Annual Report 2003

Commission for
Environmental Cooperation
of North America

Mission

The CEC facilitates cooperation and public participation to foster conservation, protection and enhancement of the North American environment for the benefit of present and future generations, in the context of increasing economic, trade and social links among Canada, Mexico and the United States.

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Message from the Council

The Commission for Environmental Cooperation is an international organization created by the governments of Canada, Mexico and the United States to protect our shared environment through cooperation, to prevent potential trade and environment conflicts, and to promote the enforcement of environmental laws.

One of the unique strengths of this organization is the capacity for cooperation at a continental level to tackle some of the most pressing issues facing North America's environment.

Last year, the CEC's first *State of the Environment* report highlighted where progress has been made, and where pressures are putting ecosystems at risk—particularly with respect to biodiversity.

This year stands as a landmark in continental cooperation to address some of those issues. The adoption in June 2003 of the *Strategic Plan for North American Cooperation in the Conservation of Biodiversity* demonstrates how the CEC works in partnership—doing together what cannot be done alone.

The plan is the result of extensive collaboration among our governments, nongovernmental organizations, academics, experts, interested persons, and indigenous communities. The plan represents a path forward with the identification of 12 priority areas for action and targets to implement the first five-year action plan.

We believe that, with the adoption of this long-term strategy and the identification of priorities for action, North America will be a global leader in developing cooperative approaches to address shared biodiversity issues.

CEC progress in 2003 was similarly distinguished by cooperation among the three countries and with national and international organizations on many issues of common concern—from reducing the impact of the most toxic chemicals in our environment to moving forward with our *Cooperative Agenda on Children's Health and the Environment*. Significant accomplishments this year include:

- Completion of the second North American Symposium on Trade and Environment, focusing on the energy and agricultural sectors;
- Publication of a comprehensive report comparing standards for intensive livestock operations in each country;
- Publication of six factual records in response to citizen submissions on enforcement matters; and
- Initiation of a North American Regional Action Plan addressing dioxins and furans, and hexachlorobenzene.

We invite you to review the progress on these and other important issues in this 2003 Annual Report for the Commission for Environmental Cooperation.

David Anderson
Canada
Minister of the Environment

Victor Lichtinger
Mexico
Secretary of Environment and Natural Resources

Christine Todd Whitman
United States
Environmental Protection Agency Administrator

Report from the Joint Public Advisory Committee

JPAC began a very active year by participating in the second North American Symposium on Assessing the Environmental Impacts of Trade and organizing a public workshop on Chapter 11 of the North American Free Trade Agreement in March. Regarding the symposium, an Advice to Council was adopted outlining a series of initiatives for Council to consider in support of this important area of work. An Advice to Council was also developed with recommendations for how the CEC Council could help create a balance between the interests of the public and those of investors in the application of Chapter 11. JPAC considers that ensuring transparency, accountability and legitimacy are critical to public acceptance of NAFTA and other free trade regimes. JPAC continues to urge Council to work through NAAEC Article 10(6) to achieve the environmental goals and objectives of NAFTA.

The second JPAC regular session was held in conjunction with the 2003 Council Session in June, where two public meetings were organized. First was a public plenary session on the North American Environmental Enforcement and Compliance Cooperation Program to seek input on a long-term strategic plan. Second was a public workshop on CEC Assessments of Transboundary Air Issues with the newly formed North American Air Working Group to discuss what would be the most fruitful area of CEC involvement in this area of work. In both instances, JPAC prepared a letter to the chairperson of each working group, expressing general support and outlining areas for consideration.

In September, JPAC issued a call for public comments on the matter of limiting the scope of factual records developed under Articles 14 and 15 of the NAAEC, including what is evolving into interpreting what constitutes sufficient information to support an allegation of failure to enforce, and to review the implementation of Council Resolution 00-09: Matters related to Articles 14 and 15 of the Agreement. In October, a public workshop was organized. JPAC had commissioned a substantive review of these matters that served as an extensive report for the very productive discussions. As a result of the discussions at the meetings, JPAC issued detailed Advice to Council on these matters. JPAC also put Council on notice that it would be exploring an emerging perception of Council being in conflict of interest with regard to the citizen submission process.

An October meeting focused on the proposed CEC Operational Plan for 2004–2006. In an Advice to Council JPAC supported the Secretariat's initiative to become more strategic in its planning and provided preliminary responses and recommendations. JPAC also expressed its unanimous support for the continuation of the North American Fund for Environmental Cooperation (NAFEC) and guarded optimism for steps being considered to improve involvement of indigenous peoples in the CEC.

In November, following a specific request from Council, JPAC provided an advice on the Hazardous Waste Task Force issue concerning the environmentally sound management and tracking of hazardous wastes and hazardous recyclable materials.

JPAC continues to be disappointed, despite its efforts, at the lack of progress by the Parties on concluding an agreement on transboundary environmental impact assessment, as required by NAAEC Article 10(7).

In December, JPAC participated in a round table on the impact of invasive species in North America, where parliamentarians, experts and policy makers provided information and exchanged views of the ecological and economic impacts of invasive species in North America and discussed options for a CEC role in promoting best approaches for prevention and control. JPAC considers

this to be a very important and urgent issue and one where the CEC is ideally positioned to foster trilateral policy and science-based solutions.

Finally, members of the Independent Ten-year Review and Assessment Committee (TRAC) met with JPAC to solicit views, opinions and perspectives on the first ten years of NAAEC and NAFTA.

Gustavo Alanís-Ortega
JPAC Chair for 2003

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Message from the Executive Director of the CEC Secretariat

The Commission for Environmental Cooperation (CEC) was established almost ten years ago to support Canada, Mexico and the United States in protecting the environment as our three countries liberalized trade relations. From the outset, a core challenge for the CEC was to accomplish a better understanding of the relationship between trade and the environment in North America. At the same time, the CEC aims to increase cooperation among our three countries to better conserve, protect and enhance our continental environment—including critical habitat and species.

In both respects, 2003 marks significant progress.

This spring, the CEC Secretariat hosted its second North American Symposium on Assessing the Environmental Effects of Trade. From 24 to 28 March, some 200 researchers, academics, environmental officials and nongovernmental organizations met in Mexico City to hear and discuss thirteen research papers on issues ranging from energy subsidies to intensive livestock operations. The results, published and distributed by the CEC Secretariat, contribute greatly to our ongoing assessment of the trade and environment relationship.

At our annual Council session in June, the adoption of the Strategic Plan for North American Cooperation in the Conservation of Biodiversity signaled a milestone in international environmental cooperation. The biodiversity strategy, as adopted by Canada, Mexico and the United States, prescribes a long-term plan of action on the part of each county, its environmental officials and partners, to conserve key spaces and species in North America.

From trade analysis to charting a practical, on-the-ground path toward conservation of species and spaces, the CEC is moving forward with its agenda, and I invite you to examine our progress in this annual report of Commission activities in 2003.

William V. Kennedy

Cooperative Achievements

ENVIRONMENT, ECONOMY AND TRADE

The Environment, Economy and Trade program has three goals: (1) to continue improving our understanding of the environmental effects of free trade and related economic integration in North America, as well as to identify opportunities for policy integration between environmental and trade policies in a manner that actively promotes transparency and public participation; (2) to identify opportunities among the NAFTA partners for cooperation and trade in environmental goods and services including renewable energy and energy efficiency; and (3) to strengthen partnerships with the private financial services sector in the area of finance and the environment.

These objectives will be addressed through three projects:

Understanding Linkages between Environment, Economy and Trade

- Assessing the Environmental Effects of Trade;

Market-based Mechanisms for Environmentally-Preferable Goods and Services

- Trade in Environmentally-Preferable Goods and Services; and
- Finance and the Environment.

CONSERVATION OF BIODIVERSITY

North America hosts a wealth of spiritually cherished, economically important, and ecologically essential landscapes and seascapes. A great deal of North American biological diversity, however, is in peril. Although most problems affecting the North American environment are on the national level, certain others are shared by two of the three countries, and the effects and consequences of some have the potential to affect the entire continent.

GOALS

In the context of increasing economic, trade and social links, the Conservation of Biodiversity program promotes cooperation among Canada, Mexico and the United States in furthering the conservation and sustainable use of North American biodiversity. With the direction and guidance from Council, the program will start implementing the "Strategic Plan for North American Cooperation in the Conservation of Biodiversity," a long-term agenda to catalyze trinational conservation action at the North American level, by:

- promoting the conservation and maintenance of regions of continental ecological significance [Ecologically Significant Regions (ER)];
- promoting the conservation of North American migratory and transboundary species [Migratory and Transboundary Species (MT)];
- facilitating data and information sharing across North America and promote integrated monitoring to increase understanding of the state of North American biodiversity [Assessment and Information Sharing (AI)];
- facilitating communication, networking, identification and sharing of best practices, priorities and opportunities for education and training [Capacity building and training (CT)];
- promoting collaborative responses to common threats facing North American ecosystems, habitats and species [Responding to Threats (RT)]; and

- identifying and evaluating potential collaborative opportunities for biodiversity conservation and sustainable use that arise from the expansion of regional trade [Biodiversity Conservation and Trade (BT)].

PROGRAM INITIATIVES

The CEC establishes a forum for coordinated, continental solutions to key conservation challenges, as well as providing a more targeted geographical focus and interdisciplinary approach to conservation activities. The implementation of the program is described in further detail under the following work plan:

North American Biodiversity Conservation Strategies

- Strategic and Cooperative Action for the Conservation of Biodiversity in North America

Stewardship for Shared Terrestrial and Marine Ecosystems and Transboundary Species

- North American Bird Conservation Initiative
- Terrestrial Species of Common Conservation Concern
- Marine Species of Common Conservation Concern
- North American Marine Protected Areas Network
- Closing the Pathways of Aquatic Invasive Species across North America

Improving Information on North American Biodiversity

- North American Biodiversity Information Network

POLLUTANTS AND HEALTH

The mission of the Pollutants and Health program area is to establish cooperative initiatives on a North American scale to prevent or correct the adverse effects of pollution on human and ecosystem health. Guidance on methods to accomplish this mission is embodied within the language of NAAEC Article 10. These methods include: encouraging technical cooperation between the Parties; promoting pollution prevention techniques and strategies; recommending appropriate limits for specific pollutants, taking into account differences in ecosystems; recommending approaches for the comparability of techniques and methodologies for data gathering and analysis, data management, and electronic data communications; and promoting access to publicly available information concerning the environment that is held by public authorities of each Party.

This program area aims to pursue the following objectives:

- facilitating coordination and cooperation between the three countries on protection of the environment;
- enhancing comparability and compatibility between the three environmental protection systems;
- improving the knowledge base on issues of environmental pollution;
- developing technical and strategic tools to avoid, eliminate, reduce, or manage environmental pollutants; and
- improving the scientific, technical, and strategic capabilities of North American environmental protection agencies.

The activities planned and described in this document are the result of a coordinated effort between the five programs to maximize their combined benefit. These activities have also been designed to coordinate with and enhance the efforts of other North American environmental protection entities.

PROGRAM INITIATIVES

Five programs and their subsidiary projects specifically address the protection of human and ecosystem health.

Cooperation on North American Air Quality Issues

- Cooperation on North American Air Quality Issues

Sound Management of Chemicals

- Sound Management of Chemicals

North American Pollutant Release and Transfer Register

- North American Pollutant Release and Transfer Register

Pollution Prevention

- Capacity Building for Pollution Prevention

Children's Health and the Environment in North America

- Children's Health and the Environment in North America

LAW AND POLICY

GOAL

The goal of the Law and Policy program area is to address regional priorities regarding obligations and commitments in NAAEC related to enhancement of compliance with and enforcement of environmental laws and regulations, environmental standards, environmental performance and the continued development and improvement of environmental law and policy. Program initiatives monitor and report on regional trends in implementing and enforcing environmental laws and standards, including innovations in regulation, economic instruments and voluntary initiatives.

PROGRAM INITIATIVES

Work in this area is divided into three program initiatives. The first, Environmental Standards and Performance, focuses on NAAEC objectives of strengthening regional cooperation in the development and improvement of environmental laws and regulations. This initiative is designed to strengthen cooperation in the development and continued improvement of environmental technical requirements and standards by promoting exchange of information and sharing best practices.

The second, Enforcement Cooperation, responds directly to the Parties' obligations for the effective enforcement of their respective environmental laws and regulations. In response to the Council mandate to ensure regional cooperation in enforcement matters, the program supports a regional forum of senior enforcement officials. It also addresses enforcement and compliance capacity building needs and provides information and analysis on the Parties' enforcement and compliance activities.

The third, Environmental Policy, examines leading-edge policy initiatives in priority areas and shares best practices among public and private sectors.

Environmental Standards and Performance

- Comparative Report on Environmental Standards
- Enviromentally Sound Management and Tracking of Hazardous Waste

Enforcement Cooperation

- Enforcement and Compliance Cooperation

Environmental Policy

- Sustainable Use and Conservation of Freshwater in North America
- Environmental Management Systems to Promote Compliance and Environmental Performance

In addition to the work of each Party in accordance with the North American Agreement on Environmental Cooperation (NAAEC), the CEC Secretariat is responsible for a specific program of action to fulfill NAAEC's objectives. This report provides an overview of CEC activities in 2003 in each program area: Environment, Economy and Trade; Conservation of Biodiversity; Pollutants and Health; and Law and Policy; as well as in the Submissions on Enforcement Matters (SEM) Unit, and the North American Fund for Environmental Cooperation (NAFEC). Up-to-date information regarding CEC activities is available online at <www.cec.org>.

Environment, Economy and Trade Program Area

Furthering understanding of the environmental impacts of trade

The CEC hosted the second North American Trade and Environment Symposium, at which research papers were presented and discussed on issues such as energy subsidies, intensive livestock operations, the impact of trade on indigenous communities, and invasive species. During the year, EET staff gave more than 20 talks on the lessons from North America on trade liberalization and the environment, and completed research on investment in agriculture and integration in the food processing sector.

Continuing to test an environment-first approach

Using data from the CEC SMOC and Law and Policy programs as a reference, the EET program hosted two meetings of technical and policy experts on the effects of increased trade and possible management and policy responses, one concerning hazardous waste and another other dealing with mercury in the Great Lake region.

Enhancing the transparency and comparability of environmental labeling and certification schemes

Work continued on updating the CEC's web-based environmental labeling database for sustainable coffee, renewable energy, energy efficiency, office supplies, and sustainable tourism, and a web site was created for the North American Green Purchasing Initiative (NAGPI) listing providers of green procurement information in North America (www.nagpi.net). In collaboration with the North American Sustainable Consumption Alliance, another site was created listing all sources of information on sustainable production and consumption in North America <www.p2win.org/main/ns/7/doc/89/lang/EN>.

Supporting cooperation among public, institutional, and private procurement officials

The CEC held a technical workshop on a Green Purchasing Strategy. To strengthen cooperation in green procurement, the CEC assisted in the development of guidelines, capacity building opportunities, best practices, business-to-business communication links, and other tools, and published a report on existing green procurement initiatives, another on green procurement, and a background paper on green procurement in trade policy. Also published was the ECO-S.A.T., the NAGPI's Environmental Purchasing Self-Assessment Tool, meant to serve as the basis for third-party certification. The Council directed the Secretariat to work with the Parties and the NAGPI towards the development of a green purchasing action plan and as part of that plan, the Secretariat was invited to work with the Parties and the NAGPI to identify tools, priorities and best practices to facilitate green purchasing, and to explore the willingness of the Parties to identity specific

product categories for possible priority attention in the 2004 work program. The Centre for a New American Dream began reviewing green purchasing policies being used by institutional purchasers across North America with a view to identifying common issues, definitions, commodities and trends, focusing on commodities most frequently integrated into green purchasing programs for use by the NAGPI Steering Committee in deciding where to focus its efforts.

Examining environmental and market aspects of renewable energy and energy efficiency markets

The CEC prepared a report on estimating the environmental benefits of renewable energy and energy efficiency, including methods to calculate displaced emissions, and presented it to a North American technical meeting of experts on these approaches. A technical group was struck to develop common approaches for evaluating environmental benefits from renewable energy and energy efficiency in North America. The CEC published a background paper on market-based mechanisms for carbon sequestration, energy efficiency and renewable energy in North America, from which one mechanism will be selected by the Parties for further cooperation. The database on renewable portfolio standards was updated and the CEC completed a database containing information on existing and planned renewable electricity capacity in North America through 2010, a "clickable" map of North America showing all the capacity, installed and projected, by state/province and by energy source.

Identifying opportunities for increased trade in environmentally preferable goods and services

The CEC continued to work with the sustainable coffee, palm, and renewable energy industries to identify and address barriers to trade expansion. The CEC published a market study of 400 church organizations that had shown a willingness to buy sustainable palm at a premium, and initiated a pilot project to help churches buy sustainable palm. The CEC worked on creating and publicizing a fund within *Fomento Ecológico Banamex* AC's *Fondo para la protección de la naturaleza* to support the sustainable management of coffee areas, and started defining criteria for distributions. The CEC also initiated collaboration with organizations such as UNCTAD, IISD, and ICO to address impacts from plummeting coffee bean prices. The CEC published Greening Trade in North America to publicize its success in demonstrating that some trading practices can promote environmental stewardship (available at <www.cec.org>).

Continuing to document how environmental information could better inform financial markets

The CEC hosted and published the proceedings of a meeting of financial regulators, finance departments, industry representatives, and other institutions to explore how to provide environmental information in a form more useful to financial institutions. In collaboration with Environment Canada and others the CEC developed two documents to establish the business case for disclosure of environmental information. The CEC produced a report documenting best practices in disclosure of environmental information in the mining sector and a policy brief for Canada's Minister of the Environment on improving the quality of environmental data available for disclosure.

Conservation of Biodiversity Program Area

Strategic and Cooperative Action for the Conservation of Biodiversity in North America

In June 2003, the CEC Council adopted a Strategic Plan for North American Cooperation in the Conservation of Biodiversity. Under this Plan, the Biodiversity Conservation Working Group identified 12 priority areas for action, and the targets to implement the first five-year action plan. Work began on developing a mechanism to monitor the implementation and evaluate the effectiveness of the Strategy.

North American Bird Conservation Initiative (NABCI)

The support of the CEC to NABCI began shifting from institutional support to jointly implemented activities of trinational significance including monitoring and communication. The CEC supported two workshops aimed at completing a North American assessment of the conservation status of birds. A NABCI video was completed in English and Spanish as a communication tool. Discussions to develop a North American bird monitoring initiative were underway with partners from the three countries. Studies were initiated to identify possible impacts of contaminants on bird populations and bird habitat in Mexico, and to produce recommendations for trilateral collaboration.

Terrestrial Species of Common Conservation Concern

The CEC continued to facilitate efforts toward developing a trinational action plan for the conservation of the shared grasslands of Central North America. The CEC published *Grasslands: Toward a North American Conservation Strategy* (available at <www.cec.org>). Work continued on satellite monitoring of the Ferruginous hawk (a CEC Species of Common Conservation Concern—SCCC), with public access to monitoring information now possible at <www.ferruginoushawk.org>. Discussions were underway regarding trinational action plans for three terrestrial SCCCs.

Marine Species of Common Conservation Concern (MSCCC)

Through this initiative, stakeholders from a wide array of backgrounds work together to develop a long-term cooperative agenda for the conservation of migratory and transboundary species at risk. In 2003, the CEC organized meetings of MSCCC experts, stakeholders, and other marine advisors to: 1) identify the first set of species for which North American Cooperative Action Plans (NACAPs) would be developed; 2) develop a framework for NACAPs modeled on the North American Regional Action Plans developed for specific pollutants under the CEC's Pollutants and Health Program; 3) develop the first set of three MSCCC NACAPs; and 4) expand the trinational, cross-sectoral partnership. Work began on a threats analysis of the 16 MSCCC in North America. Through NACAPs meetings, species experts scoped out and identified aspects of a regional monitoring and assessment program for the MSCCC. The CEC finalized the SCCC *Blueprint for Cooperation*, designed as an attractive, user-friendly reference book for decision-makers involved in the conservation of migratory and transboundary species. The CEC compiled information on individuals and organizations working on the implementation of projects relevant to the CEC Biodiversity Conservation Strategy.

North American Marine Protected Areas Network (NAMPAN)

The goal of the NAMPAN project is for the CEC to work with a trinational, multi-sectoral group of stakeholders in establishing a system of North American marine protected area (MPA) networks that enhances and strengthens the protection of marine biodiversity. In 2003, work on

the North American Marine Ecoregions, Baja California to Bering Sea (B2B) Priority Conservation Areas (PCAs), MSCCC, and Integrated Management for the NAMPAN was presented at the Fifth Annual International Conference of the Science and Management of Protected Areas Association. Marine advisors and other experts identified priorities for the CEC Biodiversity Strategy during a side meeting. The B2B PCAs were presented to Council during its 2003 session. The final report on the B2B PCAs was finalized, and a map of the B2B PCAs was developed.

Workshops were held to clarify the vision and review the theory put forth in a white paper on the integrated management of a NAMPAN, and to identify how communities can harness the potential benefits of a NAMPAN to address local concerns. Experts from Canada, Mexico and the United States identified sites to pilot the Network and build greater cooperation across borders. A *Working Draft MPA Management Effectiveness Guidebook* was released and the CEC briefed Canada on the methodology. The CEC facilitated Canada's participation in field-testing the guidebook with the participation of the Saguenay St. Lawrence Marine Park.

Marine Ecoregions of North America

The Marine Ecoregions of North America map and accompanying report were being finalized. The mapping project is scalable, ecosystematic, and linked with other maps and classification systems. It represents a developing consensus among US, Canadian, and Mexican ecologists, planners, geographers, and managers regarding marine biodiversity in North America. This consensus marine framework, displayed on a set of ecoregion maps, creates understanding among the public and, importantly, decision-makers.

Closing the Pathways of Aquatic Invasive Species across North America

An analysis of the ecological and economic impacts of invasive algae and sea weeds in the Baja to Bering marine conservation corridor was underway.

North American Biodiversity Information Network (NABIN)

A web-based portal was being developed to link the species search tools of NABIN to other environmental and socio-economic databases in North America. The portal has developed working prototypes for the grasslands, MPAs, and NABCI projects. NABIN is supporting the interoperability of two major species data search engines and continues to provide information access through its partner institutions.

Pollutants and Health Program Area

North American Pollutant Release and Transfer Register (PRTR) Project

Since 1995, the CEC has been working with the national PRTR programs of Canada (National Pollutant Release Inventory), the United States (Toxics Release Inventory), and Mexico (*Registro de Emisiones y Transferencia de Contaminantes)* to develop a North American profile of pollutant releases and transfers, promote public access to environmental information, and enhance comparability among the national systems. Its annual publication, *Taking Stock*, contains a compilation of information for the industries and chemicals that are common to the national PRTR lists. In 2003, this "matched" data set only covered the United States and Canada. Mexico continued to work on regulations to implement legislation adopted in 2001 to provide for a mandatory and publicly accessible PRTR system. *Taking Stock 2000* was released in April 2003. It found that overall, North America reduced industrial releases and transfers of chemicals by 5 percent from 1995 to 2000. Flexible access to the data sets is available through the CEC's *Taking Stock Online* web site <http://www.cec.org/takingstock>. In 2003, work continued on an Action Plan to Enhance the Comparability of Pollutant Release and Transfer Registers in North America.

Air Quality Project

In 2003, the CEC Air Quality Project focused on improving communications and interactions among the air quality management agencies of North America, establishing improved mechanisms for exchanging technical data, and developing strategies to address air quality issues of common concern.

The CEC was in the second year of a three year effort to develop a national air emissions inventory in Mexico. A draft inventory was prepared for six northern border states that included the air pollutants nitrogen oxides, particulates, sulfur oxides, reactive hydrocarbons, carbon monoxide, and ammonia. To enhance access to air emissions inventory information, the CEC Air Quality Project initiated an investigation of the feasibility of remotely linking distributed electronic databases containing air emissions information across North America. To increase institutional capacity for air emission inventories, the CEC co-sponsored a workshop on innovative methods for emission inventory development and evaluation.

The CEC gathered together a group of experts in its second workshop on common methodologies to assess population exposure to vehicle emissions along congested trade and transportation corridors. As a product of the workshop, participants helped draft a "state of the science" review paper on elements of assessment methodologies that highlighted their strengths and weaknesses, as well as future research and policy needs.

The CEC continued its series of training workshops to assist air permitting officials in finding and evaluating best available technologies for air pollution control. A workshop was held to provide permitting officials with a set of case studies focusing on key industrial sectors as a learning exercise for comparing various air pollution control technology alternatives for hypothetical new sources.

The CEC helped launch an effort in Mexico to integrate urban and regional air quality monitoring networks into a national framework. The first step was a meeting held by Mexico's federal environmental agency, Semarnat, co-sponsored by the CEC, in which Semarnat proposed to the Mexican states a rationale and approach for integrating current local monitoring networks and adopting common procedures for collecting and storing Mexico's ambient air data.

Sound Management of Chemicals Program

Resolution 95-05, adopted by the Council on 13 October 1995, in Oaxaca, Mexico, created the Sound Management of Chemicals program. The resolution created a working group composed of senior government officials from the Parties and set out a framework, together with specific commitments, for working together and with the CEC in addressing the sound management of chemicals in North America. The working group was instructed to first address the list of persistent organic pollutants included in United Nations Environment Programme Governing Council Decision 18/32 of May 1995, as well as "certain heavy metals."

North American Regional Action Plans (NARAPS) have been developed and were at different stages of implementation for DDT, chlordane, PCBs and mercury. In 2003, monitoring of children's blood in the south of Mexico saw DDT levels decline by 60% since 2000. A Global Environment Facility grant in the amount of US$7.5 million was approved to assist with implementation of the NARAP on DDT in Mexico as well as to extend the effort to Central America. Chlordane was deregistered as a pesticide in the three countries and is no longer in use in North America. A monitoring plan was being devised to ensure that chlordane levels continue to track downwards as a result of the actions taken under the NARAP. The PCB Implementation Task Force prepared a status review of this NARAP, paying particular attention to the many aspects of the NARAP that are not dependent on the transboundary transport and destruction of

unwanted PCB materials. Implementation of Phase II of the Mercury NARAP continued with projects such as the two year pilot mercury wet deposition monitoring initiative in Mexico. Two portable Tekran mercury monitoring instruments were loaned to Mexico by Canada in order to identify back ground levels of mercury as well as hot-spots in various locations. These initiatives were undertaken with the cooperation and support of the United States and Canadian governments. Phase I of a NARAP for dioxins and furans, and hexachlorobenzene, was released for public comment. A work plan was being developed for a NARAP on environmental monitoring and assessment. A project to monitor the blood of selected human populations in Mexico, Canada and the United States was launched with financial support from the World Bank. A NARAP was in preparation for lindane. A public meeting was held to discuss issues to be addressed in the NARAP. A draft decision document was prepared for lead and submitted for review by the Substance Selection Task Force based on comments from the public.

The CEC was identified as the Executing Agency for a World Bank project providing financial support to Mexico for the development of its National Implementation Plan for Persistent Organic Pollutants under the Stockholm Convention. Further information on the SMOC initiative is available on the CEC web site at <www.cec.org>.

Capacity Building for Pollution Prevention

Since 1995, the CEC has worked to advance the concept of pollution prevention in North America, establishing a pollution prevention fund that has granted 61 loans totaling approximately US$1,450,000 to projects that have prevented chemical releases to the environment and achieved significant water savings. In 2003 the fund focused on assisting large industries in improving the environmental performance of their supply chains. The CEC supported the establishment of the Mexican Pollution Prevention Roundtable, bringing together 100 organizations from different sectors in Mexico under five working groups dealing with issues ranging from environmental policy to financing and technical assistance to small and medium sized enterprises. In 2003, the North American Pollution Prevention Partnership, with the support of the CEC, conducted collaborative work in areas related to environmental policy, environmental management systems and a pollution prevention information network for the region, and promoted a project with the electronics industry in North America.

Children's Health and the Environment in North America

In 2003, work continued under the *Cooperative Agenda for Children's Health and the Environment in North America* (available at <www.cec.org>). The Council approved a recommendations document on indicators of children's environmental health and instructed the three countries to populate a core set of 12 indicators to support the preparation of the first North American indicators report in 2004. Workshops were held on the topics of risk assessment and children's environmental health, and asthma and respiratory disease.

Law and Policy Program Area

Comparative Report on Environmental Standards

The CEC finalized a report entitled *Comparative Standards for Intensive Livestock Operations in Canada, Mexico, and the United States*. The report draws some basic conclusions about the environmental requirements imposed on intensive livestock operations (ILOs) and makes recommendations on improving ILO management in North America.

Environmentally Sound Management and Tracking of Hazardous Waste

Work continued towards the development of a North American approach for environmentally sound management (ESM) of hazardous waste and on a feasibility study for a pilot project on electronic tracking of hazardous waste movements among the NAFTA countries. A comparative study of the management of hazardous waste and recyclables in North America, and a report that explores opportunities for improving tracking and enforcement of hazardous waste shipments in North America, were finalized for posting on the CEC web site. The CEC began identifying priority waste streams of mutual concern in North America on which the Parties can work to strengthen ESM practices, with an initial focus on spent lead acid batteries. Finally, the CEC began identifying specific capacity building needs in Mexico for the ESM and tracking of hazardous waste. It also developed a draft online version of a trinational hazardous waste code dictionary for review by government experts.

Enforcement and Compliance Cooperation

The North American Working Group on Environmental Enforcement and Compliance Cooperation (the Enforcement Working Group (EWG)) drafted a strategic plan to guide its work for the next five years and invited comments from the public. As part of its capacity building agenda, the CEC sponsored a series of workshops and seminars on environmental enforcement: a) a workshop on transboundary law enforcement; b) a workshop on the illegal traffic of ozone depleting substances (ODS) that focused on i) awareness of the environmental and health implications of the depletion of the ozone layer, ii) the Montreal Protocol and the implementation in developed and developing countries, iii) enforcement experiences in the United States, iv) routes and methods of the illegal ODS traffic, v) identification of ODS containers, and vi) an analysis of practical cases; and c) a seminar on enforcement issues dealing with trade and the illegal harvest of protected plant species, focusing on i) law enforcement opportunities, ii) technical information and characteristics of the major taxonomic groups of commercial plant species, iii) trends in international trade, and iv) the role of networks in monitoring illegal trade. In addition, the North American Wildlife Enforcement Group (NAWEG) completed a draft report entitled *Illegal Wildlife Trade in North America: International and Regional Issues and the Case for Cooperation*. Finally, the CEC completed a draft Transboundary Enforcement Handbook for review by the Parties, including a list of government contacts to improve coordination.

Sustainable Use and Conservation of Freshwater in North America

The CEC worked on a North American freshwater information database. A data structure was established and water information resources were inventoried to provide database content. The information resources cover freshwater themes searchable by watershed, state or provinces, and content type. To harmonize the spatial information on freshwater in North America, the CEC organized a meeting for the Canadian, Mexican, and US Atlas (mapping) programs to cooperate on harmonizing mapping components across North America, and to define and implement a North American Atlas Framework in the production of paper and digital map products.

Environmental Management Systems to Promote Compliance and Environmental Performance

The CEC co-sponsored a workshop on best practices in Environmental Management Systems.

Ten-year Review and Assessment Committee

In June 2002, the CEC Council decided to undertake, by 2004, in collaboration with JPAC and a wide selection of organizations and institutions, a retrospective of the achievements of the CEC since 1994, including the environmental effects of NAFTA, with a view to charting a path for the next decade. To this end, in 2003, the Council appointed six persons to an independent Ten-year Review and Assessment Committee (TRAC). The TRAC issued a call for public comments on implementation of the NAAEC and held a meeting with JPAC.

Registry of Submissions on Enforcement Matters 2003

ID. NUMBER	SUBMITTERS	END-OF-YEAR STATUS
SEM-97-002	Comité pro Limpieza del Río Magdalena	Final Factual Record released to the public. Process terminated.
SEM-97-006	The Friends of the Oldman River	Final Factual Record released to the public. Process terminated.
SEM-98-004	Sierra Club of British Columbia, et al.	Final Factual Record released to the public. Process terminated.
SEM-98-006	Grupo Ecológico "Manglar", A.C.	Final Factual Record released to the public. Process terminated.
SEM-99-002	Alliance for the Wild Rockies, et al.	Final Factual Record released to the public. Process terminated.
SEM-00-004	David Suzuki Foundation et al.	Final Factual Record released to the public. Process terminated.
SEM-00-005	Academia Sonorense de Derechos Humanos et al.	Preparing factual record.
SEM-00-006	Comisión de Solidaridad y Defensa de los Derechos Humanos, AC	Preparing factual record.
SEM-02-001	Canadian Nature Federation et al.	Awaiting Council's decision on development of factual record.
SEM-02-003	Sierra Legal Defence Fund et al.	Preparing factual record.
SEM-02-004	Arcadio Pesqueira Senday et al.	Determining whether a factual record is warranted.
SEM-03-001	Waterkeeper Alliance, et al.	Determining whether a factual record is warranted.
SEM-03-002	Alfonso Ciprés Villareal, et al.	Process terminated under Article 14(1).
SEM-03-003	Dr. Raquel Gutierrez Najera, et al	Awaiting Party's response under Article 14(2).
SEM-03-004	Angel Lara García	Determining whether a factual record is warranted.
SEM-03-005	Waterkeeper Alliance, et al.	Determining whether a factual record is warranted.
SEM-03-006	Academia Sonorense de Derechos Humanos, A.C. and Domingo Gutiérrez Mendívil	Determining whether a factual record is warranted.

Submission ID: SEM-97-002 (RIO MAGDALENA)

Submitter(s): Comité Pro Limpieza del Río Magdalena

Party: Mexico

Date received: 15 March 1997

Summary of the matter addressed in the Submission:

The Submitters allege that wastewater originating in the municipalities of Imuris, Magdalena de Kino, and Santa Ana, located in the Mexican state of Sonora, is being discharged into the Magdalena River without prior treatment. The Submitters assert that Mexico is failing to effectively enforce Mexican environmental legislation governing the disposal of wastewater with respect to these discharges.

2003 Events:

1. On 29 July 2003, the Secretariat submitted a draft factual record to Council, for a 45-day comment period on the accuracy of the draft.
2. On 24 October 2003, the Secretariat submitted a final factual record to Council for Council's vote on whether to make the final factual record publicly available.
3. On 5 December 2003, the Council voted to instruct the Secretariat to make the final factual record publicly available
4. On 11 December 2003, the final factual record was publicly released. Process terminated.

Submission ID: SEM-97-006 (OLDMAN RIVER II)

Submitter(s): The Friends of the Oldman River

Party: Canada

Date received: 4 October 1997

Summary of the matter addressed in the submission:

The Submitter alleges that by relying on letters of advice, Canada is failing to apply, comply with, and enforce the habitat protection sections of the Fisheries Act and the Canadian Environmental Assessment Act.

2003 Events:

1. On 17 April 2003, the Secretariat submitted a draft factual record to Council, for a 45-day comment period on the accuracy of the draft.
2. On 27 June 2003, the Secretariat submitted a final factual record to Council for Council's vote on whether to make the final factual record publicly available.
3. On 7 August 2003, the Council voted to instruct the Secretariat to make the final factual record publicly available
4. On 11 August 2003, the final factual record was publicly released. Process terminated.

Submission ID: SEM-98-004 (BC MINING)

Submitter(s): Sierra Club of British Columbia, et al.

Party: Canada

Date received: 29 June 1998

Summary of the matter addressed in the submission:

The submission alleges a systemic failure by Canada to enforce the Fisheries Act to protect fish and fish habitat from the destructive environmental impacts of acid mine drainage from mines in British Columbia.

2003 Events:

1. On 28 March 2003, the Secretariat submitted a draft factual record to Council, for a 45-day comment period on the accuracy of the draft.
2. On 27 June 2003, the Secretariat submitted a final factual record to Council for Council's vote on whether to make the final factual record publicly available.
3. On 7 August 2003, the Council voted to instruct the Secretariat to make the final factual record publicly available
4. On 12 August 2003, the final factual record was publicly released. Process terminated.

Submission ID: SEM-98-006 (AQUANOVA)

Submitter(s): Grupo Ecológico Manglar, A.C.

Party: Mexico

Date received: 20 October 1998

Summary of the matter addressed in the submission:

The submission alleges that the Mexico is failing to effectively enforce its environmental laws with respect to the establishment and operation of Granjas Aquanova S.A. de C.V., a shrimp farm located in Isla del Conde, San Blas, Nayarit, Mexico.

2003 Events:

1. On 7 March 2003, the Secretariat submitted a draft factual record to Council, for a 45-day comment period on the accuracy of the draft.
2. On 5 May 2003, the Secretariat submitted a final factual record to Council for Council's vote on whether to make the final factual record publicly available.
3. On 23 June 2003, the Council voted to instruct the Secretariat to make the final factual record publicly available. The final factual record was publicly released. Process terminated.

Submission ID: SEM-99-002 (CIEL-MIGRATORY BIRDS)

Submitter(s): Alliance for the Wild Rockies, et al.

Party: United States

Date received: 19 November 1999

Summary of the matter addressed in the submission:

The Submitters allege that the United States Government is failing to effectively enforce the Migratory Bird Treaty Act (MBTA) against logging operations on federal and non-federal lands throughout the United States.

2003 Events:

1. On 21 February 2003, the Secretariat submitted a final factual record to Council for Council's vote on whether to make the final factual record publicly available.
2. On 22 April 2003, the Council voted to instruct the Secretariat to make the final factual record publicly available
3. On 24 April 2003, the final factual record was publicly released. Process terminated.

Submission ID: SEM-00-004 (BC LOGGING)

Submitter(s): David Suzuki Foundation et al.

Party: Canada

Date received: 15 March 2000

Summary of the matter addressed in the submission:

The Submitters allege that Canada is failing to effectively enforce the Fisheries Act in connection with logging activities throughout British Columbia.

2003 Events:

1. On 15 April 2003, the Secretariat submitted a draft factual record to Council, for a 45-day comment period on the accuracy of the draft.
2. On 27 June 2003, the Secretariat submitted a final factual record to Council for Council's vote on whether to make the final factual record publicly available.
3. On 7 August 2003, the Council voted to instruct the Secretariat to make the final factual record publicly available
4. On 11 August 2003, the final factual record was publicly released. Process terminated.

Submission ID: SEM-00-005 (MOLYMEX II)

Submitter(s): Academia Sonorense de Derechos Humanos, A.C. & Domingo Gutiérrez Mendívil

Party: Mexico

Date received: 6 April 2000

Summary of the matter addressed in the submission:

The Submitters allege that Mexico failed to effectively enforce the General Law of Ecological Equilibrium and Environmental Protection (Ley General del Equilibrio Ecologico y la Proteccion

al Ambiente—LGEEPA) in relation to the operation of the company Molymex, S.A. de C.V. (Molymex) in the town of Cumpas, Sonora, Mexico.

2003 Events:

The Secretariat continued the process of preparing a factual record which began in 2002.

Submission ID: SEM-00-006 (TARAHUMARA)

Submitter(s): Comisión de Solidaridad y Defensa de los Derechos Humanos, AC

Party: Mexico

Date received: 9 June 2000

Summary of the matter addressed in the submission:

The Submitters allege a failure by Mexico to effectively enforce its environmental law by denying access to environmental justice to Indigenous communities in the Sierra Tarahumara in the State of Chihuahua. They particularly assert failures to effectively enforce environmental law relative to the citizen complaint process, to alleged environmental crimes and other to alleged violations with respect to forest resources and the environment in the Sierra Tarahumara.

2003 Events:

1. On 22 April 2003, the Council voted to instruct the Secretariat to develop a Factual Record.
2. On 15 May 2003, the Secretariat placed a work plan on its web site or otherwise made it available to the public and stakeholders.
3. On 2 September 2003, the Secretariat posted a request for information relevant to the factual record on its web site.

Submission ID: SEM-02-001 (ONTARIO LOGGING)

Submitter(s): Canadian Nature Federation et al.

Party: Canada

Date received: 6 February 2002

Summary of the matter addressed in the submission:

The Submitters assert that Canada is failing to effectively enforce section 6(a) of the Migratory Bird Regulations (MBR) adopted under the Migratory Birds Convention Act 1994, with respect to migratory bird nest destruction by clear-cut logging in Ontario.

2003 Events:

1. On 22 April 2003, the Council decided to defer voting on whether to instruct the Secretariat to prepare a factual record.
2. On 20 August 2003, the Secretariat received new or supplemental information from the Submitter(s).
3. On 21 August 2003, the Secretariat requested additional information from the concerned government Party.
4. On 16 October 2003, the Secretariat received additional information from the concerned government Party.

5. On 17 December 2003, the Secretariat supplemented its recommendation to Council that a factual record be prepared.

Submission ID: SEM-02-003 (PULP & PAPER)

Submitter(s): Sierra Legal Defence Fund et al.

Party: Canada

Date received: 8 May 2002

Summary of the matter addressed in the submission:

The submitters allege that Canada is failing to effectively enforce the pollution prevention provisions of the Fisheries Act, and provisions of the Pulp and Paper Effluent Regulations, against pulp and paper mills in Quebec, Ontario and the Atlantic provinces.

2003 Events:

1. On 8 October 2003, the Secretariat informed Council that the Secretariat considered that the submission warranted development of a factual record.
2. On 11 December 2003, the Council voted to instruct the Secretariat to develop a factual record.

Submission ID: SEM-02-004 (EL BOLUDO PROJECT)

Submitter(s): Arcadio Pesqueira Senday et al.

Party: Mexico

Date received: 23 August 2002

Summary of the matter addressed in the submission:

The Submitters assert that Mexico is failing to effectively enforce the General Law of Ecological Balance and Environmental Protection (Ley General del Equilibrio Ecológico y la Protección al Ambiente—LGEEPA), paragraphs III and IV of Article 15 of the LGEEPA Hazardous Waste Regulations and the Mining Law and its Regulations, with respect to the "El Boludo" gold mining project on the Submitters' land, in the Municipality of Trincheras, Sonora, Mexico.

2003 Events:

1. On 9 January 2003, the Secretariat received a response from the concerned government Party and began considering whether to recommend a factual record.

Submission ID: SEM-03-001 (ONTARIO POWER GENERATION)

Submitter(s): Waterkeeper Alliance, et al.

Party: Canada

Date received: 1 May 2003

Summary of the matter addressed in the submission:

The submitters assert that Canada is failing to effectively enforce sections 166 and 176 of the Canadian Environmental Protection Act and section 36(3) of the Fisheries Act, with respect to emissions of mercury, sulfur dioxide and nitrogen oxides from Ontario Power Generation's (OPG) coal-powered facilities.

2003 Events:

1. On 8 May 2003, the Secretariat acknowledged receipt of a submission and began a preliminary analysis of it under the guidelines.
2. On 15 July 2003, the Secretariat notified the submitter(s) that the submission did not meet all of the Article 14(1) criteria and the submitter(s) had 30 days to provide the Secretariat with a revised submission that conforms with Article 14(1).
3. On 14 August 2003, the Secretariat received a revised submission and began to analyze it.
4. On 19 September 2003, the Secretariat determined that the revised submission met the criteria of Article 14(1) and requested a response from the concerned government Party in accordance with Article 14(2).
5. On 18 November 2003, the Secretariat received a response from the concerned government Party and began considering whether to recommend a factual record.

Submission ID: SEM-03-002 (HOME PORT XCARET)

Submitter(s): Alfonso Ciprés Villareal, et al.

Party: Mexico

Date received: 14 May 2003

Summary of the matter addressed in the submission:

The Submitters allege that Mexico is failing to effectively enforce Article 34 of the General Law of Ecological Balance and Environmental Protection (*Ley General del Equilibrio Ecológico y la Protección al Ambiente*—LGEEPA) and Articles 37, 38 and 40 through 43 of the Environmental Impact Regulations, with respect to the EIA for the Home Port Xcaret project in the state of Quintana Roo, Mexico.

2003 Events:

1. On 15 May 2003, the Secretariat acknowledged receipt of a submission and began a preliminary analysis of it under the guidelines.
2. On 31 July 2003, the Secretariat notified the submitter(s) that the submission did not meet all of the Article 14(1) criteria and the submitter(s) had 30 days to provide the Secretariat with a revised submission that conforms with Article 14(1).
3. The thirty-day term expired without the Secretariat receiving a submission that conformed to Article 14(1). Therefore, the process was terminated on 2 September 2003, under guideline 6.2.

Submission ID: SEM-03-003 (LAKE CHAPALA II)

Submitter(s): Dr. Raquel Gutierrez Najera, et al

Party: Mexico

Date received: 23 May 2003

Summary of the matter addressed in the submission:

The Submitters assert that Mexico is failing to effectively enforce its environmental law with respect to the management of the Lerma-Chapala-Santiago-Pacífico basin, resulting in serious environmental deterioration and uneven water distribution in the basin, as well as the risk that Lake Chapala and its migratory birds will eventually disappear.

2003 Events:

1. On 28 May 2003, the Secretariat acknowledged receipt of a submission and began a preliminary analysis of it under the guidelines.
2. On 19 December 2003, the Secretariat determined that the submission met the criteria of Article 14(1) and requested a response from the concerned government Party in accordance with Article 14(2).

Submission ID: SEM-03-004 (ALCA-IZTAPALAPA II)

Submitter(s): Angel Lara García

Party: Mexico

Date received: 17 June 2003

Summary of the matter addressed in the submission:

The Submitter asserts that Mexico is failing to effectively enforce Article 150 of the General Law of Ecological Balance and Environmental Protection (Ley General del Equilíbrio Ecológico y la Protección al Ambiente—LGEEPA), with respect to a citizen complaint filed with the Office of the Federal Attorney General for Environmental Protection (Procuraduría Federal de Protección al Ambiente—Profepa) in 1995, regarding environmental irregularities in the operation of a footwear materials factory located in the Santa Isabel Industrial neighborhood of Iztapalapa Delegation in Mexico, D.F., where the Submitter lives.

2003 Events:

1. On 30 June 2003, the Secretariat acknowledged receipt of a submission and began a preliminary analysis of it under the guidelines.
2. On 9 September 2003, the Secretariat determined that the submission met the criteria of Article 14(1) and requested a response from the concerned government Party in accordance with Article 14(2).
3. On 4 December 2003, the Secretariat received a response from the concerned government Party and began considering whether to recommend a factual record.

Submission ID: SEM-03-005 (MONTREAL TECHNOPARC)

Submitter(s): Waterkeeper Alliance, et al.

Party: Canada

Date received: 14 August 2003

Summary of the matter addressed in the submission:

The submitters assert that Canada is failing to effectively enforce section 36(3) of the Fisheries Act, with respect to polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs) and other pollutants being discharged from Technoparc, the site of an historic industrial and municipal waste landfill.

2003 Events:

1. On 15 August 2003, the Secretariat acknowledged receipt of a submission and began a preliminary analysis of it under the guidelines.

2. On 15 September 2003, the Secretariat determined that the submission met the criteria of Article 14(1) and requested a response from the concerned government Party in accordance with Article 14(2).
3. On 14 November 2003, the Secretariat received a response from the concerned government Party and began considering whether to recommend a factual record.

Submission ID: SEM-03-006 (CYTRAR III)

Submitter(s): Academia Sonorense de Derechos Humanos, A.C. and Domingo Gutiérrez Mendívil

Party: Mexico

Date received: 15 August 2003

Summary of the matter addressed in the submission:

The submission asserts that Mexico is failing to effectively enforce its environmental law in relation to the establishment and operation of the Cytrar landfill in Sonora, Mexico.

2003 Events:

1. On 21 August 2003, the Secretariat acknowledged receipt of a submission and began a preliminary analysis of it under the guidelines.
2. On 29 August 2003, the Secretariat determined that the submission met the criteria of Article 14(1) and requested a response from the concerned government Party in accordance with Article 14(2).
3. On 21 November 2003, the Secretariat received a response from the concerned government Party and began considering whether to recommend a factual record.

Linking North American Communities: North American Fund for Environmental Cooperation

Since the North American Fund for Environmental Cooperation (NAFEC) was created in 1995, the CEC has issued 195 grants totaling C$9.36 million to community-based projects that complement the work of the CEC, promote the goals and objectives of the NAAEC, produce concrete results and make the link between local community work and the North American environment. Grants are awarded by a six-member (two from each country) selection committee, who select grantees from the numerous proposals submitted in response to the call for proposals on specific topics selected by the CEC. In 2003, NAFEC disbursed a total of C$674,700 to 18 community-based projects in Canada, Mexico and the United States dealing with environmental monitoring and assessment related to human health, including activities to increase citizen participation in implementing local solutions to environmental problems. The projects were as follows:

Grants awarded in 2003

(all figures in Canadian dollars)

- Beneficial Management Practices Demonstration: A Residential Project – Canada, C$40,000
- Citizen Information and Training for the Sustainability of the Sonora River – Mexico, C$40,000
- Clearing the Air: Empowering Citizen Volunteers to Monitor Air Quality Downwind of Hamilton's Industrial Core – Canada, C$7,500
- Documentation of Harm to Health, Toxic Substances and Human Rights at the Atoyac River – Mexico, C$40,000
- Environmental Health and Healing in Baja California's Indigenous Communities – Mexico, C$40,000
- Environmental Monitoring for the Ecological Regulation of the Atoyac River High Basin – Mexico, C$36,200
- Human Health Protection through Airshed Management using Environmental Monitoring and Assessment and Community Involvement in the Bulkley Valley and Lakes Districts of British Columbia – Canada, C$40,000
- Iowa CCI's Grassroots Water and Air Monitoring Project – United States, C$40,000
- Mexico-US Collaboration on the Santa Cruz River: Improving Human Health and Restoring Riparian Corridors – United States, Mexico, C$40,000
- New York Bucket Brigade Community Monitoring Project – United States, C$40,000
- Putting Factory Farms to the Test – Canada, C$28,000
- Reducing Contamination in the Yukon River Watershed and Food Chain through Improved Monitoring, Assessment, and Coordination – United States, C$40,000
- Reduction of Exposure to Lead Monoxide in the Purépechas Pottery-producing Communities in Santa Fe de la Laguna and Tzintzuntzan, Michoacán, Mexico – C$40,000
- Sustainable Municipal Planning in Maruata, Mexico: Building Capacity in Indigenous Communities – United States, Mexico, C$40,000
- The Border Environmental Health Tracking Project – C$40,000

- The Impacts of Environmental Contamination on Asubpeeschoseewagong Netum Anishinabek (Grassy Narrows First Nation) and Wabauskang First Nation – Canada, C$40,000
- Water Action Chelsea/Action-eau Chelsea – Canada, C$40,000
- Young People conducting Environmental Tracking and Assessment for Health in the Yucatán Hydrological Basin – Mexico, C$40,000

Country Reports

Canada

Country Report on Implementation of the Commitments Derived from the NAAEC

The following report was submitted to the CEC Secretariat by Environment Canada in accordance with NAAEC. It is intended to highlight certain activities undertaken to meet the obligations of the NAAEC by the federal government and the three signatory provinces—Alberta, Manitoba and Quebec.

ARTICLE 2 – GENERAL COMMITMENTS

Article 2(1)(a) – State of the Environment Reports

ENVIRONMENT CANADA

Environmental Signals 2003

In spring 2003, Environment Canada published two companion indicator reports:

- *Environmental signals: Canada's National Environmental Indicator Series 2003* depicts trends in the environment through the use of 55 environmental indicators, organized in four theme areas: ecological life-support systems; human health and well-being; natural resources sustainability; and human activities <http://www.ec.gc.ca/soer-ree/English/Indicator_series/default.cfm>.
- *Environmental Signals: Headline Indicators 2003* highlights a set of nine key indicators that are aimed at providing a succinct overview for policy- and decision-makers and for non-specialist, environmentally concerned Canadians <http://www.ec.gc.ca/soer-ree/English/headlines/toc.cfm>.

Work is currently under way to produce the second edition of the main report, which is planned for release in mid-2005.

The State of the Environment Infobase

The State of the Environment Infobase web site <http://www.ec.gc.ca/soer-ree/English/default.cfm> has been operational on Environment Canada's Green Lane for the past seven years. It continues to evolve and provides access to an increasingly broad range of environmental reporting information including the *Environmental Signals* reports, the National Ecological Spatial Framework (ecozones and ecoregions) and links to provincial, territorial, and some international SOE reports.

National Environmental Indicators and State of the Environment Reporting Strategy and Background Reports

In response to the challenge of managing and sharing knowledge creatively to better serve Canadians, Environment Canada has prepared a draft report entitled *Environmental Indicators and State of the Environment Reporting Strategy, 2004–2009: Environment Canada*. The current draft of the Strategy outlines four goals for making Environment Canada's environmental reporting more effective.

Development of the Strategy benefited from a broad consultation within Environment Canada and with indicator practitioners across Canada.

Two accompanying background reports were finalized and will be published in 2004:

- Background Paper No. 1, *Current status, trends, and perceptions regarding environmental indicators and state of the environment reporting in Canada*, provides analysis of the major forces shaping the development and use of environmental indicators and SOE reporting in Canada.
- Background Paper No. 2, *Environmental indicators and state of the environment reporting: an overview for Canada,* provides background information on indicators and reporting initiatives of Environment Canada and its partners, other Government of Canada agencies, the provinces and territories, interdepartmental and intergovernmental programs, and international initiatives. It also presents the results of a survey of indicators practitioners and senior decision-makers in Canada to obtain an understanding of views about the current approaches and future directions for environmental indicators and reporting initiatives in Canada.

Canadian Sustainability Indicators Network

Environment Canada is leading the development of the Canadian Sustainability Indicators Network (CSIN), a community of practice for sustainability indicators and state of reporting in Canada. This network is facilitating the exchange of knowledge and information on activities and best practices for the development and delivery of indicators and reporting among federal departments, provinces, regions, communities, and nongovernmental organizations. A national meeting was held in Halifax, Nova Scotia, Tuesday, 25 November 2003, with the theme of *Mixing strategic thinking and knowledge sharing*. Several virtual *Learning Workshops* have been held over the Internet, bringing practitioners from across Canada together.

State of the Environment Reporting at the Regional Level in Canada

Environmental indicator and state of the environment reports were released or completed for several ecosystems in Canada in 2003–2004, including:

- *Georgia Basin Action Plan*. The Georgia Basin is a transboundary ecosystem, which includes Georgia Strait, the Strait of Juan de Fuca, Puget Sound in Washington State, and the surrounding heights of land and watersheds. In April 2003, Environment Canada supported the renewal of the Georgia Basin Ecosystem Initiative, to be renamed as the Georgia Basin Action Plan — <http://www.pyr.ec.gc.ca/georgiabasin/index_e.htm>. In September 2003, the report *Georgia Basin Ecosystem Initiative (GBEI) — a five-year perspective* was released <http://www.pyr.ec.gc.ca/georgiabasin/reports/5_year_perspective/summary_e.htm>.
- The *State of the Great Lakes 2003* is the fifth biennial state of the environment report issued by the governments of Canada and the United States under the Great Lakes Water Quality Agreement. The 2003 report assesses the environmental status of based on information for 43 indicators <http://binational.net/sogl2003/index.html>.
- The Mackenzie River Basin Board neared completion of its *State of the Aquatic Ecosystem Report* by the end of 2003. This report is expected to be released in 2004, in both print format and on the Mackenzie River Basin Board web site <http://www.mrbb.ca/default.asp>.

As well, new and updated regional environmental indicators were posted on Environment Canada's Pacific and Yukon Region web site:
ttp://www.ecoinfo.ec.gc.ca/env_ind/indicators_e.cfm>.

ENVIRONMENT CANADA INPUT TO OTHER SOE REPORTING INITIATIVES

National Round Table on the Environment and the Economy (NRTEE) Environment and Sustainable Development Indicators (ESDI) Initiative

In spring 2003, the NRTEE published its benchmark report *State of the Debate: Environment and Sustainable Development Indicators for Canada* <http://www.nrtee-trnee.ca/eng/programs/Current_Programs/SDIndicators/ESDI-Report/ESDI-Report_IntroPage_E.htm>. The Environment and Sustainable Development Indicators (ESDI) Initiative recommended the regular reporting of the following five "natural capital' indicators:

- *air quality trend indicator*: population-weighted measure of exposure to ozone;
- *freshwater quality indicator*: national sample of the state of water quality;
- *greenhouse gas emissions indicator*: national total annual emissions of greenhouse gases;
- *forest cover indicator*: tracking the change of the percentage of Canada's total ground area that is covered by forests; and
- *extent of wetlands indicator*: tracking the change of the percentage of Canada's total ground area that is covered by wetlands.

Based on this NRTEE report, the Government of Canada stated in the 2004 Speech from the Throne its goal of incorporating key indicators on clean water, clean air, and greenhouse gas emissions reduction into its decision-making. Environment Canada, along with Statistics Canada and other partners, are now developing an initiative to enable annual national reporting of these three indicators.

New Environmental Reporting Tools under Development and Testing

A Canadian Biodiversity Index (CBI) is being developed under the auspices of the federal/provincial/territorial wildlife ministers. It is being designed to provide Canadians and decision-makers with a clear, easy-to-understand message on the state of biodiversity in Canada. The current vision for the CBI is to aggregate ecosystem assessments, done at the local scale, into a national index. The first phase involved the development of a draft framework. The next phase will involve 'proof of concept' testing for the Index.

The Water Quality Index (WQI), which was tested and then endorsed by the Canadian Council of Ministers of the Environment (CCME) in 2001, has now been applied across Canada. In 2002–2003, a pilot study in Atlantic Canada was conducted by Environment Canada and its provincial partners. The study resulted in a set of recommended improvements to the Index and a report on the status of water quality in selected watersheds across Atlantic Canada, which will be published in 2004.

Since the CCME) Water Quality Index (WQI) was selected as the Freshwater Quality Indicator in a national suite of six Environment and Sustainable Development Indicators recommended by the NRTEE, a national CCME workshop of 55 water quality experts (provincial, territorial, and federal) met in November 2003, to address issues related to calculation and application of the Water Quality Index as the national Freshwater Indicator. The resulting recommendations are helping to guide work on improvements needed for regular national reporting of the WQI.

Treasury Board of Canada Performance Reports for Canada

Canada's Performance 2003 is the president of the Treasury Board's ninth annual report to Parliament on government performance. The report has a chapter on the Canadian environment that presents information based on five indicators: climate change, assessed by Canadian greenhouse gas emissions; air quality, assessed by the number of good, fair and poor days, on the

basis of the Index of the Quality of Air; water quality, assessed by the percentage of the municipal population with wastewater treatment; biodiversity, assessed by the number of species at risk; and toxic contaminants in the environment, assessed by the accumulation of contaminants in animals at the top of the food chain. Starting in 2003, climate change is also included. Indicators will be reviewed and revised or updated yearly where feasible.

The report is available in print format and on the Internet at <http://www.tbs-sct.gc.ca/report/govrev/03/cp-rc1_e.asp>. Previous reports are available at: <http://www.tbs-sct.gc.ca/rma/communic/communie.asp>. The report for 2004 is in preparation.

ALBERTA

State of the Environment Reports

A State of the Environment Report on Wildlife was released in the 2002–2003 fiscal year. This report presents an overview of population trends for major wildlife groups and describes the pressures facing Alberta's wildlife. Actions being taken to protect wildlife are also described. Electronic copies of the report are available at <www3.gov.ab.ca/env/resedu/soe/SOEWild.pdf>.

The northern half of Alberta is part of the Mackenzie River basin. During much of 2003, Alberta gathered information for a State of the Aquatic Ecosystem report being prepared by the Mackenzie River Basin Board. This Board includes six Canadian jurisdictions responsible for water management in this major northern watershed. The final report will be published in 2004.

Alberta River Water Quality Reporting

Alberta Environment (AENV) monitors surface water quality at many river and lake locations. Each year, water quality data are collected consistently at 24 river sites throughout the province, which make up the provincial Long-term River Network (LTRN). Alberta's River Water Quality Index is calculated annually for each of these sites based on monthly data collected between April of one year and March of the next.

The water quality index is used to evaluate water in Alberta's major river systems with respect to four groups of variables: metals, bacteria, nutrients and pesticides. Results from these four groups are combined to provide an indication of overall water quality. The index can be used to show relative differences in water quality between rivers, between sites on the same river (e.g., upstream and downstream from cities), and over time.

Further information on the Index is available on Alberta Environment's surface water quality web site at: <http://www3.gov.ab.ca/env/water/SWQ/resources01.cfm>.

Air Quality Reporting

In Alberta, air quality in monitored continuously at about 40 stations operated by Alberta Environment and regional airshed associations. An additional 100 monitoring stations are operated by industry as a requirement in their respective approvals to operate.

Alberta's Air Quality Index (AQI) is reported every hour at major urban centers across the province. The AQI converts concentrations of five major air pollutants into a single number and corresponding verbal description. The index values can range from 0 to >100—the higher the index number, the greater the level of air pollution. The AQI uses hourly concentrations of carbon monoxide, fine particulate matter ($PM_{2.5}$), nitrogen dioxide, ozone and sulfur dioxide. Concentrations of these pollutants are directly related to provincial and federal air quality objectives and Canada-wide Standards.

Real-time air quality ratings are available on-line at Alberta Environment's web site at <www3.gov.ab.ca/env> (click on "Air" then "Current Air Quality"). Historical air quality data collected at over 40 monitoring stations in Alberta is available at the CASA (Clean Air Strategic Alliance) Data Warehouse at <www.casadata.org>. Current air quality conditions are also available through an automated phone system that can be accessed toll free at (877) 247-7333.

Forest Health Reporting

Alberta Sustainable Resource Development monitors forest health conditions by conducting annual surveys of forest pests, including spruce budworm, aspen defoliators and mountain pine beetle. The 2003 results have been published in the 8th annual forest health report titled *2003 Annual Report: Forest Health in Alberta*. This report summarizes the forest health conditions as well as the management and research of forest insect pests, diseases and invasive plants in Alberta in 2003. Annual reports are available at:
<http://www3.gov.ab.ca/srd/forests/health/p_reports.html>.

QUEBEC

Quebec published 34 documents in 2003, 15 of which were made available on the Internet site of the ministère de l'Environnement du Québec (MEQ—<http://www.menv.gouv.qc.ca>). The documents published included 10 scientific papers, one section of the Internet site on smog-related air quality, three scientific articles, three plain-language documents, 14 science conferences, one brochure on wood heating, and one video guide.

Several documents dealt with air quality: (<http://www.menv.gouv.qc.ca/Air/inter.htm>), with the MEQ continuing its summer and winter "info-smog" programs in collaboration with its partners, and distributing documentation on wood heating.

The other documents dealt with water (<http://www.menv.gouv.qc.ca/eau/inter.htm>): the impact of emissions reductions on lake acidity, the effects of pesticides (hexazinone monitoring in blueberry fields and human exposure to pesticides), water quality in the St. Lawrence River (indicators of the state of the St. Lawrence, monitoring of shoreline water quality, bacterial levels in Lac St-Pierre) and several other rivers (Assomption, Bayonne and Bécancour), the benefits of aeration methods in lake rehabilitation, toxic contamination (high fish mortality in the Bourlamaque river, recent changes in contamination levels in the St. Lawrence, contamination of four lakes in the Chibougamau region), the impact of agriculture on rivers (Boyer Nord and Bras-d'Henri rivers), hydrosedimentary monitoring of rivers in the Saguenay region, status of the blue-green algae and phosphorus situations in Québec, and biological monitoring of rivers (ruisseau Saint-Georges, small waterway monitoring).

Québec published the reference document for the omnibus hearing for the Parliamentary Commission on transportation and the environment: *Contexte, enjeux et orientations sur la mise en œuvre du Protocole de Kyoto* (Context, issues and directions on implementing the Kyoto Protocole).

In 2003, the crown corporation RECYC-QUÉBEC (<http://www.recyc-quebec.gouv.qc.ca/client/fr/accueil.asp>) published its 2002 overview of waste management in Québec. This overview compiled data on waste generation of three sectors in Québec: the municipal sector; the industrial, commercial and institutional sector; and the construction, renovation and demolition sector. The overview also specified quantities generated according to waste stream: recycling, composting, or elimination. The 2002 overview identified the number of management institutions for each treatment type (number of sanitary landfills, recycling plants, etc.) and presented information on the economic activity generated by waste management.

With respect to wildlife, in 2003, the Québec government published reports on the state of four animal species likely to be designated as vulnerable or threatened under the Act respecting threatened or vulnerable species. These species are the woodland caribou, the Canada lynx, the Allegheny Mountain dusky salamander, and Blanding's turtle. A rehabilitation plan was also published for stream salamanders.

An overview of the St. Lawrence was produced by the State of the St. Lawrence Monitoring Program as part of the 1998–2003 phase of the St. Lawrence Vision 2000 Action Plan (SLV 2000). SLV 2000's four partners contributed to the overview: Environment Canada, the MEQ, Fisheries and Oceans Canada, and the Société de la faune et des parcs du Québec.

MANITOBA

Manitoba has moved from producing state of the environment reports every two years to a "sustainability report," which provides important information to Manitobans on key sustainability issues and trends. Under the Sustainable Development Act proclaimed in 1998, the Manitoba government must prepare a sustainability report based on a chosen set of indicators by July 2005. This work is underway, a draft set of sustainability indicators has been proposed, and all government departments in 2003 continued providing material, data, and feedback for a draft sustainability report through the mechanism of an intergovernmental working group, coordinated by Manitoba Conservation.

Article 2(1)(b) – Environmental Emergency Preparedness Measures

ENVIRONMENT CANADA

Environmental Emergency Plans for Industrial Facilities:

On 10 September 2003, Environment Canada published regulations under s.200 of CEPA 1999 requiring the development and implementation of Environmental Emergency (E2) Plans for 174 substances that, if released to the environment as a result of an environmental emergency, may harm human health or environmental quality. These substances include 16 that are on the List of Toxic Substances under CEPA 1999 or are proposed for addition to it. The regulations came into force on 18 November 2003. Environmental Emergency Plans must address prevention, preparedness, response and recovery.

The regulations apply to anyone storing or using a listed substance above the specified threshold, or who has a container with a capacity for that substance in excess of the specified quantity. They are then required to notify Environment Canada of the place where the substance is held, along with the maximum expected quantity and the size of the largest container for that substance. If both the maximum expected quantity and the capacity of the largest container exceed the threshold, an environmental emergency plan is required and Environment Canada must be notified accordingly.

As per the Environmental Emergency Regulations, a regulatee must submit three notices (submission deadlines are shown in parentheses):

- **Notice of Identification of Substance and Place** within 90 days of the Environmental Emergency Regulations coming into force (16 February 2004) or from the date on which the requirements of the regulations are met;
- **Notice of Plan Preparation** within six months of the Environmental Emergency Regulations coming into force (18 May 2004) or from the date on which an environmental emergency plan is required;

- **Notice of Plan Implementation and Testing** within one year of the Environmental Emergency Regulations coming into force (18 November 2004) or from the date on which an environmental emergency plan is required.

ALBERTA

Emergency Management Facility and Notification System

Alberta's security has been strengthened by a new state-of-the-art emergency management facility, which was officially opened on 18 December 2003. The $1.4 million, 17,000 square foot Emergency Management Alberta (EMA) Operations Centre serves as coordination centre for disasters and major emergencies across the province. It houses separate operations facilities to manage counter-terrorism, natural disasters, and the sustainability of critical government services.

An Emergency Notification System that enables EMA to access more than 340 layers of data supports the facility. With this system, the EMA can access current environmental conditions, critical infrastructure and other factors in all areas of Alberta. The Emergency Notification System includes a mapping system that has the ability to share information, including current weather conditions, complete transportation infrastructure layouts and response agency information with all Alberta municipalities and First Nations communities.

QUEBEC

Quebec has a province-wide emergency response system known as Urgence-Environnement. The MEQ has set up an emergency coordination bureau (*Bureau de coordination des urgencies*—BCU) to support regional action teams and oversee the operations of the emergency call center, which accepts emergency calls 24 hours a day, seven days a week. To publicize the telephone number of the center and the services of Urgence-Environnement, an information campaign was carried out among governmental and municipal partners. Promotional material (brochures and stickers) were designed for this purpose.

The ongoing training of Urgence-Environnement agents is a vital aspect of the organization. To this end, courses on the following topics were updated and offered: the ministry's emergency plan; hydrocarbon spills; and releases of hazardous materials and the nuclear emergency plan, which included a nuclear accident simulation. The MEQ also took part in a number of exercises held by its partners, among the most significant of which were "Roche Brisée II" of the ministère de la Sécurité publique (MSP), which simulated an earthquake in the Québec City region; and the "Prévention 2003" exercise of the Canadian Coast Guard, which simulated a maritime spill in the North Shore region.

In terms of planning, the MEQ focused on the elimination of large numbers of carcasses and animal by-products that would occur following an epizootic crisis, and on emergencies involving chemical, biological, radiological and nuclear substances (CBRN).

For several years, the MEQ—through its center of expertise in environmental analysis—has dedicated a fleet of three mobile laboratories to on-site response in environmental emergencies. The first of these labs, the TAGA 6000 (trace atmospheric gas analyzer), specializes in sampling, identifying and quantifying airborne pollutants using a tandem mass spectrometer. The primary advantage of this lab is that it can analyze ambient air in real time while on the move. The second lab, the expert environmental analysis lab, is dedicated to environmental characterization and is used for sampling and analysis on various sites and for assessing environmental quality. Finally, the mobile, multi-purpose lab is generally used for projects of large scope that require several days of sampling and analysis in the field. This lab can analyze most environmental pollutants found in soil, water, liquid and solid wastes, and hazardous materials. The analyses are carried out using

processes and instruments adapted to the problem encountered in the field. These mobile units are frequently present during field operations in order to carry out the on-site environmental analyses needed to make sound decisions. In 2003, these units were used on site in the course of three environmental emergencies.

Article 2(1)(c) – Environmental Education

ENVIRONMENT CANADA

As part of the implementation of the Framework for Environmental Learning and Sustainability in Canada, released at the World Summit on Sustainable Development on 3 September 2002, work is underway to implement some of the recommendations made by environmental educators. Over 240 groups across Canada have developed action plans in support of the Framework, including federal departments and agencies, provincial governments, municipalities, labor organizations, nongovernmental organizations, educational institutions, seniors, youth groups, aboriginal groups and others representing all sectors of Canadian society.

An annual report providing an overview of activities delivered by action plan providers in support of the Framework is available online. In addition, Environment Canada undertook a mapping exercise of its many and diverse environmental learning and outreach initiatives. The exercise culminated in the identification of more than 130 initiatives across the Department.

The annual report on action plans in support of the Framework for Environmental Learning and Sustainability in Canada and the Inventory of Environmental Learning and Outreach Initiatives at Environment Canada is available on Environment Canada's web site at <www.ec.gc.ca/education>.

In November 2003, Environment Canada's National Office of Pollution Prevention released a series of lesson plans for elementary educators across Canada. The series, entitled "Lessons in Pollution Prevention," currently contains six different lesson plans that touch on environmental issues, such as greenhouse gases and climate change, waste management, and environmental technologies. The lesson plans are designed for students aged 10 to 14 and contain instructions for teachers, activities for students, suggestions for follow-up learning as well as materials and time needed to complete the lesson. The lesson plans can be viewed at <http://www.ec.gc.ca/cppic/youth/lplan/en/pos.cfm>

(English) or at <http://www.ec.gc.ca/cppic/youth/lplan/fr/pos.cfm>(French).

On 13–14 November 2003, EICB participated in a workshop hosted by the CEC, in Montreal, Quebec, for training on the US RACT/BACT/LAER clearinghouse (RBLC). The workshop was to provide training on accessing Best Available Technology (BAT) options through the presentation of BAT information resources, along with three case studies on selected industrial sectors. Presentations were also made on other databases containing useful BAT information and funding opportunities for BAT installation. Additionally, a list of approvals engineers/permitters was developed via participants in the workshop to be used as a reference and networking resource for the provinces/territories and federal government.

Valuable tools such as the US RBLC, although available on the Internet, have not been well known or utilized by many provincial and regional jurisdictions. The BAT workshop was an excellent opportunity to inform air quality managers from these jurisdictions of these types of tools. It also provided practical training experience assisted by knowledgeable US experts on the RBLC, specifically. We strongly support an increased awareness of the tools and resources available to air quality managers on Best Available Technology for air pollution control in North America.

The workshop also provided the opportunity for the development of a network of air quality managers among provincial and federal jurisdictions. This is an important step in continuing the

exchange and use of information on air pollution control technologies and permitting practices across North America.

ALBERTA

The Environment Department continued to publish educational resources in 2003, ranging from a four-page fact sheet on toxic PCBs (polychlorinated biphenyls) to teachers' guides on a wide range of environmental topics.

Alberta supported several special "environmental" weeks, including Environment Week, Wildlife Week, National Forest Week and Waste Reduction Week. During National Forest Week and to celebrate Arbor Day, over 70,000 tree seedlings were distributed to Alberta grade one students and community groups across the province.

In July 2003, Alberta Environment partnered with FEESA, An Environmental Education Society to develop and deliver a Water Education Institute for Alberta Teachers from across the province. Teachers spent six intensive days examining water issues in southern Alberta to better prepare them for addressing these issues in the classroom.

In 2003, Alberta Sustainable Resource Development forest health awareness and education efforts included newsletters; posters and brochures; and an extensive forest health web site that includes maps, data, publications and general information: <http://www3.gov.ab.ca/srd/forests/health/index.html>.

QUEBEC

The MEQ continued to publish the adventures of Rafale on its Internet site. This is a series of environmental features for children 10 to 14 years old.

Training sessions regarding the adoption of Groundwater Catchment Regulation were given to well drillers and municipal officers. Students were trained in data entry as part of the inventory of small water systems subject to the *Regulation respecting the quality of drinking water*. In addition, through training sessions offered on the "design guide, and the work of "treatment technologies" committee, design criteria for drinking water catchment and treatment equipment were established, and the assessment process for new technologies was explained.

The summer INFO-SMOG program continued from 1 May to 30 September. INFO-SMOG is a smog forecasting program aimed at informing the public of smog concentration in the ambient air, especially when it reaches, or may reach, levels that are hazardous to health and the environment. The winter INFO-SMOG program for Greater Montreal added an innovative smog warning component. These programs are the fruit of a collaboration among the federal and provincial governments, the City of Montreal, and public health departments.

Following the entry into force of the Pesticides Management Code and the Regulation Modifying the Regulation Respecting Permits and Certificates for the Sale and Use of Pesticides, six information and plain-language brochures were created, four of which addressed specific sectors of activity. Similarly, a public awareness brochure on lawns, along with bookmarks and posters, were distributed. The Internet chronicle "Jardiner … tout naturellement" (gardening naturally) was updated.

A dozen presentations on pesticide regulations were held during specifically targeted conventions, colloquia and conferences.

The crown corporation RECYC-QUÉBEC carried out a number of information, awareness-raising, and educational activities to stimulate and develop habits in the reduction, re-use, and recycling of waste. These activities included the public information campaigns *Tu rapportes, on*

recycle! and *Je ne suis pas une ordure, recyclez-moi !*, collaborative efforts with *Les partenaires PRO-RECYC*, educational activities in schools (support for Brundtland Green Schools, for recycling "caravans" of the Quebec network of business and recycling training centres [*Centres de formation en entreprise et recuperation*], for the network of primary-school environmental micro-businesses [*Réseau québécois des écoles micro-entreprises environnementales*], for the Alcan recycling contest, and the second annual Quebec garbage reduction week, organized by Quebec's network of waste recovery and sorting centres [*Réseau des Ressourceries du Québec*]), the distribution of information on its Internet site, etc. In 2003, the Corporation made an "ABCs of recycling" available on its Internet site. This document was aimed at helping people apply the 4Rs. RECYC-QUÉBEC also launched a funding program aimed at education in reducing, re-using and recycling (Visons l'éducation à la réduction, au réemploi et au recyclage pour 2008—VERRR 2008). Since 2003, RECYC-QUÉBEC has distributed an e-newsletter, *RECYC INFO*, to 5,000 waste management stakeholders in Quebec. The Corporation also organized the first provincial forum on waste management in January 2003, an event that brought together over 400 stakeholders in Quebec around the issue of waste management in the province.

A guide entitled "Guide relatif à la construction sur un lieu d'élimination de matières résiduelles désaffectés" was produced to facilitate enforcement of Article 65 of the *Environment Quality Act* concerning construction and renovation projects on lands formerly used as waste disposal sites.

An abridged version of a best practices guide for vehicle recyclers ("Guide de bonnes pratiques pour la gestion des véhicules hors d'usage") was published. Moreover, a broad inspection program of recyclers was set up, which will serve to raise awareness among recyclers of best practices in environmental management and to encourage respect of the applicable laws and regulations in this sector.

A brochure summarizing the Québec Residual Materials Management Policy, 1998–2008 was produced in 2003. The brochure outlines the policy's main features.

MANITOBA

Environmental education is an important function for government. In 2003, information was provided to the public on many important environmental programs. For example, in 2003, a new department of Water Stewardship was created. It is responsible for water management, economic development and clean water initiatives. A large part of the department's activities includes public environmental education and outreach, including the release of the Manitoba Water Strategy document. Through these efforts we hope to partner with Manitobans in promoting healthy lakes and rivers and building a more sustainable Manitoba.

Article 2(1)(d) – Scientific Research and Technology Development

ENVIRONMENT CANADA

Canada, through the Environmental Technology Centre, undertook the following initiatives on air quality measurement:

- The NAPS network continues to expand both in number of sites and species measured. A NAPS project, initiated in early 2003, generated routine measurements of $PM_{2.5}$ mass, metals, ammonia, ions, and organic and elemental carbon. Six speciation sites were operational in fiscal year 2003/2004.
- The ambient air quality monitoring at selected NAPS Network sites was performed for air-related CEPA toxic substances such as selected metals, certain volatile organic compounds (VOCs), PAHs, hexachlorobenzene (HCB), pentachlorophenol (PCP), and polychlorinated dibenzodioxin and dibenzofuran (PCDD/F). Research and development

work continued to improve the sampling and analytical methods employed. New and improved analytical methods for measurement of additional substances in ambient air were developed. R&D focused on air-related substances included that are not currently measured in the NAPS Network, including certain VOCs, metals, organic acids and amines, and other ionic species. This work involved a variety of analytical techniques.

- The Environmental Technology Centre participated in a number of special studies related to air toxics measurement. For example, the Centre was requested by the Sydney Tar Ponds Agency (STPA) to begin monitoring VOC at six locations every six days at the Sydney Tar Ponds for three years. The Centre continued to cooperate with the University of Virginia to study plant hydrocarbons emissions and their impact on the environment. New measurement sites were established at Bratt's Lake, Saskatchewan, and Saturna Island, BC, to support the MSC CORE program. VOC measurements also began at Alert in the Canadian Arctic as part of the Global Atmospheric Watch program.
- Research and development work was continued on the measurement of polar and heavier molecular weight VOCs that are important in ozone and particulate matter formation. A new isotope mass spectrometer was acquired and is being used to examine the origins of volatile and semi-volatile organics.

Canada, through the Environmental Technology Centre, undertook the following studies on mobile and stationary source emissions:

- Work was undertaken to characterize the emissions from a variety of fuels used with a number of engines and emissions control systems, in collaboration with private sector companies. It included a project on three advanced emission control technologies for diesel engines using ten diesel fuel formulations. There was significant industry support for this work, as well as from the New York State Department of Environment Conservation. In addition, detailed emission characterization was undertaken during the testing of two conventional and two diesel-electric urban transit buses.
- Under a collaborative R&D program with Carleton University's Department of Mechanical & Aeronautical Engineering, research is planned on exhaust emissions from turbines.
- In support of an effort to reduce the exhaust emissions from locomotives, the Environmental Technology Centre worked with NESCAUM (Northeast States for Coordinated Air Use Management) and a Massachusetts transit authority (MBTA) to measure the emissions from a typical in-use locomotive under baseline conditions and with aftermarket emissions control strategies. The purpose is to allow the assessment of various North American technologies for reducing locomotive exhaust emissions.
- A literature review on analytical methods for polychlorinated paraffins (PCA) was completed. A study to examine a high-resolution gas chromatographic (HRGC)/high-resolution mass spectrometric (HRMS) method to measure the short-chain chlorinated paraffin (C^{10-13}) mixture in environmental samples was carried out.
- A draft reference method is being developed for the measurement of oxidized and metallic mercury from coal-fired power plants to support the implementation of the Canada-wide Standard for mercury, which includes emission reduction targets and monitoring programs for the emitting sources.
- The main purpose of the dead animal cremation unit program is to characterize the air emissions and ash residues. Currently, cremation is not an approved disposal method for dead animals under the Dead Animals Disposal Act (DADA). However, on-farm cremation units are currently being used in Ontario. Approximately 250 units are being used for on-site disposal of poultry and other species not mentioned in the DADA. Cremation has the potential to be an acceptable method of carcass disposal under the new

Nutrient Management Act and the new Food Safety Quality Act. Thus, the environmental impact of DACUs needs to be fully characterized and demonstrate that they can meet the current MOE limits and CWS. Two incinerators were tested with two types of feed. Incinerators. The program was carried out at the Arkell Research Station of the University of Guelph in cooperation with the Ontario Ministry of Agriculture and Food, the Ontario Ministry of the Environment and the University of Guelph. Target pollutants included: acid gases; particulate matter; metals, including mercury; PCDD/F; co-planar or dioxin-like PCB; PAH; HCB; octachlorostyrene (OCS); and VOCs. Evaluation of additional units is planned for next fiscal year.

Canada, through the Environmental Technology Centre, undertook the following research on Oil Spills:

- Ongoing R&D continued to develop oil analysis methods and improve analytical methods for oil spills to improve the analytical methods necessary to examine the complex chemical composition of oils in relation to spill behavior, fate, effects, and countermeasures. A collaborative project with the US EPA on the most common oils in North America was completed, and a review was undertaken of oil analysis methods.
- Research work was completed on water-in-oil emulsion formation mechanisms. The work focused on developing mathematical models for the formation of water-in-oil emulsions. The results can be used for oil spill countermeasures planning & were published in papers in two journals and a conference proceeding
- The state-of-the-art Scanning Laser Environmental Airborne Fluorosensor (SLEAF) prototype sensor was installed in the DC-3 aircraft. This aircraft-mounted system is designed to detect unequivocally and classify the type of oil in a marine or terrestrial environment. Demonstration flights were conducted around the southern coast of Newfoundland in late February and early March 2004.
- R&D work, in collaboration with the Industrial Materials Institute of the National Research Council, continued on the development of an airborne laser-ultrasonic sensor for the airborne remote measurement of oil slick thickness. Airborne test flights leading up to airborne measurement of oil thickness are planned for the summer of 2004.

Canada, through the Environmental Technology Centre, undertook the following research on soil:

- Earlier research on inclusion of PCB with cyclodextrins indicated that this green chemistry approach could be an option to cleanup PCB-contaminated water or soil. The goal of the current work is to investigate the sorption/desorption properties of PCDD/F in soil and water in the presence of different cyclodextrins.
- There is a need for standardized soil testing methods to estimate the survival, persistence, gene-transfer potential, and ecological effects of genetically modified organisms (GMO). In particular, a standardized terrestrial microcosm system will serve in the risk assessment of chemicals in soils, in the development of soil quality criteria, and in the monitoring of contaminated sites. The completed first phase of this project included a review of the state-of-the-art in soil microcosm test systems and their level of standardization. The most appropriate system(s) are being selected and research work will commence to refine and further standardize the methodology.
- Hexachlorobutadiene (HCBD) is a persistent and bio-accumulative substance and is released to the environment as a result of human activity. There are no natural sources of HCBD in the environment. Measurement of HCBD releases was conducted at four municipal solid waste incinerators (Sydney, Charlottetown, Peel and Burnaby) and three hazardous waste incinerators (St. Ambroise, Mercier and Corunna).

- There is concern about the fate of nonylphenol polyethoxylates (NPE) and their biological breakdown products in the environment. Specifically, NPE are endocrine-disrupting substances and have been shown to alter sexual development in animals. One environmental source of NPE is their use as an additive in aircraft de-icing and anti-icing liquids. An ETC-sponsored project by SAIC Canada began on this topic.

Canada, through the Wastewater Technology Centre, undertook the following initiatives on GHG emissions:

- A pilot-scale demonstration project continued to verify optimal operating conditions for the application of the Microwave-Assisted Processes (MAP™) to the energy efficient extraction of canola oil from seeds and to further assess replication opportunities for other agricultural feedstock selected for their value to Canada.

Canada, through the Wastewater Technology Centre, undertook the following initiatives on GHG emissions and biosolids stabilization:

- A full-scale demonstration project was elaborated to undertake operational changes at a municipal wastewater treatment facility to optimize their anaerobic digester performance with a focus on methane production for energy recovery and greenhouse gas reductions. The project scope to include energy recovery from biogas using a portable micro-turbine is currently being considered. The results of the project will also be assessed against other environmental co-benefits related to biosolids stabilization.
- An anaerobic digester pilot plant was commissioned at the Wastewater Technology Centre and baseline operating data was collected. The pilot digester has now been modified to allow for a longer solids treatment phase to demonstrate enhanced biogas production and sludge stabilization. A number of operating and technical changes are being designed for pilot scale verification of performance improvement.
- A project to evaluate the relative effectiveness of microwaves for the destruction of pathogens in municipal biosolids and sludges is moving forward. Microwave heating is being compared to conventional heating in terms of heating efficiency, pathogen reduction and enhanced biogas production. Pilot scale microwave equipment was designed and acquired.

Canada, through the Wastewater Technology Centre, undertook the following initiatives on endocrine disruptors:

- In collaboration with NWRI and the Ontario Ministry of the Environment, the Wastewater Technology Centre laboratory has been analyzing a number of different wastewater treatment plant effluents for a suite of acid pharmaceuticals and synthetic musks. The data is being used to populate a first provincial database on the occurrence and fate of these compounds in municipal effluents.
- Development of a DNA microarray-based test for the simultaneous detection of twenty of the most common pathogens found in municipal wastewater effluents and biosolids is ongoing. This test method will dramatically reduce the amount of time required to report results (from three days down to approximately four hours).
- Two sediment testing methods were published in support of assessments for disposal at sea permits under Part 7, Division 3 of the *Canadian Environmental Protection Act, 1999*. One sediment test method estimates impacts on growth of polychaete worms and another sediment compliance testing Reference Method estimates impacts on the metabolic rate of luminescent marine bacteria.

Canada, through the Minerals and Metals Branch, is co-funding with industry, a study at the University of Waterloo to assess the potential use of photo-catalytic oxidation for the destruction of chlorinated organic pollutants from metallurgical off-gas streams. This is expected to stimulate the investigation and possible development of an innovative technology that would support effective implementation of the federal government's Toxic Substances Management Policy (TSMP), Canadian Environmental Protection Act (CEPA), and the Canadian Council of Ministers of the Environment (CCME) Policy for the Management of Toxic substances, and their provisions for Virtual Elimination of Persistent and Bio-accumulative Toxics (PBTs).

In 2003, EICB also provided funding to a couple of research projects to further scientific research and technology development in respect of environmental matters.

1. Clean and Efficient Combustion Technologies for Large Utility Electricity Generation.

This work is comprises several areas of study carried out with federal, provincial and academic research institutions. It involves laboratory and field investigations. Specifically, the studies have examined:

- sorbents for mercury capture from power plant stack gases;
- coal gasification technology and its implications/impacts for the Canadian electricity industry and indigenous coal reserves;
- methodology for measurement of the condensable fraction of fine particulate matter; and
- advanced technique for the real-time sampling, measurement and monitoring of ambient aerosol particulate matter.

2. Environmental Contaminants in Coal and Coal Byproducts

This work comprises laboratory and field investigations into the analyses of coal feed stocks, the ash-byproduct and the emissions to atmosphere from coal-fired boilers. The goal is to determining the quantification of the contaminants (e.g., heavy metals), the factors that affect the transformation and speciation of these contaminants, and to identify strategies for preventing or minimizing the release of these contaminants. The purpose of this project is to try to determine what characteristics of coals and their constituents affect the ability for mercury in the coal to be captured in the fly as opposed to being emitted to atmosphere.

ALBERTA

In 2003, Alberta Sustainable Resource Development, in cooperation with the Foothills Model Forest, the Pacific Forestry Centre of Canadian Forest Service and Gowlland Technologies Ltd., developed a model to predict the spread of mountain pine beetle in Alberta. The model assessed potential impacts of the mountain pine beetle on pine forests within the Foothills Model Forest. The main goal was to determine under what conditions an outbreak would occur. The model involved inputting geographic, forest inventory, weather and mountain pine beetle infestation data and projecting it using the Spatially Explicit Landscape Event Simulator (SELES).

QUEBEC

In 2003, under the "environment" portion of its science and technology fund for governmental priorities (*Fonds des priorités gouvernementales en science et en technologie*), the MEQ funded 14 research and technical development projects, for a total of C$759,312. These projects covered the sectors of water, air, and soil, as well as waste management and agricultural practices.

During the same period, 22 projects, with total funding of nearly C$996,000, were approved under Quebec's environmental research and development assistance program (*Programme d'aide à la recherche et au développement en environnement*—PARDE). This program is aimed primarily at

generating strategic scientific data for intervention programs related to environmental quality and sustainable development, according to priorities established by the MEQ. The topics addressed are water and air management as well as conservation of biodiversity.

The MEQ also managed several other assistance programs to support the activities of various non-profit organizations. In 2003, as part of its program to help social economy businesses (*Programme d'aide aux entreprises d'économie sociale*), the ministry distributed C$1,665,067 in grants to 15 projects in the area of recycling, development, re-use, and re-sale of waste materials. Under its Environmental Priority Assistance Fund (*Programme d'aide relatif aux priorités en environnement*), the MEQ provided financial assistance totaling over C$473,416 for 18 important projects in the areas of education and environmental protection or restoration. These projects fell under the following five priorities: climate change, conservation of biodiversity, water management, agricultural pollution, and the promotion of sustainable development. The Action-Environnement program continued to support both the vitality of organizations working in the area of environmental protection and also the implementation of environmental projects in Brundtland Green Schools and in colleges.

As part of the policy of supporting autonomous community action, and through community organization funding programs (*Programmes de soutien financier aux organismes communautaires*), 36 organizations received grants totaling C$2,516,272.

Quebec's environmental analysis center regularly develops methods to analyze environmental contaminants. During fiscal 2003, 12 new methods were developed to analyze at least 19 new substances or contaminants. Notable was research in measuring steroids and hormones in the environment and in high-resolution analysis of fire retardant substances. Moreover, six new assessment procedures were developed as part of ecotoxicological studies related to specific issues.

With respect to climate change, the Quebec government provided funding to several research and technological development projects aimed at better understanding global warming and the technological means available to attenuate the phenomenon. Particularly noteworthy in the area of technological development is the government of Quebec's ongoing support of the low-velocity electric vehicle pilot project in Saint-Jérôme.

In terms of scientific research, several projects started in 2002 as part of work done by the Ouranos Consortium on regional climatology and adaptation to climate change continued in 2003. The Consortium's science programming also increased in response to the needs of partners. Thus, the "Climate science and hydrology" program had 17 projects in 2003, while the "Impacts and adaptation" had 25. For its part, the MEQ supported a project in regional climate modeling at the Université du Québec à Montréal (UQÀM), as well as several projects for the dissemination of science knowledge.

Five ÉcoGESte prizes were awarded to Quebec organizations with outstanding performance in the reduction of greenhouse gas (GHG) emissions and who came up with novel solutions that will inspire other organizations.

The crown corporation RECYC-QUÉBEC continued to monitor activities related to the research and development funding assistance program (*Programme d'aide financière en matière de soutien à la recherche et au développement*) and the composting support funding program (*Programme d'aide financière en matière de soutien au compostage)*. It also helped to disseminate the results of these research projects by publishing several project reports on its Internet site. In addition, RECYC-QUÉBEC continued to manage two funding programs for the recycled glass industry, in collaboration with the Société des alcools du Québec. Financial support was also given to technological development assistance projects for the management of used tires in Quebec.

In collaboration with the Quebec standards bureau (*Bureau de normalisation du Québec*—BNQ), benchmark tests were carried out on wastewater treatment systems in isolated residences to certify their operation under regulation Q2 r.8 of the Environment Quality Act. With a view to protecting public health, characterizations related to possible agricultural contamination of groundwater were also carried out on seven watersheds.

A committee of experts on seismic surveying was formed to identify environmental issues related to seismic survey projects in the gulf and estuary of the St. Lawrence. The committee will also take stock of the current state of scientific knowledge and suggest courses of action.

In the area of the rural environment, four ministries and three Québec research funds came together to promote research by launching a new C$2.6 million program to strengthen and promote research on the rural environment (*Action concertée pour le soutien stratégique à la promotion et à la consolidation de la recherche sur l'environnement rural*). Among the focuses of this concerted action is to create a network of expertise and disciplines among research teams to approach problems related to the rural environment. One of the program's objectives is to better understand the impacts of agriculture and agroforestry on environmental quality and human health. The program also aims to promote agricultural and agroforestry practices that would both minimize such impacts and be efficient and economically viable.

The MEQ is funding a research project under PARDE, led by the Odotech group. Its principal goal is to assess the impacts of sanitary landfills on air quality. The project will thus characterize the biogas from six sanitary landfill sites. It will also review the literature on biogas regulation in the rest of the world, propose monitoring indicator parameters and test the LANDGEM program as a method of estimating biogas generation. The project's final report should be released in early 2004.

Article 2(1)(e) – Environmental Impact Assessment

The Canadian Environmental Assessment Agency's 2004–2006 sustainable development strategy reflects the vision of an increasingly efficient and effective federal environmental assessment process to support Canada's role as a world leader in sustainable development. The proclamation on 30 October 2003, of a renewed Canadian Environmental Assessment Act advanced this vision. It established a more predictable, consistent and timely process. The renewed Act, through strengthening opportunities for the public to participate, goes a long way toward improving the quality of environmental assessment in Canada.

ALBERTA

Environmental reviews were completed for every approval issued under the Environmental Protection and Enhancement Act and the Water Act.

During the 2003/2004 fiscal year, a total of 27 projects were at various stages in the environmental assessment process. Environmental Impact Assessment reports were completed for 8 projects, which were referred to the Energy and Utilities Board or the Natural Resource Conservation Board for consideration on the need for a public hearing. Alberta Environment staff actively participated at three hearings. The first two, CNRL Horizon and Shell Jackpine, were joint Canadian Environmental Assessment Agency/Energy and Utilities Board hearings in the Fort McMurray oil sands area, and the third, Agrium's northern extension of their existing phosphogypsum storage area, was a Natural Resources Conservation Board hearing in Fort Saskatchewan.

QUEBEC

Quebec applied its environmental assessment procedure to projects targeted under the Regulation respecting environmental impact assessment and review. In 2003, 78 projects were subject to one step or another of the environmental impact assessment and review procedure in force for

southern Quebec. Eleven of these projects were granted authorization and 28 new projects registered for the process. The projects currently being processed break down as follows: 44 land-based projects (roads, sanitary landfill sites, high-voltage electrical transmission lines), 27 water-based projects (hydroelectric plants, dredging, filling), and 7 industrial projects.

Twenty-seven projects were assessed under the James Bay and Northern Quebec Agreement, including 21 new files. Twenty-one decisions were rendered. The projects assessed included hydroelectric projects, mining projects, and the establishment of trench sanitary landfills.

In 2003, the environmental hearings board (*Bureau d'audience publiques sur l'environnement*—BAPE) completed 10 inquiries or public hearings and began six others. Five information sessions and public consultations not involving inquiries or public hearings were also held.

The Quebec government approved the Canada-Quebec Agreement to Establish a Joint Review Panel for the Kénogami Watershed Flood Control Project.

The work of the BAPE commission on sustainable development in the Quebec pork sector, begun in September 2002, continued until September 2003. The commission's mandate was to create one or more sustainable models of pork production that took into account economic, social and environmental factors. The report ("L'inscription de la production porcine dans le développement durable") was published in September 2003.

MANITOBA

To ensure that development maintains sustainable environmental quality, Manitoba Conservation:

- Administers development approval requirements of the Environment Act, the Dangerous Goods Handling and Transportation Act, the Public Health Act and the Pesticides Regulation;
- Controls municipal, industrial, and hazardous waste sources of pollutants;
- Minimizes environmental impact of development proposals; and
- Minimizes adverse effects to the environment and public health from pesticide use.

Article 2(1)(f) – Economic Instruments

With respect to promoting the use of economic instruments for the efficient achievement of environmental goals:

- In 2003, Environment Canada introduced the Solvent Degreasing Regulations under the Canadian Environmental Protection Act, 1999. These regulations pertain to two solvents, trichloroethylene and tetrachloroethylene, used in the degreasing process. The instrument is a tradable unit system which creates consumption units for each kilogram of the two solvents that exceeds a defined threshold. Users of the solvents must have adequate consumption units to avoid non-compliance and can trade excess units to other users. In 2007, consumptive units issued should decrease substantially as the calculation becomes more stringent, bringing solvent consumption to the threshold levels.
- The External Advisory Committee on Smart Regulation (EACSR) was created in May 2003 to provide an external perspective and expert advice to the Government of Canada on regulatory issues spanning economic and social policy objectives. One of the areas of interest to the Committee is how economic instruments can be used in this country to advance sustainable development objectives.

QUEBEC

Under the provisions of the Taxation Act, the MEQ issued seven visas for donations of land or easements with ecological value totaling over 140 hectares of private land. It also put directives in place to guide the ministry's regional staff in processing these files.

The Quebec government continued to levy a C$3 environmental surcharge on the purchase of each new tire in order to fund two grant programs for collecting and recycling used tires. In 2003, these programs helped to recycle 57,000 tonnes of used tires (over 6 million tires) and collect 33,000 tonnes of tires (about 4 million tires) in storage sites around the province. By 2003, Québec had thus reached its goal, set out under the Québec Residual Materials Management Policy, 1998–2008, of recycling 85 percent of all used tires.

The adoption of Bill 130 (2002, c. 53) paves the way for the government to charge an elimination fee that will fund recycling activities for waste materials.

In December 2002, Quebec adopted Bill 102 (2002, c.59), which supplements the powers conferred under the Environment Quality Act. Under the bill, when municipalities provide services with respect to certain waste materials, companies must help offset the costs incurred by municipalities to collect and recycle such materials. This heightened responsibility for producers is one of the principles of the Québec Residual Materials Management Policy, 1998–2008.

Between 1 April 2002 and 17 April 2003, 44 projects were registered in Quebec's urban contaminated sites rehabilitation program, Revi-Sols. This program aims to encourage the re-use of contaminated sites and to revitalize the urban fabric. These projects will lead to approximately C$34.4 million in restoration work (with grants of about C$15.5 million), and about C$0.8 million in real-estate investment.

An environmental tax on tetrachloroethylene continued to be levied in 2002. This tax is aimed at reducing the use of this substance, which is employed primarily by dry-cleaning businesses.

MANITOBA

The Manitoba government manages funding instruments that support innovative solutions to environmental issues. A total of approximately $3 million was provided to support the Sustainable Development Innovations Fund in 2003. The fund is composed of seven targeted allocations and one broad allocation, with access being provided to community groups, industry, and the general public. The fund categories are as follows:

- Open Category
- Environmental Youth Corps (EYC)
- Manitoba Climate Change Action Fund (MCCAF)
- Manitoba Habitat Heritage Corporation Southwest Agro-Woodlot Program
- Orphan Mine Site Rehabilitation Program
- Orphan Mine Site Assessment Program
- Waste Reduction and Pollution Prevention (WRAPP) Fund
- Zebra Mussel Program

ARTICLE 3 – LEVELS OF PROTECTION

Solvent Degreasing Regulations

The Solvent Degreasing Regulations under the Canadian Environmental Protection Act, 1999 came into force on 24 July 2003. The purpose of the Solvent Degreasing Regulations is to reduce releases of trichloroethylene (TCE) and tetrachloroethylene (PERC) into the environment from

solvent degreasing facilities using more than 1,000 kilograms of TCE and PERC per year. These regulations include a market intervention by establishing tradable allowances for the use of TCE and PERC in vapor and cold solvent degreasing operations that exceed the 1,000 kilograms threshold per year. The regulations also apply to sellers who are required, starting January 2004, to report their annual sales of TCE and PERC for the previous year to all degreasing operations regardless of quantity. However, they do not apply to solvent degreasing operations that use less than 1,000 kilograms of TCE or PERC in a calendar year. Beginning 1 January 2004, affected solvent degreasing operations that wished to continue using TCE and PERC required an allowance (consumption units) from Environment Canada. This allowance was based on historical TCE and PERC use between 1994 and 2002.

For more information on the Solvent Degreasing Regulations visit the web site at: <http://www.ec.gc.ca/nopp/degrease/en/index.cfm>.

Species at Risk Legislation

The federal Species at Risk Act, which was passed by Parliament on 12 December 2002, is coming into force in phases. Two-thirds of the Act's sections are in effect as of 5 June 2003. The prohibitions and enforcement provisions will come into force on 1 June 2004.

The purposes of the Act are to prevent wildlife species from becoming extirpated or extinct, to provide for the recovery of extirpated, endangered or threatened species, and to manage species of special concern in order to prevent them from becoming at risk.

The Species at Risk Act ensures that species are assessed under a rigorous and independent scientific process. It also requires the development of recovery strategies and action plans for species that are found to be most at risk. To address the critical habitat requirements of listed species, the Act emphasizes cooperation with Canadians as the first and preferred approach. A critical habitat safety net is available as a backstop if cooperative measures fail.

The Species at Risk Act is one element of the three-part Canadian Strategy for the Protection of Species at Risk. The other two are the Accord for the Protection of Species at Risk that unifies the efforts of the provinces, territories and federal government on this issue, and complementary stewardship and incentive programs to assist Canadians in protecting species at risk and their habitat.

Additions to the List of Toxic Substances

Canada added the following substances to the List of Toxic Substances (Schedule 1) of the Canadian Environmental Protection Act, 1999 (CEPA 1999) in 2003: ethylene oxide; formaldehyde; N-nitrosodimethylamine (NDMA); hexachlorobutadiene; ozone and its precursors and precursors to respirable particulate matter less than or equal to 10 microns (PM_{10}); particulate matter containing metals that is released in emissions from copper smelters or refineries, or from both, and particulate matter containing metals that is released in emissions from zinc plants. Although these substances are only added to the List of Toxic Substances at this time, risk management actions to address these substances will follow.

Other toxic substances added to the List of Toxic Substances in 2003 include:

- Ammonia dissolved in water – 1 January 2003
- Nonylphenol and its ethoxylates – 1 January 2003
- Effluents from textile mills that use wet processing – 1 January 2003
- Inorganic Chloramines – 1 January 2003

Federal Halocarbon Regulations, 2003

The Federal Halocarbon Regulations 2003 (FHR 2003) replaces the former Federal Halocarbon Regulations that were published by Environment Canada in July of 1999. The purpose of replacing the Federal Halocarbon Regulations with the FHR 2003 is to implement new initiatives under Canada's Ozone Layer Protection Program and to address various administrative issues in the Federal Halocarbon Regulations.

ALBERTA

Clean Air Strategic Alliance (CASA)

In November 2003, the Clean Air Strategic Alliance (CASA) presented a new air quality management framework to substantially reduce air pollutants from the utility industry. Emissions of sulfur dioxide will be reduced by 46 percent, emissions of nitrogen oxides will be reduced by 32 percent, emissions of particulate matter will be reduced by 51 percent, and emissions of mercury will be reduced by 50 percent when the framework is fully implemented. Agreement on the framework was achieved by consensus. In Alberta, CASA is a leading example of cooperative decision making between government, industry, environmentalists, health advocates and local community groups.

Framework for Water Management Planning
<http://www3.gov.ab.ca/env/water/legislation/framework.pdf>

The Framework for Water Management Planning, released in 2003, supports sustainable resource and environmental management, recognizes both short- and long-term needs and values for water, and considers local and regional perspectives. The Framework outlines the process for water management planning and the components required for water management plans in the province. It applies to all types of waterbodies, including streams, rivers, lakes, aquifers and wetlands, and takes a holistic approach.

Water for Life: Alberta's Strategy for Sustainability
<http://www.waterforlife.gov.ab.ca/>

Water for Life: Alberta's Strategy for Sustainability was release in November 2003. The Strategy sets out:

- three outcomes, three key directions, governance model, actions
- Implementation – capital investment and operational expenditures

Unpredictable water supply, coupled with unprecedented economic and population growth, has underscored the need for a holistic approach to water management in Alberta. *Water for Life: Alberta's Strategy for Sustainability* outlines the Government of Alberta's vision for water management, and identifies several outcomes and key directions that aim to provide better balance to the social, economic and environmental aspects of water and resource management.

Advisory Committee on Water Use Practice and Policy
<http://www.waterforlife.gov.ab.ca/html/removed.html>

During the two-year consultation process for the development of *Water for Life: Alberta's Strategy for Sustainability,* some Albertans expressed concern about the underground injection of water to assist in oil or bitumen recovery.

In September 2003, the Minister of Environment established the Advisory Committee on Water Use Practice and Policy, involving representatives from industry, government, municipalities, and

environmental groups, to examine the issue and help find a balanced solution. The committee was tasked with reviewing existing policies and practices, and subsequently providing recommendations that could lead to the reduction or elimination of this activity. The committee submits its final report August 2004.

Northern Rivers Ecosystem Initiative (1998–2003)

The Northern Rivers Ecosystem Initiative (NREI) addresses the commitments made in the Canada-Alberta-Northwest Territories response to the recommendations of the Northern River Basins Study (NRBS) in 1996. The NRBS report provided a benchmark that defined the state of the Peace, Athabasca and Slave rivers.

In 1997, the *Canada-Alberta-Northwest Territories Response to the Northern River Basins Study* was issued. This response report integrated the governments' positions and outlined future plans to ensure the long-term protection of these rivers. It confirmed the governments' commitment to pollution control and full stakeholder involvement. To address the recommendations of the NRBS, as well as the public demand for follow-up studies, the NREI was implemented in 1998.

The NREI involved both policy initiatives and scientific research. The five-year study focused on priorities such as pollution prevention, endocrine disruption in fish, hydrology, contaminants, nutrients, safe drinking water and enhanced environmental monitoring. Its mission was to provide the scientific underpinning to the governments' response to the recommendations of the NRBS. Its goal was to provide an understanding of the impacts of development on the northern river ecosystems. The final report of the NREI, and all associated technical studies, will be released in 2004.

Communication and Action Protocol for Failed Bacteriological Results in Drinking Water for Waterworks Systems

In 2003, Alberta Environment released the Communication and Action Protocol for Failed Bacteriological Results in Drinking Water for Waterworks Systems Authorized under the Environmental Protection and Enhancement Act. The document details the notification procedure that must be followed in the event that the Provincial Laboratory of Public Health (Microbiology) detects the presence of coliforms or *Escherichia coli* [E. coli] in drinking water samples from waterworks systems approved by Alberta Environment.

Providing clean water has become a challenge with new knowledge and information about emerging pathogens in source waters. Water treatment systems must be designed and operated to ensure microbiologically safe drinking water even under the worst possible raw water quality scenario. Effective particle removal and efficient disinfection are the two principal treatment measures for ensuring microbiologically safe drinking water. Turbidity and disinfection residual measurements are therefore, the two most important ongoing tests related to microbiological water quality. The testing for bacteria in drinking water is an important component for ensuring microbiologically safe drinking water. A positive coliform test or presence of *Escherichia coli (E. coli)* may indicate a system failure requiring immediate action. This protocol is intended to ensure that test results that exceed the bacteriological criteria as described in the latest edition of the *Guidelines for Canadian Drinking Water Quality* are transmitted to the appropriate parties so that follow-up action can be taken immediately.

Codes of Practice

Alberta Environment introduced five Codes of Practice addressing wastewater and waterworks systems under the Environmental Protection and Enhancement Act and Water Act. The Codes improved the efficiency and effectiveness of Alberta Environment's regulations for activities with

low potential for environmental impact. The Codes are province-wide rules for activities, which lead to regulatory fairness and consistency. Alberta Environment continues to inspect all operations under a Code of Practice. Changes to the Environmental Protection and Enhancement Act and several regulations were required to ensure the Codes had the force of regulation.

Climate Change and Emissions Management Act

The Government of Alberta passed the Climate Change and Emissions Management Act, which gives Alberta Environment authority to implement Alberta's climate change action plan.

The Climate Change and Emissions Management Act strengthened and complemented Alberta's existing legislation, and environmental protection and resource management activities related to air emissions. It provides for:

- An overall greenhouse gas emission target for Alberta
- Targets for negotiated sector agreements
- A framework for emission offsets against Alberta regulatory requirements
- A provincial climate change management fund

The Act will be proclaimed in stages.

Environmental Protection and Enhancement Act and Conservation and Reclamation Regulation

Alberta Environment made changes to the Environmental Protection and Enhancement Act and the Conservation and Reclamation Regulation that addressed the administrative processes for conservation and reclamation of sites disturbed by upstream oil and gas activities. The department now audits reclamation work rather than inspecting each site before issuing a reclamation certificate.

QUEBEC

In 2003, the Land Protection and Rehabilitation Regulation under the Act to amend the Environment Quality Act and Other Legislative Amendments with Regard to Land Protection and Rehabilitation came into force. The new regulation sets out concentration levels for contaminants that necessitate land rehabilitation.

Amendments to the Regulation Respecting the Quality of the Atmosphere concerning the manufacture of paints and similar products were adopted. Manufacturers of paint and similar products will henceforth be subject to new environmental requirements.

Restrictions to pig farming, both in areas with surpluses of manure, referred to as limited activity zones (*zones d'activités limitées*—ZAL), and elsewhere, were extended until 15 December 2004.

In 2003, the MEQ completed studies to designate 25 new plant species as threatened or vulnerable and 36 important habitats for these species. The government of Québec designated three new animal species as vulnerable: the American shad, the anatum subspecies of the peregrine falcon, and the bald eagle.

In December 2003, the first provincial park in Nunavik was created, the *Parc national des Pingualuit*. Developed in cooperation with Inuit parners, the Kativik Regional Government and the Makivik Corporation, this park covers an area of 1,133.9 square km. Between the implementation of the Québec protected areas action plan (*Plan d'action québécois sur les aires protégées*) in July 2002 and December 2003, the proportion of land dedicated to protected areas rose from 2.9 percent to 5.3 percent.

Overview of voluntary conservation in Québec

Nature reserves

Under the provisions of the *Natural Heritage Conservation Act*, the MEQ recognized four nature reserves totaling over 318 hectares of private land, bringing to seven the number of reserves in the network. It also put measures into place to manage the network such as signage, Internet site, certificates of honor, and financial assistance.

Program to develop a private network of protected areas

This program (*Programme national pour le développement d'un réseau privé d'aires protégées*) provided funding totaling C$2,460,609 to nine conservation organizations, who themselves invested an equivalent amount, in order to aquire over 2,398 hectares of private land in 34 different projects.

Partnership program for voluntary conservation

This program (*Programme Partenaire pour la conservation volontaire*), though the "organization" component, provided funding totaling C$358,375 to 36 organizations to carry out 52 projects to raise awareness of voluntary conservation. The "land owners" component of the program provided financial assistance totaling C$16,573 to14 land owners for legal costs associated with the conservation process.

The Pesticide Management Code and amendments to the Regulation respecting Permits and Certificates for the Sale and Use of Pesticides were adopted in March 2003 and came into force in April 2003. The Pesticide Management Code governs the storage, sale and use of pesticides in all activity sectors and is particularly strict in urban areas. Amendments to the Regulation were aimed primarily at broadening the requirement to hold a MEQ certificate to include all agricultural producers, starting in 2005 and stretching over three years. The MEQ goes to great lengths to develop knowledge and protect the environment. Among the various measures, policies and regulations put in place, it has set up programs to recognize the competence of Québec specialists. Thus, since 1984, accreditation is required to carry out laboratory analyses under the Environment Quality Act (article 118.6). Québec's centre of expertise in environmental analysis (*Centre d'expertise en analyse environnementale du Québec*—CEAEQ) manages the Accreditation Program for Environmental Analysis Laboratories for the MEQ, and, since 1999, the Environmental Sampling Accreditation Program. In 2003, an accreditation for agricultural analysis laboratories (*Programme d'accréditation des laboratoires d'analyse agricole*—PALAA) was set up to define operating rules and requirements for accrediting agricultural analysis labs. Moreover, the CEAEQ also manages a list of competent experts to certify documents related to the protection and rehabilitation of contaminated lands. These documents are required under the Environment Quality Act (Section IV.2.1).

The crown corporation RECYC-QUÉBEC supervised the preparation of waste management plans by municipal authorities. These plans identify the measures that will be put in place by municipalities in order to reach the goal of recycling 65 percent of recyclable waste materials, as set out under the Québec Residual Materials Management Policy 1998–2008.

In 2003, Québec, in concert with the State of Vermont, moved forward, from 2016 to 2009, measures under the action plan to reduce phosphorus causing the proliferation of blue-green algae in Missisquoi Bay.

MANITOBA

Some select examples of measures undertaken by the Manitoba government in 2003:

- Environmental Livestock Program - Audits were completed for 54 of the 360 manure management plans (15 percent) registered for the 2003 crop year. Charges were laid against some operators for excessive rates of manure application as well as against some operators who failed to register manure management plans.
- Petroleum Storage Program - The implementation of licensing petroleum technicians began. Only licensed petroleum technicians may construct, alter, remove or perform certain tests on petroleum storage facilities. Prospective technicians must meet specific criteria which includes both a course of study and field experience. The applications are reviewed by an advisory committee established by the Minister of Conservation and recommendations are made to the director regarding which applicants should receive a license. Currently there are 104 licensed petroleum technicians in Manitoba.
- Onsite Wastewater Management Systems Regulation – The regulation was passed on 28 April 2003, and fully implemented on 28 October 2003. The mandate of this regulation is to assure the proper installation and operation of septic tanks and related structures in Manitoba. The corresponding fees from the Environment Act Fees Regulation also came into effect on that day. The Regulation forms an integral part of Manitoba's Water Strategy Initiative.

ARTICLE 4 – PUBLICATION

ENVIRONMENT CANADA

The following notices were published in *Canada Gazette*, Part I during 2003:

Regulation	**Date**
Regulations Amending the Gasoline Regulations	April 2003
Federal Halocarbon Regulations 2003	August 2003

Pollution Prevention Plan	**Date**
Proposed Notice Requiring the Preparation and Implementation of Pollution Prevention Plans for Acrylonitrile	24 May 2003
Proposed Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Dichloromethane	29 Nov 2003
Proposed Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Ammonia dissolved in water, Inorganic Chloramines and Chlorinated Wastewater Effluent	7 June 2003
Proposed Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Textile Mills Effluents and Nonylphenol and its Ethoxylates	7 June 2003
Proposed Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Nonylphenol and its Ethoxylates in Products	29 Nov 2003

Codes of Practice	**Date**
Code of Practice for Road Salts	September 2003

ALBERTA

The legislation that has been passed is available through the Queen's Printer, either for view on their web site <www.qp.gov.ab.ca>, or for purchase (phone (780) 427-4952, fax (780) 452-0668, e-mail <qp@gov.ab.ca>). The statutes are also found in the annual Statutes of Alberta, carried by some libraries. The regulations are also found in the Alberta Gazette, Part II, also carried by some libraries.

The bills can be located on the Legislative Assembly web site <www.assembly.ab.ca> under the Bills and Amendments section.

QUEBEC

All Québec laws and regulations, along with most administrative rulings of general application, must be published in the *Gazette officielle du Québec*.

During 2003, the MEQ and the Société de la faune et des parcs du Québec ensured that all their laws, regulations, procedures and generally applicable administrative rulings concerning topics covered under the NAAEC would be published with due diligence and made available on their respective Internet sites: <http://www.menv.gouv.qc.ca> and <http://www.fapaq.gouv.qc.ca/>.

The new Act Respecting Nature Reserves on Private Land provides for the publication of recognition of nature reserves through notification in the *Gazette Officielle du Québec*, for the registration of the agreement in the land register, and for the keeping of a nature reserve registry by the MEQ.

The Quebec environment ministry holds public consultations on its draft regulations and policies. In addition, the *Société de la faune et des parcs du Québec* holds priority discussions with partners, grouped together as "wildlife groups" (*Groupes Faune*), both provincially and regionally, and with the parks consultation committee. When necessary, it also holds public hearings on draft regulations and policies.

In 2003, the "industrial" component of the MEQ's public registry was placed on line at: <http://www.menv.gouv.qc.ca/Industriel/registre/index.htm>.

In 2003, notices for projects in agricultural areas were available on the Internet in the public registry for livestock production.

Article 4(1)

The laws, regulations, procedures and administrative rulings of general application in the area of environmental assessment are published on the MEQ Internet site. All sector guidelines are available on the site, and hard copies are available on request. These guidelines cover 16 project types that are subject to environmental assessment.

Shoreline protection was the subject of publications aimed at both resort vacationers and farmers. A technical notice on the aeration or artificial circulation of water in lakes as water quality restoration measures was published. An overview of environmental compliance in the pulp and paper sector for 2001 was also published. Regarding the implementation of the Regulation Respecting the Quality of Drinking Water, several documents were published, notably a technical interpretation guide to facilitate understanding of the Regulation and frame the scope of its enforcement. Another guide on the same topic was also produced for tourism establishments. Finally, an overview of water quality in Québec for the period January 1995 to June 2002 was published in June 2003.

Article 4(2)

As part of the public consultations on sustainable development in the pork sector, non-profit organizations were invited to present funding applications.

MANITOBA

Significant government activities in Manitoba, including laws, regulations, and procedures are commonly found electronically through the Manitoba government's official web site <http://www.gov.mb.ca/conservation>. Environmental protection measures and all matters related to environmental licensing applications and approvals are available at various physical locations across the province at the public registry and further information may be obtained from the Conservation Library <http://www.gov.mb.ca/conservation/library/eregistry>. The public and other interested parties are always encouraged to comment on all matters related to Manitoba Conservation activities.

ARTICLE 5 – GOVERNMENT ENFORCEMENT ACTION

Article 1– Environmental Protection Enforcement

ENVIRONMENT CANADA

The Minister of Environment identified the need to revise and update the Export and Import of Hazardous Wastes Regulations as a priority in 2003. Consequently, the Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations were drafted and published in Part 1 of the *Canada Gazette*, which is the federal government publication for the notification of all federal Acts and regulations. The draft regulations were updated to include among other things the export, import and transit of shipments of both hazardous wastes and hazardous recyclable materials.

To further address concerns regarding the import and export of hazardous waste, Hazardous Material Sampling Teams were assembled, trained and deployed in the sampling of materials in transit, in 2003. These teams are comprised of designated Environment Canada enforcement officers.

On 27 February 2003, the Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations (PERC regulations) became law after a four-year development period. These regulations were the subject of significant compliance promotion activities in 2003 and the preceding three years during which a comprehensive initiative aimed at providing relevant information to the dry cleaning industry was undertaken.

The Compliance Assurance Branch within the National Programs Directorate was created in 2003. This branch is developing effective targeting methods that will enhance the collection and analysis of data that will feed into the intelligence planning process. This will assist the enforcement branch in effectively allocating resources in order to achieve greater results (i.e. higher rates of compliance). In addition, it seeks to better develop the compliance promotion phase of statutory and regulatory implementation.

Environment Canada's national intelligence program is designed to support the enforcement operations of the regions and to identify emerging issues, which will permit a more proactive approach to enforcement activities and allow for the more efficient deployment of resources. In 2003, Environment Canada's Enforcement Branch, Environmental Protection Service, developed an intelligence officer training course in order to train designated enforcement officers.

Article 5(1)(a) – Appointing and Training Inspectors

Environment Canada has developed specialized courses in order to effectively train its new and existing enforcement officers, fishery inspectors and fishery officers. These courses are designed to give enforcement personnel working knowledge of Canadian environmental protection laws, as well as a number of inspection and investigative tools. The courses are tailored to accommodate operational needs that result from changing priorities, or new or updated legislation and regulations.

In the spring of 2003, Environment Canada held the Pollution Enforcement Course and General Enforcement Training. These two courses were designed and delivered as required in order to designate new Environment Canada enforcement officers, fishery inspectors and/or fishery officers. Nineteen (19) new officers were designated in 2003.

Subsequently, Environment Canada decided to update and improve the Pollution Enforcement Course and General Enforcement Training, and created the Basic Enforcement Training in 2003 which combines the two former entry-level training courses. This course is the first step in the designation of enforcement officers.

In addition, multidisciplinary teams designed training programs dealing with the following regulations:

- Ozone-depleting Substances Regulations
- Metal Mining Effluent Regulations
- Tetrachloroethylene (Use In Dry Cleaning & Reporting Requirements) Regulations

The training for Ozone-depleting Substances Regulations was also delivered in 2003.

Article 5(1)(b) – Monitoring Compliance and Investigating Suspected Violations, Including Through On-Site Inspections

Inspections

Environment Canada develops an annual National Inspection Plan that outlines the inspection priorities under CEPA 1999 and the Fisheries Act for that fiscal year.

Factors used in establishing these priorities are dictated by the Compliance and Enforcement Policies for CEPA 1999 and the federal Fisheries Act and include, but are not limited to, risk to the environment and human life or health, compliance rates, new and amended regulations, nature of the regulatory provisions, operational complexity and capacity, and domestic and international commitments and obligations.

The number of planned inspections carried out under the National Inspection Plan is supplemented by a large number of unplanned inspections resulting from complaints, intelligence, or other information.

The National Inspection Plan priorities for fiscal year 2002/2003 were established as follows:

- Export and Import of Hazardous Waste Regulations
- New Substances Notification regulations
- Fuels Regulations (seven regulations are included)
- Section 36(3) of the Fisheries Act

In addition, the regional offices identify their own regional inspection priorities. The priority placed on regulations identified by the regions is up to the discretion of each region and is

influenced by a number of factors including: geography, demographic factors, provincial environmental sensitivities, and available resources.

Investigations

In order to conduct an investigation, an enforcement officer, fishery inspector and fishery officer must have reasonable grounds to believe that an offence has been committed under either CEPA 1999 or the federal Fisheries Act. Also, under s.17 of CEPA 1999, enforcement officers are also required to investigate when an individual of at least 18 years of age, resident in Canada, petitions the Minister to investigate an alleged violation of the Act. In addition, an investigation of an alleged violation may be triggered by a petition submitted to the Auditor General under s.22 of the Auditor General Act, requesting investigation of an environmental matter.

Intelligence Program

Through the collection and analysis of information, Environment Canada's Environmental Protection Intelligence Program has contributed to the detection of illegal activity that would otherwise have gone undetected by an inspection. It has also contributed to the knowledge of the regulated community in general by identifying potential regulatees not previously known to the department.

Enforcement Tools

Environment Canada enforcement officers, fishery inspectors and fishery officers have a variety of enforcement tools available to them that they can use to secure compliance when carrying out inspections and investigations.

A *warning* may be issued when an enforcement officer believes that a violation of CEPA 1999 has occurred or is continuing and when the degree of harm or potential harm to the environment, human life or health appears to be minimal under CEPA 1999 or when the degree of harm or potential harm to fish, fish habitat or human use of fish appears to be minimal under the federal *Fisheries Act*.

A *direction*, available under CEPA 1999, may be issued when there is a release or there is likely to be a release of a substance in excess of regulated limits. Similarly, a direction may be issued under the federal *Fisheries Act,* when there is a release or likely to be a release of a deleterious substance. Whether the direction is issued under CEPA 1999 or the *Fisheries Act,* the direction may be given orally but must be confirmed in writing later.

Tickets may be issued in response to alleged offences committed under CEPA 1999, where there is minimal or no threat to the environment or human life or health and the offence is identified as "ticketable" under the regulations of the federal Contraventions Act.

Under CEPA 1999, a *Ministerial Order* may be issued to: prohibit activities involving substances new to Canadian commerce; compel the recall of a product containing or emitting a substance regulated under the Act; or require more information on or the testing of a substance suspected of being toxic and to prohibit or limit its manufacture or importation.

Prohibition Orders are issued in written form by the Minister when s/he has reasonable grounds to believe that a new substance has been manufactured in or imported into Canada in violation of CEPA 1999.

Recall Orders empower the Minister to recall a substance or product from the market place where there is a violation of CEPA 1 999.

Detention Orders for ships are issued when an enforcement officer has reasonable grounds to believe that the owner or master of a ship has committed an offence under CEPA 1999 and used that ship in the commission of the violation.

Environmental Protection Compliance Orders (EPCO) can be issued under CEPA 1999 for the following reasons: to prevent a violation from occurring; to stop or correct one that is occurring or continuing over a period of time; or to correct an omission where conduct is required by CEPA 1999 or one of its regulations, and that conduct is not occurring.

Prosecutions may be undertaken in the case of any alleged violation of CEPA 1999 or the federal Fisheries Act, when the alleged violation has resulted in serious harm to the environment, human life and to fish or fish habitat, respectively. Both the CEPA 1999 and Fisheries Act Compliance and Enforcement Policies specify instances where Environment Canada will always pursue prosecution, including an alleged offence committed knowingly, failure to comply with a Ministerial Order, obstruction of an enforcement officer, fishery inspector or fishery officer in the carrying out of his or her duties, and interference with items seized by enforcement personnel.

Environmental Protection Alternative Measures (EPAM) are an alternative to court prosecution. They are set out in agreements signed under CEPA 1999, after the laying of charges. EPAMs are used to negotiate settlements that are legally binding, registered as court documents, and secure compliance more rapidly by avoiding the time and expense of lengthy court cases. CEPA 1999 specifies when an alleged offender is eligible to participate in EPAMs and sets out conditions for concluding those negotiations, such as requiring an EPAM agreement within 180 days of the date on which the Crown prosecutor first discloses evidence to the accused.

The following is a chart of enforcement activities carried out during 2003.

Enforcement Activities Carried Out during the Calendar Year 2003

	Total Inspections	On-site Inspections	Off-Site Inspections	Investigations *	Prosecutions	Charges	Convictions	Contraventions	Directions	Written Warnings
CEPA(1988 & 1999) -- Canadian Environment Protection Act	**5,026**	**2,540**	**2,486**	**34**	**9**	**6**	**4**	**6**	**8**	**656**
FA – Fisheries Act	**4,441**	**922**	**3,519**	**54**	**14**	**10**	**3**	**0**	**50**	**249**

Additional Statistics

During the 2003 calendar year, there were no Environmental Protection Compliance Orders (EPCOs) or Environmental Protection Alternative Measures (EPAMs) under CEPA 1999.

*Out of the 34 CEPA 1999 investigations started in 2003, eight ended in 2003 and 26 are still ongoing.

* Out of the 54 Fisheries Act investigations started in 2003, 13 ended in 2003 and 41 are still ongoing.

Explanatory Notes

The number of inspections relates to the number of regulatees inspected for compliance under each of the applicable regulations.

* Investigations are tabulated by number of investigations files. An investigation file may include activities relating also to other legislation and may include one or more regulations. Therefore, the

total number of investigations shown by regulation does not add to the total at the legislation level. All measures (except for prosecutions) are tabulated at the section level of a regulation. For example, if the outcome of an inspection is the issuance of a written warning that relates to three sections of a given regulation, the number of written warnings is three.

The number of prosecutions is represented by the number of regulatees that were prosecuted by charged date regardless of the number of regulations involved.

Article 5(1)(d) – Publicly Releasing Non-compliance Information

The CEPA Environmental Registry was established under CEPA 1999 and is available to the public at <http://www.ec.gc.ca/CEPARegistry/default.cfm>.

This registry includes non-compliance information in the following documents:

- CEPA 1999 Annual Reports
- CEC Annual Reports on Enforcement (when they deal with CEPA 1999 issues)
- Enforcement activities reports and enforcement statistics
- CEPA 1999 Compliance Reports, as they are prepared from time to time.

In addition, Environment Canada releases the annual "National Inspection Plan: Compliance Verification" which reports on how the ministry met the enforcement priorities set out for that fiscal year.

Article 5(1)(e) – Issuing Bulletins or Other Periodic Statements On Enforcement Measures

Enforcement information, reports and statistics can be found on Environment Canada's web site at: <http://www.ec.gc.ca/ele-ale/>. This site also includes historical court decisions on guilty parties and press releases and media advisories.

Article 5(1)(g) – Requiring Record Keeping and Reporting

Federal environmental protection Acts and regulations, administered by Environment Canada require record keeping and reporting. Enforcement officers, fishery inspectors and fishery officers verify compliance and take action, in accordance with the applicable Compliance and Enforcement Policy, if a violation has occurred.

Article 5(1)(i) – Using Licenses, Permits or Authorizations

Permits and authorizations are required by environmental protection Acts and regulations, administered by Environment Canada. Enforcement officers, fishery inspectors and fishery officers verify compliance and take action, in accordance with the applicable Compliance and Enforcement Policy, if a violation has occurred.

Article 5(1)(j) – Quasi-judicial or Administrative Proceedings Initiated

As mentioned earlier, an Environmental Protection Compliance Order (EPCO) is an enforcement tool available to EC enforcement officers, under CEPA 1999. The recipient of an EPCO can request a hearing before a review officer in an administrative proceeding.

Under CEPA 1999, the Minister of the Environment must establish a roster of review officers and will appoint one of them as Chief Review Officer. The Chief Review Officer has authority to establish hearing procedures and assign review officers to conduct the hearings.

The review officer has authority to require that the EPCO be suspended during the review, or that the order remain in force during that time. The review officer will hear evidence from the party subject to the EPCO and the issuing enforcement officer. The review officer must then decide whether to uphold the order, or set it aside. The decision of the review officer can itself be appealed to the Federal Court of Canada.

No EPCO review proceeding was held in 2003.

Article 5(1)(k) – Providing for Search, Seizure or Detention

Environmental protection legislation administered by Environment Canada, provide for search, seizure and detention. These powers are used based on investigative requirements.

Article 5(1)(l) – Issuance of Administrative Orders

As indicated above, CEPA 1999 provides for administrative orders in the form of directions, Ministerial Orders, detention orders for ships and EPCOs. The federal Fisheries Act provides for directions.

Article 5(2) – Each party shall ensure that judicial, quasi-judicial or administrative enforcement proceedings are available under its law to sanction or remedy violations of its environmental laws and regulations.

CEPA 1999 provides for a specific review process for EPCOs. First, there is the privilege of oral representations that an alleged violator who may be subject to an EPCO and that the violator makes to an enforcement officer. Then, if the EPCO is issued and the person subject to it has objections to its content or conditions, that person may request to the chief review officer for a review. Following the finding of the review officer, the matter may be heard before the Federal Court of Canada if the alleged violator or the Minister of Environment is not satisfied with the review officer's decision.

It is also possible for a person to request judicial review before the Federal Court of Canada of any decision made by a Minister under CEPA 1999 or the federal Fisheries Act.

Article 5(3) – Sanctions and remedies provided for a violation of a Party's environmental laws and regulations shall, as appropriate:

a) take into consideration the nature and gravity of the violation, any economic benefit derived from the violation by the violator, the economic condition of the violator, and other relevant factors; and

b) include compliance agreements, fines, imprisonment, injunctions, the closure of facilities, and the cost of containing or cleaning up pollution.

CEPA 1999 provides sentencing guidelines to assist Canadian courts. Those criteria include, among other things, the nature and gravity of the violation and any economic benefit derived by the violator. The federal Fisheries Act does not contain similar criteria, but there are criteria in Canada's *Criminal Code* that could be referred to by a judge as well as criteria set out in the environmental court judgment for United Keno Mines Ltd. v. The Queen.

Both CEPA 1999 and the federal Fisheries Act provide for court orders that impose the closure of facilities or set cleanup costs.

ALBERTA

Enforcement Action Summary

Alberta Environment's objective is to maintain a high level of compliance with the Environmental Protection and Enhancement Act (EPEA) and the Water Act. This goal is pursued through education of the regulated community, which holds authorizations under EPEA or the Water Act, and individuals or companies whose activities do not require a mandatory authorization from Alberta Environment.

As part of its annual compliance assessment program, Alberta Environment conducts proactive, unannounced inspections; reviews compulsory reports required by statute, authorization or Code of Practice; and conducts audits to verify compliance and ensure that regulated parties clearly understand their statutory obligations.

By achieving a high level of understanding about their statutory responsibilities, Alberta Environment's corporate clients are better prepared to undertake initiatives of their own to meet and even exceed the regulatory standards required of them and to foster environmental stewardship within the regulated community. Those who do not comply with legislated requirements are held responsible and accountable for the effects of their actions on the environment.

Environmental Protection and Enhancement Act (for fiscal year ending 31 March 2003)

- 315 compliance assessments (147 inspections, 168 audits) were conducted on industrial facilities;
- 38 compliance assessments (all inspections) were conducted on Code of Practice facilities;
- 801 compliance assessments (443 inspections, 358 audits) were conducted on municipal facilities;
- 104 inspections were conducted for pesticide applicators, retail outlets, etc.;
- 108 inspections were conducted waste management facilities; and
- 125 proactive inspections were conducted for gravel pits and mines regulated under the Conservation and Reclamation Regulation.

Enforcement Summary
(Alberta Environment)
1 April 2002–31 March 2003

LEGISLATION	Charges Laid	Charges Concluded	Convictions	Pending	Penalty Amount	Appeal of Sentence	Creative Sentencing Orders	Written Warnings	Admin. Penalties Assessed	Admin. Penalty Assessed Value	Appeal of Admin. Pen-alty	Orders
EPEA and Regulations												
EPEA	32	23	5	23	$54,500	0	2	46	22	$99,000	0	73
Summary Conviction (EPEA)	14	14	13	2	$1,495	0	N/a	0	0	0	0	0
Activities Designation Regulation	0	0	0	0	0	0	0	1	0	0	0	0
Waste Control Regulation	68	58	1	20	$75,000	2	1	22	0	0	0	0
Beverage Container Recycling Regulation	0	0	0	0	0	0	0	1	0	0	0	0
Pesticides Sales, Handling, Use and Appl. Reg.	6	3	1	6	$1,000	0	0	0	1	$1,000	0	0
Pesticide (Ministerial) Regulation	0	0	0	0	0	0	0	4	1	$1,000	0	0
Potable Water Regulation	0	0	0	0	0	0	0	1	0	0	0	0
Subtotal:	**120**	**98**	**20**	**51**	**$131,995**	**2**	**3**	**75**	**24**	**$101,000**	**0**	**73**
Water Act and Regulations												
Water Act	0	0	0	0	0	0	0	18	1	$2,500	0	5
Water Ministerial Regulation	0	0	0	0	0	0	0	1	0	0	0	0
Subtotal:	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**1**	**$2,500**	**0**	**5**
Other Legislation												
Dangerous Goods Transportation and Handling Act	0	6	0	0	0	0	0	N/a	N/a	N/a	N/a	N/a
Criminal Code of Canada	8	N/a	N/a	8	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Fisheries Act	1	N/a	N/a	1	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Subtotal:	**9**	**6**	**N/a**	**9**	**0**	**0**	**0**	**N/a**	**N/a**	**N/a**	**N/a**	**N/a**
Enforcement Actions Total:	**129**	**104**	**20**	**60**	**$131,995**	**2**	**3**	**94**	**25**	**$103,500**	**0**	**78**
Total Monetary Penalties:	$235,495											

Education and Inspection Programs

AENV also conducts several annual education and inspection programs that focus on a geographic area or industry. These inspection "sweeps" are a proactive initiative that Alberta Environment uses to educate industrial sectors regarding their responsibilities under EPEA and the Water Act; achieve compliance through cooperative means; and encourage best management practices and pollution prevention. The program involves two parts: an educational component, where specific detailed information about regulations and requirements are provide d to businesses; followed by unannounced inspections to ensure that businesses make any necessary upgrades that were required.

Three "sweeps" were conducted across the province during 2002/03, with a focus on handling and storage of hazardous wastes and hazardous recyclables. A province-wide inspection sweep was also conducted of the liquid waste hauling and disposal industrial sector.

Alberta Sustainable Resource Development

Enforcement Action Summary

Forestry

As part of the 2003 Alberta Sustainable Resource Development mountain pine beetle management program, a Ministerial Order (12/2003) prohibiting transportation of pine logs and wood products with bark was enforced in cooperation with Alberta Transportation. This was a preventive measure to stop the introduction of the beetle into susceptible forest stands. For more details, see <http://www3.gov.ab.ca/srd/forests/health/mpb.html>.

Fish and Wildlife

The compliance assurance activities undertaken by the Fish and Wildlife Division for the fiscal year ending 31 March 2004:

Fisheries Legislation

- 32,565 anglers were checked;
- 3,291 commercial fisheries operations were inspected;
- 10 inspections were completed on fish processing facilities; and
- 118 inspections of subsistence fishers were conducted.
- In addition to conducting compliance checks, officers investigated 496 reported incidents of non-compliance with fisheries legislation.

Wildlife Legislation

- 23,420 hunters were checked;
- 311 subsistence hunters were checked;
- 971 inspections were completed on commercial operations, including guides and outfitters, meat processors, fur dealers, taxidermist and trappers; and
- 35 inspections were completed on various wildlife facilities (i.e., zoos and game farms).
- In addition to conducting compliance checks, officers investigated 3,561 reported incidents of non-compliance with wildlife and fisheries legislation.
- The Fish and Wildlife Division uses a computerized database to track reported incidents, compliance checks and enforcement actions taken as a result of confirmed non-compliance. The data is coded to allow for GIS mapping of occurrences and enforcement actions.

- The Fish and Wildlife Division administers many acts and regulations in fulfillment of the regulatory and enforcement role within the Department of Sustainable Resource Development. Compliance is assessed by conducting inspections of regulated user groups to ensure compliance with legislation. Reports of illegal activity are investigated. All incidents of non-compliance are followed up with enforcement action (prosecution, warning or enforcement order).
- The Fish and Wildlife Division took 2,096 enforcement actions in response to non-compliance to wildlife legislation and 1,758 enforcement actions in response to non-compliance with fisheries legislation.

(These statistics are for the time period 1 April 2003 to 31 March 2004.)

Article 5(1)(a) – Appointing and Training Inspectors

A total of 133 Fish and Wildlife Officers (officers) are assigned to the Enforcement-Field Services Branch of Alberta Fish and Wildlife Division, Sustainable Resource Development (SRD). A comprehensive operation/technical training program is provided to enforcement staff. Some courses are also offered to fisheries and wildlife biologists and technicians (firearms, boat operations, etc.). Some areas in which officers (and some others) receive training include, but are not limited to, the following:

- Legislation;
- Investigative skills;
- Criminal intelligence analysis;
- The Canadian Charter of Rights and Freedoms;
- Securing and protecting evidence and the preparation and execution of search warrants;
- Communication and conflict management skills;
- Courtroom procedures;
- Firearms qualification and re-certification (Officers, wildlife/fisheries biologists and technicians only);
- Defensive tactics and dealing with hostility (officers only); and
- Water safety and small vessel training (officers, forest officers, fisheries/wildlife biologists and technicians).

QUEBEC

In September 2003, Québec and Canada renewed the Administrative Agreement Regarding the Implementation in Quebec of the Regulations Pertaining to the Pulp and Paper Sector.

In June 2003, Québec, the State of Vermont and the State of New York renewed the Agreement on Environmental Cooperation regarding the Lake Champlain Management Plan, and published the French version of the plan: *Perspectives d'action, un plan progressif pour l'avenir du bassin du lac Champlain* (Opportunities for Action: An Evolving Plan for the Future of the Lake Champlain Basin).

In 2003, the MEQ complaints bureau received 248 intervention requests: 109 were of an environmental nature, 36 concerned quality of service, and the three others were of varying natures.

As part of the implementation of the Pesticide Management Code, the MEQ produced a guide for golf courses to help them meet the requirement of producing a pesticide reduction plan (article 73).

Moreover, over 6,400 circular letters were sent to stakeholders in sectors covered by the Code and to permit holders under the Pesticides Act.

Article 5(1)

Table 1: Ministère de l'Environnement du Québec

Convictions in 2003

ACT / REGULATION	***NUMBER***	*FINE (C$)*
Natural Heritage Conservation Act	1	100
Ecological Reserves Act	4	1,150
Environment Quality Act	98	949,988
Pesticides Act	1	4,000
Regulation respecting solid waste	14	3,900
Regulation respecting snow elimination sites	8	40,000
Regulation respecting hazardous materials	9	75,000
Regulation respecting the reduction of agricultural pollution	26	51,300
Reglulation respecting the quality of the atmosphere	32	25,350
Regulation respecting ozone-depleting substances	1	20,000
TOTAL	194	1,174,288

Table 2: Société de la Faune et des Parcs du Québec

Convictions in 2003

Act or Regulation	No. of the Act or Regulation	Number of Infractions	Number of Convictions	Amount of Fines (C$)	Number of certificate or permit cancellations (for 2 years)	Number of prohibitions on holding a migratory bird permit (1 year)
Fisheries Act	F-14	278	84	15,505		
Québec Fishery Regulations	C.R.C., ch. 852 DORS/90-214	2,127	901	130,263		
Migratory Birds Convention Act	M-22	4	2	400		2
Migratory Birds Regulations and Migratory Bird Sanctuary Regulations	C.R.C., ch. 1035 C.R.C., ch. 1036	107	44	12,350		41
Regulations enabled under the Act respecting the conservation and development of wildlife	C-61.1, r. ….. C-61, r. …..	939	466	119,305		
Regulations enabled under the Parks Act	P-9, r. 8	264	164	8,300		
Act respecting the conservation and development of wildlife	C-61.1	2,193	735	574,900	178	
Regulations enabled under the Act respecting hunting and fishing rights in the James Bay and New Québec territories	D-13.1	30	8	400		
Parks Act	P-9	17		--		
Envronment Quality Act	Q-2	84	14	7,604		
Ecological Reserves Act	R-26.1	19	6	1,000		
Act respecting threatened or vulnerable species	E-12.01	93	57	8,600		
Parks regulation	P-9, r.23	1	1	10		
Total		6,156	2,482	888,637		

Note: case files involving the *Environment Quality Act* and the *Ecological Reserves Act* are handled by the Ministère de l'Environnement, as are infractions under the *Act respecting threatened or vulnerable species* (since 27 November 2003).

Article 5(1)(a)—Appointing and Training Inspectors

Urgence-Environnement inspectors were given basic training on the emergency plan, hydrocarbon spills, chemical spills, and the nuclear emergency plan.

Over the course of 2003, the *Société de la faune et des parcs du Québec* offered several types of training related to regulatory enforcement to its 438 wildlife protection officers. In addition to basic training given to all new officers, more specific training included courses on protecting habitat and the physiological and pharmacodynamic principles of tranquilizers.

The crown corporation RECYC-QUÉBEC carried out inspections to ensure that tire collection, recycling and recovering programs were operating properly. RECYC-QUÉBEC also enforces compliance among its partners with agreements on beer and soft-drink container deposits.

Article 5(1)(b)—Monitoring Compliance and Investigating Suspected Violations, Including Through On-site Inspections

Over the course of 2003, MEQ investigators closed 238 investigation files. During the same period, 246 additional files were opened. With respect to wildlife species, the investigations department of the *Société de la faune et des parcs du Québec* conducted five investigations that resulted in the dismantling of as many poaching rings operating in several regions of Quebec.

The year 2003 also saw intensified monitoring of the used vehicle recycling sector.

Article 5(1)(c)—Seeking Assurances of Voluntary Compliance and Compliance Agreements

In 2003, the *Société de la faune et des parcs du Québec* initiated procedures to create a wildlife refuge on the tidal flats of the Saguenay river, in Saint Fulgence. The Saint-Fulgence flats represent the only significant migratory staging area for waterfowl in this region. The projected refuge is located in part (39 hectares) on private lands belonging to the municipality of Saint-Fulgence; a protocol to place these lands inside the wildlife refuge should be signed with the municipality. The rest of the future refuge (223 hectares) is made up of Crown land.

Procedures to create a wildlife refuge in the northeastern portion of Lac St-Pierre were also begun. This habitat is used as a feeding and rest stop for large numbers and a wide diversity of diving ducks. The refuge will be located solely in (non-private) aquatic territory.

These two wildlife refuges are scheduled to be created for spring 2005.

Article 5(1)(f)—Promoting Environmental Audits

By decree, when the Québec Department of Environmental Assessment (*Direction des évaluations environnementales*) issues a certificate of authorization, it produces a review report that includes a verification program. All of this is sent to the regional department, whose responsibility it is to monitor the project as specified in the verification program.

In 2003, the crown corporation RECYC-QUÉBEC launched a recycling recognition program (*ICI on recycle* !), the purpose of which is to recognize industries, businesses and institutions who have achieved the objectives set out in the Québec Residual Materials Management Policy 1998–2008. To obtain a "certificate of performance," candidates must carry out an audit of the waste they generate. Another aspect of *ICI on recycle* ! is to help industries, businesses and institutions who wish to implement an integrated waste management system to improve their performance.

Article 5(1)(g)—Requiring Record Keeping and Reporting

The Québec Department of Environmental Assessment uses an electronic file management system called IDÉE (*Information sur les dossiers d'Évaluation environnementale*), which allows it to monitor the administrative stages a file passes through, issue call-backs, and produce various management reports.

Different partners report on their activities in waste management to RECYC-QUÉBEC. Organizations that transport, recycle and recover tires must send data on amounts collected to RECYC-QUÉBEC. The organization Éco-Peinture must report volumes of paint and paint containers collected and recycled to RECYC-QUÉBEC. The organization that manages deposits on single-fill drink containers, Boissons Gazeuses Environnement, must report amounts collected and program costs to RECYC-QUÉBEC.

Article 5(1)(i)—Using Licenses, Permits or Authorizations

The crown corporation RECYC-QUÉBEC is responsible for accrediting businesses that collect and transport used tires, as well as businesses involved in recycling and recovering tires that wish to offer services under the two existing programs.

Article 5(1)(k)—Providing for Search, Seizure or Detention

In 2003, MEQ investigators executed over 50 authorized entries and search warrants.

Article 5(2)

For the MEQ, information concerning Quebec's enforcement procedures is available at <http://www.menv.gouv.qc.ca>. Statistics on convictions for 2003 appear in Tables 1 and 2, above.

MANITOBA

Enforcement policy/procedure provides a consistent approach, with emphasis on ensuring compliance with legislation. In addition to the summary of enforcement activities for 2003 in Tables 3 and 4 below, a detailed report of enforcement activities is available in Public Registries throughout the province and on the Department's homepage at <http://www.gov.mb.ca/conservation>.

Table 3

Manitoba Environmental Sector Enforcement

Legislation	Prosecutions	Warnings	Orders	Fines($)
The Contaminated Sites Remediation Act			2	
The Dangerous Goods Handling and Transportation Act	93	8	41	31,270.00
The Environment Act	46	102	32	28,927.00
The Public Health Act	4	43	22	1,213.00
Municipal by-laws		4		
Total	**143**	**157**	**97**	**61,410.00**

Table 4

Manitoba Enforcement Actions, by Act/Regulation

Legislation	Prosecutions	Fines ($)
Environment Act Litter and Peat Smoke Regulations	21	4,371.00
Onsite Wastewater Management Systems Regulation	6	1,480.00
Livestock Manure and Mortalities Management Regulation	19	23,076.00
Dangerous Goods Handling and Transportation Regulation	88	28,992.00
DGH&T Act and Regulations	3	1,027.00
Storage and Handling of Petroleum Products and Allied Products Regulation	2	1,251.00
PHA Food Handling and Building and Dwellings Regulations	4	1,213.00

ARTICLE 6 – PRIVATE ACCESS TO REMEDIES

Persons with a recognized legal interest have access to remedies before administrative tribunals and the courts. Interested persons, in addition to being able to institute private prosecutions, may also put forth to a competent authority, a request to investigate alleged violations of environmental laws and regulations.

For example, CEPA 1999 provides statutory authority for a person to apply to the Minister of the Environment for an investigation concerning any alleged offense under that Act. As well, persons with a recognized legal interest in a particular matter have access to administrative, quasi-judicial and judicial proceedings for the enforcement of Canada's environmental laws and regulations. In this regard, CEPA 1999 has introduced the concept of "environmental protection actions" which allow any person to seek a court order prohibiting a continued violation of the statute and/or to mitigate harm caused by a violation of the statute. As well, CEPA 1999 provides the statutory authority to request the review of administrative decisions or proposed regulations.

QUEBEC

The MEQ and the *Société de la faune et des parcs du Québec* have put into place a complaints process, under which a victim of or witness to a violation of a law or regulation governing the environment or wildlife may communicate with these organizations, who will then study the complaint. When necessary, the MEQ or the Société investigates to identify the offender and collect the evidence needed to carry out the appropriate recourse.

The Ministry and Société ensure confidential access at all times to their environmental emergency and poaching departments (*Urgence-Environnement* and *S.O.S. Braconnage*, respectively) through a central environment and wildlife toll-free hotline available 24 hours a day, seven days a week.

During 2003, S.O.S. Braconnage received 5,239 calls, 3,927 of which were reports of violations or accidents, and 1,312 were requests for information.

ARTICLE 7 – PROCEDURAL GUARANTEES

Canada has administrative, quasi-judicial and judicial proceedings available for the enforcement of environmental laws and regulations. Both the Canadian Charter of Rights and Freedoms and the courts have ensured that persons are given an opportunity, consistent with the rules of procedural fairness and natural justice, to make representations to support or defend their respective positions and to present information or evidence. Decisions are provided in writing, are made available without undue delay, and are based on information or evidence on which the parties were offered the opportunity to be heard. In accordance with its laws, Canada provides parties to such proceedings, as appropriate, the right to seek review and where warranted, correction of final decisions by impartial and independent tribunals. An example of fair, open and equitable proceedings at the administrative level is the Board of Review process available under CEPA 1999.

Québec has procedural guarantees under the Act Respecting Administrative Justice and the Charter of Human Rights and Freedoms. Moreover, the Environment Quality Act, the Pesticides Act, the Code of Penal Procedure and the Code of Civil Procedure, and the Charter of Human Rights and Freedoms provide for appeals processes.

Mexico

Country Report on Implementation of the Commitments Derived from the NAAEC

The following report was submitted to the CEC Secretariat by the Ministry of the Environment and Natural Resources (*Secretaría de Medio Ambiente y Recursos Naturales*—Semarnat) in accordance with the NAAEC.

Introduction

The information provided in this section refers to the activities undertaken with respect to environmental management and protection during the period from 1 September 2002, to 31 August 2003. The report includes the activities carried out by the following autonomous agencies: the National Water Commission (*Comisión Nacional del Agua*—CNA), the National Institute of Ecology (*Instituto Nacional de Ecología*—INE), the Office of the Federal Attorney for Environmental Protection (*Procuraduría Federal de Protección al Ambiente*—Profepa), and the National Commission for Protected Nature Areas (*Comisión Nacional de Áreas Naturales Protegidas*—Conanp); the following decentralized agencies: the Mexican Institute of Water Technology (*Instituto Mexicano de Tecnología del Agua*—IMTA) and the National Forestry Commission (*Comisión Nacional Forestal*—Conafor); and the National Commission for Biodiversity Awareness and Use (*Comisión Nacional para el Conocimiento y Uso de la Biodiversidad*—Conabio). This report does not include all activities undertaken in Mexico during this period, or the activities assumed by the Mexican government under the North American Agreement on Environmental Cooperation (NAAEC), but rather seeks to cover the main environmental efforts undertaken at the state, territorial and local level.

Environment, Economy and Trade

- The primary goals of the Forestry Development Program (*Programa de Desarrollo Forestal*—Prodefor) are to provide guidance on the technical management and conservation of forest resources, promote the recovery of ecosystems' production capacities, and further technological modernization in the extraction and processing of timber and non-timber raw materials. Prodefor continued its initiative to support sector competitiveness with temporary funding for woodland owners and/or holders. The program is aimed primarily at communal farms, communities and small owners.
- The (commercial) Forest Plantation Development Program (*Programa para el Desarrollo de Plantaciones Forestales*—Prodeplan) consists basically of the direct allocation of funding to individuals and entities that plant forests for timber and non-timber production purposes. It creates income-earning, employment, regional sustainable development and production diversification options in Mexico.
- A coordination agreement was signed by the Confederation of Industry Chambers (*Confederación de Cámaras Industriales*—Concamin) to reduce the improper disposal of soft-drink and water bottles. The goal is to fully recycle 2.610 billion bottles, converting them to textile fabric for manufacturing 475 million T-shirts by 2006.
- Under the framework of the Environmental Management Systems Program (*Programa de Sistemas de Manejo Ambiental*—PSMA), the Secretariat of the Environment and Natural Resources (*Secretaría de Medio Ambiente y Recursos Naturales*—Semarnat), in cooperation with the National Energy Savings Commission (*Comisión Nacional para el Ahorro de Energía*—Conae) and the IMTA, has promoted programs for the responsible

use of office supplies, energy savings and the efficient and rational use of water in federal agencies and entities.

- The IMTA prepared the guidelines and workplan for applying the Program for the Efficient and Rational Use of Water (*Programa de Uso Eficiente y Racional del Agua*—PUERA) in federal government buildings. Thanks to its awareness campaigns and promotion, during the period, 55 federal agencies joined the program, making a total of 85 to date.
- The Socioeconomic Agenda (*Agenda Socio-Económica*) was developed, consisting of research projects aimed at designing new economic instruments in environmental policy, developing economic assessment methodologies for natural assets and environmental services, and in general establishing environmental accounting systems.

Conservation of Biodiversity

- The Mexico Valley Basin Regional Coordination Office (*Coordinación Regional de la Cuenca del Valle de México*) was created, to coordinate the regional federal, state and municipal efforts to undertake the task of ecological zoning. It also will enable the assessment of this regional approach and its reproduction in other parts of the country.
- Actions were undertaken to create and institutionalize the National Information System for Mexican Beach Water Quality (*Sistema Nacional de Información sobre la Calidad del Agua en Playas Mexicanas*).
- Negotiations began with the Global Environmental Facility (GEF) and its administrating agencies to design a national biodiversity strategy timetable and the respective sector programs, to design and implement: (1) a biodiversity action plan, (2) a joint climate change action plan, and (3) an action plan to fight soil degradation.
- In 2003, funding totaling 31.4 million pesos was distributed among 22 states for environmental programs such as wildlife management, environmental impact, environmental management and land use, comprehensive pollutant management and the federal maritime land zone.
- With the addition of 241 Wildlife Conservation Management Units (*Unidades de Manejo para la Conservación de la Vida Silvestre*—UMA) covering just over 1.2 million hectares, Mexico now has 5,250 registered UMAs for a total of 20.4 million hectares, or 10 percent of its territory. This addition provides for the conservation and sustainable use of more than 1,157 wildlife species and 51 subspecies, as well as their habitats.
- As regards ecological zoning and ecosystem conservation, the Green Agenda (*Agenda Verde*) was developed for scientific research into the sustainable use of natural resources through biodiversity conservation and comprehensive basin management.
- Regional and microregional planning mechanisms were developed and consolidated, and state conservation systems were developed as well.
- As part of its ongoing program for the protection, recovery, conservation, restoration and extension of the country's forest cover, the National Reforestation Program (*Programa Nacional de Reforestación*—Pronare) continued to restore deteriorated ecosystems by planting forest species appropriate to the weather conditions of the various regions' unplanted lands.
- Conanp increased the number of protected nature areas from 149 to 150, thereby increasing the overall protected area from 17,502,235 hectares to 17,856,227 hectares, equal to 9.1 percent of all national territory.
- The budget allocated for operating the forest fire program throughout the country was 212.7 million pesos, which allowed for planning, prevention, detection and firefighting actions with the following results:

1. Planning:
    - 1,061 meetings were held to determine and coordinate actions with other entities.
    - 32 state forest fire programs were developed and integrated into National Program.
    - Equipment and tools for 1,037 fire brigades were acquired and allocated.
2. Prevention
    - Release of the fire-related Mexican Official Standards (*Normas Oficiales Mexicanas*—NOMs) in 1,594 municipalities.
    - Distribution of 6 million pamphlets and discussion of 25,538 events in radio and television ads.
    - Creation of 1,042 groups of volunteer firefighters.
    - Controlled burns on 3,727 hectares to reduce fuels in high-risk areas.
    - Construction and maintenance of 9,929 kilometers of fire barriers.
3. Detection
    - Operation of 224 forest fire control centers.
    - Operation of 171 observation towers throughout the country.
    - 43,638 land inspections and 312 aerial inspections to detect fires.
4. Firefighting
    - Operation of 817 fire brigades
    - Operation of 21 firefighting helicopters
    - Coordination of participating institutions and community organizations

Pollutants and Health

- The Burgos Basin Territorial Ecological Zoning (*Ordenamiento Ecológico Territorial de la Cuenca de Burgos*) was created and implemented, to regulate for the first time the exploration, exploitation and distribution of natural gas under environmental guidelines to avoid pollution, harm to health and ecosystem deterioration.
- The revision and update of the Certificate of Annual Operations (*Cédula de Operación Anual*—COA) form was concluded, which is the primary instrument to compile information for the pollutant release and transfer register (PRTR) and further ensures comparability with the North American PRTR.
- The Clean Air Program (*Programa de Aire Limpio*) was created to prevent and control air pollution in the Mexico City, Guadalajara, Monterrey, Toluca, Ciudad Juárez, Mexicali and Tijuana-Rosarito metropolitan areas by reducing air pollution emissions primarily through fuel improvement, regulation and modernization of public transportation services, newer vehicles and an updated legal framework.
- Efforts have been geared toward creating an infrastructure to allow for adequate technology and sufficient capacity for the safe handling of hazardous waste, thereby stopping pollution and reducing the health and environmental risks. From January to June 2003, 490,000 tons were authorized, representing a 1,162 percent growth of authorized capacity compared to 2002, for a total of 7,816,253.9 tons per year. Nationally, approximately 1.5 kilograms per bed of biological-infectious waste is generated each day, for a total of 191,553 kilograms per day.
- As regards the Intersecretarial Commission for the Control of the Processing and Use of Pesticides, Fertilizers and Toxic Substances (*Comisión Intersecretarial para el Control del Proceso y Uso de Plaguicidas Fertilizantes y Sustancias Toxicas*—Cicoplafest), during the 2002-2003 period 102 new, modified and renewed pesticide and fertilizer records were

reviewed, along with 2,102 import authorizations for pesticides, plant nutrients and toxic substances, for a cumulative total of 7,093 applications.

- A broad Gulf of Mexico Ecological Rescue Program (*Programa de Rescate Ecológico del Golfo de México*) was begun with the involvement and cooperation of the United States and Cuba, with a view to establishing mechanisms to analyze the cross-border marine, coastal and atmospheric transfer of pollutants, species migration, natural ecosystems and trade networks, as well as vulnerability to natural disasters and climate change.
- The National Crusade for a Clean Mexico (*Cruzada Nacional por un México Limpio*) was created in conjunction with the US state of Virginia, to empower municipalities by supporting technology transfer, successful experiences, and technical assistance for municipal solid waste and water management facilities.

Environmental Law and Policy

- As the result of zoning efforts, the Ecological Zoning Regulations to the General Law of Ecological Balance and Environmental Protection (*Reglamento de Ley General de Equilibrio Ecológico y la Protección al Ambiente en Materia de Ordenamiento Ecológico*) were published in the Federal Official Gazette (*Diario Oficial de la Federación*).
- Environmental laws, standards, decrees and regulations were drafted, including:
  1. General Law for Comprehensive Waste Management (Ley General para la Prevención Integral de Residuos)
  2. General Law of Sustainable Forestry Development (Ley General de Desarrollo Forestal Sustentable)
  3. Reforms to the Law of National Waters (Ley de Aguas Nacionales)
- To undertake and contribute to the protection and conservation of natural resources, the direct regularization and environmental management of industry was endeavored. In this case, actions have been taken to issue the Sole Environmental License (*Licencia Ambiental Única*—LAU), the COA, the PRTR and the Clean Air Program.
- The National Water Program (*Programa Nacional Hidráulico*) was created.
- Actions were undertaken to develop and review regulatory improvement and industrial promotion NOMs, with respect to the master program for the recovery and sustainability of the Lerma-Chapala basin.
- As the result of zoning efforts, the Ecological Zoning Regulations to the General Law of Ecological Balance and Environmental Protection were published in the Federal Official Gazette.
- From September 2002 to June 2003, a total of 358 projects entered the Environmental Impact Assessment (EIA) procedure, 18 percent more than in the previous period. These projects involve works and services in the farming, urban development, energy, forestry, gas, hydraulics, industry, mining, oil, tourism and communications sectors. A total of 392 were ruled on, with 213 favorable rulings and the remainder in the process of being resolved.
- Work was undertaken to amend public policies in four priority strategic areas for sustainable development—water, forests, energy and tourism—considering their correspondence with decentralization and tax policy instruments in an environmental context.
- As regards the modernization of environmental provisions, the federal maritime land zone developed a procedure authorization system from January to August 2003, with which applications from filers that use the zone and coastal environments may register

their procedures in the coastal state delegations. This system will immediately result in a centralized roster of federal-zone filers and a quick-reference archive.

- A total of 28 legal instruments have been signed, as follows: eight with middle and higher educational institutions, 14 with nongovernmental organizations (NGOs) and four with government entities, which focus on the implementation of environmental programs and projects and the copublishing of publications and educational materials.
- Profepa enhanced actions to control the illegal trading of wood, forest products and wildlife species throughout the country's key forestry zones, especially those located in the critical regions in northern, central, southern and southeastern Mexico. These four regions were sealed off for the first time, covering the primary roadways and highways in Mexico State, Durango, Nuevo León, Tamaulipas, Veracruz, Tabasco, Chiapas, Campeche, Yucatán, Michoacán, Hidalgo and Puebla, with 1,366 inspections and the establishment of 20 permanent strategic carrier review points, which led to 336 administrative proceedings and the appearance of 13 alleged offenders before the Federal Public Prosecutor (*Ministerio Público Federal*—MPF).
- With respect to the inspection and oversight of natural resources in protected nature areas, 11 new Special Inspection and Oversight Programs (*Programas Especiales de Inspección y Vigilancia*) were implemented in the period.
- As regards the inspection and oversight of wildlife trafficking, 1,514 inspections and 221 sweeps were conducted, including 10 special operations involving federal, state and municipal authorities at capture, collection, transport, distribution and sale sites for wildlife products and byproducts.
- In the case of the inspection and oversight of fisheries and marine resources, five special inspections were conducted in coordination with the Secretariat of the Navy – Mexican Navy (*Secretaría de la Marina – Armada de México*), the Secretariat of National Defense (*Secretaría de la Defensa Nacional*), the Federal Preventive Police (*Policía Federal Preventiva*) and the Office of the Attorney General (*Procuraduría General de la República*), leading to 302 administrative proceedings and the imposition of fines totaling 2.3 million pesos.
- On the international stage, Mexico signed two memoranda of understanding with the United Nations Environment Programme (UNEP), concerning the Cooperation Agreement on Environmental Protection and Natural Resources, through the UNEP Regional Office for Latin America and the Caribbean.

Citizen Participation

- Semarnat implemented the Federal Law of Transparency and Access to Governmental Public Information (*Ley Federal de Transparencia y Acceso a la Información Pública Gubernamental*), which will increase environmental accountability. The strategic approaches of such implementation include broadening the decision-making involvement of ethnic groups and women in environmental and sustainable-development programs and projects, citizen involvement, fighting corruption, transparency, and developing mechanisms and instruments that promote an inclusive environmental policy.
- The Environmental Education Program (*Programa de Educación Ambiental*) was created by directly approaching education agencies, interacting at the local, state and federal levels with the following results:
    - 11,478 students and 7,160 teachers participated in environmental education programs addressing general and specific topics
    - The Higher Education and Sustainable Development (*Educación Superior y Desarrollo Sustentable*) project supported 46 higher education and

environmental training events, such as courses, workshops and meetings to strengthen the participation of higher education institutions in the environmental management process.
    - The National Crusade for a Clean Mexico involved 125,722 students and 1,403 teachers in the Federal District, the State of Mexico, Coahuila, Guerrero and Guanajuato.

- Projects with academic and research institutions, state and municipal governments, and NGOs have been pursued with respect to conservation programs and actions for the development of Priority Conservation Regions.

Conclusions

This year, many of the public's ecological demands have, little by little, become actions, institutions and laws, giving a clear environmental protection mandate to the government and citizens. The way policies are exercised has matured, and laws continue to be brought up to date while technical rules continue to be developed. Also, environmental research and know-how have been strengthened substantially.

In addition, firm steps have been taken toward the sustainability of water and forests, which have become matters of national security. Greater budgeting to attend to and design comprehensive approaches for these matters is therefore required to incorporate and recognize the contributions of the various social actors, and to implement mechanisms to recognize and compensate woodland owners for their forests' contribution to society.

In this sense, environmental management has taken the shape of a true state policy, involved in the agenda of priority matters and national security.

United States

Country Report on Implementation of the Commitments Derived from the NAAEC

The following report was submitted to the CEC Secretariat by the Government of the United States.

Introduction

The information included in this section of the 2003 Annual Report is intended to highlight certain activities and developments related to environmental protection for the calendar year 2003. It does not represent the full range of activities undertaken by the United States (US) government regarding the North American Agreement on Environmental Cooperation (NAAEC), nor is it intended to reflect environmental efforts at the state, tribal, territory, or local level.

Environment, Economy and Trade

- The US Environmental Protection Agency (EPA) launched a new partnership program called the Green Suppliers Network, along with the National Institute of Standards and Technology's Manufacturing Extension Partnership Program and the US manufacturing industry. The Green Suppliers Network will work with all levels of the manufacturing supply chain to achieve environmental and economic benefits.
- A final agreement was reached by the Organization for Economic Cooperation and Development (OECD) on new environmental standards for projects financed by the export credit agencies of its member countries. The agencies of all OECD countries will apply the environmental standards of either the project host country or a relevant multilateral development bank, whichever are more stringent.
- The Secretary of the US Department of Energy (DOE), along with energy ministers and their representatives from around the globe signed the first international charter in support of the Carbon Sequestration Leadership Forum. The charter sets the framework for international cooperation in research and development for the separation, capture, transportation and storage of carbon as a means of reducing greenhouse gas emissions.
- Energy representatives from the United States and Russia signed a new Protocol on Energy Efficiency and Renewable Energy as well as a Protocol on overall energy issues.
- DOE's Office of Energy Efficiency and Renewable Energy made $2.2 million available to seven Native American tribes to support the development of renewable energy resources on tribal lands.
- DOE awarded $12.3 million to 21 broad-based, cost-shared research projects that would simultaneously advance energy efficiency and fossil energy technologies. The projects promote crosscutting systems in different research fields designed to be applied to both areas of science.
- DOE granted $17,390,442 for 187 energy efficiency and renewable energy projects in 48 states, the District of Columbia and one territory. Actual award dates varied.
- The US Department of Agriculture (USDA) awarded $1.5 million in grants and cooperative agreements to organizations in eight states to examine the economic effects of combating exotic pests and diseases.

- The United States hosted a summit where more than 30 nations came together to establish an international, comprehensive, coordinated and sustained Earth observation system, aimed at providing critical scientific data needed to address important global economic, social and scientific challenges. With this improved knowledge, decision-makers around the world will be able to make more informed decisions regarding climate, the environment, and a host of other economic and social issues that are affected by Earth and climate systems.

Conservation of Biodiversity

- The United States and Mexico signed an agreement to extend cooperation on wildfire protection for the next ten years, enabling fire fighters and their equipment to cross the border and help fight wildfires that threaten both countries.
- The US Department of the Interior (DOI) awarded $12.9 million in cost-share grants under President Bush's Cooperative Conservation Initiative to complete 256 conservation projects in conjunction with states, local communities, businesses, landowners, and other partners.
- DOI awarded more than $70 million in grants to 29 states to support conservation planning and acquisition of vital habitat for threatened and endangered fish, wildlife, and plant species.
- DOI awarded $34.8 million in cost-share grants to states under a new partnership program to assist private landowners in conserving and restoring the habitat of endangered species and other at-risk plants and animals.
- The United States ratified the Protocol Concerning Specially Protected Areas and Wildlife to the 1983 Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, better known as the SPAW Protocol. The international agreement paves the way for greater coordination and protection of marine biodiversity in the Wider Caribbean region.
- The US Fish and Wildlife Service (FWS) and the Department of Commerce's National Oceanic and Atmospheric Administration's (NOAA) Fisheries Service (NOAA Fisheries) issued new regulations to accelerate Endangered Species Act review of National Fire Plan (NFP) actions, allowing land managers to better protect communities and wildlife habitat from catastrophic fires.
- NOAA Fisheries, and Restore America's Estuaries awarded a $1.7 million grant to continue their three-year partnership to restore habitat vital to the conservation of America's coastal fisheries.
- NOAA established a new National Center for Research on Aquatic Invasive Species in Ann Arbor, Michigan. The Center allows NOAA to more effectively organize and coordinate its aquatic invasive species research efforts while assuring that NOAA resources are focused on priority problems nationwide, and where appropriate, form partnerships with other agencies, academia, and the private sector.
- Almost ten years after three ships collided and spilled oil into Tampa Bay, citizens regained 15 acres of wetland and upland habitat at Joe's Creek along the shores of Boca Ciega Bay, Florida. Federal, state and county officials declared the Joe's Creek site fully restored and an example of the many restoration projects implemented under the Tampa Bay Oil Spill settlement.
- USDA released $7 million to assist farmers in the Klamath Basin. The funds are part of a $50 million fund for Klamath farmers made available through the Environmental Quality Incentives Program authorized in the 2002 Farm Bill.

- USDA made available 15-year agreements for the Wildlife Habitat Incentives Program to help farmers and ranchers restore and protect wildlife habitat.

Pollutants and Health

- EPA granted $2.7 million for research on risk assessment and clean-up methods for Superfund sites to transform land contaminated by hazardous waste into profitable new businesses. The grants included research on increasing community involvement in planning to redevelop the land for new business or recreational use.
- The Environmental Council of the States and the Association of State and Territorial Health Officials (ASTHO) released a report, "Catching Your Breath: Strategies to Reduce Environmental Factors that Contribute to Asthma in Children." The project is a joint activity of the Environmental Council of the States and ASTHO and is funded through a cooperative agreement with EPA and the Centers for Disease Control and Prevention (CDC).
- Environment and health agencies in California, Wisconsin and Wyoming were awarded a total of $100,000 in September of 2003 to implement the "Catching Your Breath" project by conducting pilot projects to address environmental triggers of childhood asthma.
- Forty high-priority hazardous waste sites across the country were cleaned up in Fiscal Year (FY) 2003 (1 October 2002–30 Sept. 2003). As of October 2003, EPA had cleaned up 886 sites on the Superfund National Priorities List (NPL). These sites are considered some of the highest health threats in the nation.
- EPA issued a new, organic liquid distribution rule that would reduce toxic air emissions by 3,500 tons per year and reduce volatile organic compound emissions by approximately 9,900 tons per year. It would affect approximately 380 existing facilities as well as new facilities.
- EPA issued an air toxics rule for miscellaneous coating manufacturing facilities expected to reduce toxic air emissions by 4,900 tons per year from facilities such as those that produce paints, inks or adhesives. It is also expected to reduce volatile organic compound emissions which contribute to the formation of ground-level ozone or smog.
- EPA made available $73.1 million in Brownfields funds for a variety of different grants from the Small Business Liability Relief and Brownfields Revitalization Act.
- EPA released "America's Children and the Environment: Measures of Contaminants, Body Burdens, and Illnesses," the Agency's second report on trends in environmental factors related to the health and well-being of children in the United States.
- Thirteen final rules to reduce toxic air emissions from industrial facilities across the United States were signed and, when fully implemented, they are expected to reduce annual toxic air emissions by over 37,000 tons per year and avoid health problems. They will also reduce over 6,000 tons of other air pollutants.
- The Federal Interagency Forum on Child and Family Statistics issued the report, *America's Children: Key National Indicators of Well-Being, 2003*, outlining 25 indicators on important aspects of children's lives, including environmental and health situations.
- The United States made available the 2001 Toxics Release Inventory (TRI) data in June 2003. It included the first year of reporting for lead and lead compounds as persistent bioaccumulative toxic (PBT) chemicals, giving communities a more complete picture of sources of these chemicals in their environment.
- EPA completed and distributed 25,000 copies of its desktop software, TRI Made Easy (TRI-ME), to assist facilities in determining and meeting their TRI Reporting obligations. For the first time, this year's version of the software provided direct electronic reporting to EPA's Central Data Exchange through the Internet with electronic signature.

- The USDA awarded $3.2 million in water and wastewater facility grants and loans for Minnesota for projects that will spur economic growth and job creation and eliminate potential environmental and health concerns through building and upgrading water and waste disposal facilities in two counties.
- In Fiscal Year (FY) 2003, 12 former non-attainment areas, with a combined population of 6.8 million people, were certified as having attained National Ambient Air Quality Standards (NAAQS), and 34 communities around the country pledged to reduce air pollution sooner than required by the Clean Air Act (CAA).
- EPA proposed to regulate emissions from heavy-duty, non-road diesel sources such as construction and agricultural equipment, and completed standards for marine diesel engines and motorcycles. EPA also began certifying motor vehicles to meet the Tier 2 light-duty vehicle standards that were promulgated in 2000, and began the certification of heavy-duty engines that meet the 2004 engine standards.
- EPA's Acid Rain Program continued on course to meet its FY 2010 objective. As a result of efforts by utilities covered under this program, sulfur dioxide (SO_2) emissions continued to decline from 17.5 million tons in 1980 (baseline) to 10.2 million tons through 2002, while nitrogen oxides (NO_x) emissions were reduced by 33 percent from 1990 emissions levels.
- EPA's report *Response of Surface Water Chemistry to the Clean Air Act Amendments of 1990*, released in January 2003, concludes that measurable improvements in surface water chemistry (lower sulfate concentrations and decreases in acidity) have resulted from reductions in emissions and wet sulfate deposition under the Acid Rain Program.
- In FY 2003, EPA initiated the Clean School Bus (CSB) USA Program—an outgrowth of EPA's Voluntary Diesel Retrofit Program. The CSB USA Program's goal is to reduce both children's exposure to diesel exhaust and the amount of air pollution created by diesel school buses. Since 2000, when EPA first launched the Voluntary Diesel Retrofit Program, commitments have been made to retrofit more than 160,000 vehicles and engines.
- In FY 2003, EPA and the Advertising Council launched an aggressive nationwide English and Spanish language media campaign to heighten awareness of asthma as a chronic disease. For the next three years, this public service campaign will educate the public about indoor environmental triggers of asthma attacks, such as mold and secondhand smoke, and how to prevent them.
- In February 2002, President Bush committed America to a national climate change strategy that will cut the greenhouse gas intensity of the U.S. economy by 18 percent by 2012. Overall, EPA's climate protection programs are on track to prevent 185 million metric tons of carbon equivalent (MMTCE) annually by FY 2012, up from an estimated 65 MMTCE in FY 2002.
- EPA's Office of Solid Waste started the implementation of the Resource Conservation Challenge (RCC) with the goals of: promoting pollution prevention, recycling, and reuse; reducing the release of priority chemicals; and conserving energy and materials. To achieve these goals, the RCC champions six program elements: product stewardship, priority chemical reduction, "greening" the government, beneficial use of materials, energy conservation, and environmentally friendly design.
- EPA announced nearly $15 million in grants to 20 watershed organizations selected as part of President Bush's new Watershed Initiative (Targeted Watersheds Program). The grants support community-driven initiatives that protect human health, improve water quality and habitat, and enhance outdoor recreation. The selected watersheds cover more than 90,000 square miles of the nation's lakes, rivers and streams.

- In 2002 and 2003, EPA awarded almost $10 million annually in funds to all 35 coastal and Great Lakes states and territories to help improve public health programs to protect the health of those who use beaches, and to develop beach monitoring and public notification programs for coastal and Great Lakes beaches.
- EPA awarded more than $470 million in grants in fiscal years 2002 and 2003 to control nonpoint source pollution—the leading cause of water quality impairments. These grants are being used to implement Best Management Practices to control polluted runoff from agriculture, urban areas, forestry operations, roads and other sources of polluted runoff.
- EPA awarded more than $12 million in grants in 2002 and 2003 annually to states, tribes, and nongovernmental organizations to develop programs to protect, restore, and enhance wetlands in the United States. Many of these wetlands are in the North American flyway and are important for migratory birds.

Law and Policy

- FY 2003 was a record-breaking year for the recovery of civil penalties in environmental cases. Court awards and consent decrees achieved by the US Department of Justice (DOJ) and US Attorney's Offices resulted in more than $203 million in penalties for civil violations of the nation's environmental laws. In contrast, awards during the three previous years averaged approximately $75 million.
- Brown Boys Feed Inc., of Royal City, Washington, pled guilty to violating the Resource Conservation and Recovery Act (RCRA) by illegally disposing of diesel fuel and was sentenced to pay a $35,000 fine and serve two years' probation. Additionally, the defendant paid $46,000 to clean up the illegal fuel dump site and is required to disclose all financial information, including tax returns, during the probation period.
- DOJ, EPA, the State of Ohio and the Ohio River Valley Water Sanitation Commission (ORSANCO) reached a settlement with the Board of Commissioners of Hamilton County and the city of Cincinnati where the Metropolitan Sewer District of Greater Cincinnati (MSD) is expected to spend more than a billion dollars to bring its aging sewer system into compliance with the Clean Water Act (CWA) and other pertinent laws and regulations.
- DOJ, EPA, and the US Attorney, San Francisco, reached a comprehensive CAA settlement with Chevron USA Inc., expected to reduce harmful air emissions by almost 10,000 tons per year from five US petroleum refineries that represent more than five percent of the total refining capacity in the United States. The consent decree required Chevron to spend an estimated $275 million to install and implement innovative control technologies to reduce emissions at its refineries. Chevron's actions under this agreement will reduce annual emissions of NO_x by more than 3,300 tons and SO_2 by nearly 6,300 tons.
- The District Court of Montana ordered W.R. Grace & Co. to pay over $54.5 million to reimburse the federal government for the costs of investigation and cleanup of asbestos contamination in Libby, Montana.
- Tyson Foods Inc. pled guilty to 20 felony violations of the CWA and agreed to pay $7.5 million to the United States and the State of Missouri.
- The US District Court in Seattle ordered Olympic Pipeline Company (OPL) and Equilon Pipeline Corporation (EPC) to pay $51 million in criminal and civil penalties for a June 10, 1999 gasoline pipeline explosion that killed three people, released approximately 236,000 gallons of gasoline, and caused severe damage to two creeks in Bellingham, Washington. Three former OPL employees were also sentenced, and EPC's parent company, Shell Oil, will spend $61 million to ensure the safety of its pipelines in the

United States. This was the first criminal prosecution of pipeline companies and executives under the Federal Hazardous Liquid Pipeline Safety Act.

- DOJ and EPA reached a multi-million dollar CAA settlement with Southern Indiana Gas and Electric Company, Inc. (SIGECO). The settlement is expected to eliminate approximately 10,500 tons of harmful air pollutants annually from three coal-fired electricity-generating units at the Culley Station. It was estimated that SIGECO would spend approximately $30 million to reduce emissions of NO_x, SO_2 and particulate matter (PM) and come into compliance with the CAA. The company will also pay a civil penalty of $600,000 and will spend at least $2.5 million on an environmental project to install and operate technology to reduce emissions from the Culley plant of sulfuric acid, a chemical affecting air opacity in the vicinity of the plant.
- DOJ and EPA reached a $600 million CAA settlement with Wisconsin Electric Power Company (WEPCO), for violations of the New Source Review (NSR) provisions of the Act at several of its plants. The settlement is expected to eliminate more than 105,000 tons of harmful air pollutants annually from five coal-fired electricity-generating plants in Wisconsin and Michigan.
- DOJ and EPA reached the largest CAA enforcement settlement with a power utility. Virginia (VA) Electric Power Co. would spend $1.2 billion between 2003 and 2013 to eliminate 237,000 tons of SO_2 and NO_x emissions each year from eight coal-fired electricity-generating plants in VA and West Virginia.
- DOJ and EPA reached a settlement with Toyota Motor Corporation for CAA violations involving 2.2 million vehicles manufactured between 1996 and 1998. Under the settlement, Toyota would spend $20 million on a supplemental environmental project to retrofit up to 3,000 public diesel fleet vehicles to make them run cleaner and extend the emission control system warranty on affected vehicles. In addition, Toyota would accelerate its compliance with certain new emission control requirements, and pay a $500,000 civil penalty. The settlement would cost Toyota an estimated $34 million.
- President Bush signed the Healthy Forests Restoration Act of 2003, a commitment to reduce the threat of catastrophic wildfire to communities and restore our nation's forest and rangelands.
- NOAA and the Florida Department of Environmental Protection (DEP) received $2.2 million from the federal Oil Spill Liability Trust Fund to restore beaches and marine habitat damaged by an oil spill near Fort Lauderdale, Fla., over three years ago. This is the first time NOAA had been awarded a natural resource damage claim from the trust fund.
- EPA announced a new Water Quality Trading Policy. The policy supports states and tribes in developing and implementing water quality trading programs that are consistent with CWA requirements and achieve watershed goals in more flexible ways. The Policy recognizes that within a watershed, the most effective and economical way to reduce pollution may be to provide incentives for earlier and voluntary pollution reductions—resulting in cleaner water, faster. The Policy allows one source to meet its regulatory obligations by using pollutant reductions created by another source that has lower pollution control cost.

Public Participation

- To make EPA's quality science available to researchers and all citizens, the EPA Science Inventory was launched for public access. The Science Inventory, managed by EPA's Office of Research and Development, is a searchable, Agency-wide database of 4,000 scientific and technical work products. The Science Inventory is available at <http://www.epa.gov/si>.

- ECHO, EPA's Enforcement and Compliance History Online database, successfully delivered local-facility compliance and enforcement information in response to over one million search requests in its first year of operation. Accessible at <http://www.epa.gov/echo>, ECHO gives every citizen the ability to easily access extensive information on EPA's environmental inspections, findings of violations and enforcement actions at more than 800,000 facilities nationwide.
- A new resource for researchers, policymakers and concerned citizens on children's environmental health was made available online at <http://www.epa.gov/envirohealth/children>. The "America's Children and the Environment" web site presents data and discussion on environmental contaminants and children's health, based on EPA's report *America's Children and the Environment: Measures of Contaminants, Body Burdens and Illnesses* (2003).
- New information on air quality became available year-round in more than 100 US cities as part of an ongoing effort to protect the American public from air pollution.
- US EPA continued its commitment to inform the Hispanic community of the Agency's initiatives and programs by launching a new Spanish language campaign on the Hispanic Radio Network (HRN) throughout the US mainland and Puerto Rico.
- US EPA unveiled a new web site to help high school students explore and learn about their environment and ways to protect it. The site can be found at <http://www.epa.gov/highschool/>.
- <Regulations.gov>, a new online rulemaking web site that will make the federal rulemaking process more accessible and enable citizens and small businesses to quickly access and comment on hundreds of open proposed rules from all federal agencies was launched, and it is estimated that it will save $94 million by creating a single system for the entire federal government.
- A new web site, designed to highlight the importance of Hispanic Heritage Parks and the part they play in the nation's history, was launched by DOI. It assists visitors in experiencing the nation's Hispanic heritage that is preserved and interpreted throughout the National Park Service. Visitors can log onto <www.nps.gov> in order to access this special program, which is prepared in English and Spanish.
- Take Pride in America, a national partnership initiative aimed at increasing volunteer service on America's public lands, was launched. The program works with governors and other partners to launch volunteer conservation projects
- The Bush Administration launched <EarthDay.gov>, a web site that provides a comprehensive guide to environmental service opportunities and Earth Day events sponsored by the federal government, including events hosted by USDA agencies.
- DOE launched the <Energysavers.gov> web site, aiming to educate consumers on specific steps they can take to conserve energy.
- The USDA awarded $440,000 in competitive grants for three organizations under the USDA's Native American Outreach Program. The program's goal is to develop and deliver outreach activities that will inform Native American farmers and ranchers, tribal governments, tribal communities and tribal colleges and universities about the availability of, and encourage participation in, USDA programs.
- EPA and state and local agencies launched the National Air Toxic Trend Site network, which will help provide population exposure information for EPA and communities as they develop risk reduction strategies and programs.

Conclusion

Calendar year 2003 was a successful year for the United States in fulfillment of our obligations under the North American Agreement on Environmental Cooperation. We have achieved important results in the areas of protection of biodiversity; preventing the health effects of pollution; enhancing linkages between trade, environment, and economy; and enforcing our environmental laws, as well as improving the participation of the public. The achieved results are an important step toward achieving even more substantial improvements in the future.

2003 Financial Statements

Financial statements of

Commission for

Environmental

Cooperation

December 31, 2003

Deloitte.

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Auditors' report

To the Council of the
Commission for Environmental Cooperation

We have audited the balance sheet of the Commission for Environmental Cooperation as at December 31, 2003 and the statements of revenue and expenditures, capital and cash flows for the year then ended. These financial statements are the responsibility of the Commission's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these financial statements present fairly, in all material respects, the financial position of the Commission as at December 31, 2003 and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

Samson Bélair
Deloitte & Touche s.e.n.c.r.l.

Chartered Accountants

March 5, 2004

COMMISSION FOR ENVIRONMENTAL COOPERATION

Statement of revenue and expenditures

year ended December 31, 2003
(in Canadian dollars)

	2003	2002
	$	$
Revenue		
Contribution - Canada (Note 4)	**4,796,390**	4,737,450
Contribution - Mexico (Note 4)	**4,796,390**	4,737,450
Contribution - United States (Note 4)	**4,796,390**	4,737,450
Other revenue	**163,434**	119,166
	14,552,604	14,331,516
Expenditures		
Expenses related to work program - Schedule	**5,315,953**	4,719,023
Expenses related to specific obligations - Schedule	**805,822**	1,013,328
Expenses related to the Council meetings - Schedule	**277,358**	260,103
Expenses related to the JPAC - Schedule	**460,644**	427,585
Expenses related to the Directorate operations	**376,675**	460,661
Expenses related to North American Fund for Environmental Cooperation	**79,245**	88,078
Planning and evaluation	**92,384**	57,360
Public outreach	**384,880**	382,144
Salaries and fringe benefits	**4,039,711**	4,160,829
Relocation and orientation expenses	**143,632**	324,498
Office expenses	**118,946**	171,527
Telecommunications	**80,131**	101,567
Rent, utilities and office maintenance	**607,693**	516,490
External administrative support	**184,090**	293,125
Operating equipment	**104,756**	55,994
Expenditures related to contingency fund	**146,055**	383,807
Grants disbursed	**686,769**	690,874
Amortization of capital assets	**100,012**	96,676
Loss on foreign exchange	**1,192,314**	47,559
	15,197,070	14,251,228
Excess of (expenditures over revenue) revenue over expenditures	**(644,466)**	80,288

COMMISSION FOR ENVIRONMENTAL COOPERATION

Statement of capital

year ended December 31, 2003
(in Canadian dollars)

	Invested in capital assets	Restricted for North American Fund for Environmental Cooperation	Restricted for currency fluctuation	Unrestricted	Total 2003	Total 2002
	$	$	$	$	$	$
Balance, beginning of year	**308,571**	**411,656**	**471,341**	**468,786**	**1,660,354**	1,580,066
Excess of (expenditures over revenue) revenue over expenditures	**(100,012)**	**(686,769)**	**47,559**	**94,756**	**(644,466)**	80,288
Transfer	**-**	**674,701**	**-**	**(674,701)**	**-**	-
Investment in capital assets, net of financing	**45,018**	-	-	**(45,018)**	-	-
Balance, end of year	**253,577**	**399,588**	**518,900**	**(156,177)**	**1,015,888**	1,660,354

COMMISSION FOR ENVIRONMENTAL COOPERATION

Balance sheet

as at December 31, 2003
(in Canadian dollars)

	2003	2002
	$	$
Assets		
Current assets		
Cash and term deposits	**1,886,049**	2,345,312
Goods and services tax	**270,008**	334,473
Receivable contributions	**2,209,244**	2,862,815
Other assets	**156,544**	138,112
	4,521,845	5,680,712
Capital assets (Note 3)	**285,285**	308,571
	4,807,130	5,989,283
Liabilities		
Current liabilities		
Accounts payable and accrued liabilities	**814,943**	738,870
Deferred contributions (Note 4)	**2,015,610**	2,356,680
Other deferred income	**-**	95,820
Employee benefits (Note 5)	**670,613**	619,286
Current portion of obligations under capital leases (Note 6)	**6,541**	-
	3,507,707	3,810,656
Leasehold inducements	**258,368**	518,273
Obligations under capital leases (Note 6)	**25,167**	-
	3,791,242	4,328,929
Capital		
Invested in capital assets	**253,577**	308,571
Restricted for North American Fund for Environmental Cooperation	**399,588**	411,656
Restricted for currency fluctuation	**518,900**	471,341
Unrestricted	**(156,177)**	468,786
	1,015,888	1,660,354
	4,807,130	5,989,283

Commitments (Note 8)

Approved by the Council

..... Canada

..... Mexico

..... United States

COMMISSION FOR ENVIRONMENTAL COOPERATION

Statement of cash flows

year ended December 31, 2003
(in Canadian dollars)

	2003	2002
	$	$
Operating activities		
Excess of (expenditures over revenue) revenue over expenditures	**(644,466)**	80,288
Items not affecting cash and cash equivalents		
Amortization of capital assets	**100,012**	96,676
Amortization of leasehold inducements	**(259,905)**	(238,857)
	(804,359)	(61,893)
Changes in non-cash operating working capital items (Note 7)	**390,114**	(1,869,485)
	(414,245)	(1,931,378)
Investing activity		
Acquisition of capital assets	**(39,720)**	(186,391)
Financing activity		
Repayment of capital lease obligations	**(5,298)**	-
Net decrease in cash and cash equivalents	**(459,263)**	(2,117,769)
Cash and cash equivalents, beginning of year	**2,345,312**	4,463,081
Cash and cash equivalents, end of year	**1,886,049**	2,345,312

Additional information:

During the year, capital assets were acquired at a total cost of $76,726 ($186,391 in 2002) of which $37,006 (nil in 2002) were acquired under capital leases. Total cash disbursements of $39,720 ($186,391 in 2002) were made to purchase capital assets.

1. Nature of activities

The Commission for Environmental Cooperation is an international organization that was created by the North American Agreement on Environmental Cooperation for the purpose of meeting NAFTA's environmental provisions. The Commission became operational in July 1994.

2. Significant accounting policies

The financial statements are presented in accordance with Canadian generally accepted accounting principles including the following significant accounting policies.

a) Cash and cash equivalents

cash and cash equivalents include cash and short-term investments with maturities of three months or less.

b) Capital assets

Capital assets are recorded at cost and are being amortized on a straight-line basis at the following annual rates:

Computer equipment	20%
Computer equipment and software - projects	30%
Computer software	30%
Furniture and fixtures	20%
Telephone system	30%
Equipment	30%
Leasehold improvements	term of the lease

c) Leasehold inducements

Leasehold inducements relate to the rental of office space by the commission. These inducements, which are amortized over the term of the lease, are offset against rent expenses.

d) Leases

Leases are classified as either capital or operating in nature. Capital leases are those which substantially transfer the benefits and risks of ownership to the lessee. Assets acquired under capital leases are amortized over their estimated useful life (Note 2b). Obligations recorded under capital leases are reduced by the principal portion of lease payments. The imputed interest portion of lease payments is charged to expense.

(in Canadian dollars)

2. Significant accounting policies (continued)

e) Use of estimates

The preparation of financial statements in conformity with Canadian generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from these estimates.

f) Contributions

The Commission follows the deferral method of accounting for government contributions. Under this method contributions are recognized as revenue in the year in which the related expenses are incurred.

The Government of Canada, the Government of the United Mexican States and the Government of the United States of America (the "Parties") contribute to the Commission's annual budget by mutual agreement.

Funds contributed remain available for two months following the end of the financial year to discharge related obligations incurred during the year.

g) Foreign currency translation

Monetary assets and liabilities of the Commission denominated in foreign currencies are translated into Canadian dollars at the year-end exchange rate. Non-monetary assets and liabilities are translated at historical rates. Revenues and expenses of the Commission denominated in foreign currencies are translated at the exchange rate in effect at the transaction dates. Translation gains and losses are presented in the statement of revenue and expenditures.

3. Capital assets

	2003			2002
	Cost	Accumulated amortization	Net book value	Net book value
	$	$	$	$
Computer equipment	**600,743**	**436,402**	**164,341**	188,397
Computer equipment and software	**219,025**	**197,587**	**21,438**	30,018
Furniture and fixtures	**381,581**	**375,305**	**6,276**	9,770
Telephone system	**120,088**	**120,088**	**-**	-
Equipment	**180,369**	**163,887**	**16,482**	28,467
Equipment financed under capital leases	**37,006**	**5,550**	**31,456**	-
Leasehold improvements	**118,205**	**72,913**	**45,292**	51,919
	1,657,017	**1,371,732**	**285,285**	308,571

(in Canadian dollars)

4. Deferred contributions

	Canada	Mexico	United States	Total
	$	$	$	$
Balance, beginning of year	**785,560**	**785,560**	**785,560**	**2,356,680**
Contributions committed	**4,682,700**	**4,682,700**	**4,682,700**	**14,048,100**
Contributions transferred to revenue	**(4,796,390)**	**(4,796,390)**	**(4,796,390)**	**(14,389,170)**
Balance, end of year	**671,870**	**671,870**	**671,870**	**2,015,610**

5. Employee benefits

Employees are entitled to withdraw amounts accumulated as defined in the Rule of employment. The Commission holds the equivalent of those amounts in a term deposit or in a dedicated bank account.

6. Obligations under capital leases

The Commission entered into a five-year lease agreement with a third party for office equipment. Future minimum capital lease payments for the next five years as of December 31, 2003 are as follows:

	2003
	$
2004	**8,856**
2005	**8,856**
2006	**8,856**
2007	**8,856**
2008	**2,214**
	37,638
Less amount representing interest charges	**5,930**
	31,708
Less current portion	**6,541**
Balance	**25,167**

Interest has been charged at a rate of 7.9%.

(in Canadian dollars)

7. Changes in non-cash operating working capital items

	2003	2002
	$	$
Goods and services tax	**64,465**	1,424,382
Receivable contributions	**653,571**	(2,862,815)
Other assets	**(18,432)**	(68,268)
Accounts payable and accrued liabilities	**76,073**	(349,602)
Deferred contributions	**(341,070)**	(142,350)
Other deferred income	**(95,820)**	(37,764)
Employee benefits	**51,327**	166,932
	390,114	(1,869,485)

8. Commitments

a) The Commission leases premises under an operating lease which expires in December 2018. Total minimum payments required in future years are as follows:

	$
2004	**328,611**
2005	**334,688**
2006	**334,688**
2007	**334,688**
2008	**334,688**
Thereafter	**4,497,370**
	6,164,733

b) The Commission has commitments of $1,519,774 related to environmental projects and of $495,836 related to administration and support, for a total of $2,015,610.

9. Comparative figures

Certain of the comparative figures have been reclassified in order to conform to the current year's presentation.

COMMISSION FOR ENVIRONMENTAL COOPERATION

Schedule

Expenses related to the work program, specific obligations under North American Agreement, Council meetings, Joint Public Advisory Committee (JPAC) meetings

year ended December 31, 2003

(in Canadian dollars)

	2003	2002
	$	$
Work program		
Professional fees	**2,981,589**	2,746,484
Travel, accommodation and meeting expenses	**1,486,978**	1,395,819
Translation and interpretation	**459,075**	291,561
Office expenses	**77,919**	83,339
Publications	**310,392**	201,820
	5,315,953	4,719,023
Specific obligations under North American Agreement on Environmental Cooperation		
Professional fees	**191,332**	484,833
Travel, accommodation and meeting expenses	**138,662**	154,680
Translation and interpretation	**174,943**	134,202
Publication	**257,523**	179,705
Office expenses	**43,362**	59,908
	805,822	1,013,328
Council meetings		
Translation and interpretation	**29,884**	105,495
Travel, accommodation and meeting expenses	**217,644**	131,814
Office expenses	**29,330**	20,230
Professional fees	**500**	2,564
	277,358	260,103
Joint Public Advisory Committee (JPAC) meetings		
Travel, accommodation and meeting expenses	**294,880**	302,789
Translation and interpretation	**70,508**	64,584
Professional fees	**88,591**	10,413
Office expenses	**6,665**	49,799
	460,644	427,585

Looking Ahead

		Budget 2004 C$
GOAL 1: To foster understanding of the state of our environment, and its relation to the economy and trade in North America		**1,050,000**
Objective A: The public and the Parties have a better understanding of the state of and outlook for the North American environment, and its relation to human and ecosystem health		**885,000**
Strategy 1: Facilitating data harmonization and information sharing and promoting integrated monitoring across North America to foster better understanding of the current status of the North American environment		**795,000**
	State of the Environment Information	75,000
	North American Pollutant Release and Transfer Registry: *Taking Stock* report	375,000
	North American ambient air monitoring networks (Air)	60,000
	North American air emissions and greenhouse gas inventories (Air)	245,000
	Information exchange on best available technologies for air pollution control (Air)	40,000
Strategy 2: Investigating potential environmental threats and issues of common concern by performing comparative analyses and assessments using comparable environmental information collected across North America		**50,000**
	Forward-looking assessments of air pollution/public health/ecosystem interactions (Air)	50,000
Strategy 3: Assessing the impacts of environmental degradation on human and ecosystem health in North America and disseminating assessment results to decision makers and the public		**40,000**
	Children's Health and the Environment Indicators Report	40,000
Objective B: Trade officials and the public understand the environmental effects of liberalized trade and use that understanding to inform new agreements		**165,000**
Strategy 1: Developing a strategic plan for the Environment, Economy and Trade program		**15,000**
	Develop a strategic plan for the Environment, Economy and Trade program	15,000
Strategy 2: Assessing and disseminating findings on environment/trade relationships in a transparent manner		**150,000**
	Assess linkages between trade and environment, focusing on agriculture and energy	50,000
	Conduct third North American Symposium on Assessing the Environmental Impacts of Trade	100,000

GOAL 2: To act as a catalyst to improve domestic law and policy, and enhance environmental enforcement and compliance across North America		**405,000**
Objective A: Enhance cooperation in the development, improvement and dissemination of information about environmental laws, policies, standards and technical requirements		**265,000**
Strategy 1: Improving the understanding of regulatory and technical requirements, experiences and management techniques in selected sectors		**50,000**
	"Best practices" for promoting and safeguarding water quality	50,000
Strategy 2: Ensuring that online information about North American environmental laws and policies is up-to-date and easily accessible		-
	Law Data Base Development	-
Strategy 3: Improving the coordination of environmentally sound management and tracking of transboundary hazardous waste in North America		**215,000**
	Environmentally Sound Management of Hazardous Waste (ESM)	100,000
	Transboundary movement of hazardous waste	80,000
	Hazardous Waste Code Dictionary	35,000
Objective B: The Parties enhance compliance with, and enforcement of, their environmental laws and regulations		**140,000**
Strategy 1: Providing a forum for the Parties and stakeholders to come together on issues of common concern		**140,000**
	Enforcement Working Group meetings	30,000
	Enforcement Working Group publications	60,000
	Enforcement Working Group conferences and workshops	50,000
Strategy 2: Ensuring that the Articles 14/15 process yields information that can enhance environmental enforcement and compliance in North America		
	Please refer to Actions described under Goal 4, Objective A	
GOAL 3: To mobilize international cooperation to resolve critical North American environmental issues		**2,196,000**
Objective A: Conserve North America's biodiversity and use it sustainably		**755,000**
Strategy 1: Implementing the Biodiversity Strategic Plan through collaboration and cooperation		**20,000**
Strategy 2: Promoting cooperation for the conservation and maintenance of North American regions of ecological significance		**178,000**
	Grassland Ecosystem Network	70,000
	North American Marine Protected Areas Network (NA MPA)	108,000
Strategy 3: Promoting the conservation of North American migratory and transboundary species, and other species identified by the Parties		**297,000**
	Terrestrial Species of Common Conservation Concern	100,000
	Marine Species of Common Conservation Concern	117,000
	North American Bird Conservation Initiative	80,000
Strategy 4: Facilitating data and information sharing across North America and promoting integrated monitoring and assessment to increase understanding of the state of North American biodiversity		**25,000**
Strategy 5: Facilitating communication, networking, and identification		

	and sharing of best practices, priorities, and opportunities for education and training	**110,000**
Strategy 6: Promoting collaborative responses to threats facing North American ecosystems, habitats and species		**100,000**
Strategy 7: Identifying and evaluating potential collaborative opportunities for biodiversity conservation and sustainable use of biological resources that arise from regional trade		**25,000**
Objective B: Ensure North American environmental, economic and trade policies are mutually supportive		**340,000**
Strategy 1: Promoting renewable energy and energy efficiency in North America		**115,000**
Strategy 2: Fostering understanding of environmental labeling		**37,000**
Strategy 3: Encouraging the disclosure of relevant environmental information		**94,000**
Strategy 4: Fostering green procurement in North America		**75,000**
	Lead the North American Green Purchasing Initiative (NAGPI)	75,000
Other Items		**19,000**
	Complete the sustainable palm project	19,000
Objective C: Prevent or reduce pollution impacts on human and ecosystem health		**1,101,000**
Strategy 1: Facilitating the development and implementation of North American strategies and actions to protect human health and the environment		**921,000**
	Sound Management of Chemicals Initiative (SMOC)	545,000
	Regional Program of Action and Demonstration of Sustainable Alternatives to DDT for Malaria Vector Control in Mexico and Central America (DDTRP)	126,000
	Cooperative Agenda on Children's Health and the Environment in North America	195,000
	North American Air Working Group	10,000
	Exchange opportunities for air quality professionals in North America	45,000
Strategy 2: Fostering private sector actions to adopt sound approaches to environmental protection and conservation		**180,000**
	Capacity building for pollution prevention	105,000
	Environmental management systems (EMS)	65,000
	Environmental auditing	10,000
GOAL 4: That all CEC activities strive to provide a forum for public dialogue and participation concerning environmental issues in North America		**351,500**
Objective A: The North American public and NAAEC Parties view the citizen submission process as a useful and valuable mechanism for enhancing enforcement of and compliance with environmental law in North America		**351,500**
Objective B: The CEC will engage and inform the North American public in its programming and operations		
Cross-Cutting Management Activities and Objectives:		**351,900**
Communications		351,900

Administration and Finance			5,934,200
	Telecommunications		112,000
	Operating equipment		124,000
	Relocation orientation		50,000
	Recruitment		15,000
	External administrative support		244,800
	Information Center		114,000
	Corporate Office		202,500
	Mexico Liaison office		226,300
	Office supplies		140,000
	Rent		722,600
	Salaries		3,983,000
Special Initiatives			**1,362,900**
	Article 13		281,600
	Ten-year Review of NAFTA/NAAEC		100,000
	2004–2006 Operational Plan		30,000
	Support to Council		265,500
	Support to JPAC		360,000
	Monitoring, Evaluation and Reporting		50,000
	Annual report		27,000
	Reserve for unforeseen needs		150,000
	Capacity development support		98,800
		Total Budget	**11,651,500**
Other Items			
NAFEC			-
Article 10(6) Cooperation with NAFTA Free Trade Commission			-
Article 10(7) Transboundary Environmental Impact Assessment			-
Pollutants and Health	SMOC position		100,000
Pollutants and Health	PRTR/CEH position		100,000
Postponed from 2003			
	Delay in SOE contracts		(60,000)
	Reduction in Air meeting costs		(40,000)
		TOTAL	**11,751,500**