



Wild Lands Advocate 10(2): 4-5, April 2002

Fresh Water Oil Floods: The Ultimate Bulk Water Export

By Dale L. Watson

Recent episodes of E. coli contamination of drinking water have focused national attention on the fundamental importance of access to clean drinking water. Perhaps widespread concern aroused by these troubling, sometimes deadly events signals a substantial shift in attitude about this essential element of life, which is based on a more realistic awareness of the preciousness and scarcity of fresh water both here and around the world.

In the past, Canadians have generally taken water for granted. Each day we use over 300 liters per household, almost twice as much as the average European. We live as if the supply of fresh water were endless. It is an illusion which those who lobby aggressively for bulk water exports try to keep alive by reminding us regularly that we are home to more fresh surface water than any other country (over 9% of the total world supply). Prime Minister Chretien, and others who should know better, reinforce the perception of over abundance by erroneously referring to water as one of our renewable resources. "Focus on Ground Water," a publication of Alberta Environment, states on page 3, "Water is Alberta's most important renewable natural resource."

Yet, as far as we know, the earth's supply of water has never changed. Water recycles constantly, but neither the earth nor humans are able to create more water. Also, in spite of appearances in parts of Canada, we do not have an over abundance of fresh water. Ninety seven percent of the earth's water is saline and less than one percent of fresh water is available for our use; the rest is frozen in glaciers and the polar ice caps. An even more sobering fact is that only 5% (some say 2%) of available fresh water is on the surface; the remaining 95% is underground.

This means that billions of organisms depend on only 5% of available fresh water for life. It also means that the importance of ground water cannot be overstated. Potable water is a scarce, nonrenewable, absolutely essential element of life. Yet we use it to flush and absorb enormous quantities of chemical and biological pollutants, and we waste it as if we had no care or responsibility for the quality or viability of life on this planet.

When we know that the supply of fresh water, especially clean fresh water, is finite and scarce, we are, or should be, appalled by government policies which allow oil producers to inject fresh water into oil wells to increase the recovery rate.

This is not a recently developed technique. Many companies have been using it here since the early 1960's. As the cost effectiveness of this method of pressuring up oil fields became apparent (water is cheap), the volume of water used for this purpose increased steadily. Producers took water from the closest accessible source: sloughs, lakes, streams, rivers or aquifers. When other large volume users of water complained about the quantity of surface water being used for oil floods, oil producers shifted their attention to that hidden, "under utilized" source of millions of cubic meters of water, deep fresh water aquifers.

Nevertheless, the controversy over the use of fresh water by oil companies, mostly unnoticed by the general public and ignored by the media, continued. On March 27, 1990, The Honourable Ralph Klein, Minister of the Environment, publicly announced a ground water allocation policy for oil field injection. This policy was supposed to demonstrate "a commitment to the principles of conservation and multipurpose use of this valuable water resource,...substantially reduce the conflict over the use of





potable ground water for oil field injection in agricultural areas and ... allow the province to allocate some potable ground water for oil field injection purposes."

Mr. Klein said further that this policy would prevent the overuse and waste of this vital resource. But it did not prevent the overuse and waste of water or reduce the conflict. It simply regularized and further accommodated what was already happening, easy access to huge quantities of fresh ground water by oil producers continued unabated.

Last year water diversion permits for oil floods totaled 45.4 billion gallons (17 billion gallons from aquifers), about five times the volume of Sylvan Lake, enough water to serve the city of Red Deer for 20 years. When water is injected into the earth to the depth of an oil well, it is removed from the water cycle forever. Even if it were recovered, it is completely contaminated. If 45.4 billion gallons of potable water has been rendered inaccessible and undrinkable in one year, how many billions of gallons have disappeared from the biosphere in the past 40 years? The government claims to know but is unwilling to disclose the numbers.

I became aware of fresh water oil floods 18 months ago during a public presentation/discussion on ground water sponsored by the Red Deer Chapter of the Council of Canadians. During the discussion members of the Butte Action Committee for the Environment told their stories of conflict with oil companies seeking ground water diversion permits. A resident of the Butte community sparked the formation of this organization when she became alarmed by a notice of application for a water diversion permit published in the Western Star.

The notice stated that Petro Canada intended to draw water from aquifers at depths of 0-500 meters for a large oil flood. Talking with neighboring farmers and ranchers uncovered wide concern about the potential depletion of aquifers in the area. When protest letters, petitions and talking with officials of Petro Canada and the Water Department of Alberta Environment failed to meet their objections to this gross waste of fresh water, they decided to organize.

A group of individuals and families from the farms and towns of west central Alberta gathered in Dec. of 1999 to establish an organization that would "monitor various threats to the ground water and ensure the availability of sufficient quantities of clean water for all domestic uses in the future." Since then this group of citizens (now about 180 members) has become a strong, clear voice: (1) objecting to the misuse and abuse of water by oil producers; (2) denouncing the government policy which gives them the right to do so; (3) calling officials of Alberta Environment to account for being more concerned for enabling the objectives of oil companies than for conserving water and protecting its quality; (4) identifying the flaws of the new Water Act (1999); and (5) arousing public awareness of the enormous volume of fresh water which has been and is being removed from the biosphere.

Although fresh water is a cheap medium for increasing the percentage of oil recovered from a field, others are available. Vast quantities of underground salt water could be used for oil floods. Also water pumped to the surface with oil (i.e., produced water) could be re-injected for this purpose. In Saskatchewan, Pan Canadian Petroleum is injecting several million tonnes of carbon dioxide per year into a 46-year-old oil field. Oil producers have used natural gas in the same way in the Rainbow Lake/Zama region of the province.

The Alberta government's 1990 policy statement on the use of ground water for oil floods contained an "understanding" that an "appropriate level of investigation" of alternatives to fresh ground water would be conducted prior to the submission of a water diversion application, but it is difficult to find evidence that either Alberta Environment or oil producers have given this "understanding" more than lip service. Obviously, alternatives to "business as usual" will not happen unless a substantial number of aroused





citizens persuades the government to change its policy on the use of fresh water for oil well injections.

It is ironic that the Klein government has had the good sense to enact legislation forbidding the bulk export of water beyond our borders, and at the same time, to allow oil producers to remove billions of gallons of water per year from the water cycle. I cannot imagine a more extreme form of bulk water export.

(Dale Watson is a retired United Church minister and currently chairs the Water Committee of the Red Deer chapter of the Council of Canadians. This article also appeared in the Fall 2001 issue of the Parkland Post.)

