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Minister

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November 10, 1993

Ms Sarah Miller
Canadian Environmental Law Association
Suite 401, 517 College Street
Toronto, Ontario M6G 4A2

Dear Ms Miller:

I am responding to your letter of September 16, 1993 which was co-signed by representatives of the Georgian Bay Association, Great Lakes United, Groundwater Alert and STORM Coalition.

I am aware of the concerns that you have identified about the impact of a possible major water pipeline from the Great Lakes. However, although TransCanada Pipelines has asked the Ontario Government to express its views on the concept of a major privately financed and operated water pipeline, I should emphasize that no specific proposal has been received from any prospective proponent for such a venture.

If and when such a proposal is received you may be sure that it would be subject to a full environmental assessment.

I appreciate your comments regarding this concept. I agree there are many issues which must be taken into consideration before this matter can proceed further, and your views are very helpful.

Sincerely,

Ed Philip
Minister

cc: The Honourable Bud Wildman
Minister of Environment and Energy

Mr. Jim Merritt
Vice President, Operations (designate)
Clean Water Transition Team



September 16, 1993

Ed Philip
Minister of Municipal Affairs
700 Bay Street
17th Floor
Toronto, Ontario
M5G 2E6

Bud Wildman
Minister of the Environment and
Energy
135 St. Clair Avenue West
Toronto, Ontario
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Dear Ministers,

Re: Georgian Bay Pipeline Proposal

This letter expresses the concerns of several Ontario and Great Lakes public interest groups, the Canadian Environmental Law Association, Great Lakes United, the Georgian Bay Association, STORM (Save the Oakridges Moraine) and Groundwater Alert about the TransCanada Pipeline proposal to supply water to York and Waterloo regions by pipeline from Georgian Bay.

We understand that this proposal is now being considered by the Provincial government. We would like to outline to you our collective concerns about a variety of process and policy questions in regard to this proposal.

Conservation Concerns

We recognize that the Province's management of its water resources is in transition with the formation of the Ontario Clean Water Agency and the reorganization of the Ministry of Environment and Energy to achieve a multi-media focus. This makes it very important now to build strong conservation objectives into these new agencies and their programs. The Water Efficiency Strategy for Ontario drafted by MNR holds promise if it is implemented.

We are concerned that the TransCanada Pipeline proposal might mitigate against local and provincial initiatives to achieve conservation. For instance, the Region of Waterloo is currently undertaking a study, "Reassessment of the Long Term Water Supply Strategy". This process will determine regional priorities and is examining alternatives to importing water into the region. Since Kitchener-Waterloo has pioneered groundwater protection and conservation in the province, they should be encouraged and supported in their initiatives to solve resource management problems locally.

On several occasions in the past few years, the Province of Ontario has opposed water withdrawal and diversion proposals originating in the U.S. The Province's latest objection was to the Michigan Mud Creek irrigation proposal (to pump 14 million gallons a day) because it could result in large consumptive use (5 million gallons a day) of Great Lakes water. Ontario's international stance has been effective in upholding the intent of the Great Lakes Charter to conserve and protect the region's water resources. At the last meeting of Great Lakes jurisdictions, Ontario's representatives were influential in getting their U.S.

counterparts to commit to draft a basin-wide water conservation plan. The Georgian Bay pipeline proposal could seriously weaken Ontario's international stance. While it is an intrabasin proposal, its withdrawal volume of 50 to 60 million gallons a day exceeds recent U.S. withdrawal and diversion proposals. The pipeline amounts to a bypass of some or all of these volumes out of the St. Clair, Detroit and Niagara River flows and out of the Lake Erie watershed.

Trade Agreement Implications

Trade specialists have interpreted provisions of the U.S.-Canada Free Trade Agreement and the proposed NAFTA to allow the treatment of water as a good. They point out that in these agreements once water is diverted between countries continuous supplies must be provided regardless of supply problems and local demands.

TransCanada already moves natural gas in pipelines from Canada to the U.S. We are concerned that they are planning to do the same with Canada's water resources. The Georgian Bay proposal could be the first step in providing key portions of the infrastructure to bring Ontario's northern waters south. Is TransCanada Pipelines positioning its company to respond to future demands to continentalize North America's water systems to relieve shortages in the U.S. and Mexico? We would urge your Ministry of Intergovernmental Affairs to consider these concerns.

Environmental Impacts

The damaging impacts of water diversions are well documented. This proposal could result in ecological disruption for both Georgian Bay and for the water bodies receiving increased volumes of wastewater discharges resulting from the pipeline.

Lowered lake levels influence all shoreline and riparian uses. Habitat loss can result. Harmful species can migrate between watersheds through man-made connections. Contamination can do the same, imperiling ecosystem and food web health. Recreation uses can be negatively impacted by these changes. As well, aboriginal rights and treaties could be violated.

Regulatory Concerns

This range of impacts and geographical areas impacted, and the cost of the TransCanada Pipeline proposal, estimated at \$500 million, makes it appropriate that this project receive the benefit of a full Environmental Assessment. Because TransCanada Pipeline is asking local municipalities to act as proponents for each phase, the pipeline is clearly a public project. Indeed, with the implementation of full cost pricing, the public could be asked to pay for the cost of this water delivery system. Affordability will need to be carefully considered.

We would urge you to examine all phases of this project under one EA rather than severing

it into smaller approvals. It is our experience that the full range of impacts, alternatives, evaluation of need and conservation options cannot be weighted adequately when a large water or sewage project is considered in segments under Class EAs. It is important that the cumulative impacts of this proposal be evaluated in one process.

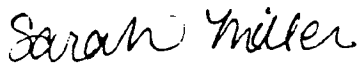
Planning Concerns

The work of the Province's Sewell Commission, MNR's Watershed and Subwatershed Guidelines, and MMA's Growth and Settlement Policy Guidelines all emphasize the necessity to move toward watershed planning to ensure that development proposals and infrastructure are planned in such a way so as to protect the environment. There is currently no master planning for provision of water and sewer infrastructure, very inadequate groundwater mapping, and little integration of water supply decisions with resultant sewage discharges.

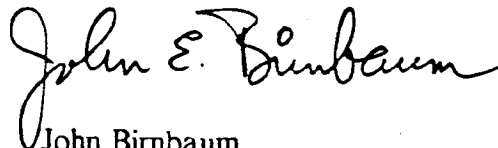
We strongly feel that this proposal should be subject to new Ontario planning guidelines to integrate the impacts this project will have in various regions.

In conclusion, we would ask that the TransCanada Pipeline proposal not be given further consideration until it is subject to a full Environmental Assessment. We urge your government to consider the precedent-setting nature of this project and to consider the full range of policy implications of this proposal for municipal planning, water conservation, environmental impacts and international trade. We would appreciate it if we could be kept informed of your work in this regard.

Yours truly,



Sarah Miller
Canadian Environmental Law Association



John Birnbaum
Georgian Bay Association



John Jackson
Great Lakes United



Brenda Thompson
Groundwater Alert



Gloria Reszler
STORM Coalition

c.c. Honourable Bob Rae, Minister of Intergovernmental Affairs
Ken Sharrett, Water Policy Section, Ministry of Natural Resources

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Paul I had
no accompanying
map
London Ont.
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from G.B.

Water Pipelines and Sustainable Development
Technical
Ontario Water Services Secretariat
Toronto

James MacLaren

Introduction

The need to construct water pipelines from areas of major supply, such as the Great Lakes, to regions of significant water demand must have strong justification to warrant detailed study.

Pipeline supplies are only warranted where the land-use management decisions have determined the appropriate regional limits to growth and where the development proposed within such limits cannot be served adequately by local sources of water supply, including groundwater. A major new supply by pipeline must be considered as supply management of the water regime because its availability tends to release users from a conservation-oriented attitude to water use.

Pipelines are normally competitive in the provision of water supply provided the population of the region to be served represents at least 250,000 people located in a 250 km² (100 sq mi) development area and the distance of transmission does not exceed 120 km (75 mi).

The routing of the pipeline to serve the most significant target area, however, can vary significantly depending on the intention and need of serving development *en route*.

Importance of Planning

To avoid land speculation and irregularities in planning, the pipeline sizing and routing studies must be under full provincial control with participation of the various stakeholders such as municipalities, regions, large customers, and representatives of the public to be served.

These studies must be conducted so as to clearly meet the terms of the *Environmental Assessment Act*, for even if the pipeline supply alternative appears technically justified, it will not gain regulatory approval until the proponent agency of the province has submitted a complete environmental assessment to the Minister of the Environment. The purpose, rationale, and description of the project, and a justification for it being more beneficial than any other alternative must be clearly obvious.

It is quite probable that for a pipeline project the Minister may require a hearing of the Environmental Assessment Board, or more probably of a Consolidated Hearings Board, before determining to give his approval to the project, with or without conditions, or indeed to reject the project.

Throughout the development period it is only reasonable that the proponent be a ministry or a provincial enterprise. It is not possible to produce information that no local private or public interest can bias the proposal. This does not mean that private interests cannot be considered in the design, building, operation, and financing of the project. Franchises to private-sector groups could be one of the viable alternatives considered by the proponent agency of the province, but that agency would be the ultimate owner and would be the manager of the sale of water to municipalities and regions *en route*, and at the terminal of the pipeline.

In releasing the areas to be served from the constraints of local water-supply capacity, the proponent agency and all to be served by the pipeline should recognize that water from this supply will become waste water which must be treated to a no-discharge condition before it is released to augment the flow of local waterways. Probably of even greater consequence is that the development spawned by the new pipeline supply will generate storm runoff from rainfall and thaw that could materially exceed the safe-flow capacities of local waterways, unless state-of-the-art urban drainage management plans are introduced and strictly enforced.

Conservation and Supply

Pipeline supplies of water can be provided to a customer, region, or municipality at \$2 to \$3 per 1,000 gallons or 45 to 65 cents per 1,000 litres. These costs do not represent a large increase over current supply costs, so it behoves all parties to ensure that a customer pricing and metering structure is adopted that properly reflects full user-pay so that a conservation-minded consuming public is served and that abnormal amounts of waste water are not generated through wasteful water-use practices.

Continuing the conservation theme, some municipal customers may promote supplementing current water-supply systems with pipeline water, rather than abandoning local supplies for the pipeline supply.

Mixing the two systems can create potential problems in mixing the quality of two supplies. On the whole, studies of western Ontario experience in mixing Great Lake pipeline supply with local river or ground water have revealed no problems of consequence.

However, trying to live with two systems can be very expensive, especially if both systems have a high energy requirement. Normally it will prove more beneficial to switch to the pipeline supply and abandon the local supply, or to isolate it to the supply of a particular geographical area or a major industrial customer.

Plan Requirements

In a broader sense, the development of water conservation plans for regions of urban concentration and potential development would serve to better identify new supply needs, including the need for water transfer to supplement local supply sources.

Such a plan would include the following major elements:

- (1) A co-ordination of current land-use development, redevelopment, and future development, with due reference to official plans, so as to direct the water management study to follow land-use requirements.

- (2) An estimate of present, current, and projected water use and water generation responding to land use and, therefore, segregated according to land use.
- (3) An estimate of current urban runoff conditions and future impacts according to current and projected land use.
- (4) Identification of the current conditions of water resources within the planning region, and the various uses and impacts relating to different land use and consumer types.
- (5) An inventory of water conservation measures currently practised by municipal water and waste-water utilities, direct industrial users, and urban authorities to control water use, point and non-point water pollution discharges and groundwater pollution. (Automatically this would cover water pricing and customer metering.)
- (6) The water management programs necessary to meet the *Safe Drinking Water Act*, MISA Effluent Regulations, Provincial Water Quality Objectives and Provincial Urban Drainage Requirements for the water resources of the planning area, while satisfying land-management objectives.
- (7) The relative environmental and economic impacts of these programs and their relation to the Six Guiding Principles of the Ontario Round Table on the Environment and the Economy, and sustainable development.
- (8) A schedule of implementation for the proposed programs and the related financing plan.
- (9) An outline of the public education and involvement program that would be undertaken prior to submitting the plan for provincial approval.
- (10) A commitment to a regular five-year review of the Plan.

We have indeed, in the words of the Round Table's Challenge Paper, reached the need for "new ways of thinking, new decision-making processes and new ways of doing things. New partnerships among all stakeholders – individuals and organizations – will have to be developed to seek common ground and workable solutions."

So the need to build a pipeline to transfer water for new development can only be justified if such a solution best suits a regional water conservation plan.

Water Quality Considerations

Al R. LeFeuvre
Inland Waters Directorate
Environment Canada
Burlington

In considering the question of the quality of water piped to a municipality from one of the Great Lakes, it is necessary to look at the quality of alternative sources, groundwater and local surface water.

Groundwater Quality

As a former resident of Waterloo, I am well aware of some of the advantages and disadvantages of groundwater as a municipal supply. I recall a conversation with my Waterloo dentist many years ago. He said that his practice would be much larger if it were not for the existence of an almost optimal concentration of naturally occurring fluorides in the groundwater we were drinking. Groundwater usually is free from sediments and bacteria so that it requires little, if any, treatment.

A major disadvantage is known as the "three-tap" syndrome - hot, cold, and hard. Waterloo tap water is great to drink, but don't try to wash in it. A water softener is almost mandatory.

In some areas of southwestern Ontario the groundwater has objectional taste and odour characteristics. In many localities there are no available aquifers of sufficient capacity, so the alternative of groundwater supply does not exist.

Local Surface Water Quality

Many municipalities have developed their water supply from a local river. In most parts of the world this is the only alternative to groundwater. In addition to the problems of highly variable flow, what about quality considerations?

In many instances, the same river must serve several municipalities along its route to the Great Lakes. In reality, the sewage treatment plant discharge of an upstream city becomes a significant portion of the river flow used as a water supply for a downstream city. Fortunately, good water treatment processes can convert this "raw" water into a potable municipal supply.

Sediment-laden (muddy) water may seem polluted but, in actual fact, this sediment is easily removed and may assist in the removal of more serious toxics. There are added costs for sediment removal, and the frequency of filter back-flushing can become a serious problem.

Withdrawals from the Great Lakes

Many municipalities in the Great Lakes basin have an alternative water supply which is unique to this region. Withdrawals from the lakes has always been the preferred option. The quality of lake water varies considerably from lake to lake: In all cases, however, there are some clear advantages in using lake rather than local water supplies.

All Great Lakes water is relatively soft, although the water of Lake Ontario is quite a bit harder than that of Lake Huron and Lake Superior. Other quality considerations are less clear-cut. Suspended sediment usually is lower than in riverine sources, but periodic algal blooms can have a serious impact on filter operation and sometimes cause taste and odour problems.

The big question with Great Lakes water is toxic substances. Lake Ontario, in particular, has been much maligned in some quarters. In actual fact, the jury is still out. Toxicologists are still trying to determine the significance of the extremely low concentrations of many toxic substances that have been found in the water and biota. Also, all chemicals for which there are drinking water guidelines (for example, nitrates and PCBs) do not exceed these guidelines.

Public reaction to previously unquantifiable concentrations of some specific toxics has led to the emergence of the "bottled water" industry. Tests have shown that some of this bottled water is worse than the water coming out of the tap. This is not to say there is no toxics problem in the Great Lakes or in surface water. The true significance and public health threat are still under investigation. The concentrations of DDT and PCB in lake water are lower now than they were 20 years ago.

Impact on the Lakes and Rivers

What might be the impact of municipal pipelines on the rivers and lakes? This is the other side of the issue. The quality of water usually has little, if any, impact on the hydraulic characteristics of the system. The converse is not true. The hydraulic characteristics of the system can have profound impacts on the quality of the water.

The ability of a stream to biodegrade pollutants or to simply dilute them is dependent on the hydraulic characteristics such as flow velocity, depth, and re-aeration. Significant changes in lake levels can produce a wide variety of water quality and fish habitat impacts.

Introducing a piped supply of lake water into a community will not increase the amount of waste being generated, but it might increase the amount of water used. This puts an increased hydraulic load on the sewage treatment plant which might reduce plant efficiency resulting in an increase in pollutant load to the stream.

On the other hand, the increase in plant discharge will increase the total flow in the stream. This might increase the stream's capacity to biodegrade the residual waste.

Will direct withdrawal of water from the Great Lakes significantly impact the lakes themselves? The quantities required for municipal water supply are so small compared to the natural flow in the system that the impacts would be almost indistinguishable. Thus, no significant water quality impacts are anticipated.

If megadiversions out of the basin are considered, there would be very large environmental impacts. My comments address only pipelines to service municipalities within the basin.

Summary

The quality of water delivered by pipeline from the Great Lakes must be compared with the quality of local sources. Groundwater has advantages such as clarity and desirable minerals. It also has some disadvantages such as hardness, and sometimes undesirable taste and odour.

Local surface water requires considerable treatment before use, especially if there are municipal waste treatment plant discharges upstream.

The quality of Great Lakes water used as a municipal supply is generally very good. The significance of very small concentrations of toxic substances is unknown and the situation is getting better rather than worse.

The impact on Great Lakes water quality of a conversion from local to piped-in municipal water supplies is insignificant.