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Landscapes of the heart



Watershed SENTINEL

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FROM THE EDITOR



War Against Caution

Thinking inside the box is a dangerous pastime. It leaves no opportunity for new and constructive ideas. The staccato reverberations can produce jumbled messages that, when repeated, make the messenger appear rather silly.

Was Kenneth Green, chief scientist at the Fraser Institute, victimized by the pratfalls of inside the box thinking? His comments in "Kyoto Jeopardizes Our Quality of Life," *Victoria Times Colonist*, July 23, indicate he may have been blind-sided by jumbled messages.

His opening paragraph warns Canadians of the "dangers that greenhouse gas restrictions pose to their quality of life, the resources they need to fund health care and real environmental protection, and their ability to compete internationally."

Those who think outside of the box will see that paragraph as a parade of anomalies. They would likely view the lessening of our dependence on fossil fuels as a boon to the health of the planet's population. Some might even think that until health care is removed from the market system we are but monkeys babbling at the edge of civilization. Some may already have concluded that competing internationally is a dead end because the market system we are following demands exponential growth and that growth is fueled by a finite environment.

Of course, the science on greenhouse gas emissions and climate change is speculative and incomplete, but there is enough scientific evidence to warrant caution. Nowhere does Mr. Green suggest caution except in defending the status quo. It seems the precautionary principle, in his opinion, should protect only business and profits, and to hell with the environment. And that's the scary part of his comments.

There is also a silly part. Mr.Green's analysis of the effects of imposing fuel efficiency standards on automakers is breathtaking. He says it would lead to drivers choosing smaller, lighter, less powerful vehicles, which would increase the risk of death in automobile accidents. One could draw the conclusion that when he's behind the wheel of his SUV he thinks he's at war. Perhaps he would have us all drive HUM VEES or better still, army tanks. Doesn't he know that a government with guts could prohibit the manufacture of vehicles, whose sole purpose seems to be intimidation on the streets and highways.

Perhaps common sense and consideration for others could even replace the SUV as a new power symbol.

*Don Malcolm,
Whaletown, August 2003*

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wss@rfu.org or phone our office at 250-935-6992.**

Watershed *SENTINEL*



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No matter where on Earth we live, we are all residents of a watershed. Throughout history, clans, tribes and all organized groups have endeavoured to protect their home watershed or territory. Sentinels were stationed throughout the highlands of a watershed to herald the coming of friends, or of threats in the form of encroachment, floods, fire or hostile armies.

Threats to our watersheds exist to this day, whether they come from careless individuals or insensitive corporations. The *Watershed Sentinel* keeps watch and informs.

BUZZ*arrrrrre*

The good news is that, back in February, it was a false alarm which triggered an evacuation at Hanford Nuclear Reservation in Washington State, where decades of radioactive waste is stored under problematic conditions. ‘Problematic’ is the *Watershed Sentinel*’s polite way of referring to the radioactive plume in the groundwater which is moving toward the Columbia River.

The bad news (you knew it was coming, didn’t you?) is that Bechtel Corp. is now trying to round up radioactive mud wasp nests before the larvae hatch next spring. Not to worry though. After all, in the past, Hanford has safely contained radioactive ants, a radioactive mouse, and radioactive fruit flies. Only critters that give ‘em a real chase for the money are the radioactive tumble weeds.

—*TriCity Herald, August 15, 2003*

Subscription Forms are on the back cover. Stay up to date - Subscribe. Thank you!

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Our Readers Write

The Watershed Sentinel welcomes letters but reserves the right to edit for brevity, clarity, legality, and taste.

Anonymous letters will not be published. Send your musings and your missives to:

Watershed Sentinel, Box 39, Whaletown, BC V0P 1Z0

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Where Were They?

Shame on our elected officials. Where was the leadership they promised when we put our trust in them and elected them to public office?

Tuesday the 22nd of July was the last day for submissions to the BCUC as the hearings for the Certificate of Public Convenience and Necessity for the Vancouver Island Generating Project (VIGP) came to a close. Throughout the proceedings, local government was noticeably absent.

The effort to hold BC Hydro accountable for their proposal to spend about \$700 million of taxpayers' money on an ill-conceived plan for a gas-fired power plant at Duke Point and the pipeline to deliver the gas from the United States was left to individual citizens, public interest groups, and private industry.

Despite being listed as intervenors (participants in the process), the Regional District of Nanaimo and Islands Trust asked no questions during the examination of the evidence, failed to attend many of the sessions, and declined to submit any written argument.

Despite having passed a resolution requesting the BCUC review, and sending a letter to the Minister of Energy and Mines urging him to direct a BCUC review of the VIGP project, the Nanaimo City Council didn't even register as an intervenor.

Unlike the MLA for Chilliwack, Barry Penner, who has been prominent in opposition to the proposed gas-fired power plant in Sumas, our local MLA's stood silently on the sidelines.

The BC Utilities Commission recognized the importance of the hearings to the Nanaimo area by scheduling the hearings there. That action gave the citizens of the Nanaimo area the opportunity to express their views to the Commission.

In his closing remarks, the chairman of the BCUC hearing, Robert Hobbs, acknowledged the contribution of the individuals who spoke at the hearings. To close the

QUOTABLE

"The government consists of a gang of men exactly like you and me. They have, taking one with another, no special talent for the business of government; they have only a talent for getting and holding office."

— H. L. Mencken (1880 - 1956)

proceedings, he quoted from a presentation from Gordon Bell, a private citizen from the Nanaimo area: "The application before you represents an important juncture in consideration of energy supply, not only on Vancouver Island but also for future energy policy and planning for British Columbia until 2025 or thereabouts."

It's unforgivable that local politicians chose not to participate in this significant undertaking.

Jim Parr, Gabriola, BC

The Final Coup -- the Working Forest

Many thousands of small pristine streams fed the once fabled salmon rivers of yesteryear.

For over 125 years, we have logged up to and over these streams with large clearcuts which fouled them, and then repeatedly afterwards, with no forest cover to impede the added silting of winter run off.

We did not and would not proscribe logging within fifty feet of these small feeder streams nor limit the clearcuts to 20 to 30 acres to reduce rapid run off and also to abet a more natural regeneration (with a more proximal seed source).

We have thus improvidently traded our fish and forest abundance for ghost towns and wasted our two prime resources.

With the much-touted "working forest" legislation the final demise is set for a have-not prodigal people, who were once so envied.

Must we continue to have "no tomorrow" for our children?

R. Sutherland, Victoria BC

Download Mad Cow USA

As I was heading home from Vancouver came the disturbing news that mad cow disease has been found in Canada. The media is spinning this to protect industry. As the author of *Mad Cow USA: Could the Nightmare Happen Here?*, I can tell you that if BSE is in Canada, it's in the US. By the way, you can download a free and complete version of our book *Mad Cow USA* by going to our website and clicking on the cover of the *Mad Cow USA* book. That will take you to the PDF download.

Rule of thumb: If you are not a vegetarian, at least the animals you eat should be! Seriously.

*John Stauber, Center for Media & Democracy
Madison, WI*

<http://www.prwatch.org/>

Two billion tax bucks for ITER?

by Delores Broten with material from the Sierra Club of Canada

Last June, the federal cabinet was expected to make a crucial decision on whether to provide a billion-dollar subsidy to an international consortium to build a \$19 billion experimental fusion reactor. The International Thermonuclear Experimental Reactor (ITER) would be built at the Darlington reactor site in Ontario. Cabinet delayed that decision until fall.

Two years ago, the federal government approved ITER negotiations on the condition that there would be no taxpayer subsidy or risk. The project organizer, ITER Canada, reneged on this condition and is now seeking a subsidy of \$2.3 billion — half from the federal Canadian government and half from the Ontario government. As part of the package, the federal government is also being asked to restart the federal fusion research program (in addition to ITER), which was costing about \$30 million per year when the government pulled the plug on it in 1995.

The Ontario government of Premier Ernie Eves has already committed to providing half of the \$2.3 billion subsidy. Even if Cabinet chooses not to support construction of ITER in Canada, it may continue as an international ITER partner and support its

construction in Japan or Europe. This would still likely require a financial contribution of \$2 billion, \$1 billion each from the Canadian and Ontario governments.

There are many environmental and economic reasons to oppose what the Sierra Club calls “this nuclear boondoggle.” ITER Canada’s slogan is “Cleaner energy for our planet.” However, ITER will not be clean, nor will it ever produce any electricity. The ITER reactor is purely experimental. Even its supporters admit that a fusion reactor to generate electricity is at least 35 to 50 years away if ever.

Even worse, ITER will require huge amounts of electricity to operate — about 100 megawatts of baseload power to cool the magnets that suspend the plasma in the reactor, and 500 megawatts to heat the plasma in three-second pulses several times a day. This is enough power to run a city the size of Kingston, equal to a Pickering-sized reactor, further stressing Ontario’s electricity system.

ITER will routinely and accidentally release radioactive tritium, increasing cancer risk in the downwind population and adding to emissions from the four Darlington reactors and the Tritium Recovery Facility already at the site. The fusion reac-

tion will produce large amounts of high-energy neutron radiation, which will make the structural components highly radioactive, producing 30,000 to 40,000 tonnes of radioactive waste, deadly for 100 years.

The Sierra Club of Canada says support for the \$19 billion fusion reactor would be a tragic waste of tax dollars and a foolish direction for Canadian energy policy, noting that ITER will do nothing to reduce carbon dioxide emissions. The federal government has budgeted \$2 billion to meet the Kyoto greenhouse gas reduction targets by 2010.

If \$19 billion was poured into the development and deployment of energy efficiency devices and alternative energy such as tidal power, the payoff is almost unimaginable.



What you can do

Write to:

The Right Hon.
Jean Chrétien

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K1A 0A6

Fax: 613-941-6900 &/or
613-957-5571

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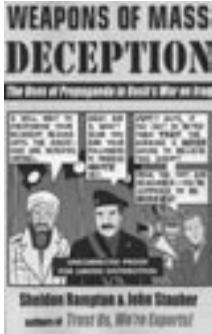
Fusion Funnies

For more information,
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Nuclear Campaign
Ph: 905-852-0571;
Email: nuaware@web.ca
www.iter.ca



Books Reveal the Hidden World

by Delores Broten



Weapons of Mass Deception, by Sheldon Rampton and John Stauber, is something of a stealth event – placing on the New York Times and other best-seller lists for weeks on end, despite having received absolutely no major book reviews in the United States. Still, someone out there, a whole lot of someones, is finding it and reading it, which is the greatest comfort you will receive from this exposure of the Bush administration’s PR packaging of the war on Iraq.

But it’s better to know where in the sands of history you have landed. We, it appears, are in a stage of US history where fake interest groups are drummed up at the beck of PR companies, terrorist attacks are timed precisely to hit the news with no time for analysis, and both TV and Hollywood are, once more, in the grip of the spin-masters in Washington. *Weapons of Mass Deception* exposes it all, with footnotes.

Rampton and Stauber outline the extensive US oil interests in the Gulf including presidential ones, and the history of Saddam’s close relations with the US until the end of the war with Iran in the late 1980s. They remind us of the disturbing details of the war in 1990. Of course that includes the uncomfortable saga of the Kuwaiti princess’

tale of hundreds of babies torn from their incubators by invading Iraqi soldiers – the tale cooked up by PR firm Hill & Knowlton. Sort of a ‘cover’ version of the Great Wars’ crowd-pleasers about enemy soldiers bayoneting babies... or was that nuns?

Then they move onto the spectacularly unsuccessful, and expensive, attempt by Washington and its hired PR flacks to sell the ideal of America on the streets and TVs of the Arab world after Sept. 11, 2001. As if the answer to, “Why do they hate us?” could be solved by ads before and after the call to prayers. They also expose the Saudi “flack attack” to convince the American people that Saudi Arabia is a trustworthy ally.

The tangle between the BBC and Tony Blair over the “sexed up” intelligence reports about imminent nuclear holocaust if Saddam had a temper tantrum has shed some light on this sad manipulation of public angst from across the Atlantic. But for those of us closer to the imperial centre, who need as much information as possible if we are going to avoid being sucked into the American vacuum, *Weapons of Mass Deception* is an excellent place to start. Remembering the news stories of yesterday helps. Unfortunately, one of the take home lessons is that you just can’t be cynical enough.

Sheldon Rampton and John Stauber, Weapons of Mass Deception: The Uses of Propaganda in Bush’s War on Iraq, Jermy P. Tarcher/Penquin, New York, 2003. 224 pgs, \$17.99 Can., ISBN 1-58542-276-2

Turning from the grim to the delightful, Ruth Ozeki’s All Over Creation provides a romp through the genetic battlefields of an Idaho potato farmer, with a cast of intriguing and engaging characters. The action is mostly seen through the eyes of Yumi, appropriately nicknamed Yummy, the daughter of a retired potato farmer and a Japanese horticulturalist mother. It careens through the hilarious to the sombre toward pathos.



Yummy, drawn unwillingly home by ailing folks, from her life as a university teacher and real estate developer in Hawaii, embroils us in a tangle of human relations, past and present. Those events are largely driven by the opposition of two familiar players.

The Seeds of Resistance, a floating collective of anti-genetic engineering activists, travel America in their bio-fuelled bus, Spudnik, recycling fast food grease. This may

sound fantastical but attentive readers will remember Hal Hewett in his Scrounge Utility Bus (SUB), who crossed Canada this way (“The Biodiesel Project, Fuelling the Eco-Revolution,” *Watershed Sentinel*, August/September 2002.)

Elliot Rhodes, Yummy’s old lover and a former hippie, has left his life as a history teacher for that of a PR flack for agribusiness. The stage is set when his company orders Elliot back to his Idaho home to contain the potential media impact of the Seeds’ planned Potato Party.

Fast moving, chockfull of interesting characters, *All Over Creation* strikes an introspective note with some glorious writing. At the same time, a friend notes that she learned a lot about the business of genetic engineering from the novel.

This is the world as we at the *Watershed Sentinel* experience it, the one so ignored by the mass media that one sometimes wonders if it exists. Ozeki, who divides her time between the islands of Manhattan and Cortes, has revealed that hidden world, which feels like home.

Ruth Ozeki, All Over Creation, Viking/Penquin, New York, 2003. 420 pgs, \$37.50 Can., ISBN 0-670-03091-0

Quiet for Whales this Fall

A massive international (US/Canada/Japan) seismological research project, planned for late August and early September 2003, off the south coast of Vancouver Island, has been postponed for a year due to the need for a Canadian environmental assessment. The Orca Network had raised fears that the project could harm marine mammals: "The work is slated to begin on approximately August 27 - a time when whales (orcas, humpbacks and several other species) are known to be in the area."

The Cascadia collaborative SeISmic experiment (CASSIS), researchers planned to do their earthquake fault mapping by firing an extremely large air cannon at a volume of 243 decibels, picked up by 60 ocean bottom sensors and 100 seismic meters on Vancouver Island and the mainland. The Department of Fisheries and Oceans withdrew necessary permits when the size of the air gun was revealed, and Natural Resources Canada submitted the project to a *Canadian Environmental Assessment Act* review. Last October a US judge stopped a seismic mapping project off Baja California after the death of two beaked whales.

— *Orca Network, July 2003, www.orcanetwork.org, info@orcanetwork.org*

Ph: 1-866-ORCANET

<http://ens-news.com/ens/oct2002/2002-10-29-10;>

<http://geosun1.seos.uvic.ca/cassis/intro.html>

ProRep for Quebec

Quebec will abolish the current voting system in favour of proportional elections in time for the next provincial election. Prior to last spring's provincial election, the Parti Québécois government announced its intention of adopting a proportional electoral system. The project has been taken up by the new Liberal government. The third party in the National Assembly, Action Démocratique du Québec, also favours the move. At the Estates-General, held in February, 90 per cent of the participants, over 800 Quebecers from across the province, voted in support of proportional representation.

— *Fair Vote Canada Newsletter, July 2003*

SUVs go up in smoke

The FBI suspects "environmental terrorism" after about 20 SUVs, mostly Hummers, were destroyed in an LA dealership in August. Other vehicles were marked with slogans like "Fat, Lazy Americans" and "ELF," possibly the Earth Liberation Front.

— *Vancouver Sun, August 2003*

EPA lied about Trade Centre Toxics

The *Vancouver Sun* reports that the White House controlled the US Environmental Protection Agency when it issued misleading statements about the low health risk of air pollution during the World Trade Centre disaster. The White House defended its actions as a matter of national security.

— *Vancouver Sun, August 2003*

Extreme Weather on Rise

In July, the World Meteorological Organization (WMO) announced that record extremes in weather and climate events were occurring around the world, consistent with predictions of global warming and climate change. These extreme weather events included heat waves in Europe, tornadoes in the US in May as well as unseasonable wet and cold, temperatures of up to 49°C in India, and heavy rainfall in Sri Lanka. WMO also said that average global temperatures had increased by .6°C in the 20th century, slightly higher than predicted.

— *World Meteorological Organization, July 2003*

In Context

Listen, first of all, one third of humanity has no electricity. Secondly, another billion people, - and now we're up to half of humanity- get a failure like this two or three times a week. And the media doesn't even write about it."

—Mark Jacquard, BC energy expert, commenting on the massive Eastern power failure, in the *Vancouver Sun*, August 16, 2003

Mexico's Community-Managed Forests Model Sustainability

As a little-noticed result of the Mexican Revolution in the second decade of the twentieth century, well over half of the forests of Mexico were placed in community-held lands. In historic struggles that passed through several phases, most of these communities have now gained substantial control over the use of their forests. Because of the substantial degree of social capital in rural forms of organization in Mexico, this control of forest resources has led to an estimated 290-479 community forest enterprises (CFEs), through which communities are producing timber on their own lands. New studies are beginning to suggest that important gains in both social and economic justice, good forest management, and biodiversity protection are resulting from the actions of these CFEs.

—*Bray et al, Mexico's Community-Managed Forests as a Global Model for Sustainable Landscapes. Conservation Biology 17 (3), 672-677, 2003.*

Wildfires

As thousands of BC and Alberta residents have become environmental refugees due to forest fires, a biologist argues that these fires are the result of management for timber and cows instead of for forest diversity.

by Brian L. Horejsi



As the Lost Creek fire darkens the skies of southwest Alberta and the wind washes the land with an air of power and wildness, it's not easy to realize that the origins of this fire go back over half a century. Back to the 1930's when the provincial government began co-management with the Federal government of what was then the Rocky Mountain Forest Reserve.

These seemingly vast tracts of the Rocky Mountains had been set aside for watershed protection, but it was not long after the province got into the act (*1930 Natural Resources Transfer Act*) that they began to think

dollar signs. The big fires that roared through the Rocky Mountains around the 1930's prompted construction of the forestry trunk road (Waterton to Hinton, beginning in 1948), built almost exclusively to provide access to the forests for forest fire "prevention." The Forest Service took on their new role as fire fighter with a vengeance, and by that measure they have done a heck of a job .

The result is a massive build-up of fuel brought about by almost complete suppression of the multiple smaller fires that historically occurred in these areas every few years. In other words, the Lost Creek fire is a mess of the Forest Service's own making.

As is inevitably the case with bureaucratic bungling of this magnitude, someone gets stuck with the tab, and that's almost always the taxpayer. And just as dastardly, innocent people lose their property, have their lives disrupted, and suffer unbearable stress.

Our mountain and foothill forests evolved with frequent fire, but the Alberta Forest Service decided not to manage for the nature diversity of forest landscapes; instead they chose to fight the design and processes of nature. No fires! The reason, of course, was to protect "timber," not forests.

Part of the strategy of "preventing" wildfire was to log those old forests like hell and graze like hell, because old growth trees, grass and under story shrubs were viewed as

stepping stones to forest fires. So were born two strong Forest Service constituencies: the timber industry and the forest reserve/public lands' livestock industry. We cannot expect them to acknowledge that their propaganda, that logging and grazing are good for the forest and would prevent "destruction by fire," was wrong. This fire most assuredly debunks that nonsense, just as the big fires in the US in the late 1980's debunked the same propaganda in that country.

"Alberta Forest Service decided not to manage for the nature diversity of forest landscapes"

The ecological costs of this Log, Graze and Fight Fire policy are immeasurable: virtual eradication of old growth forests, degraded fish and wildlife habitat, mass upset of biological diversity, massive watershed restructuring, total disappearance of vast stretches of wilderness, an oppressive network of roads and trails, erosion, rampant weed problems, and on and on!

When I look at this fire, I see reflections of an outrageous waste of money, an organization that fabricated a (false) aura of sound management and invincibility (this fire has punched that full of holes), an



organization that falsely fuels the public apprehension about fires, an organization that resisted public accountability, and an organization that is in dire need of reform.

What do I mean, “resisted public accountability?” The Forest Service could not continue to serve their historical constituencies and still listen to the modern public, because the public had started to talk about protecting wilderness, fish and wildlife, biological diversity, visual landscapes, wilderness, and that elusive “ecological integrity.” Basically, the public was saying, “We want to be part of the process; these lands belong to us!” Instead of responding to the will of the people, the Forest Service insulated themselves from public input.

But even the Forest Service could see that the forest industry was withering away; after all, the cheapest trees to cut and mill, the large old trees that we call old growth, are essentially gone. What would happen to this massive bureaucracy that planned clearcuts, built roads, and flew an army of planes and helicopters on watch for that evil monster, fire? Could off-road motorized invasion of public lands be a substitute constituency? A perfect fit for continued industrialization of the Rocky Mountains!

It would be naive to think that humans will not use some parts of public lands for activities that are essentially destructive to natural systems. But there would be widespread tolerance for these uses if the ecological, social and economic costs did not exceed the limited benefits and *if*, and it is a critical *if*, they took place within a well regulated framework that did not

permit the destruction of other values and the abuse of other users.

What is going on, however, is indifference and disregard based on “I don’t care what the other guy is doing as long as I get my piece of the action!”

What about the Lost Creek fire? As is so typical of Alberta government organizations, the Forest Service is provincial (as in narrow minded), poorly informed, inward

“Public lands should be managed as places that have all the parts and processes of naturally viable landscapes”

looking, and resistant to information and outside experience. The fires of Yellowstone taught people that a fire like the one we have now — huge fuel buildup, perfect burning conditions — is invincible. The hundreds of dumps of retardant and water have simply squandered tax dollars and endangered lives.

The solution is to concentrate organizational “firepower” (sorry for the pun) when and where there is an imminent threat to property.

And there is a message here for Forest Service partners in crime, the municipal governments that promote development in forest areas. “Get your lawyers lined up” is what they may have to do! But more importantly, the public is going to have to significantly curb the power of municipal governments to approve developments that are at high risk of destruction by fire.

And finally, another battle looms: salvage logging, during which the Forest Service will strive once again to serve its favourite constituency, the timber industry.

The Lost Creek fire, and those yet to come in many parts of Alberta and our national parks, are the results of cumulative mismanagement of public lands. But perhaps, out of the ashes will rise a rose. It would be history in the making if Albertans were to look upon these fires as the start of something good. Ecological renewal in our forests, a process that has been suppressed for half a century, could begin if it is not “managed” to death. There are great days ahead for wildlife populations, whether you are a watcher, dreamer, or hunter.

But the most shining opportunity is rarely presented to any society. We have a once-in-a-lifetime chance to impose the rule of democracy, and reform the Forest Service, or eliminate it and start over with a Natural Resource Conservation agency that is legally accountable to the people of Alberta to manage public lands for native biological diversity, water, wildlife, wilderness protection, a gentle-on-the-land mix of recreational options and some commodities.

I am not prepared to believe that it is utopian to expect that public lands should be managed for this and future generations as places that have all the parts and all the processes of naturally viable landscapes. I hope Albertans will come to the same conclusion.

■
 B. L. Horejsi is a forester and wildlife scientist, and a former Crowsnest Pass resident.
 Photos Provincial Emergency Program and <http://castanet.firewatch.net/>

Climate Change Impacts on Water

by Peter Dixon

What is the extent of our understanding how climate change will impact water supplies in British Columbia? The Canadian Water Resources Association stated that the "incidence of extreme hydrological events and new and unforeseen climatic records is on the increase..." A few communities are beginning to take notice.

For example, a report *Enhancing Water Supply Infrastructure Investment Planning Practices for a Changing Climate for the Okanagan Basin* (Environment Canada) articulates a deep concern on how climate change will impact water supplies.

Streams in the Okanagan Basin area are down to record levels following a drought from the summer of 2002. The *Victoria Times Colonist* reported that "The provincial government granted Summerland an extension of its state of emergency regarding water Wednesday." ("Parched Okanagan Town Struggles With Water Crisis," *Times Colonist*, August 14, 2003)

Another Environment Canada report, *Climate Change and the Greater Vancouver Regional District*, says that from April to June a 10% to 30% reduction in precipitation with no change in July and August are expected due to climate change. But in the fall, precipitation would increase 10-30% and in the winter months 10-20%. Spring and summer are drier, fall and winter wetter. The report concludes that the GVRD temperatures have risen gradually over the last 60 to 100 years.

The long-term average estimated temperatures in the GVRD project a rise of about 3.5° C by the year 2100.

Higher temperatures in the GVRD water supply watershed will

decrease the snow pack thereby reducing water stored as snow.

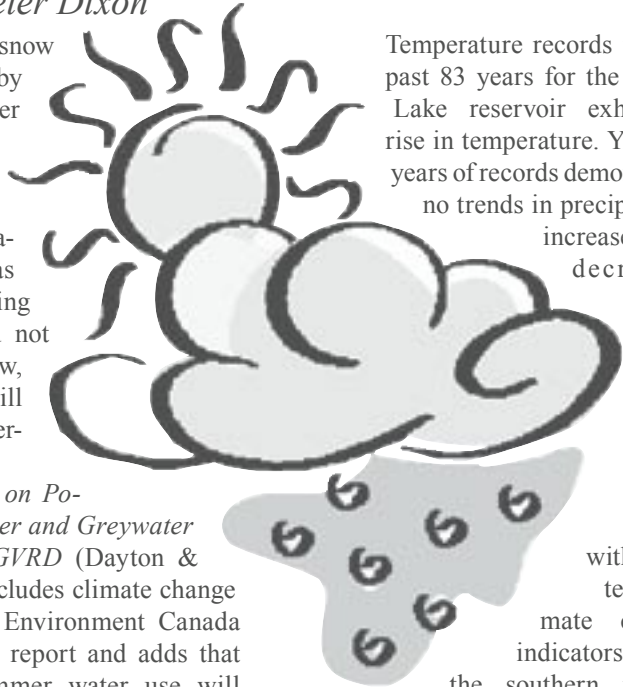
Furthermore, since more of the precipitation will fall as rainfall during the winter and not stored as snow, water may spill over the reservoir.

The *Study on Potential Rainwater and Greywater Reuse in the GVRD* (Dayton & Knight Ltd.) includes climate change data from the Environment Canada climate change report and adds that per capita summer water use will still increase by 3-5% by the late 21st century.

Greater Victoria, within the Capital Regional District, is a slightly different scenario but will, nevertheless, also feel climate change.

The core municipalities are in the rain shadow from the Olympic Mountains and to a small extent from the Sooke hills. It receives less rainfall than Vancouver; hence, it is drier and subject to greater drought-like conditions.

Climate change records show temperatures rising in the Greater Victoria area. The Victoria Gonzales annual mean maximum and minimum temperatures reveal a rise in temperatures between 1899 and 2000, whereas, from 1902 to 1987 there is a downward trend in precipitation. The temperature rise is in keeping with an increase in a warming trend along the BC coast, the largest increase in any century over the past 1000 years, which is roughly the same rate as the global average.



Temperature records for the past 83 years for the Sooke Lake reservoir exhibit a rise in temperature. Yet, 107 years of records demonstrate

no trends in precipitation increases or decreases

at the reservoir.

The 'no trend'

agrees with long-term climate change

indicators for the southern tip of

Vancouver Island (*Indicators of Climate Change for British Columbia 2002*, Ministry of Water, Land and Air Protection).

Between 1967 and 2002, weather records at the reservoir show an increase in the magnitude and frequency of dry years, which may foreshadow increases in future periodic summer droughts.

Rising temperatures combined with no increase in precipitation will necessitate an increase in irrigation of crops and gardens putting extra demand on water supply. Climate change projections - globally, provincially, and regionally - generally indicate increased warming trends and extreme precipitation events.

The evidence of climate change is increasing and, therefore, needs to be addressed at a regional level. With respect to supply and demand it should be included in water management plans.



Peter Dixon is the president of Victoria's Veins of Life Watershed Society

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• **And Those Who Wish To Remain Anonymous**

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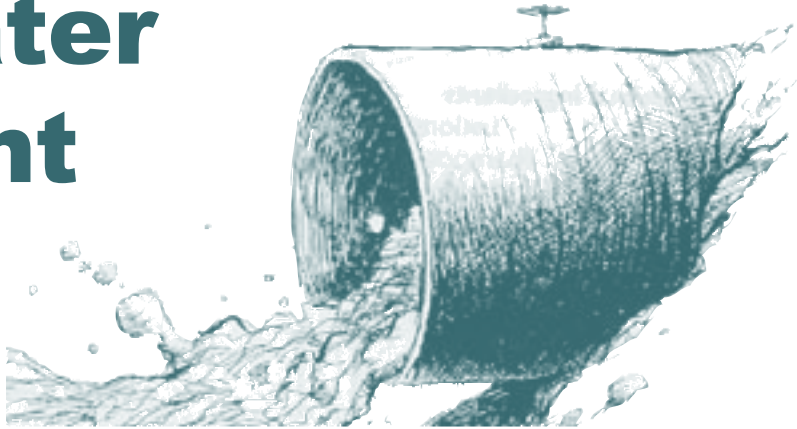
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And Those Who Wish To Remain Anonymous

Wastewater Treatment Systems

*Water Stewardship Feature,
Part Two - by Maggie Paquet*



All living things produce waste products. That includes us, of course. How we handle this waste can have significant impacts on our shared environments, whether on land, in the sea (and rivers and lakes), or even in the air. Mostly how we handle it involves using water.

Water is one of the most precious—and abused—resources on the planet. Protecting and conserving water resources is an issue of great public concern. Previously, WS featured composting toilets as one of the tools for conserving water. Let's face it, in our society, flushing and forgetting is one of the most rampant abuses of water we do. In this issue, we're focusing on wastewater treatment systems.

Wastewater comes in two varieties: black water, or sewage containing fecal matter (flushing the toilet), and grey water, or water from bathing, laundry, dishwashing, and the like. In most of our cities, the two streams run through the same pipes to municipal wastewater treatment systems. All too often, they then flow into the nearest water body, whether lake, river, or the ocean. They call it waste because that's precisely what it is: a waste of water. Cliff Turner, an Environmental Health Officer living on Gabriola Island, believes all water use in the province should be metered. That way, he says, communities, municipalities, and industries can be made responsible for leakage and other

wasteful practices and maybe get motivated enough to use water resources more sustainably.

Much of the world can't afford the "luxury" of wasting water. One of the sessions at the 3rd World Water Forum held in Japan last March focused on re-using treated domestic wastewater. In many parts of the world, recycled water is the only water source for local agriculture. By implementing safe technologies to enable re-using water, communities can achieve health and economic benefits otherwise unavailable. In the spirit of thinking globally and acting locally, we need to recognize water re-use as an important resource for meeting a variety of demands, including agricultural and non-potable uses, such as pollution abatement and public health protection, and as a means of energy conservation.

A wide range of technologies are currently under development, including constructed wetlands, aquatic greenhouses, and various types of bio-reactors and membranes. Unfortunately, and in spite of some recent improvements, there is still insufficient regulatory and policy support to encourage effective new technologies that are affordable and practicable for individuals and small communities. Not that there's anything inherently wrong with the conventional septic system. Properly installed and maintained, it works. But where there's a

high density of septic systems, where people don't maintain them properly (more common than you'd believe), where the soil and other physical conditions aren't optimal, and where the amount of land needed for constructing a proper septic field isn't available, we need to have safe alternatives that can meet regulatory approval.

John Rowse, Project Manager Health Planning, BC Ministry of Health, says the ministry's primary concerns are for public health and safety. "Wastewater treatment systems have to be flexible enough to handle anomalies (problems). And people have to be committed to maintaining whatever systems they use. Septic systems are like a car; if you ignore or abuse them, they'll fail. Government is revising the legislation (Sewage Disposal Regulation under the *Health Act*) because we have more options than we used to have and we're recognizing the improvements in technologies and materials available. The new legislation is expected sometime in late 2003. The major changes will be around permits. The draft regulation is expected to replace the permitting process with a registration process. The proponent will register their system with the Health Authority and then install it. The current inspection process will not take place, but Health officers will have the power to audit or inspect the system at any time."

TYPES OF WASTEWATER TREATMENT SYSTEMS

(For contact info for companies listed below, please see References and Resources section at end of article.)

ECO-TEK Wastewater Treatments Inc., Solar Aquatics Systems (Langley, BC)

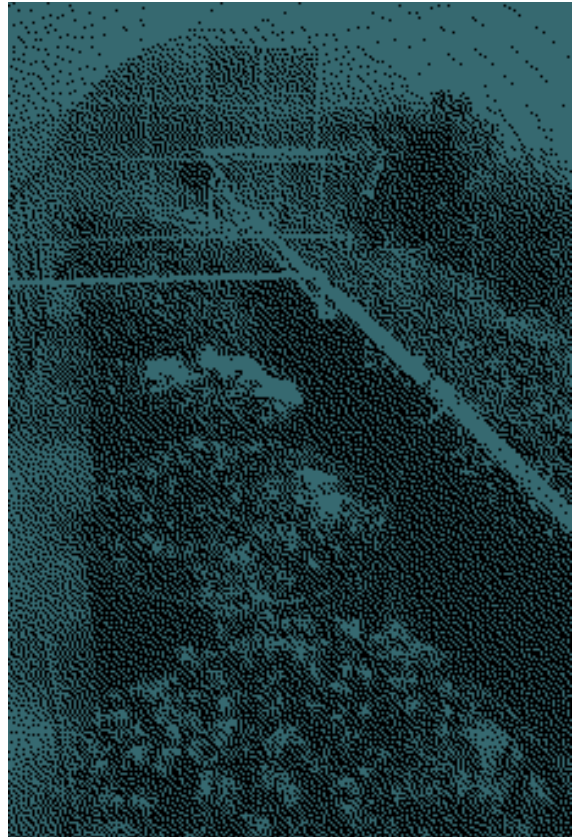
Eco-Tek designs, builds, and operates “enhanced ecosystems to reclaim and re-use the resources in wastewater to protect and regenerate human and natural communities with clean water, nutrients, energy, and biodiversity.” The company, based in the Fraser Valley, uses Solar Aquatics™ technology to treat wastewater using solar energy, water, and plants that mimic the natural purifying processes of streams and wetlands. These are combined with features of conventional technologies in a controlled environment, typically a greenhouse. The system produces clean water, recycles nutrients, recovers heat energy, and helps promote biodiversity. This technology is resilient to toxic loadings and can be constructed for small or large applications simply by adding more modules. ECO-TEK provides design, engineering, project management, training, and operations for Solar Aquatics™ facilities. Currently, they’re involved with an EcoVillage project near Yarrow in the Fraser Valley, building a solar aquatics system.

Hydroxyl Systems Inc. (Sidney, BC)

Hydroxyl builds modular package wastewater treatment systems for a variety of applications, including marine. The systems generally incorporate multiple processes, including biological, advanced oxidation, solids separation, and can optionally include filtration or membrane separation. An example of their use is on the Bowen Queen, operated by BC Ferries. The vessel was retrofitted with Hydroxyl’s enclosed wastewater treatment system, which uses ozone rather than chlorine to disinfect the effluent. The Hydroxyl process uses two non-biological treatment processes and the resulting effluent is clear, odourless, and low in pollution (BOD and TSS). The entire process chain is enclosed in stainless steel tanks and residual solids are pumped out semi-annually as part of routine maintenance. The system provides environmental, economic, and social benefits in that no chlorine is used, there are lower maintenance costs than with conventional systems, and the crew of the ferry works in a safer environment. Hydroxyl also serves other treatment needs, from treating industrial landfill leachate at Crofton Pulp Mill to the septic system of a shopping centre south of Duncan.

Zenon Environmental Inc. (Oakville, ON)

Zenon provides a membrane-based water treatment process that involves treating water by drawing it through membrane fibres in an “outside-in” flow path under a slight vacuum. The membrane fibres are installed directly in the tank of wastewater to be filtered and replace both the clarifier and the granular media filters of conventional drinking water or wastewater treatment systems. Zenon’s system uses a range of membranes that have been approved by the National Sanitation Foundation. The outside surface of the fibre is a highly water-permeable polymeric membrane that removes biological contaminants, particulates, and colloidal species from water, including: turbidity, bacteria, cysts and oocysts, iron and manganese. The membranes can be used in both water treatment and wastewater treatment applications. The basic process can be combined with enhanced coagulation (organics and arsenic removal), chemical oxidation (iron and manganese removal), and activated carbon (for taste and odour removal) to achieve particular effluent requirements. Zenon also provides reverse osmosis pre-treatment and tertiary treatment processes, can supply membrane bioreactor systems that combine filtration with a conventional activated sludge process to treat a variety of municipal, industrial, shipboard, or private development wastewaters.



Continued on Page 11 ➤➤

← *Wastewater continued*

Here are a few places in BC where some non-conventional wastewater treatments are in place:

Hornby Island

In 1994, concerns about groundwater and consequently well-water quality from faulty, failing or non-existent septic systems prompted Hornby Island residents to press for a change. The result was an experimental system that may also be useful in other locations with the right conditions. The project is a constructed wetland—a 12-by-6 metre rubber sheet lined structure that's filled with gravel and covered with plants—installed at the Tribune Bay Outdoor Education Centre. It cost about \$12,000 to set up, including a septic tank, pump, liner, gravel, plants, labour, and excavation of a 500-foot trench.

The wetland services a 4-person residence. Wastewater (both black and grey water) goes subsurface from the septic tank and is pumped up to the wetland, where aquatic plants and microbes aid in decomposition. Under the government's Innovative Technology Program, results were monitored for two years. Early tests showed reduced faecal coliforms and Biological Oxygen Demand (BOD), although there was a brief time when groundwater intrusion into the pump chamber temporarily lowered the effectiveness of the system. A period of antibiotic use by one of the residents also correlated with a period of higher than usual BOD levels. It is speculated that there was a connection between the two events, but this cannot be confirmed.

Ed Hoepfner, of the community-based Greenhouse Organic Sewage Treatment Society (GHOSTS), which manages this project, says that the Health ministry is satisfied with the results and has given approval for three more constructed wetland pilot projects for BC, providing they can fine-tune the design in order to address the higher than expected BOD levels. Currently, GHOSTS is researching and testing a planter bed design for the treatment of greywater. The next stage for GHOSTS is to develop broader research capacity for environmentally sustainable wastewater treatment.

Errington, Vancouver Island

Steve Chomolok operates an Eco-Tek/Solar Aquatics system at a trailer park in Errington. The system services 52 mobile homes. Steve considers this a successful application of environmentally friendly wastewater treatment technology. The system has been installed for six years and processes between 45,000 and 60,000 litres per day. It functions well under provincial permit levels for BOD and TSS, and treats to secondary treatment standards. The system requires minimal energy to operate, a bit more in winter because some heat is required for the system to function. About an hour a day is needed for maintenance, consisting of maintaining filters, checking pumps, and monitoring inflow, outflow, temperature, etc. With proper training, it's a fairly simple process.

The system employs both aerobic and anaerobic processes and requires only very occasional removal of sludge. Barring problems such as floods, Steve believes it is an efficient and easy system to operate, and is much more resilient than a septic system. He has increased the use of native marsh plants, harvesting them just above root level to keep them working. His goal is to achieve Class 1 water quality for irrigation use. Steve says an important consideration for installing this type of system is the amount of land you have available. This one is housed in a 30-by-60 foot agricultural-style greenhouse, with a double envelope. It's been relatively trouble-free and the owners are pleased with its performance.

Other Systems

Some of the ways (not legally sanctioned) rural people deal with grey water include:

- Filter greywater to remove bits of food and grease (recommend an oil drum filled with sand, gravel, and sawdust on top). Of course, you must keep the water as free from chemicals as possible.
- Dilute greywater by 50 percent with water to speed decomposition and protect plants. Living plants are the best things for neutralizing greywater, but do not use this water directly on food plants; it should only be used for orchards or ornamentals.
- As much as possible, keep grey water underground or in pipes. If it's not used to water plants, an outflow hole (filled with sand, covered with wood chips) can be built on a well-drained area away from streams and neighbours. One possible system for plant watering would be a pit lined with plastic and filled with dirt, then plant trees and flowers in the pit.

For more information, see, "Greywater Use in the Landscape," Robert Kourik Edible Productions, Box 1841, Santa Rosa, CA 95402; and "Oasis Grey Water Information," Oasis Biocompatible Products, 1020 Veronica Springs Rd, Santa Barbara, CA 93105-4532.

Feature sponsored by Friends of Cortes Island Water Stewardship project

There are at least three
guarantees in life.

Most of us know the first two:
death and taxes.

Often we overlook the third: poop.

— *Septic Sense, Scents, Cents*. Washington Sea Grant Program.

The Johkasou system has been developed in Japan to treat domestic wastewater—both black- and greywater—in areas where there is no municipal sewage system. Johkasous are a form of bio-reactor that separates suspended solids from wastewater through sedimentation, purifies pollutants through biological processes (aerobic and anaerobic), stores separated sludge, and disinfects treated wastewater with chlorine. There are more than 1 million Johkasous serving over 10 million people, and more than 200,000 are installed every year. There are so many of these systems, large and small, that the Japanese government has laws regarding their manufacture, installation, maintenance, training, and inspection.

As long as the Johkasou system operates properly, the amount of separated and stored sludge will gradually increase, and the amount of chlorine needed will decrease. Unless it is properly managed, the accumulated sludge will exceed the system's storage capacity, resulting in sludge flowing out with the effluent and high use of chlorine. To prevent such problems and under the Johkasou Law, the system must be maintained and desludged correctly, and pass an annual inspection.

The Johkasou system has the following advantages: a) high treatment performance with low construction cost; b) a short time period for installation of a small-scale Johkasou; c) less topographic influence; and d) easy re-use of sludge. The key points of Japan's Johkasou/on-site wastewater treatment experience can be summarized as follows: i) sustained efforts of research and development; ii) education and training system for technical workers; iii) establishment of legal system for construction, operation, maintenance, and inspection; and iv) policy initiatives to promote Johkasou systems.

References and Resources

Hydroxyl Systems Inc., 9800 McDonald Park Road (Brody Guy); Sidney, BC V8L 5W5; Ph: 250-655-3348; Fax: 250-655-3349; email: hydroxyl@hydroxyl.com, web: www.hydroxyl.com

ECO-TEK Wastewater Treatments Inc.; 20543 96th Avenue, Suite #10; Langley, BC V1M 3W3; Ph: 604-728-9599; Fax: 604-882-9331; email: ecotek@windsong.bc.ca; web: www.ecotek.ca

Zenon Environmental Inc., 3239 Dundas St. West, Oakville, ON L6M 4B2; Ph: 905-465-3030; Fax: 905-465-3050; web: www.zenonenv.com

BC Sewage Disposal Regulation (Health Act): www.qp.gov.bc.ca/statreg/reg/H/Health/411_85.htm#1

Ministry of Health guidelines: www.crd.bc.ca/nsaanich/soilrpt/volume1/part3.htm

BC Water and Waste Association, Suite 221, 8678 Greenall Avenue, Burnaby, BC V5J 3M4; Ph: 604-433-4389; Fax: 604-433-9859; email: dhaylock@bcwwa.org; web: <http://www.bcwwa.org/>

John Rowe, Ministry of Health Planning; Ph: 250-952-1501; Fax: 250-952-1713

Bear River in Nova Scotia (interesting site): <http://collections.ic.gc.ca/western/bearriver.html>

An ecological wastewater recycling system in North Carolina: <http://www.waterrecycling.com>

Constructed Wetlands Information from the US EPA: <http://www.epa.gov/owm/mtb/decent/> and <http://www.epa.gov/owow/wetlands/watersheds/cwetlands.html>

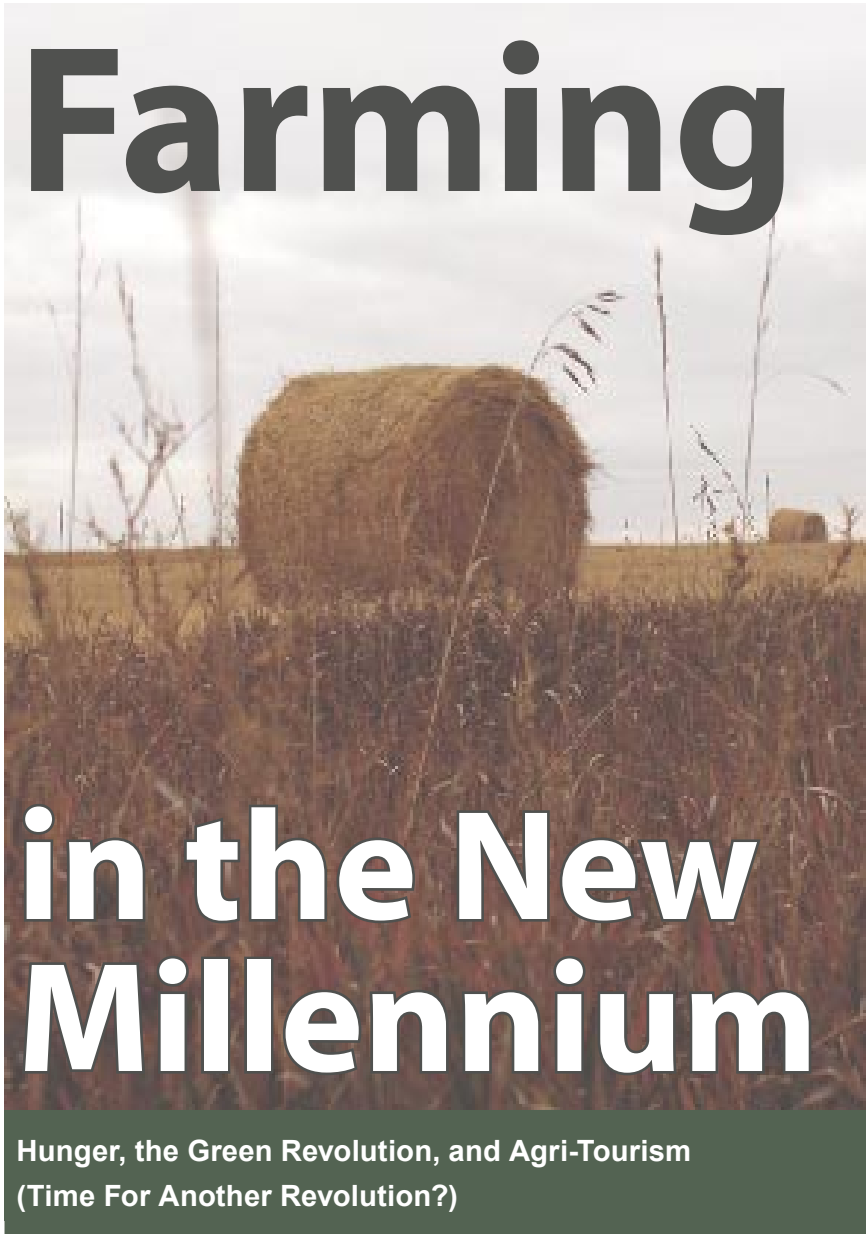
Center for Ecological Pollution Prevention [See previous issue of WS]: <http://www.cepp.cc/products.html>

Washington Sea Grant Program, Office of Marine Environmental and Resource Programs; 3716 Brooklyn Ave NE, Seattle, WA 98105-6716; Ph: 206-543-6600, Fax: 206-685-0380; email: seagrant@u.washington.edu web: www.wsg.washington.edu/about/about.html

Adam Joseph Lewis Center, Oberlin College in Ohio (Environmental Studies Dept) has a Living Machine wastewater treatment facility; web: www.oberlin.edu/envs/ajlc/Systems/Water/Tour/TourHome.htm

National Small Flows ClearingHouse (National Environmental Services Center), "Helping America's Small Communities Meet Their Wastewater Needs"; web: <http://www.nesc.wvu.edu/nsfc/>





by Bob Collins © 2003

Hunger is a daily reality for hundreds of millions of people. It rules their lives. Each day brings another grim struggle to find something to eat, often unsuccessfully. The heartbreaking reality for many is watching their children starve to death. Canadians (and Americans) enjoy a far more comfortable reality. Food is abundant and cheap. Much

of it knows no season. Fresh produce finds its way to our grocery shelves every day of the year. The rows of preserves that lined Great-Grandmother's pantry shelves are obsolete. No one need worry about having less than a week's food on hand; there are air-conditioned, conveniently located stores full of it. Perhaps even with Air Miles.

We can thank the "Green Revolution" for this plenty. While Green Revolution may sound like a New Millennium political campaign slogan, it was, in fact, coined by scientists and agrologists to describe the dramatic post-war (WW2) advances in agricultural productivity.

The Green Revolution is still in full swing, but its days are inevitably numbered. It was made possible by cheap and abundant water, cheap and abundant energy, chemical technology, and the industrialization of biology. Water shortages are an ever-present reality in the Canadian Prairies and in the entire US Southwest; price becomes irrelevant when there is nothing to buy. Cheap energy is over. The chemical fix has run its course. And it's hard to imagine how the process could be more industrialized. What efficiency model will replace the battery laying cage?

Among its many accomplishments, the Green Revolution popularised monoculture, consumed vast amounts of topsoil, made small farms obsolete, and enabled a massive and ominous corporate presence to insert itself between farmers and consumers. It is not hard to imagine what is driving the corporate agenda. It is most certainly not local food security and it is definitely not sustainability. *(The writer once tried to sell sweet corn to a local outlet of a multinational food retailer. The produce manager informed him that it was corporate policy not to deal with "locals." The writer asked if the policy extended to customers as well.)*

Genetic modification has been widely championed as the next great advance in the ongoing Green Revolution. Esoteric questions aside, it is hard to imagine GMOs significantly prolonging the status quo. (GMOs will be lucky if they can even offset the effects of climate change.) The looming truth is: the Green Revolution will ultimately fail most consum-

ers because it isn't happening where they are. There probably isn't a gene that will allow plants or animals to flourish without water; even if there was, it's a good bet there isn't one that will make a melon march from California to Winnipeg in January.

That brings us back to energy and the corporate agenda. While the term Green Revolution may have been coined to describe production increases in fields and barns, a more dramatic Green Revolution was occurring in the coffers of the corporate entities controlling the inputs, marketing, and distribution of the resulting bounty. Production costs and logistics aside, the notion that all the food for 400 million people can be loaded onto trucks and hauled more than a thousand miles every day, ad infinitum, is ludicrous.

There will be much denial and nay-saying from corporate bigwigs and the agrolgists and economists who work for them, but the writing is on the wall. Food and its delivery are going to cost an awful lot more. Believe it or not, this is good news for everyone. The Green Revolution has effectively hidden the true cost of food production for decades. Given the essentially parasitic nature of our species' relationship to its environment, the goal of absolute sustainability is probably unachievable; but given estimates that some North American topsoils have been depleted by 50 percent since 1950, we have little choice but to aim for it anyway.

The efficient farmer of the future will be the one who produces food where it is needed, relying on mixed farming and crop rotation to maintain soil fertility. The efficiency model of the Green Revolution—the farmer who can stay one step ahead of shrinking margins by turning the natural fertility of the land into money as quickly as possible—is ultimately doomed, along with the chemical alchemy that enables it.

The fiscal reality of the Green



“There probably isn't a gene that will allow plants or animals to flourish without water; even if there was, it's a good bet there isn't one that will make a melon march from California to Winnipeg in January.”

Revolution is that no more than 25 percent of an average dollar spent on food finds its way back to the farm gate (and most of that will be clawed back to pay for fertilizer, chemicals, machinery, and transportation). Monocultural production, multi-cropping, and concentration camp animal husbandry are the inevitable results.

So what's the good news? If even half of the 75 percent of the food dollar currently paying for national brand advertising, cross-continental shipping, convenience packaging, pre-cooking, air-conditioned muzaked fluorescent-lighted shopping comfort...et cetera, found its way back to the person who actually created the food, there would be a whole new agricultural revolution. Small, diversified farms would again be viable. Local production would have value simply because it's there and doesn't need a 1500-kilometre ride to the table.

A resurgence of locally based agriculture would empower consumers to redirect their food dollars to local farmers, who are attuned to the wishes of the end users and not corporate middlemen. *(The author once grew carrots as a commodity for a corpo-*

rate wholesaler. Faced with a mind-numbing selection of hybrid seed options, all with glowing testimonials, he decided to ask the seed merchant which one tasted best. The astonished seed merchant said he didn't have a clue and, anyway, taste was the last thing the author needed to worry about. Looks alone were all that mattered.) And, of course, the food dollars could be recycled through the local economy instead of sprinting for some corporate bottom line.

Will it all change tomorrow? No, because in most cases there isn't enough local production left to feed everyone. But there is a palpable agricultural resurgence taking place. Farmers' markets are springing to life across the country. Farmers are finding that consumers are indeed willing to pay for food grown locally by someone they know and trust. Increasingly, consumers are choosing to make their purchases at on-farm markets. Consumer desire for interaction with farms and farmers has spawned a whole new field of rural endeavour: Agri-tourism. From roadside stands to farm-stay guest cottages, many farmers are finding an opportunity to diversify their enterprises and help



Continued on Page 16 ➔

make them viable.

While agri-tourism might not spring into most minds when you mention farming, and is condemned by some as an improper activity for farm land, it is going to be a big part of the new farming revolution. It has the potential to make small farming viable, to encourage on-farm processing, to introduce the urban public to the where and how of producing food, to share the joy of farm life, and perhaps most importantly of all, to encourage another generation to see growing food as a realistic career choice.

Contemplating a farming career can be a sobering exercise. Long hours, low pay, and crushing debt just don't add up to a very attractive package. An agri-tourism component can add the revenue necessary for a real-

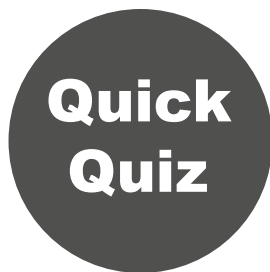
istic income. It can justify the wages needed to pay workers to lighten the work load. And it can have an unexpected and amazing ability to remove long term debt from the equation altogether. *(The author and his wife have a successful agri-tourism business [www.ArrowvaleCottages.com] in conjunction with their 70-acre farm. Because the income generated by the agri-tourism component of their business will support them, they have been able to turn the farming enterprise over to their son, who will not have to buy land appraised at \$10,000 an acre.)* [Ed. note: See "The Cow Ain't the Only One Who's Mad," on AgriTourism in this issue.]

The cost of something only increases when it is sold. The greatest benefit of agri-tourism may well be the ability to facilitate inter-gen-

erational farm transfers. As the Green Revolution lurches along looking for more and more dollars to sustain itself, the safest place to be might well be next door to someone with the ability and desire to grow food.



Bob Collins and his wife Ann, are farmers in the Alberni Valley. Bob is a long-time contributor to "Country Life in BC" (started in 1915 by Ma Murray) and the author of two books. His first, *Out Standing in Their Field: The Rural Adventures of Hap & Edna*, was short-listed for the Leacock Humour Medal. His newest book is *Dance With the One That Brung Ya: More Rural Adventures with Hap and Edna*. Both are available through your local bookseller. In both books, Bob's stories contain subtle (and hilarious) social commentary on the state of the family farm and the changing values in Canada's rural communities.



: How U.S. Democracy Works

Question: How is it that every industrialized nation in the world has banned Monsanto's rBGH as unsafe, but it's legal (and unlabelled) in the United States?

Answer: In order for the Food and Drug Administration (FDA) to determine if Monsanto's growth hormones were safe or not, Monsanto was required to submit a scientific report on that topic. Margaret Miller, one of Monsanto's researchers put the report together. Shortly before the report submission, Miller left Monsanto and was hired by the FDA. Her first job for the FDA was to determine whether or not to approve the report she wrote for Monsanto. In short, Monsanto

approved its own report. Assisting Miller was another former Monsanto researcher, Susan Sechen. Deciding whether or not rBGH-derived milk should be labelled fell under the jurisdiction of another FDA official, Michael Taylor, who previously worked as a lawyer for Monsanto.

Question: How did Monsanto's policies become US policy?

Answer: Prior to being the Supreme Court Judge who put G.W. in office, Clarence Thomas was Monsanto's lawyer. The U.S. Secretary of Agriculture (Anne Veneman) was on the Board of Directors of Monsanto's Calgene Corporation. The Secretary of Defense (Donald Rumsfeld) was on the Board of Directors of Monsanto's Searle pharmaceuticals. The U.S. Secretary of Health, Tommy Thompson, received \$50,000 in donations from Monsanto during his winning campaign for Wisconsin's governor. The two congressmen receiving the most donations from Monsanto during the last election were Larry Combest (Chairman of the House Agricultural Committee) and Attorney General John Ashcroft. (Source: Dairy Education Board)

—Organic Consumers Association, <http://www.organicconsumers.org/publications.cfm>

Really Round Up Ready

In June, Professor Bob Hartzler of the Department of Agronomy at Iowa State University informed the British government that four or five species of weeds have become resistant to the herbicide glyphosate, Monsanto's Round Up. The weeds have evolved the resistance through natural evolution due to repeated exposure rather than through gene transfer from Monsanto's genetically-engineered plants. —<http://www.weeds.iastate.edu>



How You Gonna Keep ‘Em Down On The Farm?

by Maggie Paquet

Down on the farm these days, visiting schoolchildren are wonder-struck when they realize the artfully designed (and marketed) little containers of yoghurt they pack in their lunches actually come from a big old Holstein-Friesian, with some exotically named bacteria mixed in. “Yuck!” say some of them, hearing the words *acidophilus* and *lactobacillus*. “Cool,” say others. “How many cows does it take to make one of those artificially sweetened, coloured, and flavoured six-packs of yoghurt (complete with corporate logo)?”

How many cows, indeed. And what does the average consumer know about cows, or any livestock? As it turns out, not much. With the conversion of more and more agricultural land into subdivisions, or bought up by multinationals and turned into factory farms, fewer and fewer people, especially kids, have the opportunity to connect with the land and animals that provide them with sustenance. The family farm has been besieged by the need to exchange a way of life for a bank account that seems perpetually in the red. So farmers do what they must in order to survive financially.

Financial survival doesn’t necessarily translate to sustainability—environmental or social. And farmers know that. Ghostly, once-thriving farm towns are scattered all over North America. Not wanting to be saddled with the crippling debt and stress of their parents, successive



Young campers feed the goats at Bob and Ann Collins’ beautiful Arrowvale Campground and Cottages in the Alberni Valley on Vancouver Island. Arrowvale offers fishing on the Somass River. Two other agri-tourism operations in the area are Farmer Bill’s, with a corn maze (maize... get it?) and hayrides, and Alpine Springs, a bed-and-breakfast and on-farm sales of flowers, herbs, vegetables, and berries.

Photo D. Broten

generations have moved away and forgotten the farming life. Their children never knew it. If they inherit the family farm, they either sell it off to the highest bidder (usually a corporation) or parcel it out for suburban development. Infrequently, they may try to farm it for a while, but the bank usually gets it in the end.

As discussed elsewhere in this issue, farmers are fighting back. They’re bringing some hope for sustainability back to farming through agri-tourism—a movement that not only benefits farms and rural communities, but has the potential to so educate the urban public that demand for healthful, local production can only increase.

The “agri-tourism movement” is growing. In British Columbia, the BC AgriTourism Alliance (BCATA) incorporated in 2002 and is in the process of doing a comprehensive survey of BC agri-tourism operations [see www.agri-tourismbc.com]. BCATA defines agri-tourism as:

...combin[ing] agricultural or rural settings and products within

a tourism experience...providing visitors with...agriculturally based experiences ranging from fruit and vegetable-stand shopping...to winery, orchard, garden, and alpaca tours, and from farm-based bed-and-breakfast [or other] accommodation to participation in harvest festivals, farmers’ markets, and cattle drives.

With tourism and community economic development agencies as partners, BCATA stresses the need for farm diversification as the key to rural sustainability in BC. BCATA thinks agri-tourism, which includes community-based value-added processing, will give rural communities more power to shape their own future. In our mountainous province, only about 3 percent of our landbase is suitable for farming. We can’t afford to waste it by turning it into subdivisions, nor can we let the corporate agenda take it over. Agri-tourism operations are springing up all over; look for, and support, the ones in your neck of the woods. You’ll be glad you did.

■

2020 Action Alert

Presented with the Compliments of 20/20 Vision
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In April Mr. Robert Thibault, Minister of Fisheries and Oceans, was presented with 14 recommendations by the BC government, aboriginal, commercial and recreational fishing groups, and environmental organizations, including:

- a new BC coast-wide policy committee to guide all major fisheries and oceans decisions, and;
- two salmon-fisheries management committees (one for the north coast and one for the south coast).

There still has been no action from the Department of Fisheries and Oceans to protect Cultus and Sakinaw sockeye stocks.

Please contact Mr. Thibault. Tell him to get on with the job of implementing those recommendations - NOW. As the minister responsible, he must ensure that threatened and endangered species are NOT fished to extinction.

The Honourable Robert G. Thibault
Minister of Fisheries and Oceans Canada
HOUSE OF COMMONS Ottawa, Ontario K1A 0A6
Tel: (613) 993-0999 Fax: (613) 990-1866
E-Mail: Min@dfo-mpo.gc.ca

(include your postal and e-mail address)
20/20 Vision, 103-2609 Westview Drive, North Vancouver BC, V7N 4N2

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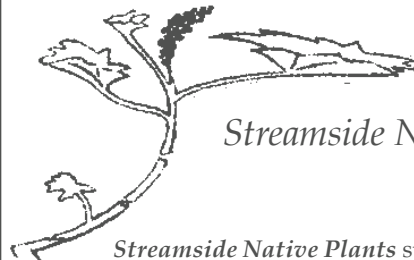
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To my way of thinking, Turnpike Exit 9 is a little slice of heaven. New Jersey is the Garden State, where activists grow like flowers. It's a state where you see tee shirts proclaiming, "Union and proud of it!" — and because of those unions, wages in New Jersey exceed the national average. As a result, many people have some breathing room to worry about their neighbourhoods and their children's health, and even to get nosy about their government. (Yes, folks, unions are essential to the success of every democracy. Unions are also the foundation stone of public health: inequality is our biggest killer disease by far, and labour unions are our best defence against inequality. When unions grow weak, the corporados roll you on the ground and have their way with you. Take a look around. But I digress.)

New Jersey is a state with a growing Environmental Justice Alliance, a state-wide Environmental Federation with 80 organizational members, and a Work Environment Council with 60 organizational members where labour, community, and environmental activists develop strategies together.

But of course there's a reason for all this energy, activism and commitment. Everyone in New Jersey lives within 10 miles of a toxic dump. There are at least 12,648 active contaminated sites in the state, and more are being created as we speak.

Yes, there's real trouble here. The streams and the tap water in much of New Jersey are contaminated with toxic metals, pesticides, antibiotics, flame retardants, deodorants, artificial colours, caffeine, benzene, pain killers, perfumes and fragrances, fuel additives like MTBE, anti-depressants, blood-pressure medicines, birth control pills, insulin, sunscreen, gasoline, and hormones that were injected into cows but soon leaked into the nearest stream. A low-level toxic brew.

A Long-Term



Photo Baby Kayla by Rick Aguar with digital compositing David Kahle, courtesy Little Pearls (www.littlepearls.org).

Risky Business

Everyone in New Jersey lives within 10 miles of a toxic dump. It seems like a good place to start applying the Precautionary Principle.

by Peter Montague

Excerpted from Rachel's Environment & Health News #763, Electronic Edition, April 2003

One thing hasn't changed — New Jersey (like the 49 other states) is still bogged down in a "risk assessment" mentality.

How does a "risk assessment mentality" manifest itself? Let me count the ways.

For instance: When university scientists released their shocking report listing 600 industrial chemicals in the state's waters, a reporter wanted to know what it all meant. The chief research scientist answered the question this way: "The question is, 'Is this something the body deals with at low levels, metabolizes, and there's no

problem? Or is this something that accumulates in the body? To be honest, we are just starting to deal with that question." In other words, what it all means is "scientific uncertainty" but trust us, we can "deal with that question" eventually. Until then, sit tight.

The take-home message was clear: scientists will have to determine the combined effects of all these chemicals on humans and wildlife before we can conclude there's a problem worth solving. We need scientific proof of harm before we can justify action to protect ourselves. That is

Continued on Page 20 ➔

Risky Business Continued

the essence of a risk-assessment approach, and it is rampant.

Let's examine the university's risk-based approach for a moment. Scientists now know that very low levels of some individual chemicals are biologically active in humans — especially humans in the womb. Some chemicals interfere with hormones at levels measured in parts per trillion, others in the low parts per billion. Furthermore, a handful of studies have now shown that harmless levels of several individual chemicals can combine together to produce harm.

But testing to measure the effects of mixtures of chemicals is extremely expensive and time-consuming. We'll never be able to determine the precise effects on the offspring of a pregnant woman who drinks (and breathes) a toxic brew of mercury, PCBs, manganese, dry cleaning fluid, benzene, birth control pills and who knows what else. Lastly, if we're drinking (or breathing) these chemicals every day, it doesn't matter if they build up in our bodies or not; even if we excrete all of them every day, we get a fresh new load every day, so our bodies are continuously awash in exotic industrial toxicants. Can this be good for babies? Is this what we want for our babies? Do we really need scientists to answer these questions for us? Ask any Mom.

No, the risk-based approach would study a problem like New Jersey's contaminated waters (and air) for 100 years and still never reach scientific consensus on the nature of the danger.

Corporations, of course, love this risk-based approach because it allows them to do their business in our water without ever taking any responsibility for the dangers they create.

A much smarter approach says, "All this crap in our environment is probably not good for babies, or for fish, and we could set specific goals

for cleaning our waters and then take real steps to reach our goals. We could continue to study the harms of individual chemicals and spread that knowledge far and wide so people know exactly how and why their tax dollars are being spent. We do need the best possible scientific information. But delaying action until we have scientific consensus on the hazards posed by combinations of 600 industrial poisons is a recipe for endless trouble."

Some would call this "precautionary action." Others would call it common sense.

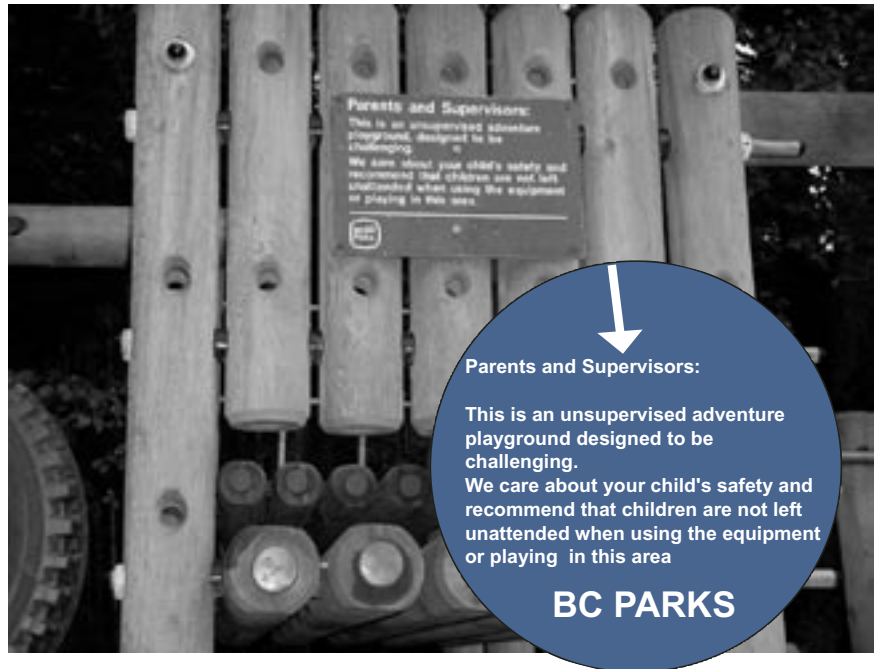
Here's another example of risk assessment at work.

At a meeting the other day, I ran into Jane Nogaki, one of New Jersey's most wonderful activists. Jane says to me, "New York has passed a law

banning the use of arsenic in new playground equipment. Don't you think N.J. could use a law like that?" I start to answer when a gentleman standing nearby chimes in. I believe his work is partially funded by the US Department of Agriculture, a lumbering agency in every sense of that word. Immediately he steers the conversation into familiar risk-assessment territory:

Gentleman: "I've been looking at this, and the only place you'd expect to find arsenic is in the soil immediately around the posts holding up the play set. It won't harm anyone there," he says in classic risk-assessor fashion.

Jane, smiling: "Actually, they're finding arsenic all over the play sets, where the children can get it on their hands. Arsenic causes cancer and it's a danger to the children."



Status of toxic wood in Canada

By a voluntary agreement, lumber manufacturers will no longer treat wood with Copper Chromium Arsenate after December 31, 2003, if it is to be used for non-industrial purposes such as play-structures, decks, picnic tables, landscaping timbers, residential fencing, or patios, walkways or boardwalks. Stocks can still be sold and used. Consumers are advised their current product is safe, despite concerns about leaching of arsenic.

Gentleman: "From what I read, it's only freshly-treated lumber that has arsenic on its surface. As play sets age, the arsenic is no longer measurable, so there's little or no hazard," he says, in best risk-assessor style.

"Actually," says Jane, smiling, "I've been reading just the opposite. It's the older play sets that have the most arsenic on the wood." The gentleman goes silent. Jane has nailed him.

I speak for the first time. "This is a risk assessment conversation," I say. "Maybe a precautionary approach would help. A precautionary approach would ask, What are our alternatives? What are the different ways of providing play sets for children?"

Jane smiles broadly. "Yes, there are non-arsenic wood preservatives, there are different kinds of wood that don't need preservatives, there are plastics, and there are metal play sets," she says.

Gentleman: "The exotic woods cost at least 20% more than arsenic-treated yellow pine and they don't have the necessary strength." A lumber guy to the end.

I say, "The play set at my early school could easily be in use today, 50 years later. It was made of sturdy metal."

At that moment the meeting is called to order. I reflect that the gen-

tleman has been using a risk-based approach to defend the status quo, doing his best to prevent people like Jane and me from asking the most basic precautionary questions:

(a) What are our goals for our children and the quality of our environment?

(b) What are our options for getting there?

(c) How can we prevent problems before they start?

(d) Shouldn't corporations have to test their products before they are

Delaying action until we have scientific consensus on the hazards posed by combinations of 600 industrial poisons is a recipe for endless trouble.

allowed to market them?

Those questions are fundamentally different from, "How much arsenic-treated wood is safe for children at play? How much PCB-mercury-Viagara-contaminated fish can a pregnant woman eat without damaging her unborn baby's brain?"

The true answers to the precautionary questions can be known through a process of democratic debate. On the other hand, the true answers to the risk questions are

forever unknowable, subject to endless scientific uncertainty. So long as we allow uncertainty to paralyse us while we search for the Holy Grail of scientific consensus, the corporados will rule the day and our children will get sick: cancer, asthma, reduced IQs, attention deficits.

Risk-assessment thinking created New Jersey as it is today: dangerously contaminated by unaccountable corporate decisions, aided by governments and scientific risk assessors. The best hope of turning things around is starting to think and speak in a precautionary way. We can do this. It is starting to happen. So long as we retain the right of free speech, this surging sea change is something that the corporations and the governments they own simply cannot stop.



To see the full article with footnotes, go to: <http://www.rachel.org>. To subscribe (free), E-mail listserv@lists.rachel.org with the words SUBSCRIBE RACHEL-NEWS YOUR FULL NAME in the message.

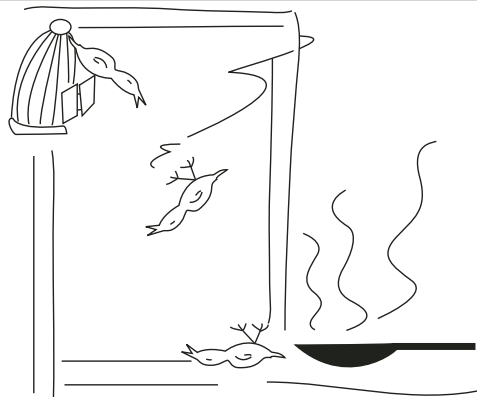
Environmental Research Foundation, P.O. Box 160, New Brunswick, N.J. 08903. Fax 732-791-4603; E-mail: erf@rachel.org

See also *San Francisco Goes Precautionary, MillWatch*, p. 26

GAS FROM NON-STICK POTS KILLS BIRDS

In May, the Environmental Working Group (EWG) released a study showing that non-stick pots and pans can heat to temperatures where they gas off toxic fumes that are strong enough to kill pet birds. The EWG report, *PFCs: A Family of Chemicals that Contaminate the Planet*, says the non-stick cookware, including Teflon, containing ammonium perfluorooctane (PFOA), was never assessed by the government before its general use. A draft risk assessment by the EPA on PFOA found evidence of high developmental and reproductive health risks to humans, in particular to children and women of childbearing age.

See <http://www.ewg.org/reports/pfcworld/>





by Don Malcolm

Photo Full Earth, NASA, from Apollo 17, 1972

Landscapes are a central theme to all of humanity, probably as much a state of mind as of geography. All cultures, and individuals within those cultures, hold within their very centre, like an engraving on the mind and heart, a vision of landscape that is personal and precious. What seems to one the lodestone that informs his journey and yearnings through life may appear to others commonplace. But, perhaps it is the larger canvas, made up of all the personal and precious landscapes, burned into the hearts and minds of the world's people that makes our planet the beautiful place it is.

So it appeared in the breathtaking photograph beamed back to earth from Apollo 2, thousands of miles in space, without political boundaries and turmoil, a jewel shining in the universe.

My personal landscape lies little more than a hundred miles west

of Ottawa, up the Madawaska River watershed to a place where time was measured by passing seasons. The surrounding hardwood hillsides heralded each season in turn.

The brilliant colours of autumn presaged the coming of winter when grandfathers selected, from stocks of seasoned beech, ash or maple, boards which would be sawn, planed and shaped by hand tools, the ends boiled in a cream can on the kitchen stove then bent on a home-made press to produce skis. After an application of sealing wax or crayon, applied with a hot clothes iron, the child whose turn came round at last got a new set of skis.

We recognized no difference between cross-country and downhill skis. It was thrill enough for us to be able to travel on top of the deep snow, making trails through the forest, labouring up the steep slopes and gliding down. Some of the trails covered considerable distances,

crossing marshes, lakes and ponds, allowing access to places we couldn't go in summer, a track home to guard against becoming lost, our own private nature trails. Access to a forest in winter was a boon to inquisitive children. Wild animal footprints were numerous, prompting imaginative young minds to speculate as to what had crossed the trail. Was it a bobcat, a lynx perhaps? Are those fox tracks there? Did a timber wolf cross here, or was it only an old redbone hound, having slipped his chain, working the runway of a snowshoe hare?

My landscape was a place in time, where enough was plenty, waste was sin and excess was unimaginable.

In winter, horse-drawn home-made sleighs provided transportation. Going home late at night after a visit in the community, snuggled down in hay and covered with blankets, was a delightful experience for children. On dark nights when the moon did not compete, stars provided a dizzy-

ing canopy to quicken a child's imagination and speculation about other worlds and things unknown. When the moon shone silver-bright on the snow our landscape was a spangled wonderland of frost crystals, shadows, and visions both familiar and new that rivalled the starlit canopy. The music of harness bells and the creaking and hissing of sleigh runners on frosty snow must surely intrude on, and enhance, the "life symphony" of all who came out of that experience to the world beyond.

Light wagons served in summer. They were noisy, rough, utilitarian, dusty, and had far less magic than the sleighs.

Spring brought a warming of days and the rising of sap in the maple and birch trees, the making of maple syrup, sugar, taffy on snow and birch vinegar. Late spring melted the snow and ice in the lakes and streams and decorated our landscape with a sudden rushing extravagance of wildflowers, and opened the buds that spread a fresh mantle of green over the hardwood hills, and promised summer.

Time ground slowly to summer for the children in the one-room school that served our community. The west wall of the school contained the windows that let the light into the classroom. There on a windowsill the pencil sharpener was mounted. Many pencils were reduced to shavings by children turning away on the crank while gazing out at the steep hill that rose a few hundred yards to the west, which we called Ab's Mountain, or just "The Mountain." From the top of that hill looking westward two lakes could be seen where we knew that trout and northern pike lurked, and farther to the southwest another range of hills hid the lake where the bass waited. To the north and east was a panorama of scattered houses, small cultivated areas, sometimes a few cat-

tle and horses, and ridge after ridge of hills to the Madawaska and beyond. To look in any direction from the top of the hill, it seemed the whole world we knew lay in a bowl formed by the ridges that surrounded our vantage point.

My landscape was a place in time, where enough was plenty, waste was sin and excess was unimaginable.

Twice a year the teacher would treat the pupils to an excursion to the top of The Mountain. These outings occurred when the autumn colours were at their most glorious, and in those long, long, dragging days before the summer holiday, when the pencil sharpening activity reached a frenzied pace.

But summer always came and was gone far too quickly. It was a time of lazy bare-foot days at the lake, swimming and fishing for bass, or following one of the many small streams, tempting eastern brook trout

with a baited hook dangled on a string from an alder sapling fishing pole.

At least once each summer we hitched the horses to the wagon and followed the ancient wagon road to the Madawaska River, about five miles to the north of our home, where we would spend a few days. In our excitement we children usually ran ahead, but not too far because there were bears. We slept in an old log shack on the riverbank or outside under the pine trees if it didn't rain. Nights were filled with the sound and fresh clean smell of the river, the night calls of birds, both familiar and strange, and sometimes unidentifiable sounds that caused us to lie very still under our covers and wonder about dangerous wild animals, ghosts and such. Each dawn found us awake, anxious for whatever the days had to offer.

Throughout the nineteenth and early part of the twentieth centuries, in the heyday of the great riverdrives, the forests adjacent to the river had been logged, the timber floated down the river to Quebec. Tales of the hardships of that occupation, the excitement, bravery and tragedy, were



an inherited part of our folklore. Upstream from our campsite the Snake Rapids held a particular interest for us. There the river drivers had hammered large metal eye-bolts into holes drilled in the rocks, to secure side booms to divert logs from areas where they would get caught in the twisting, tumbling turns of the rapids and cause logjams. Repeated warnings from elders urged great caution there.

Below the rapids, on the shore of a small bay near our campsite, was a clearing known as the Antoine Field where it was said that Algonquin peoples had camped for uncounted centuries before the arrival of strangers in their land, and the imposition of Indian reserves. How they must have enjoyed their river that had become ours. It was easy to imagine dark-eyed children watching us from just beyond the ring of light from our campfire at night.

We never got enough of the river. No matter how long we stayed, we left with great reluctance. Those trips to the river were one of the highlights of our simple lifestyle.

Summer was not entirely a time of loafing; in fact it was probably our busiest time. There were gardens to plant and tend, cows to milk, calves and pigs to feed, wild hay to harvest in the swales, a winter's firewood supply to cut, wild berries to pick and preserve. Adults organized trips

to the hills where wild blueberries grew. Children were not allowed to go alone because of the bears. Trips to the blueberry hills were enjoyable community picnics.

We were self-sufficient and secure in our routines governed by the

We never got enough of the river. No matter how long we stayed, we left with great reluctance.

circles of the seasons. Looking backward, it's possible to determine when our world began to change.

Occasionally in summer, cars travelled the narrow dirt roads of our community. People came to visit. Some came to try to sell something. Some, it seemed, just came to look. We, in turn, were fascinated by the cars that brought them.

Sometime shortly before the beginning of World War 2, the first radio came into our community. Each night, in the houses that had them, we gathered round those radios enthralled with the exploits of Jack Armstrong, The Lone Ranger, Tom Mix, and many others. Presentations of music such as we had never experienced before, ranging from folk through jazz to full orchestra to classical, filled the

houses at full volume. On Saturday nights, from Nashville Tennessee, the Grand Ole Opry afforded us our first exposure to American culture. The radio brought us news from around the world and close to home, and from Ottawa, at 10 A.M. each weekday, the

Dominion Astrophysical Observatory time signal, by which our world began to set its watches.

If there was one historical juncture that would pinpoint the beginning of change to our community, and others like it, possibly it was the coming of the radio with its tightly timed programming, including the time signal from Ottawa. Time gained a new significance that required adherence.

Radio, also, with its commercial messages, made us aware that there were many things in the outside world that we wanted.

Although logging had been a traditional activity, concentrated in those areas close to the river, the pace had lessened somewhat since the days of the river drives. Lack of local capital and equipment denied local residents the opportunity to harvest the considerable stands of timber in the surrounding Crown forests.

Before the close of World War 2, small to medium sized lumber companies from outside the community established sawmills and began, under permit, to harvest timber on Crown lands. Local residents who had not already gone to the cities to work in the factories of the war effort were able to find employment in the timber industry, although the pay was quite low.

In winter, taking advantage of frozen streams, swamps and lakes, the trees were felled, cut into log lengths and skidded with horses to selected locations. From those locations (skidways), before spring break up, the logs were loaded on large logging sleighs and hauled by heavy draft horses to the mill sites. On Saturdays, when school was out, children petitioned teamsters to be allowed to ride on top of the loads.

The physical appearance of our landscape began a gradual change as the population, for the most part, shifted activity from subsistence



farming to wage earning, and to dependence on towns outside the community for the supply of food and other necessities. Our life-style, our self-reliance, our security began to slip away.

Over time the fields that had pastured cattle, horses, pigs and sheep, and produced food for the families that lived there, grew over to brush, the pioneer species that begins the natural process of reforestation of unused cleared areas.

When the war ended, industries quickly shifted focus from manufacturing war materials to satisfying the needs and wants of the general public. They had a lot of new technology, the development of which had been funded by public money, and they were anxious to reap the corporate profit waiting in the hungry market place. After six years of war with its accompanying hardships, rationing and deprivations, people were hungry

for consumer goods. The stage was set. Waiting in the wings was a catalyst that would carry the market place to unprecedented heights.

Consumer financing would be the willing genie to fan the flames of desire in the general population, while stoking the furnaces of production in the manufacturing sector. From electric can-openers to clock radios that turned on or off automatically at pre-set times, toys and gadgets staggered the imagination. Household furnishings, labour saving appliances such as washers, dryers, refrigerators and freezers raced each other off the assembly lines. So frenetic was the pace of introduction of new and improved models that many items went from new to obsolete in less than two years. The arrival of television would hold the attention of North Americans for decades up to the present time, and become a tool of the manufacturers and advertisers.

Cars. They hit our community like a Christmas morning. Consumer financing put private automobiles within the grasp of anyone who had a steady job. Automobile manufacturing had been severely curtailed during the war years. When car makers geared up after the war, those who could afford the new models traded in their pre-war models and bought the new ones. The older cars were bought by the less affluent. Before long the previously cultivated areas that had sustained families became littered with broken down automobiles and broken dreams.

But it was a time of increased mobility and

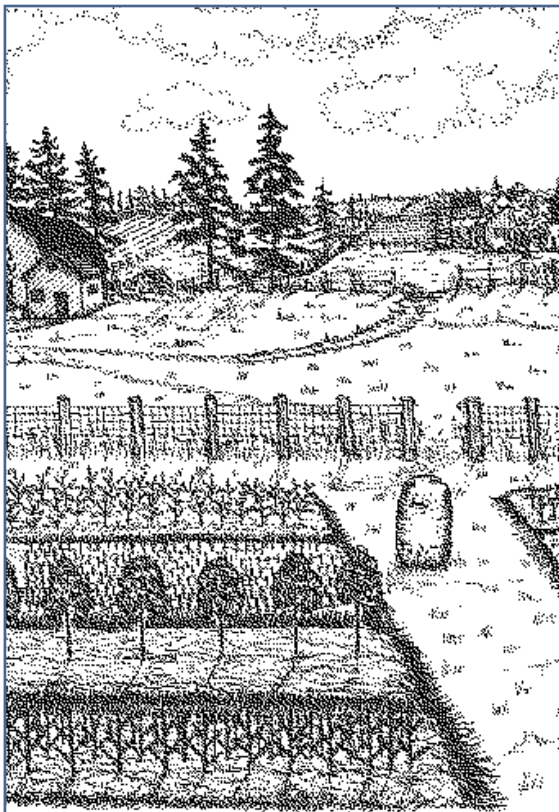
promise. Young people approaching maturity went away to the cities, to further education, to jobs in factories, offices and stores. Young men would be lured by the glamour of long-haul trucks, which were beginning to crowd the ever-expanding highways. Others would work at highway construction. Another war was under management in Korea. Some went to the armed forces.

In all communities, landscapes steadily changed as highway systems expanded to accommodate more and more vehicles. Millions of acres of prime farmland disappeared under pavement and concrete overpasses as cities expanded over the agricultural land that had justified their original establishment. Now long-haul trucks haul heavily subsidized food crops from the southern US and Mexico to satisfy the appetites of northern cities. Meanwhile, the prime mover of our considerable mobility, the world's finite supply of oil, is diminishing. We will be faced with some tough choices in the future.

Humans are a marvellous species. We function best, achieve most, when faced with adversity. When we recognize problems we set about to head them off. Perhaps the future will see a drift back to a community style of living, with emphasis on sustainable practices where families produce most of their food on the land on which they live. Maybe we will consider trading our lawn mowers for hoes.

Whatever the future holds, there will still be those who look back in fondness to personal and precious landscapes, burned into their hearts and minds.

We would do well to remember a line from a Robert Service poem: "We bore the famine worthily, but we lost our heads at the feast."





San Francisco Builds a Bridge to the Future

In a stunning breakthrough in environmental management, the San Francisco Board of Supervisors adopted the precautionary principle as city and county policy on June 17, 2003.

The road to the victory was long and extremely political, involving key leadership inside and outside the city's governing structures, help from most of the major organizations involved with toxics and health in the US, as well as dozens of grassroots organizations, co-operating under the guidance of Jared Blumenfeld, hired to head the city's Department of the Environment.

The statement is based on several key assertions:

- Every San Franciscan has an equal right to a healthy and safe environment.
- Historically, environmentally harmful activities have only been stopped after they have manifested extreme environmental degradation or exposed people to harm.
- San Francisco is a leader in making choices based on the least environmentally harmful alternatives, thereby challenging traditional assumptions about risk management.
- As the City consolidates existing environmental laws into a single Environment Code, and builds a framework for new legislation, the City sees the Precautionary Princi-

ple approach as its policy framework to develop laws for a healthier and more just San Francisco.

•A central element of the precautionary approach is the careful assessment of available alternatives using the best available science...This process allows fundamental questions to be asked: "Is this potentially hazardous activity necessary?" "What less hazardous options are available?" and "How little damage is possible?"

•San Francisco looks forward to the time when the City's power is generated from renewable sources, when all our waste is recycled, when our vehicles produce only potable water as emissions, when the Bay is free from toxins, and the oceans are free from pollutants.

As you read through this policy, ask yourself, would my local work be easier if precaution were official policy in my community? Why not campaign to make it so?

- *Rachel's Environment & Health News* #765, March 20, 2003

http://www.breastcancerfund.org/pp_precaution.htm

Don't miss the Commentary by *Reach for Unbleached* Program Director Jay Ritchlin, "EPPs Offer a Value Added Market," in the September 2003 issue of *Pulp and Paper Magazine*, available at www.paperloop.org

THE SAN FRANCISCO PRECAUTIONARY PRINCIPLE.

The Precautionary Principle requires a thorough exploration and a careful analysis of a wide range of alternatives. Using the best available science, the Precautionary Principle requires the selection of the alternative that presents the least potential threat to human health and the City's natural systems. Public participation and an open and transparent decision making process are critical to finding and selecting alternatives.

Where threats of serious or irreversible damage to people or nature exist, lack of full scientific certainty about cause and effect shall not be viewed as sufficient reason for the City to postpone measures to prevent the degradation of the environment or protect the health of its citizens. Any gaps in scientific data uncovered by the examination of alternatives will provide a guidepost for future research, but will not prevent protective action being taken by the City. As new scientific data become available, the City will review its decisions and make adjustments when warranted.

Where there are reasonable grounds for concern, the precautionary approach to decision-making is meant to help reduce harm by triggering a process to select the least potential threat. The essential elements of the Precautionary Principle approach to decision-making include:

1. Anticipatory Action
2. Right to Know
3. Alternatives Assessment
4. Full Cost Accounting
5. Participatory Decision Process

The Board of Supervisors encourages all City employees and officials to take the precautionary principle into consideration and evaluate alternatives when taking actions that could impact health and the environment, especially where those actions could pose threats of serious harm or irreversible damage.

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Portland, Oregon: First City To Incorporate The Common Vision on Paper into Law

Portland has long prided itself on being in the forefront of recycling and environmental issues. Now they are the first to incorporate many of the results of the Environmental Paper Summit into their new Sustainable Paper Use Policy, with the guidance of the Center for a New American Dream, which also coordinated help from *Reach for Unbleached*, Conservatree and others.

The American Forest & Paper Association (AFPA) was not nearly so enthusiastic and launched a high-pressure lobbying attack two days before the City Council vote.

Faced with hardball tactics, what did the Portland City Council members do? They passed the policy unanimously on June 11, and even accelerated the transition to PCF/TCF papers from 2006 to 2004.

Policy Statement

The City of Portland shall incorporate sustainable practices in its procurement, use, and disposal of all paper products. Sustainable practices include, but are not limited to:

1. Reducing paper consumption.
2. Considering fibre source and type, paper processing methods, and recyclability in paper purchase decisions in addition to price, performance quality, and end-use application.
3. Reusing and recycling paper products.

Action Items:

Reduce

- All equipment to have duplex capability so they can print on both sides
- Move printers to central locations; remove desktop printers
- Set duplex mode as default for printers

Paper Criteria

- Within one year, meet current U.S. Federal Procurement Standards, with the exception of recycled content for tree-free products
- A paper products purchased by the City will be processed chlorine free (PCF) or totally chlorine free (TCF), by July 2006. "Paper products that are processed elemental chlorine free (ECF) DO NOT meet this criterion."
- By July 2004 10% of all paper product purchases will meet fibre-sourcing criteria such as being free of fibre from endangered forests, plantations, genetically modified organisms
- Non tree fibres to be grown and harvested using sustainable farming practices
- Credible Chain of Custody certificate required

Performance Tracking

- All departments to document strategy to meet paper criteria and reduction policy in both external and internal usage
- All departments to track copy, printing, and writing paper consumption

Making Paper to Sustain the Earth

"Whereas

'The Lord is God, let the earth be glad,
let coasts and islands all rejoice,
cloud and mist enfold God, righteousness and justice are
the foundation of God's throne' (*Psalms 97: 1-2*)

Whereas Our United Church Creed invites us to 'live in respect with creation'

Whereas our scriptures invite us to be stewards of the earth (Genesis etc)...."



So declaring, the Burnaby/Vancouver congregation of the United Church has passed a Paper Resolution calling on the church to purchase environmentally sustainable paper (recycled and totally chlorine free). The lengthy resolution mentions the *Reach for Unbleached* Buying Club as one possible source for the paper. It also calls for an adjustment to the budget for the office of the Church to absorb the anticipated extra 10-20% in cost over current paper.



Water Stewardship So Far!

by Kathy Smail

Wow! Already the sun has softened, morning fires kindled in the woodstove, and the long awaited autumn rains have begun. It has been a very busy summer for us here in our little office.

Erin, Paul and Jessika, this year's ToxicSmart Youth Team, have been active with their "tabling" (the new lingo for running a booth) and pledge collecting. The Georgia Strait Alliance ToxicSmart program has provided the model for our team, and has been a marvelous source of detailed information and inspiration. It's encouraging that so many fellow Cortesians are willing to re-think their brand and use of household cleaning products.

Liesa, FOCI's Office Assistant, has been busy engaging upland property owners in Living by Water's

(LbyW) Shoreline Ambassador program. Using the LbyW Shoreline Action Checklists, homeowners are quizzed about their home habits and habitats, challenged to make changes, and rewarded for taking positive steps to live in a "shoreline-friendly way." This program has provided an excellent opportunity for individuals who live close to the water's edge to discuss problems and ideas about foreshore landscaping, septic issues, and water quality and conservation.

Delores, our researcher, has been bustling about developing our own "Septic Challenge" for local owners



of traditional septic tanks and fields, water stewardship articles, and the soon to be released, "Scoop on Poop" booklet, a compendium of our experiences and learnings about water stewardship issues and solutions on our island home.

And me? Well, beyond my regular office and Board work, I've been weaving in and out planning and coordinating this Water Stewardship work. This fall we will be busy with group consultation on the larger sewage disposal issues and will have (for this leg of the project) a final event in the septic care series about home package treatment plants. Check out the FOCI sponsored article in this issue. This summer's drought has been a fierce reminder of the need for alternatives to flushing our most precious resource down the drain.

For more information contact the FOCI office

Phone/fax: (250) 935-0087

Email: foci@island.net

Mail: Box 88, Whaletown, BC, V0P 1Z0

Further Water Stewardship Sources:

www.livingbywater.ca

www.georgiastrait.org

SUSTAINABILITY HOME SHOW 2003!

Last year's 'alternative home technology' event was such a great hit that we've made it an annual event.

The Sustainability Home Show, a take-off of "home shows" in the big cities, introduces folks to available alternative technologies and information for their homes to become more sustainable.

From water conservation products and low impact building techniques to renewable energy products and smart consumer information,

this is the show with something for everyone.

On Saturday October 18th, 11am to 4pm, join us at the Manson's Community Hall for

worm composting, cob building and water testing; light bulbs, enviro-friendly cleaners and solar water heaters; plants for grey water systems, recycled paper and septic system advice;

kid activities, organic munchies and door prizes; eco-village concepts, recycling and.....

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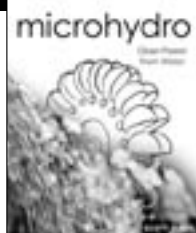
on the street November 1, 2003

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Jim Merkel

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Bill Weaver, Across Borders Media.

I directed my first documentary, Turning the Toxic Tide, around the same time the Watershed Sentinel got underway. In fact, some of the first issues were produced out of our small cabin on Cortes!

Today, my island-born company, Across Borders Media, continues to thrive, as does Media that Matters, a yearly gathering of caring media professionals I convene at Hollyhock. As the issues of this region grow in their complexity, my respect – and support -- for the Sentinel's solid journalism continue to deepen.



Bill Weaver
Sustaining Subscriber

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