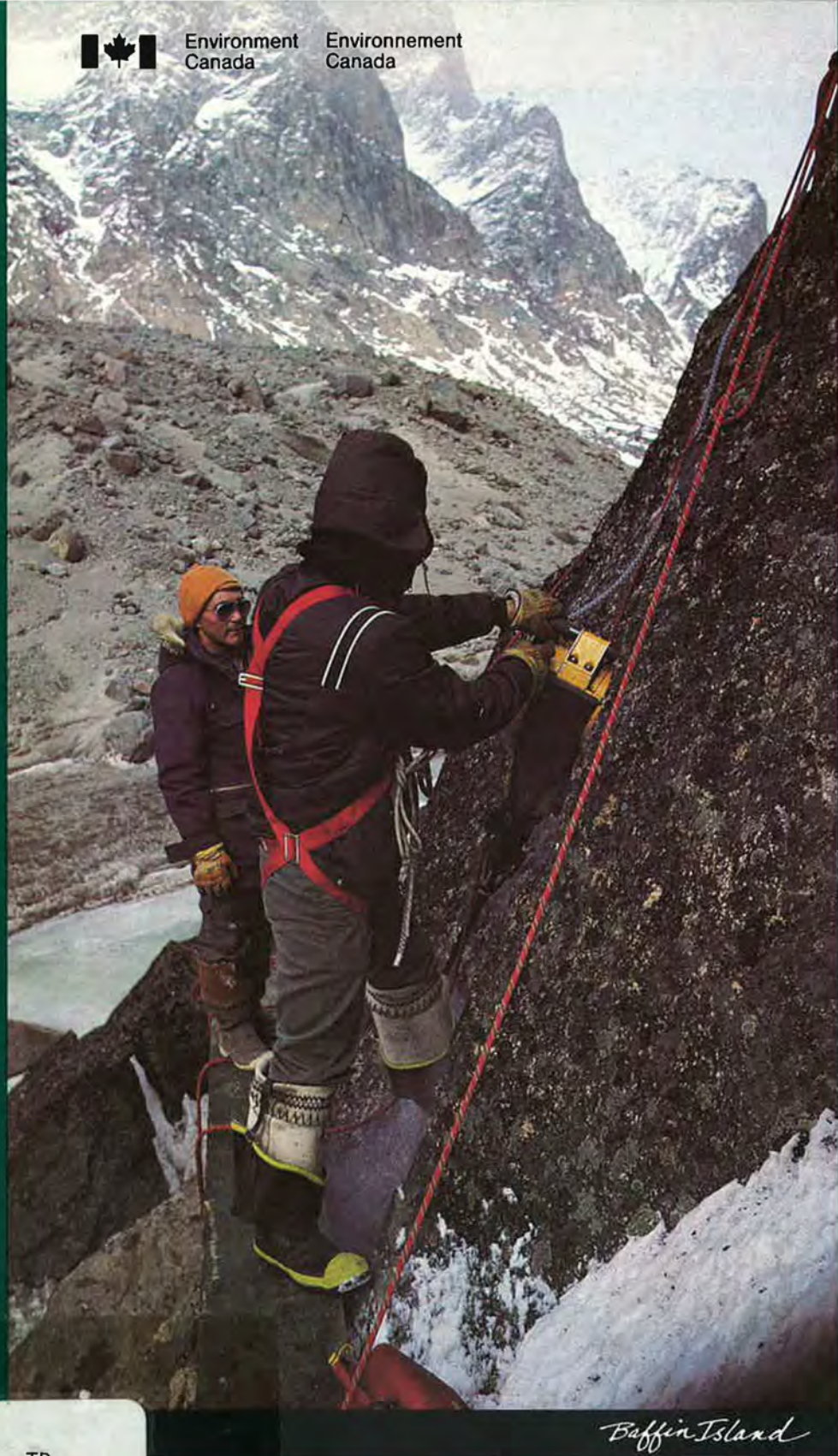




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Canada

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Canada

Canada



*Baffin Island*

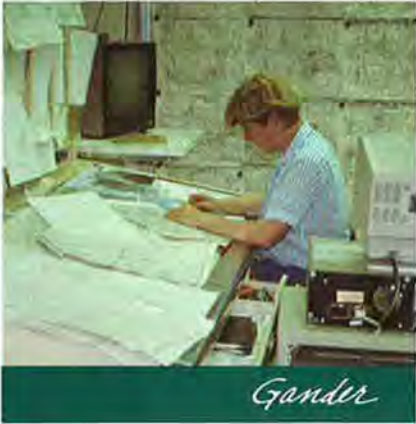
**A  
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**ENVIRONMENT  
CANADA**



**W**hen Bridget Thomas began her work at the Newfoundland Weather Centre at 8 a.m., April 5, 1988, Gander lay under fog and drizzle. As usual, she would spend the day inside preparing weather forecasts. But on this day, she had another, special, job. Like all Environment Canada employees across the



country, she was invited to record her activities on April 5 in words and photographs.

*A Day in the Life of ENVIRONMENT CANADA* is the result of the employees' response. Through this booklet, Environment Canada staff want to share with each other and their fellow Canadians what they do and why they do it.

The story starts with Bridget Thomas in Newfoundland and ends with Hez Oshootapik and Morris Kooweeliusie in the Northwest Territories. As we move across the country, you will experience not only the vastness of our nation, but the amazing

variety and complexity of activities that are undertaken by Environment Canada employees as they seek to understand, conserve and protect the environment for the use and enjoyment of Canadians, now and in the future.

**▼ Cape Breton Island, Nova Scotia**

Greta Beaver makes the period costumes worn by volunteers at Louisbourg National Historic Park in Nova Scotia. Here, she adjusts the costume worn by Millie Harpell, President of the Fortress of Louisbourg volunteers. Beaver provided support services to Harpell and forty other volunteers who were preparing to participate in Rendezvous Canada, an international tourism and trade show to be held in Halifax in late April.





*LaHave River*

#### ▶ *LaHave River, Nova Scotia*

Using a small motor boat and a tagline of rope strung between two trees, Bob MacInnis takes stream flow measurements in the LaHave River, one of forty locations in Nova Scotia where data on water volume and quality are collected. In addition to forming part of the monthly index of surface water conditions in southwestern Nova Scotia, the information is used in setting fishing season dates for the river and its estuary.

#### ▶ *Gulf of St. Lawrence, Nova Scotia*

On his daily helicopter patrol over the Gulf of St. Lawrence, Larry Solar records ice and weather conditions and relays the information to Coast Guard ships, especially the ice-breaker Sir John A. Macdonald — his assigned responsibility. Solar has just completed a career milestone — 7 000 hours in the air and 2 200 days on board ship. “We are responsible for ensuring that every ship that enters Canadian waters during the winter months arrives at its destination in the shortest possible time, encountering the least possible ice,” explains Solar.

*Gulf of St. Lawrence*

#### ▶ *Halifax County, Nova Scotia*

Looking like extra-terrestrials in their protective gear, Randy Simmons and Sinclair Dewis simulate a hazardous chemical spill in Halifax County, Nova Scotia. They regularly review their procedures to make sure they are prepared to respond swiftly and effectively when a spill actually occurs.

*Halifax County*

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*Bay of Fundy*



### ***Fundy National Park, New Brunswick***

Like many other places in Canada, Fundy National Park in southern New Brunswick is vulnerable to acid rain. Its rich amphibian population — thirteen different species — is affected by high acidity levels in the spring breeding ponds. Park Ecologist Stephen Woodley is taking water samples at Wolfe Lake as part of an ongoing program to monitor the level of acidity in the Park's waters.



### ***Bay of Fundy, New Brunswick***

Wildlife Biologist Peter Barkhouse holds a male Common Eider Duck captured at its nesting colony on The Wolves, islands in the Bay of Fundy. After capturing waterfowl with a hand net, he weighs, measures, bands and then releases them. This type of research project often involves collaboration with provincial governments and non-profit groups such as Ducks Unlimited. "I like doing something beneficial for wildlife," says Barkhouse.



*Charlottetown*



### ***Charlottetown, Prince Edward Island***

Sharon Larter shows a group of visitors one of the most important rooms in Canadian history, the Confederation Chamber in Charlottetown's Province House. Recently restored to its original appearance, it was the site, in 1864, of the first step towards the union of Britain's North American colonies. Explains Larter: "It's important for the public to be aware of the role this room played in the events leading up to the Canadian union in 1867."



*P.E.I. National Park*



### ***Prince Edward Island National Park, P.E.I.***

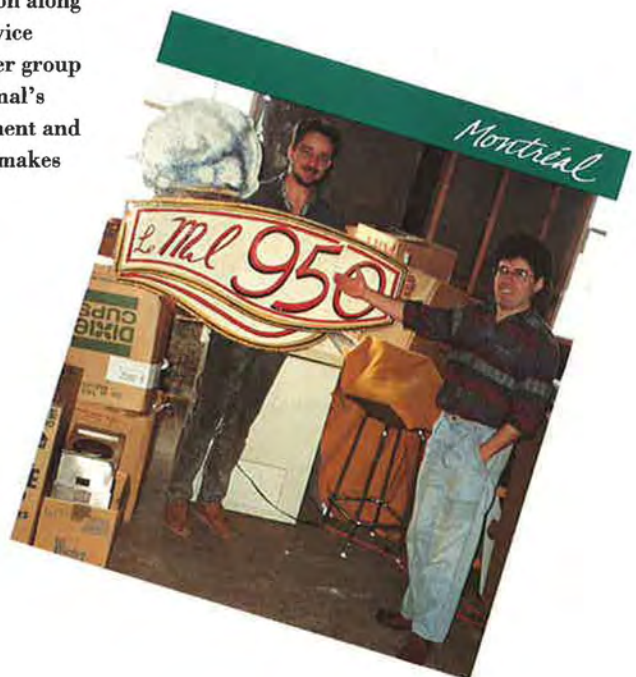
Phil McCabe's first activity of the day was taking Prince Edward Island National Park's fire truck out for a test drive. That was just one of the day's tasks necessary to ensure that all the Park's firefighting equipment is ready for a fire call during the spring forest fire season. "Being prepared to fight fires is just one of the activities we do year-round to protect the natural resources of the Park," says McCabe. After completing a degree in Forestry, McCabe became a Park Warden two years ago.



*Fundy National Park*

▼ **Montréal, Quebec**

Paul-Emile Cadorette and René Thériault hang out the snack bar sign in preparation for the summer tourist season along the historic Lachine Canal. The two Canadian Parks Service employees work as planners and publicists with a volunteer group called “Les Mil-Lieues” which carries out many of the Canal’s programs. Says Cadorette: “I like working for the enjoyment and education of the public — and the feedback I get later on makes all pre-season planning worthwhile.”







▶ **Montréal, Quebec**

Interpreters Line Sauvageau and Diane Labrie conduct inventory at the souvenir sales counter at the Maison Cartier in Montréal — “a typical behind-the-scenes task at a Historic Site.” Labrie says she particularly enjoys explaining the importance of the home of Father of Confederation Georges-Etienne Cartier to the many groups that visit it.

▶ **Hull, Quebec**

Researchers at the National Wildlife Research Centre in Hull, Quebec, share the results of their research on the effect of PCBs and dioxins on wildlife with Dr. Tanabe, a PCB expert visiting from Japan. Ross Norstrom, Michael Mulvihill and Mary Simon explain how the apparatus they designed separates dioxins from fats and oils more efficiently than traditional methods.



▶ **Hull, Quebec**

Canada’s newest national park has a dual name — South Moresby and Gwaii Haanas (Haida for “islands of wonder and beauty”). Pat Thomson and Barry Olsen have been involved in negotiations with the British Columbia government and the Haida Indian community to establish the park in B.C.’s Queen Charlotte Islands. According to Thomson, the dual name reflects “the cooperative spirit that exists between Environment Canada and the Haida in the establishment and management of the park.”

▶ **Longueuil, Quebec**

At the Captain Bernier Laboratory in Longueuil, Quebec, Ivan Jobin and Raymond Vezeau use sophisticated electronic equipment to test the effects of toxic metal build-ups on small organisms such as algae. Vezeau says that their process is “state of the art” because it allows them to measure precisely the toxic chemicals taken in by living organisms. Their research is at an early stage, but will help in the future design of regulations for industrial pollutants.





▶ **Dorval, Quebec**

Weather Technician Martin Elie checks the functioning of the Dorval Airport Weather Office's laser ceilometer. Used to measure the height of clouds, this instrument is particularly valuable for monitoring take-off and landing conditions for aircraft using the airport. Elie makes hourly observations of all weather conditions as part of a continuous weather watch.

▶ **Lac Laflamme, Quebec**

Rain or shine, every Tuesday Denis Labonté heads to Lac Laflamme in Quebec's Laurentides Provincial Park to collect water samples for a research program on acid rain. He also takes bi-monthly samples from forty-one other lakes throughout southwestern Quebec. Labonté says he likes the travelling, whether by snowmobile, helicopter or boat. "I also enjoy opportunities to discuss acid rain issues with other scientists," he adds.







#### **Québec City, Quebec**

Sylvie Marcil puts into place one of the last pieces of a several-hundred-year-old Dame Jeanne wine container found during excavations beneath Québec City's Dufferin Terrace. Says Marcil: "I enjoy the challenge of working on a three-dimensional jigsaw puzzle of which you're not sure you have all the pieces" — 400 in this case. She regularly visits Parks Canada sites and museums around Quebec to help restore and maintain historically significant objects.



#### **Hull, Quebec**

Using a computer-aided design (CAD) system, Luc Julien prepares a construction drawing for offices in Hull, Quebec. As an Accommodation Planner, Julien is responsible for designing floor layouts and construction drawings for Environment Canada installations in the National Capital Region.





**Toronto, Ontario**

Early Childhood Educator Barbara Toplitsky helps children eat their lunch at the Sunburst Children's Centre in Downsview, Ontario. The daycare centre was set up for the children of employees of the Atmospheric Environment Service and is located in their building.



*Toronto*

**Ottawa, Ontario**

At Ottawa's River Road Environmental Technology Centre, Technologist Diane Radnoff observes as Project Engineer Lisa Gardner adjusts the pressure valves on a unit which treats contaminated waste water. This unit, developed by Centre staff, will likely have many commercial applications. Trials are currently being conducted with industry, other government departments and the U.S. Environmental Protection Agency. Gardner enjoys "being part of a group that helps clean up the environment."



*Ottawa*

**Ingersoll, Ontario**

Monitoring the populations of migratory birds such as Canada Geese is one of Norman North's most enjoyable activities. This morning, North checks on Canada Goose nesting success at a marsh near Ingersoll, Ontario. Keeping track of the number of successful waterfowl nests provides information on future population levels.

*Ingersoll*







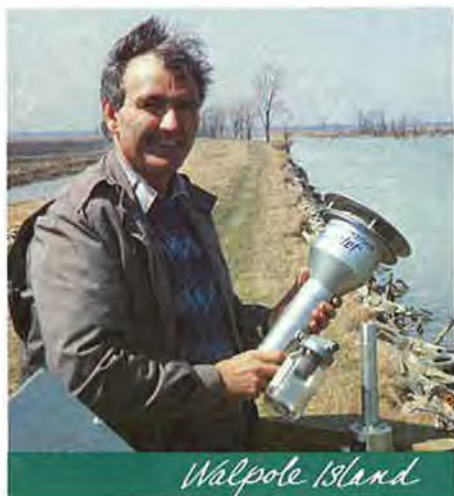
*Ottawa*

▲ **Ottawa, Ontario**

Planning the decorative colours and patterns on the walls of the reconstructed Rideau Convent Chapel at the new National Gallery of Canada are Project Co-ordinator Geoff Hoare (left) and Architect Ken Elder (right), together with outside contractor Stan Dusko (centre). They are providing building restoration expertise to the National Gallery during construction of its new facilities in Ottawa.

▲ **Walpole Island, Ontario**

Environmental Officer Carl Morden inspects air quality measuring equipment at the Walpole Island Air Monitoring Station near Wallaceburg, Ontario. Operated and maintained by the Walpole Island Indian Band's Environmental Research Centre, it is one of two stations in southwestern Ontario measuring air pollution. This station, and another in Windsor, are well suited to monitoring pollution from Sarnia's "Chemical Valley" and nearby Detroit, Michigan, including emissions from Detroit's proposed waste incineration facility.



*Walpole Island*

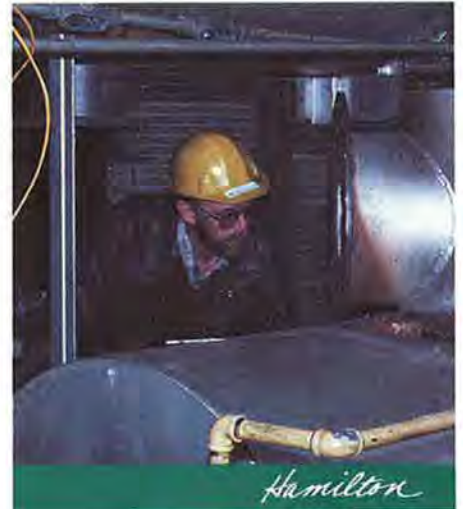


▶ **Pukaskwa National Park, Ontario**  
Managing the relationship between wolves and ungulates such as moose and deer is one of Park Warden Duncan Michano's responsibilities at Pukaskwa National Park on the north shore of Lake Superior. Here he removes a jawbone from a moose killed by a wolf pack in the White River area. Discovered on a regular patrol, the sample will be used to determine the age and health of the animal and will contribute to an understanding of both species in the Park.



*Pukaskwa Nat. Park*

▶ **Hamilton, Ontario**  
At the Hamilton-Wentworth Sewage Treatment Plant, Herb Campbell inspects a new installation to improve the performance of a pilot plant which converts the sludge left over from sewage treatment into a usable and salable low-grade coal or fuel oil. This "oil from sludge" technology, developed and patented by Environment Canada, has the potential to reduce significantly the costs of sewage treatment and turn otherwise wasted sludge into a useful product.



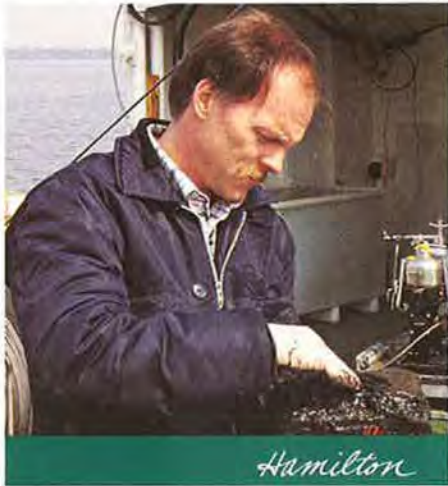
*Hamilton*

▶ **Toronto, Ontario**  
At the Canadian Climate Centre in Downsview, Ontario, Frank Manning and Marvena Voss receive many requests each year for information on climate. Managers of an extensive archive of Canadian climatological data, they are shown here responding to just such a request. The question: "Which area of Eastern Canada receives the greatest mean annual snowfall?"



*Toronto*





### *Hamilton, Ontario*

Aboard the research vessel *Limnos* in Hamilton Harbour in southern Ontario, Tom Murphy collects and examines a sediment sample before determining the amount of contaminants it contains. Murphy, whose specialty is restoring polluted lakes, is investigating the effect of toxic sediments on aquatic organisms as part of a Remedial Action Plan (RAP) to improve the Harbour's water quality.

*Hamilton*



*St. Lawrence Islands National Park*



### *St. Lawrence Islands National Park, Ontario*

The ducks do stop here! The Thousand Islands area of the St. Lawrence Seaway is a major stopover site for waterfowl migrating to northern nesting grounds each spring. The spectacle of thousands of bobbing birds of thirty different species attracts many visitors to the "Waterfowl Watch" each April at St. Lawrence Islands National Park near Mallorytown, Ontario. Sheila Birtch, Kathleen Burtch and Rem Burns are among the Park Interpretation staff that monitor the arrival of the birds.



▶ **Ottawa, Ontario**

At a Canadian Parks Service analytical laboratory in Ottawa, Conservation Technician Joy Moyle uses an instrument called a riffler to prepare a soil sample before it is analyzed for its iron content. This is just one of 500 samples being analyzed in an attempt to determine where the forge was located in an historic blacksmith shop. Locating the forge will aid in reconstructing the shop for public viewing.



▶ **Peterborough, Ontario**

With his sense of humour, Welsh accent and fluent Gaelic, Dick Edwards is “quick to befriend and eager to make machinists of us all” say his colleagues at the Trent-Severn Waterway in Peterborough, Ontario. He is equally well-known for his ingenuity in designing and recreating antique parts necessary to maintain the more-than-seventy-year-old heritage canal. Here Edwards repairs a ram cylinder for the swing bridge at Severn Lock #45.

▼ **Winnipeg, Manitoba**

Dave Bergman, Terry Youmans and Via Rail’s Fred Quant discuss the railway’s plans to upgrade its locomotive fuelling sites in Winnipeg and to clean up a diesel fuel spill. Environmental Protection staff provide advice and direction to federal facilities on environmental protection regulations such as product handling and storage practices.







*South Shetland Islands*



***South Shetland Islands, Antarctica***

Goodwill ambassador Dennis Stossel from Winnipeg discusses the 1988 Canadian Weather Trivia Calendar with the commander of the new Spanish weather research base on the South Shetland Islands in the Antarctic. Using his many years of Arctic experience, Stossel exchanged information on polar operations with Spanish scientists. He has produced a video presentation on Antarctic operations for government and university groups engaged in polar research.



***Forks National Historic Park, Manitoba***

At the Forks National Historic Park in Manitoba, Peter Priess examines soil exposed during construction. Explains Priess: "Continued archaeological involvement is necessary during construction in a national park because of the possibility of encountering cultural remains." Discovery of remains would require further archaeological investigation before continuing with construction.



*Forks National Historic Park*





### *Saskatoon, Saskatchewan*

At Saskatoon's National Hydrology Research Institute, Bruce Holliday works with sediment samples from a river bottom to determine the kinds of phosphates present. Because phosphate acts as a nutrient, the high levels deposited by agricultural and industrial activity lead to excessive aquatic plant growth, clogging many rivers and streams. The results of the study will be sent to other agencies for action.

### *Last Mountain Lake, Saskatchewan*

Established in June 1887, Last Mountain Lake Migratory Bird Sanctuary in Saskatchewan is the oldest wildlife sanctuary in North America. Wildlife Biologist Philip Taylor reports that H.R.H. Prince Philip unveiled a plaque here in 1987 to commemorate 100 years of wildlife conservation in Canada. The photo shows Clint Jorgensen and Stan Woynarski installing the Centennial Cairn and Plaque in the Sanctuary, marking the completion of the Grasslands Nature Trail.



### *Jasper, Alberta*

"As I sat here trying to finish a typical late-evening assignment, I swear that goat — in storage over the quiet winter months — started eyeing the screen. How many people in cities get to work in an environment like this? A goat for company!!" In the interpretive offices of Jasper National Park in Alberta, Writer/Editor Bill Overend labours over a computer terminal to ensure that publication deadlines are met on the park's visitor guide.







**Banff, Alberta**

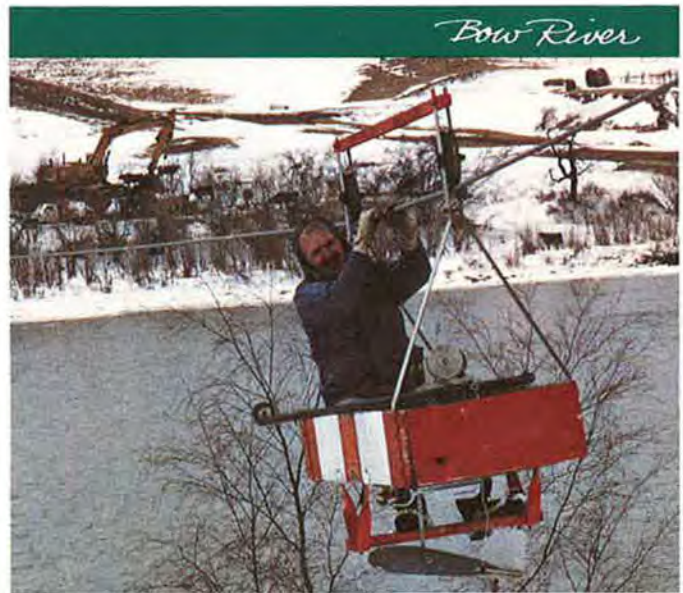
Heather Dempsey took this photo of a Banff National Park utilities staff member digging out a tunnel below a local hotel to install new water mains.

**Bow River, Alberta**

Taking part in a survey which provides an inventory of Canada's surface water, Rod Howey pulls himself back to shore after completing measurements to determine the volume of water flow in the Bow River near Bassano, Alberta. This type of cableway is constructed when the river is too deep or swift to wade into and there is no convenient bridge from which to take measurements. Depending on the size of the stream, a single cableway measurement can take up to one hour to complete.



*Banff*



*Bow River*





*Wood Buffalo National Park*

▲ ***Wood Buffalo National Park,  
Alberta and the Northwest Territories***

Park Warden Don Huisman creeps up on bison in Wood Buffalo National Park which straddles the Alberta/Northwest Territories border. Through aerial surveys and snowmobile patrols, Huisman monitors the numbers and health of the Park's bison, which make up the world's largest free-roaming herd.

▲ ***Baker Lake, Northwest Territories***

At Baker Lake in the Northwest Territories, Aerology Technician Tom Kudloo inflates a hydrogen balloon to which is attached a radiosonde instrument. As the balloon rises, the radiosonde continuously transmits information on air pressure, temperature, relative humidity and wind speed directly to ground equipment.

▲ ***North Vancouver, British Columbia***

Stewart Yee counts dead fish in the Aquatic Toxicity Laboratory in North Vancouver. Ten chinook salmon under-yearlings are placed in each aquarium, each of which contains a different concentration of pesticide. Throughout a typical 96-hour test, Yee counts the number of dead fish in each tank daily. These tests contribute to our understanding of the effects of pesticides on the environment and how to alleviate these effects.



*Baker Lake*



*North Vancouver*





*Fraser River estuary*



**▲ Fraser River estuary, British Columbia**  
Habitat Biologist Sean Boyd is in the second year of a four-year study of the Snow Geese population in British Columbia. Here, Boyd photographs a flock at the Reifel Bird sanctuary at the mouth of the Fraser River. “This activity is important, exciting and tense since the population is increasing fast and the geese are everywhere, including the marshes off the main runway of the Vancouver International Airport.” The purpose of the study is to determine the impact the geese are having on the marshes as well as the grazing pressure exerted by the geese.

▶ ***Vancouver, British Columbia***

This day in the life of Environment Canada was also a special day in the life of forecaster Owen Lange — it was his birthday! Winds above hurricane force causing two marine accidents made it “another challenging day” at the Pacific Weather Centre in Vancouver, B.C. Lange passes hourly information to the Rescue Coordinating Centre while manning the Search and Rescue hotline.



▶ ***Tulameen River, British Columbia***

On his “regular hydrometric tour,” John Gilbert opens up a shelter along the Tulameen River in southern British Columbia to check a machine recording daily water levels in the river. These data, together with other streamflow measurements, are used for flood forecasting, irrigation planning, and transboundary water agreements with the United States.



▼ ***Beaver Creek, Yukon Territory***

Inspector Bob Allan check a load of PCB-contaminated electrical transformers from Alaska for signs of leaks and other safety hazards. Says Allan: “This shipment will travel 3 000 km on Canadian highways before re-entering the United States. My responsibility is to ensure that it complies with Canadian environmental and safety regulations.” Before leaving the Beaver Creek Customs Station in the Yukon, the driver will be briefed by Allan regarding Canadian spill reporting and other requirements on transporting hazardous wastes.





**I**n *A Day in the Life of ENVIRONMENT CANADA*, you have met just a few of the more than 10,000 Canadians who work to protect the life-support systems on which Canadians depend — clean air, fresh water and healthy soil.

Approximately 95% of Environment Canada's employees work in one of the Department's three larger services — the Atmospheric Environment Service, the Canadian Parks Service, and Conservation and Protection, while the remaining 5% work in Finance and Administration and the Corporate Planning Group.

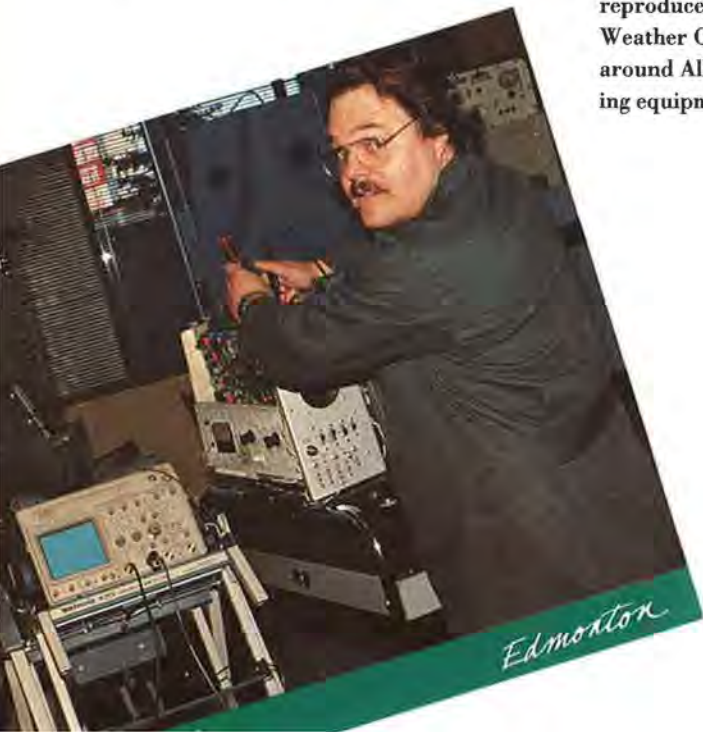
Through the type of activities described in this booklet, employees strive to fulfill the mandate of Environment Canada and their service.

## Atmospheric Environment Service

*To ensure that Canada has adequate information on the atmosphere, ice and sea state for the safety of life, the security of property, the greater efficiency of economic activities and for the maintenance and enhancement of environmental quality.*

### ▼ *Edmonton, Alberta*

Maintaining sophisticated electronic equipment plays an important part in acquiring accurate weather data. Using test equipment, Ken Roth repairs a U.P.I. Unifax machine which reproduces satellite images of weather patterns for the Edmonton Weather Office. A former Weather Technician, Roth travels around Alberta and the territories maintaining weather monitoring equipment at various weather offices.



## Canadian Parks Service

*To protect, for all time, those places which are significant examples of Canada's natural and cultural heritage, and to encourage public understanding, appreciation and enjoyment of this heritage in ways which leave it unimpaired for future generations.*



*Banff National Park*



*Banff National Park, Alberta*  
Park carpenter Hans Hansen at work.



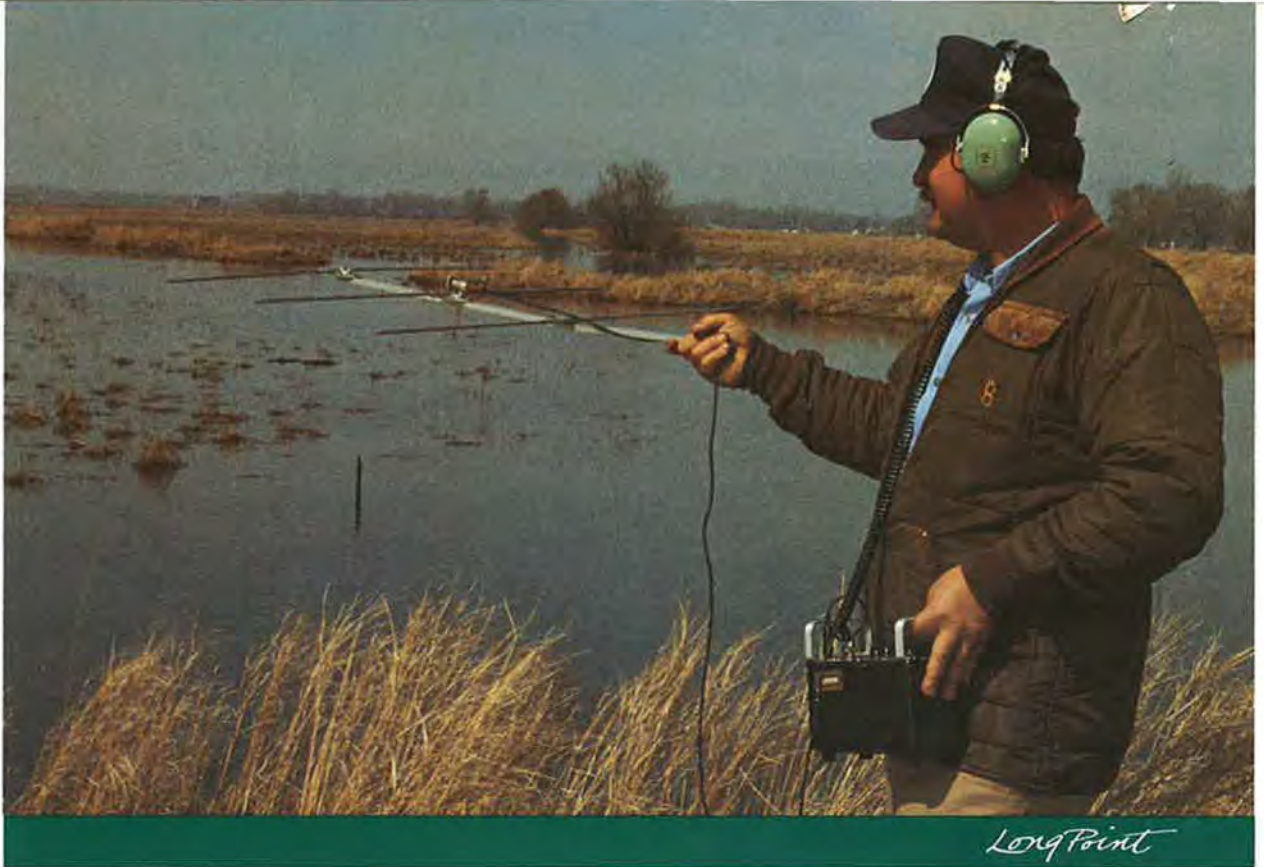
*Smiths Falls, Ontario*

Canalman Peter McPherson paints one of the Rideau Canal lock gates in Smiths Falls in preparation for the summer operating season. Maintenance of the locks is critical to the continuous operation of this 156-year-old heritage canal in eastern Ontario.



*Smiths Falls*





*Long Point*

## Conservation and Protection

*To conserve, protect and enhance Canada's renewable resources of water, land and wildlife and their related ecosystems and promote their wise use in a sustainable manner; and*

*To influence human activities in a way that will achieve and maintain a state of the environment necessary for human health and well-being; the health and diversity of species and ecosystems; and the sustained use of natural resources.*



*Long Point*

▶ *Long Point, Ontario*  
Jeff Robinson helps veterinarian Bill Rapley of the University of Western Ontario examine a young bald eagle, one of twenty-eight which have been transferred from nests at Lake of the Woods to compartments in nesting platforms in the Long Point National Wildlife Area on Lake Erie. The joint program will help the endangered species increase its population.

### *Long Point, Ontario*

Kim Brown uses radio telemetry at Long Point on Lake Erie to locate Canvasback Ducks carrying radio transmitters. As part of Canada/U.S. efforts to protect waterfowl populations, he helps track the birds as they migrate from the Eastern seaboard of the U.S. to their nesting grounds on the Canadian prairies.



### *Baffin Island, Northwest Territories*

It's quite a challenge building a bridge in a remote location north of the Arctic Circle. General Works Foreman Hez Oshootapik explains: "In April it may be mild in much of Canada, but here at Windy Lake in Auyuittuq National Park, it's twenty below zero with winds up to 100 kilometres per hour." He and Morris Kooweeluisie are drilling holes for rock anchors to secure steel cabling from which the bridge will be suspended. The bridge will be completed in time for this year's hikers to cross over the Weasel River.

Achieving the mandate of Environment Canada is a daunting challenge. But it is a challenge which its employees embrace with enthusiasm, expertise and commitment.

April 5, 1988 is history. Many more days full of painstaking work and cheerful relations with the public have since gone by. But each day in the life of Environment Canada is building a safe and enjoyable future for Canadians.

**M**eeting the challenge of the future —we are doing it one day at a time.



