ESTIMATES

Environment Canada

Performance Report

For the period ending
March 31, 1998

Canada

Improved Reporting to Parliament
Pilot Document

The Estimates of the Government of Canada are structured in several parts. Beginning with an overview of total government spending in Part I, the documents become increasingly more specific. Part II outlines spending according to departments, agencies and programs and contains the proposed wording of the conditions governing spending which Parliament will be asked to approve.

The *Report on Plans and Priorities* provides additional detail on each department and its programs primarily in terms of more strategically oriented planning and results information with a focus on outcomes.

The *Departmental Performance Report* provides a focus on results-based accountability by reporting on accomplishments achieved against the performance expectations and results commitments as set out in the spring *Report on Plans and Priorities.*

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Foreword

On April 24, 1997, the House of Commons passed a motion dividing on a pilot basis what was known as the annual *Part III of the Estimates* document for each department or agency into two documents, a *Report on Plans and Priorities* and a *Departmental Performance Report.*

This initiative is intended to fulfil the government's commitments to improve the expenditure management information provided to Parliament. This involves sharpening the focus on results, increasing the transparency of information and modernizing its preparation.

This year, the Fall Performance Package is comprised of 80 Departmental Performance Reports and the government's "*Managing For Results*" report.

This ***Departmental Performance Report,*** covering the period ending March 31, 1998, provides a focus on results-based accountability by reporting on accomplishments achieved against the performance expectations and results commitments as set out in the department's *Part III of the Main Estimates* or pilot *Report on Plans and Priorities* for 1997-98. The key result commitments for all departments and agencies are also included in *Managing for Results.*

Results-based management emphasizes specifying expected program results, developing meaningful indicators to demonstrate performance, perfecting the capacity to generate information and reporting on achievements in a balanced manner. Accounting and managing for results involve sustained work across government

The government continues to refine and develop both managing for and reporting of results. The refinement comes from acquired experience as users make their information needs more precisely known. The performance reports and their use will continue to be monitored to make sure that they respond to Parliament's ongoing and evolving needs.

This report is accessible electronically from the Treasury Board Secretariat Internet site: http://www.tbs-sct.gc.ca/tb/key.html

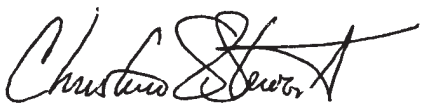
Comments or questions can be directed to the TBS Internet site or to:

Planning, Performance and Reporting Sector
Treasury Board Secretariat
L'Esplanade Laurier
Ottawa, Ontario, Canada
K1A OR5
Tel: (613) 957-7042
Fax (613) 957-7044

Environment
Canada

Performance Report

For the period ending March 31, 1998



Christine S. Stewart
Minister of Environment

Executive Summary

Much of Environment Canada's daily ongoing activity which is of great value to Canadians is not described in this report. The report instead focuses on program areas where the department has reached significant milestones during the past year, and it describes areas in which the department committed to reach a target but, for various reasons, did not do so. This report also serves as Environment Canada's annual report on its science and technology efforts and on the implementation of its Sustainable Development Strategy.

With its complex agenda and limited resources, EC had to ... target its efforts strategically.

In its *Report on Plans and Priorities* for 1997-98, Environment Canada (EC) set out strategic directions to guide its business line priorities. With its complex agenda and limited resources, EC had to make choices and target its efforts strategically. Overall, the department succeeded in delivering on its highest priorities in 1997-98, but had to delay others of lower priority or where strategic considerations impacted EC's timetable.

In its *Healthy Environment* business line, EC's priorities were Climate Change and reintroduction of the *Canadian Environmental Protection Act (CEPA)*. Canada signed the Kyoto Protocol and undertook to develop with Natural Resources Canada (NRCan) a national strategy to meet Canada's Kyoto commitments. *CEPA* was reintroduced in Parliament. EC completed phases of several of its ecosystems initiatives; they yielded real environmental results as well as enhanced community capacity for environmental management. EC delayed introduction of new endangered species legislation; instead it continued to work on its endangered species legislation by consulting with stakeholders. This is requisite homework before tabling.

The department succeeded in delivering on its highest priorities in 1997-98...

In its *Safety from Environmental Hazards* business line, EC's priorities were to meet the extraordinary demands on its services during the severe weather events of the winter of 1997-98. It did so and, in the process, impressed 8 in 10 Canadians surveyed with the quality of its services. EC continued the development of its forecast services and predictive capabilities and responded to 200 serious pollution spills.

In its *Greener Society* business line, EC's priority was the completion of an Accord with the provinces for the harmonization of environmental activities in Canada. EC succeeded in concluding an Accord that has placed relations with the provinces on a new, constructive and promising course. EC also tabled its Sustainable Development Strategy in the House eight months before the deadline and continued to progress in greening its own operations.

In its *Management and Administration* business line, EC completed its Program Review reductions and is now working within its fixed reference level and learning how to create some flexibility within its budget and reallocate to meet emerging issues.

To deliver on its 1997-98 priorities, EC focused on: its core roles; issues of greatest risk; and the achievement of results. To ensure EC targets its effort and resources strategically the Minister has set as EC's priorities for 1998-99 and beyond — clean air; clean water; nature and climate change. EC will report on its performance in delivering on these priorities in its Report for the period ending March, 1999.

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Section I

1.1 Minister's Message

I am pleased to present Environment Canada's Performance Report for the period ending March 31, 1998.

This past fiscal year was a busy one for Environment Canada. We concentrated on putting in place the right framework and tools for long-term and sustained action to improve the quality of our environment. With the framework and tools in place, I am in a stronger position to deliver to Canadians the concrete results in the four areas I have committed to — clean air, clean water, nature and climate change. As a government, we made important international and domestic environmental commitments. As well, we made major strides in defining how we will work in cooperation with other governments to achieve concrete environmental improvements into the next millennium.

A firm commitment to reduce greenhouse gas emissions...

I appreciate the opportunity to contribute to the movement of openness in government through this report. On behalf of Environment Canada, I am proud to present the achievements of the past year which include:

- A firm commitment to reduce greenhouse gas emissions in Canada, under the Kyoto Protocol.
- A new framework for working effectively with provinces and territories to improve the quality of the environment, under the Canada-wide Accord on Environmental Harmonization.
- Introduction in the House of Commons of a renewed and strengthened *Canadian Environmental Protection Act,* making pollution prevention the cornerstone of environmental action.
- Continued provision of timely and accurate weather warnings, forecasts, especially during severe weather occurrences, such as the January 1998 ice storm.
- Ongoing discussions with other governments, stakeholders and Canadians to define the parameters for a first-ever federal endangered species law.
- Tabling in the House of Commons of the Environment Canada Sustainable Development Strategy, one of the first strategies of this nature required by all federal departments and agencies.

A new framework for working effectively with provinces and territories...

Much has been accomplished and much more remains to be done, by governments and at the community level, in our journey to a more environmentally sustainable Canada. Our experience continues to reinforce the importance of sound science as the basis for decisive action. We must also use the science to apply the precautionary principle so that the health of the environment and of Canadians is not put at undue risk.

Another vital aspect of last year's achievements centres on the need to focus our efforts around specific actions and goals. My priorities for the environment into the new millennium are clear — clean air, clean water, climate change, and nature. There are tremendous challenges involved, but with federal leadership and a concerted effort on the part of all Canadians, action in each of these areas is an invaluable investment in our collective future. We are all responsible for the choices we make and the impacts they have on the environment. Thinking globally and acting locally must become a reality.

The coming year will continue to pose challenges for Environment Canada. We will move forward by building on last year's accomplishments and bringing them closer to their ultimate end point: visible environmental improvements for the well-being of Canadians. We will continue to provide Canadians with information about environmental issues and the kinds of individual actions they can take to contribute to our common goal of improving the quality of our environment. In this respect, I remain committed to actively encouraging community efforts towards developing sustainable local eco-systems, as well as to voluntary efforts to reduce harmful emissions to the environment, backed by targets for measurable results, clear accountability and a strong and effectively enforced legislative base.

My priorities are clear — clean air, clean water, climate change and nature.

Our past experience has demonstrated one undeniable truth — when we focus our efforts and work at the community level with all sectors of Canadian society, we can make visible and measurable improvements to the environment. I will continue to work with Canadians in their communities so that we can together pass on an environmental heritage, sustainable for generations to come — a rich legacy for our children and grandchildren.

Christine S. Stewart

1.2 Chart of Key Results Commitments

Environment Canada

Provides Canadians with:	To be demonstrated by:	Achievement reported in:
A Healthy Environment		DPR Section 3.2
reduction of negative impacts on the atmosphere, and help Canadians better understand and adapt to these consequences.	⇨ concentrations of greenhouse gases limited through global actions to levels that avoid serious disruption to climatic systems.	P. 17, 18
	⇨ negative impacts of inhalable particulates on human health and visibility minimized.	P. 18
	⇨ recovery of the ozone layer to a level that minimizes the harmful effects on human health and natural ecosystems.	P. 19
elimination of the threat posed by toxics.	⇨ sources and quantities of toxic substances, effluents, emissions and wastes requiring management identified (in a timely manner based on sound scientific research and assessment).	P. 20
	⇨ management actions toward virtual elimination of existing persistent, bioaccumulative toxics (PBTs) resulting from human activity implemented.	P. 20-22
	⇨ management actions to prevent, reduce or eliminate risks posed by toxics and other substances of concern that do not meet all the Toxic Substances Management Policy Track 1 criteria implemented.	P. 20
fairly and effectively enforced environmental laws and regulations.	⇨ a high level of compliance with laws and regulations.	P. 26, 27
conservation and enhancement of Canadian and global biodiversity.	⇨ positive recovery trends for threatened or endangered species achieved through federal endangered species initiatives.	P. 23
	⇨ significant wildlife habitat and ecosystems protected/enhanced.	P. 23, 24
conservation and restoration of ecosystems.	⇨ health and sustainability of targeted ecosystems across Canada improved through ecosystems initiatives of national priority.	P. 25, 26
	⇨ vulnerable ecosystems of priority identified and conserved through the development of ecosystem, regional, sectoral and other strategies/initiatives.	P. 25
Safety from Environmental Hazards		DPR Section 3.2
weather and environmental predictions as well as timely and accurate warnings of severe weather events.	⇨ timely and accurate weather and environmental information for Canadians.	P. 31
	⇨ effective decisions by Canadians related to the social and economic impacts of changing weather, climate and hydrology.	P. 30, 31
	⇨ scientific capacity to understand the past, present and future states of the atmospheric environment.	P. 32

1.2 Chart of Key Results Commitments (cont'd)

Safety from Environmental Hazards (cont'd)		
prevention or reduction in the frequency, severity and environmental consequences of emergencies that affect Canada.	⇨ accidental releases prevented. ⇨ preparations made to handle accidental releases. ⇨ advice and specialized support provided to lead responders.	P. 33 P. 33 P. 33
A Greener Society		DPR Section 3.2
promotion of responsible environmental citizenship by helping Canadians effectively use timely environmental information and advice.	⇨ products and services from Environment Canada that meet the needs of Canadians. ⇨ products and services developed that help Canadians make environmentally-responsible decisions. ⇨ broad public support for services provided by Environment Canada.	P. 35, 36 P. 35 P. 15, 19, 31
tools to prevent pollution and develop green technologies and capacity that create social, economic, and environmental benefits.	⇨ environmental technologies and techniques developed and promoted domestically/internationally to address environmental problems and contribute to jobs and economic growth. ⇨ pollution prevention that protects the environment while contributing to jobs and economic growth. ⇨ management skills, capacity and activity to be built in communities to address environmental priorities.	P. 35-37 P. 37, 38 P. 40
mobilize effective partnerships nationally and provide a strong international voice to build a sustainable development agenda.	⇨ environmental, economic and social agendas integrated in government policies and operations in the context of sustainable development. ⇨ partnerships with all sectors of society established to mobilize action on sustainable development. ⇨ Canada's domestic interest related to sustainable development reflected in international fora and mechanisms.	P. 39, 41 P. 39 P. 40

Section II: Departmental Overview

2.1 Mandate, Vision, And Mission

Environment Canada's Mission is to help Canadians live and prosper in an environment that needs to be protected, respected and conserved.

Our Vision — a Canada where people make responsible decisions about the environment; and where the environment is thereby sustained for the benefit of present and future generations.

EC has a large mandate. Under the *Department of the Environment Act*, the department is expected to preserve and enhance the quality of the natural environment (including migratory birds and other non-domestic flora and fauna), conserve and protect our water resources, carry out meteorology, enforce the rules of the Canada-U.S. International Joint Commission, and coordinate federal environmental policies and programs. Sustainable development is the context within which EC carries out its mandate. As a national goal of the Government of Canada, it helps shape environmental management in this country. EC is uniquely positioned to provide leadership in building a national agenda and in mobilizing Canadians to make sustainable development a reality.

In order to support its Mission, EC's **long standing and complementary roles** are to: provide national and international leadership in sustaining the environment; act on behalf of all Canadians to address environmental issues of national concern and administer federal environmental laws and regulations; advocate, promote and encourage practices that lead to environmental sustainability and cooperate with others having similar objectives; and build capacity and deliver services to Canadians to enable them in their daily lives to sustain and adapt to the environment.

Provide national and international leadership in sustaining the environment

2.2 Objectives And Business Lines

EC fulfills its mission through four results-focused business lines through which the department plans and reports on its performance. They are: A Healthy Environment; Safety from Environmental Hazards; A Greener Society and Management and Administration. These business lines, described below, are also a succinct description of the department's main objectives and the benefits which it is focused on providing to Canadians.

EC's Business Lines — its Highest Objectives

- *A Healthy Environment*
- *Safety from Environmental Hazards*
- *A Greener Society*
- *Management & Administration*

A Healthy Environment: With its partners and all Canadians, EC's long-term goals are to: reduce the negative impacts of human activity on the atmosphere and help Canadians understand and adapt to their consequences; eliminate the threat posed by toxics and other substances of concern to human health and the environment; conserve and enhance global biodiversity; conserve and restore ecosystems; and fairly and effectively enforce and promote compliance with environmental laws and regulations.

Safety from Environmental Hazards: EC helps Canadians adapt to their environment in ways which safeguard their health, safety and property,

optimize economic activity, and enhance environmental quality; and also works to prevent or reduce the frequency, severity and environmental consequences of pollution emergencies. EC's goals are to help Canadians anticipate or prevent environmental disasters and adapt to their environment.

A Greener Society: EC provides Canadians with the tools, technologies and know-how to understand their environmental responsibilities and to act on their environmental values. Long-term goals include ensuring Canadians have access to timely and accurate environmental information and advice; providing Canadians with tools and technologies to prevent pollution and create social, economic and environmental benefits; mobilizing effective partnerships in communities and internationally; and providing a strong international voice to build a sustainable development agenda.

Management and Administration: This involves providing corporate leadership; decision-making support; integrated systems; and common services to the Minister and the department.

2.3 Science

Science — the foundation of EC's business and its core role

EC's scientific knowledge and expertise underpin its three main business lines and are fundamental to carrying out its vision and mission. Its scientific activities include research, monitoring and assessment, technology and indicators development and deployment, and reporting. EC uses its knowledge and expertise to:

- understand naturally occurring aquatic, biotic, terrestrial and atmospheric processes and their interactions;
- evaluate and assess the effects of known and emerging stressors on the environment;
- design and evaluate policies for control, management and adaptation;
- communicate scientific knowledge and provide Canadians with tools to develop and evaluate actions to address environmental issues; and
- identify, monitor and support progress toward sustainable development domestically and internationally.

2.4 Organization

A matrix approach to management strengthens EC's ecosystem approach and integrated delivery of services and results

EC's business lines cut across its internal structure which includes:

- Offices of the Minister and Deputy Minister;
- Atmospheric Environment Service;
- Environmental Conservation Service;
- Environmental Protection Service;
- Policy and Communications;
- Human Resources Directorate; and
- Corporate Services.

- Five integrated regions are Atlantic, Quebec, Ontario, Prairie and Northern, and Pacific and Yukon.

This matrix approach to management and accountability ensures that EC's programs and services are defined in a national context, and delivered in a client-centered manner that respects regional differences. It makes results the focus of departmental planning and reporting, and provides a shared strategic context for department-wide expenditure management.

2.5 Operating Environment

For its large mandate, EC is actually one of the smaller federal departments; its budget for environmental protection is comparable to provincial budgets. Yet Canadians look to the federal government and EC in particular to secure the country's environmental health, their own health and safety and their natural legacy. In response, EC's broad range of activities vary from advocating sustainable development to forecasting the weather, from regulating toxics to restoring wildlife, from surveying the Arctic ice pack to modeling the global climate into the next century. In carrying out its mandate effectively, EC must face a number of challenges and constraints.

Evolving Environmental Concerns: Opinion polls make clear that the environment is a bedrock concern for Canadians. Many fear for the future of Canada's natural legacy and believe their health has already been affected by deteriorating environmental conditions.

Environmental issues are increasingly global and interconnected

In fact, in many ways Canada's environment is in better shape today than it has been for many decades. Nevertheless, pressures on the environment and the consequent affects on human health continue to mount. Air quality in urban centres is threatened by emissions from vehicles and energy consumption. Toxic pollution, much of which originates outside our borders, is accumulating in the North and in lakes, rivers and wildlife in other parts of Canada. Greenhouse gas emissions continue to rise and a growing number of species face an uncertain future while weather-related disasters occur with increasing frequency. We are learning more about environmental issues, and our understanding of their complex interaction is growing. And as we learn more about the effects of very low levels of certain substances, we are beginning to suspect that the thresholds at which effects occur from prolonged exposure may be far lower than previously thought.

An Increasingly Complex Environmental Policy Agenda: As science reveals more about complex stresses and their interactions, the expectation that governments will act also rises. Economic growth, both at home and abroad, compounds environmental challenges. More and more environmental issues are global in scale. As a consequence, international fora play an increasingly influential role in shaping the domestic environment agenda. Against this backdrop, public expectations around the

world are mounting that governments must act to safeguard human and environmental health.

In the past, solutions to environmental ills tended to be one-off or localized, but we are now reaching the limits of what incremental or issue-specific approaches can achieve. We must now take a global view of pollution prevention and adaptation to our changing environment, and learn to respect the thresholds of ecosystem sustainability and sustained resource use.

There is one central truth about the environment — the problems are too wide ranging and complex for any one player to make a difference alone

Shared Responsibility for the Environment: Achieving real improvements requires the collaboration of many parties, domestic and international. For EC, this means working with many partners, domestically and internationally on science, integrated approaches and coordinated action. Many partnerships must be maintained over years and even decades in order to achieve results. In virtually every area of its work, EC shares responsibility and must work closely with the provinces. At the federal level, EC frequently works with Health Canada, Fisheries and Oceans, Natural Resources Canada, Industry Canada, Foreign Affairs and International Trade, Agriculture Canada and Indian Affairs and Northern Development on issues such as climate change, pollution prevention, technology development and diffusion, international accords and agreements, and so on.

EC must be increasingly strategic in setting its priorities and targeting its actions

Fiscal Constraints And Growing Workload: Fiscal constraint at all levels of government is making public service organizations rethink their roles and the ways they do business. Canadians are demanding greater accountability for the expenditure of public funds and for the results and quality of services delivered. In all aspects of its work, EC has experienced substantial growth in its workload. At the same time, however, as a science-based department with extensive national monitoring systems and research and development facilities, EC's budget is comprised largely of fixed costs (salaries and infrastructure), with only limited capacity to redirect resources quickly. EC's ongoing challenge is to ensure its efforts and resources are allocated across a range of existing and emerging issues and responsibilities in a reasonable and precautionary manner.

To survive and thrive in this operating environment, EC must set priorities, focus its activities and direct its resources strategically. It must be selective about when and where to intervene in the life cycle of an issue and continue to find cost-effective ways to protect human health and the environment. EC needs to measure and report on results, deliver quality service in innovative ways, and sustain a dedicated workforce and science- and technology-base equal to the challenges of the next century.

The table below provides examples of key partners involved in the delivery of EC's commitments.

Business Line	Commitments from 1997 RPP	Key Partners
Healthy Environment		
Atmospheric Change	Climate Change	NRCan, DFAIT, IC, DIAND, Provinces, Territories, Industry, Env'l Groups, Universities, NGOs
	Smog (Inhalable Particulates)	HC, IC, NRCan, TC, Provincial Governments, Industry, Health & Env'l Orgs, Communities, Associations
	Ozone Layer	OGDs, International Community
Toxics	Identify, manage toxic substances and eliminate related risks	HC, OGDs, Provincial Governments, Industry, Private Sector, Communities, International Community
Compliance &Enforcement	Compliance with laws & regulations	DFO, RC, RCMP, Provinces, United States and Canada Customs, the U.S. EPA, CEC, Interpol and NGOs.
Biodiversity/Wildlife	Endangered species and wildlife habitat	AAFC, DFO, Provinces, Territories, Aboriginal Groups, Env'l Groups, Industry, Municipalities, Landowner Groups, Ducks Unlimited, Wildlife Habitat Canada, Agencies, Universities
Ecosystems	Ecosystems of national priority	DFO, HC, AAFC, IC, Provincial/ Territorial Governments, Industry, Communities, Aboriginal Peoples
Safety from Environmental Hazards		
Weather & Environmental Predictions	Weather services and environmental predictions	TC, NAVCanada, DFO, DND, Provincial Governments, Organizations, Industry, Municipalities
Emergency Prevention and preparedness	Accidental release prevention and preparedness	DFO (Coast Guard), TC, HC, IC, NRCan, Provincial & Territorial Governments, Private Sector in Canada and U.S., International Agencies
Greener Society		
Information Products & Services	Products & services for environmentally-responsible decisions	SC, DFO, NRCan, AAFC, OGDs, Provinces, Schools
Technologies, Jobs, and Capacity-building	Environmental technologies and tools for pollution prevention	IC, DFAIT, CIDA, PWGSC, HRDC, Provinces, Territories, Private Sector, Organizations, Communities, Aboriginal Peoples, NGOs
Partnerships for Sustainable Development	Sustainable development agenda and mobilization of partnerships	DFAIT, IC, CIDA, PWGSC, HC, OGDs, Provincial/Territorial Governments, Aboriginal Peoples, Industry, Business, NGOs, Env'l Orgs., Int'l Dev. Orgs., Communities, Youth, Universities

2.6 Performance Measurement

Within this context, EC must continue to deliver, measure and report on its results. Four factors shape how the department measures its performance: priority setting, the life cycle of an issue, qualitative and quantitative measurement, and attribution.

Target efforts strategically based on the risk to the environment and the health and economic well-being of Canadians

Strategic priorities: Having a large mandate and limited resources, EC must continuously target its efforts strategically, based on: the risk to the environment and the health and economic well-being of Canadians; whether or not there is a clear federal responsibility or mandate to act; how federal leadership can lever the most benefit; and whether — if everyone works together — we can make a measurable difference in improving the environment. However, the department's performance measurement and reporting cannot be divorced from the reality of expenditure management.

Performance is relative to the life cycle of an issue

Life cycle: Overall, we seek improvement in the environment. But this may not come for many years. Several steps precede environmental improvement: monitoring to identify a problem; science to scope an issue and analysis to determine the best policy response; building public understanding; promoting international cooperation; introducing appropriate policy instruments (regulations, standards, protocols, technology development, etc.); promoting changed behaviour; remediation where applicable (species recovery programs, contaminated sites cleanup, etc.); monitoring to determine whether stresses on the environment are being reduced; and reporting improvements to sustain action. Performance measurement at any particular point in time must take into account the current stage in the life cycle of an issue.

Qualitative and quantitative measures: Given the complex (multi-jurisdictional, long-term or interconnected) nature of many environmental issues, it is not possible or reasonable to use quantitative measures alone to assess the department's performance. Measurement techniques like statistical trends in inspections or emissions, or numbers of species threatened do not do justice to the intricate nature of many issues. Assessing the department's performance also requires qualitative measures, such as examples of best practices adopted, or community initiative, or international scientific agreement which may have taken years to build.

Attribution: EC shares responsibility (and even jurisdiction) for virtually all of its strategic priorities with a long list of partners, including other government departments and other levels of government, industry, communities, organizations, private citizens and even foreign governments. As a consequence, it is not a simple matter to attribute primary responsibility for an environmental result to any particular partner. In many instances, the best qualitative measure of EC's contribution to an environmental result is the momentum and commitment of its partners to joint action on an issue.

2.7 Performance of EC's Science

As a science based department more than 80% of the EC's expenditures are science related. However, measuring the performance of its science-related activities poses particular challenges. EC's science has impacts beyond its own policy making and service quality; it also makes a substantial contribution to Canada's sustainable development. Two independent assessments of the socio-economic impacts of EC's science illustrate this. Both cases substantiate the considerable benefits Canadians have derived from EC's unique contribution to global scientific knowledge.

More than 80% of the Department's expenditures are science related

Pulp and Paper: The first review concerned EC's scientific efforts in support of pulp and paper regulations. The assessment concluded that since 1988-89, investments of about $13 million in ground breaking research positively impacted $546 million of Canada's gross domestic product. EC's research helped protect Canada's access to foreign markets and prevented industry from incurring needless expense of complying with inappropriate regulations derived from existing (mainly Swedish) research.

Investment of $13 million in research had a positive effect of about $546 million on Canada's GDP

Stratospheric Ozone: The second concerned EC's research in support of controls of ozone depleting substances. EC's research on stratospheric ozone not only enabled Canada to influence the Montreal Protocol but also yielded Canada's UV Index. The Index, the first advisory of its kind, enables people to protect themselves from the harmful effects of the sun. Ultimately, this research may help reduce skin cancer rates and environmental impacts. A cost-benefit analysis suggests EC's $108 million investment since 1975-76 had an approximate benefit of $432 million on Canada's GDP.

UV index to reduce skin cancer

Section III: Performance Expectations and Accomplishments

This section reports on those program areas where, in relation to the life cycle of an issue, EC managed during the past year to reach a significant milestone. It also describes program areas in which the department expected to reach a certain target but, for various reasons, did not do so.

3.1 Departmental Performance

Total – Gross	
Planned Spending	$ 507,510,145
Total Authorities	*$ 557,904,051*
1997-98 Actual Spending	**$ 548,114,336**

EC's planned spending represents budgets approved through the March Estimates process. Throughout the year, EC received new spending authorities through Supplementary Estimates which are represented by its total authorities. In 1997-98, EC spent 98% of its total authorities.

In its *Report on Plans and Priorities* for 1997-1998, EC set out four strategic priorities to guide its Business Lines:

- maintain momentum in meeting key commitments;
- enhance EC's contribution to sustainable development;
- better manage EC's interdependencies and partnerships; and
- continue to build a flexible and adaptable department.

1997-98 Strategic Directions

- *momentum on key commitments*
- *enhanced contribution to S.D.*
- *better managed partnerships*
- *flexible, adaptable department*

With its complex agenda and limited resources, EC had to make choices and target its efforts strategically. Overall, EC succeeded in delivering on its highest priorities in 1997-98 but for various reasons it had to defer certain expectations:

- **Key Commitments:** On Climate Change, EC's highest priority in 1997-98, EC exceeded expectations. Another of its priorities, the *Canadian Environmental Protection Act,* was reintroduced to Parliament. EC also met the extraordinary challenges thrown at its weather services by weather extremes of the past year. EC delivered on its commitments under the Canadian Environmental Industries Strategy. However, EC delayed introduction of endangered species legislation in favour of building support for protection of species through cooperative and complementary approaches with the provinces and territories under the *National Accord for the Protection of Species at Risk.*
- **Contribution to Sustainable Development:** EC tabled its Sustainable Development (SD) Strategy eight months before the

deadline. It also exercised leadership by providing assistance to other departments and agencies in developing their own SD strategies. The challenge remains to comprehensively implement its strategy, measure its progress, and advance SD principles and actions broadly outside government.

- **Better Managed Partnerships:** Harmonization was also one of EC's highest priorities in 1997-98. After years of work, EC concluded an accord for the harmonization of environmental activities in Canada that places relations with the provinces and territories on a new, constructive and promising course. EC also engaged key departments like Natural Resources Canada and Industry Canada on climate change, and built considerable momentum on the issue across the federal government. Relations were improved with other departments regarding endangered species, and EC continued to work and share expertise with other departments on contaminated sites. EC continued to strengthen relations with the private sector. However, with some environmental organizations EC requires more work to find a basis for constructive engagement that can move beyond ideals to action.
- **Flexible, Adaptable Department:** The last of its Program Review reductions had been completed in the previous fiscal year, and in 1997-98 EC began operating within its essentially fixed reference level. However, EC faced workload pressures that required constant 're-basing' of its budget to adequately resource priorities and is still learning how to create flexibility within its budget and reallocate funds to meet emerging issues.

With the reduction of 248 FTEs, EC completed its commitments under Program Review

For a more comprehensive listing of EC's performance expectations and accomplishments see Section 3.3.

Focus on Fundamentals

Fiscal year 1997-98 marked a transition of sorts. EC repositioned itself to deliver on a more strategic agenda focusing on its core roles with its current resources. In 1997-98 departmental activity was characterized by a return to certain fundamentals. EC focused on:

- its responsibilities in transboundary and international areas where risks to the well-being of Canadians and the sustainability of their environment are greatest;
- environmental results rather than process in its partnerships; and
- its core contribution to environmental management in Canada and internationally; that is, EC's science and monitoring.

EC's performance on its highest priorities provides the measure of this approach:

Delivered on Priorities

- *Climate Change*
- *CEPA*
- *Harmonization*
- *Ecosystems*
- *Severe Weather*

- On Climate Change, EC's scientific knowledge and expertise (as exemplified by the Canada Country Study) was instrumental in building the momentum, parameters for negotiation and partnerships required for Canada's successful participation in the Kyoto process, and will be essential to follow-up action.

- The reintroduction of a modernized CEPA, key to enhancing our ability to manage toxics in Canada, was made possible by the definition of clear goals and extensive discussion with key stakeholders.
- The Harmonization Accord was made possible by a focus on results, by a shared commitment to highest standards of environmental protection based on EC's science and monitoring, and by a commitment to clear public accountability and regular performance reporting.
- In its Ecosystems Initiatives, EC's science, monitoring and focus on objectives rather than jurisdiction have enabled many federal, provincial and community partners to overcome barriers and achieve real environmental improvements. These initiatives also helped to build innovative governance structures and community capacity for sustainable environmental management.
- During the Ice Storm, EC's monitoring and leading edge forecasting capacity enabled it to warn of the extraordinary scenario unfolding and then support emergency services and the public with extensive, full-time information services across a wide range of media for several weeks.

The effectiveness of EC's strategic approach is equally clear from the many other important milestones achieved: in smog and ozone issues, endangered species, routine weather forecasting, emergencies, information services, technology development and community action.

EC's revenue generating activities increased by 32%

To deliver on its priorities, EC had to reallocate substantial resources internally (in the range of $25 million to $30 million). It managed to resource its work in support of the Kyoto process, develop the new *CEPA*, the Harmonization Accord and the Northern Ecosystems Initiative, and meet the extraordinary demands of the winter's severe storms — all from within. The department partnered extensively: certainly to foster shared responsibility for the environment, but also to lever resources. EC collected $11 million through collaborative arrangements. It explored its opportunities for revenue generation and commercialization and increased its revenue generating activities by 32% ($18 million) over 1996-97 levels. Sustaining EC's performance will require it to continue to make the transition to a strategic agenda based on its core roles and current resource levels.

This transition is not yet complete. EC needs to continue to strengthen its internal management accountabilities and measures of performance. More of its partnerships need to be based on results rather than process. Especially important, EC's scientific knowledge and expertise need to be communicated effectively to more Canadians.

To ensure that the transition continues, the Minister's priorities are to focus on real environmental results in the areas of: clean air, clean water, nature and climate change. Next Fall, EC's Performance Report will describe in detail its achievements on the Minister's priorities, and report in more general fashion on its broader transition process.

3.2 Business Line Expectations and Accomplishments

A Healthy Environment

Total – Gross	
Planned Spending	$ 220,631,500
Total Authorities	*$ 233,708,585*
1997-98 Actual Spending	**$ 224,362,807**

EC's planned spending represents budgets approved through the March Estimates process. Throughout the year, EC received new spending authorities through Supplementary Estimates which are represented by its total authorities.

This business line is about understanding the environment and taking action with Canadians to protect, conserve and adapt to it in order to ensure *A Healthy Environment* for generations of Canadians to come. The department is working toward five goals or long term results in this business line:

- Reduce negative impacts on the atmosphere and better understand and adapt to their consequences;
- Eliminate the threat posed by toxics;
- Conserve and enhance Canadian and global biodiversity;
- Conserve and restore ecosystems; and
- Fairly and effectively enforce environmental laws and regulations.

Long term Business Line Expectations

- *reduce atmospheric change*
- *eliminate toxics*
- *conserve biodiversity*
- *conserve ecosystems*
- *enforce laws*

EC's 1997-98 performance expectations included the introduction of a modernized *Canadian Environmental Protection Act* (CEPA) and endangered species legislation, new habitat initiatives, recovery plans for species at risk and enforcement actions targeted at the worst offenders. With such a heavy Ministerial and departmental agenda, however, EC's highest priorities in this Business Line became its preparations for the Kyoto "Climate Change Summit", the reintroduction of CEPA, and building partnerships with the provinces under the *National Accord for the Protection of Species at Risk*.

Business Line Priorities: Climate Change and CEPA

Long Term Goal:

Reduce negative impacts of human activity **on the atmosphere** and better understand and adapt to their consequences.

The atmosphere continues to change in ways that are not fully understood. In large part, the changes are due to emissions to the air from human activity — acidifying emissions, hazardous air pollutants, smog, ozone-depleting substances and greenhouse gases.

The effects of atmospheric change are profound:

- Canadians are increasingly aware of the threat to our global climate, and how vulnerable as a northern country Canada may be. Climate change is an economic, health, social and political challenge as well as an environmental challenge. All Canadians need to play a role in addressing this issue.
- Health Canada has determined that in excess of 5,000 Canadians die prematurely every year as a result of air pollution. Many more are hospitalized; children and the elderly are particularly vulnerable. Asthma is increasing in all age groups.

Although EC carried on its work across a range of atmospheric issues, preparations for Kyoto imposed by far the most demanding burden on the department in 1997-98.

Climate Change: Canada's measured response to this issue is not to try to solve the problem all at once, but to further develop the foundation for continuous economic, social and technological progress that will let Canada meet its commitments while enhancing its economic prosperity.

The most important milestone in 1997 was Canada's signing of the Kyoto Protocol on Climate Change. With that, Canada committed to reduce its greenhouse gas emissions by six per cent below 1990 levels by the period between 2008 and 2012. Because of potential effects which further reductions in greenhouse gas emissions present to the economy and lifestyle, developing a Canadian position and signing the Protocol was very challenging.

EC contributed to achieving the Protocol by co-leading the Canadian delegation with the Department of Foreign Affairs and International Trade at international negotiations leading up to Kyoto. EC also coordinated consultations with other government departments, provinces and multi-stakeholders and was instrumental in ensuring that emissions trading and carbon sinks were included in the Kyoto agreement. Following the signing of the Protocol in November, EC and Natural Resources Canada focused on developing a management approach to determine how Canada puts in place its strategy to deliver on its commitments. The federal government committed $150 million to a Climate Change Action Fund (CCAF) to lay the foundation, with the provinces and other partners, of a National Implementation Strategy.

Canada commits to reduce emissions 6% below 1990 levels between 2008 and 2012

National Implementation Strategy

The government will:

- *consult with provincial and territorial governments;*
- *engage industry, environment groups, municipalities and individual Canadians.*

EC will lead on:

- *environmental policy and*
- *national public outreach.*

Measuring progress will be an important part of the Strategy.

Canada Country Study, first-ever national assessment of social, biological and economic impacts of climate change

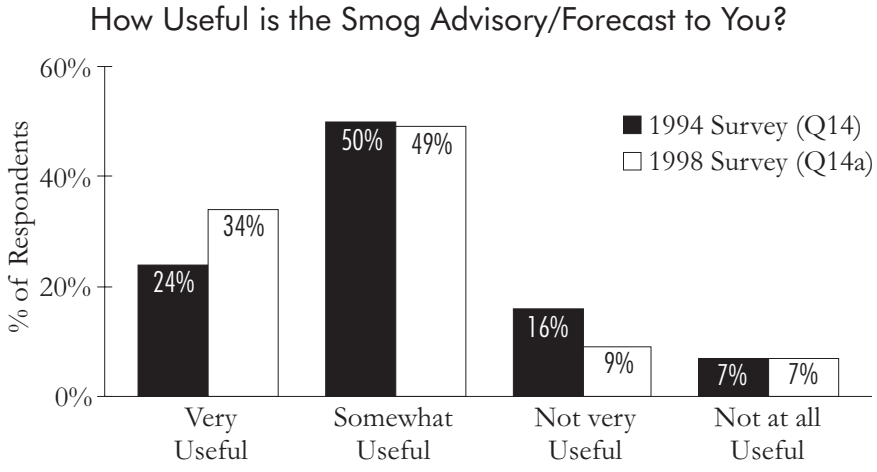
Perhaps EC's most important contribution to the development of Canada's position on climate change has been its science and information on the likely effects of climate change. EC's Canada Country Study, released in November 1997, was the first-ever national assessment of social, biological, and economic impacts of climate change. It identified how Canadians in every region of the country will be affected by a changing climate, how they can respond or adapt to these changes, and what additional scientific research should be conducted to improve our knowledge. The study is also an important contribution to international knowledge; as such it will form part of a North American chapter in a Special Report by the UN-led Intergovernmental Panel on Climate Change (IPCC) on regional impacts of climate change.

The study is a prime example of the need to work with many partners in various sectors. To conduct this study, the department drew upon its own science as well as the expertise of more than 55 people in the field of climate impacts and adaptation. These experts from government, industry, academia and non-government organisations reviewed existing knowledge on climate change impacts and adaptation; identified gaps in research; and suggested priority areas where new knowledge is urgently needed.

New fuel regulations will reduce certain emissions by 8,000 tonnes

Clean Air: Over the past year, EC built on its previous successes (for example, the Canada/U.S. Air Quality Agreement) in improving Canadian air quality. The department took steps to further reduce smog-producing pollutants and build Canadians' understanding of the relationship between smog and their health.

- Diesel Fuel Regulations which came into force in January 1998 will reduce particulate matter (10 microns and larger) by 5000 tonnes per year, Benzene in Gasoline Regulations (promulgated in November 1997) will result in a 3,000-tonne reduction in benzene emissions beginning in mid-1999.
- The country's first smog forecast, launched in southern New Brunswick during the summer of 1997, provided one-stop shopping for air quality information. The forecast allowed individuals to take expected smog levels into account when planning outdoor activities. The project was a partnership among the N. B. departments of Environment and Health and Community Services, as well as the Lung Association, the Citizens Coalition for Clean Air, the Saint John Air Resource Management Area Committee and EC's Atlantic Region.



(The 1994 survey was done after an advisory program where warnings were issued on days when smog levels exceeded 80 parts per billion. The second survey followed the initial pilot year of daily predictions.)

- The Phase 2 Smog Plan, published in November 1997 with Natural Resources Canada and Transport Canada, adopted a broader definition of smog, along with a more comprehensive approach that integrates gains from other programs in fields such as energy efficiency and acid rain.

Canada was the first country to ratify amended Montreal Protocol

Ozone depletion: The signing of the *Montreal Protocol on Substances that Deplete the Ozone Layer* on September 16, 1987, is widely recognized as a global environmental milestone. In September 1997, representatives from about 120 Parties attending the 9th Meeting of the Parties (MOP) to the Montreal Protocol agreed to an accelerated phase-out schedule for methyl bromide, a pesticide and potent ozone depleter. Also, a licensing system was established to help governments track international trade and discourage smuggling in chlorofluorocarbons (CFCs) and other controlled ozone-depleting substances. Lastly, a process was developed for review of the non-compliance procedure, and deadlines were set for developed countries to submit initial strategies for transition to non-CFC based metered dose inhalers (MDIs) used to treat asthma and other respiratory illnesses. Canada both hosted the meeting which developed, and was the first country to ratify, the most recent amendments to the Montreal Protocol on March 27, 1998.

Review of Air Issues: EC carried out a follow-up to the 1996 review of the management of air issues, and confirmed that management practices continue to be strengthened. Human resource pressures have been dealt with through staffing and succession planning and EC has reorganised its climate change unit to maximise results. More effort is being placed on coordination and integration of air issues, better priority setting, sound scientific information gathering and building a greater science consensus among federal natural resources departments. An assessment of EC's environmental monitoring capacity has also been drafted to determine how well progress can be measured in meeting air issues targets.

Long Term Goal:

Eliminate the threat to human health and the environment posed by **toxics** and other substances of concern

There are some 23,000 commercial chemicals in use in Canada today. Most are unlikely to have adverse effects, however EC plays a major role (with Health Canada and the provinces who share responsibility) in identifying toxic substances and ensuring that they are managed in a manner that will minimize their risk to the environment and the health of Canadians.

Over the past year, EC reached important milestones in the effort to eliminate the threat posed by toxics including risk assessment of over 600 chemicals, expansion of the Accelerated Reduction/Elimination of Toxics (ARET) program, and release of the *National Pollutant Release Inventory Report*. EC's highest priority and its most demanding workload pressure in the toxics program was the reintroduction of CEPA.

CEPA, designed to enhance toxics management, reintroduced

***Canadian Environmental Protection Act* (CEPA):** This Act provides the basis and authority for EC to deal with toxic substances. A revised CEPA (Bill C-32) was introduced in Parliament in March 1998. This legislation is designed to enhance EC's ability to deal with toxic substances by: providing the authority to implement a fast-track approach to evaluating and controlling toxic substances; ensuring that most harmful substances are phased out, or not released in measurable quantities; improving the enforcement of regulations; improving whistle blower protection; and allowing for more effective cooperation with other governments and Aboriginal Peoples.

Policy for the Management of Toxic Substances: Federal action alone is not sufficient; the provinces also play an important role in the management of toxic substances. In this regard, a significant milestone was reached in January 1998 with the signing by all jurisdictions of the *CCME Policy for the Management of Toxic Substances*. This policy lays the foundation for a coordinated approach to priority-setting and managing toxic substances, and builds on existing activities. It is consistent with the Toxic Substances Management Policy adopted by the federal government in 1995, and will be key to delivering country-wide action on toxic substances in the future.

600 new chemicals and polymers assessed in 1997-98

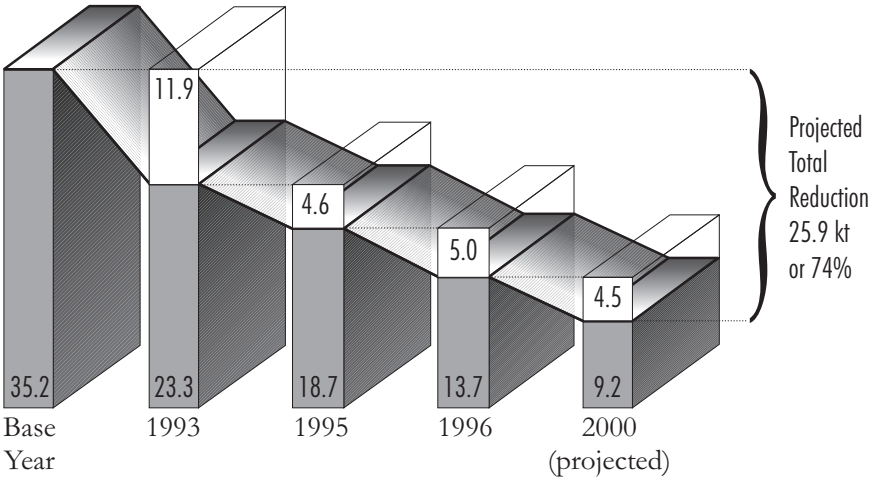
Risk Assessment of New Substances: The workload associated with this activity has increased steadily over the last few years. In the transitional years between the formation of the Domestic Substances List (1987) and the introduction of the New Substances Notification Regulations (1994), more than 5,000 substances were introduced to commerce in Canada. In 1997-98 alone over 600 new chemicals and polymers were proposed for introduction. Risk assessments had to be conducted for these new substances and, in addition, 700 of the so-called "transitional substances" were assessed. As a result of these assessments, one substance is now prohibited from manufacture or import and seven have had conditions placed on their manufacture or import to ensure protection of human health and the environment. In addition, regulations on biotechnology

products intended for manufacture or import into Canada came into force in September 1997.

27% reduction in releases of certain toxic substances since 1995

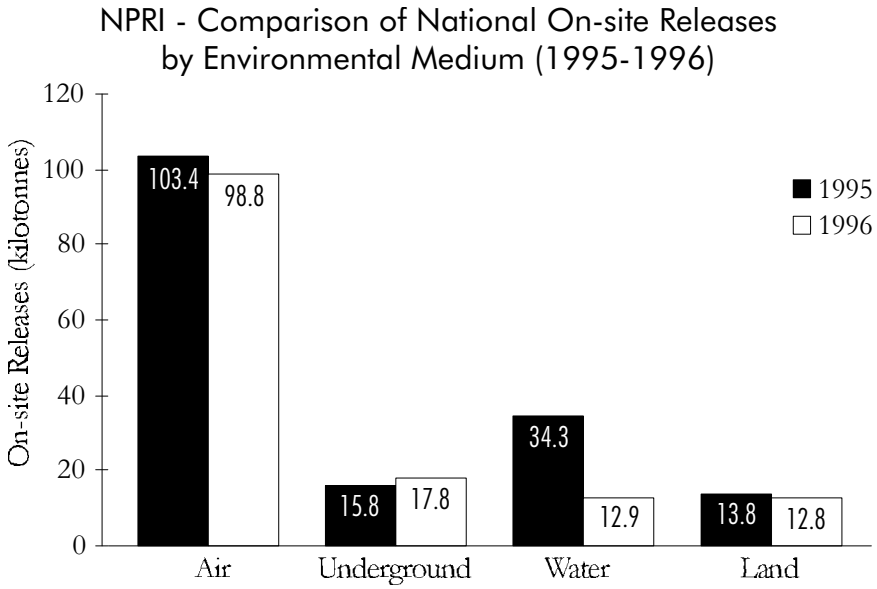
Voluntary Action — Accelerated Reduction/Elimination of Toxics (ARET): This program is an excellent example of partnership in action. EC has worked with industry to reduce pollutants on a voluntary basis since the early 80s. The ARET program, which gave official status to this effort, was launched in 1994 and now has over 292 participating facilities. Participants reduced overall releases of certain toxic substances by 5,000 tonnes in 1996, a decrease of 27% from 1995 emission levels. This brings reductions to a total of 61% (21,500 tonnes) since 1988. Already, 100 facilities have met or exceeded year 2000 targets, and year 2000 targets have also been met or exceeded for 54% of ARET substances. A further 18 substances have been proposed to be added to the Toxic Substances List. If confirmed, EC intends to use the toxic designation of these substances to persuade additional major polluters to join ARET.

Actual and Projected Emission Reduction Progress from Base Year to 2000 (kilotonnes)



6% reduction in releases of reported substances from 1,800 companies since 1994

National Pollutant Release Inventory Success Stories: Compiled by EC, the National Pollutant Release Inventory (NPRI) is a data base which tracks and communicates pollutant releases. The report released this past year showed that industrial pollution entering the environment is declining. More than 1,800 companies reported releasing 142,613 tonnes of pollution in 1996. This represents a release of 25,000 fewer tonnes than 1995, or a reduction of 15%. The NPRI also serves as a tool to help communities get information about pollution in their area so that they can encourage companies to adopt pollution prevention measures. In 1997-98 access to the NPRI was improved through an on-line query system on the Internet, which allows searches for data by geographic location (province, city or postal code), by chemical or by industry type.



Fresh Water: In 1987, EC played a leadership role in developing the first comprehensive Federal Water Policy. Much has changed since then. After 18 months of discussions with 12 other federal departments, EC obtained agreement to launch a review of the federal role in freshwater in Canada. The review will inform and obtain the views of Canadians on current federal freshwater policies, programs and activities, how federal water programs have evolved since 1987, and where they may lead in the future.

Sydney Tar Ponds: In 1997-98, EC continued to provide leadership in the effort to clean up Canada's worst contaminated site - the 100 hectare Sydney Tar Ponds/Coke Ovens site. EC is working through an innovative community-based process to secure citizen engagement with governments, delineate the problem and develop treatment strategies. One result was an MOU defining the roles and relationship of the parties to be signed by federal and provincial Ministers and the Mayor this Fall. EC provided technical and scientific support to assess technologies and cleanup options. With EC's partners (particularly Health Canada), a CCME Phase 1 Site Assessment was completed, and a geophysical survey to determine sub-surface contamination was begun. Cleanup began with the removal of surface structures on the coke oven site. Construction of an interceptor sewer to stabilize the site and reduce contamination of Sydney Harbour was approved. Assessments uncovered pockets of contamination near local residential properties. Efforts are continuing to determine the extent of the contamination, complete health risk assessments, and seek solutions acceptable to all parties.

Canada's Worst Contaminated Site

The Sydney Tar Ponds contain an estimated 700,000 tonnes of sediment contaminated with PAHs and 45,000 tonnes of sediment contaminated with PCBs (in concentrations greater than 50 mg/Kg). The Coke Ovens site is grossly contaminated with PAHs and other organics. The entire site is located in a residential community of 26,000.

Long Term Goal:

Conserve and enhance Canadian and global biodiversity

Canada stewards 20% of the world's remaining natural areas, 9% of the earth's renewable fresh water, 10% of its forests and 25% of its wetlands.

EC's commitments in 1997-98 were to introduce legislation to protect endangered species, develop and implement species recovery plans and create new wildlife areas. With its partners, EC put in place a range of habitat and species protection initiatives. However, it had to delay reintroduction of legislation for the protection of endangered species and instead focused on developing a national accord to serve as the basis for action by all, especially the federal and provincial governments.

All jurisdictions agree to National Accord for the Protection of Species at Risk

Endangered Species Legislation: Bill C-65, the *Canada Endangered Species Protection Act*, died on the order paper when Parliament was dissolved in 1997. Several aspects of Bill C-65 caused concern for the provinces and territories, environmental groups and industry; this led to considerable rethinking of the legislation. During this review, emphasis was placed on ensuring protection of species through a cooperative and complementary approach with the provinces and territories. The approach, the *National Accord for the Protection of Species at Risk*, has been agreed to in principle by all (and signed by most) jurisdictions, and implementation has begun. A joint work plan serves as the basis for consultation with a wide variety of interested parties, including Aboriginal groups, environmental groups, industry, municipalities and landowner groups, and other federal departments and agencies. The work plan will be presented to the Wildlife Ministers Council of Canada in the Fall, with federal legislation planned for introduction before the end of the year.

Recovery plans for 9 species being implemented

Endangered Species: Nine species recovery plans are in progress: for the Henslow's Sparrow, Burrowing Owl, Whooping Crane, Marbled Murrelet, Harlequin Duck, Piping Plover, Loggerhead Shrike, Roseate Tern and the Peregrine Falcon. The Baird's Sparrow was removed from the endangered species list in 1996. Kirtland's Warbler is believed to no longer be found in Canada.

Recovery plans have been developed for the Acadian Flycatcher, Hooded Warbler, and King Rail. The South Okanagan Recovery Plan, which includes the Sage Thrasher, White-headed Woodpecker and Yellow-breasted Chat, is under development. Recovery efforts have been deferred for the Eskimo Curlew until it is determined if the species still exists in Canada, and for the Mountain Plover, pending a decision on economic feasibility.

Oiled Sea Birds

Oil or oily products discharged at sea devastate wildlife. Operation Clean Feather brings together wildlife biologists, enforcement officers and chemical analysts to combat the problem. The result is more effective enforcement, education and science.

Habitat: Plans to establish eight National Wildlife Areas (NWAs) two Migratory Bird Sanctuaries (MBS) and two Shorebird Reserves have not progressed as quickly as anticipated. Negotiations for a proposed NWA for Igaliqtuuq (Isabella Bay) continue; however, the lease of Inuit lands for the NWA has been delayed, pending completion of the Inuit Impacts and Benefits Agreement (IIBA), required under the Nunavut Agreement. Several other NWAs (Sable Island, Suffield, Kentville Ravine, the Canada-New Brunswick Cooperative NWA and Iles de lac St. Pierre) have been delayed, pending EC's decision on whether to propose amendments to the *Canada Wildlife Act* to permit designation as NWAs of lands under the administration of other federal ministers, the provinces and territories or

third parties. Public consultations have identified little interest in the Broughton Island community for the proposed Cape Searle or Reid Bay NWAs, therefore these two initiatives have been deferred. A second Western Hemisphere Shorebird Reserve, planned for British Columbia, is awaiting provincial approvals.

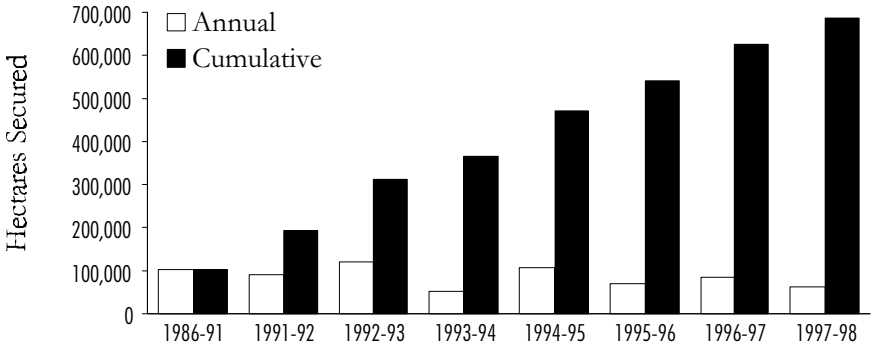
One new Ramsar site, the Lac St-Pierre wetlands in Quebec, was nominated and formally designated in May 1998. This 11,952 hectare site includes federal DND lands (the first Ramsar lands of this type in North America). The proposed designation of Inkerman MBS was announced in *Canada Gazette, Part I* in July, 1998. The Chaplin Lakes/Old Wives' Lake Shorebird Reserve (Saskatchewan) was designated in 1997.

Under amendments to the Income Tax Act covering donation of ecologically sensitive lands for wildlife conservation, 19 additional gifts were received. In total, there have been 47 gifts of ecologically sensitive land. Both Nova Scotia and British Columbia completed agreements with EC. There are now five provinces, acting as implementation partners for the donation of land.

Under the North American Waterfowl Management Plan, there were an additional 61,752 hectares of key wetland habitat conserved across Canada for a total of more than 680,000 hectares since the plan's inception in 1986.

680,000 ha of habitat conserved under NAWMP

North American Waterfowl Management Plan
Cumulative Accomplishments



Long Term Goal:

Conserve and restore **ecosystems**

Ecosystem Initiatives are partnership programs which apply a particular approach to environmental, economic and social challenges in targeted geographic areas across Canada. They focus on the resolution of issues involving air and water quality, resource use, human health and nature in an integrated manner which responds to the unique problems of particular ecosystems and the needs of communities.

As the key partner in each initiative, EC activities vary according to the particular circumstances of a given situation. In general, its roles are to encourage and support the formation of partnerships; generate the public and political support necessary to address ecosystem issues; provide quality environmental science; help build local capacity; and take direct action where appropriate.

EC operates five ecosystems initiatives. Two of these initiatives completed their first phase in 1997-98: the Fraser River Action Plan (FRAP) and the Atlantic Coastal Action Plan (ACAP). FRAP will be replaced by the Georgia Basin Ecosystem Initiative (GBI) in the upcoming year. Phase 2 of ACAP is already underway.

EC's third initiative, the St. Lawrence Action Plan Vision 2000 (SLV 2000), launched its 3rd Phase on June 8th of this year.

Two other initiatives are continuing: Great Lakes 2000 (GL2000) and the Northern Rivers Basin Initiative (NREI), which responds to the findings of the Northern Rivers Basin Study (NRBS). A sixth initiative, the Northern Ecosystem Initiative, is in its planning phase. It will focus on Canada's Arctic ecosystem.

Ecosystem initiatives

- *are concrete examples of how different levels of government can work together to achieve the highest level of environmental quality;*
- *engage individuals, communities, First Nations, industry and governments in designing and implementing actions affecting their communities;*
- *recognize the interrelationships between land, air, water, wildlife, and human activities;*
- *encourage the use of natural and social science combined with local and Traditional Knowledge;*
- *focus on preventing problems and avoiding costly clean-up measures.*

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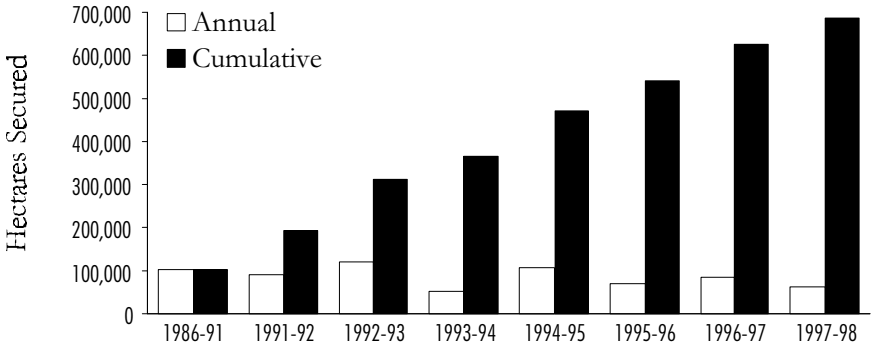

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EC's investment in ecosystem initiatives has realized concrete environmental benefits:

65,000 ha of habitat protected in Fraser Basin

Action plans for sustainability of 13 Atlantic communities

96% reduction in toxic effluent from 50 priority industry plants on St. Lawrence

66% reduction in dioxins/furans in Great Lakes

- Under FRAP in B.C., almost 65,000 hectares of wild bird habitat have been protected and reductions in the release of toxic wood preservatives from the lumber industry have exceeded 90%.
- ACAP brought diverse interests together in 13 Atlantic Canada sites where they developed detailed action plans for the restoration and sustainable development of their ecosystems. Examples of progress include restoration of over 300 km of stream bank and 30 km of hedge row, water quality improvements in six river systems; sewage treatment upgrades and waste reduction programs in several communities; and soil conservation projects to keep soil in the fields and out of streams.
- Under SLV 2000, since 1981 there has been a 96% reduction in toxic effluents discharged by 50 priority industrial plants along the St. Lawrence; the population of beluga whales has stopped declining and appears to have increased from 500 to approximately 800 individuals; and 12,000 hectares of wildlife habitat has been protected. Work with communities was also an important part of SLV 2000. Enhanced community awareness led to the creation of 10 Priority Intervention Zone committees and rehabilitation plans for each zone.
- Through GL2000, Canadian emissions of dioxins and furans to the Great Lakes have been reduced by 66% over seven years. Also, there has been a reduction of 4.5 million kilograms in emissions of toxic substances as a result of voluntary partnerships, and Collingwood Harbour on Georgian Bay has been fully remediated.
- NRBS findings improved our understanding of the impacts of the growing number of industrial developments in northern watersheds, particularly pulp and paper and oil sands projects.

Reviews of Fraser River Action Plan and St. Lawrence Vision 2000 have provided many valuable lessons learned including:

- the value of a community based approach;
- the importance of clear communications among partners and with stakeholders and the public;
- the value of sound science, communicated effectively and in a timely manner; and
- the importance of clear, measurable and detailed operational planning.

These results have been communicated widely and are being factored into the planning and implementation of ecosystem initiatives.

Sable Island

With DFO, Nova Scotia, the oil industry, academia and environmental interests, EC has developed a plan for Sable Island. A not-for-profit society will assume responsibility for all aspects of Sable Island. The society, while accountable to the federal and provincial governments, will draw on wider resources. The regime will adhere to Sable Island Regulations under the Canada Shipping Act and the Sable Island Conservation Strategy, an EC-led framework for the long-term protection of the Island's flora and fauna.

Long Term Goal:

Fairly and effectively enforce environmental laws and regulations

Environmental laws and regulations, clearly understood and fairly and effectively enforced, are essential to providing clean air and water and protecting Canada's endangered species.

In 1997, EC committed to target known offenders, focus compliance promotion on the compliant majority, and reward performance leaders by publicly recognizing their contribution. Achievements include the conviction and precedent-setting punishment of a major CFC smuggler, substantially improved inspections for CITES and WAPPRIITA-controlled goods as a result of enhanced collaboration with Canada Customs, and aggressive compliance promotion among federal departments.

$60,000 (Can) total fines and 15 month prison term for CFC smuggling

Partnerships with other Jurisdictions: The prosecution of a major CFC smuggler in the past year showed the effectiveness of EC's network of partners across jurisdictions. EC obtained information that a New Brunswick automobile dealership (City Sales Inc.) had been exceeding the limits of its CFC export permit to the United States. EC and the U.S. Environment Protection Agency (EPA) jointly investigated the case. Canada Customs, U.S. Customs and N. B. Environment also contributed to the operation.

In April 1997, the dealership's president plead guilty in a Maine court to illegally importing approximately 75 tonnes of CFCs into the U.S. and was sentenced to 15 months in prison and a fine of $28,000 (U.S.). The company was also ordered to pay $20,000 (Can) in N. B. provincial court after pleading guilty to knowingly providing false and misleading information during an inspection. The outcome was precedent-setting and the most severe punishment ever imposed for offenses against Canada's laws concerning CFCs.

Partnerships with federal enforcement agencies: During 1997-98, EC developed an umbrella Memorandum of Understanding with Revenue Canada (Customs) to strengthen relationships, determine roles and responsibilities and specify collaboration mechanisms. Two annexes were also developed for Hazardous Waste and WAPPRIITA.

Physical examination of shipments for CITES-controlled goods up to 63%

Under the MOU, a pilot project to train Customs officers to identify endangered or protected species resulted in a marked increase in the number of seizures at targeted ports. The physical examination of shipments increased to 63%. Customs officers referred a quarter of all inspected shipments for further examination by EC inspectors and 28% of these involved detentions and seizures. The project also improved service to Canadian importers. Imports subject to the *Convention on International Trade in Endangered Species* (CITES) were processed in an average of three hours compared to the previous average of several days. Some ports which had not previously reported CITES-controlled goods are now issuing reports every month. Given the demonstrated effectiveness of the pilot project, the concept will be expanded to other ports.

Compliance Promotion: For the federal government to exercise leadership in Canada, it is important that federal agencies be in compliance with Canada's environmental laws. Accordingly, EC promotes compliance aggressively to federal departments and senior management. In 1997-98,

through the Federal Committee on Environmental Management Systems, EC shared best practices with departments, and provided information on departmental obligations under CEPA and other environmental legislation. EC also promotes compliance with the private sector and recognizes performance leaders through its web-site on pollution prevention success stories. These stories are also profiled at various domestic and international venues.

Business Line Next Steps

Based in part on EC's performance in this Business Line in 1997-98, its commitments in 1998-99 include: a national plan to implement the Kyoto Protocol, passage and implementation of CEPA, Canada-wide standards for particulates, ground level ozone, dioxins/furans, mercury and benzene in support of the Accord on Harmonization; an ozone annex to the Canada-U.S. Air Quality Agreement; broadened participation in ARET; a Federal Fresh Water Strategy; a strengthened enforcement capacity; endangered species legislation; a nature stewardship program; and an ecosystems initiative in Canada's north.

Safety from Environmental Hazards

Total – Gross

Planned Spending	$ 130,471,000
Total Authorities	*$ 151,953,614*
1997-98 Actual Spending	**$ 146,134,078**

EC's planned spending represents budgets approved through the March Estimates process. Throughout the year, EC received new spending authorities through Supplementary Estimates which are represented by its total authorities.

Long-term Business Line Expectations

- *timely, accurate weather forecasts and warnings*
- *prevention, reduction of emergencies*

This business line is about helping Canadians adapt to their environment in ways which safeguard their health, safety and property, optimize economic activity, and enhance environmental quality. It is also about preventing or reducing the frequency, severity and environmental consequences of pollution emergencies and it includes two specific goals or long-term results:

- weather and environmental predictions as well as timely and accurate warnings of severe weather events; and
- prevention or reduction in the frequency, severity and environmental consequences of emergencies that affect Canada.

Business Line priorities: Severe weather events

EC's 1997-98 performance expectations were to ensure that Canadians continue to receive timely and accurate weather warnings and forecasts upon which to base their social and economic decisions. Natural events tested the department's resources and commitment in this area well beyond the norm. In 1997-98, EC responded to two natural disasters — the Manitoba flood and the ice storm — and over 200 pollution incidents.

Long Term Goal:

Weather and environmental predictions as well as timely and accurate warnings of severe weather events

For more than a century, Canada's national weather service has provided Canadians with weather forecasts and warnings. However, risks to lives and property from severe weather, flooding, and poor air quality are becoming more serious. As risks change, clients use environmental information in different ways and look for new weather and environmental prediction products.

EC's accomplishments in the past year included the application of new research methods to severe weather and assistance to Canadians in dealing with several severe weather events, as well as the implementation of substantive improvements to Canada's forecast system and meteorological services, and the development of new forecast models and techniques.

Severe Weather: Two severe weather occurrences in 1997-98 demonstrated the strength of the department's forecast capabilities, and tested its capacity to sustain quality forecast services under the most trying circumstances. The evidence is that EC's weather services rose to both challenges.

- In the Spring of 1997, the Manitoba flood caused in excess of $400 million in damages and necessitated the evacuation of some 27,400 Manitobans.

  Early warning of impending flood, continuous briefings of emergency services and the public

  EC scientists (using methods developed by EC to determine snow water equivalent from passive microwave satellite data) in the winter and spring of 1997 observed unusually high levels of snow water equivalent in Manitoba and the Dakotas. Satellite-based products were used to evaluate spring flooding potential in the Red River basin. Water and weather forecasting data provided to provincial authorities in advance of the flood helped make the best preparations possible. During the ensuing flood, daily briefings on weather conditions and forecasts were provided to the Manitoba Flood Forecast Center, emergency measures organizations. An EC internet site provided information to the public. After the flood, EC was involved in supporting the work of the International Joint Commission's Red River Task Force which made recommendations on preparing for future incidents.

- In January 1998, a severe 6-day ice storm hit Eastern Canada (eastern Ontario, southern Quebec and southern New Brunswick). More than 100 mm of precipitation was reported in many localities. The storm claimed 25 lives, left 3 million people without electricity and heat for several weeks, and caused damage in excess of $2 billion to infrastructure, power lines and trees.

  Public gives EC's performance in Ice Storm an 8 out of 10 rating

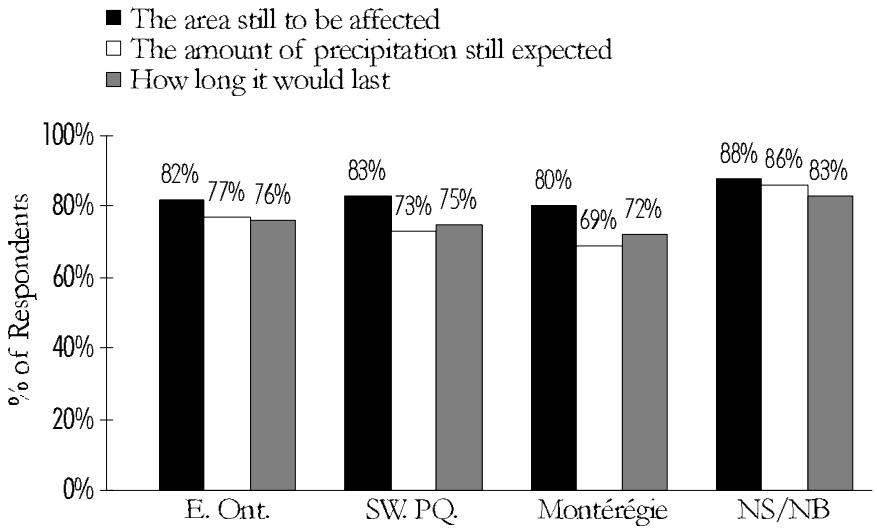
  EC alerted affected areas about the severe weather and continued to provide forecasting throughout the event as well as special briefings to emergency organizations, power and telephone companies, and commercial customers. It also conducted a large number of media briefings. In a survey of the public and clients (emergency measures organizations, municipalities, hydro companies and businesses) on reaction to its services during and after the storm, EC's performance was judged effective and efficient. Overall, people (based on 1,253 interviews) gave EC a rating of 8 out of 10 for its handling of this storm:

  - more than 70% of respondents felt that affected areas and the start of precipitation were well communicated;
  - 88% of respondents said they received enough information to make decisions for themselves and their families; and

- over 60% of respondents said they would do things differently if they heard a forecast of freezing rain again.

Interviews with clients also indicated a high level of satisfaction with the services provided. Emergency measures organizations were especially satisfied with the services provided. Several media commented on EC's effectiveness in responding quickly and professionally to their needs and deadlines. Despite the increased workload and increased absence by staff who were personally affected, there was no decrease in service as a result of the storm.

Percentage of respondents satisfied with the communication of EC's forecasts during the ice storm



Improvements to Canada's forecast system: EC is engaged in two projects to augment its national weather forecast and warning system: the National Radar Project (NRP) and the Canadian Lightning Detection Network (CLDN). Both progressed well in 1997-98.

- Through the NRP, EC's network of weather radar will become an all-Doppler network: by the addition of new Doppler Radars (for a total of 29 by 2003), and by giving remaining radars a Doppler capability. Doppler Radar detects the intensity and location of precipitation, as well as the movement of air inside a storm, thus allowing early identification of a storm's severity. Progress has been made in the following major areas:
  - siting plans and acquisition of land for radar installations;
  - competitive bidding and contracting for major system modules (e.g., antenna systems, radomes, towers, signal processors);
  - building and deployment of two radar systems in Spirit River (Alberta) and Aldergrove (B.C.).

Action Plan on the Saguenay Flood

April 1997, an action plan was signed to preserve and protect the environment following floods that occurred in the Saguenay in 1996. This $3.3 million federal project includes the modernization of weather radar at Lac Castor, analyses of effects of the floods on ice fishing, the marine environment and migratory birds, the study of landslides, and support for restoration and reconstruction projects.

Progress on national systems of Doppler Radars and lightning detection sensors

- 70% of the CLDN (of 81 sensors) had been completed at the end of FY 97/98. Full implementation will occur by the end of October 1998. All regional offices have acquired their lightning data licenses and lightning display software. The Manitoba Ministry of Natural Resources and B.C. Ministry of Forests recently signed contracts for lightning data for their forest fire programs; other contracts are in development.

New forecast models and techniques: EC continuously looks for new techniques and models to improve its forecast and predictive capacity. In 1997-98, EC developed two new tools:

- A new integrated weather and hydrologic prediction model. In co-operation with the National Research Council, the conceptual design of a flow forecasting decision support system featuring fully integrated weather (precipitation) forecasting and ground based monitoring with hydrologic and hydraulic prediction models was completed. The conceptual design of the hydrologic modeling environment and the preparation of hydrologic and hydraulic models for a watershed test basin were also completed. This new system will allow EC to accurately determine areas susceptible to flooding and to issue warnings accordingly. In 1998-99 a functional prototype of the hydrologic modeling environment will be developed and evaluated at the test watershed.
- A high resolution atmospheric model. EC has developed a high resolution version of the Global Environmental Multiscale (GEM) model which can be used to forecast meteorological conditions more accurately, and provide an enhanced basis for developing other environmental products. The model was developed for two "windows": one centered over the Windsor-Montreal corridor, the other over complex topographic areas of B.C. and Alberta. It proved valuable in Eastern Canada during the severe winter of 1997-98. Another version of GEM covering all of Canada is being tested. Once implemented, it will be used to provide atmospheric parameters to other models such as the Chemical Transport Model (CTM).

Review of Weather Services: This review concluded that the public weather service delivers a quality forecast product that meets the public's expectations. However, given ongoing pressures in its operating environment, the continued ability to sustain this level of performance is a concern. The public weather service's continued success will depend on its ability to manage change and risk and to demonstrate public accountability.

Long Term Goal:

Prevention or reduction in the frequency, severity and environmental consequences of **emergencies** that affect Canada

Accidental releases of polluting substances into the air, land or water can cause severe adverse affects on human health and the environment. EC seeks to minimize the risk and consequences of emergencies through national and regional emergency prevention and preparedness programs. It also provides advice

to responders during emergencies and makes technologies available for response and remediation.

EC responded to 200 significant spills

In 1997-98, EC responded to over 200 significant spill events by providing environmental advice and support. It began the negotiation of an Environmental Emergencies Sub-Agreement under the Canada-Wide Accord on Environmental Harmonization (see below), and was involved in the development of harmonized approaches to spill prevention, preparedness and response at the international, national and regional levels. It implemented an improved national spill notification and reporting network and spill database, compiled national spill statistics and trends to target appropriate industry sectors for prevention programs. It also transferred the emergencies engineering program of the Environmental Technology Center to the private sector. EC collaborated with the Canadian Coast Guard and Natural Resources Canada on a pilot project to assess satellite radar data for the surveillance of oil pollution off Canada's East Coast, and tested a prototype Scanning Laser Environmental Airborne Fluorsensor for detecting oil remotely. It increased its collaboration with international agencies and the private sector in Canada and the U.S. to fund research and technology development projects.

Business Line Next Steps

Based on EC's performance in 1997-98, its commitments in 1998-99 include further progress on the lightning detection and Doppler Radar systems, continued effort to strengthen and sustain vital weather services and completion of a federal-provincial sub-agreement on emergency response.

A Greener Society

Total – Gross

Planned Spending	$ 94,169,000
Total Authorities	*$ 103,394,519*
1997-98 Actual Spending	**$ 109,446,056**

EC's planned spending represents budgets approved through the March Estimates process. Throughout the year, EC received new spending authorities through Supplementary Estimates which are represented by its total authorities.

This business line is about helping Canadians, communities and the private sector to understand their environment and environmental responsibilities, and to act on their environmental values in order to move Canada towards a *Greener Society*. The department is working toward three goals or long-term results in this business line:

- promote environmental citizenship and help Canadians effectively use timely environmental information and advice;
- develop green technologies and provide Canadians with tools to prevent pollution; and
- mobilize effective partnerships nationally and provide a strong international voice to build a sustainable development agenda.

Long-term Business Line Expectations

- *Information for responsible environmental citizenship*
- *Technologies to prevent pollution*
- *Partnerships for sustainable development*

1997-98 performance expectations were to: work with the provinces to arrive at the highest standards of environmental quality for dealing with issues critical to Canada; implement the *Canadian Environmental Industry Strategy* to better position Canada to capitalize on job creation and international markets; and develop and promote environmental citizenship. Within the department's framework of long-term goals for this business line, in 1997-98 the department's top priority was the conclusion of the Harmonization Accord and its first three sub-agreements.

Business Line Priority: Harmonization

Long Term Goal:

Environmental citizenship promoted and help for Canadians to effectively use timely environmental information and advice

Information enables Canadians to turn knowledge into action on environmental issues. EC has always been a major source of national environmental information and expertise on a wide range of conditions and issues.

Over the past year, EC participated in providing vignettes called *Earth Tones* to the Discovery Channel; expanded its presence on the Internet and developed a charter for weather services to ensure the quality of products and services. All initiatives are intended to give Canadians access to environmental information in understandable, usable formats through a variety of sources.

Environmental Indicators: Of particular importance has been the National Environmental Indicators Program, under which EC has developed and regularly updates indicators for 10 nationally significant environmental issues: climate change, stratospheric ozone depletion, energy consumption, acid rain, urban air and water quality, sustaining Canada's forests and marine resources, toxic contaminants in the environment, and Canadian passenger transportation. The National Environmental Indicators are available through the State of Canada's Environment Infobase, which is linked to the Green Lane.

EC on the Internet: EC is using the Internet in a variety of ways to improve Canadians' access to environmental information. In 1997-98, for example:

The Green Lane Web site improved and expanded

- EC expanded its award-winning Web site, *The Green Lane*, to cover climate change, smog, toxics and endangered species and added sites on science and the environment, environmental technology, and emergencies.
- It provided emergency Internet services during natural disasters like the Red River Flood and the Ice Storm.
- It developed an on-line query system for the National Pollutant Release Inventory (NPRI) and an extensive set of services through its Canadian Pollution Prevention Information Clearinghouse (CPPIC).
- The Canadian Hurricane Centre unveiled its web site and it began development of a web site for training in support of the Canadian Lightning Detection Network (CLDN).

Canadian Hurricane Web site

Long Term Goal:

Green technologies developed and Canadians provided with tools to prevent pollution

Clean technologies and pollution prevention skills benefit Canadians and the global environment in terms of better health and quality of life. EC is a major source of tools, technologies and skills to prevent, control, to clean up, and/or eliminate pollution. The principal achievement over the past year was EC's successful completion of its portion of the *Canadian Environmental Industry Strategy*, led by Industry Canada (IC). Other achievements included: support to IC's *Technology Partnerships Canada* program; the Canadian Pollution Prevention Clearinghouse; shifting delivery of the Environmental Technology Verification Program to the private sector; and, in partnership with The Canadian International Development Agency (CIDA) and Canadian companies, transferring Canadian contaminated site assessment and remediation technologies to Latvia and Ukraine among others, and providing environmental assessment advice.

Canadian Environmental Industry Strategy (CEIS): The multi-departmental initiative CEIS was established to promote Canada's environmental industry at home and abroad. The strategy provided services to industry in technology development and commercialization, and helped environmental companies access foreign markets. EC led two of the strategy's 17 initiatives, related primarily to regulation and policy:

- The International Environmental Management Initiative; and
- The enhancement of the involvement of Members of Parliament in partnership with the environment industry.

EC co-led seven other initiatives:

- examination of certification of products, processes and services (with IC);
- market development through assistance for small and medium-sized enterprises to improve their environmental performance (with IC);
- improved access to business opportunities through international agreements and institutions (with IC);
- enhancing market intelligence (with IC, DFAIT);
- federal government commitment to green procurement (with IC);
- enhancing the "Going Green" building program (with PWGSC);
- establishing an implementation steering committee (with IC).

34 capacity building/technology transfer projects in 9 developing countries

The strategy came to its scheduled end in March 1998. In the strategy's final year, under its International Environmental Management Initiative, EC undertook 34 capacity building/technology transfer projects in nine developing countries. The projects focused on technology transfer in priority areas such as energy efficiency, air quality and enhancement and water management.

Review of CEIS: A third-party evaluation, completed in November 1997 under the supervision of the review branches of Industry Canada and EC, concluded that: the strategy leveraged significant funding from other government and private sector sources on a ratio of $2.30 for every $1 contributed; put in place infrastructure for business information and advice; and expanded international market activity for environmental technology. The evaluation concluded that 60 % of the strategy's funding supported the development of international markets. The exposure of Canadian companies to emerging high-growth markets had some benefits in the short term and more significant benefits are expected in the medium term.

The evaluation identified several missed opportunities and concluded further opportunities could be promoted through human resource development and training, domestic market development, and building significant partnerships with major industries in Canada (mining, forestry, pulp and paper).

Technology Transfer and Capacity Building: Among EC's accomplishments in technology transfer and capacity building were:

- The Canadian Pollution Prevention Information Clearinghouse (CPPIC) launched in March 1998. This Internet-based tool assists business with pollution prevention activities by providing sector-specific information, success stories, background concepts, new developments and links to related sites.

- The Microwave Assisted Process (MAP™) developed by EC. MAP™ decreases solvent and energy consumption by up to 90% and 95% respectively. It was jointly approved as an official Method of Analysis in May 1998 by EC and the U.S. EPA, and has to date been sold to 500 laboratories around the world. MAP is used in a process to extract organic compounds from soils, sediments and solid wastes.
- Two multi-million dollar CIDA-supported projects to transfer Canadian technologies for contaminated site assessment and remediation to Latvia and Ukraine were successfully completed in partnership with Canadian companies.

Environmental Assessment: EC's environmental assessment expertise was provided to other departments and the private sector for 1,392 projects in 1997-1998, including such major projects as the Magnola Project, Sable Gas, and the Cheviot Coal Mine. In each of these reviews, EC advocated the protection of wildlife and habitats, migratory birds, air and water quality, and raised the awareness of climate change issues. EC's support to environmental assessment requires substantial departmental time and resources but yields real environmental benefits; for example:

EC's contribution to EA is well received

- Though not subject to the federal process, the Magnola Project was assessed under the *Bureau d'audiences publiques sur l'environnement* (BAPE) and EC was invited to participate. EC's recommendations were adopted by the Quebec Department of the Environment and Wildlife, which subsequently directed the proponent to implement them.
- Sable Gas, a project consisting of six offshore gas fields near Sable Island, underwent a joint public review. As a result of EC's interventions, the proponent will be required to use only non petroleum-based drilling muds, and to ensure that pipeline and blasting activities in the Country Harbour area do not disturb or destroy migratory birds, nests or eggs during nesting season. EC is also working with the proponent, the Canada-N.S. Offshore Petroleum Board, the provincial government and other federal agencies in the development of environmental management plans that will help ensure Sable Island and "The Gully" are protected.
- The Cheviot Mine Project was also subjected to a joint Public Review Process. The Panel report recommended EC's advice to the proponent. EC is participating on federal-provincial management and technical committees that will be developing the detailed provisions of the company's development and operating permits.

Long Term Goal:

Mobilize effective **partnerships** nationally and provide a strong international voice to build a **sustainable development** agenda

Sustaining the environment is a shared responsibility. Two of EC's strategic goals are to build strategic domestic and international partnerships based on shared goals, and to provide leadership by its own actions.

Over the past year, EC has: signed a Harmonization Accord with the provinces; developed partnerships with aboriginal communities on specific issues;

completed its first Sustainable Development Strategy; and met its targets in greening its own operations.

Harmonization with the Provinces: In January 1998, after several years of collaborative work, through the Canadian Council of Ministers of the Environment (CCME), Ministers from across Canada (except Quebec) signed the Canada-Wide Accord on Environmental Harmonization and three sub-agreements. Under the Accord, all jurisdictions will use their powers in a more effective and coordinated way. The focus is on environmental results aimed at the highest level of environmental quality in Canada. The Accord and its sub-agreements were among the most important achievements of 1997-98 and pave the way for future cooperation in resolving serious environmental issues.

The objectives of harmonization

- *enhance environmental protection*
- *promote sustainable development*
- *achieve greater effectiveness, efficiency, accountability, predictability and clarity of environmental management for issues of Canada-wide interest*

By these agreements, the federal, provincial and territorial partners have agreed to collectively define Canada-wide environmental goals and develop collaborative approaches to achieve them. The new arrangements are expected to lead to concrete environmental results.

Sub-agreements translate the Accord into action. By grappling with a few priorities at the outset (i.e., environmental standards, environmental assessment and inspections), the objective is to learn from experience before tackling other areas.

Sub-agreements translate the Harmonization Accord into action

- **Canada-Wide Standards:** The Standards Sub-Agreement encourages governments to achieve concrete environmental goals on priorities that require common standards or collective actions. As a first priority, Canada-wide standards are being developed for ground-level ozone and air-borne particulate matter, benzene, mercury, dioxins and furans, and petroleum hydrocarbons in soil. For each priority, a numeric target, a time frame for reaching the target, initial implementation plans for each jurisdiction, and mechanisms for reporting are required.
- **Inspections:** The Inspections Sub-Agreement is intended to create a one-window delivery of environmental inspections and ensure, to the extent possible, that a single inspector can verify the compliance of a particular facility with both federal and provincial laws. Arrangements between the two orders of government may vary between provinces or territories, since each has its own operating structure and capacities.
- **Environmental Assessment:** The Environmental Assessment Sub-Agreement addresses situations where two or more jurisdictions are obligated to conduct environmental assessments of the same project. (See Canadian Environmental Assessment Agency Performance Report)

Mackenzie River Basin Agreement

A milestone was reached with the signing of the Transboundary Waters Master Agreement by EC, DIAND, B.C., Alberta, Saskatchewan, N.W.T. and the Yukon. The Agreement, which established a multi-lateral board, will become a forum for cooperative management of the Basin's water resources.

Each sub-agreement contains commitments to report publicly on progress. The Accord and sub-agreements will be reviewed two years after they came into force (January 1998) to assess progress and evaluate effectiveness. CCME is developing an Annex to the Accord to elaborate key elements of stakeholder participation, aboriginal involvement and accountability.

Sustainable Development Strategy (SDS): EC tabled its SDS in April 1997. As the first department to table its strategy, EC was able to offer support to other departments in the months leading up to the deadline for tabling the remaining strategies in December 1997.

As illustrated in Section 5.2, in its first year of implementation EC made progress on all four of its strategic directions: strengthening its ability to meet SD goals; being a more effective advocate of SD; giving Canadians the tools they need to make sound decisions; and setting a good example in the greening of government operations. Particular progress was made in strengthening relationships with its partners, including for example: work with the private sector on innovative policy instruments and efforts to exploit emerging opportunities for Canadian environmental industries internationally; building of common agendas with other government departments as in Quebec where work has begun on a regional interdepartmental action plan for SD; creating opportunities to engage youth in SD issues nationally and internationally (e.g. through the Youth Round Table); and working with Aboriginal People and their structures of governance on environmental management issues. Considerable progress was also made in the area of greening government operations, both within EC and as an advocate across government (through the Federal Committee on Environmental Management Systems) and internationally (through the OECD and APEC).

EC leads Interdepartmental Network on Sustainable Development Strategies

Another priority for EC in the first year of implementation was to provide leadership of the Interdepartmental Network on Sustainable Development Strategies (INSDS). The INSDS, which includes representatives from more than 30 departments and agencies, is chaired by EC and provides the opportunity for sharing experiences and ideas, ensuring coordination in the development and implementation of strategies across the government, and through cooperation enhancing the efficiency with which the 28 departmental Strategies are implemented. The INSDS coordinated a joint tabling of Strategies and analyzed the 28 strategies to identify areas of common action and opportunities for cooperation.

Partnership with the Eskasoni

A partnership between EC, the Eskasoni Fish and Wildlife Commission, University College of Cape Breton, Enterprise Cape Breton Corporation, N.S. Fisheries and Aquaculture, N.S. Environment and the N.S. Aquaculture Association was developed to carry out a shellfish water quality monitoring program in Bras d'Or Lakes. The primary objective is to maintain and enhance water quality. The second is to provide training and technology to the Eskasoni.

Partnerships with Aboriginal Peoples: EC is committed to the involvement of Aboriginal People and their Traditional Environmental Knowledge in its legislation, policies and programs. Sound working relationships will lead to effective partnerships in our effort to achieve tangible environmental results. Notable examples of the commitment to engage Aboriginal People in our initiatives include the participation of Aboriginal organizations in the ad-hoc committee for the implementation of the UN Convention on Biological Diversity and the Aboriginal working group for CESPA. As well, in the renewed CEPA, provision was made for Aboriginal People on the new National Advisory Committee. Further, groundwork has been laid for future policy development and an interdepartmental committee is working on a strategy for the inclusion of Traditional Environmental Knowledge in environmental assessments.

Similarly, the CCME made arrangements to meet with the national Aboriginal leaders at its September 1998 meeting to discuss involvement of Aboriginal People in environmental management. One component of an Annex to the Harmonization Accord is dedicated to the principles of Aboriginal involvement. The goal is to strengthen relationships with Aboriginal People and their structures of governance.

Investment of $5.4 million for healthier local environments

Partnerships with communities: Action 21 provides funding to community groups and encourages all Canadians to become responsible environmental citizens through its public education initiatives. Through its funding program, 165 new projects were supported in the areas of clean air, clean water, climate change and nature. These projects represent an investment by the federal government of approximately $5.4 million in creating healthier local environments. In addition to providing funding to groups, Action 21, in a partnership with Health Canada, helps communities develop their capacity to tackle heath-environment issues. This community animation initiative involves an investment of approximately $500,000 which is matched by Health Canada.

In the area of public education, more than 6,000,000 Canadians were reached this year through television and print media, feature articles, and educational publications. Projects such as the Youth Round Table on the Environment and the Polaris Northern Star awards recognize youth leadership and help the department to benefit from their perspective on issues.

International partnerships: Many environmental issues facing Canada today are global in scale or cause. Many international economic issues like the Multilateral Agreement on Investment, harmonization of international standards and international competitiveness will also impact the health and sustainability of Canada's environment. Protecting our domestic interests requires an active international voice and presence. To do so, EC works with other departments, provincial governments, other national governments and international organizations to build and deliver strong and cohesive international positions. In 1997-98 Canada acted through several fora to help to establish common international objectives and goals such as committing to the reduction of greenhouse gas emissions through the Kyoto Protocol, and reducing heavy metals and persistent organic pollutants through negotiation of two UN ECE Protocols. Canada was instrumental in promoting a UNEP Global Persistent Organic Pollutants initiative by sponsoring the First Meeting of the Intergovernmental Negotiating Committee and succeeding in the designation of a Canadian chairperson. EC also transferred technologies and skills internationally on issues such as the emergency spills response component of EC's international partnerships. On issues as diverse as endocrine disrupting substances and climate variability, EC scientists play an active international role; their work provides a foundation for collective approaches to common issues.

Green Power provides 100% of EC's energy needs in Alberta

Greening Environment Canada: EC is dedicated to reducing the environmental impacts of its activities by adopting a strategic approach to environmental management. The department achieved an 82% reduction in solid waste sent to landfills (using 1988 as the baseline year). As of March 31, 1998, EC has reduced the size of its fleet from 771 vehicles (August 1995 baseline) to 553, or by 28.3%. The department met the requirements of the *Alternative Fuels Act* by purchasing vehicles, where economically and operationally feasible, that run on alternative fuels. In order to measure its progress in adopting green procurement practices, EC modified its financial management system. In November 1997, EC entered into an agreement to purchase green power from two newly constructed wind turbines to supply 100% of the needs of all of EC's facilities and offices in Alberta for a period of 10 years. Three Federal Buildings Initiative (FBI) projects (at EC facilities in Montreal and Hull, Quebec and in Downsview, Ontario) yielded annual energy savings totaling $623,000.

Contaminated Sites: EC continued to make progress in managing its potentially contaminated sites. The department operates 7,400 stations grouped in 7 categories (water monitoring, upper air, weather, labs, marine, NWA, other). EC spent $1 million in 1997-98 to fund assessment and clean-up work at 32 stations.

This work revealed that general departmental liabilities were linked mainly to hydrogen production residues, construction material (e.g. asbestos), petroleum products and mercury. Studies specific to the hydrogen residue proved that the situation was safe and could be easily addressed. A risk analysis performed for mercury concluded that risks were low. The analysis also resulted in the creation of mercury remediation criteria well adapted to conditions at our water monitoring stations. A protocol is now developed to clean mercury appropriately where still required.

Findings from the work over the last year also reduced the number of sites suspected to be contaminated by 65%. Remote northern sites remain a major concern due to the logistics required to address their contamination. The department plans to spend an additional $4.5 million between 1998 and 2001 on this work.

Business Line Next Steps

Based in part on its performance in 1997-98, EC's priority commitments in 1998-99 include: performance measurement and reporting on results delivered under the Harmonization Accord; Millennium Eco-Communities Initiative to help communities set environmental goals and act on them; and more effective communication of EC's scientific knowledge and expertise to Canadians, especially concerning the importance of clean air, clean water, nature and the need for action on climate change.

Management and Administration

Total – Gross

Planned Spending	$ 62,238,645
Total Authorities	*$ 68,847,333*
1997-98 Actual Spending	**$ 68,171,395**

EC's planned spending represents budgets approved through the March Estimates process. Throughout the year, EC received new spending authorities through Supplementary Estimates which are represented by its total authorities.

Business Line Priority: Maintain department's capacity to perform well

This business line supports EC in achieving its environmental results and in contributing to the broader agenda of the government. It ensures adequate common systems and services, and leadership in the setting of strategic policy directions. It has one goal: to maintain the department's capacity to perform well in an environment of escalating pressures and accelerating change.

Long Term Goal:

A department that maintains and seeks to **enhance its capacity to perform well** in an environment of escalating pressures and accelerating change

Driven by globalization, new technologies, fiscal pressures and the changing fabric and expectations of society, the role of government and the challenges it faces are evolving. The federal government has actively responded to this situation by rethinking and shaping itself to be more effective in meeting the needs of Canadians.

For EC, this has meant being flexible and developing the skills and tools to deliver on its mandate in creative and cost-effective ways. The challenge is to ensure that EC's resources (human and financial) are allocated to essential responsibilities and priorities to achieve environmental results.

In 1997-98, EC's priorities under this business line were to:

- invest in human resources;
- develop a science and technology management framework;
- explore alternative service delivery;
- improve EC's results management and performance measurement; and
- renew and enhance EC's information technologies.

Prairie & Northern Region Aboriginal Recruitment Initiative

This initiative combines work experience and post-secondary education to develop qualified aboriginal Canadians for full time employment within EC.

It takes full advantage of existing student hiring programs. It also supports EC's Inuit Training and Employment Plan.

Human Resources: EC concentrated its efforts on building capacity for HR Management based on competencies, maintaining our knowledge and skills mix, and creating a healthy and productive workplace. Learning Fund dollars supported 29 projects, many of which addressed science and technology and community needs. Consultations were held with staff across the country to clarify HR needs and priorities, a revised Performance Management Framework was instituted; implementation of the Universal Classification System began, and, to improve

communications, an HR web site was launched. The HR Management infrastructure was significantly strengthened through its full integration into the Planning, Reporting and Accountability Structure.

Follow-up Audit of Occupational Safety and Health Program: In 1995, an EC audit focused on policy and management leadership within the department to promote and provide a safe and healthy work place; the implementation of a safety and health framework to ensure due diligence; the development of local occupational safety and health action plans; and proper allocation of resources and training to support the department's commitment to occupational safety and health. A follow-up conducted in 1997 showed that these concerns are being addressed.

Over 80% of budget spent on science-related activities, and over 60% of workforce in S&T occupations

Managing Science and Technology: EC is one of the federal government's leading science and technology (S&T) departments, with over 80% of its budget spent on S&T, and more than 60% of its workforce involved in scientific and technical occupations. The results of EC's science and technology activities are reflected throughout this Performance Report but in addition, in 1997-98, EC continued to make progress on its efforts to improve S&T management. It completed a framework which outlined key elements of S&T management practices. Other milestones included:

- an external evaluation of the department's S&T Executive Committee, and restructuring of the committee to achieve greater effectiveness in strategic S&T management;
- production of a Statement of Accreditation for operational laboratories;
- establishment of a departmental committee to ensure compliance with requirements of the Canadian Council on Animal Care for the ethical treatment and use of animals;
- development of an Intellectual Property Management Information System (IPMIS) to monitor the department's intellectual property by keeping an inventory of key information on inventors, inventions, patents and trademarks (e.g., renewal fees and expiration dates), licensing and collaborative agreements (e.g., fees and termination dates), intellectual property-generated revenues, and awards paid to inventors and innovators;
- renewal of the 3-year Memorandum of Understanding on S&T for Sustainable Development with the departments of Fisheries and Oceans, Agriculture and Agri-food, Natural Resources, and Health;
- formation, with Natural Resources Canada, of the Technologies Early Action Measures (Team) to advance technologies as a solution to Greenhouse Gas emissions;
- impact assessment of EC's Research and Development on stratospheric ozone;
- initiation, in association with the Nova Scotia Department of the Environment, of a draft Federal-Provincial-Territorial Sub-Agreement on Research and Development under the *Canada-Wide Accord on Environmental Harmonization*;

- Lead development of an interdepartmental Working Group on Women in Science and Technology under the Treasury Board S&T Human Resources Framework;
- review of commercialization efforts at the National Water Research Institute; and
- launch of the Framework for HR Management of the Federal S&T Community.

Alternative Service Delivery: The department examined alternative service delivery for weather services. Consultations were held with other departments, provinces, academia, business, employees and citizens. The current performance and future requirements of the Atmospheric Environment Program were analyzed. It was recommended that the best way to sustain quality weather services is through the development of a "departmental service agency." This agency would be clearly situated as an entity within EC. Work continues to shape and implement this new concept.

Commercialization and Cost Recovery: As EC increases the number of its commercialization initiatives the department remains committed to keeping clients' needs at the forefront of service delivery.

Total revenue of $70.6 million

In 1997-98, $70.6 million in revenue was realized from services provided by EC. Of this amount, $41.6 million came from external clients and an additional $29 million from other federal government departments. More than 50% of this revenue was generated through provision of scientific and professional services.

EC's cost recovery initiatives have direct benefits for Canadians. For example, the recent amendment of entrance fees for the Cap Tourmente National Wildlife Area permits more efficient services at the best possible cost to the public, taking into account the real needs of visitors.

Cost recovery also allows EC to allocate its resources efficiently and ensure equity in financing government programs. New service delivery approaches such as the arrangement between EC's Emergencies Engineering Division and a private sector partner benefits Canadians by providing leverage matching R&D funds from the private sector.

Increased capacity to reallocate resources based on results

Performance Measurement: In 1997-98, EC strengthened its internal performance measurement and accountability structure. Tools and workshops on accountability for results and performance were provided to managers. EC reviewed its Planning, Reporting and Accountability Structure (PRAS) to provide a clearer picture of how EC is clarifying its accountabilities and approach to resource allocation.

Information Technology: Information technology (IT) is an integral part of EC's daily operations. In 1997-98, EC worked with other government departmentss on Locally Shared Support Services (LSSS) initiatives to reduce costs while providing better services. For example, a shared Internet

link was developed as an LSSS initiative within the Terrasses de la Chaudière complex in the National Capital Region to provide higher speed access at a reduced cost. EC has developed and implemented a national server infrastructure to support national applications. This provides clients with access to departmental information at minimal cost.

Year 2000 readiness: EC has put in place a Year 2000 project structure, consisting of a Steering Committee, a National Project Officer, and Year 2000 coordinators for each Service and Region. A five-phase approach to getting to Year 2000 readiness has been established that involves: Awareness and Inventory, Detailed Assessment, Remediation, Validation, and Implementation. A Compliance Kit, which outlines the Departmental Year 2000 methodology, has been developed and distributed across the department. Environment Canada has one Government Wide Mission Critical System, i.e., Weather Forecasting and Warning.

In August 1998, the department completed its inventory of systems and applications. Detailed work plans are in place and remediation is underway, with a focus on testing. A Year 2000 Inventory System, containing information on all systems, is used for tracking and reporting on the status of the project. A risk assessment approach has been used to prioritize the items in the Inventory System. The department's Legal Services Unit has completed a Year 2000 legal analysis to ascertain the different types of liabilities and to aid in addressing them. A Risk Management Plan is in place. Areas of concern include the key weather systems, complexity of testing (e.g., testing of embedded systems, complex interfaces, and data dependency), and facilities. The Department will begin work on developing contingency plans in the Fall of 1998.

A communications plan for staff and external stakeholders is being implemented. The Year 2000 Communications Kit has been developed and distributed to program managers. Internal and external Web sites are in place to raise awareness and to provide project status. Letters are being sent out to regulated industries, and presentations are being made at federal/provincial and international fora.

Business Line Next Steps

Based in part on its performance in 1997-98, priorities of this business line for 1998-99 include: implementing the Universal Classification System (UCS); implementing the departmental service agency for weather services; implementing the new accountability structure; and ensuring EC's Year 2000 readiness of critical departmental systems.

3.3 Summary Table of Performance Expectations and Selected Accomplishments 1997-1998

All the commitments to follow were published in the Departmental Report on Plans and Priorities for 1997-98.

♦ indicates that the commitment was also published in the Sustainable Development Strategy.

Performance expectations for 1997-1998	Selected accomplishments
A Healthy Environment	
Reduce negative impacts on the atmosphere and help Canadians better understand and adapt to their consequences	
In implementing the National Action Program on Climate Change, publish Canada-wide country study to evaluate the social, economic and biological impacts of climate variability and change on the whole of Canada: initial evaluation in 1997 and resulting research program in 1997-98-2001-02.♦	⇨ Two national summary reports on the Canada Country Study released Nov. 1997. ⇨ Signed Kyoto Protocol and committed to reducing greenhouse gas emissions to 6% below 1990 levels for period 2008 -12.
In accordance with Federal Action Program on Climate Change, federal government operations will surpass national goal re greenhouse gas emissions.	⇨ On target to reduce emissions from federal operations by 27% below 1990 levels by 2005 ⇨ Signed agreement to purchase green power that will eliminate 2000 tonnes of CO_2 emissions annually.
Continue to implement EC's air program; specifically in 1997, promulgate Diesel Fuel Regulation (low sulphur diesel).	⇨ Diesel Fuel Regulation came into force January 1998; will result in a reduction of 5000 tonnes/year of particulate matter (10 microns and greater) emissions by 1999.
Negotiation of UN ECE Heavy Metals Protocol and Persistent Organic Pollutants Protocol.	⇨ Negotiation of Metals Protocol and Persistant Organic Pollutants Protocols concluded in February 1998, formally adopted and opened for signature at a Ministerial Conference on June 23, 1998. ⇨ Benzene in Gasoline Regulations promulgated in November 1997; result in reductions of emissions (about 3000 tonnes per year) beginning in 1999.
HCFCs will be frozen at a base level starting in 1996, and capped in accordance with new limits set by Parties to the Montreal Protocol (dealing with ozone depleting substances) at their seventh meeting *(from Part III expenditure plan 1996-97)*	⇨ Canada is meeting its commitment to freeze HCFC consumption at base level.
Elimination of the threat posed by toxics	
In 1997, a comprehensive strategy to fully implement CEPA.	⇨ Re-introduced CEPA (Bill C-32), renewed activity to prepare for implementation, including: plan for new requirements within available resource levels; preliminary work on priority areas e.g.: Pollution Prevention; screening Domestic Substances List; cleaner fuels regulations; public registry and greening government; and cost recovery regulations.
By 1998, develop 50 Canadian environmental quality guidelines for soil, water, sediment or biota for toxic substances of national concern.	⇨ Environmental quality guidelines on track for delivery in 1998. Scheduled for release in late 1998/early 99.

Summary Table of Performance Expectations and Selected Accomplishments 1997-1998 (cont'd)

Performance expectations for 1997-1998	Selected accomplishments
In 1997, release 1995 report of the National Pollutant Release Inventory.	⇨ 1995 NPRI released; showed pollutants released into environment declined by 6% from 1994 levels;3rd year of decline.
During 1997, announce regulations enabled by CEPA.	⇨ Regulations for virtual elimination of persistent bioaccumulative substances await promulgation of new CEPA. ⇨ Some PBT Regulations already in place e.g., Pulp and Paper Effluent, Chlorinated Dioxins and Furans Regulations. Monitoring indicates levels of these substances continues to decline (e.g., 99% reduction in B.C.'s Fraser River Basin).
During 1997, with OGDs and other stakeholders, market-based approaches and other policy tools for the management of toxic substances developed. ♦	⇨ In 1997-98, 8 of 14 multi-stakeholder reviews on Priority Substances List (PSL) 1 toxic substances completed, resulting in regulations/ other prevention, control instruments being developed. Remaining 6 reviews to be completed in 1998-99. ⇨ Code of practice to reduce benzene released from natural gas dehydrators implemented (Natural gas dehydrators are second to transportation in emissions of benzene).
Fairly and effectively enforced environmental laws and regulations	
During 1997, promote compliance and perform enforcement monitoring, take targeted and focused enforcement action against chronic offenders, recognize performance leaders in the private sector, etc.	⇨ Enforcement Program and National Pollutant Release Inventory Program built awareness with industry of their responsibilities re regulatory compliance. ⇨ Pacific &Yukon launched project on Internet to inform B.C. public about enforcement statistics. ⇨ Recognized performance leaders through EC Web site on pollution prevention successes.
Conservation and enhancement of Canadian and global biodiversity	
By 1997/98, implement 11 endangered species recovery plans and develop 8 new recovery plans.	⇨ Recovery plans for 9 species continue to be implemented: Henslow's Sparrow, Burrowing Owl, Whooping Crane, Marbled Murrelet, Harlequin Duck, Piping Plover, Loggerhead Shrike, Roseate Tern and the Peregrine Falcon. ⇨ New recovery plans developed for: Acadian Flycatcher, Hooded Warbler, King Rail.
Establish 8 National Wildlife Areas (NWA), 2 Migratory Bird Sanctuaries (MBS), and two Shorebird Reserves (1996-98). Secure habitat and influence land use under North American Waterfowl Management Plan (NAWMP) agreements.	⇨ Plans to establish 8 National Wildlife Areas (NWA's) 2 Migratory Bird Sanctuaries (MBS) and two Shorebird Reserves have not progressed as quickly as anticipated. ⇨ Proposed designation of Inkerman MBS announced in *Canada Gazette, Part I*, July, 1998. Chaplin Lakes/Old Wives' Lake Shorebird Reserve designated in 1997.
Implement provision for conservation land donations with Finance Canada and Revenue Canada (1996-97).	⇨ Under NAWMP, additional 61,752 ha of wetland habitat secured/enhanced, for total of 680,000 ha across Canada since 1986. ⇨ Under amendments to Income Tax Act for donation of ecologically sensitive lands, 19 gifts received. EC completed agreements with Nova Scotia and British Columbia, raising number of provincial partners in this initiative to 5.

Summary Table of Performance Expectations and Selected Accomplishments 1997-1998 (cont'd)

Performance expectations for 1997-1998	Selected accomplishments
Conservation and restoration of ecosystems	
Continue implementing ecosystems initiatives.	⇨ Some ecosystems initiatives, (or phases of initiatives) completed . Next steps: either new initiative or next phase to begin.
In 1997 and ongoing, provide expertise in support of the Arctic Council and the Arctic Environmental Protection Strategy. ♦	⇨ Supported Arctic Council during the development of Rules of Procedure for Arctic Council and on Terms of Reference for Sustainable Development. EC also chairs several Arctic Council working groups.
Safety from Environmental Hazards	
Weather and environmental predictions as well as timely and accurate warnings of severe weather events	
1997 to 2000, modernize the national Weather Warning System (radar and lightning detection networks, TV All Channel Alert).	⇨ Development of siting plans and selection and acquisition of land required for radar installations in 1998 and 1999. The National Radar Project (NRP) to expand network of weather radars to an all Doppler network of 29 stations will be completed by 2003. ⇨ By end 1997-98, 70% of lightning detection network completed. Full implementation by October 1998. Manitoba and B.C. signed contracts for lightning data, discussions underway with 6 other provinces. ⇨ With Canadian Cable Television Association (CCTA) and Canadian Association of Broadcasters (CAB), influenced CRTC to make changes in Distribution Regulations, allowing WeatherAlert initiative to proceed. ⇨ Four sites across Canada selected to run Cable TV "field trials" for 6 months, beginning summer 1998. EC's partners include CCTA, CAB, Industry Canada, and Pelmorex (The Weather Network).
In 1997, pilot project initiated for forecasting water levels and quantity. ♦	⇨ With National Research Council, a water flow forecasting support system was designed and 2 models completed.
From 1997 to 1999, advances in National Weather Program to provide local scale atmospheric parameters for environmental predictions (e.g. : smog forecast, agriculture, UV index).	⇨ Canadian Meteorological Centre (CMC) developed high resolution version of Global Environmental Multiscale (GEM) atmospheric model for more accurate forecast of meteorological and environmental parameters. Value proven during Eastern Canada winter 1997-98, including Jan. ice storm. ⇨ Enhanced version of GEM covering all of Canada being tested.
1997-98, Great Lakes-St-Lawrence Basin report; and Toronto-Niagara Region Study begins.	⇨ Proceedings of Bi-national Symposium "Adapting to Climate Change and Variability in the Great Lakes and St-Lawrence Basin," released. Goal: to improve understanding of climate change over this particular basin, and develop strategies to adapt social and economic activities to environmental changes. ⇨ Toronto-Niagara Region Study to examine impacts of atmospheric change and adaptation options in urban-rural region of Canada began.

Summary Table of Performance Expectations and Selected Accomplishments 1997-1998 (cont'd)

Performance expectations for 1997-1998	Selected accomplishments
Prevention or reduction in the frequency, severity and environmental consequences of emergencies that affect Canada	
Regional, national and international standards, agreements, codes of practice and technologies improved.	⇨ Worked with Canadian Coast Guard, Transport Canada, provinces and internationally to prevent intentional and unlawful spills which affect coastal wildlife population. ⇨ Enhanced Arctic fuel spill prevention through development of air-transportable waste fuel treatment and disposal systems; developed draft North American (ASTM) Standard for performance testing of oil spill sorbents; tested sorbents and established Internet database for test results.
Workshops on pollution prevention, including risk assessment techniques, presented to OGDs, industry and municipalities.	⇨ Training sessions given to public, industry and OGDs to improve preparedness and response capability. Promoted awareness of prevention, preparedness and response practices at federal facilities.
Computerized sensitivity mapping databases enhanced (1997-98).	⇨ Segregated sensitivity map atlases of Arctic integrated and Great Lakes Environmental Emergencies Sensitivity atlas made more user-friendly and data more accurate.
In 1997-98, spills notification and reporting capabilities enhanced.	⇨ Redeveloped National Environmental Emergencies System (NEES) for spill notification and reporting, improved data access, harmonized reporting with other networks; resulted in opportunities for cost sharing. ⇨ Report *Summary of Spill Events in Canada, 1984-1995* completed (available 1998-99), to help governments, industry and others focus on prevention. ⇨ Advice and support provided by EC and Regional Environmental Emergencies Team (REET) partners in over 200 significant spill events during 1997-98. ⇨ With US Coast Guard and US Minerals Management Service, experiments measured emissions from diesel burns; and with Norway studied international oil discharge. ⇨ Assisted Uruguay, Chile and Columbia to prepare for dealing with spills.
A Greener Society	
Promotion of responsible environmental citizenship by helping Canadians to effectively use timely environmental information and advice	
By 1998, national service standards implemented for weather services.	⇨ Charter for Weather Services to the Public containing a pledge covering quality of its products and services developed.
By 1997, Environmental Valuation Reference Inventory (EVRI) functional. ♦	⇨ The EVRI put on World Wide Web, data entry via Internet has begun.
Expansion of information products available on the Green Lane, access to Canadian youth and educators via SchoolNet.	⇨ Over 15 Web sites launched in 1997-98: Smog in Canada, Earth Tones II, and Science and the Environment (Issues and Bulletin, etc.).

Summary Table of Performance Expectations and Selected Accomplishments 1997-1998 (cont'd)

Performance expectations for 1997-1998	Selected accomplishments
Tools to prevent pollution and develop green technologies and capacity that create social, economic, and environmental benefits	
In 1997-98, shift delivery of Technology Verification Program to the private sector.	⇨ 1997-98 operational license agreement signed with ETV Canada Inc.; nine technology certificates issued.
Support to the Canadian Environmental Technology Advancement Centers (CETACs) to increase investments in the environmental sector.	⇨ New contracts with three CETACs to March 31, 2001 signed in 1997-98. Efficiency of CETACs in assisting SMEs to commercialize environmental technologies increased.
Encourage private sector investment and advance commercialization of environmental technologies for domestic and international markets through Technology Partnerships Canada Program (TPC).	⇨ Support to Industry Canada's TPC program through technical and policy review of private sector environmental applications for federal government financial investment. 1997-98 over 20 proposals reviewed by EC. Five projects realized TPC investment; collective value at $13.4 million.
Help position Canadian companies for environmental market opportunities through Canadian Environmental Industry Strategy (CEIS).	⇨ Workshops on Hospital Waste Management and ISO 14000, in Chennai, India as part of International Environmental Management Initiative (IEMI) portion of CEIS. Follow-up opportunities identified by Canadian participants, including two hospital waste treatment equipment suppliers signing marketing agreements with Indian partners.
During 1997, create the National Pollution Prevention Clearinghouse. ♦	⇨ Canadian Pollution Prevention Information Clearinghouse (CPPIC) launched at Globe '98. Web site database has sector-specific information, generic information, success stories, background concepts, new developments and potential solution providers. CPPIC being further developed through government and private sector cooperation.
By April 1, 1997, involve young Canadians in environmental programs with targets of 56 young people in 1997-98 and 132 in 1998-99. ♦	⇨ 81 internships started: 57 in Environmental Protection sector, 19 in Environmental Conservation and Preservation of Natural Resources Sector, 5 in Environmental Education, Communications and Research sector.
Public and other stakeholders mobilized and have access to information and other tools.	⇨ 190 Action 21 projects funded during 1997-98 for action on toxics, biodiversity, ecosystems and atmospheric change. ⇨ Educational materials prepared and distributed on climate change, smog and vehicle emissions reduction; supported development of curriculum materials by non-government experts on climate change. ⇨ Action 21 Network launched to identify and recognize local action taken by individuals and groups on environment. ⇨ Targeted advertising placed in First Nations newspapers to encourage more community proposals. ⇨ Partnership with Health Canada supported groups in tackling health/environment issues in 82 communities.
Mobilize effective partnerships nationally and provide strong international voice to build a sustainable development agenda	
By December 1997, table EC's Sustainable Development Strategy.	⇨ SDS tabled, April 1997.

Summary Table of Performance Expectations and Selected Accomplishments 1997-1998 (cont'd)

Performance expectations for 1997-1998	Selected accomplishments
In April 1997, implement the Environmental Management System in all Regions and Services. ♦	⇨ Implemented Environmental Management System (EMS).
By 1998, 80% diversion of office waste from landfill. ♦	⇨ 82% reduction of the amount of waste sent to landfills.
By 1998, reduce vehicle fleet and energy and water use, and convert vehicles to alternate fuels (75%). ♦	⇨ As of 1998, vehicle fleet reduced 28.3%, conversion in compliance with *Alternative Fuels Act*.
Make progress on assessment of priority contaminated sites.	⇨ 1997-98, 34 contaminated sites assessed.
Over time, implement Federal Buildings Initiative (FBI) projects in up to 100 buildings to make the department much more energy and water efficient.	⇨ Three FBI projects to reduce energy consumption by EC in Quebec and Ontario result in combined annual savings of $623,000.
Incorporate green accommodation standards into EC facilities and leased facilities through the Master Occupancy Agreement with Public Works and Government Services Canada; this includes adopting the new National Energy Code in all new construction.	⇨ With PWGSC, began development of Green Office Framework, a corollary to the Master Occupancy Agreement.
By 1998, 40 bilateral and multilateral agreements with provinces and territories will rationalize environmental management functions for specific environmental results. ♦	⇨ January 1998 Canada-Wide Accord on Environmental Harmonization and 3 sub-agreements on inspections, environmental assessment and environmental standards signed by CCME Ministers, except Quebec. ⇨ CCME Policy for Management of Toxic Substances (PMTS), (consistent with the TSMP) signed by all jurisdictions in January 1998. ⇨ Work underway on the 6 initial priorities for Canada-Wide Standards: particulate matter, ozone, benzene, mercury, dioxins and furans, and petroleum hydrocarbons. ⇨ the Canada-Quebec Agreement on the enforcement of federal pulp and paper effluent regulation in Quebec signed; revised Canada-B.C. agreement for compliance monitoring of pulp and paper mills prepared.
Promote integration of environmental consideration in Aboriginal self-government and land claims agreements.	⇨ Incorporation of environmental management input in self-government and treaty framework agreements, in B.C., Yukon, N.W.T., Labrador.
By 1998, over 25 cooperative initiatives to strengthen national environmental institutions in Latin America.	⇨ Officials participated at North American consultation on the UNEP Global Environment Outlook (GEO). GEO2 report, to be released in 1999, will provide overview of global and regional environmental issues and policy responses.

Section IV: Financial Performance

These financial tables do not apply to Environment Canada

Table 1: Financial Requirements by Authority (millions of dollars)

Vote	Environment Program	1997-98 Planned Spending	1997-98 Total Authorities	**1997-98 Actual****
1	Operating expenditures	407.2	437.1	**428.8**
5	Capital expenditures	26.2	36.6	**36.2**
10	Grants and contributions	33.7	43.2	**42.3**
	Minister of the Environment - Salary and motor car allowance*	–	–	–
	Contributions to employee benefit plans	40.4	40.4	**40.4**
	Total Program	**507.5**	**557.3**	**547.7**

* $49,000 not shown above due to rounding

** The 1997-98 Actuals do not include expenditures related to Crown asset (0.4).

Explanation of change:

The $40.2 million increase in the 1997-98 Actual Expenditures over the 1997-98 Planned Spending is due mainly to:

	$ Millions
Additional resources in respect of employee departure programs	9.1
Severance pay and other Treasury Board Vote 5 eligible costs	9.7
Net effect of the carryforward of the 1996-97 operating budget received in 1997-98 and the lapsing resources of 1997-98	6.6
Additional resources for the Canadian Lightning Detection Network	9.6
Contributions to the Commission for Environmental Cooperation	4.1
Other workload adjustments	1.1
Increase	**40.2**

Table 2: Departmental Planned versus Actual Spending by Business Line 1997-98 (millions of dollars)

Business Lines	FTEs	Operating*	Capital	Voted Grants & Contributions	Subtotal: Gross Voted Expenditures	Statutory Grants & Contributions	Total: Gross Expenditures	Less: Revenue Credited to the Vote	Total Net Expenditures
A Healthy Environment	1,618	198.3	6.2	23.4	227.9	–	227.9	(7.3)	220.6
	1,618	*213.1*	*5.5*	*24.4*	*243.0*	–	*243.0*	*(9.3)*	*233.7*
	1,790	**204.8**	**5.2**	**23.6**	**233.6**	–	**233.6**	**(9.3)**	**224.3**
Safety from Environmental Hazards	1,313	153.8	12.0	2.7	168.5	–	168.5	(38.0)	130.5
	1,313	*166.8*	*23.8*	*2.8*	*193.4*	–	*193.4*	*(41.4)*	*152.0*
	1,502	**162.6**	**22.1**	**2.8**	**187.5**	–	**187.5**	**(41.4)**	**146.1**
A Greener Society	668	102.5	6.7	7.6	116.8	–	116.8	(22.6)	94.2
	668	*100.9*	*6.2*	*15.7*	*122.8*	–	*122.8*	*(19.4)*	*103.4*
	628	**105.1**	**8.1**	**15.7**	**128.9**	–	**128.9**	**(19.4)**	**109.5**
Administration	750	60.9	1.3	–	62.2	–	62.2	–	62.2
	750	*68.0*	*1.0*	*0.3*	*69.3*	–	*69.3*	*(0.5)*	*68.8*
	787	**67.7**	**0.8**	**0.2**	**68.7**	–	**68.7**	**(0.5)**	**68.2**
Total	4,349	515.5	26.2	33.7	575.4	–	575.4	(67.9)	507.5
	4,349	*548.8*	*36.5*	*43.2*	*628.5*	–	*628.5*	*(70.6)*	*557.9*
	4,707	**540.2**	**36.2**	**42.3**	**618.7**	–	**618.7**	**(70.6)**	**548.1**
Other Revenues and Expenditures									
Revenue credited to the Consolidated Revenue Fund									(7.0)
									(*7.0*)
									(**9.5**)
Cost of services provided by other departments									50.3
									50.3
									51.7
Net Cost of the Program									550.8
									601.2
									590.3

* Operating includes contributions to employee benefit plans, Minister's allowances and the disposal of crown assets.

Note: Normal font: 1997-98 Planned Spending
Italic font: *1997-98 Total Authorities*
Bold font: **1997-98 Actual Spending**

Explanation of change:

The $40.6 million increase in the 1997-98 Actual Expenditures over the 1997-98 Planned Spending is due mainly to:	$Millions
Operating: The net effect of the 1996-97 operating budget carryforward received in 1996-97 offset by 1997-98 operating budget funds to be carried forward into 1998-99 (6.6); additional resources in respect of employee departure programs and other costs paid by Treasury Board Vote 5 (18.8); other reallocation of resources	24.7
Capital: Canadian Lightning Detection Network (9.6) and additional capital requirements	10.0
Grants and Contributions: Contribution to the Commission for Environmental Cooperation (4.1), and other grants and contributions requirements	8.6
Revenue credited to the Vote: The change is due to multiple minor factors.	2.7

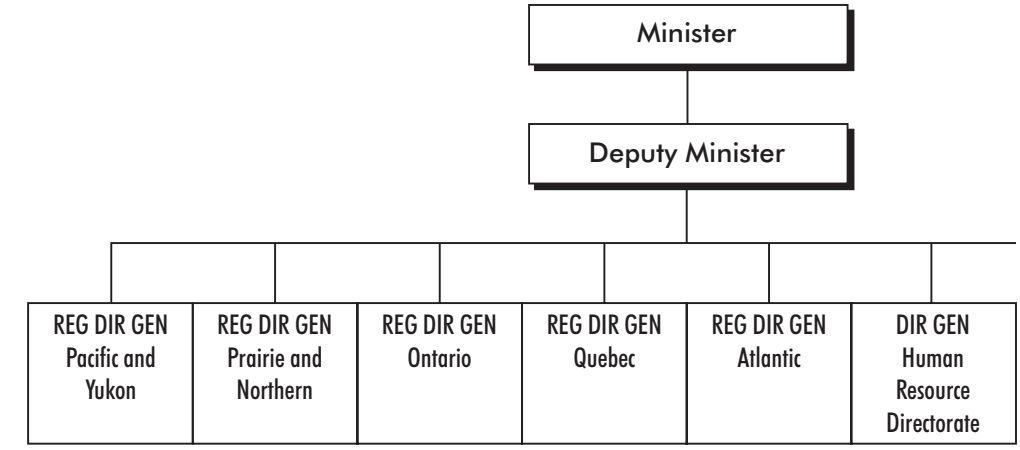
Table 3: Departmental Planned versus Actual Spending by Business Line 1995-96 to 1997-98 (millions of dollars)

Business Lines	Actual 1995-96	Actual 1996-97	Planned Spending 1997-98	Total Authorities 1997-98	Actual 1997-98
A Healthy Environment	247.3	235.2	220.6	233.7	224.3
Safety from Environmental Hazards	189.2	153.4	130.5	152.0	146.1
A Greener Society	129.1	120.5	94.2	103.4	109.5
Administration	85.2	72.0	62.2	68.8	68.2
Total	**650.8**	**581.1**	**507.5**	**557.9**	**548.1**

Explanation of change:

The $40.6 million increase in the 1997-98 Actual Expenditures over the 1997-98 Planned Spending is due mainly to:	$Millions
Additional resources in respect of employee departure programs	9.1
Severance pay and other Treasury Board Vote 5 eligible costs	9.7
Net effect of the carryforward of the 1996-97 operating budget received in 1997-98 and the lapsing resources of 1997-98	6.6
Additional resources for the Canadian Lightning Detection Network	9.6
Contributions to the Commission for Environmental Cooperation	2.0
Other workload adjustments	1.5
Increase	**40.6**

Table 5: Comparison of 1997-98 Planned Spending to Actual Expenditures by Organization and Business Line (millions of dollars)



	REG DIR GEN Pacific and Yukon	REG DIR GEN Prairie and Northern	REG DIR GEN Ontario	REG DIR GEN Quebec	REG DIR GEN Atlantic	DIR GEN Human Resource Directorate
A Healthy Environment	26.0 **25.5**	16.8 **19.4**	23.2 **21.5**	21.5 **23.1**	10.3 **11.9**	– –
Safety from Environmental Hazards	10.7 **13.7**	22.3 **26.5**	10.6 **10.6**	9.8 **10.6**	9.4 **10.4**	– –
A Greener Society	5.6 **9.0**	10.0 **13.6**	7.3 **7.9**	6.6 **9.8**	6.1 **7.4**	– –
Administration	2.5 **2.4**	5.9 **6.1**	7.7 **9.0**	3.9 **4.8**	4.6 **6.5**	6.8 **6.6**
Total	44.8 **50.6**	55.0 **65.6**	48.8 **49.0**	41.8 **48.3**	30.4 **36.2**	6.8 **6.6**

Note: Normal font: 1997-98 Planned Spending
Bold font: **1997-98 Actual Spending**

ADM Policy and Communications	Corporate Offices	ADM Corporate Services	ADM Atmospheric Environment Service	ADM Environmental Protection Service	ADM Environmental Conservation Service	Total	% of Total
–	–	–	27.0	37.1	58.7	220.6	
1.3	–	–	26.8	36.7	58.1	224.3	40.9%
–	–	–	63.5	3.5	0.7	130.5	
–	–	–	71.1	2.9	0.3	146.1	26.7%
13.2	0.1	0.4	7.2	34.2	3.5	94.2	
21.7	–	–	7.8	27.9	4.4	109.5	20.0%
0.3	6.7	21.5	0.6	1.2	0.5	62.2	
0.3	4.2	25.3	0.8	1.8	0.4	68.2	12.4%
13.5	6.8	21.9	98.3	76.0	63.4	507.5	
23.3	4.2	25.3	106.5	69.3	63.2	548.1	100.0%

Table 6: Revenues Credited to the Vote by Business Line (millions of dollars)

Business Lines	Actual 1995-96	Actual 1996-97	Planned Revenues 1997-98	Total Authorities 1997-98	Actual 1997-98
A Healthy Environment	3.9	5.9	7.3	9.3	9.3
Safety from Environmental Hazards	22.0	25.9	38.0	41.4	41.4
A Greener Society	21.1	21.1	22.6	19.4	19.4
Administration	–	–	–	0.5	0.5
Total Revenues Credited to the Vote	**47.0**	**52.9**	**67.9**	**70.6**	**70.6**

Table 7: Revenues Credited to the Consiladated Revenue Fund (CRF) by Business Line (millions of dollars)

Business Lines	Actual 1995-96	Actual 1996-97	Planned Revenues 1997-98	Total Authorities 1997-98	Actual 1997-98
A Healthy Environment	5.8	4.4	4.8	4.8	3.7
Safety from Environmental Hazards	0.3	0.9	1.5	1.5	4.1
A Greener Society	1.1	0.8	0.7	0.7	0.2
Administration	3.4	1.2	–	–	1.5
Sub-total	10.6	7.3	7.0	7.0	9.5
Unplanned	–	–	–	–	–
Total Revenues Credited to the CRF	**10.6**	**7.3**	**7.0**	**7.0**	**9.5**

Explanation of change:

The $2.5 million increase in the 1997-98 Actual Expenditures over the 1997-98 Planned Spending is due mainly to:	$ Millions
Employee benefits plan recoveries related to salary expenditures	1.1
Capital recoveries for aviation weather services from NAVCAN	1.3

Table 9: Transfer Payments by Business Line (millions of dollars)

Business Lines	Actual 1995-96	Actual 1996-97	Planned Spending 1997-98	Total Authorities 1997-98	Actual 1997-98
Grants					
A Healthy Environment	10.5	6.9	5.1	3.7	2.9
Safety from Environmental Hazards	1.1	0.9	0.9	0.6	0.6
A Greener Society	2.9	2.1	0.2	0.7	0.7
Administration	–	–	–	–	–
Total Grants	**14.5**	**9.9**	**6.2**	**5.0**	**4.2**
Contributions					
A Healthy Environment	21.8	22.2	18.3	20.7	20.7
Safety from Environmental Hazards	2.4	2.1	1.8	2.2	2.2
A Greener Society	15.2	14.2	7.4	15.0	15.0
Administration	–	–	–	0.3	0.2
Total Contributions	**39.4**	**38.5**	**27.5**	**38.2**	**38.1**
Total Transfer Payments	**53.9**	**48.4**	**33.7**	**43.2**	**42.3**

Explanation of change

The $8.6 million increase in the 1997-98 Actual Expenditures over the 1997-98 Planned Spending is as follows:	$ Millions
Grants	
Grants for the implementation of the Montreal Protocol on substances which deplete the ozone layer	(1.2)
Grant to the Wildlife Habitat Canada Foundation	(0.7)
Other	(0.1)
Contributions	
Contribution for the Commission for Environmental Cooperation	4.1
Contribution to the United Nations University for the establishment of the International Network on Water, Environment and Health (UNU-INWEH)	0.8
Contribution under Action 21 Program to help Canadians take individual and collective actions in their communities	0.7
Contribution under the Youth Employment Initiatives	2.0
Contributions — Building International Partnership	0.9
Membership fee — World Meteorological Organization	1.8
Other	0.3
Increase	**8.6**

Table 10: Capital Spending by Business Line (millions of dollars)

Business Lines	Actual 1995-96	Actual 1996-97	Planned Spending 1997-98	Total Authorities 1997-98	Actual 1997-98
A Healthy Environment	10.3	6.0	6.2	5.5	5.2
Safety from Environmental Hazards	22.8	11.3	12.0	23.8	22.1
A Greener Society	13.3	9.4	6.7	6.2	8.1
Administration	3.4	1.2	1.3	1.0	0.8
Total Capital Spending	**49.8**	**27.9**	**26.2**	**36.5**	**36.2**

Explanation of change

The $10 million increase in the 1997-98 Actual Expenditures over the 1997-98 Planned Spending is due mainly to additional resources for the Canadian Lightning Network ($9.6M)

Table 11: Capital Projects by Business Line (millions of dollars)

Business Lines	Current Estimated Total Cost	Actual 1995-96	Actual 1996-97	Planned Spending 1997-98	Total Authorities 1997-98	Actual 1997-98
A Healthy Environment						
Revitalization of laboratories – National Water Research Institute	5.7	0.9	0.4	–	–	0.8
Safety from Environmental Hazards						
Doppler upgrade – Radar Network Modernization	39.2	0.4	0.4	2.0	2.0	2.6
North American Lightning Detection Network	10.1	–	–	–	8.5	9.6
Weather station construction Eureka N.W.T.	4.1	0.5	0.5	0.4	0.4	0.3
Weather Warning Delivery System	3.8	0.4	–	0.5	0.5	0.1
Regional Insfrastructure Renewal	2.5	–	–	–	–	0.5
A Greener Society						
Ice Integration and Analysis System	5.1	1.9	0.9	0.6	0.6	0.2
Mercury manometer replacement program	3.8	0.1	1.0	1.3	1.3	0.5
Automation & real-time access to discharge data-hydrology	3.3	–	0.3	–	–	0.3
Data processing upgrades for Radarsat	2.7	1.0	0.8	0.2	0.2	0.2
Construction of new wing – Environmental Technology Centre	2.6	0.7	1.9	–	–	1.2
Modernization of the Climate Observing Program	0.5	–	0.1	–	–	0.2

Table 15: Contingent Liabilities (millions of dollars)

There are currently 11 claims against the department on various grounds including breach of contract, damage to property, and physical damage.

As of March 31, 1998, the contingent liabilities associated with the claims were estimated at $ 0.5 million.

Section V: Consolidated Reporting

5.1 Statutory annual reports

Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act (WAPPRIITA)

Purpose: This Act and Regulations came into effect in May, 1996. WAPPRIITA implements Canada's international obligations under the *Convention on International Trade in Endangered Species of Wild Flora and Fauna* (CITES). Canada was one of the original Parties to the Convention, which had been adopted by 143 countries by the end of 1997.

As well as implementing trade controls under CITES, WAPPRIITA protects Canadian and foreign species of animals and plants by making it an offense to transport illegally obtained wildlife between provinces or between Canada and other countries. It also safeguards Canadian ecosystems by controlling importation of certain harmful species.

Administration: Environment Canada coordinates and administers WAPPRIITA through national CITES management and scientific authorities. CITES authorities are also located in the Department of Fisheries and Oceans (DFO) for fish and marine mammals, and in each province and territory (except Alberta), which issue export permits for other species. The Canadian Food Inspection Agency (CFIA) helps Environment Canada process CITES documentation for the export of artificially propagated plants.

The table below summarizes the CITES permits which were issued in 1997.

CITES Permits issued in Canada in 1997

Jurisdiction	Import	Export	Temporary Export/import	Scientific
Canada	159	9326	210	36
Alberta		N/A		
British Columbia		2265		
Manitoba		1710		
New Brunswick		1170		
Newfoundland		133		
N.W.T.		69		
Nova Scotia		59		
Ontario		5424		
P.E.I.		0		
Quebec		1780		
Saskatchewan		484		
Yukon		198		
Total	**159**	**22,618**	**210**	**36**
Appendix I species included on permit	148	183	79	1

No permits were issued for the import of species listed under the Act as potentially harmful.

Memoranda of Understanding were signed in 1997 with Saskatchewan and the Yukon Territory as a basis for cooperation in the administration and enforcement of the Act. Negotiations were well advanced with Manitoba, Alberta and the Northwest Territories and were concluded in 1998. Similar MOUs were under discussion with remaining provinces.

Consultations began in 1997 on a number of regulatory initiatives to reduce administrative burden, while improving enforcement of WAPPRIITA. These include a personal and household effects exemption, personal pets provisions and labeling provisions.

Enforcement: Enforcement of WAPPRIITA is coordinated by Environment Canada and carried out by 5 regional offices (Pacific and Yukon, Prairie and Northern, Ontario, Quebec, and Atlantic), in cooperation with Revenue Canada, the RCMP, DFO and provincial and territorial wildlife agencies.

In 1997 Environment Canada and its partners continued efforts to promote awareness and compliance with WAPPRIITA by providing information to travellers, the import-export community, industry, outfitters and the general public.

At the same time, monitoring was increased at many ports of entry. Environment Canada conducted more than 5,700 inspections and initiated over 300 investigations which resulted in the seizure of more than 170,000 items which were exported, imported or transported in contravention of WAPPRIITA.

International cooperation: Canada participated in the 10th Meeting of the Conference of the Parties (COP10), held in Zimbabwe in June, 1997. The Canadian delegation included representatives of Environment Canada, Foreign Affairs and International Trade, Fisheries and Oceans, Natural Resources Canada (Canadian Forest Service) and the provinces of British Columbia and Newfoundland and Labrador. The delegation met daily with Canadian non-governmental organizations attending as observers.

Decisions affected several Canadian species. The wood bison was transferred from Appendix I to Appendix II, thus permitting a controlled export of ranched wood bison. All Sturgeons were listed on Appendix II, and several artificially propagated species of cacti and cyclamen were removed from CITES appendices. The most contentious proposals were to down-list the populations of African Elephant from Zimbabwe, Botswana and Namibia, to permit a controlled trade in live animals and sports-hunted trophies, as well as to permit the sale of a quota of registered stockpiles of tusks to Japan. These proposals were approved, subject to stringent conditions.

Environment Canada works actively with the wildlife subgroup of Interpol, the World Customs Organization (CITES Working Group) and the North American Wildlife Enforcement Working Group on international wildlife enforcement activities.

International River Improvements Act

Purpose: This Act received assent on July 11, 1955. It provides for licensing international river improvements to ensure that Canada's water resources are developed and utilized in the best national interest. The Act does not apply to international river improvements built under the authority of an Act of the Parliament of Canada, or situated within boundary waters as defined in the Boundary Waters Treaty of January 11, 1909, or those constructed, operated and maintained solely for domestic, sanitary or irrigation purposes.

Administration: Regulations for administering this Act were passed by Order-in-Council P.C. 1955-1899 dated December 29, 1955, and amended P.C. 1987-1943, dated September 17, 1987, and P.C. 1993-764 dated April 20, 1993. The Department of the Environment has administered this Act since June 1971.

Activity: During 1997, no licenses were issued under the Regulations of the International River Improvements Act. However, a project by International Skyline Gold Corporation, of Vancouver, B.C. for the construction of a run-of-the-river hydroelectric plant on the Iskut River in northwestern B.C., was excepted from the application of the Act in accordance with Regulations amended in 1987.

A project by Columbia Power Corporation of B.C., to develop a short canal and powerhouse downstream of the Keenleyside Dam on the Columbia River near Trail, B.C., was excepted from the application of the Act in accordance with Regulations amended in 1987.

Other Statutory and Departmental Reports:

Access to Information Act
Canada Water Act
http://www.ec.gc.ca/water/index.htm
Canadian Environmental Protection Act
http://www.ec.gc.ca/cepa/index_e.html
International River Improvements Act
Privacy Act

5.2 EC's Sustainable Development Strategy: Year One Performance Highlights

For additional information, visit Environment Canada's website at www.ec.gc.ca

Goals	Objectives	Highlights of Progress to Date
Strengthen EC's ability to meet Sustainable Development (SD) goals	⇨ Acquire techniques and tools for socio-economic analysis in the design of EC policies ⇨ Develop SD indicators ⇨ Enhance EC's capacity to employ science, socio-economic analyses and market-based approaches, particularly in the implementation of legislation	⇨ working with Ontario on Pilot Emission Reduction Trading (PERT) project to draft recommended trading rules ⇨ partnership with 5 provinces, OGDs and other stakeholders on GHG emission reduction trading pilot (GERT) ⇨ Canada hosted emissions trading workshop on Climate Change (CC) at Globe '98 ⇨ developing performance-based regulations (e.g. benzene in gasoline regulations) and other tools (e.g. voluntary agreements such as the Dofasco MOU) that are cost-effective in achieving environmental objectives ⇨ 8 of 14 multi-stakeholder reviews of Priority Substances List 1 toxic substances completed - these considered other prevention and control instruments alongside regulations. ⇨ under MOU with 4 Natural Resource Departments, the Wkg Group on Valuing Natural Capital began a project to value water in Canada ⇨ Environmental Valuation Reference Inventory (to help determine value of non-marketed goods by using cost-benefit and other analysis) was established on Web, data entry via Internet has begun and collaborators have begun using it ⇨ Canada Country Studies on CC released - first ever national assessment of the social, biological and economic impacts of climate change for Canada
Be a more effective advocate of SD	⇨ Build partnerships for SD of the North ⇨ Strengthen relationships and build partnerships with Aboriginal People and their structures of governance ⇨ Improve EC interdependencies and partnerships within government ⇨ Develop partnerships with the private sector and NGOs ⇨ Engage youth	**Aboriginal People:** ⇨ successful incorporation of environmental management input in self-government and treaty framework agreements (B.C., Yukon, N.W.T., Labrador) ⇨ completing revised "Guidelines for Negotiation: Environmental Management in Self-Government Agreements and Comprehensive Land Claims" - result of work with PCO, DIAND, DFO, CH, NRCan, AAFC ⇨ partnership was established between EC, the Eskasoni Fish and Wildlife Commission, the University College of Cape Breton, Enterprise Cape Breton Corporation, the N.S. Department of Fisheries and Aquaculture, the N.S. Department of Environment and the N.S. Aquaculture Association to carry out a shellfish water quality monitoring program in Bras d'Or Lakes - objective of this project is to maintain and enhance the water quality for the sustainable development and use of the shellfish resource, and to provide training and technology transfer to the Eskasoni First Nation.

Goals	Objectives	Highlights of Progress to Date
Be a more effective advocate of SD (cont'd)		**Within government:** ⇨ EC (Quebec Region) coordinated an interdepartmental working group on SD to prepare a regional interdepartmental action plan for SD for the Conseil des hauts fonctionnaires fédéraux du Québec (CHFFQ). A first draft was presented in March 1998 and the final plan should be ready by September ⇨ joint management meetings with NRCan and AAFC in 1997 to identify shared policy priorities - many joint initiatives have been completed ⇨ work with NRCan on climate change issues - EC takes the lead on development of climate change environmental policy including climate science policy agendas ⇨ Canada-Wide Accord on Environmental Harmonization and sub-agreements on inspections, Environmental Assessment (EA) and environmental standards signed - work underway on Annex (to address public participation, Aboriginal involvement and accountability) ⇨ departmental review of international activities initiated ⇨ leadership of Interdepartmental Network on SDS **Private sector and NGOs:** ⇨ Canadian Environmental Industry Strategy - over 34 capacity building/technology transfer projects undertaken in 1997-98 in 9 developing countries under the International Environmental Initiative and various bilateral MOUs ⇨ new contracts signed with the Canadian Environmental Technology Advancement Centres, extending to 31 March 2001, and including strong economic and environmental performance measurement indicators - efficiency of the CETACs in assisting SMEs to commercialize environmental technologies, continued to increase during the year ⇨ support to Industry Canada's TPC program in provision of technical and policy review of private sector applications for federal government financial investment - over 20 proposals reviewed in 1997-98 ⇨ Canadian Pollution Prevention Information Clearinghouse launched in March 1998 ⇨ voluntary approaches - e.g., Dofasco MOU; CPPI voluntary program underway to reduce emission of benzene from refineries ⇨ through EC's bilateral program under the Mulitlateral Fund (MLF) of the Montreal Protocol, 6 Canadian companies engaged in bilateral projects worth US$ 1,222,560; contributed to important reductions in ozone depleting substances

Goals	Objectives	Highlights of Progress to Date
Be a more effective advocate of SD (cont'd)		**Youth:** ⇨ 81 internships started: 57 in Environmental Protection sector, 19 in Environmental Conservation and Preservation of Natural Resources Sector and 5 in Environmental Education, Communications and Research sector ⇨ youth round table established - made up of diverse group of 14 young Canadians; have provided advice to Minister on issues of concern, reviewed funding program to identify barriers to youth involvement, etc. ⇨ Polaris Network/Northern Star Awards launched ⇨ youth journalist initiative allowed for participation of young people at UN General Assembly (Rio 5th Anniversary) and 10th Anniversary of Montreal Protocol meeting
Give Canadians the tools they need to make sound decisions in a changing environment	⇨ Warn Canadians of environmental risks to their health and safety ⇨ Provide services and expertise to contribute to the competitiveness of Canadian businesses in the global marketplace ⇨ Predict a wider variety of environmental parameters using various time scales ⇨ Increase efforts aimed at environmental education and communication	⇨ N.B. Smog Forecast Program implemented in summer 1997 resulting in "one-stop" shopping for air quality information (Partners: N.B. depts of Environment and Health and Community Services, N.B. Lung Association, Citizens Coalition for Clean Air and Saint John Air Resource Management Areas Committee) - survey revealed residents generally satisfied with ease of getting and understanding the smog forecast ⇨ conceptual design of water flow forecasting decision support system completed (ultimately to minimize flood dangers and maximize benefits of reservoirs) ⇨ daily forecast program aimed at reducing the use of pesticides was carried out in partnership with the provincial government and the farming community during the summer of 1997 in P.E.I. - goals of the program were reduced environmental impacts and enhanced financial benefits ⇨ EC issued regular diagnostic and trajectory forecasts for Diamondback moth in summer 1997, which poses threat to canola-growing regions. Forecasts provide warnings to regions affected and allows for efficient use of pesticides. (Partners: AAFC, Saskatchewan Agriculture and Food and Canola Council of Canada) ⇨ Atlantic Environmental Prediction Research Initiative (AEPRI) involving integrated environmental modeling launched - R&D for regional environmental simulation and prediction on all time scales in the Atlantic region (Partners: Atlantic Region AEB and CARD AES, other national and regional governments, Dalhousie University) ⇨ two workshops held to look at integrated assessments of multi-air issues, including acidic deposition, global warming, stratospheric ozone depletion, tropospheric ozone episodes, hazardous air pollutants and suspended particulate matter - consensus reached that analytical methods such as biogeochemical cycle methods, ecological systems approach, risk assessment, the no-regrets principle, ecological economics/ the precautionary principle and cumulative environmental assessments need to be addressed

Goals	Objectives	Highlights of Progress to Date
Give Canadians the tools they need to make sound decisions in a changing environment (cont'd)		⇨ EC organized IPCC Workshop on Adaptation to Climate Variability and Change that was hosted by Government of Costa Rica (March 1998) - this workshop has placed Canada in a global leadership position on Adaptation work ⇨ research underway on impacts of climate variability and change on sustaining Great Lakes coastal wetlands (partners: AAFC, WRI, NOAA, Ontario Ministry of Natural Resources, University of Waterloo, Wetland Habitat Fund) and on impacts of climate change of Bay of Quinte (partners: Bay of Quinte RAP, Heritage Canada, DFO) ⇨ additional Web sites launched in 97-98 include: Smog in Canada, Earth Tones II, Canadian Pollution Prevention Clearinghouse, Science and the Environment (Issues and Bulletin), Canadian Biodiversity Information Network (revised), Ice Storm '98, Montreal Protocol 10th Anniversary, Apartment 3R, Environmental Technology Advancement, Stratospheric Ozone, Environmental Emergencies, and From Laboratory to Action: Science and Technology at Environment Canada
Set a good example in the greening of government operations	⇨ Play an advocacy role and lead by example in implementing sustainable development	⇨ through successful implementation of its Environmental Management System (EMS), EC leading greening activities across government, with other organizations and on international scene ⇨ work nationally through FCEMS - co-chair of FCEMS and participant on many sub-committees including ad hoc working group on Performance Measures for Sustainable Government Operations ⇨ work internationally through OECD to promote EMS and other green government practices in other countries - EC/OECD partnership to develop an EMS and greening of OECD operations - EC expert to work directly with OECD. ⇨ produced federal guide to environmental legislation, policies and codes - delivered course on compliance and due diligence to more than 85% of EC key facility managers and operations contacts ⇨ the 2 targets from SDS for this reporting period have both been met (80% diversion of office waste from landfill by 1997-98: surpassed at 82%; commence implementation of EMS by spring 1997) ⇨ as of March 1998 EC had reduced its fleet by 28.3%, well on its way to 30% target that is to be achieved by the end of calendar year 1998, and met its requirements under the *Alternative Fuels Act* with regard to conversion of vehicles to alternative fuels. ⇨ EC has modified financial management system in order to be able to measure progress in adopting green procurement

5.3 Regulatory Initiatives

Performance of regulatory initiatives

Purpose of legislative or regulatory initiative (as reported in the FRP)	Expected results (as reported in the FRP)	Performance measurment criteria	Results achieved
Trichloroethylene and Tetrachloroethylene Regulations (in Solvent Degreasing Operations) Under the Canadian Environmental Protection Act (CEPA), the intent of regulations is to reduce emissions of Trichloroethylene (TCE) and Tetrachloroethylene (PERC) in industry by establishing a cap on the use of these solvents. The regulations will control consumption of chlorinated solvents by solvent degreasing operations. Consumption will be frozen at past levels and will have to come down to 35% of that level three years after the regulations are promulgated.	Gradual reduction in consumption of trichloroethylene and tetrachloroethylene by solvent degreasing operations. Consumption is to decrease by 65% within 3 years of the promulgation of the regulations.	All degreasers will have to report annually the amount of TCE and PERC they purchase; distributors will have to report annually all sales to degreasers of TCE and PERC.	Regulations have not yet been promulgated. They should be ready for publication in the Canada Gazette Part I in early 1999 and promulgated in late 1999.
Cleaner Gasoline Regulations (now called Benzene in Gasoline Regulations) Under CEPA, the intent is to reduce emissions of benzene from vehicles by limiting the amount of benzene in gasoline to a maximum concentration of 1% by volume, and controlling the Benzene Emissions Number which relates to gasoline composition and predicted emission of benzine from vehicles.	Lowering the concentration of benzene in gasoline will result in lower emissions of benzene from motor vehicles.	Gasoline samples to measure the concentration of benzene in gasoline. Reduction in ambient levels of benzene.	Regulation does not take effect until July 1999. No results achieved to date.
Alice Arm Tailings Deposit Regulations (Revocation) Under the *Fisheries Act*, the intent is to revoke this regulation after consultation with stakeholders. The regulations authorized the mine to deposit mine tailings into the bottom of Alice Arm, B.C. The mine has been closed since 1982.			The regulations have yet to be revoked because of other priorities.

Purpose of legislative or regulatory initiative (as reported in the FRP)	Expected results (as reported in the FRP)	Performance measurment criteria	Results achieved
Tetrachloroethylene Regulations (In the Dry Cleaning Sector) To reduce emissions of tetrachloroethylene (PERC) in the dry cleaning sector. The proposed regulation implements the following recommendations: (I) phase-out use of tetrachloroethylene in old technology equipment; (ii) establish tetrachloroethylene consumption rating for new equipment; (iii) mandate seller responsibility for tetrachloroethylene waste management; and (iv) require reporting on import and distribution of tetrachloroethylene.	Gradual reduction of tetrachloroethylene consumption.	Suppliers and sellers of PERC to dry cleaners to report on the quantity sold.	Regulations have not yet been promulgated. They should be ready for publication in the Canada Gazette Part I in late 1998 and promulgated in early 1999.
New Substances Notification Regulations — Amendment (Part III – Biotechnology Products) CEPA requires that all substances new to Canada be reported to the Minister of the Environment for an assessment of whether they may be "toxic," before the substances are manufactured or imported. The amendment extended existing Regulations to cover biotechnology products. These Regulations include information requirements.	Reduce the risks associated with the introduction of new organisms, biochemicals, and biopolymers.	Companies submitting notifications for the introduction of new biotechnology products.	The regulations came into force Sept. 1, 1997. A compliance promotion strategy is being implemented. Notifications are being received and decisions made under the Regulations.
Diesel Fuel Regulations These Regulations require that the concentration of sulphur in diesel fuel for use in light-duty vehicles, light-duty trucks and heavy-duty vehicles shall not exceed 0.05% of the fuel by weight.	Compliance with the Regulations will result in reduction of emissions of primary air pollutants such as particulate matter and sulphur dioxide, as well as lower ambient air concentrations of secondary pollutants such as ground level ozone and particulates.	Reduction in ambient levels of ground level ozone and particulates. Samples to measure the concentration of sulphur in diesel fuel.	The Regulations were published in Canada Gazette Part II on Feb.19, 1997. Effective date of the Regulations is Jan. 1, 1998 (no performance indicators to date).
Migratory Birds Regulations (MBRs), Amendment Protect migratory game birds from harmful effects of lead by requiring hunters to use only non-toxic shot when hunting most migratory game birds in Canada. To be achieved by phasing in a ban on lead shot, first in wetland areas by Sept. 1997, and nationally by Sept. 1999.	**short term:** Protection for most migratory game birds from lead poisoning in areas in which they are most vulnerable (wetlands). Increased availability of non-toxic shot alternatives for hunters. **long term:** With national ban in 1999, decrease in deposition of lead into the environment by 800 tonnes annually.	**short term:** Decrease in the number of migratory game bird hunters who hunt with lead shot. **long term:** Reduction in lead levels in tissue of hunter-killed migratory game birds.	**short term:** The decrease amount of lead deposited into the environment. **long term:** The decrease amount of lead deposited into the environment.

Section VI: Other Information

6.1 Contacts for further information

Headquarters Directors of Communications

Louise Power
Environmental Protection Service
351 St. Joseph Boulevard
12th floor
Hull, Quebec
K1A 0H3
Telephone: (819) 953-6603
Fax: (819) 953-8125
E-mail: Louise.Power@ec.gc.ca

Karen Dufton
Environmental Conservation Service
351 St. Joseph Boulevard
9th floor
Hull, Quebec
K1A 0H3
Telephone: (819) 994-6079
Fax: (819) 994-0196
E- mail: Karen.Dufton@ec.gc.ca

Linda Larocque
Atmospheric Environment Service
10 Wellington Street
4th floor
Hull, Quebec
K1A 0H3
Telephone: (819) 997-0458
Fax: (819) 994-8841
E-mail: Linda.Larocque@ec.gc.ca

Dianne Clarke
Strategic Policy Communications
10 Wellington Street
25th floor
Hull, Quebec
K1A 0H3
Telephone: (819) 953-2853
Fax: (819) 994-6484
E-mail: Dianne.Clarke@ec.gc.ca

Regional Managers of Communications

Wayne Eliuk
Atlantic Region
Environment Canada
45 Alderney Drive
Dartmouth, Nova Scotia
B2Y 2N6
Telephone: (902) 426-1930
Fax: (902) 426-5340
E-mail: Wayne.Eliuk@ec.gc.ca

Clement Dugas
Quebec Region
Environment Canada
1141 Route de l'Église
Sainte-Foy (Quebec)
G1V 4H5
Telephone: (418) 648-5777
Fax : (418) 648-3859
E-mail: Clement.Dugas@ec.gc.ca

Maureen Martinuk
Ontario Region
Environment Canada
4905 Dufferin Street
Downsview, Ontario
M3H 5T4
Telephone: (416) 739-4787
Fax: (416) 739-4776
E-mail: Maureen.Martinuk@ec.gc.ca

Nancy Hnatiuk
Prairies and Northern Region
Environment Canada
123 Main Street Suite 150
Winnipeg, Manitoba
R3C 4W2
Telephone: (204) 983-4819
Fax: (204) 983-0964
E-mail: Nancy.Hnatiuk@ec.gc.ca

Mary Beth Berube
Pacific and Yukon Region
Environment Canada
700-1200 West 73rd Avenue
Vancouver, British Columbia
V6P 6H9
Telephone: (604) 664-9513
Fax: (604) 664-9517
E-mail: MaryBeth.Berube@ec.gc.ca

6.2 Legislation and Associated Regulation Administered

The Minister has sole responsibility to Parliament for the following acts and regulations:

Canada Water Act	R.S. 1985, c. C-11
Canada Wildlife Act	R.S. 1985, c. W-9
The administration, management and control of certain public lands was assigned pursuant to various statutory instruments.	
Wildlife Area Regulations	C.R.C., vol. XVIII, c.1609
Canadian Environmental Assessment Act	S.C. 1992, c. 37
Comprehensive Study List Regulations	SOR/94-638
Regulations Respecting the Coordination by Federal Authorities of Environmental Assessment Procedures and Requirements	SOR/97-181
Exclusion List Regulations	SOR/94-639
Federal Authorities Regulations	SOR/96-280
Inclusion List Regulations	SOR/94-637
Law List Regulations	SOR/94-636
Projects Outside Canada Environmental Assessment Regulations	SOR/96-491
Canadian Environmental Protection Act	R.S. 1985, c. 16 (4th Supp.)
Alberta Equivalency Order	SOR/94-752
Asbestos Mines and Mills Regulations	SOR/90-341
Benzene in Gasoline Regulations	SOR/97-493
Chlor-Alkali Mercury Release Regulations	SOR/90-130
Chlorobiphenyls Regulations	SOR/91-152
Chlorofluorocarbon Regulations 1989	SOR/90-127
Contaminated Fuel Regulations	SOR/91-486
Diesel Fuel Regulations	SOR/97-110
Domestic Substances List	SOR/94-311
Export and Import of Hazardous Wastes Regulations	SOR/92-637
Federal Mobile PCB Treatment and Destruction Regulations	SOR/90-5
Fuels Information Regulations, No.1	C.R.C., vol. IV, c.407
Gasoline Regulations	SOR/90-247
List of Hazardous Wastes Authorities	SOR/92-636
List of Toxic Substance Authorities	SOR/94-162
Masked Name Regulations	SOR/94-261
New Substances Notification Regulations	SOR/94-260
Ocean Dumping Regulations, 1988	SOR/89-500
Ozone-Depleting Substances Regulations	SOR/95-576
Ozone-Depleting Substances Products Regulations	SOR/95-584
PCB Waste Export Regulations, 1996	SOR/97-109
Phosphorus Concentration Regulations	SOR/89-501
Prohibition of Certain Toxic Substances Regulations	SOR/96-237
Pulp and Paper Mill Defoamer and Wood Chip Regulations	SOR/92-268
Pulp and Paper Mill Effluent Chlorinated Dioxins and Furans Regulations	SOR/92-267
Registration of Storage Tank Systems for Petroleum Products and Allied Petroleum Products on Federal Lands Regulations	SOR/97-10
Secondary Lead Smelter Release Regulations	SOR/91-155
Storage of PCB Material Regulations	SOR/92-507
Toxic Substances Export Notification Regulations	SOR/92-634

6.2 Legislation and Associated Regulation Administered (cont'd)

Vinyl Chloride Release Regulations, l992	SOR/92-631
Canadian Environment Week Act	R.S. 1985, c. E-11
Department of the Environment Act	R.S. 1985, c. E-10
Environmental Contaminants Act	R.S. 1985, c. E-12
Heritage Railway Stations Protection Act	R.S. c. 52 (4th Supp.)
International River Improvements Act	R.S. 1985, c. I-20
International River Improvements Regulations	C.R.C., vol. X, c.982
Lac Seul Conservation Act	S.C. 1928, c. 32
Lake of the Woods Control Board Act	S.C. 1921, c. 10 and S.C. 1958, c. 20
Manganese-Based Fuel Additives Act	S.C. 1997, c. 11
Migratory Birds Convention Act, 1994	S.C. 1994, c. 22
Migratory Birds Regulations	C.R.C., Vol. XI, c.1035
Migratory Bird Sanctuary Regulations	C.R.C., Vol. XI, c.1036
National Wildlife Week Act	R.S. 1985, c. W-10
Weather Modification Information Act	R.S. 1985, c. W-5
Weather Modification Information Regulations	C.R.C., Vol. XVIII, c. 1604
Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act	S.C. 1992, c. 52
Wild Animal and Plant Trade Regulations	SOR/96-263

The Minister shares responsibility to Parliament or assists other departments in administering the following acts and regulations:

Arctic Waters Pollution Prevention Act	R.S. 1985, c. A-12
Auditor General Act	R.S. 1985, c. A-17
Canada Shipping Act	R.S. 1985, c. S-9
Emergency Preparedness Act	R.S. 1985, c. 6 (4th Supp.) (April 27, 1988)
Energy Supplies Emergency Act	R.S. 1985, c. E-9
Fisheries Act	R.S. 1985, c. F-14
Alice Arm Tailings Deposit Regulation	SOR/79-345
Chlor-Alkali Mercury Liquid Effluent Regulations	C.R.C., vol. VII, c.811
Meat and Poultry Products Plant Liquid Effluent Regulations	C.R.C., vol. VII, c.818
Metal Mining Liquid Effluent Regulations and Guidelines	C.R.C., vol. VII, c.819
Petroleum Refinery Liquid Effluent Regulations and Guidelines	C.R.C., vol. VII, c.828
Port Alberni Pulp and Paper Liquid Effluent Regulations	SOR/92-638
Potato Processing Plant Liquid Effluent Regulations and Guidelines	C.R.C., vol. VII, c.829
Pulp and Paper Effluent Regulations	SOR/92-269
James Bay and Northern Quebec Native Claims Settlement Act	S.C. 1976-77, c. 32
Hazardous Products Act	R.S. 1985, c. H-3
International Boundary Waters Treaty Act	R.S. 1985, c. I-17
Motor Vehicle Safety Act	S.C. 1993, c. 16 (in force 12.04.95)
National Round Table on Environment and Economy Act	S.C. 1993, c.31 (in force April 28, 1994)
Resources and Technical Surveys Act	R.S. 1985, c. R-7
Transportation of Dangerous Goods Act, 1992	S.C. 1992, c. 34

6.3 Glossary

Accelerated Reduction/Elimination of Toxics (ARET)	A departmental voluntary program to reduce toxic pollutant releases by industries.
Approved Reference Levels	The amount of resources approved by Treasury Board to carry out approved policies and programs.
Bioaccumulation	A process by which chemical substances are ingested and retained by organisms, either from the environment directly or through consumption of food containing the chemicals.
Contingent Liabilities	Potential debts that may become actual financial obligations if certain events occur or fail to occur (e.g., potential losses from pending or threatened litigation).
Consolidated Revenue Fund (CRF)	The aggregate of all public moneys on deposit at the credit of the Receiver General of Canada.
Dioxins and Furans	Popular names for two classes of chlorinated organic compounds, formed either as by-products during some types of chemical production that involve chlorine and high temperatures, or during combustion where a source of chlorine is present.
DDT (dichlorodiphenyl trichloroethane)	A synthetic insecticide introduced after World War II. This chlorinated organic compound is persistent and tends to bioaccumulate. No longer in use in Canada or the U. S.; it is still used in Mexico and Latin America, subject to long-range transport. Found in sediment of the Great Lakes.
Ecosystem	An integrated and stable association of living and non-living resources functioning within a defined physical location.
Endangered	A species facing imminent extirpation or extinction.
Environmental Management System (EMS)	A systematic approach for organizations to bring environmental considerations into decision making and day-to-day operations. It also establishes a framework for tracking, evaluating and communicating environmental performance. An EMS helps ensure that major environmental risks and liabilities are identified, minimized and managed.
Federal Committee on Environmental Management Systems (FCEMS)	An interdepartmental committee that promotes information sharing and cooperative efforts towards greening governments operations.
Green Power	Power generated from environmentally-friendly sources or in ways that do not degrade the environment (e.g. wind, solar).
Greenhouse Gases (GHGs)	Gases in the atmosphere that trap the sun's energy and thereby contribute to rising surface temperatures. The main greenhouse gas that contributes to climate change is carbon dioxide (CO2), a byproduct of burning fossil fuels. Other greenhouse gases include methane (from agricultural sources) and nitrous oxide (from industrial sources).
Ground-Level Ozone	Ozone (O3) that occurs near the surface of the earth and is injurious to health. Its toxic effects make this pollutant a major component of smog.
ISO 14000	The series of international environmental management systems standards that provides organizations around the world with guidance on how to manage environmental aspects of their activities, products and services more effectively.
Persistent Bioaccumulative Toxic Substances (PBTs)	Substances that produce toxic effects in living things, that stay in the environment a long time and accumulate as they are passed up the food chain.
Polychlorinated Biphenyls (PCBs)	This group of isomers was originally used for its flame-retardant attributes. Used since 1929 in the production of electrical transformers and lubricating oils, PCBs became regulated in Canada in 1977. The importation of all electrical equipment containing PCBs was banned in 1980.

6.3 Glossary (cont'd)

Persistent Organic Pollutants (POPs)	Organic substances such as certain pesticides (DDT, Chlrodane, Endrin, etc.); industrial chemicals (PCBs) or by-products; and contaminants (dioxins and furans). These pollutants do not break down readily in the environment and are easily taken in by living organisms (e.g., eating contaminated food, drinking polluted water, breathing polluted air).
Priority Substances List (PSL)	Two lists (list 1 and 2) of priority substances for assessment of toxicity. The first list of 44 substances has been assessed and management plans are being developed or implemented for the 25 substances that were assessed as toxics. The second list of 25 substances has been published in Part I of the Canada Gazette and is being assessed.
Program Review	A federal government-wide initiative (in three phases) to reduce budgets through program adjustments, technological improvements and alternative service delivery.
Program Spending- Gross	Planned budgetary spending, whether funded through budgetary appropriations or revenue credited to the vote.
Program Spending- Net	Planned budgetary spending, net of any revenue credited to the vote.
Report on Plans and Priorities	A department's primary strategic planning document, intended for parliamentary and public scrutiny. It portrays the department's mandate, plans and priorities and sets out strategies for achieving expected key results.
Report on Performance	A department's primary accountability document, intended for parliamentary and public scrutiny. It reports on a department's performance up to the most recently completed fiscal year, and uses the plans and priorities identified in the Report on Plans and Priorities, as the basis for comparison.
Revenues Credited to the Vote	Receipts credited to the appropriation that the department has the authority to reutilize.
Smog	A literal contraction of "smoke" and "fog, " it occurs when nitrogen oxides (NOx) and volatile organic compounds (VOCs) react during warm temperatures in the presence of sunlight. Stagnant air conditions aid smog formation.
SO2	Sulphur dioxide, chemical whose emissions enter the atmosphere and return to earth with precipitation as acid rain.
Stratospheric Ozone	The layer of the earth's atmosphere, extending from 15 to 35 kilometers above the earth, that protects life on the planet by absorbing harmful ultra-violet rays.
Sustainable Development (SD)	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
Threatened	A species likely to become endangered if limiting factors are not reversed.
Transfer Payments	A payment authorized by a budgetary appropriation for which no goods or services are received in exchange, and that neither gives rise to financial claim nor represents the liquidation of financial obligations.
Volatile Organic Compounds (VOCs)	The organic (containing carbon) gases and vapours present in the air. They are involved in ground-level ozone formation and some are toxic air pollutants.
Vote	A request to Parliament for appropriation. A vote becomes an appropriation only when the Appropriations Act in which it is contained receives royal assent.
Vote Netted Revenue	Receipts credited to the appropriation that the department has authority to reutilize.
Voted Appropriations	See vote.

6.4 Acronyms

AAFC Agriculture and Agri-Food Canada
ACAP Atlantic Costal Action Plan
AEB Athmospheric Environment Branch
APEC Asia Pacific Economic Cooperation
ARET Accelerated Reduction/Elimination of Toxics Program
ASD Alternative Service Delivery
ASTM American Society for Testing Material
CAB Canadian Association of Broadcasters
CARD Climate and Athmospheric Research Directorate
CCAF Climate Change Action Fund
CCTA Canadian Cable Television Association
CCME Canadian Council of Ministers of the Environment
CEC Customs and Excise Canada
CEIS Canadian Environmental Industries Strategy
CESPA Canada Endangered Species Protection Act
CEPA Canadian Environmental Protection Act
CETAC Canadian Environmental Technology Advancement Centers
CFC Chlorofluorocarbons
CIDA Canadian International Development Agency
CITES Convention on International Trade in Endangered Species
CLDN Canadian Lightning Detection Network
CMC Canadian Meteorological Center
CPPIC Canadian Pollution Prevention Clearinghouse
CRF Consolidated Revenue Fund
CRTC Canadian Radio-Television and Telecommunications Commission
CTM Chemical Transport Model
CTTA Canadian Cable Television Association
DIAND Department of Indian Affairs and Northern Development
DFAIT Department of Foreign Affairs and International Trade
DFO Department of Fisheries and Oceans
DDT Dichlorodiphenyltrichloroethane
DND Department of National Defense
EA Environmental Assessment
EMS Environmental Management System
EVRI Environmental Valuation Reference Inventory
FBI Federal Buildings Initiative
FCEMS Federal Committee on Environmental Management Systems

6.4 Acronyms (cont'd)

FRAP	Fraser River Action Plan
FRP	Federal Regulatory Plan
FTEs	Full-Time Equivalents
GBI	Georgia Basin Ecosystem Initiative
GDP	Gross Domestic Product
GEM	Global Environmental Multiscale (model)
GHGs	Greenhouse Gases
HC	Health Canada
HRDC	Human Resources Development Canada
IC	Industry Canada
IPMS	Intellectual Property Management Information System
ISO	International Organization for Standards
IT	Information Technology
IIBA	Inuit Impacts and Benefits Agreement
INSDS	Interdepartmental Network on Sustainable Development Strategies
IPCC	Intergovernmental Panel on Climate Change
LSSS	Locally Shared Support Services
MAP	Microwave Assisted Process
MBS	Migratory Bird Sanctuary
MDI	Metered Dose Inhalers
MLF	Multilateral Fund
MOP	Meeting of the Parties
MOU	Memorandum of Understanding
NAFTA	North American Free Trade Agreement
NAVCan	Navigation Canada
NAWMP	North American Wildlife Management Plan
NCR	National Capital Region
NEES	National Environmental Emergencies System
NGO	Non Government Organization
NOAA	National Oceanic and Athmospheric Administration
NOx	Nitrogen Oxides
NPRI	National Pollutant Release Inventory
NRBS	Northern Rivers Basin Study
NRCan	Natural Resources Canada
NREI	Northern Rivers Basin Ecosystem Initiative
NRP	National Radar Project
NWA	National Wildlife Area

6.4 Acronyms (cont'd)

OECD	Organization for Economic Cooperation and Development
OGD	Other Government Department
OZONE	O3 Ground-Level Ozone
PBTs	Persistent Bioaccumulative Toxic Substances
PCB	Polychlorinated Biphenyl
PCO	Privy Council Office
PMTS	A Canadian Council of Ministers of the Environment Policy for the Management of Toxics Substances
POPs	Persistent Organic Pollutants
PRAS	Planning Reporting and Accountability Structure
PSL	Priority Substances List
PWGSC	Public Works and Government Services Canada
RC	Revenue Canada
RCMP	Royal Canadian Mounted Police
REET	Regional Environmental Emergencies Teem
RPP	Report on Plans and Priorities
SC	Statistics Canada
SDS	Sustainable Development Strategy
SO2	Sulphur Dioxide.
TC	Transport Canada
TSMP	Federal Toxics Substances Management Policy
UCS	Universal Classification System
UN	ECE United Nation's Economic Commission for Europe
UNECE	United Nations Economic Commission for Europe
UNEP	United Nation Environment Program
U.S. EPA	United States Environmental protection Agency
VNR	Vote Netted Revenue
VOC	Volatile Organic Compound
WAPPRIITA	*Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act*
WRI	Water Research Institute

6.5 Index

6.5 Index (cont'd)

6.6 Green Lane