

Environment Canada Environnement

CANADA. ENVIRONMENT CANADA. ANNUAL REPORT = R
APPORT ANNUEL

Date: 1989-90

0015773J

REF 1
ARCH

OTM

Environment Canada

1989-1990

annual report

Canada

Contacts

Headquarters:

Enquiry Centre
Environment Canada
Hull, Quebec
K1A 0H3
(819) 997-2800

Atlantic:

Wayne Eliuk
Communications Office
Environment Canada
45 Alderney Drive
Dartmouth, Nova Scotia
B2Y 2N6
(902) 426-1930

Quebec:

Clément Dugas
Communications Office
Environment Canada
3 Buade Street
P.O. Box 6060
Québec, Quebec
G1R 4V7
(418) 648-7204

Ontario:

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

Western & Northern:

Marcel Préville
Communications Office
Environment Canada
2nd Floor, Twin Atria 2
4999-98 Avenue
Edmonton, Alberta
T6B 2X3
(403) 468-8074

Pacific & Yukon:

Sheila Ritchie
Communications Office
Environment Canada
224 West Esplanade
North Vancouver, British Columbia
V7M 3H7
(604) 666-5902

Issued under the authority of
the Minister of the Environment

©Minister of Supply and Services Canada 1990

Cat. No. En1-1990
ISBN 0-662-58684-0
ISSN 0711-1320

Design, Typesetting and Layout
MGL Publishing Inc., Ottawa

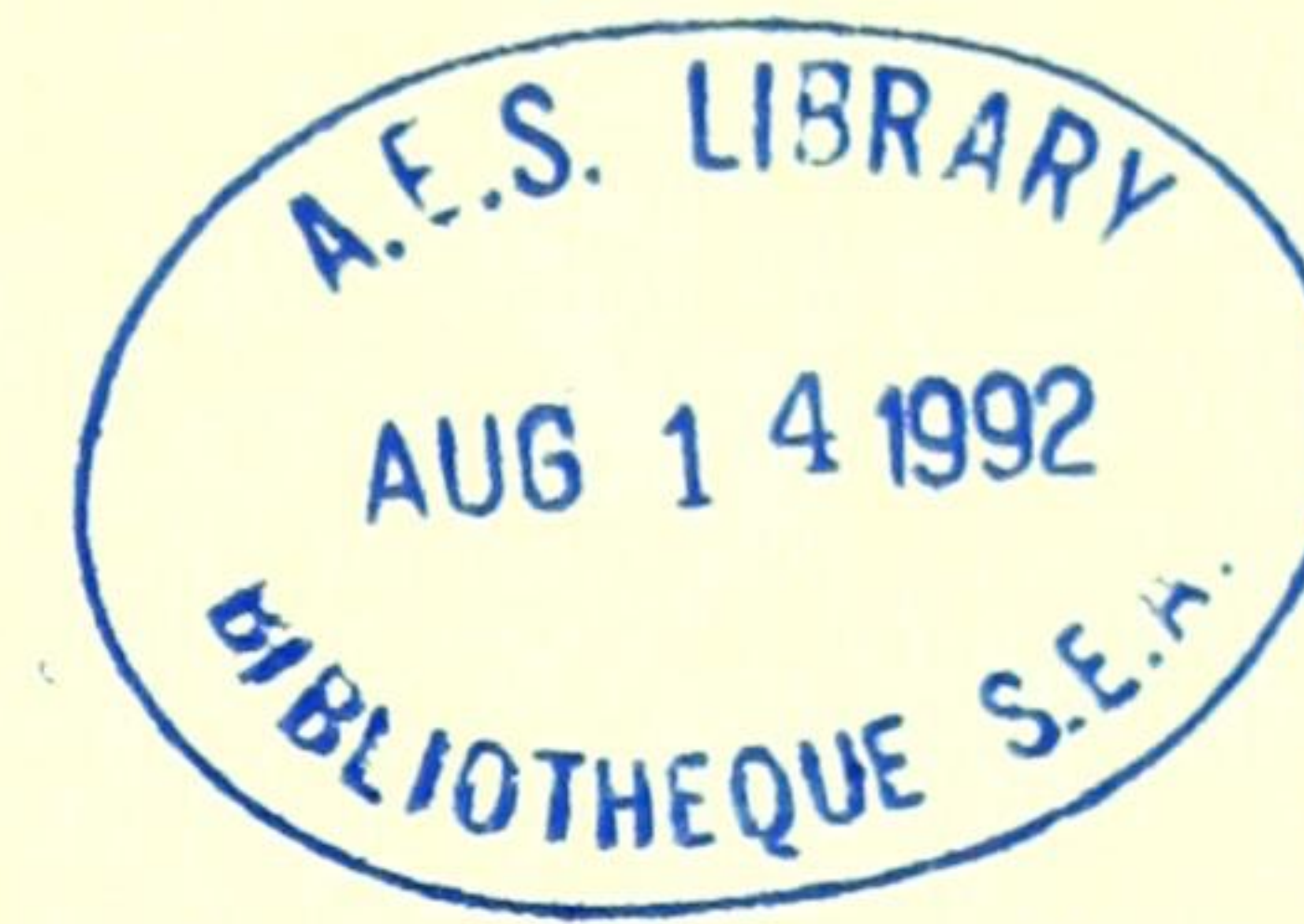
Copies available from:

Communications Directorate
Environment Canada
Hull, Quebec
K1A 0H3



Printed on recycled paper

Environment Canada
Annual Report 1989-1990



Mandate and Organization 1

Sustainable Development: Reconciling Economic and Environmental Needs 2

Atmospheric Environment Service 5

Conservation and Protection 8

Canadian Parks Service 15

Administration 25

Federal Environmental Assessment Review Office 31

Financial Summaries 35



Mandate and Organization

The federal Minister of the Environment is responsible for policies and actions to preserve and enhance the quality of the environment for the benefit of present and future generations of Canadians.

MANDATE

The mandate is derived from the *Government Organization Act* (1979), which establishes that the duties, powers and functions of the Minister of the Environment extend to and include all matters over which Parliament has jurisdiction not otherwise federally assigned, and relating to:

- preservation and enhancement of the quality of the natural environment, including water, air and soil;
- renewable resources, including migratory birds and other non-domestic flora and fauna;
- water;
- meteorology;
- enforcement of rules and regulations arising from the advice of the International Joint Commission relating to boundary waters and questions arising between the United States and Canada that relate to the preservation and enhancement of environmental quality;
- national parks, national historic sites and heritage canals; and
- other federal matters relating to the natural environment that are assigned to the Minister.

More specific powers and duties of the Minister of the Environment are defined by the following:

- *Canada Water Act*
- *Canada Wildlife Act*
- *Canadian Environment Week Act*
- *Canadian Environmental Protection Act*
- *Game Export Act*

- *Historic Sites and Monuments Act*
- *International River Improvements Act*
- *Lake of the Woods Control Board Act*
- *Migratory Birds Convention Act*
- *National Battlefields at Quebec Act*
- *National Parks Act*
- *Weather Modification Information Act.*

The Minister is also responsible for administering pollution control provisions of the *Fisheries Act* and for providing specific advice and information under certain sections of federal legislation assigned to other departments.

The responsibilities noted above are carried out through departmental programs designed to:

- promote the establishment or adoption of objectives and standards relating to environmental quality or pollution control;
- ensure the wise management and use of renewable resources;
- provide Canadians with environmental information in the public interest;
- ensure that new federal projects, programs and activities are assessed early in the planning process for potentially adverse effects on the environment; and
- ensure the preservation of nationally significant examples of Canada's natural and cultural heritage.

ORGANIZATION

In the fiscal year 1989-1990, Environment Canada comprised the Atmospheric

Sustainable Development: Reconciling Economic and Environmental Needs

Environment Service, Conservation and Protection, the Canadian Parks Service, and the Administration Program.

The Atmospheric Environment Service provides information on weather, climate, sea state, ice conditions and air quality.

Conservation and Protection promotes conservation and protection of inland waters, lands and wildlife against the harmful effects of pollutants.

The Canadian Parks Service establishes, develops, protects and manages national parks, national historic sites, heritage canals and co-operative heritage areas.

2

The Administration Program is responsible for the general management of the Department. It provides co-ordination and direction for environmental policy and builds partnerships with national and international organizations whose co-operation with, and support for, departmental programs is essential to the fulfilment of Environment Canada's mandate.

From coast to coast, Canadians have access to vast natural resources rivalling those of any other country. For generations, we have enjoyed the benefits of clean air, fertile soil, mineral and forest resources, plentiful clean water, and abundant wildlife. Much of Canada's economic development and material well-being has grown from the application of increasingly sophisticated technology, by an increasingly educated workforce, to this rich base of environmental resources. Our environment supports a high standard of living and quality of life for a relatively small population.

There is mounting evidence, however, that we have not fully been meeting our environmental responsibilities. Pollution in the Great Lakes and the St. Lawrence River, smog in our cities, and the contamination of ground water and soil demonstrate how rapidly neglect can erode the most bountiful environmental legacy.

Global stresses such as climate change, ozone depletion, acid rain and contamination from toxic chemicals are all signs that our planet is straining to meet the demands placed on it by ever-growing human activity around the world.

To remedy the situation, some have insisted that we must limit economic development and even strive for the goal of zero growth. For those at the top of the economic ladder, the concept of zero growth may seem attractive, but it looks dangerously simplistic to the large majority of

humanity who seek to improve their circumstances. In many countries — indeed, in large parts of Canada — growth offers the only hope for a better future. In fact, as Norway's Prime Minister Gro Brundtland pointed out, "A world in which poverty is endemic will always be prone to ecological and other catastrophes."

Under the guidance of Prime Minister Brundtland, the United Nations' World Commission on Environment and Development propounded a different vision. According to the Commission, it is a mistake to suppose that we must choose between economic growth and the environment. In fact, growth is essential if we are to solve environmental problems and, at the same time, deal with international — and domestic — economic disparities. What we should strive for, said the Commission in its 1987 report, *Our Common Future*, is development that "meets the needs of the present without compromising the ability of future generations to meet their own needs." In other words, we should work toward *sustainable development*.

The Brundtland Commission challenged the nations of the world to reconcile economic and environmental needs. Canada has been quick to respond to that challenge. Our country's resource and environment ministers set up a National Task Force on Environment and Economy, composed of business executives, environmentalists and academics, as well as environment ministers.

The task force called for a change in the way we make decisions. "Environmental considerations cannot be an add-on, an after-thought," it stated. "They must be made integral to economic policy making and planning and a required element of any economic development proposal."

On the recommendation of the task force, the federal government appointed a National Round Table on the Environment and the Economy, which met for the first time in Ottawa in June 1989. Chaired by Dr. David Johnston, Principal of McGill University, this body includes highly qualified individuals from many sectors of Canadian society. Within the forum provided by the Round Table, they can share their expertise and consider ways of integrating environmental and economic decision making.

In March 1990, the Government of Canada released *A Framework for Discussion on the Environment* to begin a public dialogue on a comprehensive national strategy and action plan for implementing sustainable development, *Canada's Green Plan*. Building on the work of the National Task Force on Environment and Economy, the discussion document shared with Canadians a vision of a new and better way of making environmental decisions and a more balanced relationship between the environment and human activities.

Better environmental decision making was identified as the key to sustainable development — better decision making

through improved environmental science, information and education; the balanced application of regulatory and market-based instruments to encourage environmentally sound decision making; reforms to decision-making institutions and processes at all levels of society; and new and stronger partnerships. Specific environmental issues, including global warming, waste management, toxic pollution, parks and wildlife, were also set out for priority attention.

As stressed in the *Green Plan* consultation document, sustainable development not only requires the integration of various factors in decision making, it also demands the co-operation of all sectors of our society. Obviously, no one individual, group or government can ensure that economic activity is brought into harmony with the present and future limits of the ecosystem. Rather, we need to establish partnerships between sectors such as government, industry, environmental groups and individual Canadians. All have a vital part to play in the task before us.

Government is responsible for providing leadership and setting the rules for the use of and access to the environment. In addition, it acts as a catalyst, encouraging people to change the ways in which they make decisions.

Environmental non-government organizations (ENGOS) also have an important part to play, both in raising the

public's level of environmental knowledge and in pressing for action by government and industry.

Still another essential partner in implementing sustainable development is industry. Innovative technology is required to help Canadians identify and solve environmental problems. In fact, the business sector has begun exploring new opportunities in environment-related fields, such as waste management, pollution monitoring and control, and environmental information.

Finally, the consumer plays a crucial role in the effort to achieve sustainable development. Daily choices in purchasing, workplace activities, energy use and other matters have a substantial cumulative effect when practised by millions of Canadians.

During 1989–90, these sectors, separately and together, helped Canada to make substantial progress toward sustainable development. Some of that progress was recorded and publicized by Environment Canada's Success Stories Bank. The Bank collected examples, from both the public and private sectors, of projects that combined economic and environmental benefits. This information was made available for consultation and exchange. The aim was to encourage and assist other organizations to undertake similar projects.

One private-sector success story, for example, concerns Inco Limited. Since

1984, the nickel company has been growing forestry seedlings in an abandoned mine-shaft 1,400 metres below the surface. Natural geothermal heating, automated artificial lighting, watering and fertilizing help grow the seedlings. Ventilation and hoists exist from now-discontinued mining operations. With tree survival rates of 97 per cent, Inco has successfully reforested areas previously degraded by mining activity. Since 1985, the company has planted an annual average of more than 2,000 hectares of land with 45,000 red and jack pine seedlings that began their lives underground.

4 A public-sector example of sustainable development in action is the 1986 North American Waterfowl Management Plan, signed by Canada and the United States. The Plan seeks to restore waterfowl populations and diversity to the levels of the early 1970s. By 1999, almost \$1 billion will have been spent under the Plan, primarily on habitat restoration and protection in Canada. Canadian partners include Environment Canada, Agriculture Canada, all the provinces, both territories, Ducks Unlimited Canada, Wildlife Habitat Canada, and several provincial and local ENGOs.

Another notable development is the signing of an agreement between the governments of Canada and Quebec to co-ordinate clean-up of the St. Lawrence River. The four-year agreement covers all

components of the St. Lawrence Action Plan announced by the federal government in June 1988. The objective is to clean up, restore and conserve the St. Lawrence River, and to develop environmental technology.

In other instances, Environment Canada itself has taken the leading role, creating opportunities for action. The Department administers the \$50-million Environmental Partners Fund, which provides up to half the financing for small-scale projects that protect, preserve, enhance or restore the environment. Proposals are considered from service clubs, community organizations, environmental groups, schools and youth groups. Industry, municipalities and provincial governments are encouraged to give their support.

In the current business climate, the environmental industry is booming, accounting for some \$250 billion of economic activity around the world, and \$7 billion in Canada. In March 1990, Environment Canada hosted GLOBE '90 in Vancouver. This was the first international conference and trade fair promoting global opportunities for business and the environment.

At the conference, over 3,000 representatives from more than 70 countries and a variety of sectors discussed environmental concerns. During it, the federal and provincial governments announced their endorsement of a national

protocol to halve waste from packaging by the year 2000.

The trade fair provided momentum for Canada's environmental products, services and technology. More than 400 Canadian companies exhibited their wares and made valuable contacts with potential buyers from all over the world.

GLOBE '90 set the stage for GLOBE '92, to be held in 1992 in Vancouver. The plan is to hold the conference and trade fair every two years. The successive gatherings will help to gauge our success in moving to sustainable development — both within Canada and internationally.

A century ago, Canada had a national dream to unite the country physically with a railroad. Now a new national dream is taking shape of a secure and prosperous future for Canadians in a healthy environment. Like that earlier dream, this will require unremitting effort and vision on the part of all Canadians. And, like that earlier one, this dream is attainable. By working together to shape *Canada's Green Plan*, we will be able to make sustainable development a practical reality in Canada.

Atmospheric Environment Service

The Atmospheric Environment Service (AES) has the primary responsibility for providing weather, climate, sea-state, ice and air-quality services for the safety of Canadians, the security of their property, the improvement of the national economy and the maintenance and enhancement of environmental quality.

GLOBAL WARMING

During 1989–90, global warming became internationally prominent at the highest political levels because of its potentially serious consequences for the current world socio-economic system. In this regard, leaders of the seven largest industrial democracies, meeting in Paris in July 1989, issued a statement "strongly advocating common efforts to limit emissions of carbon dioxide and other greenhouse gases which threaten to induce climate change."

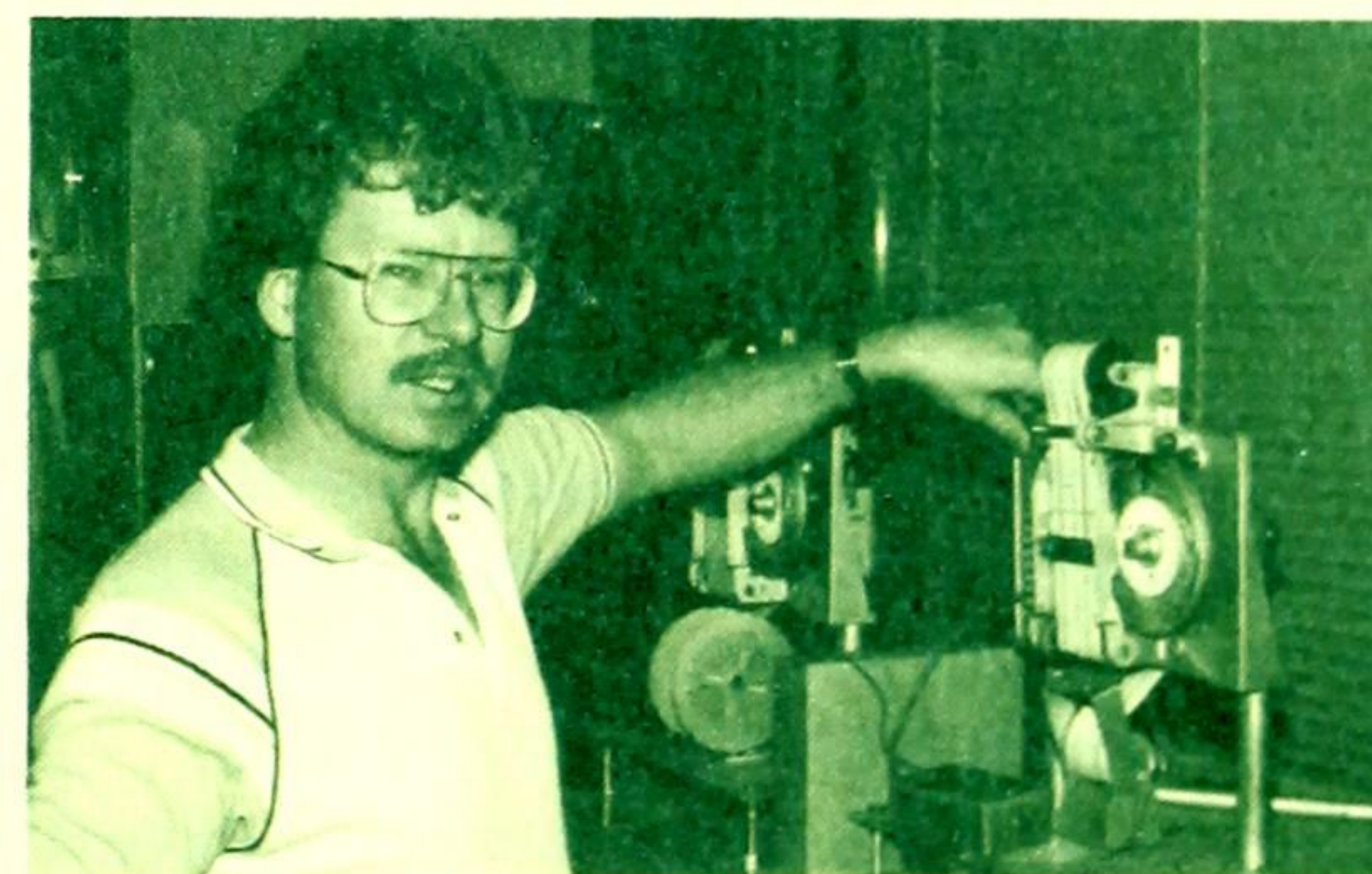
In November 1989, a ministerial conference on atmospheric pollution and climate change was held in Noordwijk, Netherlands, with Canada and 70 other countries present. It was agreed that CO₂ emissions must be stabilized, and it was felt that the Second World Climate Conference, to be held in Geneva in October/November 1990, would be an appropriate forum for decisions on developing a framework Climate Convention. The conference declaration also clearly recognized the role of various international organizations, including the World Meteorological Organization and the Intergovernmental Panel on Climate Change.

Canada has also been active on global warming issues domestically. The Energy Minister's Task Force Report on global warming, released in August 1989, concluded that it would be premature to adopt the 20-per-cent reduction in CO₂ emissions recommended by the World Conference on the Changing Atmosphere, held in

Toronto in 1988. Nevertheless, the Task Force stated that emissions must be reduced.

The following October, Parliamentary hearings into atmospheric change were held; and in March 1990, federal and provincial Environment ministers requested the development of a National Action Strategy on Global Warming. AES has been asked to play a prominent role in its development.

While there is increasingly clear scientific evidence that the earth's atmosphere is facing major changes, there is uncertainty about the rate of those changes and their consequences for the world's climate, particularly at the regional level. The best tools for predicting them are complex, three-dimensional mathematical models of the climate system — atmosphere-ocean-ice-land — known as General Circulation Models or Global Climate Models.



AES has developed one of the only half-dozen world-class models in existence today. Based on a doubling of carbon dioxide, Canada's model predicts an increase

in global temperature of about 3°C during the next century. Such a rate of change is unprecedented in geological time.

Further assessments in AES' Climate Change Digest series were released in 1989. The series is designed to inform Canadians about the potential effects of climate change on this country. The most recent reports evaluated the potential impacts of climate warming on Ontario resources, agriculture, boreal forests, national parks, municipal water use in Quebec, and the economy of Alberta.

ARCTIC POLLUTION

AES scientists are testing the air, snow and glacial ice in the Arctic for traces of chemicals from industry and agriculture. The chemicals of most concern are stable synthetic substances, such as pesticides and PCBs, that are toxic and may remain intact for decades or even centuries. Also of concern are greenhouse gases and arctic haze constituents, such as sulphuric acid and black carbon, that influence climate and acidify the environment.

An International Symposium on the Arctic and Global Change, held in Ottawa in October 1989, examined the issue of such pollution.

In November 1989, Canada concluded an agreement with the U.S.S.R. on environmental co-operation. The two nations also signed a Memorandum of Understanding concerning atmospheric research, water research and management of oil spills. Canada and all

other Arctic circumpolar nations are now reviewing means of protecting the northern environment, with the objective of developing and signing an accord.

Twenty-two students, accompanied by their escorts, and representing 15 countries, participated in the Icewalk Expedition sponsored by AES in April 1989. The students gathered at the weather station in Eureka, Northwest Territories, to learn about global environmental problems, so that they could promote awareness of such problems in their respective countries.

ATMOSPHERIC RESEARCH

Acid rain

AES research helped to formulate Canada's strategy to reduce acid rain by pinpointing the most exposed regions and determining what reductions in acid-rain-causing emissions are required for their protection. The Canadian Acid Rain Control Program is now in place, and its effectiveness must be monitored. A multi-million-dollar/multi-agency project called the Eulerian Model Evaluation Field Study (EMEFS), carried out in eastern Canada in 1988 and again in 1990, examined our ability to understand and predict acid rain. The results of this Canada-U.S. study will be used to evaluate the progress of the Canadian Acid Rain Control Program and to influence proposed changes to the U.S. *Clean Air Act*.

A National Atmospheric Chemistry Archive (NATCHEM) was established in co-operation with provincial agencies and the U.S. government in 1989-1990.

NATCHEM stores information on the acid level of precipitation across the country, including data from the Canadian Air and Precipitation Monitoring Network (CAPMON), other provincial and U.S. networks and special field studies such as EMEFS. It will be the main source of data for setting limits on acid rain, and it will help in developing further emission controls, particularly for nitrogen oxides (NO_x).

Great Lakes pollution

AES is taking the Canadian lead in an international study of airborne toxic chemicals in the Great Lakes region. Research has shown that considerable amounts of these chemicals enter the lakes from the atmosphere, either as precipitation or as dry fallout. Under the Canada-United States Great Lakes Water Quality Agreement, AES is establishing the Canadian component of a network of measuring stations to monitor toxic chemicals in the air in this region. The Point Petre Master Station on Lake Ontario is the first of these. AES will analyze data from this station, and review its design, before completing the network.

Ozone layer depletion

In the spring of 1989, Canadian research scientists, using measurements taken at Alert, Northwest Territories, discovered a thinning in the ozone over the Arctic. The measurements indicated that the process that caused the Antarctic ozone "hole" is also responsible for ozone depletion in the Arctic. These observations provided further evidence for strengthening controls on ozone-depleting substances, such as chlorofluorocarbons

(CFCs), halons and methyl chloroform. The spring 1990 ozone measurements did not indicate such thinning, most likely because of natural fluctuations in weather patterns.

University research

For several years, AES has been encouraging atmospheric research in universities by increasing scientific research grants, providing scholarships and supporting the establishment and maintenance of chairs in research. In September 1990, the Natural Sciences and Engineering Research Council of Canada (NSERC) agreed to match Environment Canada grants for the study of ozone depletion, air quality, improved weather forecasting and climate change. During 1989-1990, AES and NSERC together provided \$1.4 million to more than 70 university research projects.



ICE SERVICES

In 1989, Environment Canada, under contract with Intera Technologies of Calgary, introduced a \$58-million program to improve the gathering of information about ice. Intera's new ice reconnaissance aircraft expands AES' capacity to acquire radar image data. The data are communicated directly to the major Coast Guard icebreakers, and by satellite link to the AES Ice Centre and to the Coast Guard's regional Ice Operations Centres. This information augments the Coast Guard's ability to make operational decisions with respect to ice conditions, as well as increasing AES' ice analysis and forecast capabilities. It thus helps to ensure safe marine transportation in and near ice-infested waters.

Another part of this new ice information program is a \$12-million computer system for processing and analyzing data about ice. This system integrates sea-ice observations from satellites, aircraft, ships and shore stations. As a result, AES can produce ice forecasts in chart and text forms quickly and accurately.

BETTER WEATHER INFORMATION FOR MARINERS

Through studies such as those on Atlantic storms, and the implementation of further weather monitoring and communications technology, AES scientists have gained valuable insight into the forces that shape our weather.

In 1989-1990, AES established forecasters dedicated solely to marine requirements in Halifax, Nova Scotia, and

Gander, Newfoundland. Using a model derived from the Canada-U.S. coastal storm study of 1988, regional forecasters can better understand intense coastal storms. Measurements taken from ships, floating buoys and space satellites have increased knowledge of the Atlantic's sudden and unpredictable storms, and have led to improved forecasting techniques across Canada.

Thirteen new marine buoys were deployed on the west coast, in the Great Lakes, on the east coast, and on the ice of the Arctic Ocean, to provide real-time weather data. Sixteen Weatheradio stations were established across Canada, including four on the east coast and seven around the Great Lakes. All help to improve weather warning services for mariners.

IMPROVED WEATHER WARNINGS TO THE PUBLIC

Advances in science and technology combined with economic pressures are leading AES to conduct forecast operations at more, but smaller, offices. Over the next decade, the production of weather forecasts and the provision of weather services will be gradually integrated at Weather Services Offices.

In 1989, AES established test Weather Services Offices in Halifax and Toronto in preparation for opening a prototype office in Kelowna, British Columbia, in 1992. Once implemented, the system of Weather Services Offices will provide more accurate forecasts and better local service than the current regional weather centres.

Conservation and Protection

Our mission is to contribute to the conservation and protection of the Canadian and global environments for sustained benefits.

During 1989–1990, AES added 23 automatic weather stations to improve collection of weather data across the country. A new weather radar station in New Brunswick completes a southern network of radars stretching from the Rocky Mountains to Newfoundland. These additions allow Environment Canada to provide better forecasts and storm warnings. Plans are under way to replace the current weather radar network with modern Doppler radars.

WEATHER COMMUNICATIONS MODERNIZATION

8 A new public-packet switch-based communications facility has replaced the obsolete teletype system at major Weather Offices. A satellite-based broadcast system has been installed to replace the ageing facsimile networks used to distribute graphic information. Graphics work stations have been installed to enhance operator effectiveness and reduce paper consumption. These two networks are cost-effective and greatly improve the accuracy and timeliness of weather data collection and dissemination.

A new initiative called the AES Meteorological Information Service (AMIS) is under way. AMIS is a high-speed satellite broadcast service that uses low-cost, very small aperture technology (VSAT). This service will improve atmospheric services to other government departments as well as to the public, and will foster the growth of private meteorology in Canada.

ENVIRONMENTAL PROTECTION

Sustainable development cannot be achieved unless we reduce and control the effects of toxic substances on our environment.

There are over 20,000 chemical substances in use in Canada today. Between 100 and 200 new chemicals are added to this list every year. These chemicals are beneficial; however, their improper production, transportation, use, storage and disposal can pose threats to the environment and our health. Canadians strongly support the need to increase controls over toxic chemicals. They want those toxic chemicals already in the environment removed, and toxic dump sites cleaned up and restored.

To this end, legislation, regulation and enforcement play essential roles in reducing and controlling the effects of toxic substances. Market forces are also powerful instruments that can and should be harnessed in the pursuit of these objectives.

POLLUTION CONTROL UNDER CEPA

The *Canadian Environmental Protection Act* (CEPA) gives the federal government broad powers to protect Canadians and the natural environment from pollution of all kinds, particularly that caused by toxic substances. Regulations under CEPA can encompass the entire life cycle of toxic substances, from their development and manufacture to their transportation, distribution, use, storage, and disposal. CEPA also authorizes the Minister of the Environment to regulate fuels and their components, emissions and effluents, and

waste handling and disposal practices, including the dumping of wastes at sea.

Assessing potentially toxic substances

As defined by CEPA, a "substance" can be a chemical, a living organism, or a product of biotechnology that can be dispersed into the environment. The Priority Substances List identifies 44 substances used in Canada that require priority assessment under CEPA. Dioxins and furans were the subjects of the first assessment. A summary of the assessment, published in Part I of the *Canada Gazette* in March 1990, concluded that dioxins and furans are toxic by definition under CEPA. It recommended regulations to control their release into the environment from incinerators and from pulp and paper mills.

Compiling an inventory of substances

All chemical products already manufactured or imported into Canada on a commercial scale are being registered in a comprehensive inventory that will include some 20,000 substances. The list is being compiled over a three-year period with the collaboration of all chemical manufacturers and importers across Canada. A core list of 8,900 substances was published in August 1989, and expanded during the winter of 1990 by industry and Environment Canada.

Regulations under CEPA

CEPA absorbed the regulations that previously existed in the *Environmental Contaminants Act*, the *Clean Air Act*, the *Ocean Dumping Control Act*, the nutrient provisions under the *Canada Water Act*, and

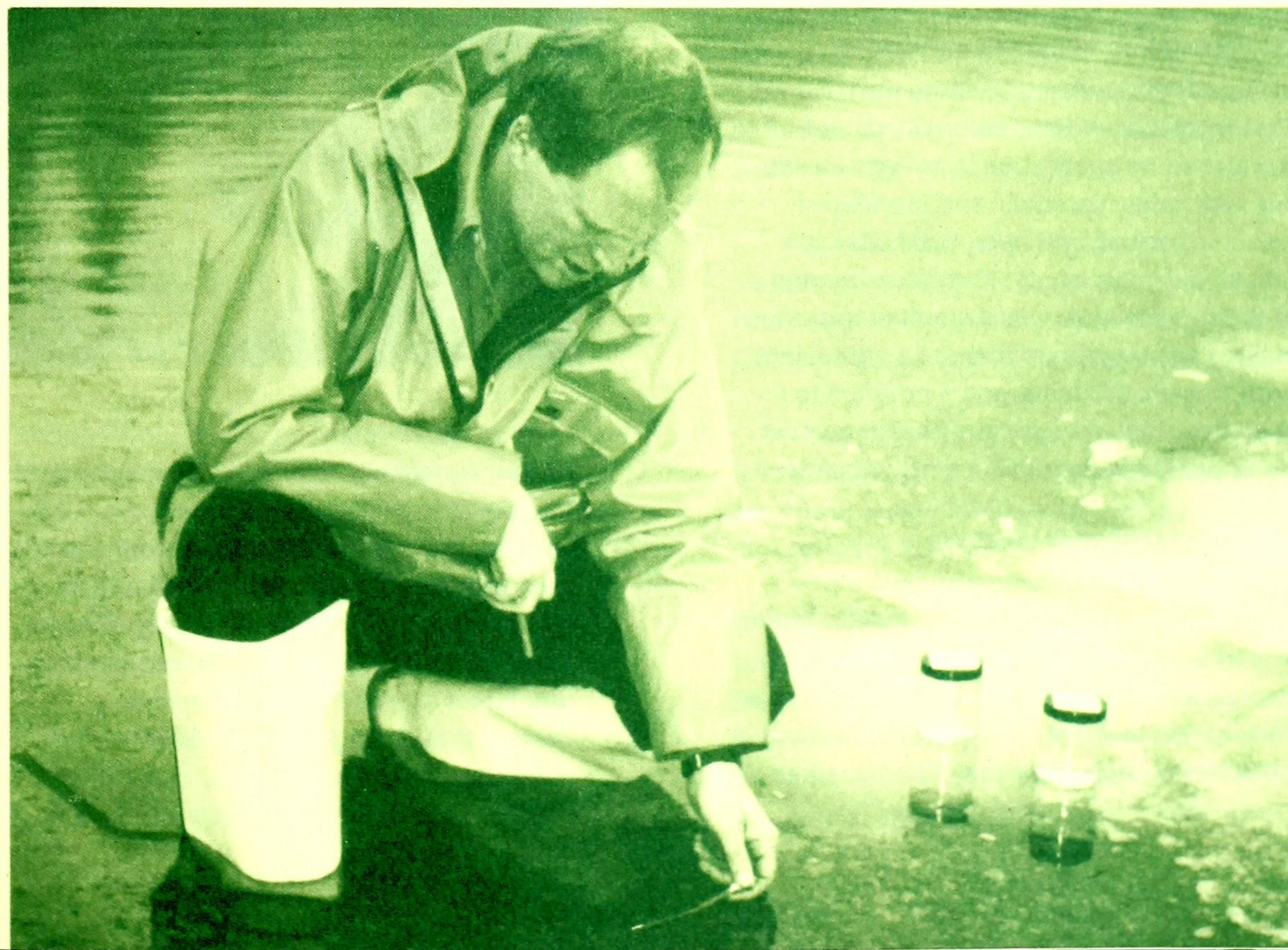
one section of the *Canada Environment Act*. In 1989-90, the groundwork was laid for three entirely new regulations to control chlorofluorocarbons (CFCs), bromofluorocarbons (halons), and lead in gasoline. In January 1990, the Minister of the Environment formally advised the pulp and paper industry that the federal government would soon introduce new regulations to limit pollution from pulp and paper effluent, and to virtually eliminate dioxins and furans. In 1989-90, federal-provincial working groups did considerable preparatory work for these regulations. A major objective was to establish similar federal and provincial discharge limits.

Enforcement activities

In the 1989-90 fiscal year, departmental officials carried out 3,412 inspections under CEPA. Cases included PCB waste storage, asbestos mines, contaminated fuels, and ocean dumping. To deal with violations of the Act, the Department undertook 277 enforcement measures that ranged from warnings to prosecution.

WASTE MANAGEMENT

In 1989-90, the Department's efforts focused on PCB waste destruction, controlling the transport of hazardous wastes, reclaiming contaminated dump sites, and strategies to reduce waste packaging.



PCB destruction

Now in its second year, the federal PCB destruction program operates mobile incinerators to treat and destroy PCB wastes where they exist in large quantities. In 1990, an incinerator was located at Goose Bay, Labrador, to destroy 40 per cent (by weight) of federal PCB waste, as well as PCBs owned by Ontario. Moreover, the Minister of the Environment and his Atlantic counterparts agreed on a co-operative program to destroy PCB wastes in the four Atlantic provinces. In January 1990, regulations were issued under CEPA to govern the safe operation of mobile PCB incinerators. Subsequently, Environment Canada published guidelines for treating and destroying PCBs.

Transportation of hazardous wastes

In June 1989, an amendment to the *Transportation of Dangerous Goods Act* broadened its application to include hazardous recyclable materials, and introduced a simple method with which industry can test its own shipments. Closer monitoring of the transboundary movement of hazardous wastes was initiated through an agreement with Canada Customs, and a program to inspect fuels for contaminated waste was set up at selected Canada-U.S. border points.

Contaminated sites clean-up

In 1989, the government approved a five-year program to clean up abandoned, contaminated land sites in Canada, and to develop new clean-up technologies. Provincial ministers agreed to share the costs of reclaiming abandoned, high-risk sites. The Canadian

Council of Ministers of the Environment (CCME) has committed \$250 million to the clean-up program.

Waste packaging protocol

Following the recommendations of a task force, the CCME adopted a National Packaging Protocol in March 1990. Its goal is to reduce the amount of packaging waste by half by the year 2000.



AIR QUALITY

At the request of the CCME, Environment Canada prepared a plan to reduce the levels of nitrogen oxides and volatile organic compounds in urban air. Motor vehicle fuel combustion is the major source of both these pollutants. They are responsible for ground-level ozone (a photochemical oxidant that damages human lungs and vegetation) and smog.

TECHNOLOGY DEVELOPMENT AND TRANSFER

The Department began nine new technology development projects valued at \$5.5 million — \$4.5 million of which was contributed by industry, provincial governments, and/or municipalities. A major accomplishment during 1989–90 was the first full-scale demonstration in Canada of oil-from-sludge technology at Toronto's Highland Creek Sewage Treatment Plant. Often in co-operation with the provinces, departmental scientists developed methods to measure a number of toxic compounds. A program was begun to devise strategies and technologies for controlling sewer and stormwater overflows in the Great Lakes basin.

INLAND WATERS DIRECTORATE

To achieve sustainable development, we need to make decisions that will help control water demand and maintain water quality. To do that we need, first, to expand our knowledge base by upgrading our data, research and especially our predictive capabilities; second, to change decision-making processes by introducing new policies and legislation; and third, to strengthen partnerships with other levels of government and private-sector agencies involved in water management.

The Federal Water Policy

A report entitled "Federal Water Policy — A Progress Report" was released. Progress was noted in such areas as the management of toxic chemicals (*Canadian Environmental Protection Act*), the Great Lakes Action Plan, the St. Lawrence Action Plan, Water Quality

Agreements and Flood Damage Reduction Agreements, all of which are discussed in this annual report.

Great Lakes Action Plan

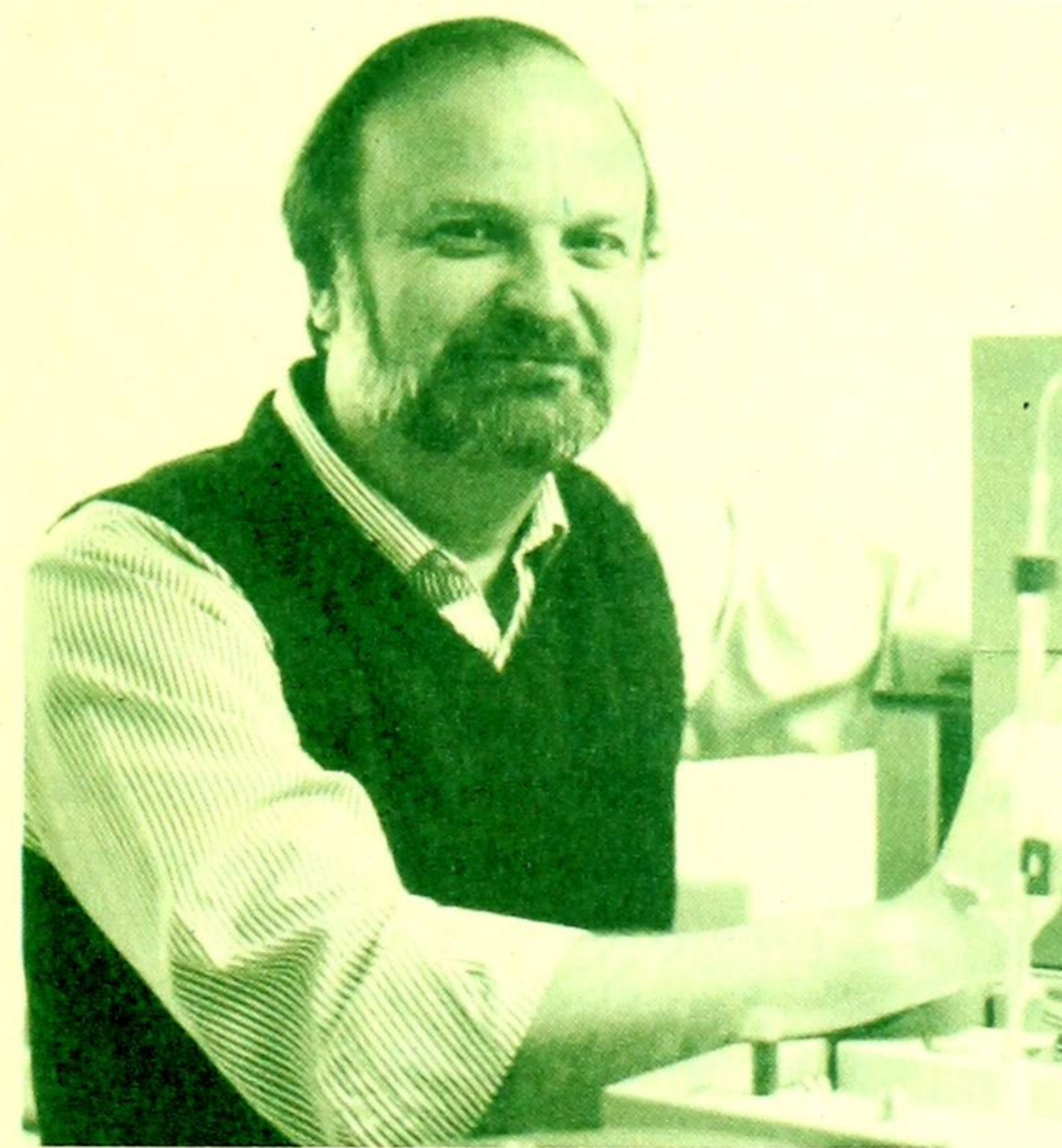
The 1987 Protocol to the 1978 Canada-U.S. Great Lakes Water Quality Agreement recognized the need for existing programs to be extended and for new programs to be added to address lakewide management, contaminated sediments, land run-off, airborne toxics, human health effects and new ecosystem and water quality objectives. In October 1989, a five-year Great Lakes Action Plan was announced, which will direct \$125 million in federal resources toward the implementation of these new provisions. Environment Canada is primarily involved in two components of the action plan: the Preservation Program and the Clean-Up Fund.

The Preservation Program was designed to address, in a comprehensive way, the widespread contamination of the Great Lakes basin ecosystem by toxic chemicals. A major component of the Program is the development and implementation of Remedial Action Plans for 17 Canadian areas of concern.

Remedial Action Plans are submitted to the International Joint Commission at three major stages of their development or implementation. Stage I is the identification of environmental problems; Stage II is the selection and implementation of remedial measures; and Stage III is reached when monitoring indicates that beneficial uses

have been restored to the area of concern. Canada and Ontario have completed Stage I for five Canadian Remedial Action Plans. It is expected that the remaining 12 Canadian Stage I plans and three Stage II plans will be completed by the end of 1991-92.

The Clean-Up Fund is designed for use in the implementation of Remedial



Action Plans. The fund is administered by Environment Canada, based on priorities reflected in Remedial Action Plans for particular areas of concern. In 1989-90, a framework for considering potential remedial projects was developed. Project approvals are under way.

St. Lawrence Action Plan

1989-90 represented the first full year of activity under the St. Lawrence Action Plan.

Of particular significance was the signing of a Canada-Quebec agreement for the clean-up, protection, restoration and conservation of the St. Lawrence River. By virtue of this agreement, Environment Canada and its Quebec counterparts will co-ordinate their respective action plans, in order to enlarge the scope of their specific contributions.

In June 1989, the federal and Quebec Environment ministers released a list of 50 industrial plants, located along the shores of the St. Lawrence River, that have been targeted for priority action. Activities associated with these priority plants included effluent sampling projects and establishing technology development needs. A federal-provincial team of industrial pollution control specialists continues to work with the industries in an effort to achieve a 90-per-cent reduction of their discharges of liquid toxic waste into the river by 1993.

An inventory of 65 contaminated aquatic sites along the St. Lawrence River was completed. Priorities will be established for future action with respect to these sites.

The Department also acquired 335 hectares of critical habitat to shelter vulnerable or endangered species along the St. Lawrence River.

Niagara River

Under the four-party (Canada, the United States, Ontario and New York State) Niagara River Toxics Management Plan and its accompanying Declaration of Intent, water quality and suspended sediment sampling

and data analyses were successfully conducted. The annual four-party report was released to the public in June 1989.

Water quality

Cost-shared water quality monitoring agreements were signed with Prince Edward Island and Manitoba, raising to six the number of provinces that have joined the National Water Quality Monitoring Network. These federal-provincial arrangements enhance water resource management and protection by identifying sources of contamination and variation in selected water quality factors.

National Flood Damage Reduction Program

The intent of this program is to prevent flood damage in flood-prone areas. Through federal-provincial/territorial agreements, flood-risk areas are identified and designated, and further vulnerable developments in those areas are discouraged. In April 1989, the Canada-Alberta Flood Damage Reduction Agreement was signed, and the Manitoba Flood Protection Agreement, the Manitoba General Mapping and Studies Agreement, and a Memorandum of Understanding with Indian and Northern Affairs Canada were all renewed. To date, some 150 of the most populous flood-prone areas in Canada have been mapped and designated.

Ground water

Research, development and demonstration projects continued at Environment Canada's national water and hydrology research institutes. Some of the causes of ground-water contamination being addressed include pesti-

cides in western Canada and the Maritimes, hazardous waste sites in Ontario and Quebec, deep-well disposal in Alberta, Saskatchewan and Ontario, and acid mine drainage in British Columbia.

Environmental emergencies

Two of the many emergencies to which Environment Canada responded in 1989-90 were the suspected import from the United States of fuel tainted with hazardous waste, and the tire fire in Hagersville, Ontario. In response to the tainted fuel issue, samples were taken and analyzed for toxic contamination. In the Hagersville tire-fire area, water quantity gauging stations were constructed and water samples taken to assess toxic contaminant loadings to surrounding streams and Lake Erie.

In an effort to strengthen the Department's ability to prevent emergencies and to deal effectively with those that do inevitably occur, a new Environmental Emergencies Branch was formed in March 1990. This Branch will be responsible for developing and co-ordinating an effective National Emergency and Crisis Prevention, Preparedness and Response Management Program.

Global water resources

The Department provided international scientific leadership in the redesign and updating of the Freshwater Global Environmental Monitoring Program (GEMS/WATER), sponsored by the United Nations and the World Health Organization. GEMS/WATER

operates 350 monitoring stations around the world, and serves as a global clearing house for information on water quality and management.

Environmental assessment

Conservation and Protection conducts environmental assessments of its own projects, as well as providing scientific and technical advice, upon request, on projects initiated by other government departments and agencies. It also develops and recommends appropriate assessment actions, codes of practice, guidelines, or regulations under the appropriate statutory authority. During 1989-90, Conservation and Protection reviewed over 2,000 initial environmental assessments and participated in 15 formal public review panels.

CANADIAN WILDLIFE SERVICE

For centuries, people have depended on Canada's renewable resources for their continued well-being. Indeed, wildlife resources and our economy are more closely interconnected than one might imagine. Fish- and wildlife-related activities combine to contribute more than \$11.5 billion to Canada's Gross Domestic Product and sustain 284,000 jobs annually.

In the last decade, however, it has become increasingly apparent that renewable resources are precious assets to be conserved for the benefit of all humanity. The concept of sustainable development must extend to the use of wildlife and the ecosystems on which they depend in order to optimize

economic and other societal benefits today, while not damaging prospects for their use by future generations.

Waterfowl populations

During 1989–90, the Department continued to monitor trends in waterfowl populations. In western Canada, prairie habitat deteriorated further as a result of widespread drought. For many species, populations and productivity rates continued to decline from the low levels observed in 1988–89. There is particular concern about populations of Northern Pintails, Mallards, Blue-winged Teal, Scaup and Canvasbacks.

Following a steady decrease in the number of Black Ducks between 1955 and 1985, recent surveys of Black Duck breeding areas generally indicate stable or increasing populations. In Prince Edward Island and Ontario, however, Black Duck populations continue to decline. Overall, goose populations continued to increase, as in recent years.

North American Waterfowl Management Plan

The North American Waterfowl Management Plan (NAWMP) addresses the loss of wetland habitats and establishes specific objectives to restore waterfowl populations to the levels of the 1970s. NAWMP is being implemented through joint ventures — i.e., partnerships between governments, non-government organizations (NGOs), the private sector and landowners. Two federal departments (Environment Canada and Agriculture Canada), provincial and territorial governments, and major NGOs,

such as Wildlife Habitat Canada and Ducks Unlimited, are all involved in the process.

In November 1989, the federal government committed \$30 million, over five years, to the conservation of waterfowl habitat. The President of the United States signed into law the *North American Wetlands Conservation Act*, which will allow up to \$30 million (U.S.) annually to be directed to Canadian NAWMP projects. Five-year NAWMP provincial management plans have been completed for nine provinces. These plans will guide departmental initiatives under NAWMP and the various joint ventures.

As of October 1989, close to 10,000 hectares of waterfowl habitat have been secured, and 2,185 hectares have been enhanced, under the Prairie Habitat Joint Venture. More than 2,000 hectares of water-

fowl habitat have also been secured under the Eastern Habitat Joint Venture. Surveys, banding and research projects commenced under the Arctic Goose Joint Venture. In May 1990, a comprehensive survey was initiated under the Black Duck Joint Venture to provide data on breeding populations of waterfowl in eastern Canada. This annual survey will provide the information necessary to manage this resource effectively.

Wildlife habitat

The Department continued to work toward the establishment of two migratory bird sanctuaries — one at Île aux Canes (Green Island) and Shepherd Island, in Newfoundland, and one at Prince Leopold Island, in the Northwest Territories. In Saskatchewan, the national wildlife areas (NWAs) of Raven Island, Stalwart and Tway were enlarged. Three NWAs in British



Columbia — Brisco, Herrogate, and Spillmacheen — were united with a fourth, Wilmer, to create the Columbian NWA. Arrangements with Saskatchewan were finalized for the transfer of provincial Crown lands to the federal government to create Last Mountain Lake NWA.

Endangered species

In 1988, a joint endeavour with World

Wildlife Fund Canada was initiated. This organization is composed of federal, provincial, and territorial wildlife agencies, and three major national wildlife organizations. Its goal is to have all agencies and organizations work as a team to rescue species at risk from extinction, and prevent vulnerable species from becoming at risk. In 1989–90, three recovery plans — for the Whooping Crane, Peregrine Falcon and Piping Plover — were approved by RENEW.

Work continued on the five-year survey of contaminants in waterfowl and the monitoring of seabirds and other indicators, such as Herring Gulls and turtles, in the Great Lakes. A circumpolar survey of contaminants in polar bears was initiated in co-operation with the U.S.S.R., the U.S.A. and Norway. Several co-operative studies between universities and government agencies were funded by the Wildlife Toxicology Fund, a joint venture involving Environment Canada and the World Wildlife Fund. The results of these studies are made available through an annual report published by the World Wildlife Fund.

Co-operative wildlife management

A Canada–British Columbia wildlife agreement was signed in July 1989. This agreement facilitates co-operative research and management activities relating to wildlife conservation, and addresses such concerns as information-sharing, regulations and enforcement activities.

The 1989 Conference of Parties to the Convention on International Trade in Endangered Species was held in Lausanne, Switzerland. The Parties adopted the Canadian resolution on captive breeding, which sought to have conservation requirements of endangered species satisfied before breeding for commercial purposes be allowed. The Canadian position on the adoption of humane transport standards for captive animals was also accepted.



Wildlife Fund Canada created a four-year, \$2-million Endangered Species Recovery Fund to assist in the recovery of endangered animals and plants native to Canada. In 1989–90, 39 proposals and approximately \$1 million in funding were approved for research and other activities to support the recovery of endangered species.

Work continued under the strategy for the Recovery of Nationally Endangered Wildlife (RENEW). The RENEW organiza-

Toxics and wildlife

Further advances were made in gaining a better understanding of the nature and extent of lead poisoning in Canadian waterfowl resulting from the ingestion of lead shot. Toxicological advice was provided for the development of a departmental policy document on the use of lead shot in waterfowl hunting, and also for establishing criteria to identify non-toxic shot zones. A national survey of lead in wing-bones was also initiated.

Canadian Parks Service

As Canadians, we take great pride in the beauty of our lands and waters, and in the richness of our nation's history. For over a century, the federal government has protected outstanding natural areas as national parks, and has commemorated persons, places and events of national historic significance at national historic sites.

Our national parks and historic sites, taken together, represent the very essence of Canada. They reflect for present and future generations the environment upon which we have always been dependent, and the many people whose lives have shaped our diverse nation.

The goal of the Canadian Parks Service (CPS) is "to protect for all time those places which are significant examples of Canada's natural and cultural heritage and also to encourage public understanding, appreciation and enjoyment of this heritage in ways which leave it unimpaired for future generations."

Our national system of protected spaces, although as yet incomplete, is a mosaic composed of 34 national parks, two national marine parks and 112 national historic sites, which include the historic canals. More than 1,000 bronze plaques have been erected throughout the country by the Historic Sites and Monuments Board of Canada. The Parks Service contributes, through cost-sharing and co-operative agreements, to the protection of 44 sites of national historic and/or architectural significance.

In 1989-90, Canada's national parks recorded 12.8 million visits, while 7.6 million visits were registered at national historic sites.

PROGRAM ACTIVITIES

National Parks Act

Management plans for the four mountain parks — Banff, Jasper, Kootenay and Yoho —

were tabled in Parliament. The Town of Banff was incorporated as an Alberta municipality within a national park. In addition, more than 10 regulatory projects were initiated to ensure greater protection and enjoyment of our national parks.

Heritage Railway Stations Protection Act

The *Heritage Railway Stations Protection Act* received Royal Assent on September 22, 1988. It states that no railway company may remove, destroy, alter or in any way dispose of a heritage railway station under its control, or alter any of its heritage features, without Governor-in-Council approval. A heritage station is defined as one designated as such by the Minister of the Environment on the recommendation of the Historic Sites and Monuments Board of Canada.

Designation of heritage stations awaits the formal proclamation of the Act. In the meantime, the Board has been receiving suggestions from many Canadians who wish to see their favourite stations designated.

NATURAL RESOURCES PROTECTION AND MANAGEMENT

Resource protection

The Law Enforcement Operations program, designed to prevent poaching in the parks, continues to yield results. To date, there have been 16 Law Enforcement Operations undertaken in national parks, including information gathering, joint force operations, and actions carried out against offenders. Five of these operations led to the laying of charges. One person was fined \$3,000 and sentenced to a month in jail, as well as to the loss of

hunting privileges for life. These results represent an increase over penalties levied prior to the amending of the *National Parks Act*.

Staff are being trained, both at the federal level and jointly with the provinces, to ensure the continuing protection of wildlife in the parks.

CPS is developing a National Occurrence Tracking Information System to assist in reporting poaching incidents. This system will include linkages with other federal and provincial networks, such as Uniform Crime Reporting and the Police Information Retrieval System.

CPS is now a direct access user of the Canadian Police Information Centre system.

Resource management

The Canadian Parks Service has launched a research program in co-operation with Alberta and the World Wildlife Fund to study the declining population of caribou in the Jasper National Park region. CPS and the World Wildlife Fund have co-sponsored a carnivore conservation study for the Four Mountain Parks region of Alberta and British Columbia. CPS has been monitoring closely the establishment of a wolf population in Banff National Park, and has initiated research in Point Pelee National Park, Ontario, to restore and protect the carolinian ecosystem. A molecular biology project has been initiated to examine the elk and bison population of Elk Island National Park, Alberta.

CPS pursued efforts to manage fire as a natural process. The newly established Western Region fire command team used planned burns in Elk Island, Banff and Jasper national parks to improve the natural habitat and reduce the risk of wildfire. CPS undertook a vegetation modelling exercise to develop a fire management system that will improve the Service's fire management capabilities.



Canadian Parks Service management plans

In 1989-90, the Canadian Parks Service initiated the process of designating Wilderness Areas covering approximately 90 per cent of the Banff National Park land base. Natural resources within these areas will benefit from stricter protection.

During the year, national historic site management plans were approved for Port au Choix, Chambly Canal, Fort Temiscamingue and Motherwell Homestead. These plans give direction to the management and development of sites by establishing guidelines for research, resource protection, marketing, interpretation and provision of visitor facilities. In addition, public consultations were held in Saskatchewan to discuss plans for a national historic site at Fort Walsh, and in Nova Scotia for a site to commemorate Alexander Graham Bell.

In April 1988, the Canadian Parks Service introduced a new way of reporting public attendance at national parks and national historic sites. The new attendance data for 1989-90 are therefore not directly comparable with similar data from previous years.

The data show 12.8 million person-visits to national parks in 1989-90. This figure represents a 3-per-cent increase over the previous year. Quebec Region experienced the largest increase in attendance at national parks.

In 1989-90, national historic sites received 7.6 million person-visits — an increase of less than one per cent over the previous year. Ontario Region showed the greatest increase in visits to national historic sites.

New park and historic site negotiations

The challenge facing the Canadian Parks Service is to depict the full breadth of Canada's natural diversity within the national park system. Currently, Canada's 34 national parks are located within 21 of the 39 land-based natural regions; by this measure, the national park system is roughly 54-per-cent complete. Four of the 29 marine regions are represented: one by a national marine park (Fathom Five); one by a representative marine component to an existing coastal national park reserve (Pacific Rim); and two by a national marine park reserve (South Moresby).

Work has been undertaken to establish seven new national parks. Discussions were held with the Tungavik Federation of Nunavut regarding new national parks in the vicinity of northern Baffin Island, in the Bluenose Lake area, and near Wager Bay. New parks are also being discussed for Banks Island (with the Inuvialuit of the western Arctic) and at Churchill, Manitoba. In addition, plans are being prepared that will guide efforts to complete Canada's systems of national parks and national marine parks by the year 2000.

Plans are also being prepared and implemented to fill the gaps in Canada's system of national historic sites. In the North, consultations have been undertaken to permit the eventual establishment of such sites.

Canadian Parks Service Heritage Awards Program

On Heritage Day, February 19, 1990, the Minister of the Environment presented the annual Canadian Parks Service Heritage Awards to 10 recipients at a ceremony on Parliament Hill. These awards recognize significant contributions to heritage conservation. The 1989 award-winners were:

- **Cam and Joy Findley**, Alberta. Joy Findley's dedication to conservation helped to ensure the success of Wildlife '87. Cam Findley, while president of the Alberta Wildlife Conservation Centennial Association, helped to establish the Alberta Wildlands Trust.
- **Phyllis Lambert**, Quebec, founded the Canadian Centre for Architecture, helped to establish the Heritage Montréal Foundation and inspired the Milton Park co-operative program in Montréal.
- **Ursuline Monastery**, Quebec. For three centuries, the sisters of the Ursuline convent in the old city of Québec have responsibly managed their historic properties, which contain the largest single body of 17th-century architecture in Canada.
- **Ontario Heritage Foundation**, founded in 1968, has promoted appreciation of Ontario's heritage, and provided funding and technical assistance to support heritage conservation. Among notable recent projects, the Foundation has restored the Elgin and Winter Garden Theatres in Toronto.
- **Quidi Vidi Rennie's River Development Foundation**, Newfoundland. This non-profit, volunteer organization constructed the Newfoundland Freshwater Resource Centre, introducing interpretive and educational programs in that St. John's urban parkland.
- **Via Rail Canada** has acted to protect heritage railway stations across Canada. It has restored stations in Port Hope, Ontario, as well as in the cities of Québec and Halifax.
- **Village of Kaslo**, British Columbia. The 850 people of the village of Kaslo launched a fund-raising and promotional drive that succeeded in preserving the oldest remaining paddle-wheel ship in Canada, the S.S. *Moyie*. The vessel, built in 1898, is now a museum.
- **Wanuskewin Indian Heritage Incorporated**, Saskatchewan. This organization represents all language groups and Indian districts in that province. The group has developed Wanuskewin Heritage Park, an interpretation centre of Northern Plains Indian culture, located near Saskatoon.

- **E. Keith Winterhalder**, Ontario, is a director of the Canadian Botanical Association. His research provided the basis for the "Greening of Sudbury" program, which established Canada as a leader in the field of land reclamation.
- **Yarmouth County Museum**, Nova Scotia. This is an outstanding community museum with an extensive Victorian collection that emphasizes the region's marine heritage.

Federal Heritage Buildings Review Office

The Federal Heritage Buildings Review Office (FHBRO) is an interdepartmental body that advises the Minister of the Environment on the designation of federal heritage buildings.

As it is federal policy to conserve and reuse buildings so designated, FHBRO advises owner departments on the conservation of the heritage character of designated buildings. Federal heritage buildings are designated as either "recognized" or "classified". Classified buildings are those identified as having the highest heritage significance, while recognized buildings are of second-highest significance.

To date, FHBRO has evaluated 1,480 buildings. Of these, 96 have been classified and 384 have been recognized.

In 1989-90, 18 classified buildings were added to the Register of Federal Heritage Buildings, including the Québec Customs House and the North Lodge of

Kingston Penitentiary. An additional 78 buildings were recognized and added to the Register. These included the light tower and keeper's dwelling in Twillingate, Newfoundland, and the Municipal Library Building in Jasper, Alberta.

In 1989-90, FHBRO reviewed 36 proposals for interventions to classified federal heritage buildings. Alterations to recognized federal heritage buildings are subject to review by the custodial department.

Historic Sites and Monuments Board of Canada

Five new members were appointed to the Historic Sites and Monuments Board of Canada in 1989-90: Dr. F.X. Bolger, Dr. Raymonde Gauthier, Dr. Michael Kinneer, Dr. Margaret Conrad, and Mr. Daniel Tlen, representing respectively Prince Edward Island, Quebec, Manitoba, Nova Scotia, and the Yukon.

The Historic Sites and Monuments Board of Canada is the statutory body appointed by the Governor-in-Council to advise the Minister of the Environment on the commemoration of national historic sites. The Minister is responsible for developing and implementing a national program to commemorate aspects of Canada's human history that are nationally significant.

Sixteen members, representing each province and territory, are appointed to the Board for a term of five years. Ontario and Quebec each have two repre-

sentatives. Other members include the National Archivist and a representative of the National Museums of Canada.

Since its inception in 1919, the Board has made over 5,000 recommendations and erected more than 1,200 federal government plaques bearing the inscription of the Historic Sites and Monuments Board of Canada. Thirty commemorative plaques were erected in 1989-90.

The Board also has the responsibility of advising the Minister on the designation of heritage railway stations under the *Heritage Railway Stations Protection Act*.

National historic sites fall into three categories: those owned and administered by the Parks Service; those that are owned by other governments or non-profit organizations, and that receive CPS support through a cost-sharing arrangement; and those commemorated by means of a plaque.

Canadian Heritage Rivers

The Canadian Heritage Rivers System is a co-operative program of the Government of Canada, involving eight provinces and the two territories. The System ensures both national recognition of designated heritage rivers and their long-term protection.

More than 4,000 kilometres of 18 rivers are now protected under the Canadian Heritage Rivers System. In 1989-90, the following rivers were nominated for heritage designation: the Kazan and Thelon in the

Northwest Territories and the Seal in Manitoba, all three flowing into Hudson Bay; and the Grand in Ontario, flowing into Lake Erie.



Archaeological Research Branch

The Marine Research Section of the Archaeological Research Branch continued to make inventories of underwater cultural resources for the regions. In 1990, the second year of a four-year project, the Section resumed locating, identifying and evaluating shipwreck sites and other underwater resources in Fathom Five National Marine Park, using side-scan sonar and computer-assisted underwater mapping systems. Other work included an evaluation of prehistoric fish weir remains at Atherley Narrows for Ontario Region, and an inspection and condition assessment of shipwreck sites in Louisbourg harbour.

The Archaeological Research Branch continued its program of support in Material Culture Research to the regions and to Headquarters Interpretation Branch. Tangible results of this support were the production of glossaries of general classes of artifacts, the identification and interpretation of specific classes from archaeological site assemblages, popular publications on the material culture of specific sites, training sessions on the interpretation of site assemblages, and the maintenance of the continually growing National Reference Collection of historic-period material culture specimens.

In February 1990, the Collection and Data Management Section hosted a meeting of archaeological and material culture research staff from all regions. At this meeting, final arrangements were made for the implementation and installation in 1990-91 of the Canadian Parks Service automated archaeological collections management system (DOSSIER).

Marketing

In 1989-90, the Parks Service completed and released a major market survey on visitors to Canada's national parks and historic sites. On the basis of the information gathered from this and other sources, CPS developed its first comprehensive, multi-year National Marketing Strategy. Work also continued on regional marketing strategies, particularly in the Atlantic and Quebec Regions.

A film was made at Waterton Lakes National Park, Alberta, as part of the effort

to bring the parks and sites to the many people who may never have the opportunity to visit them. A program objective is to gather high-quality representative material on the major regions and historic themes of the Parks system. Such material is clearly needed since research consistently indicates that, by a large majority, Canadians know very little about their national parks and historic sites.

In March, at the GLOBE '90 Conference in Vancouver, the Marketing Branch gave presentations on achieving sustainable development in tourism.

Training also continued throughout the Service, with an emphasis on internal dialogue about marketing issues and applications.

Parks Day 1990

Preparations began for Canada's first annual Parks Day, to be celebrated on June 9, 1990. Among the activities planned by the Canadian Parks Service as well as provincial and territorial parks were litter blitzes, sunset boat cruises and mall displays.

Training

During 1989-90, the Training Section of the Visitors Activities Branch provided one nation-wide course and three regional workshops for CPS staff. In addition, together with Interpretation Canada, the Parks Service presented a professional seminar for non-government groups on the interpretation of marine resources.

Volunteers

Over 4,400 volunteers contributed nearly 100,000 hours in 1989-90, augmenting the Parks Service's existing programs and providing new services. At Pacific Rim, volunteers presented children's programming throughout the summer; at the Western Regional Office, a Peruvian volunteer produced summaries of regional plans. Students and other volunteers carried out archaeological excavations at Fort Langley, the Forks in Winnipeg and several sites in Ontario. At Forillon, an agreement with the Université d'Anjou in France was signed to provide volunteer internships for tourism and recreation students. Community volunteers worked on CPS photograph collections, carried out research in resource conservation and gave interpretive presentations to visitors.

Co-operating associations

Thirty-five co-operating associations representing over 4,500 members have been active in all provinces and the Yukon. These associations contributed over 65,000 hours of their time, presenting some 600 events over the course of the year. Their sales outlets had revenues of over \$2 million, earned on the sale of publications and parks-related items. The associations developed 150 new products.

One outstanding activity was the first Birding Festival organized by the Friends of Point Pelee, in co-operation with the World Wildlife Fund and private business. Another was a successful Elderhostel program, spon-

sored by the Friends of Mount Revelstoke and Glacier, on the identification of birds and plants in the Columbia Mountains. Further, the Prince Albert Friends of the Park launched *Saskatchewan's Playground*, one of several successful publications produced by co-operating associations.

The Canadian Parks Partnership co-sponsored workshops for park liaison officers and association representatives to improve the operation and governing of non-profit co-operating associations. The Quebec Region signed a new strategy for the co-operating association program. At the national level, a product development officer began work on development of a National Product Line for CPS and co-operating associations.

Access

CPS identified the needs of disabled visitors and established standards for accessibility to all 118 heritage properties.

Co-operation with universities

A network of contacts has been developed between the Canadian Parks Service and the university community. More than 20 formal co-operative arrangements have been concluded, and there are numerous informal arrangements with Canadian and foreign universities.

Activities include voluntary and contract research, co-op internship programs, protected area and heritage thesis research, workshops, lectures, and courses offered jointly by universities and CPS.

An example of a successful co-operative venture was the pilot project with the University of Waterloo, where a Heritage Resources Centre was established with the help of a liaison agreement with the Parks Service. The activities of the Centre have expanded to encompass a wide range of natural, cultural and other heritage concerns, groups and institutions.

ATLANTIC REGION

Water Street Historic District, ST. JOHN'S, NEWFOUNDLAND

A Historic Sites and Monuments Board of Canada plaque was unveiled to commemorate Water Street in St. John's, Newfoundland. Since the 16th century, this has been the city's main business street. After a major fire in 1846, its buildings were reconstructed, but since then there has been virtually no change in their facades, with their unadorned, evenly spaced openings. Water Street constitutes the first historic district recognized by the Historic Sites and Monuments Board of Canada.

Maritime Archaic Indian cemeteries and Palaeo-Eskimo habitation sites, NEWFOUNDLAND

Three Maritime Archaic Indian cemeteries and two Palaeo-Eskimo habitation sites at Port au Choix National Historic Site, Newfoundland, were commemorated in July.

The cemeteries are the most important site of skeletons and artifacts remaining from

the Maritime Archaic Indians, who migrated to Port au Choix from Labrador about 5,000 years ago.

The Palaeo-Eskimo habitation sites were left by a race that occupied the eastern Canadian Arctic between 4,000 and 1,000 years ago. The well-preserved artifacts include tools, parts of weapons, ivory carvings and clothing remnants.

Signal Hill Lookout Project,
NEWFOUNDLAND

The "Lookout Project" was launched in July at Signal Hill National Historic Site in St. John's, Newfoundland. A \$500,000 gift from the Johnson Family Foundation will be used to help construct viewing platforms and interpretive exhibits, upgrade trail systems, stabilize gun batteries, and install facilities for disabled persons.

Terra Nova Golf Course Expansion,
NEWFOUNDLAND

In September, St. Christopher's Resorts (Inc.) Newfoundland received approval to add nine holes to the Twin Rivers Golf Course in Terra Nova National Park, Newfoundland. The firm will spend approximately \$3 million to add nine holes and upgrade existing facilities. The federal government will retain ownership of the land and the improvements, and will receive a percentage of the gross revenue.

President of Iceland's Visit to L'Anse aux Meadows,
NEWFOUNDLAND

In July, Canadian Parks Service staff welcomed the President of Iceland, Vigdís Finnbogadóttir, to the site of the 11th-century Norse settlement at L'Anse aux Meadows, Newfoundland.

L'Anse Amour Funeral Monument,
LABRADOR

L'Anse Amour, on the south coast of Labrador, was recognized as a national historic site in August. The earlier discovery there of the remains of an Indian boy, who had died 7,500 years ago, established L'Anse Amour as the oldest funeral monument in North America.

Basque Whaling at Red Bay,
LABRADOR

The Basques made Red Bay, on the south coast of Labrador, the world whaling capital in the years 1550-1600. Its importance has been established by the discovery of the tryworks, the whalers' cemetery on Saddle Island, and the wreck of the *San Juan*, a whaling ship sunk in 1565. This historical significance was recognized in August when Red Bay was named a national historic site.

Marconi National Historic Site,
NOVA SCOTIA

In July 1989, the Marconi Exhibit Centre was opened at Table Head, Nova Scotia. From towers overlooking the steep cliffs at Table Head, Guglielmo Marconi sent the first

wireless telegraph message to England in 1902. The Italian-Canadian community, the Marconi Celebration Trust, the Town of Glace Bay, Environment Canada and various other federal departments contributed to the funding of this site.

Old Covenanters Church,
NOVA SCOTIA

The Old Covenanters Church at Grand Pré, Nova Scotia, was commemorated in July. This is one of the earliest and most interesting examples of a 19th-century, New England-style meeting house in Canada. Built between 1804 and 1811, the church was originally used by Presbyterians and is probably the first permanent house of worship in the area.

Liverpool Town Hall,
NOVA SCOTIA

The national architectural significance of the town hall in Liverpool, Nova Scotia, was recognized in August. A wooden structure built in 1901-1902, it has housed the town offices since that time.

St. Stephen Post Office,
NEW BRUNSWICK

In August, a commemorative plaque was unveiled at the old post office in St. Stephen, New Brunswick. Now used as the town hall, the post office was constructed between 1885 and 1887 as one of a series of public buildings erected to establish the federal presence throughout the country.

Marysville Cotton Mill,**NEW BRUNSWICK**

As part of the national Heritage Day celebrations in February, the cotton mill in Marysville, New Brunswick, was formally recognized for its historic and architectural significance. The red brick mill was built between 1883 and 1885, and operated until 1975. It now serves as an office complex for the provincial government.

Land Tenure Question,**PRINCE EDWARD ISLAND**

The Land Tenure Question on Prince Edward Island was commemorated in August, in recognition of the historic significance of a pattern of land ownership that was unique in North America. In the 1800s, land ownership on the Island was in the hands of a few people, who were generally non-residents. In 1875, an act was passed to provide for compulsory government purchase of estates to end this long-standing grievance.

QUEBEC REGION**Coteau-du-Lac**

Construction began of a visitor and interpretation centre at Coteau-du-Lac, at a cost of \$572,000.

Fort Lennox

Work began on the restoration of the fortifications at Fort Lennox. The Intendant's warehouse and the artillery magazine received particular attention in the \$830,000 project.

Les Forges-du-Saint-Maurice

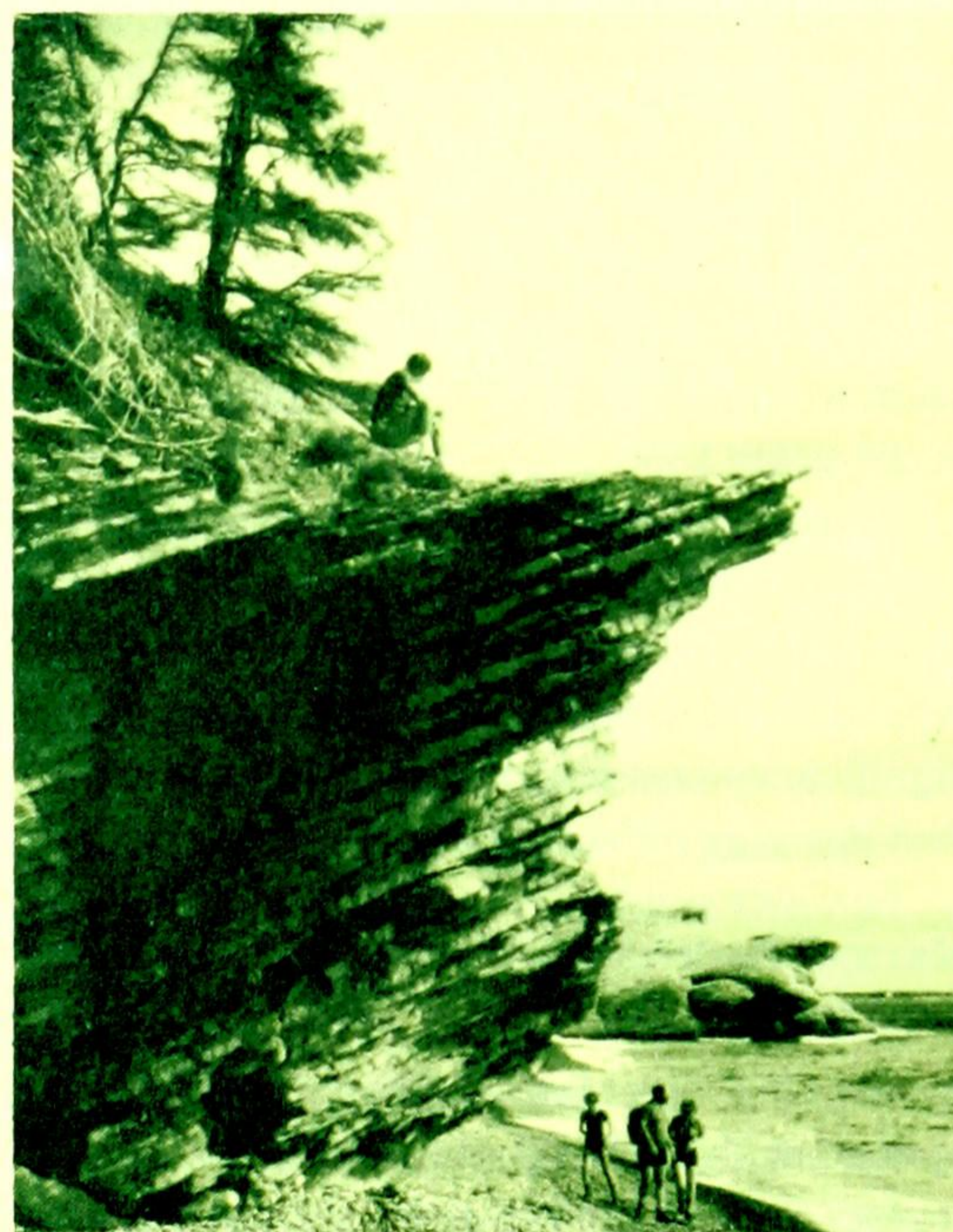
The Grande-Maison was opened to the public, and phase two of work on the Upper Forge began. The cost of the latter is \$400,000.

Walls of Québec

Restoration began of the Saint-Jean Bastion, in the Québec city walls. The \$2.5-million project will be completed in 1991-92.

Gaspé

A tourism and recreation centre was completed in the city of Gaspé at a cost of \$1.5 million.

**Forillon National Park**

Forillon National Park opened a universal access interpretive trail in June. This trail will allow disabled persons to enjoy the park. Also in June, the park began construction of a Recreation Centre.

The Canadian Parks Service and the Canadian Wildlife Service co-operated in the reintroduction of peregrine falcons into Forillon National Park during July and August.

Saguenay

The federal and Quebec governments signed an agreement to co-operate in defining the area of the Saguenay Marine Park, its planning and its management.

Manoir Papineau

The Canadian Parks Service, the Department of Communications and Canadian Pacific reached an agreement in principle to develop Manoir Papineau at Montebello. Transfer of property and sharing of responsibilities are matters under consideration.

Chambly Canal

The Minister approved the Master Development Plan for the Chambly Canal. This plan stipulates priorities for site development.

Mont Saint-Bruno

The ministers of the Environment and of National Defence announced the transfer of a portion of the Canadian Forces Base Saint-Bruno to the Canadian Parks Service for purposes of conservation.

Dufferin Terrace

A major study was published on the archaeology and history of the Dufferin Terrace at Québec.

Old Port of Montréal

An agreement was signed between the Société de développement du Vieux-Port de Montréal and the Canadian Parks Service to ensure the performance of professional archaeological research during the excavation of locks 1, 2 and 3 on the Lachine Canal.

Montréal 1992

After discussions with Phyllis Lambert, of the Canadian Centre for Architecture, the Canadian Parks Service agreed to undertake a study of the walls of the city of Montréal. The study is in preparation for the celebration of the 350th anniversary of the founding of the city.

ONTARIO REGION

George Brown House, TORONTO

In September, the Minister of the Environment officially opened George Brown House, a national historic site in Toronto.



Woods Mill, SMITHS FALLS

The Canadian Parks Service reached an agreement with the Rideau Canal Museum Corporation, a group of private citizens, to rehabilitate a heritage complex in Smiths Falls for use as a museum to present the Rideau Canal story.

St. Thomas City Hall, ST. THOMAS

The Canadian Parks Service contributed \$250,000 to the restoration of the exterior of the St. Thomas City Hall through a cost-sharing agreement with the city.

Music Building, TORONTO

Metro Toronto and the Canadian Parks Service entered into a cost-sharing

agreement to undertake the restoration of the Music Building on the Canadian National Exhibition grounds. The restoration, supported by a \$750,000 contribution from the Parks Service, will be completed in 1991.

Aberdeen Pavilion, OTTAWA

Environment Canada has signed an agreement with the City of Ottawa to contribute \$1 million toward the cost of restoring the Aberdeen Pavilion at Lansdowne Park in Ottawa. Known locally as the Cattle Castle, the Pavilion is an example of fanciful 19th-century architecture.

PRAIRIE AND NORTHERN REGION

Wood Buffalo National Park

ALBERTA-NORTHWEST TERRITORIES

A Federal Environmental Assessment and Review Panel held public hearings on measures to deal with the diseased bison herd in and around Wood Buffalo National Park. At the hearings, northern native groups and others vigorously objected to an Agriculture Canada proposal that the entire herd be slaughtered and replaced with disease-free stock.

Native involvement in northern parks management

The Dene-Métis Agreement-in-Principle was signed, and implementation proceeded of the Inuvialuit Final Agreement (for North Yukon National Park) and the Fort Chipewyan Agreement (for Wood Buffalo National Park). The result is increased involvement of native peoples in the management of northern national parks. In addition, to ensure that

northern native peoples benefit from the national parks in their region, the agreements provide for preferential treatment for native northerners in training, employment and economic development programs.

Forks National Historic Site,
WINNIPEG

July 1989 marked the opening of the Forks National Historic Site, a 10-acre development at the confluence of the Red and Assiniboine rivers in the heart of Winnipeg. Established under the highly successful Federal-Provincial Agreement for Recreation and Conservation on the Red River corridor, the landscaped riverside park provides basic interpretive and visitor services. It has been the setting for events commemorating native peoples' traditional use of the area, the fur trade era, the growth of the City of Winnipeg, modern immigration to western Canada, and the use of the site as a major railway yard.

In the summer of 1989, a pilot public archaeology program was launched at the Forks. The Government of Manitoba, the Forks Renewal Corporation and the Canadian Parks Service provided support so that school groups and volunteers of all ages could participate in a dig. Professional archaeologists directed the 10-week program, which drew over 40,000 spectators.

Grasslands National Park,
SASKATCHEWAN

An additional 63 square kilometres of land were acquired within the proposed boundaries of Grasslands National Park. The purchase price was approximately \$2.2 million.

**Motherwell Homestead National
Historic Site,**
SASKATCHEWAN

A Management Plan was approved for Motherwell Homestead National Historic Site. Originally, this was the showpiece farm of W.R. Motherwell, a leading advocate of scientific farming during the Prairies settlement era (1896–1914). His important contributions to agriculture and the history of Saskatchewan now are commemorated at the Site.

As part of the 1989 Canada Day celebrations, the Motherwell Homestead Barn was officially opened to the public. The Ontario-style barn is furnished in the period preceding the First World War, and contains several original pieces of equipment from that time. A small number of chickens, pigs, and cats add to the atmosphere, while horses are brought in for special events.

WESTERN REGION
Yoho National Park,
ALBERTA

On June 20, 1989, the Kicking Horse River was designated as a Canadian Heritage River in recognition of its natural beauty and its role in the development of the Canadian Pacific Railway. Also on that day, the Canadian Parks Service and Travel Alberta opened the Field Travel Information Centre, serving visitors to Alberta and Yoho National Park.

Banff National Park,
ALBERTA

On September 2, 1989, the North Saskatchewan River was designated as a Canadian Heritage River. Originating in the Columbia Icefield, the North Saskatchewan is notable for the role it played in the lives of native peoples and in the modern settlement of the Canadian West.

On October 14, an \$11.2-million sewage treatment plant was opened in Banff National Park. The new plant was designed to meet stringent federal and provincial environmental standards. It will handle peak sewage flows and meet effluent quality guidelines into the 21st century. The plant incorporates sludge management technology that is unique to North America.

On January 27, 1990, the Town of Banff officially achieved the status of a provincial municipality. The town's mayor was presented with the Instrument of Entrustment giving Banff municipal status under a federal-provincial agreement.

Brooks Aqueduct,
ALBERTA

August 1989 marked the official opening of the new visitor facilities at the aqueduct in Brooks, Alberta. Under a co-operative heritage agreement, Environment Canada contributed \$150,000 to the construction of these facilities.

Administration

Alexander MacKenzie Heritage Trail, BRITISH COLUMBIA

On October 17, 1989, Environment Canada and British Columbia Parks pledged \$300,000 to improve the Alexander MacKenzie Heritage Trail. Plans call for installation of signs, displays and plaques; construction of suspension bridges; trail improvements; and development of rustic campsites.

S.S. Moyie, BRITISH COLUMBIA

The Canadian Parks Service contributed \$150,000 to the second phase of preservation work on the S.S. Moyie, a 91-year-old paddle-wheel steamboat. A matching contribution was provided by the Kootenay Lake Historical Society and the British Columbia Heritage Trust. In February 1990, the villagers of Kaslo received a Canadian Parks Service Heritage Award in recognition of their efforts to preserve the stern-wheeler.

The Administration Program is responsible for the general management of the Department. It provides co-ordination and direction for environmental policy, and builds partnerships with national and international organizations whose co-operation with, and support for, departmental programs is essential to the fulfilment of the Department's mandate.

The program comprises the Minister's and Deputy Minister's offices, the Corporate Policy Group, the Finance and Administration Service, and the Personnel and Communications Directorates.

The Federal Environmental Assessment Review Office (FEARO) and the Canadian Environmental Advisory Council (CEAC) are also part of the Administration Program.

POLICY DIRECTORATE

The Policy Directorate, in consultation with the Services and other government departments, began to develop the *Green Plan* policy framework and to pull together the initial program, regulatory and other action elements of the plan. Cabinet approval was sought for the policy framework and basic elements of the action plan. A target of late 1990 was set for the release of the Plan.

The Policy Directorate prepared the *Green Plan* consultation document, *A Framework for Discussion on the Environment*. Released on March 29, 1990, the discussion document provided the focal point for nation-wide consultations on the *Green Plan*.

Further, as requested by the Canadian Council of Ministers of the Environment (CCME), the Directorate began drafting a national action strategy to deal with climate change. In this task it was joined by Environment Canada's Atmospheric Environment Service and Conservation and Protection, as well as other federal government departments, particularly Energy, Mines and Resources Canada. The strategy was to be prepared for consideration by the CCME in November 1990.

Finally, the Directorate began drafting a discussion paper on the use of economic instruments (for example, tradeable permits or emission charges) to achieve environmental goals in a cost-effective manner.

The discussion paper is one of the initiatives called for in the *Green Plan* consultation document. It will be published in 1991.



SUSTAINABLE DEVELOPMENT / STATE OF THE ENVIRONMENT REPORTING

STATE OF THE ENVIRONMENT REPORTING

Canada continued to develop environmental health indicators to meet the requirements of the Organization for Economic Cooperation and Development (OECD), and at the same time to lay the foundation for a national set of indicators. In July 1989, at the Paris meeting of the Group of Seven leading industrialized nations, Prime Minister Mulroney gave a public commitment that led to the striking of a task force to accelerate this work.

The State of the Environment (SOE) Report *On the Brink: Endangered Species in Canada* was a major success and reached a large audience. Two further studies appeared in the SOE Fact Sheet Series: *Pollutants in British Columbia's Marine Environment* and *Contaminants in Canadian Seabirds*. Work began on all 28 chapters of the 1991 National Report, and plans were made for editing, translation, printing and communications. A computerized client list of nearly 7,000 names was established to assist in disseminating publications to appropriate audiences. Three editions of the *State of the Environment Reporting* newsletter were published, and an SOE display was created to increase public awareness of environmental issues. A federal-provincial workshop held in Victoria sought to establish co-ordination of SOE initiatives at different government levels.

SUSTAINABLE DEVELOPMENT

As part of the effort to achieve sustainable development, several initiatives have been undertaken. These include incorporation of environmental and economic concerns into new federal-provincial development agreements; establishment of a bank of sustainable development success stories; research into better ways of integrating environmental factors into planning and development decisions; and measures to help federal program managers foster sustainable development through their own programs. The newsletter *Sustainable Development* continues to provide Canadians with information on the steps taken toward sustainable development and the means to make their decisions more environmentally sound.

Throughout the country, Canadians show increasing interest in preparing strategies to promote sustainable development and conservation. Several workshops were held, including one in January 1990 in co-operation with the secretariat of the Ontario Round Table on Environment and Economy. This session identified the common elements needed in a strategy. Regular status reports were issued on the development of strategies for the provinces and territories.

Progress was also made in the area of policy development. The *Federal Policy on Land Use Guidelines* manual was published and distributed. The manual was prepared for the Interdepartmental Committee on Land, which is responsible for the

implementation of this policy. Further, at its annual meeting in New Brunswick, the federal-provincial Committee on Land Use discussed current land-use and sustainable development issues.

CORPORATE PROGRAMS

ENVIRONMENTAL PARTNERS FUND PROGRAM

Announced in June 1989, the Environmental Partners Fund was created to assist local non-profit, non-governmental groups in undertaking community projects that protect, enhance and restore the environment. The \$50-million, five-year program may provide as much as 50 per cent of an approved project's eligible costs, to a maximum of \$200,000 over a three-year period. The remaining funds come from industry, business and other levels of government, thus demonstrating the value of a partnership approach.

From September 1, 1989 to March 1, 1990, the program's six regional offices received 700 applications for funding. These proposals were studied in the program's technical review process, after which 12 independent selection committees recommended funding to 162 projects valued at over \$36.1 million. Of this amount, the federal contribution was more than \$6.7 million. The balance was supplied by cash and in-kind contributions from organizations, industry and other levels of government.

The approved projects range from composting and recycling programs to the

rehabilitation of wildlife habitats and stream clean-up activities.

ENVIRONMENTAL CHOICE PROGRAM

The Environmental Choice Program was established to help consumers find, and encourage industry to offer, products that ease the burden on the environment. Goods and services meeting the program's product-specific criteria are identified by the EcoLogo, the program's symbol of certification.

By the end of March 1990, criteria had been set for 10 product categories: re-refined lubricating oil, insulation made from recycled wood-based cellulose fibre, selected products made from recycled plastics, zinc-air batteries, reduced-pollution water-based paint, fine paper made from recycled paper, hobby and craft forms made from recycled paper, newsprint made from recycled paper, heat-recovery ventilators and reusable cloth diapers. At GLOBE '90 in Vancouver, the first licences were awarded to manufacturers of some of these products.

At year's end, work was in progress on another 11 categories: reduced-pollution solvent-based paint, diaper services, consumer compost units, reusable shopping bags, energy-efficient appliances, alternative fuels, sanitary paper made from recycled paper, compost, non-rechargeable batteries, energy-efficient light bulbs and water-conserving products. Many others are being considered.

Experience indicates that Environmental Choice products will be sought after not only by consumers in the store but also by businesses and governments that want to exercise more environmental responsibility in making purchases. Efforts are under way to adapt the program to the needs of such end-users, and to forge links with similar programs being developed in other countries.

NATIONAL AFFAIRS

FEDERAL-PROVINCIAL RELATIONS

Canadian Council of Ministers of the Environment (CCME)

In 1962, the Canadian Council of Resource and Environment Ministers (CCREM) was founded. Since then, its role as a national co-ordinating body has focused increasingly on environmental matters. To reflect this changing focus, in 1989 it changed its name to the Canadian Council of Ministers of the Environment.

CONTAMINATED SITES CLEAN-UP

Ministers agreed in principle on a new policy to ensure clean-up of contaminated sites throughout Canada under the "polluter pays" principle. A federal-provincial cost-sharing formula will be applied to clean up "orphan sites" — that is, sites where the party responsible is unknown, cannot be located or is insolvent.

WASTE MANAGEMENT

Ministers recognized that waste management is an urgent and pressing national problem. They agreed to strike a committee to study the problem and propose a solution. The committee will conduct a broad review of the various possible ways of managing solid waste, including government purchasing and recycling policies. It will then develop a packaging policy for Canada to meet the target, set by the Ministers, of a 50-per-cent reduction in solid waste generation by the year 2000.

The Ministers also commended the federal government's Environmental Choice Program, and the growing trend toward reduction and recycling of municipal waste.

PCB PHASE-OUT

The 1989 annual CCME meeting reviewed the progress made in phasing out PCBs. Among the milestones reported were: the installation of the first federal mobile incinerator at Goose Bay, Labrador, to destroy 3,000 tonnes of PCBs (half of all federal PCB waste) and 600 tonnes of Newfoundland waste; the establishment of a permanent destruction facility in Swan Hills, Alberta, to destroy hazardous wastes, including PCBs; the adoption and enforcement of nationally consistent standards for the safe storage of PCBs; the issuance of a permit by Quebec to test the efficiency of cement kilns in destroying liquid PCB wastes; the adoption and enforcement of nationally consistent standards for the safe storage of PCBs; and the demonstration of

the VESTA 100 mobile incinerator in Alberta to assess its potential for use across Canada.

Ministers also agreed that the destruction of Canadian PCBs should be carried out, as far as possible, within Canada. Accordingly, the federal Minister confirmed that, as a matter of policy, no federal PCB wastes will be exported to other countries for treatment.

NATIONAL TASK FORCE ON ENVIRONMENT AND ECONOMY

A CCME Advisory Committee on Environment and Economy was set up at the 1989 annual meeting. Its task is to follow up on the implementation of the 1987 recommendations of the National Task Force on Environment and Economy.

Wildlife Ministers' Council of Canada

At their annual 1989 meeting, Canadian wildlife ministers expressed satisfaction with the progress achieved in implementing the North American Waterfowl Management Plan, and noted that projects under the Plan are now under way in all regions of Canada. The Eastern Habitat Joint Venture was signed by Ministers from Canada, Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland, as well as by representatives of Wildlife Habitat Canada and Ducks Unlimited. This project will support habitat restoration and conservation projects throughout eastern Canada. Provincial and territorial Ministers welcomed the federal Minister's announcement that

the federal Cabinet has confirmed funding of \$30 million over five years in support of the Plan.

Ministers also agreed to seek public comment in their jurisdictions on the draft of a Canadian wildlife policy before the spring of 1990.

Waterfowl in some regions are being poisoned by ingestion of lead shot. To deal with this problem, the provinces of Ontario and British Columbia as well as the federal government agreed to draft regulations banning the use of lead shot in 1990 in affected areas of those provinces.

Ministers expressed their appreciation of the efforts undertaken by the Fur Institute of Canada to promote and improve the fur industry in Canada. They endorsed strategies to encourage humane trapping methods, trapper training, public education and enhanced communication at the international level.

NON-GOVERNMENTAL RELATIONS

Partnerships with Non-Governmental Organizations

In December 1989, the Non-Governmental Relations group was established to initiate and strengthen constructive partnerships with non-governmental organizations (NGOs). The growing number and complexity of environmental problems requires the development of new and innovative

mechanisms to facilitate partnerships and public participation in decision making.

Regional and national NGOs, including business, labour, environmental groups, youth, academia and other voluntary groups, are recognized as key stakeholders whose active involvement is integral to the attainment of Canada's environmental objectives. To many of these organizations, the Department provides funding to support programs and services such as environmental education and awareness, and to promote communications between NGOs and other environmental stakeholders.

National Round Table on the Environment and the Economy

The National Round Table on the Environment and the Economy (NRTEE) has convened on a regular basis since its inaugural meeting in June 1989. Five working committees have been struck to pursue activities in the areas of socio-economic impact, decision-making processes, waste reduction, foreign policy, and education and communications. The Minister of the Environment is a member of the Round Table. Other members are drawn from government, business, labour, universities, research organizations and environmental groups.

INTERNATIONAL AFFAIRS

Internationally, the environment continued to be a major issue in 1989-90.

The third summit of the community of French-speaking nations (La Francophonie)

was held in Dakar, Senegal, in May 1989. Heads of government from the member countries recognized, for the first time, the linkage between environment and development. The meeting also adopted a resolution on the environment, proposed by Canada, which decided to convene the first Conference of Ministers of the Environment.

The leaders of the Group of Seven leading industrialized countries also identified action on the environment as a priority at their summit in Paris in July. At that meeting, Canada won support for the development of environmental indicators similar to existing economic indicators. Also, the October meeting of Commonwealth heads of government in Kuala Lumpur, Malaysia, made progress in promoting environmental co-operation between industrialized and developing countries.

Climate change remained a major international concern. The Intergovernmental Panel on Climate Change continued its work, weighing the scientific evidence for a shift in climate, the repercussions it might have and the possible responses to it. Ministers from about 70 countries, including Canada, met in Noordwijk, Netherlands, in November 1989. At this first major ministerial conference on climate change, a declaration that recognized the need to stabilize carbon dioxide emissions was issued. This represented a significant step forward in the broader international discussions on measures to address climate change.

In March 1990, the Minister of the Environment and the Premier of Manitoba announced the appointment of the Board of Directors of the International Institute for Sustainable Development in Winnipeg.

Canada and the United States held further discussions on a bilateral air quality accord to address the transboundary effects of acid rain as well as other air pollutants.

Canada signed bilateral environmental agreements to facilitate co-operation with Mexico, Brazil and the Soviet Union. Negotiations also began on the development of new memoranda of understanding with the Federal Republic of Germany and France.

Environment Canada was responsible for co-ordinating Canadian participation and the development of Canadian positions on matters discussed at the biennial meeting of the United Nations Environment Programme's Governing Council held in May 1989. One of the council's most important decisions was to recommend to the United Nations General Assembly that a UN Conference on Environment and Development (UNCED) be convened.

The Minister addressed the United Nations General Assembly on October 23, 1989. Environment Canada provided comments and participated in the debate on environmental resolutions. The General Assembly decided to convene a United Nations Conference on Environment and Development in 1992 in Brazil, 20 years

after the historic Stockholm Conference on the Human Environment. The Stockholm meeting put environment on the international agenda; UNCED is to put environment on the world's economic agenda. More than 100 heads of government are expected to attend UNCED, which is being called the Earth Summit.

In March 1990, Environment Canada played a major role in organizing GLOBE '90, an international conference and trade fair on environmental technology in Vancouver. Several ministers and heads of international agencies participated in this event. It was so successful that a follow-up event, GLOBE '92, is being planned.

30

As a step in dealing with the problem of long-range transport of air pollutants (LRTAP), Canada and fellow member nations of the UN Economic Commission for Europe began negotiations on a protocol to the 1979 LRTAP Convention, on volatile organic compounds (VOCs). The aim of the protocol is to control ground-level ozone.

In September 1989, the eight Arctic circumpolar nations met to discuss the sensitive northern environment. Environment Canada participated in this round table meeting, which was held in Rovaniemi, Finland.

In October 1989, a meeting of the Conference on Security and Co-operation in Europe on Environment Protection was held in Sofia, Bulgaria. The aim of this meeting was to develop recommendations on prin-

ciples, and guidelines for further measures and for co-operation in areas of environmental protection. On the basis of these discussions, the participating states recommended that the United Nations Economic Commission for Europe:

- develop an international convention, code of practice or other appropriate legal instrument on the prevention and control of the transboundary effects of industrial accidents;
- promote international exchange of information and the co-ordination of efforts in order to achieve closer co-operation in managing hazardous chemicals; and
- develop a framework convention on the protection and use of transboundary watercourses and international lakes.

ENVIRONMENT WEEK 1989

The theme for this year's Environment Week was "Our Common Future: It's in Our Hands."

With funding provided by Environment Canada, many thousands of Canadians took part in activities across the country from June 4 to 10. In addition, industry, non-government organizations, schools, municipalities, provincial governments, service clubs and a host of other groups joined in to celebrate Environment Week with their own activities and messages.

On June 4, the Minister of the Environment presented the first annual

Environmental Achievement Awards at a ceremony in Ottawa. These new awards, in six categories, recognize outstanding efforts by individuals and organizations to protect and restore Canada's environment.

COMMUNICATIONS ACTIVITIES

The Communications Directorate provided support to a number of major departmental and federal events and strategies. These included a tourism and trade exhibition in Greenland, organized by External Affairs Canada in October 1989; the GLOBE '90 conference in Vancouver, in March 1990; and *A Framework for Discussion on the Environment* (phase I of the federal *Green Plan* strategy), released in March 1990.

A Departmental Strategic Communications Framework was completed in the fall of 1990.

OFFICE TECHNOLOGY: DOTS

The Departmental Office Technology System (DOTS) is a vast computer communications network that permits thousands of users across Canada to access and share information and communicate with each other. As of April 1990, more than 4,500 users at over 90 locations were on the network, which is expected to grow to include 120 locations and 6,000 users.

DOTS is already paying off. The widespread implementation of a range of applications has led to systems for automated procurement and contracting, in-use material, library information, correspondence tracking,

departmental records management, on-line pay, human resources management information, executive information, and management of Parks realty records.

Links have been established with both internal and external organizations and systems via "gateways" to the network. These include: the Inland Waters Network, Supply and Services Canada's financial systems, the DOBRIS system at the National Library, and a number of systems used at commercial service bureaus.



Federal Environmental Assessment Review Office

The Federal Environmental Assessment Review Office (FEARO) administers the Environmental Assessment and Review Process (EARP) on behalf of the Minister.

EARP REFORM

In the Speech from the Throne delivered in April 1989, the Government announced its intention to legislate the federal Environmental Assessment and Review Process (EARP). In that same month was handed down the first of a series of court decisions that affected the use of EARP throughout government. The Federal Court, considering the need for federal environmental assessment of the Rafferty-Alameda Dam Project in Saskatchewan, declared that the EARP Guidelines Order creates binding obligations that are legally enforceable.

In May, the Minister of the Environment and the Minister of Transport accepted an Environmental Assessment Review Panel recommendation that the proposal to build and operate a jet fuel facility at Vancouver International Airport be turned down.

In June, FEARO and the Department of Indian and Northern Affairs hosted a workshop for aboriginal people from Canada, Australia and New Zealand, to discuss the implications of environmental assessment.

In September, FEARO again hosted a workshop, this time for 28 representatives from the Netherlands and Canada who met to exchange views and information on environmental assessment. Also in September, FEARO convened the annual meeting of environmental administrators from across Canada. FEARO continued to chair the United Nations working group charged with developing a convention on environmental impact assessment in a transboundary context.

In December, a second court decision on the Rafferty Dam stated that any project requiring a federal decision, the impacts of which are potentially "not insignificant," or that does not have a mitigation plan to make the impacts insignificant, must be reviewed by an Environmental Assessment Review Panel. Accordingly, a Panel was appointed in January 1990.

In March, the Federal Court of Appeal issued a decision about the Oldman Dam Project in Alberta, which had the effect of "superadding" the Guidelines Order to all federal legislation. In consequence, EARP now applies to all federal decisions based on legislation — even a decision not to use legislative authority such as Section 37 of the *Fisheries Act*. The Government was ordered to conduct a panel review of the Oldman Dam Project.

As a result of these decisions, what had been a general policy guideline became mandatory.

SELECTED ENVIRONMENTAL ASSESSMENT PANELS

Several Environmental Assessment Panels were in operation, starting up or completing their work during the fiscal year 1989-90.

Military flying activities in Labrador and Quebec

The military flights over Labrador and Quebec increased during the course of the environmental assessment review. The Panel recommended that the number of flights be reduced to 1986 levels, and that the Department of National Defence undertake monitoring to gather information for use in public hearings.

Northern diseased bison

In February 1989, the Minister appointed a Panel to conduct a public review of the issues raised by the incidence of tuberculosis and brucellosis in the herd of hybrid wood and plains bison inhabiting Wood Buffalo National Park and surrounding lands. The panel will examine the environmental, resource conservation, socio-economic and health issues associated with the bison herd. Matters to be addressed include not only questions of animal and human health but also the traditions of the native hunting culture and the possible disruption of predator-prey relationships. By March 1990, the Panel had completed its public consultations.



Vancouver International Airport Panel reactivated

The environmental assessment panel was reactivated in November to examine the socio-economic and environmental effects of a proposed new runway at Vancouver International Airport. The airport has seen a 50-per-cent rise in traffic since 1984.

Sherwood Pacific ferrochromium plant

The governments of Canada and British Columbia appointed a panel to review the environmental and social effects of the Sherwood Pacific ferrochromium smelter proposed for the Port Hardy area.

Port of Montréal

A Panel was named in June to examine the site selection process for the long-term expansion of the Port of Montréal. The Panel will consider technical, economic and environmental criteria, including ice formation and movement. The Panel will assess the impacts of the expansion on the environment,

and will examine socio-economic implications. In March, the panel issued draft guidelines for the preparation of an environmental impact statement.

Air traffic management in the Toronto region

A Panel was appointed in November to examine the socio-economic and environmental implications of Transport Canada's plans to accommodate increased demand for air services in southern Ontario. The first part of the review is a study of a proposed medium-term solution of additional runways at Pearson International Airport. The second part will be a study of long-term plans for future air traffic throughout the region around Toronto. The Panel will consider factors such as noise levels, air quality, water emissions, and forecasts of future air traffic in the region.

Nuclear fuel waste management and disposal

The Minister appointed a seven-member Panel in October to review the safety and

acceptability of the concept of deep geological disposal of nuclear wastes in Canada, proposed by Atomic Energy of Canada Limited. Public hearings will be held in Ontario, Saskatchewan, Manitoba, Quebec, and New Brunswick to explain the review process and the concept.

Northumberland Strait crossing

The final public hearings on the Northumberland Strait Crossing Project — the construction of a fixed link between Prince Edward Island and New Brunswick — were held in March. The hearings considered topics ranging from marine life and changes in tides and currents to possible impact on bird migration, employment losses by ferry workers, and changes to the Island way of life.

Rafferty-Alameda Dam

In January, a Panel was named by the Minister to review the environmental and directly related social impacts of the Rafferty-Alameda Dam project. The Government of Saskatchewan offered to stop construction once the dam site had been rendered safe, and it agreed not to resume work on the project until the Minister had responded to the Panel's report.

THE CANADIAN ENVIRONMENTAL ASSESSMENT RESEARCH COUNCIL

The Canadian Environmental Assessment Research Council (CEARC) identifies ways to improve the procedural, technical, and scientific aspects of environmental assess-

ment (EA). It promotes and supports research to:

- develop new approaches to integrating EA with strategic (or regional) planning and the control or management of economic and social activities;
- improve scientific rigour in applying ecological and social sciences in the analysis and interpretation of environmental impacts;
- improve the effectiveness of procedures for clarifying social values and incorporating them in environmental impact evaluation; and
- identify means of strengthening policy and institutional frameworks for linking the above-mentioned elements.

During the 1989–1990 fiscal year, CEARC continued to support research in a number of priority areas associated with EA. These included health and EA, human settlements and EA, traditional ecological knowledge and sustainable development, and links between the environment and the economy.

In the study of EA and health, five regional workshops were held in Toronto, Edmonton, Halifax, Montréal and Rankin Inlet–Winnipeg. The workshops attracted participants with a wide range of interests in the field of health and environmental assessment. A research prospectus and background paper summarizing research and providing suggestions for establishing or

improving the integration of health considerations in EA will be completed in late 1990.

Concerning traditional ecological knowledge (TEK) and sustainable development, a review of the literature and of experiences in collecting and applying TEK to EA was undertaken in 1989, and a report was completed by the Dene Cultural Institute. CEARC also supported two studies with native communities — Old Crow in the Yukon and Nuu-Chah-Nulth in British Columbia — to consider the question of community assessment, with particular emphasis on the role of traditional knowledge. The resulting reports and the state-of-the-art review of TEK will be integrated into one document.

In order to gain a better understanding of interrelationships between the environment and the economy, CEARC undertook a review of the treatment of environmental problems in economic assessments, and began a study of the opportunities for more integration between environmental and economic assessments. A report was prepared on the complementary aspects of environmental and economic assessments, and the opportunities for integrating such assessments. The report should be ready for distribution in the spring of 1991.

CEARC issues an annual review of its activities.



Financial Summaries / Department of the Environment

SUMMARY OF HUMAN AND FINANCIAL RESOURCES — BY ACTIVITY

PROGRAMS

Environmental Services Program

	PYs	
Atmospheric Environment Service	2,406	\$219,850,000
Conservation and Protection Service	2,448	284,655,000

Total	4,854	\$504,505,000
--------------	--------------	----------------------

Parks Program

Park Operation	3,685	278,041,000
Park Development	364	39,502,000
Program Management and Technical Services	610	60,807,000

Total	4,659	\$378,350,000
--------------	--------------	----------------------

Administration Program

Administration	465	41,701,000
Federal Environmental Assessment Review Office	31	6,767,000

Total	496	\$48,468,000
--------------	------------	---------------------

Grand Total	10,009	\$931,323,000
--------------------	---------------	----------------------

DEPARTMENTAL FINANCIAL SUMMARY

BUDGETARY EXPENDITURES

	1989-90	1988-89	INCREASE/ (DECREASE)
Operating Expenditures	\$708,700,000	\$610,269,000	\$98,431,000
Capital Expenditures	167,740,000	142,932,000	24,808,000
Grants and Contributions	29,631,000	46,305,000	(16,674,000)
Payments to the National Battlefields Commission	1,829,000	1,745,000	84,000
Contributions to Employee Benefit Plans	59,899,000	60,060,000	(161,000)

Total (Gross)	\$967,799,000	\$861,311,000	\$106,488,000
----------------------	----------------------	----------------------	----------------------

Revenues Credited to the Vote	(36,476,000)	(37,302,000)	826,000
-------------------------------	--------------	--------------	---------

Total (Net)	\$931,323,000	\$824,009,000	\$107,314,000
--------------------	----------------------	----------------------	----------------------

Financial Summaries / Atmospheric Environment Service

SUMMARY OF EXPENDITURES FOR THE 1989-90 FISCAL YEAR — BY ACTIVITY

ACTIVITY

Management and Common Support Services	\$8,486,000
Ice Services	23,575,000
Weather Services	171,382,000
Air Quality Services and Atmospheric Research	13,201,000
Climate Services and Research	19,095,000
Contributions to Employee Benefit Plans	17,296,000
Total (Gross)	\$253,035,000
Revenue Credited to the Vote	(33,185,000)
Total (Net)	\$219,850,000

FINANCIAL SUMMARY

BUDGETARY EXPENDITURES	1989-90	1988-89	INCREASE/ (DECREASE)
Operating Expenditures	\$202,470,000	\$190,244,000	\$12,226,000
Capital Expenditures	31,374,000	29,908,000	1,466,000
Grants and Contributions	1,895,000	1,924,000	(29,000)
Contributions to Employee Benefit Plans	17,296,000	17,322,000	(26,000)
Revenues Credited to the Vote	(33,185,000)	(36,070,000)	2,885,000
Total	\$219,850,000	\$203,328,000	\$16,522,000

GRANTS AND CONTRIBUTIONS

GRANTS

Meteorological Research	\$779,000
Economic Commission for Europe's Co-operative Program for Monitoring and Evaluation of the Long-range Transport of Air Pollutants	10,000
Canadian Meteorological and Oceanographic Society	20,000
Total Grants	\$809,000

CONTRIBUTIONS

World Meteorological Organization	\$1,006,000
Scholarships for studies in meteorology and atmospheric sciences at Canadian universities	80,000
Total Contributions	\$1,086,000

Total Grants and Contributions	\$1,895,000
---------------------------------------	--------------------

Financial Summaries / Conservation and Protection

SUMMARY OF EXPENDITURES FOR THE 1989-90 FISCAL YEAR — BY ACTIVITY

ACTIVITY

Management and Common Support Services	\$41,129,000
Inland Waters	109,052,000
Wildlife Conservation / Lands Conservation	43,606,000
Environmental Protection	77,742,000
Contributions to Employee Benefit Plans	16,417,000
Total (Gross)	\$287,946,000
Revenues Credited to the Vote	(3,291,000)
Total (Net)	\$284,655,000

FINANCIAL SUMMARY

BUDGETARY EXPENDITURES	1989-90	1988-89	INCREASE/ (DECREASE)
Operating Expenditures	\$218,935,000	\$175,437,000	\$43,498,000
Capital Expenditures	27,883,000	17,137,000	10,746,000
Grants and Contributions	24,711,000	18,645,000	6,066,000
Contributions to Employee Benefit Plans	16,417,000	16,295,000	122,000
Revenues Credited to the Vote	(3,291,000)	(1,232,000)	(2,059,000)
Total	\$284,655,000	\$226,282,000	\$58,373,000

GRANTS AND CONTRIBUTIONS

GRANTS

Wildlife Toxicology Fund	\$333,000
Canadian Nature Federation	10,000
Creston Valley Wildlife Management	100,000
Fur Institute of Canada	20,000
Wildlife Habitat Canada Foundation	2,947,000
Canadian Association of Geographers	7,000
Environmental Non-Government Organizations	150,000
Canadian National Committee of the International Association on Water Pollution Research	5,000
Canadian Wildlife Federation	10,000
Saskatchewan Water Corporation	2,000,000
Total Grants	\$5,582,000

(Continued on next page)

Financial Summaries / Conservation and Protection

GRANTS AND CONTRIBUTIONS (Continued)

CONTRIBUTIONS

Provinces:

Federal-Provincial Water Resources Projects	\$403,000
Waterfowl Crop Depredation	800,000
Flood-damage Reduction Studies and Flood-risk Mapping	2,863,000

Implementation of Water Planning Recommendations:

<i>Saskatchewan:</i> Qu'Appelle Valley	28,000
<i>British Columbia:</i> Fraser River Flood Control	2,500,000
<i>Quebec:</i> Hydrometric Agreement	748,000
James Bay Agreement	80,000
Water Quality and Monitoring Agreement	266,000
<i>Ontario:</i> Canada-Ontario Agreement respecting Great Lakes Water Quality	1,870,000
Fur Institute of Canada	460,000
<i>United Nations:</i> Convention on International Trade in Rare and Endangered Species	59,000
Interjurisdictional Caribou Management Board	15,000
Porcupine Caribou Management Board	6,000
Windermere Basin Clean-up	448,000
Organization for Economic Co-operation and Development	87,000
Sydney Tar Ponds Clean-up	4,416,000
Environmental Network	403,000
Convention on Wetlands of International Importance	15,000
North American Waterfowl Management Plan	1,896,000
World Wildlife Fund	250,000
Canadian Coalition on Acid Rain	80,000
Environmental Partners Fund	730,000
International Program on Chemical Safety	20,000
Protection and Clean-up of the St. Lawrence River	594,000
Environmental Non-Government Organizations	92,000

Total Contributions **\$19,129,000**

Total Grants and Contributions **\$24,711,000**

Financial Summaries / Canadian Parks Service

SUMMARY OF EXPENDITURES FOR 1989-90 FISCAL YEAR — BY ACTIVITY

ACTIVITY

Park Operation	\$261,328,000
Park Development	37,137,000
Program Management and Technical Services	57,146,000
Contributions to Employee Benefit Plans	22,739,000
Total	\$378,350,000

FINANCIAL SUMMARY

BUDGETARY EXPENDITURES

	1989-90	1988-89	INCREASE (DECREASE)
Operating Expenditures	\$243,151,000	\$209,975,000	\$33,176,000
Capital Expenditures	108,483,000	95,887,000	12,596,000
Grants and Contributions	2,148,000	24,885,000	(22,737,000)
National Battlefields Commission	1,829,000	1,745,000	84,000
Contributions to Employee Benefit Plans	22,739,000	23,011,000	(272,000)
Total	\$378,350,000	\$355,503,000	\$22,847,000

GRANTS AND CONTRIBUTIONS

GRANTS

Development of International Peace Garden in Manitoba	\$30,000
Canadian Parks and Wilderness Society	20,000
Total Grants	\$50,000

(Continued on next page)

Financial Summaries / Canadian Parks Service

GRANTS AND CONTRIBUTIONS (Continued)

CONTRIBUTIONS

Jasper Townsite Committee	\$18,000
Inter-Agency Forest Fire Centre	29,000
Co-operating Associations	245,000
Banff Municipal Committee	26,000
Compagnie Franche de la Marine	66,000
Porcupine Caribou Management Board	6,000
Federal-Provincial Parks Conference	16,000
International Union for Conservation of Nature and Natural Resources	120,000
Canadian Contribution to World Heritage Fund	86,000
Resources/Conservation Monitoring Centre	15,000
International Centre for the Study of the Preservation and Restoration of Cultural Property	47,000
International Council on Monuments and Sites	40,000
Acquisition and Restoration of Trestler House Army Museum	15,000
Alexander MacKenzie Trail	31,000
Restoration of Sites and Structures	130,000
Canadian Man and the Biosphere Program	1,000,000
University of Waterloo	15,000
Eastern Irrigation District (Brooks Aqueduct)	25,000
World Wildlife Fund	101,000
Canadian Society of Landscape Architects	65,000
	2,000
Total Contributions	\$2,098,000
Total Grants and Contributions	\$2,148,000

Financial Summaries / Administration Program

SUMMARY OF EXPENDITURES FOR 1989-90 FISCAL YEAR — BY ACTIVITY

ACTIVITY

Administration	\$38,506,000
Federal Environmental Assessment Review Office	6,515,000
Contributions to Employee Benefit Plans	3,447,000
Total	\$48,468,000

FINANCIAL SUMMARY

BUDGETARY EXPENDITURES	1989-90	1988-89	INCREASE/ (DECREASE)
Operating Expenditures	\$44,096,000	\$34,574,000	\$9,522,000
Grants and Contributions	877,000	851,000	26,000
Minister, Salary and Motor Car Allowance	48,000	39,000	9,000
Contributions to Employee Benefit Plans	3,447,000	3,432,000	15,000
Total	\$48,468,000	\$38,896,000	\$9,572,000

GRANTS AND CONTRIBUTIONS

CONTRIBUTIONS

Canadian Council of Ministers of the Environment	\$174,000
Non-Government Organizations for Environment Week Projects	693,000
Assembly of the Inuit Circumpolar Conference	10,000
Total Contributions	\$877,000
Total Grants and Contributions	\$877,000