reprieve from industrial assault by the gas industry. Last month the government announced that no more mineral rights will be sold in the Hills until a \$4-million environmental impact study has been completed. Existing leases, however, will continue to be drilled.

The government also quadrupled the area off limits to gas exploration and development to 365 square kilometers.



The announcements followed years of controversial maneuverings by companies such as Anadarko and one rural district to open up the Hills to unfettered development. These ongoing controversies eventually lead to the publication of a Great Sand Hills Land Use Strategy Review last month. It recommended more land protection, an environmental study as well as action on "the perceived inability of government to respond convincingly to environmental situations."

The Great Sand Hills cover a 1,900 square kilometer area in southwestern Saskatchewan where 10,000 year-old sand dunes and native grasses have created a uniquely fragile heritage on the prairies. Like fescue grasslands in Alberta, the Great Sand Hills represent some of the last surviving native range land in North America.

To the Blackfoot the Hills remain a sacred place where their dead travel to find peace. And to the descendants of the Nebraska ranchers the Hills offer good grazing on native grasses. But to oil and gas companies it's just another place to drill for a dwindling resource.

In addition to all kinds of rare plants and animals the Hills protect substantial groundwater resources (remarkably shallow aquifers) in a drought-prone part of Saskatchewan. As a consequence the

report also recommended a thorough study of groundwater resources.

Some Key Excerpts:

Impacts: Issues regarding ecosystem fragmentation, invasive species, loss and disturbance of rare and threatened species, erosion, groundwater and soil contamination, fires, climate change, and drought have not lessened, nor are they likely to lesson over time.

Management: The gas industry...has not been subject to formal penalties when problems have arisen.

Ranching: Many local residents appreciate a unique sense of solitude and beauty within the Sand Hills that is not experienced elsewhere. However there is subjective interpretation as to whether other users such as the gas industry can coexist successfully within this context.... **Some ranchers find that they are not fairly or adequately compensated for the disturbance that the gas industry creates.** The Review committee heard that compensation couldn't be met solely or sufficiently with a dollar figure in every instance. For example, you can't put a dollar figure on aesthetic value.

Industry: Provincial agencies lack effective enforcement tools to deal with situations where land users undertake development activity in a manner that causes unnecessary or unacceptable levels of environmental damage... Provincial agencies recognize that the enforcement possibilities and the consequences for a developer who breaches commitments are unclear or insubstantial....It is estimated that 60% of the families in one Rural Municipality derive their main source of income from gas industry development in the area. **Alternatively, this same municipality has experienced a 41% increase in their budget for road maintenance due to the increased traffic both in their municipality and enroute to development sites in nearby municipalities.**

Source: The Great Sand Hills Land Use Strategy Review: Report and Recommendations, June, 2004. Go to: <http://www.se.gov.sk.ca/ecosystem/> and click on **Land Use Planning** and then click on **Great Sand Hills**

British Columbia: 10 Steps to Responsible Development

To pay its bills the BC government is frantically pushing oil and gas development (including coal bed methane (CBM)) throughout the province. In the process the government has axed regulations and allowed largely Alberta companies to control the pace of development as well as capture most of the benefits. This approach doesn't give people in the Peace Region, or Fernie much say about their future. A coalition of groups including the West Coast Environmental Law Association has come up with a better plan with 10 essential recommendations. Although the government has ignored the document, many oil and gas contractors in the Peace region support the plan.



- 1.) Properly define energy security and implement an Energy Plan: "If energy security is to be achieved, BC must situate planning for scarce fossil fuel resources within the context of North American demand over the long-term."
- 2.) Create Jobs from BC resources: "**The potential jobs in energy efficiency and renewable energy industries surpass those available by using oil and gas for energy.**"
- 3.) End subsidies and royalty breaks to industry and direct 25% to a new BC "heritage" fund to support a transition to renewable energies: "Norway's State Petroleum Fund stands at over \$100-billion."
- 4.) Level the playing field for landowners and locals: "**In BC, citizens have almost no rights to oppose oil and gas developments that may endanger their health or livelihoods.**"
- 5.) Address health impacts: "BC allows sour gas

wells to be drilled as near as a 100 metres from a home, and there are increasing anecdotal reports of locals complaining of adverse health impacts due to sour gas exposure.”

6.) Recognize Aboriginal title and rights: “Most of BC’s lands and waters have never been ceded by First Nations.”

7.) Restore monitoring and enforcement capacity: “As a result of the 2003 compliance review, the government issued 49 tickets, with penalties ranging from \$230 to \$575--little more than the cost of a speeding ticket.”

8.) Suspend coal bed methane development. **“The impacts of removing large quantities of groundwater are not well understood.”**

9.) Protect BC’s parks and wildlife: “Each linear mile of road disrupts a minimum of about four adjacent acres of habitat.”

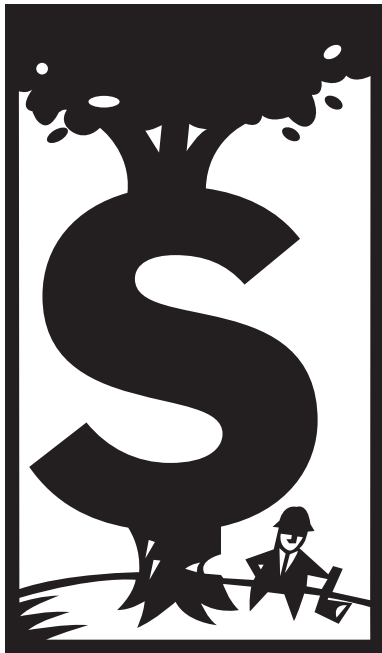
10.) Implement cumulative impact management: “The rate of cut for forestry set by the government is too high because of oil and gas activities.”

For copies of the report visit www.wcel.org

Boreal News

Trends in Seismic Exploration

By Richard Schneider



Last September I was invited to speak at the annual meeting of the Canadian Association of Geophysical Contractors – the seismic operators. I told the group that forest clearing by the petroleum industry in northern Alberta was approaching the annual area harvested by the forest

industry and that seismic exploration was by far the leading contributor to this clearing.

In contrast to forestry cut blocks, seismic lines persist on the landscape for several decades leading to a steadily increasing ecological footprint. This is because seismic lines are seeded to grass

after use, delaying succession, and because the lines are often used as travel corridors for off-road vehicles and snowmobiles. Finally, I related how cumulative forest fragmentation, increased human access, and invasion by nonnative species along seismic lines is harming the health of our forests and causing a decline in sensitive wildlife species, such as woodland caribou.

When I was done, the assembled group “took me out behind the woodshed”, so to speak. That’s all old news, I was told. We’re doing “low-impact” seismic now and the width of seismic lines has decreased dramatically in recent years. This is a good news story!

So what is really going on out there?

Remarkably, it is almost impossible to find out.

Even though tens of thousands of kilometers of new lines are cut through our forests each year, there is no database or summary of annual seismic activity accessible to the public. In fact, it seems that provincial historical records may not even be maintained. In response to my written request for trend data over the last decade (to confirm what I heard at the meeting), government and industry sources could only supply me with data for the last fiscal year (and it took five months to get that). For 02/03 a total of 78,900 km of seismic lines were approved in forested regions of Alberta, of which 42,500 km were new lines and 36,400 km were old lines that were reused.

Fortunately, a 2003 Master’s thesis by Arin MacFarlane at the University of Alberta sheds light on recent trends in seismic activity. Arin conducted her study in northeastern Alberta, making use of a detailed database of seismic activity maintained by Alberta-Pacific Forest Products (Al-Pac) for their 59,000 km² management area. Arin’s thesis shows that the width of seismic lines has indeed been decreasing over the past decade, substantiating the petroleum industry’s claim of a current average width of 2.9m. However, Arin’s thesis also shows that the total area cleared through seismic exploration has remained relatively unchanged. Total area has not declined because the number of lines has been increasing, effectively offsetting the benefit of narrower lines.

In conclusion, it appears that an important downward trend in the width of seismic lines is underway; however, there remain several causes for concern. First, progress is not uniform across the province. Changes to operating practices appear to be primarily motivated by financial incentives provided by forestry companies (e.g., Al-Pac) or high levels of public scrutiny (e.g., Eastern Slopes) and not ecological concerns. In particular, it remains standard practice to re-clear old seismic lines to a full 6-8m when they are reused for new programs (accounting for 45% of all activity in

02/03). A second concern is that the overall area disturbed through seismic exploration, the ultimate measure of interest, does not appear to be declining. Finally, no systematic efforts are yet underway to reforest the massive existing seismic footprint.

The obvious solution to these concerns is for the government to implement a cap on permissible cumulative seismic disturbance. Such a cap would provide the incentive that companies need to minimize the number of new lines they cut, to cut each line as narrow as possible (even if on an existing route), and to ensure that lines are reforested after use (including legacy lines). The Annual Allowable Cut limit that regulates the forest industry provides a precedent for this form of regulation and we have many examples demonstrating that new minimal impact approaches are practical to implement. All that is required is the political will to stand up to the petroleum industry and do what is right for our forests.

(Richard Schneider is Director of the Canadian Parks and Wilderness Society in Edmonton)

BC's CBM Battle: The Montana Challenge By Andrew Nikiforuk

Plans by the British Columbia government to open two large blocks of land for industrial coal bed methane (CBM) between Fernie and Montana has created a storm of controversy in the region as well as heightened border tensions.

The governor of Montana, Judy Martz, has even petitioned the federal government of Canada for a proper environmental assessment of the proposal.

Premier Gordon Campbell, a strong advocate of CBM developments, has steadfastly refused to do a proper study, saying the companies will do one on their own.

But Martz says that's just not good enough.

In July 26th letter to the federal environmental and foreign affairs ministers in Ottawa Martz politely chastised Campbell's provincial government: **"Our concern is that ground-disturbing activities and wastewater discharge is likely to commence before an environmental baseline is established and before a comprehensive assessment is completed.**

Further, we believe that in the event that different companies win the tenures on the different parcels offered for sale now and in the future, the opportunity for a comprehensive assessment would be lost. Further, the vesting of private property rights in these currently public resources will unnecessarily complicate any future assessment.

Now is the time to evaluate the various development alternatives in the East Kootenay coal fields."

Both the citizens of Fernie and the people of

Montana fear that CBM developments in the region could industrialize the landscape and seriously pollute the headwaters of the Flathead River with waste water discharge and endanger Glacier National Park, a World Heritage Site designated by UNESCO.

The park is already under assault by warming temperatures created by greenhouse gases such as methane. In fact scientists with the US Geological Service predict that parks remaining glaciers could disappear by 2030. Just one hundred years ago the park had 150 glaciers.

As noted by Ted Ralfe of Citizens Concerned About Coalbed Methane, existing CBM projects north of Fernie "involve extensive landscape denuding for wells, treatment plants, and roads, lengthy flaring of methane gas into the atmosphere, and the extraction of coal bed water contaminated with dissolved zinc, iron naphthalene, sulphate and bicarbonate." In addition even treated water from CBM projects still stains stream bed rocks a bright orange.

Last March an internal report for the BC government flatly admitted that the provincial government lacked good baseline data on water quality and flows in many feeder streams. Two years ago the Council of Environment Ministers strongly recommended that provincial governments conduct thorough groundwater and surface surveys before approving any CBM developments.

The internal BC report documented a "potentially critical information gap" on local stream flows and advised that "baseline water-quality monitoring will very likely be needed for at least three years before CBG (coal bed gas---a government euphemism for CBM) development."

When the BC government ignored this advice and refused to withdraw its plans to auction off the land on August 25th, Gov. Martz promptly took her case to Ottawa where it now rests. Under Canadian law the federal government could convene a joint US-Canadian panel to do a study. The dispute may also be heard by the International Joint Commission, a water watch dog for the two countries.

Unlike British Columbia, Montana has done extensive environmental studies on CBM that are extremely detailed. A Final Environmental Impact Statement on CBM proposals in Montana concluded that approximately 20,000 wells would disturb 70,000 acres of largely native grasses with pads, roads and pipelines.

It noted that loud compressor stations would affect local air quality. It concluded that CBM development could drawdown groundwater by more than 20 feet and up to more than five kilometres away. "In such cases either agriculture that depends on groundwater or CBM development would need to be limited." All in all CBM development "would likely conflict with the attitudes, beliefs, lifestyles and values of many individuals and population subgroups."

Neither British Columbia nor Alberta have

conducted such detailed or honest assessments.

“Following our own experience, our neighbors in Montana, are now discovering the casual attitude of the Campbell government with respect to science and fact,” said Ralfe, a spokesperson for the Fernie’s Citizens Concerned About Coalbed Methane.

“British Columbia shows no more regard for the reasonable concerns of its American neighbors than it has for those of its own citizens.”

-30-

Contacts: Ted Ralfe: Citizens Concerned About Coalbed Methane, Fernie, British Columbia: 250-423-6844 or tedlaw@elkvalley.net

Steve Thompson: National Parks Conservation Association, Whitefish, Montana
406-862-6722 or sthompson@npca.org

WATER CURRENTS

The ABC’s of Groundwater



A: Groundwater Primer

- Groundwater provides drinking water for 8-million Canadians including 600,000 Albertans.

- Canada has no reliable groundwater inventory and lags behind the United States and Europe in groundwater science and protection.

- **According to John Cherry, professor and NWERC Chair in Contaminant Hydrogeology, polluting groundwater beneath private property is not strictly illegal and therefore there are no strong incentives to avoid such contamination.**

- Laws and regulations for groundwater protection are often weak and or unenforced.

- **One litre of gasoline can contaminate 1,000,000 litres of groundwater. It can take anywhere between two weeks to 10,000 years to flush out contamination in groundwater.**

- The federal government has never done a national assessment of naturally occurring groundwater contaminants or a comprehensive assessment of how human activities are affecting levels of naturally occurring substances.

- Small surveys of rural well quality have found that bacteria exists in 10 to 40% of all rural wells. The percentage of wells with nitrate above acceptable guidelines was 10% of 240 wells in BC; 6% of

813 wells in Alberta and 17% of 1,484 wells in Saskatchewan.

- Inadequate monitoring of wells likely results in more Canadians suffering adverse health effects due to contaminated groundwater than due to contaminated surface water.

- **The number of aquifers that supply Canada’s drinking water greatly exceeds the number of rivers and lakes providing drinking water.**

B: How the Oil Patch Threatens Groundwater Or What the Land Man Forgot to Tell You

In 2002 the Canadian Council of Ministers of the Environment (CCME) sponsored a workshop on groundwater: **Linking Water Science to Policy: Groundwater Quality**. Here are key excerpts or important information rarely reported in the Alberta media:

Contaminants produced in the petroleum industry that pose a threat to groundwater quality fall in four categories:

- 1.) Hydrocarbon releases from drillings, spills, pipe breaks, leaking storage tanks, flare-pits, and blowouts;
- 2.) Saline formation-water releases from sump-pits, spills and leaking pipelines;
- 3.) Metal releases through formation water and flare pits; and
- 4.) Naturally occurring radioactive materials which are present in petroleum at low concentrations but can become concentrated in pipe scale.

“The greatest threat to groundwater quality from the petroleum industry stems from the legacy of a century of (1) exploration, development, and refining (improperly abandoned exploration bore holes; drilling sumps; flare-pits; spills), (2) less stringent environmental standards of past times, and (3) aging field facilities (production and disposal well seals, plugs, and casing; pumps; pipelines; storage tanks). All can act as local sources of groundwater contamination today.”

“Abandoned oil and gas wells and exploration bore holes may act as a pathway for contaminant migration from depth to aquifers near surface. Although bore hole wells are, as a contaminant source, individually very small, the number of abandoned wells and bore holes in producing regions across Canada is immense. It is estimated that there are over 600,000 abandoned oil and gas wells in Alberta alone. When abandoned, these wells are sealed with a concrete plug near the base of the casing to prevent upward migration of contaminant fluids. In addition, the wells are

constructed of steel casing that prevents formation fluids from moving into the well. If the concrete seal and the steel casing remains intact, there will be little possibility of contamination of shallow aquifers. However, although these wells were properly abandoned under existing regulations and with the current technical expertise, there is concern about the long-term viability of concrete seals with in casing and integrity of steel casing to corrosion, especially because many abandoned wells are over 50 years old.”

“Oil and gas production typically produces brine (several times more salty than sea water) that must be disposed through disposal wells....A more common source of shallow groundwater contamination is through accidental spills. The most common source of brine contamination is through leaking pipelines. Accidental hydrocarbon releases can occur from spills during transportation, pie breaks, leaking storage tanks, flare-pits, and blowouts. These spills are very localized and at surface.”

“Oil sands developments in northeast Alberta are growing rapidly. Currently 25% of Canada’s oil is obtained from oil sands and by 2005 this proportion will grow to 50%. Bitumen-mining operations create large pits and tailings ponds that have an impact on local and regional groundwater quality. In-situ thermal -recovery operations might mobilize naturally-occurring groundwater contaminants, like arsenic. A good baseline investigation of natural groundwater geochemical quality and variability is essential. The in-situ operations also produce brine waste.”

C: What We Don’t Know About Groundwater Contamination

- 1.) We do not know the long-term integrity of pipelines, exploration bore hole seals, and abandoned well cement plugs and steel casing
- 2.) We do not know the impact or scale of groundwater contamination should wells in an old field start failing.
- 3.) We do not know if current techniques for dealing with spills or brines are reasonable or if costly remediation techniques should be used.
- 4.) **We do not know the impacts of coal-bed methane (CBM) because we have not done baseline hydrogeological investigations to be able to recognize and track groundwater contaminants.**
- 5.) We do not know if thermal projects, such as the steam injection for enhanced recovery of heavy oil, are mobilizing natural contaminants in groundwater and fracturing and, hence, comprising the integrity of overlying confining layers. (Will the streams of northeast Alberta become affected by deep-well disposal of oil-sand wastewater?)

D: What the Provincial Environmental Ministers Concluded

“The threat to groundwater quality from all aspects of past activities (from exploration, through filed production, storage, transportation, and refining/ petrochemical production) represents a major challenge to governments and industry. For example, recognition that little is known about the long-term integrity of concrete seals and steel casing in the hundreds of thousands of abandoned wells across Canada is required. Given that oil and gas production cover very large areas, groundwater contamination may occur at a watershed or regional scale. The associated costs of ensuring abandoned wells are secure or remediating contaminated aquifers are immense. There is need for ongoing government-supported surveys of baseline conditions, and ongoing supported monitoring of groundwater chemical quality. Reliance on natural attenuation or current technologies for remediating contaminated sites may not be effective in all Canadian environments. Therefore, research or industrial development funds should be targeted to assessing groundwater remediation concepts and technologies in field conditions relevant to Canadian needs. **Approval of non-conventional energy developments and development in frontier areas without adequate baseline groundwater knowledge may have unintended future consequences, affecting groundwater quality on a regional scale.**”

Source: **Linking Water Science to Policy: Groundwater Quality: A CCME Sponsored Workshop, March, 2002:** www.ccme.ca/assets/pdf/2002_grndwtrqlty_wkshp_e.pdf

Protecting Groundwater

Two years ago University of Arizona Professor Robert Glennon wrote a great book on the effects of groundwater pumping called **Water Follies**. He notes that the United States cannot sustain current levels of groundwater use let alone projected increases. Over drawing has changed the structural integrity of soil, emptied lakes, reversed water drainage in some basins, dried up wetlands and drawn salt water into freshwater wells. Here’s what he recommends to protect groundwater (with a few Canadian adaptations):

- 1.) **Provinces should carefully craft conservation standards. They should be easy to administer and implement and have the greatest likelihood of success.**
- 2.) **Provincial legislatures should establish minimum stream flows and protect those flows from pumping hydrologically connected groundwater. The state of Washington is a leader in this area and has established minimum levels to protect fish, game, recreational and aesthetic**

resources.

3.) The provinces must pull the plug on unregulated groundwater pumping. Individuals should have no right to drill new wells that contribute to the tragedy of the commons and that shunt externalities off to their neighbors or society. Provinces should ban absolutely the drilling of new wells within prescribed distances from any watercourse or wetland.

4.) Provinces should impose an extraction tax on water pumped from any well within a certain distance of any river, spring or lake.

How To Get Local Groundwater Reports

The Prairie Farm Rehabilitation Administration (PFRA) is currently preparing a series of groundwater studies: PFRA Groundwater Assessment Reports: According to the PFRA these new groundwater studies provide an overview of the groundwater resources and characteristics in individual municipalities. Shallow and deep aquifers are identified and potential yield and water quality are characterized. Additional technical details, such as poster-size maps and drawings, are available from files available on CD-ROM.

Why is PFRA supporting these studies?

Because groundwater in Alberta is a very important resource, it needs to be protected and conserved. The regional groundwater assessments provide updated information that helps users determine the status of the groundwater resource in an area and what steps should be taken to best manage the resource. They also can be found at: http://www.agr.gc.ca/pfra/water/groundw_e.htm

CDROMs of the regional groundwater assessments can be purchased for \$20 from Information Sales at the Alberta Geological Survey.

The contact at Information Sales is:

Sarah Boisvert

Phone: (780) 422-3767

E-mail: sarah.boisvert@gov.ab.ca

“How can any nation or region justify the destruction of a local productive capacity for the sake of foreign trade? And how can people who have demonstrated their inability to run national economies without inflation, usury, unemployment, and ecological devastation now claim that they can do a better job in running a global economy?
Wendell Berry

ENCANA WATCH



1.) EnCana, Canada's largest gas producer, is spending a billion dollars on developing gas wells in BC. But northeastern BC doesn't always see a lot of that money. It goes either to Alberta contractors or to into provincial coffers.

But a recent story by Ben Parfitt (TheTye.ca) documents growing resistance to the plunder of the region by Alberta-based companies. The tiny town of Kelly, BC's only Metis community, has gone to court to challenge EnCana's drilling plans in a bid to gain control of how local energy riches are harvested and managed. The suit, filed before the Supreme Court of BC, seeks to quash EnCana's mineral rights and return them to the Metis.

Road, seismic lines and pipelines now crisscross the area. "They've drilled quite a bit around our area," says Lyle Letendre, president of the Kelly Lake Metis Settlement Society. **"We were never consulted. Nothing. I don't know how much harder I can stress that there's a problem."** EnCana couldn't find anyone to comment on the suit.

For more details read the full story in TheTye.ca

2.) EnCana is also having some trouble with the locals in Colorado. A land man recently accused EnCana of taking advantage of people when it negotiated a surface agreement on parkland owned by the city of Southland. According to the land man the agreement didn't provide enough protection against environmental damage or future drilling. "What's going on out there is outrageous," said the land man. "They're able to get away with it because, one, it's legal, and two, people out there are very naive about what they're signing and the possible future consequences of what they're signing. If they had any idea, they wouldn't be signing it." The South Canyon contract was so unfair that the land man quit working for the company negotiating the contracts for EnCana and returned to Kansas where he took a 50% decrease in pay.

The land man's concerns were echoed by local landowners. Many said that EnCana negotiators offered barebone contracts. "My belief is that EnCana's modus operandi is to end up at somebody's house, hand them a lease and expect them to sign it," said Peggy Utesch, secretary for the Grand Valley Citizens Alliance, a group pushing for better controls on gas companies.

Other citizens have criticized EnCana for leaving well pads littered with garbage, equipment and concrete structures.

A spokesman for EnCana denied it is treating landowners unfairly. This story appeared in the Aspen Daily News (May 26, 2004).

3.) Improper drilling in Garfield County, Colorado may have resulted in substantial gas seepages that are terrifying local landowners and polluting a local creek with benzene, toluene and ethyl benzene. The Colorado Oil and Gas Conservation Commission (COGC) says some wells were apparently not properly cemented. Gas then leaked to the surface through faults and the local creek where millions of bubbles made the water look like a freshly poured can of soda.

According to Doug Dennison, Oil and Gas Auditor for Garfield County, citizens raised the following concerns at the June 21st meeting of the Garfield County Board of County Commissioners. Many called for an independent review of all the environmental and geological data related to the gas seep. Dennison also reported that citizens told him that "that they've got deformed animals, animals that are dying, and people don't know what to believe. In all honesty they don't believe anything that EnCana puts together which largely isn't fair but that's just a fact of life."

4.) The Colorado Oil and Gas Conservation Commission will hold a public hearing on EnCana's alleged violations on August 16th in Glenwood, Colorado. The company faces a maximum fine of \$420,000 for the gas seepage. Stay tuned.

America Without Farmers?



By Deborah E. Popper and Frank J. Popper, Prairie Writers Circle

Posted on April 16, 2004, Printed on July 2, 2004
<http://www.alternet.org/story/18428/>

Those who labor in the earth are the chosen people of God,

if ever he had a chosen people, whose breasts he has made his peculiar deposit for substantial and genuine virtue. -- Thomas Jefferson, "Notes on the State of Virginia"

In 1801, when Jefferson became president, 95 percent of Americans essentially made their full-

time living from agriculture. By the turn of the 20th century, it was 45 percent, and by the turn of the 21st less than 2 percent.

In 1993, the Census Bureau stopped counting the number of Americans who live on farms.

"Farm residence," it reported, "is no longer a reliable indication of whether or not someone is involved in farming. ... The cost of collecting and publishing statistics on farm residents and farmers in separate reports could no longer be justified."

Over the past two centuries, the nation became urban, then suburban, and now increasingly exurban. Farmers, especially those who are small-scale, full-time and living on their farms, have become politically and culturally distant to most Americans. We still have agriculture, but it is mostly large-scale agribusiness. There is little Jeffersonian farming, almost no "labor in the earth."

The desertion of the small family farm constitutes the largest population movement in American history. The small-farmer diaspora, here and abroad, partly or wholly underlies other storied American population shifts: the development of cities and suburbs, the settlement of the West, the late 19th and early 20th century European immigrations to the United States, the post-1965 Latin American and Asian ones, the black migration from the rural South to the Northern ghetto, the rise of the Sunbelt, and even the growth of military bases around the country.

The family farm is one of the last homes of old-school American ethnicity and beliefs. In 1993 the Census Bureau found, for example, that farm residents were almost all white, half lived in the Midwest, and their households were 25 percent less likely than nonfarm ones to be headed by a single woman. These differences from the rest of the nation have intensified over the past decade.

Many family farmers encourage their offspring to leave that life, and these perhaps unusually deferential children listen. Why they should move on is obvious. The United States is a nation whose metropolitan areas, despite all their evident problems, can offer better pay and more opportunity than most of its countryside. This imbalance has existed for the nation's entire life. But it was nowhere near as large or visible in, say, 1960; much less 1880 or earlier pioneer periods.

American small farmers are victims of the same impersonal national and international economics that wipe out small banks, railroads, airlines, newspapers and stores here and elsewhere. Farmers, like the others, have responded to continued pressures for large-scale, homogenized production -- in farming's case, high per-acre output. Having only this aim, their success brings

about the demise of most of them and their communities. American small farmers now appear to be at the far end of a vast economic shift that gives every promise of eliminating them.

A momentous transition looms. Although the United States and other First World nations have been heading toward it since at least the late 18th century, no nation of even modest size has ever explicitly chosen to navigate it. No one knows the full implications of a farmerless America -- or a farmerless France or Japan.

Are there really the links Jefferson suggests between farming and virtue? Does a domestic population working the soil ensure a nation's social and physical health? What are the international and security consequences of the near-total disappearance of the farmer? What happens when the world's most powerful country no longer has those who work their own land?

These are at least nation-scale questions, ones whose answers turn the hinges of history. They obsess many farmers, their political representatives and their intellectual interpreters in this country and abroad. The suburban-exurban America hardly notices. In its Information Age world, the farmer has mostly been gone for generations.

Deborah and Frank Popper are authors of 'The Great Plains: From Dust to Dust' and 'The Buffalo Commons: Metaphor as Method.' Deborah Popper teaches at the College of Staten Island-City University of New York. Frank Popper teaches at Rutgers University. Both are members of the Land Institute's Prairie Writers Circle, Salina, Kan.

© 2004 Independent Media Institute. All rights reserved.

View this story online at: <http://www.alternet.org/story/18428/>

CBM UPDATE



Alberta's Coal Bed Methane Consultation by Alan Gardner

Alberta is running out of conventional natural gas. Within the next decade the level of reserves and production, along with the concurrent revenue to government, will be

dropping rapidly. With governments hungry for more revenue they see the potential for the extraction of methane gas from coal seams as a way of maintaining economic activity and their revenue

stream. The potential reserves of Coal Bed Methane (CBM) is estimated to exceed the total amount of gas so far produced in Alberta. Nevertheless CBM development comes with some serious negative effects.

These negative effects flow mainly from the intensity of development resulting in cumulative impacts on the surface far in excess of that required for normal natural gas development. The cumulative impacts of CBM development can include:

- Many more wells per section than conventional gas recovery with potentially up to 16 wells per section and a 200 metre minimum spacing.
- More infrastructure including access roads, pipelines and additional gas compressors (possibly a compressor for every 2-4 wells). Compression is needed because the gas from the coal seams is usually at low pressure.
- Venting and flaring of the methane during development and testing as the quantities are generally too low for economic capture.
- Potential negative effect on water wells and underground aquifers if the coal bed needs to be dewatered.

The looming negative effects on productive surface uses, such as agriculture, and a rising level of protest by the public, partially due to bad experiences in the United States, has led the Alberta Government to commence a series of public consultations to review the current regulatory framework for petroleum and natural gas (PNG) and determine if changes are required specific to CBM development. A Multi-Stakeholder Advisory Committee was formed and under that several working groups tasked with identifying the relevant issues and making draft recommendations. They have been meeting since March of this year. The Surface and Air working group, the Water working group, the Tenure working group, and others will present their draft recommendations to the MAC in the fall of 2004.

Membership on these working groups is skewed towards government and industry but a number of landowner associations are represented including the Alberta Surface Rights Federation, the Pekisko Group, the Wheatland Surface Rights Action Group, the Butte Action Committee and the Freehold Owners Association. Each of the landowner representatives is working to balance the power equation that has for too long allowed the PNG industry, supported by government, to often run roughshod over the legitimate interests and concerns of farmers and ranchers. And with the price of natural gas at record highs the pace of three CBM wells drilled per day in 2003 is just a start.

One of the challenges to the landowner representatives is the attempt by the MAC to skew the discussion to give priority to those effects

specific to CBM. Unfortunately there are few characteristics of CBM development that are not also part of normal PNG development and this would therefore create a very narrow focus. The landowner representatives have been working to widen the focus, arguing that the cumulative effect of all development including CBM needs to be of concern. While the regulatory bodies tend to view each well application as a separate and distinct issue, our concern is the total number of wells and other infrastructure that the landowner has to deal with in maintaining the economic viability of his or her surface operation.

The Surface and Air working group has focused mainly on the surface effects, passing most of the air effects off to the Clean Air Strategic Alliance (CASA). These surface effect issues and draft recommendations have been grouped into three categories including Land Use Management, Communication and Education, and Quality of Life. The challenge will be to get government and industry to seriously examine their attitudes and procedures when the old ones have worked so well to date. For example, most of them see education as a matter of educating the public about the PNG industry, not educating themselves about agriculture.

The Tenure group looks at how mineral leases are sold in the Province. The Department of Energy (DOE) representatives and industry are understandably reluctant to make changes to how the system works from the landowners perspective. Nevertheless we are pushing to have the landowner notified whenever a mineral lease under their property is sold, and to have landowner and agriculture representation on the CMDRC: a committee that attaches notices of surface access restrictions to bidding documents. The biggest question in the minds of the landowner representatives is whether our input will have some effect or whether our presence is mere window dressing to a process designed to ensure that CBM continues unobstructed. Time will tell.

Al Gardner is a member of the Pekisko Group

CBM: What US Governors Recommend

Last April the Governors of Colorado and New Mexico put together a list of best practices for CBM. Larry Charach of Alberta Environment served on the advisory board.

Here's a small sample of what's offered:

- comprehensive land and watershed planning to minimize disturbance;
- baseline data on ground and surface water quality;

- ongoing monitoring data for the landowner;
- proper distancing of wells from outcrops;
- the discontinuation of diesel fuel in hydraulic fracturing fluids; proper notice and full communication with land owner;
- \$40,000 (US) compensation per well site;
- annual rent of \$2,000 per acre.

The Handbook comes with three sample surface use agreements (one comprehensive document is 27 pages long).

After seeing Charach's name on the document, Tom Nahirniak, a long-time surface rights advocate in Alberta, asked a government CBM functionary if the handbook "is going to become our Bible?"

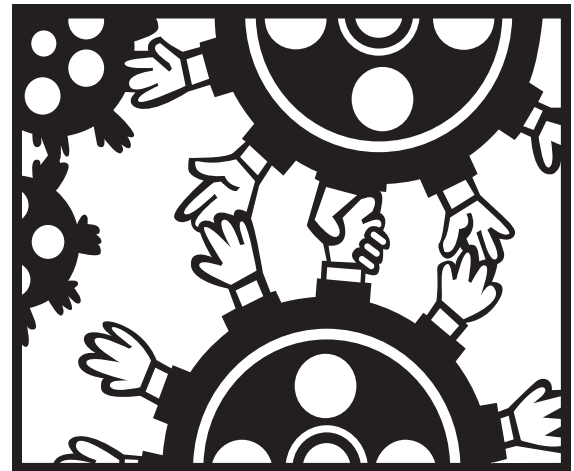
The quick reply was "not on compensation."

"What about conditions?" added Nahirniak.

No comment was the reply.

For most CBM projects in Western Canada landowners are being offered less than \$2000 (CDN) per well site and a paltry amount for rent. Conditions on water quality, compressor noise and minimal disturbance are often ignored or belittled. Copies of the Handbook can be downloaded from the Advocate's web site or directly from: <http://www.westgov.org/>. Don't be bullied by your local land man. Tell him the Governor of Colorado recommends the best!

Board Watch News From The Regulators



Alberta: Recent Statistics

Every year the Alberta Energy and Utility Board (AEUB) releases statistics on what's happening in the field. Highlights from the AEUB's Field Surveillance Provincial Summary for January-December in 2003 include the following numbers:

Last year the AEUB received 817 public complaints about odours, flaring, noise and trespassing. Only 58% of the complainants reported that their concerns had been resolved. And only 53% felt satisfied with action by the offending company. (The

AEUB then suggests that complaints are actually going down in numbers because everyone is doing a good job. But maybe the poor satisfaction rate has something to do with the decrease.)

As usual 39% of the complaints dealt with smelly gas wells and sputtering oil batteries.

Although a record 17,108 wells were drilled in 2003, the AEUB only inspected 400 drilling operations. Approximately 10% were not in compliance. Eleven rigs had to suspend operations for a day or two.

Inspection of some of the province's 6,000 oil batteries and associated satellites found that nearly a third were not in compliance. The three most common problems were "equipment failure resulting in H2S emissions off lease" poor spill cleanup and no dikes installed around product tanks.

Of the province's 741 gas plants only 68% got a satisfactory inspection--a decrease of 2% from last year. The most common problems were off-lease sour gas emissions and "unaddressed" hydrocarbon spills. Not surprisingly the number of complaints against gas processing facilities increased from 84 in 2002 to 92 in 2003.

The AEUB recorded 796 pipeline incidents last year along 332,464 km of pipeline. **Internal corrosion accounted for 44% of leaks or ruptures.** The number of priority number one leaks was 37 or more than has been reported in each of the last three years. Twenty-nine of these leaks occurred on sour gas pipelines or six more than last year.

Spills dumped 5268.3 cubic meters of hydrocarbons and 15,605.6 cubic meters of produced water (often containing anticorrosives and other highly toxic compounds) on Alberta lands in 2003. (Check out Impact of a Petroleum Spill.)

Sour Gas: It took years but the AEUB will soon post a data base on sour gas wells, pipelines and facilities. Some day it might even inform land owners about rule-breaking companies in the industry.

Saskatchewan: No Enforcement

The authors of the Great Sand Hills Land Use Strategy Review make many alarming references to lack of enforcement in Saskatchewan's oil patch. On page 14 the report notes that **"the gas industry has been subject to greater attention at the project planning stage, but has not been subject to formal penalties when problems have arisen."** Then comes this stunning admission on page 21: **"Provincial agencies recognize that the enforcement possibilities and the consequences for a developer who breaches commitments are unclear or insubstantial."**

Source: The Great Sand Hills Land Use Strategy Review, June 2004

BC: Fewer Regulations

The OGC's Annual Service Plan Report makes interesting reading if you are having difficulty sleeping. Swamped with applications (3944 last year) the Commission is having trouble staying on budget and getting its work done. One solution is to become a **"stake holder-centric organization"** and "performance based regulator." That means the OGC "will move away from telling industry how to do things and instead focus on what must be accomplished (or protected). This will allow for flexibility and innovation by industry." (So why bother with a regulator at all? asks the Editor.)

The OGC has achieved a 36% decrease in regulations in two years. It was gunning for 33%.

The report also identifies a number of risks. Two important ones include "coal bed gas development" and "increased depths of wells in the Northeast and increased levels of H2S of those wells."

Source: Annual Service Plan Report (2003-2004) at www.ogc.bc.ca

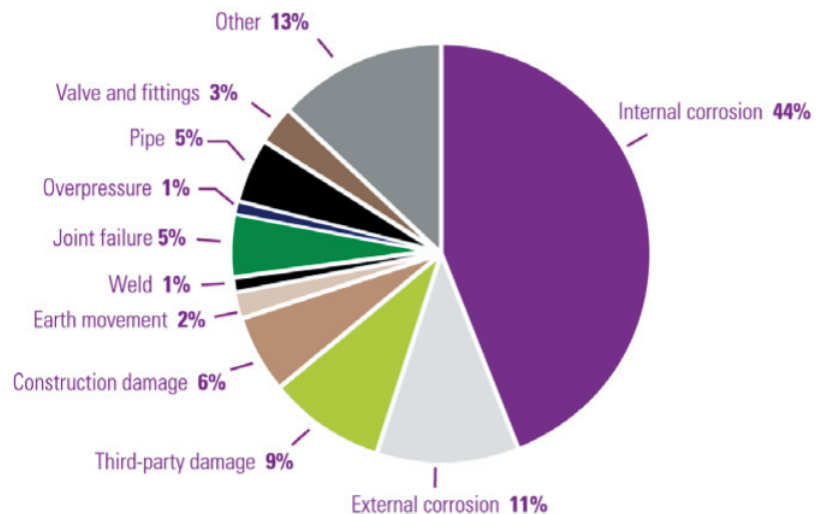
Frogs and Pipelines

On July 10, 2002, Cam Stevens, a biology student at the University of Alberta, notified Penn West Petroleum that a pipeline leak may have been responsible for a large number of dead amphibians observed in a beaver-obstructed stream that he was studying in the boreal foothills eco-region near Lodgepole, AB. The company immediately pressure tested nearby pipelines to discover that a freshwater line containing industrial bactericide and corrosion inhibitors had failed. This unfortunate event provided a unique opportunity to document the environmental effects of a typical pipeline failure in Alberta. As part of his PhD research project, Cam was using field enclosures to assess the role of pond conditions in the growth and survival of larval wood frogs on four beaver ponds. Coincidentally, one was the spill pond downstream of the pipeline failure. The other three sites were similar reference ponds not affected by the chemical spill. Each pond had six enclosures constructed of wood frames with nylon window screen on all sides and placed in the shallow margins of ponds. At the start of the experiment, 20 recently hatched larvae were added to each enclosure. On day 33 (July 10, 2002), none of the larvae had survived in the spill pond while in the three reference ponds, the mean survival rate in the enclosures was 91%. Three hundred dead larvae were also found outside the enclosures, but within the spill pond, between June 19 and July 10.

The field observations clearly suggest that corrosion inhibitors and industrial bactericides in pipelines pose a threat to amphibians and pond ecosystems. (You wouldn't want this stuff in your groundwater

Pipeline failures by cause (%)

January 1 - December 31, 2003



either!) Given this evidence, the high rate of failures from an increasingly extensive pipeline network represents a potentially large environmental impact in Alberta. Indeed, the EUB agrees that pipeline failures due to internal corrosion are a large source of liquid releases that pollute the environment. The mechanisms by which these chemicals affect freshwater and terrestrial environments in Alberta are unclear, however. Two potentially toxic compounds in corrosion inhibitors and industrial bactericides are methanol and alkyl-dimethyl ammonium chloride. The latter ingredient belongs to a class of chemicals called quaternary ammonium compounds (QACs) that are registered pesticides and not readily biodegradable.

Recommendations

- Collaborative research between industry and university on the toxicology of pipeline maintenance chemicals
- The oil and gas sector implement new pipeline technology that reduces corrosion, such as the use of internally-coated steel.

Environment Research and Studies Centre
(University of Alberta)

For more information on what's happening to Alberta's water check out: <http://www.ualberta.ca/~ersc/water/>

SOURCE: Page 42 EUB Statistical Series (ST) 2004-57: Field Surveillance Provincial Summary / January-December 2003

Closing the Gate

Citizen's Guide Being Updated

The Pembina Institute is working on a revision to "When the Oilpatch Comes to Your Backyard: A Citizens' Guide to Protecting Your Rights", that they first published in 2001. Author Mary Griffiths says that the book is being completely updated and reorganized. It will include new information, including sections on coal bed methane. Publication is planned for the fall, and more information will be provided in the next Land Advocate.

Another Sour Gas Lawsuit

The Merchant Law Group in Winnipeg has filed a statement of claim against Tundra Oil and Gas, a company owned by James Richardson and Sons Limited. Twenty-three landowners in Tilston, Manitoba are suing the company for aggravated damages due to chronic pollution from one of Tundra's sour gas batteries. Several families living downwind have moved out of their homes temporarily or permanently due to poisonous toxins including H2S from the battery. Farmers have also recorded a high incidence of cattle mortality, deformities, abortions and infertility in their herds. After moving away from the battery one family went from 46 medical appointments a year to 11. Their health has dramatically improved since moving.

Lawyer Tony Merchant said in a press release that, "Suing big deep pocket corporations is difficult because a company like Tundra can tie up this case in court for years. Merchant Law Group has the staying power to fight through the next few years but the strategy of companies where environmental wrongdoings is before the courts is to delay, fight hard, and in a sense re-victimize the plaintiffs."

Landowners have filed more than 20 lawsuits against oil and gas companies over H2S pollution.

H2S Kills Memory Cells

A new study has found that snails exposed to small amounts of sour gas didn't remember how to breathe very well reports the Journal of Experimental Biology. Ken Lukowiak, a researcher at the Calgary Brain Institute, got the idea for his study after hearing a nurse say that "kids downwind of wells tainted with hydrogen sulphide performed worse on exams than kids upwind" at a local sour gas hearing. Lukowiak, who works with the humble snail, decided to test the alarming anecdote. After training snails to breathe through their skins under water rather than through their pneumostomes, he exposed them to nontoxic levels of sour gas. The gassed snails didn't remember a thing. Concluded a short article on the findings: "Lukowiak suspects that the noxious gas disrupts synaptic interactions in the tiny cluster of neurons that store the mollusks memory, and hopes to identify the memory disruption mechanism soon. And as for the gas well close to his home? Given hydrogen sulphide's startling effects, he wonders whether the days of siting sour-gas well vents upwind of populated areas could be numbered." **Source: Journal of Experimental Biology, 207, 2621-2630 (2004)** <http://jeb.biologists.org/cgi/content/full/207/15/i>

Pembina Pleads Guilty

Federated Pipe Lines Ltd, a wholly owned subsidiary of Pembina Pipeline Income Fund, pleaded guilty to polluting water in Northern British Columbia with crude oil last April. Four years ago a pipeline rupture emptied more than a million litres of crude oil into the Pine River. The spill contaminated the drinking water of 3,000 people and killed fish and birds. The company was fined \$200,000. After years of negotiations Pembina also agreed to pay Chetwynd \$4.5 million for the cost of their new water supply. The federal government says it will use the \$200,000 to conserve and protect fish habitat in the Peace River watershed. Let's hope the fish see that money.

West Nile Virus and Coal Bed Methane Might Mix

Since the West Nile Virus outbreak, six of the nine states with the greatest number of cases have been in the US West: Colorado, Wyoming, both Dakotas, Montana and New Mexico. Tens of thousands of CBM wells have drilled recently in these states. These developments have pumped millions of gallons of groundwater onto the surface. These rank pools, in turn, create ideal breeding habitat for mosquitoes. Have CBM developments accelerated the spread of West Nile Virus? It's too early to tell but scientists are researching any possible link between methane development and the virus.

Source: High Country News, December 22, 2003

The Lighter Side: A Rose is a Rose



An elderly couple had dinner at another couple's house and, after eating, the wives left the table and went into the kitchen.

The two elderly gentlemen were talking, and one says: "Last night we went out to a new restaurant, and it was really great. I would recommend it very highly."

The other man says: "What's the name of the restaurant?"

The first man knits his brow in obvious concentration, and finally says to his companion: "Aahh, what is the name of that red flower you give to someone you love?"

His friend replies: "A carnation?"

"No, no. The other one," the man says.

His friend offers another suggestion: "The poppy?"

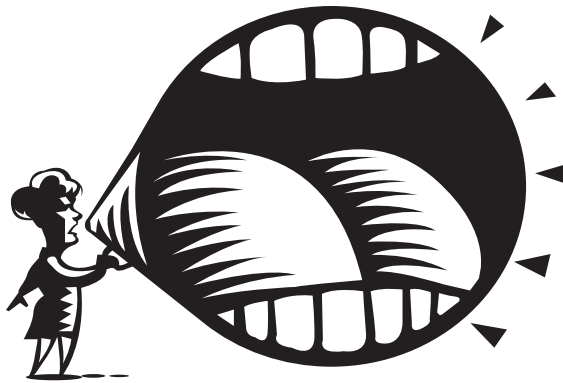
Nahhh," growls the man. "You know--the one that is red and has thorns."

His friend says: "Do you mean a rose?"

"Yes! Thank you!" the first man says.

He then turns toward the kitchen and yells: "Rose, what's the name of that restaurant we went to last night?"

Courtesy of Moe Holman in Calgary



Last Word

The Western Temptation

The Westerner is less a person than a continuing adaptation. The West is less a place than a process. And the western landscape that it has taken us a century and three quarters to learn about, and partially adapt our farming, our social institutions, our laws, and our aesthetic perceptions to, has now become our most valuable natural resource, as subject to raid and ruin as the more concrete resources that have suffered from our rapacity. We are in danger of becoming scenery sellers--and scenery is subject to as much enthusiastic overuse and overdevelopment as grass and water.

Wallace Stegner

Be an Advocate!

It's easy. Visit our web site, www.landadvocate.org. Fill out the order form on the left and receive an electronic copy of The Land Advocate.

Although we plan to initially provide this newsletter to landowners for free (corporate subscribers pay a \$350 fee while non-government types pay \$100) we need your help to reach as many rural Westerners as possible. Donations are not tax deductible because we are an advocacy group. The Land Advocate Society of Western Canada was incorporated last spring.

This issue cost approximately \$4,000 to edit, layout and mail to more 500 subscribers. Your donations help create more Advocates. Our goal is to reach 2,000 landowners by 2006.

This issue was brought to you, in part, by donations from the following landowners in Alberta, British Columbia and Saskatchewan: Tim Belec, William Campbell, Bernie Schell, Roy Ulmer, Ron Hrudey, Eber Waite, Don Mosicki, Bill Bocock, RADCAP, John Kampen, Russell Nilsson, The Pekisko Group, Elaine Dietrich, Lawson Patton, Ron Steinke, Hart Ranches, and North Central Surface Rights.

To help create more Advocates
send your donation to:

**The Land Advocate
Room 203
1225A Kensington Road NW
Calgary, Alberta, T2N 3P8**

Or share your story with us
by sending us an e-mail:
news@landadvocate.org

Check out the web site
www.landadvocate.org