



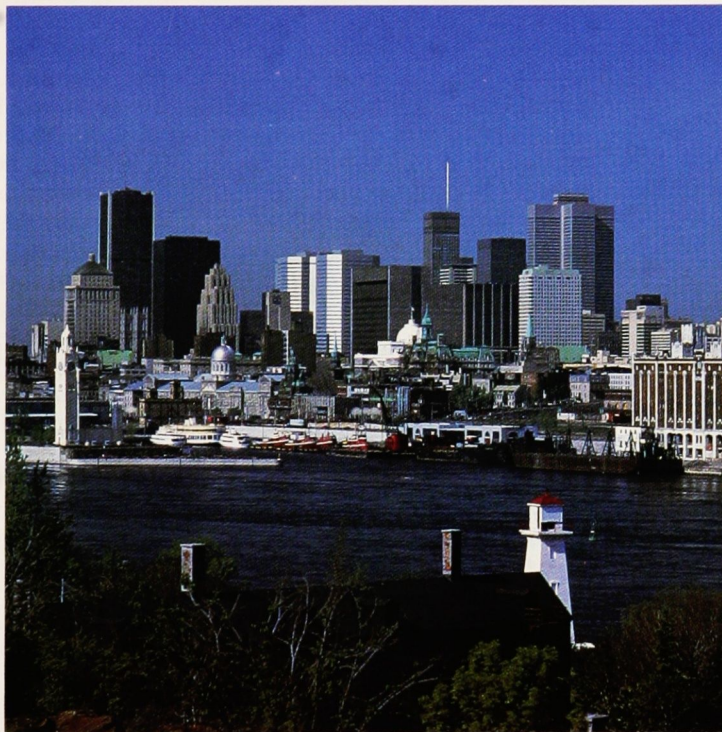
Environment
Canada

Environnement
Canada

E N V I R O N M E N T

Update

Vol. 8 No. 3 December 1988



Canada 

A Word from the Editor

As we approach the final decade of the 20th century, there is evidence of humankind — men and women everywhere — beginning to accept the idea that the planet Earth, too, is a living thing and to exist upon it we must learn to co-exist with it. The generations pass away, but the Earth abides.

What are we doing, to ensure that we also may abide? What is the evidence here, in Canada?

The Government of Canada and the province of Quebec have agreed on steps to clean up the St. Lawrence River, one of Canada's great waterways. The origins of major pollution will be traced. Cost-shared projects, involving all parties, will develop specific techniques of pollution abatement, and the results will be regularly monitored. The agreement includes a program to rehabilitate the wetlands that border on the river, to clean up ports and canals, and to stop the rapid decline in numbers of creatures such as the beluga whale, blue-winged teal, striped bass, and Atlantic sturgeon.

Canada has also signed an agreement with the Netherlands, for an interchange of information and expertise on environmental issues. We have joined with other nations in signing the Montreal Protocol for the protection of the ozone layer. Canada organized a world conference on the changing atmosphere.

Environment Canada has issued new policies related to another historic waterway, the Rideau Canal: to protect its wetlands and preserve its unique national and cultural environment. There are also new regulations concerning the hunting of migratory birds, coupled with extra funding for wildfowl management — the latter is a joint Canada-U.S. action. Incidentally, all permits to hunt migratory birds must carry a \$6.50 stamp depicting a Robert Bateman painting of pintail ducks. Proceeds from the sale of the stamp will go to Wildlife Habitat Canada.

The Federal Environment Minister has brought forward the date for the elimination of leaded gasoline by two years — to 1990. The use of PCBs is to be phased out by 1993, and those in storage are to be safely eliminated. Environment Canada is supporting the development of a damage prediction model, as a means of forecasting the effect of acid rain. Tougher fines for offenders have been written into the National Parks Act.

We can also point to marked successes, of which the prime example is the wood bison. A last, isolated, herd of 200 was discovered in a park in Alberta, in 1957, and the species was put on the endangered list. Today, there are 2,500 wood bison in widely spaced herds to be found in the northern prairies and the two territories, and the species has been removed from the endangered list.

Starting in 1989, Canadians will be able to look for products with an "Environmentally Friendly" label. Such products may be bio-degradable, packaged in recycled or recyclable material, or free from chemicals that deplete the Earth's ozone layer. Products that are friendly to the environment will be tested by independent experts and then labelled with a distinctive logo. When we buy products that are friendly to the environment, each of us, immediately and personally, can improve the environment through our purchasing decisions. The choice is up to us. By selecting the right products, we can say "yes" to a better environment.

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Photo: Supply and Services Canada Photocentre

Cover photo: Montreal, great port city of the St. Lawrence.

Environment Update

Environment Canada was created by the Parliament of Canada in 1971. The Atmospheric Environment Service, the Conservation and Protection Service, and the Canadian Parks Service of Environment Canada work to preserve and enhance the quality of Canada's environment.

Environment Update publishes a variety of articles on environmental and heritage issues relating to the mandate and work of Environment Canada.

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Readers may address comments and enquiries to: The Editor, Environment Update, Communications Directorate, Environment Canada, Ottawa K1A 0H3.

Environment News

Elimination of Leaded Gasoline

The federal government is advancing the deadline for elimination of lead from gasoline by slightly more than two years — from 31 December 1992 to 1 December 1990. The announcement was made by federal Environment Minister Tom McMillan and Health and Welfare Minister Jake Epp.

“Health data provide compelling evidence that leaded gasoline should be eliminated sooner than originally planned,” Mr. McMillan said.

Lead is added to gasoline as an economical way of enhancing octane. It also lubricates valve parts in engines designed to run on leaded gasoline.

Under the new regulations, lead in gasoline will be outlawed except for a very limited list of critical commercial, farm or marine equipment requiring minimum levels of lead to avoid premature engine failure. Fuel for such equipment will be regulated at 26 milligrams of lead per litre of gasoline.

Canada’s acid rain control program will also reduce lead emissions through controls on sulphur dioxide emissions at base metal smelting operations. The federal Environment Minister ordered a review of secondary lead smelter regulations to determine what further lead emission reductions could be achieved.

Canada Signs Ozone Agreement

Canada was among the first nations to ratify the Montreal Protocol for the Protection of the ozone layer. The Protocol will come into effect on January 1, 1989 if it is ratified by the 11 countries accounting for two-thirds of the global 1986 consumption of chlorofluorocarbons (CFCs) and halons, two ozone-depleting chemicals.

CFCs and halons are the first chemicals to be regulated under the new Canadian Environmental Protection Act passed in June 1988. The new Act enables the Government of Canada to control the import and export of ozone-depleting chemicals and to regulate their manufacture and use in Canada.

The Montreal Protocol established a timetable to control major industrial substances that deplete the ozone layer in the atmosphere. In the short term, the Protocol establishes phasedown requirements for CFCs and halons. In the long term, it schedules a review of the science and the control measures taken.

Wildlife Habitat Stamp



Canada’s fourth wildlife habitat conservation stamp reproduces a painting of pintail ducks by Canadian wildlife artist, Robert Bateman.

The stamp, costing \$6.50, must be affixed to all migratory game bird hunting permits. Proceeds from the sale of the

stamp are turned over by the government to Wildlife Habitat Canada, a non-profit organization which has committed about \$13 million to more than 100 wildlife conservation projects since 1984.

Acid Rain Warning System

The federal government is continuing to support the development of an advanced computer model to improve Canada’s early warning system for forecasting acid rain damage. The model will improve the forecasting of the potential severity of “acid shocks” which can occur during spring thaws.

Acid shock is the sudden surge of acidity that accompanies the spring thaw when the environment is unable to absorb the large levels of acid contained in the melting snow.

The federal government is contributing an additional \$292,000 to the acid rain damage prediction model developed during the past three years by a scientific team under the supervision of Environment Canada. Since 1980, researchers from Quebec’s National Institute for Scientific Research, Laval University, McGill University and the federal government have been studying acid rain and its effect at Lac Laflamme, Quebec.

New Funding for Waterfowl Management

The federal government has earmarked \$1.7 million in the 1988-89 fiscal year for waterfowl conservation projects under the North American Waterfowl Management Plan signed by Canada and the United States in 1986.

Environment Canada, Agriculture Canada, and the Department of Western Economic Diversification will each provide one-third of the funding. The \$1.7 million in start-up funds from the federal government will be matched by contributions from provincial governments and the private sector.

The objective of the multi-year commitment by private and public interests in both Canada and the United States is to bring the seriously declining numbers of waterfowl back up to about 100 million birds – the average annual fall migration level in the 1970s. The plan will concentrate on the Prairie provinces where projects will help conserve soil and water resources and minimize the impact of drought conditions.

The economic value of waterfowl to Canada is significant. In 1986, about \$1 billion and 40,000 jobs were generated by such waterfowl-related activities as tourism and hunting.

Canada-Netherlands Agreement

An agreement to share expertise and information on environmental issues has been signed by Canada and the Netherlands.

Four areas of joint concern and information exchange have been identified: the control of specific environmental problems and climate change caused by acid rain; the protection of soils and elimination of contaminants in ground water, surface water and sediments; improved environmental management; and the promotion of environmentally safe technology.

Under the agreement, joint workshops and projects involving experts from each country are to be undertaken. In particular, Canada is expected to benefit from research on nitrogen oxide pollution being undertaken in the Netherlands.

Planned projects under the agreement include establishing environmental protection targets for nitrogen compounds in both countries and exchanging information on programs and criteria for the clean-up of contaminated sites, an area in which the Netherlands has particular expertise.

New Migratory Bird Hunting Regulations

New regulations governing the 1988 migratory bird hunting season in Canada were enforced in all provinces and territories. The regulations are established by the Canadian Wildlife Service of Environment Canada in close consultation with provincial authorities.

In Manitoba, Saskatchewan and Alberta, drought conditions led to the reduction of daily bag limits in order to protect declining populations of mallards, pintails, canvasbacks and other migratory bird species.

In Ontario and Quebec, low bag and possession limits were set to protect black duck. In Ontario, the daily bag limit for canvasbacks and redheads was reduced from two birds to one as part of an international effort to protect the species.

Hunters were also asked to keep accurate records of the migratory birds they took in order to help the Canadian Wildlife Service determine the total annual harvest and the size of the duck and goose populations in Canada.

Wood Bison Off Endangered List

Canada's largest land mammal, the wood bison, is no longer endangered in Canada, according to a joint statement by the World Wildlife Fund, the Canadian National Sportsmen's Shows, the Metro Toronto Zoo and the Committee on the Status of Endangered Wildlife in Canada.

The decision to remove the wood bison from the endangered species list was based on the fact that the number of wood bison in Canada has risen from only 200 in 1959 to more than 2,500 in 1988.

The recovery effort for the wood bison started with the discovery of an isolated herd of about 200 animals in Alberta's Wood Buffalo National Park in 1957. Some of them were taken to the Mackenzie Bison Sanctuary in the Northwest Territories to establish a wild herd.

Since 1978, a co-operative effort by several agencies has led to the establishment of herds in such places as the Nahanni District of the Northwest Territories, the Waterhen area of Manitoba, the Hay-Zama region in northwestern Alberta and the Nisling River Valley of southern Yukon.

This is the second year in a row that the Canadian conservation community has achieved a similar success. In 1987, the white pelican was removed from the endangered species list.



Heritage Sites Receive Funds

Environment Canada is contributing \$287,000 toward the cost of restoring and preserving St. Paul's Church in Halifax and \$250,000 towards the restoration of the Winter Garden Theatre in Toronto.

St. Paul's, built in 1750, was the first church outside Britain to be designated an Anglican cathedral and is considered to be the oldest Protestant church in Canada.

Toronto's Winter Garden Theatre, closed to the public since 1928, is considered to be one of the last remaining roof-garden theatres of its kind in the world and was designated a national historic site in 1982. The building has belonged to the Ontario government since 1981. The federal government, through Communications Canada, is providing an additional \$5 million towards restoring the theatre complex so it can re-open for performances.

Other heritage restoration projects funded by Environment Canada under this program, which provides funds for outstanding heritage properties not owned by the federal government, include the historic City Market in Saint John, New Brunswick and the Toronto home of George Brown, a Father of Confederation and founder of *The Globe* newspaper.

McMillan Receives Award

The Sierra Club, the oldest national conservation organization in the United States, presented its highest award for service to the environment by a public official to Canada's Minister of the Environment, Tom McMillan, at its annual meeting in San Francisco.

It was the first time since the Sierra Club created the Edgar Wayburn Award in 1979 that it has been presented to a politician outside the United States. The Sierra Club award cites Mr. McMillan's accomplishments in establishing new national parks, a strong anti-pollution program and working with other countries for global environmental protection.

New Policies for Rideau Canal

New policies designed to balance the heritage value of the Rideau Canal with the increasing recreational and commercial use of the waterway have been announced by Environment Canada.

The Canadian Parks Service will do studies to determine environmentally acceptable levels of boating in high-use areas along the 200-kilometre-long canal that runs between Ottawa and Kingston. The new policies restrict dredging, filling, and the development of navigational channels, in order to protect wetlands along the canal. Land use, canal water, recreation and tourism in the area are also covered by the policy.

The historic waterway built by Colonel John By before Confederation is visited annually by several hundred thousand people, who boat, swim, skate, picnic and tour in the area.

More than 1,500 people attended the public meetings held by Environment Canada as part of the public participation in determining the new policies. About 250 written comments, letters and briefs stressed the importance of preserving the canal's unique natural and cultural environment.

First Vollenweider Lecture

Dr. Curt Forsberg, Director of the Institute of Limnology at the University of Uppsala, Sweden gave the first Vollenweider Lecture in Aquatic Sciences at the National Water Research Institute (NWRI) in Burlington.

The lectureship is to be granted annually to an eminent international freshwater scientist in recognition of his or her global contribution to the advancement of aquatic sciences. The award was created by Environment Canada to commemorate the achievements and commitment of Dr. Richard A. Vollenweider who is retiring from the Public Service of Canada after 20 years as a senior scientist with NWRI.

Dr. Vollenweider's long career of pioneering research has revolutionized modern limnology and lake management. The Zurich-born Dr. Vollenweider, who came to Canada in 1968, tackled the enormous challenge of restoring water quality in the Great Lakes. His work on reducing phosphorus in the lakes, begun in 1972, has been judged an overwhelming success and is cited around the world.



World Conference on the Changing Atmosphere



Prime Minister Mulroney opens world conference.



“Humanity is conducting an unintended, uncontrolled, globally pervasive experiment whose ultimate consequences could be second only to a global nuclear war.” That was the warning contained in the final statement issued by experts participating in the World Conference on the Changing Atmosphere held in Toronto last summer.

The conference was organized by Environment Canada and supported by the United Nations Environment Programme and the World Meteorological Organization.

Key events leading up to the Toronto gathering were the publication of the World Commission Report on Our Common Future, the Montreal Ozone Protocol signed by two dozen countries in September 1987 and a policy statement on climate change issued by a gathering of policy experts and scientists in Bellagio, Italy, late last year.

More than 340 delegates from 46 countries – including scientists, politicians, policy makers, senior government officials, industry representatives, energy specialists, social scientists and environmental activists – met in June to focus their attention on global atmospheric protection. The four-day conference featured addresses by political leaders, scientific presentations and workshop discussions.

The report of the World Commission on Environment and Development expresses an urgent need to recognize that continued economic development in all countries depends on maintaining a sustainable resource base and protecting our shared environment. The signing of the Montreal Protocol is a positive indication that large-scale environmental problems can be addressed when the political will is present. The Bellagio meeting provided much of the background information required for the deliberations on climate change.

The aims of the conference were to set policy goals based on scientific findings. These goals were to adapt to, to control, and – if possible – to prevent undesirable changes in the atmosphere. The policy statements were to sensitize politicians and other attendees to the grave issues at stake.



Gro Harlem Brundtland, prime minister of Norway, and chairman of the World Commission on Environment and Development, said, "the theme of this conference may have a mission far beyond its stated topic. It may be the awareness creator. It may erect a pillar of wisdom in the much-needed global educational campaign on environment and development. It may finally open our eyes to the fundamental fact that the earth is one, even if the world of man is still divided."

Major factors identified as contributing to the deterioration of the atmosphere included air pollution, the burning of fossil fuels, deforestation, and the effects of rapid population growth.

These activities are changing the atmosphere by enhancing the greenhouse effect which could lead to climate warming, rising sea levels and changes in rainfall patterns. Such activities are also releasing chemicals which are depleting the earth's ozone layer and increasing the contamination of the atmosphere with toxic chemicals and acid-rain-causing pollutants.

Conference participants agreed such changes in the atmosphere will:

- imperil human health and well-being,
- diminish global food supplies,
- disrupt water supplies,
- increase the potential for international conflict,
- jeopardize prospects for sustainable development and the reduction of poverty,
- increase the extinction of plant and animal species, and
- alter forest patterns.

"This conference may . . . erect a pillar of wisdom in the global education program on environment and development."

— Gro Harlem Brundtland

The delegates at the working group meetings reviewed the scientific evidence and discussed strategies to cope with the changing atmosphere. They agreed that efforts to halt deterioration of the atmosphere must be carried out globally and that no individual country can tackle this problem in isolation.

The conference issued a strong statement to governments, the United Nations, industries, educational institutions, non-governmental organizations and individuals on the critical nature of the issue, indicating that global security is being threatened. The conference also offered recommendations and an action plan for the protection of the atmosphere.

"In many respects, the conference exceeded all expectations in addressing its basic objective of improving awareness of the issue and encouraging action," said Henry Hengeveld, an Environment Canada specialist on the greenhouse effect.

Conference Recommendations

- Governments around the world should work urgently towards an action plan for the protection of the atmosphere, financed by a World Atmosphere Fund;
- Governments should ratify the Montreal Protocol on substances that deplete the ozone layer;
- Global carbon dioxide emissions should be reduced by 20 per cent of 1988 levels by the year 2005;
- A comprehensive global convention on the protection of the atmosphere should be developed and discussed at future meetings in order to be ready for consideration at an international conference on sustainable development in 1992;
- Increased funding of research into low- and non- carbon dioxide emitting energy options, including the use of nuclear power, if safety can be assured;
- Establishment of a trust fund to provide incentives for developing countries to reduce deforestation;
- The application of existing technologies to reduce emissions of acid-rain-causing substances;
- The introduction of product labelling to identify environmentally safe products;
- Increased funding of non-governmental organizations for environmental education and public awareness campaigns.

“This conference clearly demonstrated a new and unprecedented willingness by governments and industry to work with specialists from a broad range of disciplines and backgrounds.”

Howard Ferguson, Assistant Deputy Minister of Environment's Canada's Atmospheric Environment Service, said, “progress was made in that nobody was questioning the need for an international agreement on the atmosphere. What they were debating were the details. That was a definite breakthrough.”

Prime Minister Brian Mulroney, in his opening address to the conference, proposed the establishment of a comprehensive global agreement to protect the atmosphere, for discussion at the 1992 international conference on sustainable development.

Howard Ferguson believes this is a challenge which will move the agenda forward.

Optimism that the conference was a major step toward global protection of the atmosphere is turning into reality. Plans are already under way for a follow-up conference of legal experts in Ottawa next year, and the Netherlands has offered to host discussions on a global agreement on reduction of greenhouse gases.

Environment Minister Tom McMillan's concluding challenge to the conference, “Now, let's complete the job” is being acted upon by the international community. ■

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Canadian Actions on the Conference Recommendations

In Canada, the federal government is acting on many of the conference recommendations. Some of the major initiatives already under way include:

- *Environment Canada's development of a program to label environmentally friendly products;*
- *The Department of Energy, Mines and Resources is making efforts to improve the efficiency of energy use in Canada and to develop alternative forms of energy;*
- *Canada is promoting the World Atmosphere Fund and a fund to protect tropical rainforests;*
- *In 1989, Canada will host an international workshop of legal experts to pursue the development of an international framework convention and specific protocols to protect the global atmosphere;*
- *Canada has demonstrated its commitment to the global environment by being among the first nations to ratify the Montreal Protocol for the protection of the ozone layer.*

WORLD CONFERENCE
Toronto Canada June 27 - 30 1988

THE CHANGING ATMOSPHERE

Implications for Global Security



Government Gets Tough on PCBs

The use of PCBs in Canada is to be phased out by 1993.

PCBs are polychlorinated biphenyls, chemical compounds consisting of chlorine, carbon and hydrogen. Since 1929, PCBs have been used by the electrical industry as a cooling and insulating fluid in transformers and capacitors.

Because they are stable, relatively fire resistant, don't conduct electricity and have low volatility at normal temperatures, they were also used in such products as hydraulic fluids, surface coatings for carbonless copy paper, plasticizers in sealants, caulking, synthetic resins, rubbers, paints, waxes, asphalts and as flame retardants and lubricating oils.

An estimated 15,000 tonnes of PCBs are in use in Canada.

When research during the 1970s found that PCBs were widely dispersed in the environment, the federal government banned any further production of PCBs. An estimated 15,000 tonnes of PCBs, however, are still in use in Canada, mostly in electrical equipment. Another 10,000 tonnes are being stored in some 2,500 locations across the country.

Following a major fire in a PCB storage warehouse in the Quebec community of Saint-Basile-le-Grand, August 23, the Canadian Council of Resource and Environment Ministers (CCREM) met to find ways of improving the management of PCB wastes in Canada.

The Ministers agreed to a co-operative management program that includes:

- the implementation of PCB destruction facilities and stepped-up research on technologies to eliminate PCBs;



photo: Ontario Hydro

An Ontario Hydro mobile PCB decontamination unit.

- public release of a national inventory of PCB storage sites and a system to ensure that the inventory remains complete and up-to-date;
- the regulation of the storage of PCB wastes;
- the elimination, by 1993, of the PCBs now in use; and,
- the relocation of PCBs stored in "sensitive" facilities such as schools and hospitals.

The environment ministers agreed to develop a national program to address the concerns of Canadians about the safety of PCB disposal facilities. One of the main obstacles to eliminating PCBs has been opposition by local organizations to locating disposal facilities in their communities.



The federal Environment Minister has announced legally enforceable national standards for PCB storage based on new federal powers under the Canadian Environmental Protection Act (CEPA). The standards apply to all parts of Canada and all owners of PCBs, including the federal government. PCB storage facilities must pass stringent tests concerning fire, access, emergency contingencies and site design.

The federal Environment Minister ordered an inspection of all 250 federal PCB storage sites to ensure they meet the regulated requirements. Violators of the standards are subject to fines up to \$1 million a day and jail sentences.

It will cost an estimated \$500 million to eliminate the 10,000 tonnes of PCB-contaminated waste currently in storage and to find alternatives for PCBs now in use.

Ontario has the largest number of storage sites — 1,042. Quebec ranks second with about 500, followed by British Columbia with 279 and Alberta with 148. The other provinces and territories have between 10 and 78 sites each. ■

National Parks Act Amended



Some park visitors enjoy watching nature and wildlife. . .

Canada's national parks are widely recognized as priceless natural treasures. Recent amendments to the National Parks Act – the first major changes since 1930 – improve the ability of the Canadian Parks Service to protect the parks for the benefit of Canadians now and in the future.

More than half a century ago, the National Parks Act established a mandate to conserve Canada's most outstanding natural landscapes. The revised Act reflects the evolving role of the national parks system, the Canadian Parks Service, and the growing interest of Canadians in their natural heritage.

Canada's wildlife faces growing pressure from urban development, environmental degradation and illicit trade in endangered species.

Penalties for poaching trophy animals or endangered wildlife species in a Canadian national park are now among the stiffest in the world – a maximum of \$150,000 and/or six months in jail. The previous maximum fine, set in 1919, was \$500. Fines for other offences have also been raised and anybody convicted of polluting the environment in national parks can be required to pay for the clean-up.

Other provisions of the Act allow the establishment of new national parks including Ellesmere Island National Park Reserve in the High Arctic. Grasslands National Park will be established in Saskatchewan when federal-provincial land transfers are completed.

“These amendments form a modern conservation strategy.”

The amended Act also includes provisions to establish parks to protect significant marine environments. Canada's first national marine park will be created off the Bruce Peninsula in Ontario. The Act also provides for the establishment of a national park on the Bruce Peninsula.

Other changes to the National Parks Act require the Canadian Parks Service to produce management plans outlining protective measures and allowable development for each national park. The park management plans must also be tabled in Parliament and reviewed every five years. Significant changes to the plans can be made only after public consultations.

The revised Act gives the Canadian Parks Service the authority to designate “wilderness zones” if parks contain unusual and sensitive natural features that need protection from human intrusion.



. . . Other visitors explore the beauty of the parks.



The revised parks legislation also addresses the issue of self-government for Banff and Jasper. Both towns are located in national parks and are administered by the Canadian Parks Service. The amended National Parks Act allows elected bodies to take over most municipal functions when the federal-provincial agreements and local consultations are concluded.

The amended legislation also allows the Governor in Council to legislate the boundaries of the two townsites. Any subsequent boundary changes can only be made by an Act of Parliament.

There are five commercial ski areas within the boundaries of national parks. To protect the environment while giving ski hill operators a clear definition of growth potential, the amended Act prohibits development of any additional ski areas and establishes boundaries for existing facilities.

Other provisions in the amended National Parks Act include authority for the Canadian Parks Service to strengthen firearms control; to regulate all aspects of pest control products and toxic substances in the parks; to amend fees for park use; and to extend the protection of flora and fauna to include soil, water, rocks, fossils, minerals and air quality.

Ian Rutherford, Director-General, National Parks, says "These amendments form a modern conservation strategy that will allow the Canadian Parks Service to better fulfil its mandate to maintain and protect the environment in our national parks." ■

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South Moresby in the Queen Charlotte Islands of British Columbia is one of Canada's newest national park reserves.



Park Warden, Rick Kunelius (left), with Betty Williamson and Steve Logan, uses computer to record information on wildlife populations in Banff National Park.

photo: Bruno Engler



Environmentally Friendly Products Program Announced

Environment Canada has launched a program to identify products that conserve energy, are recycled or recyclable, are biodegradable and free of ozone-depleting substances.

Prime Minister Brian Mulroney announced the "environmentally friendly" products program in June at the opening of the World Conference on the Changing Atmosphere.



The new program will enable Canadians to take a more active role in helping to protect the environment by choosing products that cause the least damage to the environment.

The idea for the Canadian labelling program originated with the Conservation and Protection Service of Environment Canada, about four years ago. A similar program has been in effect in West Germany since 1978. More than 2,000 German products now bear the United Nations blue angel symbol attesting to their environmental safety.

The average Canadian family of four disposes of more than 12 pounds of garbage a day – a national total of 10 million tons a year. Getting rid of that garbage costs hundreds of millions of dollars every year and contributes to a multitude of environmental problems. Cars and other vehicles emit pollution. Chemicals used around the home and garden can also cause environmental damage.

The federal government, through Environment Canada, is providing both financial and administrative support to launch the environmentally friendly products program, which is designed to be self-financing by 1990.

Manufacturers or processors applying to use the logo will be required to pay an administrative fee to have their product or process tested for "environmental friendliness." Companies whose products pass the test – and who want to label their products with the special logo – will be required to pay an annual licence fee, based on retail sales.

Product categories and performance criteria for the Environmentally Friendly Products Program will be decided by an advisory panel, established under the authority of the new Canadian Environmental Protection Act (CEPA). The multi-sectoral panel will have members from consumer and environmental interest groups, industry, labour, and academics.

Choosing products that cause the least damage to the environment

The logo is expected to become both a handy marketing tool for environmentally conscious manufacturers and a way to assist consumers in selecting products and services. An Angus Reid Survey has indicated that most Canadians are willing to pay 10 per cent more for environmentally friendly products.

"We already know from the private sector that manufacturers, producers, packagers and retailers are eager to support this campaign. It is in their commercial interest to do so," said the Minister of the Environment, Tom McMillan.

Bettylynn Stoops, Environment Canada's project manager for the Environmentally Friendly Products initiative, says "the consumer can have an effect on what industry is doing at all levels – from research and development to retail. By raising awareness we can encourage manufacturers to increase their efforts in developing goods that are safer for the environment.

"We are confident the program will be a success. Surveys indicate 94 per cent of Canadians believe they should take personal responsibility for environmental protection. There is no doubt that Canadians are going to support this initiative. This is certainly an idea whose time has come." ■

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Saving the St. Lawrence



photo: Supply and Services Canada Photocentre

“The clean-up of the St. Lawrence is an environmental imperative.”

and so has the commercial fishing industry. The beluga whale and the American black duck are in danger of extinction and wildlife habitats have been destroyed.

The clean-up of the St. Lawrence is an environmental imperative. That is why the federal government has decided to implement a vigorous action plan to protect, conserve and restore the St. Lawrence River.

The federal government has signed an agreement with the Government of Quebec that makes them partners in a co-operative program to clean-up the St. Lawrence. A total of \$110 million will be spent over the next five years.

The federal government's action plan has four components:

1. Conservation

The \$25-million conservation component will improve knowledge about the river's ecosystem and also protect endangered species and sensitive areas in the river system. This part of the plan includes:

- provisions for the creation of a marine park at the confluence of the St. Lawrence River and the Saguenay River to help protect the beluga whales;
- protection and consolidation of major wildlife habitats along the St. Lawrence, especially Isles de Contrecoeur National Wildlife Area;
- measures to ensure the survival of endangered species, especially the beluga whale, the peregrine falcon, the American black duck, the blue-winged teal, the striped bass and the Atlantic sturgeon;
- the development of a monitoring system for the St. Lawrence River and the publication of reports on the state of the river.

The Port of Montreal will be cleaned up as part of the program to improve water quality in the St. Lawrence River.

The St. Lawrence River is one of the great rivers of Canadian history. The mighty river is a major transportation and industrial corridor and an important economic and recreational resource.

More than 80 per cent of Quebec's population lives along its banks. Half of Quebecers depend on the river for drinking water and its fishing grounds provide a livelihood for many.

But, this great river ecosystem — the largest in eastern North America — faces a serious pollution problem. In many cases, the culprits are industries that the river helped make possible.



Industries convicted of polluting the St. Lawrence River will be required to pay for the clean-up.

The quality of drinking water is threatened. Some recreational activities on the river have had to be curtailed because the water quality poses health risks. Swimming in the river has been prohibited for many years. Sport fishing has suffered



Development of environmental technologies is an objective of the St. Lawrence Centre.

2. Protection

The two programs in the protection component have a budget of \$14 million:

- All industrial sites that negatively affect the river are to be identified and an assessment made of the wastes generated by these industries. Anti-pollution and clean-up agreements are to be negotiated with each of these industries. Each one will be required to pay for part of the clean-up according to the "polluter-pays principle."
- The sources of toxic substances and the routes by which they enter the Quebec section of the St. Lawrence are to be traced and monitored. This information will be used as part of the larger effort to reduce pollution in the entire Great Lakes/St. Lawrence ecosystem.



The protection of wildlife habitats is part of the St. Lawrence clean-up.

3. Restoration

Two programs with a total budget of \$21 million will help restore water quality:

- the dredging and clean-up of federal facilities along the St. Lawrence, including the Lachine Canal and the ports of Montreal, Trois-Rivières, and Quebec City; and
- the rehabilitation of the wetlands along the St. Lawrence that have been either destroyed or damaged by pollution.

4. Environmental Technologies

A budget of \$50 million will support cost-shared projects involving the federal government, the Government of Quebec, industry, universities and non-governmental organizations. The types of projects include:

- the development and application of pollution-abatement technologies to meet the site-specific pollution problems of industrial plants emitting pollutants into the St. Lawrence River;
- the monitoring of water quality and sediments and the laboratory analysis of survey samples;
- the development of expertise in ecotoxicology (the analysis of pollution and its effect on ecosystems) and the establishment of basic organic chemistry facilities to support conservation and clean-up efforts.

The St. Lawrence Centre, located at 105 McGill Street in Montreal, has been established to manage and co-ordinate the federal action plan to clean up the St. Lawrence River. The Centre will work with the Province of Quebec, industries, universities, research centres, and non-governmental organizations to promote the development and implementation of environmental technology.

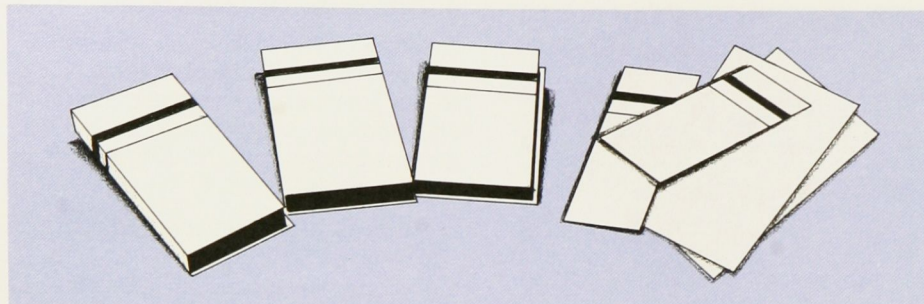
Michel Lamontagne has been named director of the St. Lawrence Centre and Michel Slivitsky has been appointed scientific adviser.

The St. Lawrence River Plan constitutes a monumental undertaking in environmental clean-up and the largest ever undertaken in Quebec. The success of these efforts depends on the participation of many partners – governments, industries, universities, non-governmental organizations, and the public at large. ■

For more information, contact:

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Update Reviews



The Natural History of Canada

The Natural History of Canada by R.D. Lawrence blends scientific detail and personal narrative to give the reader a conducted tour of the Canadian wilderness.

Lawrence begins by exploring the relationship between a life form and its geography, climate and habitat. Then, after a brief historical survey, he focuses on different areas of Canada's impressively varied natural environment.

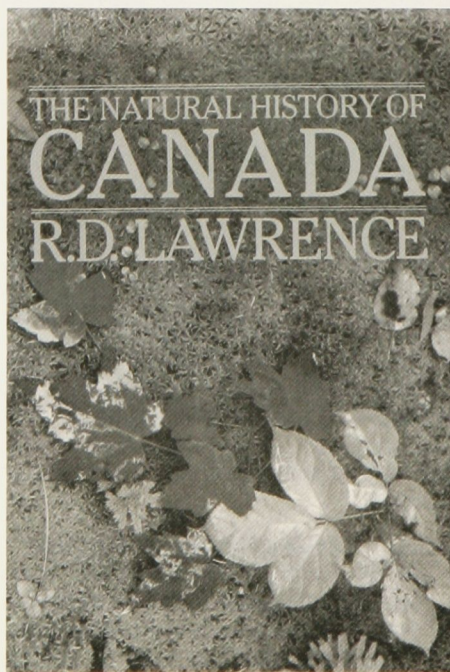
Although long (304 pages) and packed with scientific information, the book is generously and attractively illustrated with colour photographs, maps, diagrams and line drawings that highlight the beauty of Canada's landscapes and wildlife and summarize important data. Lawrence's clear and lively prose is jargon-free and highly readable.

In his afterword to the book, Lawrence applies the lessons of natural history to human management of the earth. His conclusions are similar to those of the report prepared by the World Commission on Environment and Development, *Our Common Future*: population growth, pollution and the over-harvesting of natural resources are jeopardizing the survival of entire species, including ourselves.

Like the World Commission, Lawrence believes it is possible to slow down and even to reverse this process. He urges individuals to become informed about

environmental issues, to join a conservation group and to encourage co-operation with other such groups. Their concerns can thereby be expressed in one strong, unified voice to government, giving politicians a clear mandate to promote good conservation practices. ■

Reviewed by:
Elizabeth Shore, senior editor-writer
Communications Branch
Environment Canada



The Natural History of Canada, \$39.95, is published by Key Porter Books Limited.

New Studies in Climate Change Digest Series

Environment Canada has released three more studies in its Climate Change Digest Series on the implications of the "greenhouse effect" for Canada's economy:

- CCD 88-05 *Implications of Climate Change for Tourism and Recreation in Ontario*
- CCD 88-06 *Estimating Effects of Climatic Change on Agriculture in Saskatchewan, Canada*
- CCD 88-07 *Socio-economic Assessment of the Physical and Ecological Impacts of Climate Change on the Marine Environment of the Atlantic Region of Canada*

Previous publications in the Climate Change Digest Series dealt with the effects of climate change on: agriculture in Ontario; navigation and power generation in the Great Lakes; a rise in sea level at Saint John, N.B.; agriculture in the Prairie provinces; a rise in sea level at Charlottetown; and downhill skiing in Quebec. Other publications in this series include a booklet on the Canadian Climate Impacts Program and a summary report on economic impacts of climatic variability and change.

Copies of these publications may be obtained, free of charge, from the Climate Program Office, Canadian Climate Centre, Environment Canada, 4905 Dufferin Street, Downsview, Ontario M3H 5T4. Phone (416) 739-4431. ■



Building the Trent-Severn Waterway

A Respectable Ditch: A History of the Trent-Severn Waterway 1833-1920 by James T. Angus, traces the history of what is probably the longest ongoing public works project in Canadian history. Today, this "respectable ditch" with 45 locks is a recreational waterway bisecting southern Ontario from Trenton on the Bay of Quinte in the southeast to Port Severn on Georgian Bay. The waterway is now administered by the Canadian Parks Service of Environment Canada.

Although historians have written about steamboating on the Trent, the role of the workers who built the canal, and the engineering achievement of constructing the hydraulic liftlock at Peterborough, the history of the construction of the waterway has been neglected until now. Angus brilliantly fills the gap with this book.

Angus describes the Trent waterway as significant for local navigation only. Then, chapter by chapter, he explains how each phase of construction from 1833 to 1920 was undertaken to secure the maximum benefits for local politicians.

By relating each phase of canal construction to transportation requirements and developments in Canada, Angus places the construction of the Trent waterway within the general context of Canadian economic and political history.

The most attractive aspect of the book is Angus' success in delving into the minds of both proponents and detractors of the waterway and explaining how their thoughts and views affected construction of the canal.

From a research and writing perspective, *A Respectable Ditch: A History of the Trent-Severn Waterway* constitutes a major achievement. The author's conclusions are soundly based on a thorough



photo: Canadian Parks Service

Lift lock at Peterborough on the Trent-Severn Waterway.

examination of prime ministerial and private papers, parliamentary debates, canal records, and daily and weekly newspapers.

The inclusion of biographical information on many individuals connected with the Trent's construction and a highly readable writing style will extend this book's appeal to readers beyond a small group of specialists interested in canal history. *A Respectable Ditch* will long remain a standard work for the Trent-Severn Waterway. It is perhaps the best book ever written about a Canadian canal. ■

Reviewed by:
David Spector
Realty Services Branch
Canadian Parks Service
Environment Canada

A Respectable Ditch: A History of the Trent-Severn Waterway 1833-1920, published in Montreal by McGill-Queen's University Press in 1988, costs \$37.50.



Update Reviews

Heritage Buildings

The Canadian Parks Service of Environment Canada has issued two more booklets in the Heritage Commemoration Series: *Ottawa Teachers' College* and *Former Territorial Court House*, Fort Macleod, Alberta.

Each is written in an informative, readable style and illustrated with a number of well-chosen photographs and illustrations from archival sources.

Dana Johnson, author of *Ottawa Teachers' College*, gives a quick sketch of attitudes towards teaching, teacher training and teachers (mostly female) in the last century, then deals with the materials, design and construction of the college, built in 1875, adding that – for reasons of propriety – all classrooms had separate entrances for male and female trainees. The building was used for teacher training until the 1970s.

In *Former Territorial Court House*, Edward Mills treats his subject in a similar manner. He starts with a brief introduction to justice in the Northwest Territories (as then constituted) under the North West Mounted Police, who had power of both arrest and trial. He then gives a quick survey of different court house designs before going on to the story of Fort Macleod Court House, built between 1902 and 1904, shortly before Alberta became a province. It is the oldest court house in Alberta – although no longer used as such – and one of the few surviving buildings from the period of Territorial administration on the Prairies.

The booklets are attractive but slender volumes at a cost of \$6.50 in Canada and \$7.50 in other countries. Available through authorized bookstore agents and bookstores or by mail from the Canadian Government Publishing Centre, Supply and Services Canada, Hull, Quebec, K1A 0S9. They are also available in a French-language edition.

Other booklets previously published in this series include *St. Stephen's Anglican Church*, Chambly, Quebec; *Church of Our Lady of Good Hope*, Fort Good Hope, Northwest Territories; and *Prescott House*, Starrs Point, Nova Scotia. ■

Reviewed by:
Bill Morse, a freelance
writer, based in Ottawa.

