

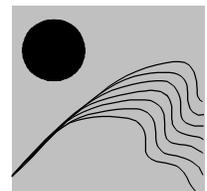
# *INQUIRIES* For a Sustainable Future

*A Decision-making Approach  
to the Study of Selected Canadian Issues*

## CANADA'S FRESHWATER

A Commodity for Export,  
A Resource for Conservation?

*Questions for a Strategy for Sustainability*



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## CANADA'S FRESHWATER

### **A Commodity for Export, A Resource for Conservation?**

Water is one of the Earth's most abundant and reliable resources. Self-renewing and constant, the world's water supply replenishes itself in a never-ending cycle of evaporation and precipitation. Yet only one tenth of one per cent of the world's water is suitable for human use. Rising populations, especially in developing countries, tax an already scarce resource. Pollution threatens the quality of usable water in the North and the South alike. The potential for conflicts between states over rights to international water courses is increasing. The sustainability of the world's freshwater resource is an urgent global issue.

For Canadians, the sustainability of freshwater has never been a concern. We are one of the world's richest countries in terms of freshwater and we take its abundance for granted.

Canada's per capita use of freshwater is higher than anywhere else, yet the quality and availability of freshwater are declining in some parts of the country, while others already face water shortages. A decade ago, the Minister of the Environment warned that "in no part of Canada is freshwater so plentiful that it can continue to be overused and abused as it has in recent decades. We must start viewing it as a scarce commodity that has real value and we should be managing it accordingly."

Managing Canada's freshwater is a complex issue. Traditionally, provinces have jurisdiction over the freshwater resources within their boundaries, while the federal government is responsible for international agreements and matters pertaining to the general interest of Canadians.

But rising demands on this vital resource have raised the need for a clearer national strategy regarding freshwater management. A freshwater strategy was developed in 1987 but did not pass into law; however, today the federal government is taking steps to bring it up to date and address new questions. One of the questions that must be resolved in this new freshwater strategy is the export of Canada's freshwater.

The idea of freshwater as a commodity for sale, like oil and timber, has always been unpopular with Canadians, but the question seems to keep recurring. Megaprojects to dam and divert Canadian rivers to supply drier parts of the country and the United States have been advocated, rejected and reintroduced, demanding a definitive national response and policy. Commercial projects to export water from rivers and aquifers are increasing and often raise local conflicts of interest. Proposals to privatize freshwater have been put forward.

Is freshwater a commodity, or a priceless resource to be protected? Who owns freshwater and who would benefit from its exploitation?

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## CANADA'S FRESHWATER

### A Commodity for Export, A Resource for Conservation?

1. Freshwater is part of Canada's identity. Comment.
2. What would be the benefits for Canada of large-scale water diversion projects, such as the one outlined in reading #3? What would be some of the costs? Do the benefits outweigh the costs? Explain your answer.
3. The sale and export of bottled water from Canadian rivers and aquifers is a rapidly expanding business. How would you assess the benefits and costs to communities of opening a bottling plant?
4. Do you agree that the solution to water scarcity is to price it more realistically? What would be your opinion about privatizing the water in your province or community?
5. The federal government is consulting with provinces and other partners to develop a new national freshwater strategy. Do you agree that a national strategy is needed? Give reasons for your answer.
6. What national policy would you suggest regarding the export of freshwater?
  - Ban all exports of Canadian freshwater in any form.
  - Prohibit river diversion projects but continue to allow the export of bottled water and tanker shipments under provincial legislation.
  - Conduct a feasibility study into the potential environmental, social and economic effects of large-scale water diversion to serve dry regions in Canada, the United States and Mexico.
  - Other.

Give reasons for your recommendations.

7. As part of your input into the content of a new freshwater policy, draft a point-form outline of some strategies needed to change the attitudes and actions of consumers — agriculture, industry and the public — in order to ensure the sustainability of the resource.
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## **BACKGROUND FOR THIS INQUIRY**

### **Readings:**

- 1           The Dynamic Web of Water
- 2           Canada Has Only Just Enough Freshwater
- 3           Diverting Canada's Rivers: The Megaproject Approach
- 4           The Megaproject Approach: Liquid Gold?
- 5           The Megaproject Approach: An Ecologist's Viewpoint
- 6           Megaprojects for Exporting Freshwater are not Cost Effective
- 7 and 8     Water for Export by Tanker
- 9 and 10    Quebec's Freshwater for Sale?
- 11          Is Privatization The Best Option For Water Conservation?
- 12          Water Exports and the NAFTA Agreement
- 13          Canada's Freshwater Strategy 1987
- 14          Canada's Freshwater Strategy: Trends and Prospects
- 15          The Perspective of the First Nations

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## THE DYNAMIC WEB OF WATER

Water forms a dynamic, continuous web that maintains and unites all life by cycling throughout the ecosphere. In this vast cycle, our fixed supply of water is renewed again and again. A few molecules of the water you drank or washed in today were probably once used by Cleopatra, Plato, or any of the world's earlier citizens!

Solar energy drives water from the oceans, lakes, rivers and continents by evaporation; gravity pulls it down as rain, snow or hail. Some of the water falls on the land, sinks or percolates downward into the soil and ground to form the ground-water system. But the soil, like a sponge, can hold only so much water. If the rain falls faster than the rate at which water percolates downward, the water begins to collect in puddles and ditches and runs off into nearby streams, rivers and lakes. This run-off causes erosion and sometimes water pollution in various forms.

The water that is not picked up by plant roots continues to penetrate downward. Eventually the water stops its downward movement and fills all the cracks and crevices between soil particles and bedrock. The top of this zone of saturation is the water-table. A porous rock layer capable of containing water is known as an aquifer. In some areas that have heavy rainfall, the water-table may be only a few metres below the land surface, but in dry areas it may be hundreds or thousands of metres down, or may not exist at all. In some places water that collected in prehistoric times has been buried deep underground by geological processes. Elsewhere, water that fell as rainfall millennia ago has followed the dip of an aquifer downwards and is now held thousands of metres below the surface. Water in artesian basins in Australia has in some instances been buried over 20 000 years. This water can be tapped and withdrawn for use but, since it is replaced very slowly or not at all, this tapping amounts to mining an essentially irreplaceable source of water.

Water Resources,  
by G. T. Miller,  
*Living in the Environment*,  
Wadsworth, Inc., 1982

## CANADA HAS ONLY JUST ENOUGH FRESHWATER

We Canadians tend to be complacent about water. It is an article of faith that our country is lavishly endowed with crystalline rivers and lakes. Generations of us have been conditioned to view Canadian water as a bottomless well. But the well is neither as deep nor as full as we think.

The truth is that Canada, which occupies seven per cent of the world's land mass, has nine per cent of its renewable water. So, we have just about our fair share. Even that fact, however, is misleading. About 60 per cent of Canada's freshwater drains north, while 90 per cent of our population lives within 300 kilometres of our southern border. In other words, to the extent that we Canadians have lots of water, most of it is not where it is needed, in the populated areas of the country. In those populated areas where it is plentiful, water is fast becoming polluted and unusable. The overall problem in the country is compounded by drought in certain regions. Put simply, Canada is not a water-rich country.

That is why the Government of Canada emphatically opposes large-scale exports of our water. We have another reason for our opposition: the inter-basin diversions necessary for such exports would inflict enormous harm on both the environment and society, especially in the North, where the ecology is delicate and where the effects on Native cultures would be devastating.

We must manage water like any other valuable resource — with care. The object should be to use it in our own time in a way that leaves it unimpaired for our children and their children after them. Most of all, we must recognize its worth.

*from the introduction to*  
Federal Water Policy,  
Environment Canada, 1987

## **DIVERTING CANADA'S RIVERS: THE MEGAPROJECT APPROACH**

*Although in 1987 the Canadian government repeated its opposition to large-scale exports of freshwater, the idea keeps recurring. This proposal, first outlined in 1963 by a Los Angeles firm of consulting engineers, the Ralph M. James Company, has formed the basis of several major proposals since that time. This excerpt is from a speech made in 1992 by a proponent of the latest version (The North American Water and Power Alliance), and shows that the grand vision is still alive.*

The thesis of my remarks today is that if North America is to continue to flourish and progress as a productive economic entity, made up of Canada, the United States and Mexico — a virtual common market of North America — it is absolutely critical to consider the development of ever more cooperative and profitable uses for our fresh water resources . . . and the transfer of ever larger volumes of water from areas where there is surplus water to areas where it is desperately needed. Alaska and Canada are overwhelmingly blessed with renewable water. . . . In addition, Canada undoubtedly has more ground water which seeps into the Earth and feeds wells, rivers, lakes, and is an important storage element. Indeed, Canada has more "lake area" than any other nation in the world. . .

The concept, in a very simplistic description, would involve the construction of several hundred hydroelectric dams in Canada, Alaska and the United States with an aggregate installed capacity of 100 000 megawatts, or about 1/5 of the total power consumed in the United States today, . . .

The key to the project is the diversion of water by the damming of three rivers — the Peace, Kootenay and Columbia Rivers in southwestern British Columbia and Montana — to create a huge lake to be called the Rocky Mountain Reservoir in the Rocky Mountain Trench, 800 kilometres in length, 16 kilometres wide, and sitting at an elevation of 900 metres. From this huge reservoir and other diversions, an estimated thirty million acre feet [37 billion cubic metres] of water would be transferred to Canada annually for irrigation and other uses, seventy million acre feet [86.3 billion cubic metres] to the United States and twenty million acre feet [24.7 billion cubic metres] to Mexico, and this fresh water supply would allow the reclamation of 13 million acres [5.3 million hectares] of farmland in Canada, 25 million acres [10 million hectares] in the United States, and seven million acres [2.8 million hectares] in Mexico.

. . . In British Columbia alone, 19 lakes or reservoirs and 38 000 megawatts of hydroelectric power would be created. Just in Mexico, the 20 million acre feet [24.7 cubic metres] would allow that country to develop eight times more new irrigated land than the Aswan Dam provides for Egypt. That, plus the estimated additional 2 000 new megawatts of power available to Mexico will literally transform the economies of the states of Baja, Sonora, and Chihuahua and go far towards stabilizing the illegal alien problem [in the United States].

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The benefits of this project go on and on. The Canadian-Great Lakes Waterway coming into the Great Lakes would help to stabilize and freshen the level of the Great Lakes and would open up waterways from points in Western Canada to the Great Lakes with shipping lanes for minerals, timber and farm products. Of course, the Dakota Canal will also help the Mississippi River in the same way. . .

Some of the additional benefits include some 121 new lakes and reservoirs to be created in Canada, some 51 new lakes and reservoirs to be created in the United States, and five lakes and reservoirs to be created in Baja California. Apart from industrial and agricultural use, simply look at the enormous additional benefit from recreational, economic, ecological and other standpoints these bodies of water would involve. Also, you have the additional benefit of the impact on temperature and surrounding growth that attends any of these bodies of water, and the Rocky Mountain Reservoir alone would provide an enormous resource for animal and wildlife that would impact a now arid area to enormous advantages. There would be many opportunities for sustainable development, which is a concept we heartily endorse. . .

*from a speech*  
Water, Water Everywhere: How to Get it from Here to There,  
by Francis L. Dale,  
*published in the proceedings of a conference sponsored by*  
Canadian Water Resources Association, 1992

## **THE MEGAPROJECT APPROACH: LIQUID GOLD?**

Why not divert water to where it is needed most? If it will give Canada an economic advantage and we do not need all of our abundant water resource to meet our own needs, then water export would seem to be an innocuous way to take advantage of the United States' water scarcity to our gain. . .

Aside from the possible threat to our sovereignty due to the existence of the Free Trade Agreement, water exports pose massive ecological threats as well. Inter-basin water transfers can introduce parasites and other organisms to new environments where they can have significant and unpredictable effects. The introduction of zebra mussels and lampreys into the Great Lakes is a good example of how devastating such newcomers can be. Reduced freshwater flows into estuaries, the portion of a river system where the sea water and the river water mix, can cause significant changes in salinity with detrimental effects on the large number of fish and bird species that depend on the estuarine ecosystem. For example, the Aswan Dam on the Nile River destroyed the fishery on the Mediterranean Sea at the Nile's mouth.

Similarly, dams interrupt the normal cyclical flows of a river system and reduce the positive effects of flooding, like the dilution of pollution and the flow of nutrients to flood plains. The interruption of local water cycles can also negatively affect climate — massive diversions of water away from the Arctic, for example, may cause dramatic changes in the climate of this region which will impact the entire globe. Mercury contamination of the food-chain is also a problem with virtually all new dams in our part of the world.

While some effects of large-scale water projects are still the subject of speculation, what we already know about the effects of completed water diversions, inter-basin transfers, and interruptions in stream flow caused by existing dams is sufficient to support the contention that we interfere with the water cycle at our peril.

The real solution to water scarcity lies in giving water its true value. For example, the reason California has a water crisis is that farmers pay next to nothing for their water, so it is not to their advantage to conserve their limited resources or to change the crops they grow. A mere ten per cent savings in agricultural water in California would be sufficient to meet the state's projected needs through the next century.

Until we price water in accordance with its true value, we will continue to interfere with the water cycle to the detriment of ourselves and a multitude of other species on this planet.

Liquid Gold,  
by Bob Simpson,  
*EarthKeeper*, December 1993/January 1994

## THE MEGAPROJECT APPROACH: AN ECOLOGIST'S VIEWPOINT

Any dam creates a reservoir, ranging in size from almost negligible in the case of a river-run hydro plant, to enormous inundations of hundreds of miles of shoreline, as in the case of the Peace and Columbia reservoir in British Columbia. Though often called lakes, reservoirs share few of the characteristics of a real lake. Water levels rise and fall in a reservoir according to demand for electricity or water in some far-off market. This ensures that normal shoreline biology cannot re-establish itself; much habitat for fish and wildlife is eliminated. An initial flush of fish production usually fades in a few years. . .

A hydro-electric dam does not remove water from a river; it simply regulates the flow to conform to the needs of the electrical system. By holding back the spring flood, the Bennett Dam on the Peace River deprives one of the world's largest and most productive freshwater deltas, the Peace-Athabasca, of the flood waters it requires to function normally. Without the high water, "perched" lakes are not filled and fish production suffers; as the delta dries out, vegetative changes affect wildlife populations including the bison of Wood Buffalo National Park. This delta which has supported Native populations for thousands of years, can no longer do so. . .

To export water, we go a step further, not only damming a river but removing water from it. The enormous energy of a river has, over aeons of time, sculptured its valley and created the conditions which support the life we observe in a valley today. A project which re-structures that landscape and forces its most powerful element to behave in ways other than those natural to it will have consequences that are often unexpected and always dramatic. The [North American Water and Power Alliance] NAWPA plan would reverse the flow of both the Liard and Peace Rivers, essentially writing off the entire Mackenzie Valley and with it the social, economic and ecological life of much of Canada's North. It is not necessary to hypothesize about the impact of such developments. We can easily understand what to expect by examining diversions already completed in Canada. Consider northern Manitoba. Southern Indian Lake is a widening of the Churchill River, which flows to Hudson Bay. Manitoba Hydro wanted to put even more water through its generators of the Nelson River, which also flows to Hudson Bay almost parallel to the Churchill some kilometres to the south. In spite of bitter opposition, Manitoba Hydro dammed Southern Indian Lake and blasted a new channel leading the water into tributaries of the Nelson, the Rat and Burntwood Rivers. As the water rose in Southern Indian Lake, it flooded out over its banks, replacing beautiful crescent sand beaches with clumping clay banks and chaotic masses of collapsed dead trees. The fishery, which once helped make the 8 000 Natives of the region among the most self-sufficient in Canada has drastically declined, and most Natives are now on welfare.

*from a speech*  
The Real Costs of Dams, Diversions and Water Exports,  
by Richard C. Bocking,  
*published in the proceedings of a conference sponsored by*  
Canadian Water Resources Association, 1992

## MEGAPROJECTS FOR EXPORTING FRESHWATER ARE NOT COST EFFECTIVE

Proposals to dam and divert Canadian rivers for the purpose of exporting water to the United States have been promoted for decades. These proposals have little political support in Canada, make no economic sense, would have an enormous negative ecological impact, and would cause immeasurable social problems if executed. Nevertheless, unless action is taken to prohibit them, water-export schemes will continue to draw attention away from the real need to conserve North America's water resources and manage them effectively. . .

The prospects for diverting Canadian rivers south were given a boost in the early 1960s, when a United States Supreme Court decision restricted California's use of water from the Colorado River. Engineers created a number of imaginative plans for re-arranging the flow of water in North America, and large-scale water export proposals became the stuff of headlines. The Canadian public responded with overwhelming opposition and politicians righteously declared that Canada's water was not for sale. . .

Since the Second World War and until very recently, there has been an alarming increase in demand for water, particularly in the western United States, due to expanding irrigation and rapid population growth. As a result, the availability of unused water has declined: the Colorado River is already over-allocated and the most important source of groundwater in the United States, the Ogallala aquifer, is being depleted.

Thus, at first glance, there would appear to be growing demand for Canadian water, but is there likely to be sufficient demand for Canadian water to make water-export projects economically viable? . . . Since the mid-1980s, the economic competitiveness of Canadian water has been declining . . . as Americans use their water more efficiently. Economic efficiency has become a primary objective of water management, particularly in the western states. This reverses an historic trend of heavy subsidies to promote irrigation. As these subsidies are reduced, water conservation is being achieved with newer irrigation technology, scheduling the choice of crops, and some reversion to dryland farming. After three decades of growth, the most recent government estimates indicate that total surface and groundwater withdrawals in the United States are actually beginning to decline. . .

Large-scale water export schemes would impose enormous social as well as environmental costs on the exporting country. The costs of compensating people for loss of property and relocation of communities displaced by flooding have been given scant consideration. The burden of these costs would fall largely on Canada's Native people, who inhabit many of the regions that would be affected by the damming and diversion of northern rivers for water export.

In the past, water diversions and water-export proposals have almost completely disregarded Natives' concerns. Today, it is obvious that this can no longer be the case. The determination of

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these groups to safeguard their social and economic welfare, as well as the general advancement of aboriginal rights and land claims, makes it imperative that they be involved in any proposal for water export. This will prove to be a difficult hurdle to water-export proponents, since Native people traditionally regard water occurring in its natural form (as in a lake or river) as sacred. Moreover, their economic dependence on and respect for ecological integrity often predisposes them to oppose large-scale resource exploitation. . .

Water Export: A Canadian Perspective,  
by Jamie Linton,  
*EcoDecision*, September 1992

## WATER FOR EXPORT BY TANKER (1)

### **Benefits for British Columbia?** *The Businessman's Perspective*

Here in British Columbia, we have the lion's share (33 per cent) of Canada's renewable freshwater supply. . . Each day in British Columbia 294 billion gallons [1 408 billion litres] of freshwater flow into the Pacific Ocean system via thousands of rivers, streams and other forms of run-off. This amounts to a renewable supply of freshwater equal to 195 times the requirement of every person in Canada, if they use water at the same rate as a Vancouverite. . .

If British Columbia were to export all of the above water it would require over two million super-tankers (the largest in the world) to handle this volume or nearly 5000 tankers per day, 365 days per year. No-one, however, is suggesting this.

What we are suggesting is that we manage this renewable resource and that reasonable export limits be adopted for the protection and benefit of all British Columbians. One thing is for sure and that is that the current moratorium on bulk water exports is unacceptable. It is negatively affecting the water industry in the province and serves no useful purpose.

As a point of interest, in 1990 Snowcap Waters applied to the British Columbia provincial government for an increase in its bulk water license to 15 000 acre feet [18 502 230 cubic metres] per year, which would allow the transport of one tanker load per week to Goleta, California. This contract would have brought in gross revenue of US\$105 million to a British Columbia company. In spite of receiving many assurances from bureaucrats and elected officials, our request was deferred by several continuous government moratoria, the last of which is due to terminate June 30, 1992. These moratoria could kill the contract. . .

The contract with Goleta, California, would have provided much needed cash flow for Snowcap, which is a small glacial water bottling company of Vancouver Island employing 20 people. Along with additional manpower for the bulk water contract, Snowcap would have been able to expand its operations by approximately 30 people.

British Columbia should share a proportion of its surplus water for economic as well as humanitarian reasons. Our government must deal with the realities of the day instead of continually postponing decisions by way of moratoria. Shipping bulk water by marine tanker has passed all environmental tests required by the federal and provincial governments. Water export by marine tanker offers a new environmentally sound industry to British Columbia, utilizing a commodity which is available in vast supply and continually replaces itself. . .

*from a speech*  
Bulk Water Exports: Benefits for British Columbia,  
by Fred Paley,  
*published in the proceedings of a conference sponsored by*  
Canadian Water Resources Association, 1992

## WATER FOR EXPORT BY TANKER (2)

### The Costs for British Columbia? *A First Nations Perspective*

Our people are very dependent upon the shellfish industry for both food and commercial income. A major natural shellfish spawning area is located at Pendrell Sound, in the vicinity of Toba Inlet. We are concerned about any impacts to the water quality, temperature, nutrients, or salinity as a result of large-scale withdrawals of fresh water from Toba Inlet.

Toba Inlet has some major salmon runs in its various rivers and streams. Even if water is not taken directly from those rivers, we humans do not know what guides a salmon to the particular stream of its origin. By interfering with the natural flows into a waterway, what might we be doing to the water salinity, temperature, or other markers on which salmon may be relying? What may appear to be a trivial difference to humans may be a matter of life or death to the fish within that system.

Water contamination from large supertankers frequently navigating through our waterways is another concern. Discharge of dirty or contaminated ballast water concerns us, just as it has led to problems such as the zebra mussel outbreak in the Great Lakes. Oil spills from an accidental grounding would be devastating to the marine waters in this area, not only to ourselves but to commercial fishermen, tourists and others who depend on this area in one way or another.

There is also the issue of the impacts of structures and facilities built along the creeks and rivers and at their mouth in order to facilitate the storage and loading of water. This will include in some cases the building of dams for storing the water in reservoirs and pipelines, power generation equipment, loading facilities and living quarters. All this is proposed to occur in what is presently an undeveloped and remote area, relatively devoid of large scale impacts other than logging activity.

With respect to these environmental concerns, we do not pretend to have the answers or to know better than others what may happen if water export were to commence. However, we also are aware that few of these concerns have been studied adequately, or are understood by others.

What we do know as First Nations people is that virtually every resource which has been developed by industrial society has been mismanaged. In the early days of the fishing and forest industries in this province [British Columbia], it was inconceivable that those so-called renewable resources could become depleted, and that people would be thrown out of work for lack of trees, or lack of fish. Unfortunately, within the span of less than a single human lifetime, both those industries are experiencing the unthinkable.

The position which our Band has always adopted is that if we do not understand the consequences of an action, then we should not undertake the activity. In the meantime we will

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make every reasonable effort to inform ourselves about the issue, but we should not prematurely proceed with such activities in the interim.

The other fundamental truth of which we are aware is that it is easier to anticipate and prevent problems from happening, than it is to try to clean up a mess after it has occurred.

These two beliefs have recently come to be known in some circles as the precautionary principle, and the preventative approach principle. Whatever label one wishes to apply to them, we feel they are absolutely critical to an examination of the potential environmental impacts of the proposed water export industry.

*from a speech,*  
First They Come and . . . ,  
by Chief Kathy Francis,  
*published in the proceedings of a conference sponsored by*  
Canadian Water Resources Association, 1992

## QUEBEC'S FRESHWATER FOR SALE? (1)

*In recent months the issue of freshwater management has become a matter of public concern in Quebec. The debate began in 1995, with a proposal from the mayor of Montreal to privatize that city's drinking water and gained new impetus with the conflict in the small town of Franklin, southeast of Montreal on the United States border, over the construction of a bottling plant to exploit the local ground water for export. The Franklin proposal, by Aquaterra, the world's second largest water bottling company, was defeated through the opposition of concerned local citizens and that of a non-governmental organization, Eau Secours!, and has focussed public attention on the ways in which decisions about freshwater are being made in the province. These excerpts from the newspaper, *Le Devoir*, outline some aspects of the water export issue in Quebec.*

### A Privatization Proposal

For several months now, the mayor of Montreal, Pierre Bourque, has been making Orwellian statements in favour of privatizing the drinking water industry in Quebec. The supposed abandonment of the project by Mr. Bourque gave a false sense of security to the people; in reality, the debates will be held behind the scenes in Quebec City by an inter-ministerial committee headed by Lucien Bouchard. Yet water is an essential service for people, and it is unthinkable to privatize the distribution of it without first publicly debating the issue, especially since people have already clearly demonstrated their opposition to any privatization project for their drinking water.

The experiences of other places in the world who have tried privatization should convince our politicians to go slowly. . . The problems in England, which proceeded to privatize the ten major Crown corporations responsible for drinking water in 1989 are especially convincing<sup>1</sup> . . .

The water issue came up in December 1995 when the mayor of Montreal, Pierre Bourque, came up with the idea of appealing to the private sector to manage the metropolitan aqueduct. The process, which raised as much protest among the public as it did enthusiasm among businessmen, was halted two months ago by the Minister of Municipal Affairs, Rémy Trudel. However, the issue of privatization of municipal infrastructures is only one element in the government's overall plans.

*Ideas,*  
translated from *Le Devoir*, April 5, 1997

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<sup>1</sup> According to *Le Devoir*, during the four years since privatization in England, the price of water has risen by 55 per cent. The companies do not hesitate to cut off those who are slow to pay. In a single year, from 1991-92, the number of households having been cut off tripled from 7 273 to 21 586. Consumers have to pay before using water by inserting a debit card in a machine; if they do not, the water is automatically cut off.

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## **Selling Water is Big Business**

Selling Quebec's water commercially could bring in a lot of money. According to a preliminary study by Davie Industries, exporting water by tankers converted for this purpose could generate revenues of \$2.6 billion per year and profits of 40 per cent to the developers.

If the Quebec government imposed a \$1-\$2 tax per cubic metre of water (1000 litres) sold abroad, this new industry could bring in between \$2.6 and \$5.2 million annually, not counting the job creation which will result from selling water to potential customers around the world.

This study, of which *Le Devoir* received a condensed version, was presented on March 27 [1997] to the working group of businessman Jean Coutu, who proposed the idea of exporting water from Quebec at the Summit on the Economy and Employment last October [1996]. The group, including several representatives from ministries in Quebec, private enterprise, and the École polytechnique, has been working since then. . .

*Current Events,*  
translated from *Le Devoir*, April 16, 1997

## **Franklin: A Costly Example of Environmental and Economic Myopia**

The word megaproject is not a figure of speech. The first request for authorization by Aquaterra to the Ministry of the Environment was for 90 gallons [409 litres] a minute or 219 million litres a year, representing nearly three quarters of all ground water produced in Quebec in 1994. . . The intent to double that in future expansions was clearly outlined. . .

All that suggests two major points of contention: the first is the actual ownership of underground water. . . The owner of resources is free to do practically anything he wishes even if that causes problems for neighbours. The second is that the authorities authorized a colossal project without an independent and rigorous analysis, and on the eve of the development of a policy on freshwater.

One can understand the anxiety of the people, especially those affected by pumping tests, since they know that the water level has already been overburdened through domestic use, farmers, agri-business and tourism, as well as by the apple growers who produce nearly a quarter of the apples in Quebec. . .

In the Franklin incident, if it had not been for the courage and vigilance of some local citizens, the government would have rushed into a project for which neither the economic benefits nor the political consequences — local or national — nor the potential for international conflict had been assessed.

Water for Whom?  
by Monique Desnommée, the Citizens Committee of St.Antoine-Abbé and Franklin and  
André Lavallée, Hélène Pedneault, Gabrielle Petteirier and Louise Vandelac of Eau Secours!  
translated from *Le Devoir*, July 30, 1997

## QUEBEC'S FRESHWATER FOR SALE? (2)

Quebec is invited to a debate on water management, which will take place this fall [1997] and which could lead to the commercial export of this treasure.

Conscious of the delicacy of this issue, which has caused much unrest over the past months, Premier Lucien Bouchard promised yesterday that no "decision of any importance with regard to this issue will be made" before a debate takes place. "I believe that this issue is so important that we have to examine it in-depth in a very comprehensive debate . . . in which everyone will be invited and which will be preceded by the publication of documents that will clarify what we already know about the water issue," stated Mr. Bouchard at the National Assembly, in response to the Liberal Opposition.

According to the scenario which will be submitted to Quebec's Council of Ministers before the end of June [1997], a reference document will be made public at the beginning of September. This document will encompass data concerning all the numerous aspects of water management: the bottled-water market, the state of aqueducts and sewers across the province, etc.

A public meeting will follow, at the end of November [1997], which will give the government an idea of what policies to develop. According to the stakes which will have been defined by this public debate, the government will proceed in a more clearly defined direction: specific consultations, and market and feasibility studies, etc.

Last April [1997], *Le Devoir* revealed the extent of the government's efforts in this area, which had remained secret until then, as well as different projects of freshwater exportation. These projects (the exportation of water from the Manicougan and bulk transportation by tankers, for example) were all proposed by the working group of Jean Coutu, who introduced the idea of exporting water from Quebec at the Summit on the Economy and Employment last October [1996].

"We have to see how we can go further with this issue, always keeping in mind the public, economic and ecological interests of Quebec," assured Lucien Bouchard. . .

One thing is certain, members of both the PQ and Liberal parties seem to be quite in favour of exporting water, with certain conditions. . .

Bouchard Announces a Debate on Water Management,  
by Kathleen Lévesque,  
*Current Events*,  
translated from *Le Devoir*, May 30, 1997

## IS PRIVATIZATION THE BEST OPTION FOR WATER CONSERVATION?

The arguments in favour of privatization are both political and pragmatic. The political one follows the basic conservative tenet that the less government, the better. In other words: when it comes to the tension between markets and government, favour the market.

As for the pragmatic arguments, there are basically three. First: businesses are more effective, more efficient: in a word, more competent at delivering a service than public sector bureaucracies. “Privatization and private investment have been effective in many sectors from electricity to telecommunications,” notes Deborah Moore, a senior scientist with the Environmental Defence Fund.

Second, there is intrinsic value in monetizing a commodity like water. When water services are heavily subsidized, there is little incentive to conserve. Require consumers to pay fair market value (or close to it), however, and a lot less water will get used.

Third, the private sector is . . . where the money is. The World Bank has estimated that US\$600 to \$800 billion in investments will be required for water and wastewater projects over the next decade. Perhaps five per cent of that will come from the World Bank. The public sector will not be able to pony up the balance, and so has little choice but to turn to the private sector.

Most of the concerns about privatization involve, one way or another, the sustainable development triad of equity, the environment and efficiency. “When water is privatized,” says Janet Abramovitz, a senior researcher at the Worldwatch Institute, “it can drive up the cost to smaller users, and the water company does not necessarily have an incentive to provide a lifeline to them.” Abramovitz cites the case of India, where some households pay a staggering 25 per cent of their income on water — roughly the same percentage that families typically pay for housing in the United States.

The environmental concerns are basically of two sorts. One involves ecosystem integrity. “Water is not just a commodity,” notes Sandra Postel, the director of the Global Water Policy Project in Amherst, Massachusetts. “It is also the source of life. I am concerned that as the private sector takes more and more control of our water resources, it will undervalue or entirely disregard this aspect.”

The other environmental concern involves conservation — “resource productivity,” as the current buzzword has it. “This is a very supply driven industry,” says EDF’s Deborah Moore. “Basically, companies increase their revenue by increasing the supply of water.” Not only are the incentives for pursuing demand-side management — cutting costs by encouraging conservation — currently modest to non-existent, but in some cases there are powerful reasons to pursue capital-intensive projects such as building new dams. . .

*continued overleaf*

In addition, despite all the talk about the greater efficiency of the private sector, there are lingering worries about performance. In the United Kingdom the industry has come under severe criticism in recent years due to leakage problems. Even in privatization projects widely cited as exemplary — Aguas Argentinas' venture in Buenos Aires, for example — there is concern that the actual investments in infrastructure development are falling behind what was expected or is required. . .

Finally, there are enforcement issues. Many governments are privatizing their water systems without having operational regulatory systems in place to oversee the agreements — or, for that matter, regulatory traditions to ensure that a regulatory system, once installed, will be effective.

None of this is to suggest that the privatization of municipal water supplies is a bad idea and should be jettisoned. In its first three years of operation, Aguas Argentinas added 500 000 customers to its network, rehabilitated 500 kilometres of pipe, and increased production capacity by 25 per cent. These are impressive numbers and there are other positive examples as well — in Santiago, Chile and Cancun, Mexico, to name just two examples. At the same time, the concerns are legitimate and they are not going away.

At this point, the jury is still out on privatization. Skeptics and supporters alike agree that, with contracts typically running twenty or thirty years or more, it is far too early to draw conclusions.

Heaven Can Wait,  
by Carl Frankel,  
*Tomorrow*, #5, vol. VII, September-October, 1997

## WATER EXPORTS AND THE NAFTA AGREEMENT

If the North American Free Trade Agreement [NAFTA] gives the United States access to Canadian water, [former] British Columbia Investment Minister Glenn Clark wants to see the deal ripped up in favour of something more palatable for British Columbia. Clark said . . . he is not swallowing an interpretation of water exports outlined in a letter by top United States trade representative, Mickey Kantor. “We are very concerned about water exports,” Clark said. “There is a very good chance we will bring in some provincial legislation to ban the export of water.”

Clark said he hopes to meet . . . with his federal counterpart, [former] International Trade Minister Roy MacLaren, to discuss water. “Our view is we still want to assert provincial sovereignty on this question to ensure there is no doubt about our ability to regulate and control water exports.” . . .

In Ottawa, MacLaren said NAFTA cannot force Canada to export water, despite Kantor's letter. “There is nothing in NAFTA or the (Canada-United States) free trade agreement that obliges Canada or the United States to export bulk water,” he said. “That is entirely within Canada's decision and we are opposed to the export of bulk water.”

The debate was sparked by Kantor's October 28 [1993] letter to American groups concerned over the scope of the Trade Agreement on water issues. In the letter he says when water is traded as a good, it is covered by NAFTA. . . . an official in Kantor's office in Washington, D.C., said Kantor only meant bottled water. “The fact is, when we are talking about water as a good, it is bottled water as far as the NAFTA is concerned. That is it,” said the official. “If at some point theoretically in the future, someone could transfer water through some means other than bottles, then that is possible. But in this case we are talking about water in bottles or tanks.” Kantor's letter was in response to inquiries about water exports.

In her letter to Kantor, Nancy Newell of Portland-based Northwest Environmental Advocate, says, “One of the deepest concerns expressed by our constituents is that NAFTA will allow for massive transport of our water or Canadian water not only in beverage containers but also in tanks, trucks, tankers, pipelines or even through changing the natural flow of rivers, all in the interest of so-called free trade.”

In response, Kantor said, “The current United States-Canada Free Trade Agreement and the NAFTA are silent on the issues of inter-basin transfers of water. However, under the CFTA and NAFTA, when water is traded as a good, all provisions of the agreements governing trade in goods apply.” He also says that any restrictive measure taken relating to conservation of any exhaustible natural resource, including water, would have to be in conjunction with domestic restrictions.

NAFTA and the US Interpretation of Water Exports Don't Mix, Clark Says,  
by Gordon Hamilton,  
*Vancouver Sun*, November 10, 1993

## CANADA'S FRESHWATER STRATEGY 1987

The Federal Water Policy of 1987, the first of its kind for the Government of Canada, was both comprehensive in its approach and specific in its application to issues. Its central message was that we must protect water as a key to a healthy environment and also manage it as an economic resource. It proposed five strategies to achieve these goals: realistic pricing, science leadership, integrated planning, legislative renewal and public awareness, supported by policy commitments in 25 areas of federal concern.

In approving the Policy, Cabinet also instructed the departments of Environment and Justice to review federal water legislation with the goal of bringing it into line with the new Policy. The Environment/Justice group completed its legislative review in 1989, with recommendations for consolidating the 1970 Canada Water Act and 1955 International River Improvement Act, and making the new legislation more comprehensive by including provisions for limiting water export and for resolving interprovincial river conflicts. The longstanding export issue had proven difficult to address in separate legislation; and inter-jurisdictional differences continued to delay efforts of the Mackenzie River Basin Committee to reach agreement on trans-boundary flow and quality regimes among its federal, provincial and territorial members. As well, the language for the amended Act would have to be updated to reflect newer interests, especially sustainable development and ecosystems, and newer approaches, such as integrated planning. Detailed instructions were prepared for this legislative package, but they were not acted upon.

In retrospect, the tabling in Parliament of the Federal Water Policy represented the high water mark of the Government of Canada's interest in this area. In the same year, the report of the Brundtland Commission (WCED, 1987) introduced the concept of sustainable development which, by the end of the decade, overtook the Water Policy's momentum. The federal government and most provincial governments lost interest in managing water as a resource in its own right, and it was subsumed within broader concerns about ecological systems and the global relationship between the economy and the environment.

Peter H. Pearse and Frank Quinn,  
from *Recent Developments in Federal Water Policy: One Step Forward, Two Steps Back*,  
in *Canadian Water Resources Journal*, Vol. 21, No. 4, 1996

## CANADA'S FRESHWATER STRATEGY: TRENDS AND PROSPECTS

It appears that the federal approach to water policy has come full circle over the last three decades, with water becoming again incidental to larger policy issues. This time, the preoccupation is with sustainable development, the quest to reconcile economic development and environmental protection. Within this framework, two related thrusts bear importantly on water management: the focus on the integrity of ecosystems and biodiversity, and the effort to improve economic performance, manifest in programs aimed at allocating and using resources more efficiently.

With these newer priorities, we can begin to discern some implications for the development of federal water policy: the emphasis on the holistic approach to resources and environment, and the stress on conservation and efficiency. . .

After four decades, it seems clear that the era of major dam, diversion and dyke construction in Canada is finally drawing to a close. A national registry of major dams<sup>2</sup> reveals a sharp decline in new projects. Two of the more recent additions were the Oldman River project in Alberta and the Rafferty-Alameda project in Saskatchewan, both completed at a cost of public unrest and litigation (probably sufficient to discourage further developments of this kind in the Prairies for many years to come). Manitoba has shelved plans for the Conawapa power project on the Nelson River, as has Ontario for expansion of its Moose River hydro power complex. Even Quebec, . . . has been forced to set aside construction of James Bay II, at least in this century . . .

New megaprojects to export water or electricity are even less likely to occur, notwithstanding free trade arrangements. Before long, we may be reinforcing or removing old dams faster than we add new ones. In the shorter term, however, we will have to be content with changing the operating regime of these structures to mitigate their worst environmental effects.

Peter H. Pearce and Frank Quinn,  
from *Recent Developments in Federal Water Policy: One Step Forward, Two Steps Back*,  
in *Canadian Water Resources Journal*, Vol. 21, No. 4, 1996

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<sup>2</sup> CanCOLD, 1991

## THE PERSPECTIVE OF THE FIRST NATIONS

Proponents of water exports are fond of saying that the water is being "wasted" at present, that it is just falling into the sea. They also try to minimize the quantity of water which is being looked at, by trying to limit the discussion to just one contract proposal or just one creek.

The former approach reflects, from a First Nations perspective, a human centered arrogance which trivializes and dismisses any natural process which we do not fully understand, or for which we as humans are not making some "use", [by] which is generally meant that someone is making money from it. For anyone to say that fresh water entering the sea is being wasted is simply making evident the degree to which most humans today are removed from understanding the natural world on which we all depend for our survival. . . .

In our view, we need to look ahead at what the demand for fresh water is likely to be not just for tomorrow, but to anticipate what it is likely to be ten, twenty and fifty years from now. It seems to us that any environmental impact assessment must incorporate as part of its requirements an analysis of cumulative impacts arising from all anticipated or foreseeable water development in an area.

*from a speech,*  
First They Come and . . . ,  
by Chief Kathy Francis,  
*published in the proceedings of a conference sponsored by*  
Canadian Water Resources Association, 1992

We acknowledge the special contribution of the Canadian Water Resources Association to this Inquiry.

The **Canadian Water Resources Association**, a national organization of individuals and organizations interested in the management of Canada's water resources, seeks to encourage public understanding and recognition of Canada's water as a valued resource; provides a forum for the exchange of information and opinion relating to the management of Canada's water resources; participates in international water resource activities; and is the Canadian sponsor of Project WET, water education for teachers.

CWRA's web site address is: <http://www.cwra.org/cwra>