



Environment
Canada

Environnement
Canada

Environment

Update

Vol. 7 No 1 March 1987



Canada 

A Word From the Editor

Since our last issue, events have moved rapidly at Environment Canada and we've made the headlines more than once.

First of all, draft legislation on environmental protection was made public last December for the purpose of discussion. The new law will grant the federal government wide powers to manage toxic substances and reduce contamination of the environment. Once the discussions are over, the legislation will be revised, and tabled in Parliament towards the end of the spring.

Environment Canada has also proposed legislation to overhaul the National Parks Act for the first time in 50 years. The bill aims to maintain the delicate balance between preservation and use of parks and to put an end to poaching of our wildlife heritage. This legislation will also add to the parks network 40,000 square kilometres of the most northerly lands in Canada — Ellesmere Island National Park Reserve.

Still in the North, a new national wildlife reserve has been designated. Polar Bear Pass, on Bathurst Island, renowned for its varied and abundant plant and animal life, will now receive increased protection while at the same time native groups will be assured the use of its resources.

On the anti-pollution front, an agreement was signed with Nova Scotia to clean up the Sydney Tar Ponds, the largest chemical waste dump in Canada. The agreement requires the investment of more than \$34 million and will provide the citizens of the region with a healthier environment, eliminating, among other pollutants, a permanent source of PAHs, a known carcinogen.

In Hamilton, a pilot plant to turn sludge into fuel was inaugurated, and this new waste disposal method holds great potential for the environment as well as for new developments in technology and energy production. Also in Hamilton, a pilot project to use oxygen injection to decontaminate polluted water is proving very promising.

Our readers concerned with the preservation of our cultural heritage will be glad to know of the many buildings protected by the Register of Federal Heritage Buildings.

In closing we wish to welcome subscribers of *Parkscan*, which has just ceased publication. *Environment Update*, carrying on, will devote more space in the future to Parks activities, for those who are concerned with the protection of the natural environment and our cultural heritage.

Table of contents

Regional Information Contacts

Atlantic:

Wayne Eliuk
 Communications Office
 Environment Canada
 45 Alderney Drive
 Dartmouth, Nova Scotia
 B2Y 2N6
 (902) 426-7990

Quebec:

Marcelle Girard
 Communications Office
 Environment Canada
 P.O. Box 10,100
 Sainte-Foy (Quebec)
 G1V 4H5
 (418) 648-7204

Ontario:

Jeanne Jabanoski
 Communications Office
 Environment Canada
 25 St. Clair Avenue, East
 Toronto, Ontario
 M4T 1M2
 (416) 973-1093

Western & Northern:

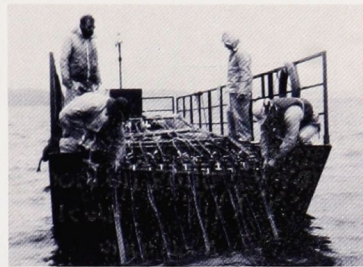
Garth Norris
 Communications Office
 Environment Canada
 2nd Floor, Twin Attria 2
 4999-98 Avenue
 Edmonton, Alberta
 T6B 2X3
 (403) 468-8074

Pacific & Yukon:

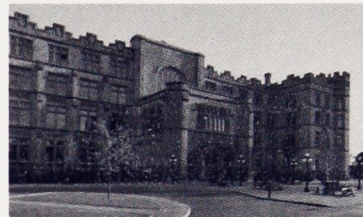
Sheila Ritchie
 Communications Office
 Environment Canada
 P.O. Box 1540
 800 Burrard Street
 Vancouver, British Columbia
 V6Z 2J7
 (604) 666-5902



Environment News	2
The Environmental Protection Act	5
Major Overhaul of National Parks Act	7



Ellesmere Island National Park Reserve	8
Polar Bear Pass National Wildlife Area	10
Sydney Tar Ponds Clean-up	11
A Breath of Fresh Air for Hamilton Harbour	13



Turning Sludge into Energy	14
Register of Federal Heritage Buildings	16
Update Reviews	17

Update

The world has witnessed in the last several years, the growth of an environmental ethic. Canadians and Environment Canada have very much been a part of this growth. In keeping with its mandate, Environment Canada has always worked hand-in-hand with all those who strive to protect and to enhance the environment.

It is in this context that the Communications Directorate publishes *Environment Update* four times a year.

Each issue of *Update* features a variety of topics on our environment and heritage and contains articles from all parts of the country in order to highlight the accomplishments of the Department. Anyone wishing to reproduce articles may do so. We ask that credit be given to this publication.

Readers who wish to comment or require further information can write to the Editor, *Environment Update*, Communications Directorate, Environment Canada, Ottawa K1A 0H3.

Canada-Newfoundland Climate Network Agreement

An agreement to further improve the network of climate observation stations in Newfoundland and Labrador was signed last December by federal Environment Minister Tom McMillan and Newfoundland Environment Minister John Butt.

The agreement provides for either the federal or the provincial agency to operate climate stations and programs on behalf of the other agency on a cost-recovery basis. It also facilitates the joint operation of climate stations and programs when cost-effective.

"We now have a stronger federal-provincial agreement to ensure that Newfoundlanders will derive the maximum benefit from applying climate information to their business and recreational activities. The agreement will tailor operations under the federal Canadian Climate Program to best meet Newfoundland and Labrador's requirements for climate information," Mr. McMillan said.

J.D. Collinson Elected Chairman of World Heritage Committee

James D. Collinson, Assistant Deputy Minister of Environment Canada's Parks Service, was elected Chairman of the World Heritage Committee for a one-year period at a meeting of the Committee in Paris, in November. Vice-chairmen representing Algeria, Bulgaria, India, Mexico and Zaire were also elected at the meeting.

The World Heritage Committee is responsible for implementing the UNESCO World Heritage Convention through the designation of World Heritage Sites. Canadian sites on the World Heritage List include L'Anse aux Meadows National Historic Park in Newfoundland, the historic district of Québec City, Dinosaur Provincial Park in Alberta and the ancient Haida village of Ninistsints in British Columbia's Queen Charlotte Islands.

The World Heritage Convention now has 91 participating countries, and the Department of the Environment represents Canada at World Heritage Convention meetings.

Bethune Twinning Agreement Complete



On November 12, in Tang Xian, China, Bethune Memorial House became the first National Historic Park to sign a twinning agreement.

Bethune Memorial House in Gravenhurst is the restored childhood home and birthplace of Dr. Norman Bethune. The Bethune Memorial Museum at Tang Xian is located

close to the site where this great Canadian died on November 12, 1939.

The twinning of his birthplace with the site of his death will facilitate the exchange of information about the life of this great Canadian hero of the People's Republic of China.

National Marine Parks Policy

In January, federal Environment Minister Tom McMillan released a national Marine Parks Policy that sets the stage for selecting, establishing and managing marine parks in Canada.

The long-term goal of the policy is to represent each of Canada's 29 marine natural regions in the national parks system. There are 10 marine regions in the Arctic Ocean, nine in the Atlantic, five in the Pacific and five in the Great Lakes.

The policy was approved after several years of research by Environment Canada and extensive consultation with other federal and provincial government agencies, the academic community and special interest groups, including commercial fishermen.

"There is not a single national marine park in all of Canada," said Mr. McMillan. "In that sense, we are playing catch-up by laying the foundation for such parks with this policy."

National marine parks will be established to protect and conserve representative examples of marine environments. They will

also offer recreational opportunities to the public and emphasize education programs about the marine environment.

The policy permits commercial fishing, according to each specific marine park management plan. Navigation and commercial shipping will also continue, in accordance with international convention.

Environment Canada is currently conducting studies to determine the feasibility of establishing national marine parks in four locations in Canada: the West Isles in the Bay of Fundy, New Brunswick; the junction of the Saguenay and St. Lawrence Rivers, Quebec; Lancaster Sound in the Eastern Arctic and South Moresby in the Queen Charlotte Islands, British Columbia.

Copies of the National Marine Park Policy, and information on marine park studies are available from Environment Canada, Parks, Ottawa, K1A 1G2.



South Nahanni Proclaimed Heritage River



In January, Environment Minister Tom McMillan proclaimed the South Nahanni River a Canadian Heritage River in recognition of its special natural and recreational features.

The 322 kilometre section of the South Nahanni River lies entirely within Nahanni National Park Reserve, 600 kilometres west of Yellowknife, Northwest Territories. In addition to its dramatic setting among the Mackenzie Mountains, the South Nahanni River holds many outstanding natural features. These include Virginia Falls, spectacular canyons, geological formations that escaped glaciation, and rare wildlife species.

The Canadian Heritage Rivers System (CHRS) is a co-operative program established in 1984, between the federal government and, to date, six provinces (Newfoundland, Nova Scotia, New Brunswick, Ontario, Manitoba and Saskatchewan) and the two territories. The objectives of the CHRS are to give national recognition to the important rivers of Canada and to ensure long-term management to conserve their natural, historical and recreational values for the benefit of Canadians now and in the future.

Habitat Acquisition at National Wildlife Area in New Brunswick

During the next several years, the federal government, with the concurrence of the province of New Brunswick, will expand its holdings of wildlife habitat at the proposed Portobello Creek National Wildlife Area, near Fredericton. The purchase of privately owned property within the boundaries of the wildlife area will be made possible through an agreement with Wildlife Habitat Canada, an independent, non-profit foundation established by Environment Canada in 1984.

Under the terms of the agreement, Wildlife Habitat Canada will contribute up to \$400,000 over the next five years towards the acquisition costs of the lands. The area, which Environment Canada intends to formally declare a national wildlife area in 1987, will be managed by Environment Canada's Canadian Wildlife Service.

The area is an exceptional example of a flood-plain forest-marsh ecosystem. Located along the St. John River, 32 kilometers east of Fredericton, it is best known for its importance to waterfowl, for its wilderness values and as one of the most productive wetlands in the Atlantic provinces. It supports the highest known breeding densities of the cavity-nesting wood duck, common goldeneye and hooded merganser in Atlantic Canada.

Environment Canada Improves its Weather Information Service

Environment Canada, in collaboration with Wood Gundy Incorporated, has improved the delivery of its weather information service in Calgary, Halifax, Toronto and Quebec City by increasing the number of telephone lines available to callers at its weather offices.

As a six-month pilot project, the costs of the new service will be covered by Wood Gundy Incorporated, a leading Canadian investment dealer. Public reaction to the service will be assessed during the trial period.

Callers to the weather offices in the four cities will hear a 15-second sponsor's message preceding the weather information for the metropolitan centres and surrounding areas. The information, updated regularly

and available 24 hours a day, details expected weather such as rain or snow, probability of precipitation, maximum and minimum temperatures, sky conditions and significant winds.

The expanded service is available by dialing:

Toronto	(416) 676-3066 (English)
Calgary	(403) 275-3300 (English)
Quebec City	(418) 872-2859 (French)
Halifax	(902) 835-7277 (English)

A New Committee on Energy and Environment

The Minister of Energy, Mines and Resources, Marcel Masse, and the Minister of the Environment, Tom McMillan, announced in January the creation of a ministerial committee to integrate energy and environmental issues at the federal level.

The ministers met with representatives of some leading Canadian environmental groups to request their help in developing an integrated approach to environment and energy issues. Co-operation between environmental groups and government is seen as a key to the success of the new ministerial committee.

"The initiative taken by Mr. Masse and me is but one part of an overall effort by the Mulroney government to recognize the importance of environmental concerns in all areas of government," Mr. McMillan said.

The ministers met with representatives of the following groups: the Canadian Coalition for Nuclear Responsibility, the National Survival Institute, the Tomorrow Foundation, the Ecology Action Centre, STOP, Energy Probe, Pollution Probe, Canadian Coalition on Acid Rain, La Société pour vaincre la pollution, L'Association québécoise de lutte contre les pluies acides, Friends of the Earth, and the Conservation Council of New Brunswick.



Removal of Toxic Contaminants by Sewage Treatment Plants

The federal government and the province of Ontario will jointly finance a study of the effectiveness of municipal sewage treatment plants in removing toxic contaminants.

Results of the \$690,000 study will play an important role in federal initiatives in the management of chemicals and in the provincial Municipal Industrial Abatement Strategy (MISA), designed to control toxics in sewage plant effluents. The federal and provincial contributions are \$565,000 and \$125,000 respectively.

The study will also explore the use of biological tests for monitoring the impact of complex mixtures of low concentrations of toxic chemicals in sewage.

National Hydrology Research Centre

The federal government's newest water research facility opened in Saskatoon, Saskatchewan in October 1986. The National Hydrology Research Centre, constructed at a cost of \$16.4 million brings together special scientific and technical resources of Environment Canada to study the closely related fields of hydrology, water quality, and meteorology.

The new centre houses the National Hydrology Research Institute, formerly located in Ottawa, Winnipeg, Vancouver, and Calgary; the regional Water Quality laboratories of Environment Canada, formerly located in Calgary; and the Meteorological Inspection Office of the Atmospheric Environment Service, formerly located near the Saskatoon airport.

Construction of the centre began in 1984. It was completed close to schedule and appreciably under budget in April 1986. When it is fully staffed, there will be 106 full-time employees in the building.

Environment Canada's water research program is accommodated in two research facilities – the long-established Canada Centre for Inland Waters at Burlington, Ontario, and now in the new National Hydrology Research Centre at Saskatoon.

Award for Architectural Excellence



The Forillon National Park Reception and Interpretation Centre merited first prize in the Canadian Wood Council's architectural contest last October.

The Centre, located near Cap des Rosiers harbour, is composed of three juxtaposed modules resembling barns. The building was

designed by architects Gilles Fortin and Pierre Paré, Environment Canada, Parks. Technical realization of the plans and estimates was carried out by the firm Bisson and Poulin, architects from Charlesbourg, and supervised by the two designers.

U.S. and Canada Agree on Controls for Transboundary Shipments of Wastes

An agreement streamlining the control of hazardous waste shipments between Canada and the United States was signed in October by the Minister of the Environment, Tom McMillan, and U.S. Environmental Protection Agency Administrator Lee Thomas. The agreement sets out the conditions for the export, import and transportation of hazardous wastes between the two countries. An estimated 100,000 tonnes of hazardous wastes are shipped annually across the Canada-U.S. border.

The agreement confirms basic principles recognized by both countries for the proper control of transboundary movements of hazardous wastes between the two countries:

- Each country will adequately manage wastes within the limits of its own jurisdiction.

- The exporting country will arrange to notify the importing country and give details of the proposed shipment of the hazardous waste before the shipment is made. The importing country can then review the information and indicate its consent or objection to the export.
- The exporting country will permit re-entry of any shipments of hazardous wastes that may be returned.
- The two countries will co-operate to ensure that transboundary shipments are accompanied by a manifest and that the shipments conform to the requirements of the agreement.

Both countries will continue to consult on procedures concerning the transboundary movement of hazardous waste. ■



The Environmental Protection Act

Canada Gets Tough with Polluters

Chemicals are a fact of modern life. It is estimated that 100,000 chemicals are now in commercial use throughout the world and nearly 1,000 new ones enter the market each year. Not surprising then that there is widespread concern that chemicals dispersed in the environment may be eroding the delicate balance on which all life depends.

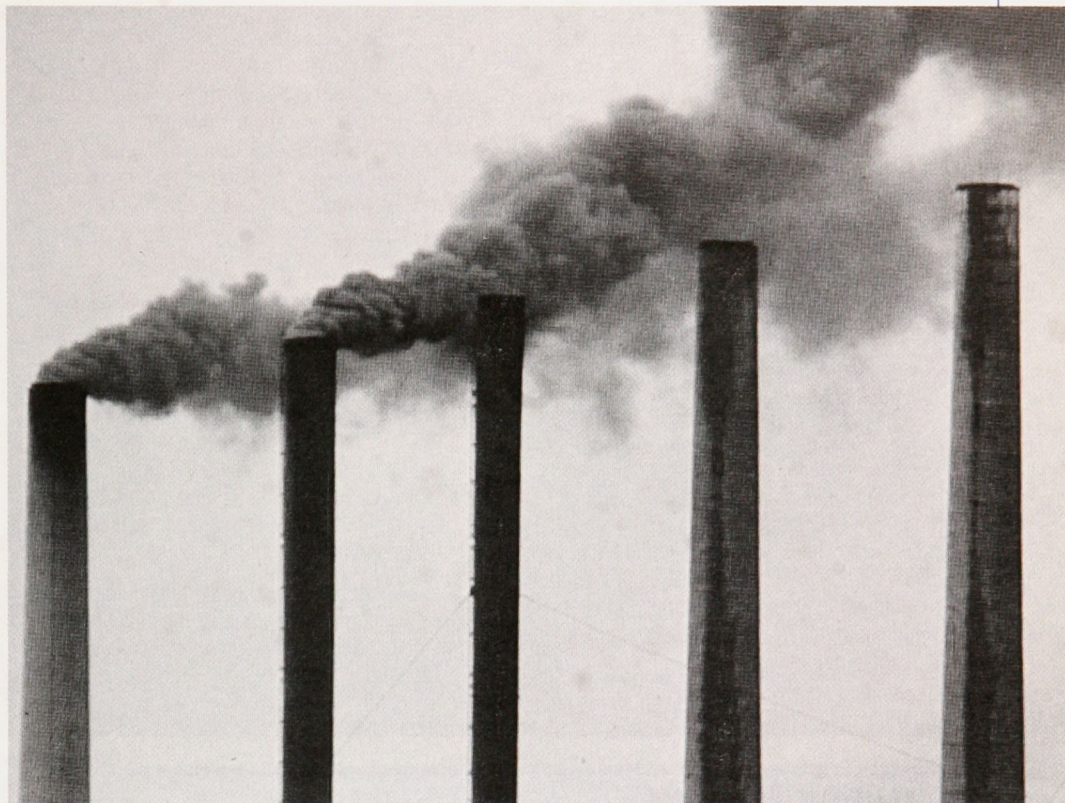
To strengthen our country's capacity to fight pollution, especially uncontrolled toxic chemicals.

To strengthen our country's capacity to fight pollution, especially uncontrolled toxic chemicals, the proposed Environmental Protection Act (EPA) will give the federal government broad new powers to manage toxic chemicals and minimize further contamination of the environment.

The draft legislation was released jointly by Environment Minister Tom McMillan and National Health and Welfare Minister Jake Epp on December 18, 1986 for discussion with other governments, environmental groups, industry, labour and the general public. Following a formal public consultation process, the bill will be fine-tuned and presented to Parliament, hopefully in the late spring.

The proposed EPA legislation would increase penalties for polluters, improve ways for the victims of pollution to seek redress in the courts and introduce a comprehensive regulatory scheme allowing the government to either ban toxic chemicals before they enter Canada or control them throughout their life cycles.

In a sharp departure from current practice, the new Act will require industry to provide government with the necessary test data and information required to evaluate chemicals that are new to Canada. This will enable the government to anticipate the potential for environmental problems and encourage their prevention by banning or restricting the use of chemicals.



The proposed EPA legislation would increase penalties for polluters.

Managing Chemicals Better

The "life-cycle approach" that is part of the draft legislation means that chemicals will be dealt with at all stages in their life cycle — from research and development to introduction, through manufacture, transportation, distribution, use and ultimately, to disposal. This comprehensive approach will cover both new and existing chemicals.

As with other major issues in Canada, the management of toxic chemicals is complicated by the fact that responsibility for environmental protection is split between the provincial and federal governments. A new enforcement and compliance policy will be developed to complement the legislative proposal by ensuring that the protections provided by the new Act will be properly implemented. The federal and provincial

governments will negotiate agreements that will spell out the role and responsibility of each in application of the Act.

Existing Legislation

The new legislation will incorporate the existing Environmental Contaminants Act, the Clean Air Act, and sections of the Canada Water Act and the Environment Act.

The key piece of existing federal legislation dealing with toxic chemicals is the Environmental Contaminants Act (ECA). The ECA regulates chemicals principally as they relate to commercial importing, manufacturing and processing. The Act applies only when consultation with other authorities shows that they are not empowered to, or are unable to, exercise control over toxic chemicals.

Perhaps the greatest flaw in this Act is that it places responsibility in the wrong place and at the wrong time. It means that government must demonstrate that a substance already on the market is harmful to



human health and the environment. The onus should be on industry to demonstrate that any new chemical is safe, not on the government to prove that it is dangerous. The time for these decisions is before, not after, a chemical enters the market.

The onus should be on industry to demonstrate that any new chemical is safe, not on the government to prove that it is dangerous.

Environmental Protection Act

The proposed Environmental Protection Act (EPA) modernizes and clarifies federal environmental legislation, providing for greater consultation among federal departments, between provincial governments and with the private sector.

The scope of the proposed EPA would be much wider than the existing ECA, covering all chemicals which are new to Canada, whether commercial or non-commercial.

Chemicals which are banned or restricted in the Environmental Contaminants Act will continue to be controlled in the proposed Environmental Protection Act. Under the new legislation, industry would also be required to:

- notify the Minister of the Environment before any chemical is introduced into Canada, and
- submit a "data package" on such chemicals, describing their properties and providing sufficient information to enable health and environmental impact assessments. Industry will also provide information on where and how these chemicals will be used.

The Environmental Protection Act, like the Environmental Contaminants Act, will operate through the listing of chemicals. "Schedules" attached to the new Act would identify chemicals for regulation.

The first schedule would list all the chemicals now in use in Canada. The list would identify those chemicals for which industry is not required to notify the Minister of the Environment or submit a data package.

The second schedule would list all chemicals known to exist in the world but not yet used in Canada. Should anyone wish to introduce chemicals on this list into Canada, they would be required to notify the Minister of the Environment of their intention and submit a prescribed data package.

For totally new chemicals, which do not appear on either list, the new Act would require notification and the most stringent data package.

A third schedule would list chemicals that are banned or severely restricted by federal legislation. The new Act would require Canadian firms exporting such chemicals to notify an authority in the countries to which the chemicals are to be exported.

Finally, there would be a schedule of dangerous chemicals which are subject to regulation under the EPA. ■

Highlights of the proposed Environmental Protection Act:

The new Act:

- protects and enhances the quality of the natural environment, by the control through this and other Acts of Parliament, of all phases of the life cycle of chemicals that pose a significant danger to human life;
- requires proper testing and assessment of chemicals;
- provides controls on the release of chemicals which might occur in the stages of manufacture, distribution, use or disposal;
- authorizes the Minister to take direct action in cases where urgent action is required;
- provides leadership in the establishment of nationally consistent standards of environmental quality;
- introduces sanctions and penalties that reflect the serious effects of environmental pollution;
- provides for regulations for the protection of the environment applicable to federal lands, waters, works and undertakings; and
- provides for guidelines for use by departments, boards and agencies of the federal government in the exercise of their powers and in carrying out their duties.

New Powers of the EPA include:

- controls on all chemical life-cycle components
- expanded inspection and investigation
- increased information gathering
- adequate testing of new chemicals
- immediate action in urgent situations
- recall orders
- clean-up orders
- notification of exports

Compliance/Enforcement will:

- be fair, consistent, predictable
- encourage compliance
- prosecute offenders vigorously

Penalties in the EPA

- fines up to \$1 million per day
- corporate officers liable for damage
- up to five years imprisonment
- statute of limitations (up to two years)
- offenders clean-up or pay for clean-up
- offenders pay cost of investigation/prosecution
- offenders post compliance bond

Consultation Process

- Public distribution of draft Bill, December 1986.
- Regional consultation meetings started January 1987.
- National consultation meeting, March 1987.
- Analysis of consultations, Spring 1987.
- Revision of Draft Bill, Spring 1987.
- Introduction of Bill for debate in Parliament.

Information:

Maggie Grogan
Environment Canada
(819) 997-6555



Major Overhaul of National Parks Act

Legislation overhauling the National Parks Act for the first time in over 50 years was introduced into Parliament this week by federal Environment Minister Tom McMillan. Aimed at increasing protection for Canada's national parks, it is one of several major pieces of legislation that Parliament will be asked to support under the Environmental Quality Policy Framework approved by Cabinet this fall.

Mr. McMillan noted that the National Parks Act enshrines the dual principles that representative parts of Canada's national heritage should be both preserved and made accessible to the public for its enjoyment and use.

"The proposed reform," he said, "strikes a delicate balance between preservation and use, for example, for tourism purposes." He stressed, however, that "when the two objectives conflict, protection and conservation will be favoured in the reformed Act."

To put a stop to the slaughter of Canada's wildlife heritage at the hands of poachers, Mr. McMillan has asked for the stiffest parks-related penalties in the world — a maximum fine of \$150,000 and/or imprisonment for up to six months for the illegal hunting of specific trophy and endangered species in the national parks.



Mountain goat

parklands are extremely sensitive to commercial and recreational intrusion. Future development, except that needed for public safety and the protection of the natural resources, will be prohibited."

In the same vein, the Minister is calling for stiffer development controls, including the setting of legislated boundaries for the townsites of Banff and Jasper.

"Urban sprawl in parks' townsites needs to be stopped. Controls over expanding commercialism must be strengthened," the Environment Minister stressed.

Existing downhill ski areas will be confined within legislated boundaries and new ski hill development prohibited. This will not affect a proposed ski hill in Gros Morne National Park, Newfoundland, which remains part of the federal-provincial agreement.

No new rail transportation or utility corridors will be allowed without the authorization of Parliament.

Cited as one of the more exciting possibilities, the Minister is seeking legislation to permit the establishment of a National Parks Citizen's Heritage Fund. "Canadians will have the opportunity to make tax deductible donations to preserve our heritage resources,

ensuring that their contribution will be used specifically for that purpose," he said. "There is a tremendous potential for new dollars."

The Heritage Fund would be used exclusively for the purchase of new parks and the enhancement of existing parks and sites, not for operations or for non-parks purposes McMillan stressed.

Mr. McMillan stated that the amendments will establish Ellesmere National Park Reserve in the high Arctic, the newest national park initiative, while permitting the future establishment of Grasslands National Park in Saskatchewan.

Included in the wide-ranging amendments to modernize the National Parks Act are provisions to: increase firearms control; regulate toxic substances and pest control products; strengthen authority for park wardens; expand protection clauses to cover soil, waters, rocks, fossils, minerals and air quality, as well as the flora and wild animals they now protect; and provide for the setting and amending of fees and charges for park use. ■

Information:
Allen Kaiser
Environment Canada
(819) 994-5074



Bighorn sheep

Other offences, such as the use of all-terrain vehicles in prohibited areas or the lighting of open fires in hazard zones, will carry fines of up to \$2,000, a fourfold increase! Polluters of parklands will be compelled to pay clean-up costs.

"Zoned Wilderness Areas need to be defended against further encroachment," McMillan said. "Vast areas of national



Ellesmere Island

One of the most Northern in the World

The wind was glacier cold and the temperature was -15°C at Tanquary Fjord when Environment Minister Tom McMillan, with Tagak Curley, Minister of Economic Development and Tourism for the Northwest Territories, signed an agreement to establish Ellesmere Island National Park Reserve.



Kettle Lake, Tanquary Fjord

The two ministers were, literally, on top of the world – a few hundred kilometres from the North Pole, surrounded by the austere mountains of the Canadian Arctic – and proud to be taking part in establishing a new national park, one of the most northern anywhere in the world.

Mr. McMillan called the agreement “a major accomplishment for all Canadians and for future generations. It protects the world’s most fragile ecology, asserts the sovereignty of Canada in the Arctic, and respects native land claim negotiations.”

The reserve will protect almost 40,000 square kilometres of Canada’s most northerly lands.

The reserve, which has the same status as a national park, will protect almost 40,000 square kilometres of Canada’s most northerly lands, an area that includes exotic flora and fauna, mountain ranges, glaciers, fiords and Lake Hazen, the largest lake north of the Arctic Circle. The proposed reserve is about 800 kilometres from the North Pole and some 600 kilometres north of Grise Fjord, North America’s most northerly permanent settlement.

Mr. McMillan said protection of Ellesmere’s fragile and unique resources will be the highest priority for the park staff, many to be recruited from Inuit communities in the High Arctic. Training of two people from Grise Fjord to work as park wardens has already begun.

Interpretive and information programs will be developed to provide visitors with an unforgettable High Arctic experience in a true wilderness setting.



Fort Conger





Muskoxen

The Site

Ellesmere Island lies 2,500 kilometres northeast of Yellowknife. It is a region of perpetual ice and snow, with tenacious flora and fauna. The northern portion of Ellesmere Island, where the national park reserve is situated, is dominated by the Grant Land Mountains and Hazen Plateau.

Wildlife and Vegetation

Owing to its long harsh winters, brief cool summers and very low precipitation, most of the area is a polar desert; windswept and arid, with few plants and little animal life.

Yet despite the severe climate, areas of thermal oasis are moist and warm enough to support vegetation and maintain animal life.

Yet despite the severe climate, areas of thermal oasis, such as the one around Lake Hazen, are moist and warm enough to support vegetation and maintain animal life.

These areas are known for their large populations of Arctic hare, which often gather in the hundreds. Small herds of muskoxen roam where there is suitable food, and Peary caribou can be found in small groups throughout the region. A few wolves, arctic fox and polar bears are the primary predators.

Human History

Remains of ancient cultures discovered in the area have allowed historians to piece together the story of a nomadic people who, about 4,000 years ago, crossed Ellesmere Island. The climate was warmer then, and it is thought that these hunters followed the muskoxen as they migrated north. The route they travelled is now called the Musk Ox Way. Crossing the area, the route is of great interest to archaeologists, for it promises to yield valuable evidence of prehistoric times on this continent.

Ellesmere Island National Park Reserve is the latest addition to a national system that began in 1885, when the government of Sir John A. Macdonald passed Order-in-Council 2197, which vested in the Crown all rights to 26 square kilometres of land at the Banff Hot Springs.

Today, in addition to 75 historic sites and nine heritage canals, we have 32 national parks, ranging from a group of islands in the St. Lawrence River that total less than five square kilometres, to the splendour of Wood Buffalo, almost 45,000 square kilometres. Taken together, Canada's national parks offer an impressive range of experiences – whether the isolated grandeur of Nahanni National Park Reserve or the friendly accessibility of Prince Edward Island National Park. ■

Information:
Jim Shearon
Environment Canada
(819) 997-3736



Polar Bear Pass National Wildlife Area



Peary caribou

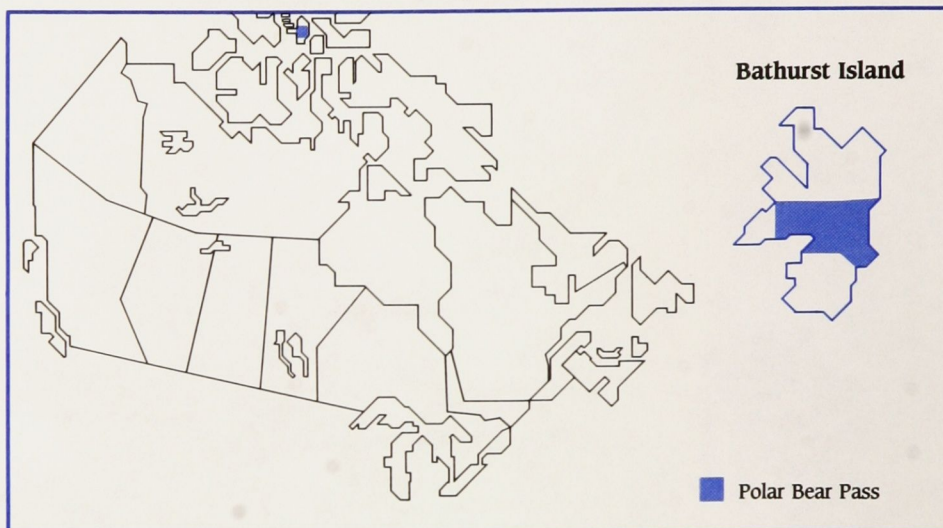
Polar Bear Pass was officially declared a National Wildlife Area by Environment Minister Tom McMillan on September 20, 1986, in a ceremony held in Resolute, Northwest Territories. Canada's 44th National Wildlife Area, and the first in the far North, is located on Bathurst Island in the Central Canadian Arctic islands and extends right across the Island from the east to the west coast. The 2624 square kilometre site is situated 150 kilometres northwest of Resolute.

"It is imperative that we conserve the unique biological richness of the Pass for ourselves and for future generations of Canadians," Mr. McMillan said during the ceremony. "Moreover, the Pass is a natural laboratory for research on High Arctic plants, birds and mammals, climatology and archaeology."

Polar Bear Pass, a fertile inland valley, has been described as an Arctic oasis within a polar desert by scientists from the National Museum of Natural Sciences, which maintains a research station in the newly established National Wildlife Area. In particular, ponds and wetlands make it a hydrologic oasis, while the reflection of the sun's radiation from the surrounding hills make it a thermal oasis.

The unusual climatic conditions coupled with nutrient-rich surface deposits, make Polar Bear Pass the most extensively vegetated area on Bathurst Island, allowing it to support a large and diverse population of plants and animals.

A total of 366 plant species are represented in the rich wet sedge and grassy meadows, dwarf shrub, herb tundras and lichen barrens found within the Pass.



Polar Bear Pass supports a diverse wildlife of some eight mammals and 53 bird species. At least 30 bird species are known to breed in this area and eight are regular migrants.

Peary caribou, a threatened species, move through the Pass on their annual north-south migrations and muskoxen frequent the area year-round. Polar bears move through the Pass to alternate feeding sites on the adjacent east and west coasts where there is an abundance of ringed and bearded seals. The marine area to the east also supports a moderate number of walrus and narwhal, mainly during summer.

The nesting population of the greater snow goose is the most westerly colony known. Atlantic brant breed in Polar Bear Pass and winter in Ireland. The area also has high populations of King eider and Pomarine jaeger as well as high densities of long-tailed jaeger and red phalarope.

Archeological surveys have located Inuit sites dating back 4000 years.

Concern for the protection of the Pass began in 1968. That year the National Museum of Natural Sciences began long-term biological explorations, some five years following the first drilling for oil on Bathurst Island. Consequently, scientists and conservationists were heartened by Mr. McMillan's announcement of the National Wildlife Area status which ensures protection of the area.

"The new legal status of Polar Bear Pass, the guidelines set up by the Area Advisory Committee, and the limited permissible activities within the area will, in time, give the wildlife of the Pass a predictable level of protection unique in the Canadian High Arctic," says David Gray, Associate

Curator of Vertebrate Ethology, National Museum of Natural Sciences.

The United Nations' International Biological Programme identified Polar Bear Pass as an ecologically important site in the 1970s and recommended protecting it as an ecological reserve. In 1982, Canada designated the site as a Wetland of International Importance under the terms of the Ramsar Convention.

Polar Bear Pass National Wildlife Area will be protected by regulations under the Canada Wildlife Act. It will be managed cooperatively by Environment Canada and the Government of the Northwest Territories, acting on the recommendations of an Area Advisory Committee. Representatives from the native people and the federal and territorial governments will make up the committee, which will prepare a management plan to protect the area and assure the Inuit continued use of the resources the area supports.

Subsistence hunting by native people will be allowed after caribou population levels recover. In 1973-74 a severe winter drastically reduced their numbers.

The declaration of Polar Bear Pass as a National Wildlife Area comes on the eve of the hundredth anniversary of the first wildlife sanctuary created in the Western Hemisphere at Last Mountain Lake, Saskatchewan. ■

Information:
Paul Hess
Environment Canada
(819) 994-1051



Sydney Tar Ponds Clean-up



An historic November '86 agreement between the federal and Nova Scotia governments to clean up the Sydney Tar Ponds is good news for the economy, health and environment of Cape Bretoners.

The chemical effluent site known as Sydney's Tar Ponds is one of the most hazardous chemical waste sites in eastern Canada, and the largest chemical waste site anywhere in the country. The Tar Ponds are mainly the result of more than 80 years of discharge of effluent from the coke ovens of the Sysco steel plant in Sydney. An oily black sediment now fills what was once known as Muggah's Creek. In environmental terms, it's 3400 tonnes of bad news.

The Tar Ponds are mainly the result of more than 80 years of discharge of effluent from the coke ovens of the Sysco steel plant in Sydney.

During the 1980s a series of federal and provincial government studies revealed the presence of a known carcinogen, polynuclear aromatic hydrocarbons (PAHs), in the ponds. Although they do occur naturally in the environment, PAHs are a by-product of the coking operation (which converts coal into coke, an industrial fuel) and other human activities. Absorbed through the food and water we consume, PAHs are among the oldest known carcinogens, or cancer causing agents, in humans. In fact, they have been identified as an active ingredient in soot, which caused tumors in chimney sweeps in the 18th century.

But PAHs, unfortunately, remain a 20th century problem, especially in Sydney. And in the early 1980s, a series of reports began to zero in on a major environmental hazard on Cape Breton Island.

In 1980 and 1981, the federal Department of Fisheries and Oceans tested lobsters in Sydney Harbour, adjacent to the Sysco plant and the Tar Ponds. They discovered that levels of PAH contamination were high enough to warrant indefinite closure of the lobster fishery in the south arm of the harbour.

In January 1982 and October 1983, Environment Canada released reports which specifically identified Sysco as the major source of pollution in the Sydney area. They concluded that the Tar Ponds represented an ongoing source of PAH contamination to Sydney Harbour. Subsequent federal studies found that ambient air downwind of the Sysco coke ovens had above average levels of PAH contamination and that cancer rates of 'downwind' Sydney residents were significantly higher than the national average.





It was soon obvious something had to be done to curb this growing threat to Sydney's environment. In April 1984, a contract was awarded to a private consulting firm to develop an engineering design for the long-term control and clean-up of the Tar Ponds. The resulting study recommended three alternatives for the clean-up: encapsulation of the wastes on site; excavation of the wastes and their eventual disposal at a new site designed to contain hazardous wastes; or excavation and incineration of the wastes, with the possibility of the generation of electrical energy.

The latter option of excavation and incineration was chosen because incineration can destroy the PAHs at a 99.99% rate of efficiency, and also because it is the most economically viable alternative.

Once the solution to the problem was clear, it was then up to the federal and provincial governments to initiate a plan to rid Sydney of the Tar Ponds, once and for all.

On December 27, 1985, the two governments announced the initiation of negotiations to develop a Subsidiary Agreement to clean up the Tar Ponds. There were also subsequent negotiations regarding the closure of the coke ovens and the re-employment of the coke oven workers.

The 10-year toxic excavation project would be the first of its kind in Canada and the largest clean-up of a chemical waste site in Canadian history.

On June 30, 1986, federal Environment Minister Tom McMillan and Nova Scotia Premier John Buchanan announced that they had reached an agreement on the clean-up of the Tar Ponds, and that the coke ovens would be closed no later than July 1988.

Then on November 7, 1986, an historic \$34.3 million federal-provincial agreement to clean up the Sydney Tar Ponds and create badly needed jobs for Cape Bretoners was signed in Sydney by the federal and

provincial Environment Ministers and the Nova Scotia Development Minister, Roland Thornhill.

At that occasion, Mr. McMillan declared that the 10-year toxic excavation project would be the first of its kind in Canada and the largest clean-up of a chemical waste site in Canadian history. "It will be only slightly smaller than the largest such clean-up ever undertaken in North America. The Tar Ponds are an environmental menace to the health of Sydney residents. The clean-up is long overdue," he said.

The first five years of the clean-up will cost \$34.3 million and will create an average of 200 jobs a year in Nova Scotia, many of them in Cape Breton and most in the first three years. An expected 1400 person years of employment will be created during the entire 10-year life of the project. The total cost will be split by the federal and provincial governments on a 70/30 per cent basis.

The clean-up agreement also stresses that the Sysco steel plant's coke ovens in Sydney will indeed be closed no later than July 1988. "We are stopping pollution, not only cleaning it up," said Mr. McMillan. "It would not have made sense to have invested in cleaning up the site while allowing the coke ovens to continue dumping waste into the Tar Ponds and into Sydney's air."

Design work and preliminary site preparation for the clean-up have already begun and should take about two-and-a-half years to complete. Then it will take about seven-and-a-half years to excavate and incinerate the tar-like substance.

Besides demonstrating innovative technology that could be applied to many other environmental problems, the clean-up will have other positive spin-offs. The local lobster fishery will hopefully be re-opened. The industrial development and tourism potential of the Sydney area will be rejuvenated. And, above all, Sydney will once again have a healthier environment for its inhabitants. ■

Information:
Wayne Eliuk
Environment Canada
(902) 426-7990

A Breath of Fresh Air for Hamilton Harbour

The Attiwandaronk Indians called the harbour Macassa: The Lake of Shining Waters. Stand on the shore of Hamilton's troubled harbour in 1987 and the ghost of Luke R. Awn stands with you.

Ninety-nine years ago – before there were computer models to talk about low oxygen levels in the water, or surveys of the tumors in fish – Luke saw what harbour pollution could really mean. He wrote a letter to the *Hamilton Spectator* about his concern on November 23, 1887.

"I heard a man from Philadelphia say that the Burlington Bay was the handsomest sheet of water he ever saw. That was in 1867.

What would he say if he saw the east end now? And what will it be like now if the present insane idea of emptying the sewage of our fast increasing city into it is carried out?

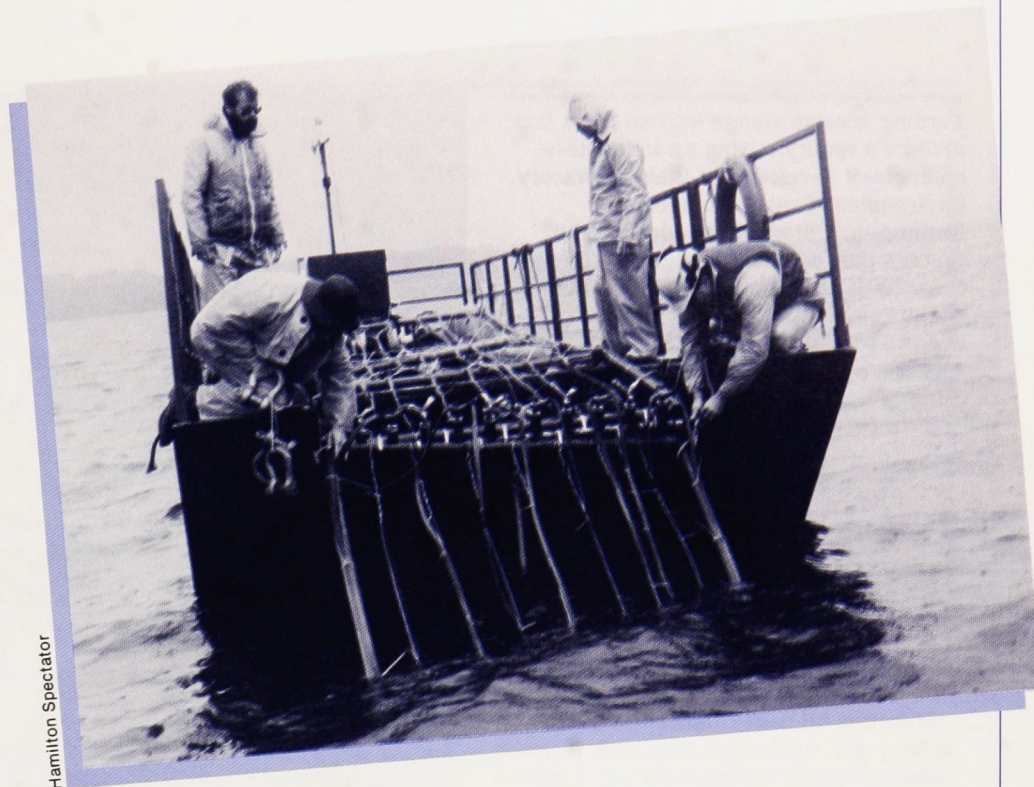
It will be a place that man cannot live on it's shore nor fish in it's waters – a veritable hotbed of disease."

People didn't listen to Luke then, and didn't really listen to people like him for another 70 years. We've paid the price for that mistake – more than \$250 million in clean-up so far and the price is still rising.

These days, everyone would like Hamilton harbour to be "tap water safe" and recent federal government experimentation on the harbour is easy to swallow. But what the water really needs is a breath of fresh air. Experts still agree that after all the financial expenditures, we still haven't come close to solving the most critical problem: the lack of oxygen in the water. Why is oxygen so important?

The harbour needs oxygen to decompose the waste with which we bombard it. Low oxygen reduces the number of kinds of fish, and can also result in metals being released from sediment on the harbour bottom to pollute the water. Oxygen is used by bacteria breaking down ammonia, by decomposing organic matter, by rotting algae that sinks to the bottom. Nutrients such as phosphorus, which gets into the harbour with the sewage flow and through creeks and rainwater runoff, increase the growth of algae.

Even with the reductions at the steel and sewage plants, the harbour is overloaded with these kinds of pollutants. The result: during the hot summer months, there's virtually no dissolved oxygen in the lower water.



Hamilton Spectator

It's interesting to note who is responsible for most of the oxygen-robbing pollutants like ammonia. It's not just heavy industry. To a large extent it's all of us. Every time a toilet flushes, it adds to the load at the sewage treatment plant.

But now the good news: Scientists working at the National Water Research Institute at the Canada Center for Inland Waters in Burlington, Ontario may have the answer to help clean up the badly polluted bay. A new clean-up process has shown significant success, following a six-week experiment.

Research scientist Tom Murphy says, "This pilot program could render the western basin of the harbour clean for recreational fishing."

To do so the pilot program would have to be expanded 6-10 times. The research showed scientists how contamination could be cleared away by bubbling oxygen up through the murky waters. The Institute worked on the program with Union Carbide of Canada, the giant multi-national chemical company.

This is how the project worked: For eight weeks a large white oxygen tank was placed on the shoreline and hooked up to a simple system of sunken hoses that released a continuous, silent stream of pure oxygen into a small, isolated portion of the harbour. This was the first experiment of it's kind in Canada. Lab experiments have shown Institute scientists that adding this precious oxy-

gen to water will make it cleaner and speed the breakdown of pollutants like ammonia, which is toxic to fish.

"We were able to pick up a signal that we are treating the harbour," says Mr. Murphy.

"It's everything we could have hope for in a small experiment." But Mr. Murphy cautions that oxygenation alone won't solve the problem. Cuts in the amount of pollution dumped into the harbour and enhanced sewage treatment must also occur, he said.

Recent events have also emphasized the importance of Hamilton harbour. In fact, both the United States and Canada recently agreed to develop a toxic chemical management plan for Lake Ontario.

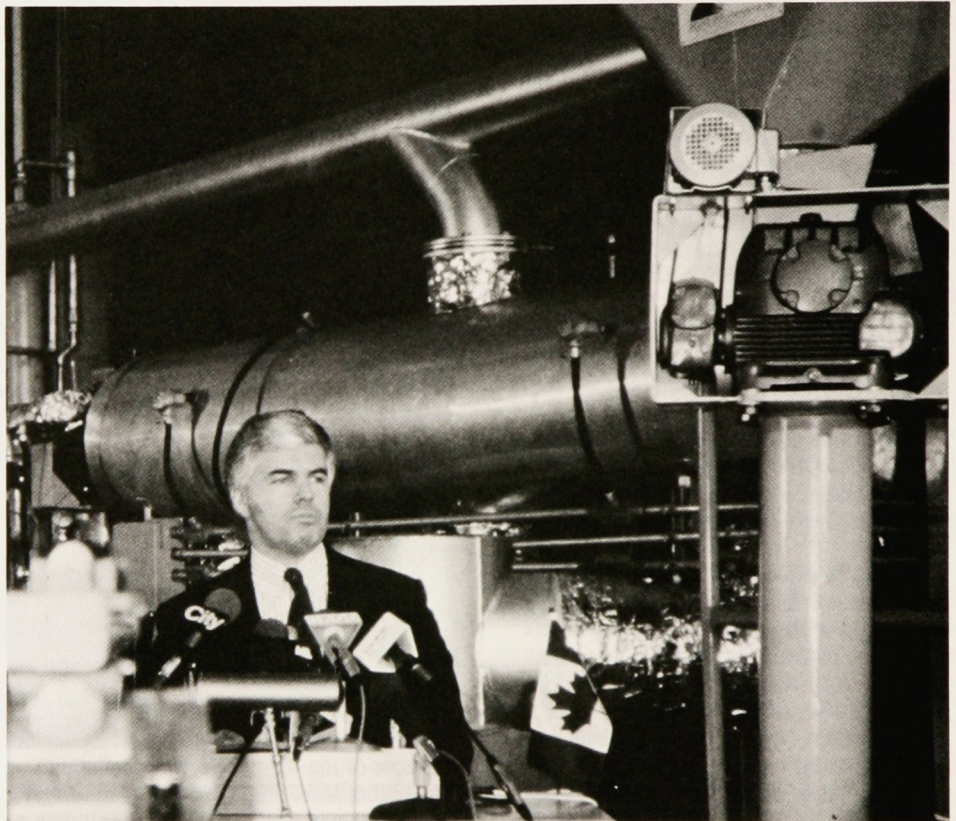
"Our colleagues in the United States consider the harbour another significant source of pollution to Lake Ontario," said Dr. James Kingham of Environment Canada. "We are being held to account by the Americans who say that the harbour is as significant a source of toxic chemicals into Lake Ontario as the Niagara River system." ■

Information:
Gord Sivell
National Water Research Institute
(416) 336-4601



Turning Sludge into Energy!

Turning sewage sludge into an asset has become a reality. Using an innovative technology developed in their laboratory, Environment Canada engineers in Burlington, Ontario have pioneered a process that converts sludge into oil and coal. Their efforts could lead to a billion-dollar Canadian industry with major exports to Japan and the United States. And waste disposal costs could be a thing of the past.



Opening of the pilot plant by Minister Tom McMillan

Sewage sludge is the by-product of the biological treatment of wastewater. For every five million litres of wastewater treated, a tonne of sludge is produced in Canada. The disposal costs alone are estimated at \$100 million.

A fuel-from-sludge pilot plant was launched recently in Hamilton to test the technology developed at the Department's Wastewater Technology Centre. The plant was designed and built by Petro Sun International of Montreal, a Canadian company specializing in alternative energy systems, with funding from the federal government.

The pilot plant demonstrates a technique that imitates the natural process of oil synthesis by converting 95% of the carbon in the sludge to a useable form of energy. The oil produced becomes a storable and transportable fuel (unlike steam or electricity) while the char (coal) is used as the energy for the process. The process reduces the volume of sludge by 75-80%, leaving only an environmentally inert ash for landfilling.

Experiments during the past five years show that this process produces two barrels of oil and one-half tonne of coal for every tonne of sewage sludge processed. With 500,000 tonnes of sludge being produced annually in Canada, the recoverable energy represents a potential value of about \$30 million. This translates into an estimated saving in disposal costs of \$40-60 per tonne compared to conventional incineration.

This process produces two barrels of oil and one-half tonne of coal for every tonne of sewage sludge processed.

"With sludge production expected to double by the 1990s, this technology can save Canadian municipalities millions of dollars in sludge disposal costs while providing a solution to a growing waste disposal problem," said Environment Minister Tom McMillan at the official opening.

The primary methods of sludge disposal in Canada are land application for agriculture, landfilling and incineration. Traditionally, land application has been the preferred method of sludge management, and in smaller communities remains the most cost-effective method. Larger communities, however, are finding it increasingly difficult to secure sufficient land within a suitable distance of the treatment plant to dispose of the waste.

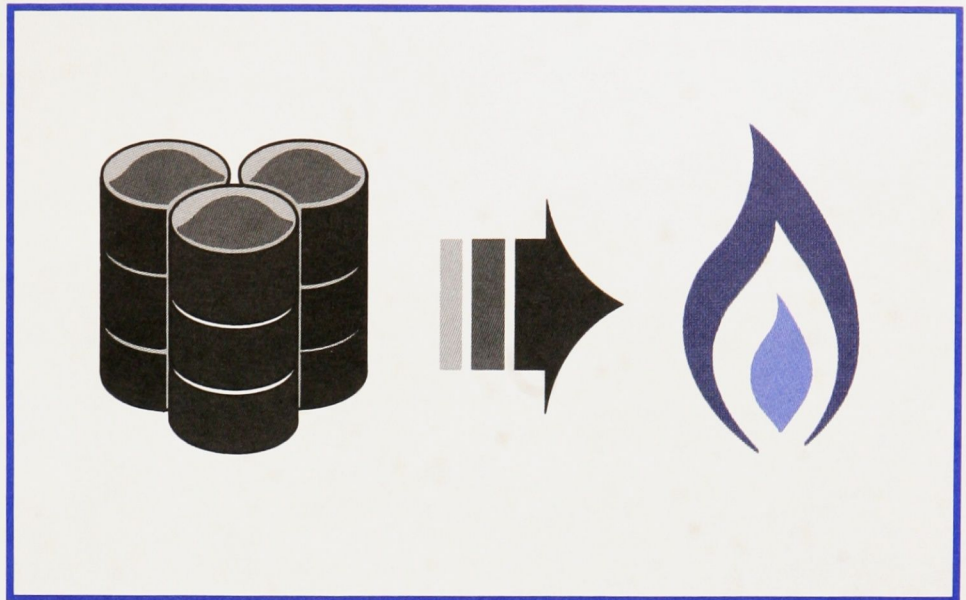
In some cases the treatment of industrial wastewater in municipal systems has elevated the levels of heavy metals in the sludge making it unsuitable for agricultural use. As a result, and with the increased difficulty in obtaining approvals for landfilling, there is a trend to sludge incineration. Disposal by incineration produces a minimum amount of residual material for ultimate disposal and the majority of heavy metals are immobilized in the ash.

Environment Canada's Wastewater Technology Centre in Burlington, which develops and tests new wastewater treatment methods applicable to Canadian industries and municipalities, initiated a research program in 1982 to evaluate a technology to convert sewage sludge to fuel. To date about \$3 million has been spent by several federal government agencies — Environment Canada, the Interdepartmental Panel on Energy Research and Development, Supply and Services Canada, and Energy, Mines and Resources.

The process is very simple. The water is removed mechanically from the sewage sludge to 35% solids and then thermally dried to 95% solids. It is then heated to 450°C in an oxygen-free environment, producing gases and solids with the metals in the sludge acting as catalysts. The gases are then condensed and converted into a liquid fuel (oil), while the solids form the char.

Under these conditions, the char produced in the process would provide the energy to dry and heat the sludge to the required temperature for the conversion process. The oil would be surplus for use elsewhere.

After successful experimentation at bench-scale level, a study was undertaken to assess the commercial viability of the technology. It found the technology based on the laboratory results to be economically viable and warranting further development.



Petro Sun International of Montreal, was contracted in 1986 to design, construct and operate a one tonne/day pilot plant and to confirm both the laboratory scale results and the projected energy savings of the fuel-from-sludge technology. A secondary objective of this pilot program is to assess, on a large scale, the commercial value of the oil fuel and to upgrade its quality for end-use trials.

A significant advantage of this technology is the low volume of residual material (ash) needing disposal.

A significant advantage of this technology is the low volume of residual material (ash) needing disposal. The process operates at low enough temperatures to ensure that the metals remain in the char. Although the ash from burning char contains high levels of the metals, its volume is significantly lower than the original sludge. Furthermore, on combustion the metals are converted to non leachable oxides or silicates, thus posing no environmental threat.

Air emissions are handled by present air pollution abatement technology. The sulphur content in the oil compares favourably with the best quality natural crude oil. Toxic organic compounds are present in similar proportions as those in crude oil. Potential infection problems associated with sludge are also eliminated in this process.

Petro Sun is currently negotiating with Canadian Patents and Development Limited, the federal crown corporation set up to license federally developed technology, to establish the worldwide licensing rights to the process. The technology will be validated at pilot scale by mid-1987 and its commercial potential established. Negotiations for design and construction of the first full-scale commercial fuel-from-sludge plant will be underway before the end of 1987. ■

Information:
Paul Hempel
Environment Canada
(819) 997-6555

Register of Federal Heritage Buildings



Victoria Memorial Museum in Ottawa

Environment Minister Tom McMillan marked Heritage Day 1987 by announcing that 154 buildings across the country have been included on a roster of heritage properties the federal government will protect.

Speaking to 300 members of heritage organizations from across Canada, Mr. McMillan said, "This is the first time that a government has committed itself to leadership in preserving heritage property by carefully cataloguing and managing its own holdings."

The Minister criticized past inaction which, he said, "resulted in the loss, through demolition or neglect, of many of Canada's built heritage treasures."

The Register of Federal Heritage Buildings will prevent such incidents as the near-destruction of Ottawa's Royal Canadian Mint: in 1985, news that wrecking balls were at the building, a major landmark in the nation's capital, sparked such a wave of public outrage that the work was halted within a week. To meet Canadian standards for the preservation of such sites, the destroyed portion of the building, a wing erected in 1952, had to be reconstructed according to the original plans.

Federal departments planning repairs, demolitions or ownership changes for federally owned buildings 40 years old or older must notify Environment Canada's Federal Heritage Buildings Review Office. Approval

for the planned action will be granted only after the most rigorous review to ensure that Canada's heritage is not being damaged or destroyed. As evaluations are required, buildings will be added to the Register and, over time, the federal government will assemble Canada's first comprehensive directory of federally owned heritage property.

The Register of Federal Heritage Buildings lists buildings as either "Classified" or "Recognized", according to their historical, architectural or environmental value — "Classified" indicating the highest heritage significance.

The Heritage Day ceremonies took place in Ottawa's Victoria Memorial Museum, itself one of the newly listed Federal Heritage Buildings. The Victoria Memorial Museum is celebrating its 75th anniversary this year.

The Minister said that the federal government will be taking other steps in the heritage field. Money is being re-allocated within Environment Canada to give more funds to built-heritage programs. Under plans now being studied, for example, the Toronto home of George Brown, English Canada's leading 19th century newspaper owner and editor, will be restored. Similar restorations will be undertaken across Canada in partnership with other levels of government and the private sector. ■

"Classified" Federal Heritage Buildings

Alberta

Banff Museum of Natural History

British Columbia

Steveston Gulf of Georgia Cannery
 Steveston Pacific Coast Cannery
 Vancouver Former Main Post Office, 701 West Hastings Street
 Victoria Gonzalez Observatory
 Victoria Hatley Castle, RRMC
 Victoria Malahat Building

New Brunswick

Fredericton RCMP "J" Division (Old Gov't House)

Nova Scotia

Halifax Admiralty House, Stadacona
 Halifax Wellington House, Stadacona

Ontario

Collingwood Federal Building, 44 Hurontario Street
 Hamilton Armoury, James Street
 Kingston Customs House, 294 King St E
 Kingston Post Office (Old), 86 Clarence Street
 Ottawa Bank of Montreal, 144 Wellington Street
 Ottawa Bank of Nova Scotia, 125 Sparks Street
 Ottawa Central Chambers, 40-46 Elgin Street
 Ottawa Cereal Barn, Experimental Farm
 Ottawa Drill Hall, Cartier Square
 Ottawa Maplelawn, 529 Richmond Road
 Ottawa Postal Station "B", 47-59 Sparks Street
 Ottawa Parliament Hill: 4 buildings
 Ottawa Prime Minister's Residence, 24 Sussex Drive
 Ottawa Rideau Hall, Sussex Drive
 Ottawa Royal Canadian Mint, 320 Sussex Drive
 Ottawa Teacher's College, 195 Elgin Street
 Ottawa Victoria Museum, Metcalfe and McLeod
 Sault Ste Marie Power House, Canal Building
 Toronto Federal Building, 1 Front Street

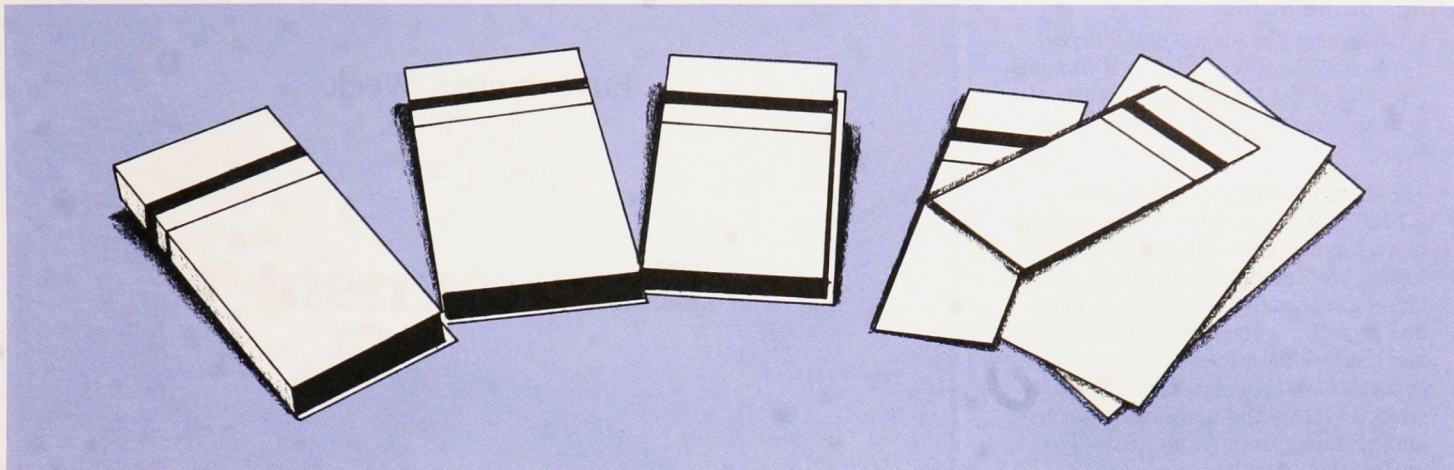
Quebec

Hull Ouest Willson House Complex: 5 buildings
 Québec City Post office, 3 rue Buade

Information:
 Christina Cameron
 Environment Canada
 (819) 994-1808



Update Reviews



Vinyl Chloride Industry Reducing Emissions

An Environment Canada report released in January reveals that emissions of vinyl chloride into the atmosphere have been reduced significantly since 1973. These emissions, which reached 4,500 tonnes in 1973, went down to 650 tonnes in 1984. However, accidental releases remain a concern.

According to the report, entitled *Environmental Status Report 1979-1984 Vinyl Chloride Industry*, the vinyl chloride industry still accidentally releases 20 tonnes of this product into the environment annually.

In complying with the limits under the Clean Air Act, the Canadian vinyl chloride industry spent more than \$15 million on pollution control and monitoring equipment, as well as designing and building safer and more efficient manufacturing processes.

Vinyl chloride is a colourless and highly flammable gas, used to manufacture polyvinyl chloride – that supple plastic found in a variety of consumer items ranging from credit cards and toys to automobile parts and building materials. Vinyl chloride is produced at plants in Fort Saskatchewan, Alberta and Sarnia, Ontario. It is liquefied for shipment by railway tank cars or pipelines to the four polyvinyl chloride plants located in Alberta, Ontario and Quebec. A fact sheet is also available. ■

Report on Pollution Control Systems

A study made last November reveals that pollution from municipal waste incinerators can be cut by more than 99 % for certain kinds of pollutants.

The comprehensive study, conducted by Environment Canada and the first of its kind anywhere in the world, tested two pilot-scale pollution control systems. Both systems demonstrated that trace organics like dioxins and furans could be reduced by over 99 %; heavy metal compounds like arsenic and lead by 99.9 %; and mercury by 97 %. In addition, a reduction of 95 % was obtained for acid gases like sulphur dioxide, a precursor of acid rain, and for hydrogen chloride.

The tests are designed to measure incinerator emissions to the lowest possible detection limits for trace organic compounds and to define optimum operating conditions to minimize emissions of concern.

The results of these tests are contained in the report *The National Incinerator Testing and Evaluation Program: Air Pollution Control Technology*. Two fact sheets on this program are also available: *Municipal Incinerators – Pollution Control Systems* and *The Two-Stage Combustion Incinerator – A Clean-burning Solution for Small Communities*. ■

Environmental Quality in the Atlantic Region – 1985

Although Atlantic Canada's environment has improved recently, there are still persistent problems that must be solved concludes a new report entitled *Environmental Quality in the Atlantic Region 1985*, released by Environment Canada this past December.

The report provides a snapshot picture of the whole Atlantic ecosystem and focuses on both the positive and negative trends in the region. Among the facts cited in the report: ground-level ozone concentrations, a possible danger to human health, are increasing; cadmium, a highly toxic poison, has been found in the sediments of Atlantic Canada's major harbours; a large portion of one of New Brunswick's most important oyster-producing bays has been closed because of fecal contamination; only 10 % of municipal waste water is being treated in Atlantic Canada, compared to 80 % in the rest of the country; groundwater, a primary source of drinking water throughout the Atlantic provinces, is being contaminated.

On a more positive note, air quality has improved in most major cities in the Atlantic Region; the amounts of DDT and other chemical compounds such as polychlorinated biphenyls (PCBs) in certain wildlife species have declined; violations of the lead-free gasoline regulations have decreased dramatically; and water quality has improved in some rivers.

A Summary Report is also available. ■



Other publications

- Environment Canada's *Annual Report 1985-1986* is now available. It contains a review of the Department's principal activities during the 1985-1986 fiscal year.
- The Canadian Heritage Rivers System (CHRS) is a co-operative program of the federal, provincial and territorial governments, whose objective is to give recognition to the nation's important rivers and to preserve their natural, historical and recreational values. CHRS's *Annual Report 1985-1986* describes the newly created system and notes designations and nominations of rivers, as well as studies that have been undertaken.
- Environment Canada and the Petroleum Association for Conservation of the Canadian Environment have published a series of fact sheets entitled *Understanding Automobile Emissions*. Various aspects of the question are addressed, including the content of automobile emissions, and their effects on health and the environment, automobile pollution control devices, misfuelling with leaded gasoline, the economic advantages of good automobile maintenance and operation, and federal initiatives related to reducing pollution from motor vehicles. "Clean" driving tips are also included.
- A fact sheet entitled *Acid Rain Milestones* is now available. It lists the co-operative initiatives taken by the United States and Canada since 1978 to solve the problem of acid rain.
- Have you heard about SWEEP? SWEEP is the name of a joint venture undertaken by the governments of Canada and Ontario with the object of improving Southwestern Ontario's soil and water. Agriculture Canada and Environment Canada are participating in the Soil and Water Environmental Enhancement Program (SWEEP) which will establish water quality and quantity monitoring activities in the Lake Erie Basin. A brochure containing further information is available.

Environment Week
1987
June 1 - 7

Environment



*It's up to
all of us!*

**An ever-expanding network
of Canadians committed
to working together
understanding and supporting
helping to provide for
a healthy environment and a
proud heritage**

For details, contact your regional
Environment Canada office.



