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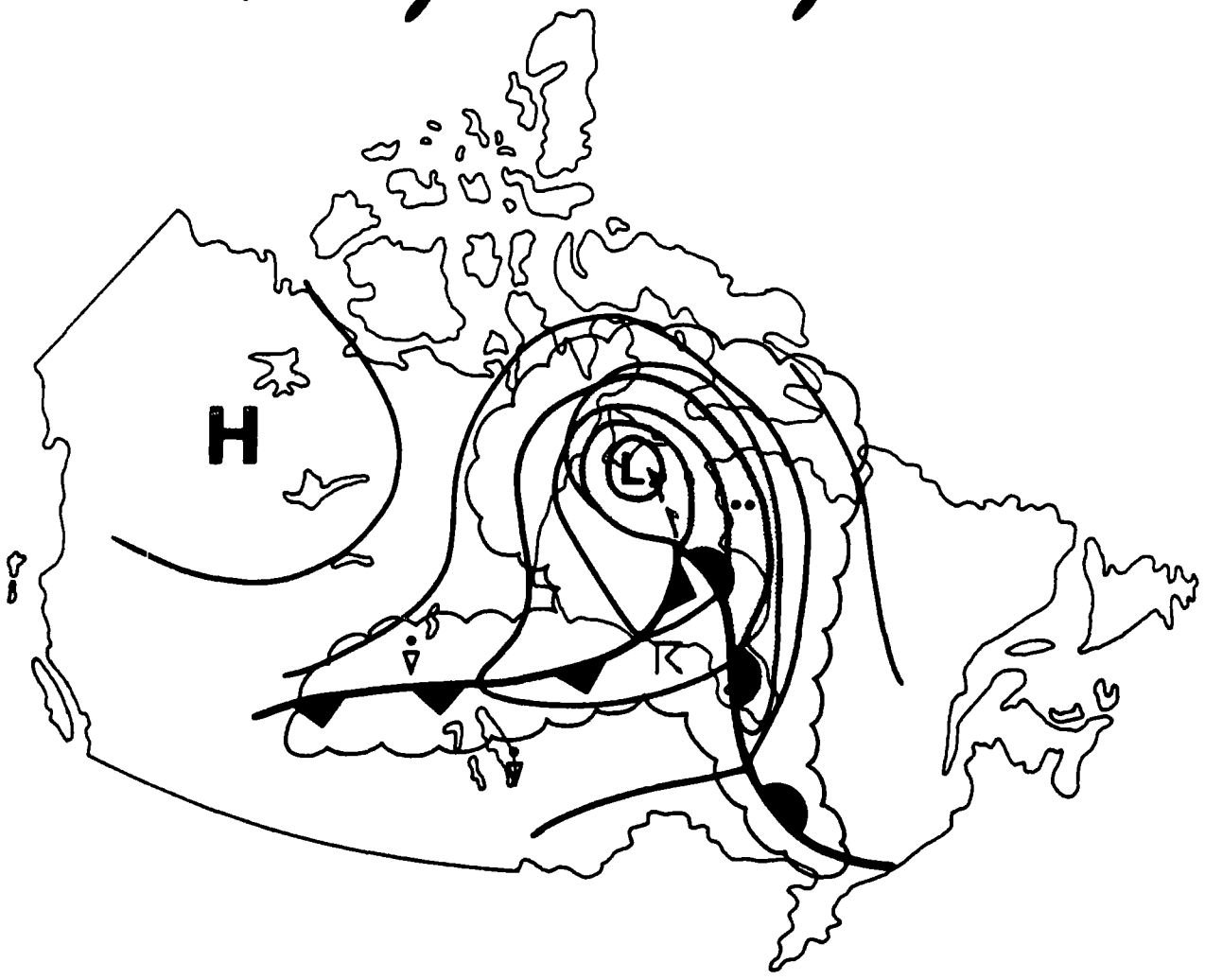
ATMOSPHERIC ENVIRONMENT SERVICE

Program Digest



1992 - 1993

AES MANAGEMENT SERIES

PROGRAM DIGEST QUESTIONNAIRE

Each year there is a sizeable demand for copies of the Program Digest There is also a considerable effort required to produce the Program Digest In order that we may serve you better, we would like your feed-back

INSTRUCTIONS

To improve this publication we are requesting that you complete this questionnaire and return it to us (see address overleaf) For each item please circle the response rating that best describes your impressions Use the space provided or attach additional sheets to respond to other questions and for your comments

CONTENT

1 To what extent does this publication address your information needs regarding AES?

Poor 1 2 3 4 5 Excellent

2 Most useful aspect of the publication

3 Least useful aspect of the publication

4 What additional information would be useful?

5 For each of the following Chapters, circle the response that best describes your opinion on the amount of material and space allocated to each chapter

	Quality					Length				
	Poor				Excellent	Too Short				Too Long
a) Introduction	1	2	3	4	5	1	2	3	4	5
b) Chapter 1 - AES and the Department of the Environment	1	2	3	4	5	1	2	3	4	5
c) Chapter 2 - The Priorities that guide AES	1	2	3	4	5	1	2	3	4	5
d) Chapter 3 - AES Focus on Client Needs and Results	1	2	3	4	5	1	2	3	4	5
e) Chapter 4 - AES Program Activity Structure	1	2	3	4	5	1	2	3	4	5
f) Chapter 5 - AES Functions and Budgets by Organization	1	2	3	4	5	1	2	3	4	5
g) Overall	1	2	3	4	5	1	2	3	4	5

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1 What are some of the uses of this publication for yourself and your organization?

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2 Do you use the Addendum? ( ) Yes ( ) No For what purposes?

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1 Who in your organization uses this publication Please check off

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d) Technical (EGs, ELs)
e) Administrative Services (ASs)
f) Administrative Support (SCYs, CRs)

2 How could this publication be improved? (Use other page if necessary)

3 Other comments (Use other page if necessary)

4 Your Organization Date

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Return to Corporate Planning and Accountability Branch (APEC)
Atmospheric Environment Service
4905 Dufferin Street
Downsview, Ontario
M3H 5T4

AES· Service through Science

In 1991, the Atmospheric Environment Service (AES) adopted a vision statement for the service - **AES People providing Quality Service through Science for the Sustainable Benefit of Canadians and Our Environment** More than just a catchy phrase or motto, the vision statement captures the essence of AES and its future The AES vision is very much a vision of the future built on present day strengths AES will continue to be a science based organization, it will use that science base to serve Canadians, and it will focus its energies on enabling Canadians to make informed and responsible decisions about the environment

"ALL INFORMATION CURRENT AS OF APRIL 1, 1992"

SEA Un service fonde sur la science

En 1991, le Service de l'environnement atmospherique (SEA) adoptait une vision pour le service - **Le SEA Des gens offrant un service de qualité fondé sur la science pour le bénéfice durable des canadiens et de notre environnement** C'est plus qu'une devise ou qu'une formule a effet, car c'est un enonce qui capte l'essence du SEA et de l'avenir de celui-ci C'est essentiellement une vision de l'avenir, fondee sur les points forts d'aujourd'hui Le SEA restera un organisme fonde sur la science, qui mettra ses fondements scientifiques au service des Canadiens et qui redoublera d'efforts pour que les Canadiens puissent prendre des decisions averties et sensees au sujet de l'environnement

"LES INFORMATIONS DATET DU 1er AVRIL 1992 "

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INTRODUCTION

PURPOSE

"The Program Digest" is an annual publication that describes

- the Atmospheric Environment Service (AES), as well as its objectives, mandate and responsibilities,
- the AES budget by program sub-activity (SA 1) and program sub-sub-activity (SA 2),
- the AES budget by Result and Sub-Result (A description of the Results Definition Structure is contained in Chapter 4)

"An Addendum to the Program Digest" is also issued
This publication describes

- sub-sub-sub-activity (SA 3) and the program activity element (SA 4) level definitions of the program activities,
- the relationship between responsibility centres and SA 3 program activities, and
- the AES financial and human resource allocations at the SA 3 and SA 4 levels by organizational unit

1 2 MATERIAL PRESENTED IN THE PROGRAM DIGEST

Chapter 1 describes AES's and the other Services's responsibilities and its mandate within Environment Canada Chapter 2 discusses AES's current objectives and priorities Information relating to AES program activities and organizational units is provided in Chapters 3 and 5 respectively

Any comments or suggestions for amendments to this document should be forwarded to Corporate Planning and Accountability Branch, (APEC)
Atmospheric Environment Service
4905 Dufferin Street
Downsview, Ontario
M3H 5T4

CHAPTER 1

AES AND THE DEPARTMENT OF THE ENVIRONMENT

ATMOSPHERIC ENVIRONMENT SERVICE

1 AES AND THE DEPARTMENT OF THE ENVIRONMENT

The Atmospheric Environment Service is a key player within the Department of the Environment, comprising of 23 8 percent of Departmental person years and 22 3 percent of total resources

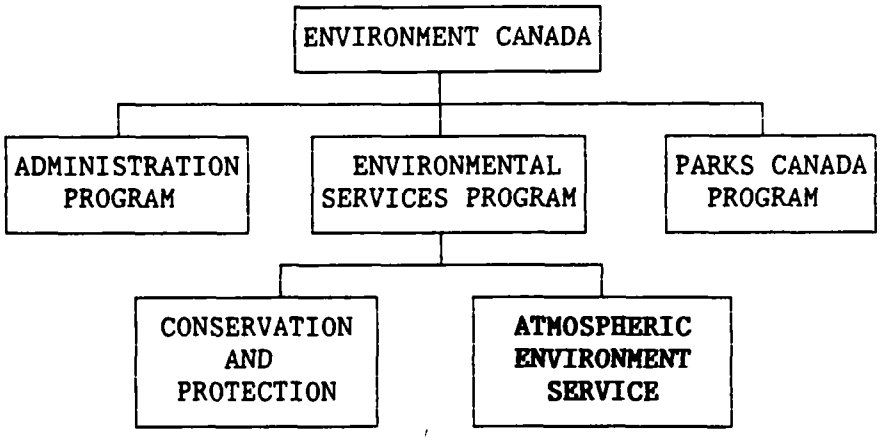
1 1 OBJECTIVE OF ENVIRONMENT CANADA

- to foster harmony between society and the environment for the economic, social and cultural benefit of present and future generations of Canadians

1 2 DEPARTMENTAL PROGRAM STRUCTURE

Environment Canada has grouped its activities into three Programs (as shown below)

- **the Environmental Services Program,**
- **the Parks Program,** and
- **the Administration Program**



1 2 1 ENVIRONMENTAL SERVICES PROGRAM (5019 2 PY, $ 655,975 K)

The program objective is to promote and undertake programs to protect and enhance the quality of the environment, and programs designed to improve the management and sustained economic utilization of the wildlife and water resources of the nation

The Environmental Services Program is divided into two Activities Conservation and Protection, and Atmospheric Environment

1 2 1 1 **Conservation and Protection** (2,555 PY, $ 402,407 K)

The objective of Conservation and Protection is to conserve, manage and protect Canada's renewable resources of water, land and wildlife and to influence human activities in a way that will achieve and maintain a state of environment necessary for the health and well-being of people, the health and diversity of species and ecosystems, and the sustained use of natural resources and the natural environment (air, water and soil quality)

The Conservation and Protection Activity meets federal responsibilities for the sound management and development of Canada's water and land resources, migratory birds, threatened and endangered species, and other national and international wildlife issues It is responsible for protecting the environment by preventing, reducing or eliminating adverse environmental effects from new developments, from releases of pollutants and from the use of hazardous substances It is also responsible for ensuring that the environmental quality at spill and waste sites is restored to acceptable levels The Conservation and Protection Activity is carried out in the following areas

Inland Waters Conservation
Wildlife Conservation
Environmental Protection
Management and Common Support Services

1 2 1 2 **Atmospheric Environment Service** (2,464 2 PY, $ 253,568 9 K)

The objective of the Atmospheric Environment Service is to ensure the safety and well-being of all Canadians by providing high quality environmental information and advice, and by promoting human behaviour that respects the present and future conditions of the atmosphere

The federal government's Atmospheric Environment Service delivers various programs in support of its objective On a 24-hour basis, for all areas of Canada and for adjacent waters within the 320-kilometre economic zone, AES provides weather forecasts, advice on past, present and future climates, ice and iceberg conditions, and information on air quality These programs enable AES to issue weather warnings and provide advice to the public and the marine, aviation, industrial, economic and military communities, as well as to government policy-makers This information is issued in enough detail and in sufficient time to permit Canadians to take steps to protect life, property and the environment and to make informed decisions which effect economic, social and recreational activities Atmospheric Environment Service also supports and carries out important atmospheric research which enhances our understanding of atmospheric processes and conditions

1 2 2 **PARKS PROGRAM** (4,707 PYs, $ 413,586 K)

The Parks Program objective is to protect those places which are significant examples of Canada's natural and cultural heritage for the benefit, understanding and enjoyment of the people of Canada, in ways which leave heritage unimpaired for future generations

The Parks Program activity structure consists of three elements Park Operation, Park Development and Program Management and Technical Services The Park Operation Activity carries out the operation, maintenance and management of the existing system of parks, sites and canals The Park Development Activity encompasses the negotiation, acquisition, conservation and development of new parks and sites as well as the provision of new services and facilities within existing parks, sites and canals The Program Management and Technical Services Activity serves the Parks Program as a whole, providing senior management, strategic planning, program policy, finance, administration, realty services, marketing and socio-economic analysis The acquisition of architectural and engineering services is also accounted for within this activity

1 2 3 **ADMINISTRATION PROGRAM** (656 PYs, $ 73,244 K)

The Administration Program's mandate is to provide policy direction, management and services to the Department and to provide for environmental assessment review

The Administration Program consists of two Activities, Administration and the Federal Environmental Assessment Review Office

The Administration Activity is divided into two sub activities

> Departmental Management, which provides direction to, and co-ordination for, all activities for the Department, education programs and communication services, information on the state of the environment, and corporate management for programs which have multi-activity involvement, and
>
> Departmental Services, which provides administrative policy and corporate services related to finance, human resources, information technology (electronic data processing, telecommunications and office technology) and administrative support

The second Activity, the Federal Environmental Assessment Review Office, administers the federal environmental assessment and review process Under Bill C-13, the proposed Canadian Environmental Assessment Act, the Office will become the Canadian Environmental Assessment Agency with its own program structure

1 3 ENVIRONMENT CANADA'S VISION FRAMEWORK

Vision - At Environment Canada, we want to see a Canada:

where people make responsible decisions about the environment, and
where the environment is thereby sustained for the benefit of present and future generations

Values - At Environment Canada, we value

our environment and our heritage and their vital importance to the identity and well-being of present and future generations,
the dedication and teamwork of our people and integrity, trust and mutual respect in our working relationships,
the contribution of the natural and social sciences to environmentally responsible decision-making,
the contribution of our leadership to achievable development, and
the provision of quality service to the public

Mission - In order to provide leadership in the achievable development, we will

act to understand, protect and restore the integrity of Canada's ecosystems,
provide quality environmental services through science,
advocate the sustainable use of resources,
protect Canada's natural and cultural heritage,
foster global environmental integrity,
contribute to knowledge, skills and values that Canadians need to make environmentally responsible decisions,
warn or advise to minimize impacts of environmental hazards and emergencies, and
promote environmental stewardship throughout the Government of Canada

Operating Principles - In order to continuously improve our performance, we will.

lead by example in our practice of environmental stewardship,
encourage innovation and empower our people to take initiative,
demonstrate care and commitment to all our employees by creating a supportive workplace in which to achieve their full potential,
work together and with others in ways that enhance the efforts of all partners,
establish effective priorities, performance standards, and accountabilities for the delivery of results, and
provide the support necessary for the successful delivery of our programs

1 4 DEPARTMENT LEGAL MANDATE AND RESPONSIBILITIES

The Department of the Environment came into being in June, 1971 following proclamation of the Government Organization Act, 1970 Known now as Environment Canada, the Department was created from components within the federal structure that related to the natural environment Subsequent organizational adjustments were effected through the Government Organization Act of 1979 which separated the fisheries and marine component, by Order-in- Council PC-1979-1617 which added Parks Canada to the Department's structure, and by Order-in-Council PC-1984-3200 which transferred the Canadian Forestry Service to Agriculture Canada

The Government Organization Act (GOA), 1979 and the subsequent Miscellaneous Statutes Law Amendment Act (June 1984) and Order-in-Council PC-1984-3200 which modified the effect of the Act, state that the duties, powers and functions of the Minister of the Environment extend to and include

(i) all matters over which Parliament has jurisdiction not otherwise assigned to other federal departments, boards and agencies relating to
- the preservation and enhancement of the quality of the natural environment, including water, air and soil quality,
- renewable resources including migratory birds and other non-domestic flora and fauna,
- water,
- **meteorology,**
- the enforcement of rules and regulations made by the International Joint Commission relating to boundary waters, and questions arising between the United States and Canada insofar as they relate to the preservation and enhancement of the quality of the natural environment,
- the co-ordination of the policies and programs of the Government of Canada respecting the preservation and enhancement of the quality of the natural environment,
- the protection and presentation of national parks, national historic sites and historic canals, and
- the National Battlefields Commission

(ii) such other matters over which Parliament of Canada has jurisdiction relating to the environment as are by law assigned to the Minister

The GOA recognizes that preserving and improving Canada's environmental quality is a responsibility of all federal departments, the provincial governments and the public The Act gives to the Minister of the Environment broad responsibilities to promote practices that lead to the improvement and preservation of environmental quality It also enables the Minister to co-operate with provincial governments and their agencies and any other program or organization having similar environmental objectives As well, the GOA empowers the Minister to establish guidelines and advise heads of departments, boards and agencies of the federal government in all matters pertaining to preserving and improving the quality of the natural environment Finally, it allows the Minister to enter into agreements with other governments or agencies for the purpose of carrying out programs for which the Minister is responsible

CHAPTER 2

THE PRIORITIES WHICH GUIDE AES

ATMOSPHERIC ENVIRONMENT SERVICE

2 THE PRIORITIES WHICH GUIDE AES

2 1 ATMOSPHERIC ENVIRONMENT SERVICE'S PRIORITIES

PRIORITY MEMORANDUM OF THE ASSISTANT DEPUTY MINISTER ATMOSPHERIC ENVIRONMENT SERVICE 1992/93 AND BEYOND

The Priority Memorandum of the Assistant Deputy Minister, Atmospheric Environment Service, identifies the strategic direction, specific priorities, and management considerations for AES for fiscal year 1992/93 and beyond A brief overview of Government, Ministerial and departmental priorities is also provided

I GOVERNMENT'S PRIORITIES

1 Canadian Unity

- o proposals suggesting changes in federal-provincial powers and responsibilities
- o speak to the world with a united voice on an active foreign policy supportive of Canadian interests

2 Participate in Prosperity

- o control government spending
- o increase productivity
- o increase skills and access to life long learning opportunities
- o integrate environmental and economic considerations into decision making

3 Change the way Ottawa works

- o streamline government structures and operations
- o improve management of public service

The Minister of the Environment's top priority will continue to be the successful delivery of the Green Plan and communicating the success of the Green Plan to Canadians The Minister will expect the Department to play a larger part in influencing government policy and the direction of other government departments

III. DEPARTMENT'S PRIORITIES

General	1	Implementing the Green Plan
	2	Increasing cooperation and coordination
	3	Enhancing leadership and stewardship
	4	Improving service to the public
	5	Care and commitment to employees
	6	Effective accountability and priority setting
	7	Encouraging and empowering innovation
Specific to AES	8	Global Warming
	9	Training and Career Planning
	10	Employment Equity

- For the immediate future the top priority in the Department will continue to be Green Plan implementation There will be an emphasis placed on meeting due dates for all deliverables, and for delivering on all other commitments contained in the Green Plan Initiative Management Contracts

- Increased coordination and cooperation of all types will be stressed, but a particular emphasis will be placed on enhancing coordination and cooperation within the Department

- All forms of service to the public will continue to be stressed The Service to the Public Task Force defined service as being of three types
  (1) Direct Service - e g weather forecasts
  (2) Policy Development & Program Design - e g consultation
  (3) Regulatory Service - e g administering regulations

- Effective accountability and priority setting will continue to be a special interest of the Associate Deputy Minister Departmental requirements will continue to evolve in this area

- Global Warming, Training and Career Planning, and Employment Equity have been highlighted by the Deputy Minister for special reporting

IV ADM'S PRIORITIES FOR AES

1 Continued development among staff of a full appreciation of their role within the Department and in achieving the goal of providing quality service through science for the Sustainable Benefit of Canadians and their environment

2 Continued effective implementation of the Green Plan, demonstrated by delivery of all Green Plan deliverables on schedule, including phased modernization of weather services

3 Establishment of viable and vibrant air quality and climate programs within the Regions

4 Development of a credible Canadian position to contribute to the success of international negotiations on Climate Change

V. MANAGEMENT CONSIDERATIONS

1 Living the Vision
2 Human Resource Management
3 PS2000
4 Communication
5 Marketing
6 Decision Making
7 Results

- o Managers must be leaders in order to make the AES Vision a reality, and they must lead by example The Vision must be applied at every opportunity

- o Managers must manage people as well as programs Effective Human Resource Management will be achieved only through careful planning and achievement of established targets

- o Managers must be innovators PS2000 offers opportunities to experiment with innovative approaches to increasing efficiency and effectiveness

- o Managers must be communicators Effective two way communication between managers and employees ensures that management is aware of the employees' concerns and ideas, and that employees are aware of the organization's initiatives and achievements The AES Vision Statement and the AES Results Model can be effective tools for managers in this effort

- o Managers must market their achievements Marketing internally within the Department as well as externally with other government departments, other levels of government, business and the public, is the means of ensuring that AES receives due recognition, respect, and fair value for its products

- o Managers must be decision makers Managers must be prepared to take individual decisions where required, and they must design and implement effective and efficient decision making mechanisms where group decisions are needed

- o Managers must focus on the achievement of results Plans and activities of the organization must be continually evaluated from the perspective of the intended result Managers must ask "is this the best possible way to achieve the result we want ?"

2 2 AES'S INVOLVEMENT IN THE GREEN PLAN

On December 11, 1990, the Minister of the Environment presented the Government's plan for environmental protection and sustainable development, the Green Plan for a Healthy Environment The Green Plan has become an important component of the Government's priorities for Canada's future AES has an active role in the implementation of Canada's Green Plan The Service is involved in a number of initiatives and has direct responsibility for delivery on the following Green Plan commitments

Provide Public Advisories in Urban Areas on Ozone

In cooperation with provincial and municipal governments, the Government will provide public advisories in major urban areas in B C , Southern Ontario, Quebec and the Maritimes on days when motorists could help reduce unacceptably high ozone concentrations by using public transport

Increase monitoring of NOx (Nitrogen Oxides), VOCs (Volatile Organic Compounds) and Ground-Level Ozone

To determine the effectiveness of the national program, the Federal Government will increase its monitoring of the amounts and environmental effects of NOx, VOCs and Ground-Level ozone Air quality models will also be developed by 1994 in order to better predict the effectiveness of further emission reduction measures under consideration

- **Determine Final Emission Targets NOx, VOCs and Ground-Level Ozone.**

  The Government will determine final emission targets for all regions in Canada where problems exist and will determine emission reductions required in the U S to deal with transboundary smog pollution coming into Canada

- **Establish Inquiry into Environmental Impact of Electricity**

  The Government of Canada and its partners will commence examination and preparation of additional measures that would yield more far-reaching changes in the way Canadians use energy For its part, the Government will establish an inquiry into the environmental impact of electrical generation options

Adopt Assessment Guidelines for Impacts of Major Projects on Climate Change

The Government will identify those areas that are at risk and will provide Canadians with a wide range of new information on effects and mitigation Government efforts will include adopting guidelines to ensure that potential changes in the Canadian environment as a result of climate change are considered in major projects

Assess Socio-economic Impact of Climate Change

The Government will identify those areas that are at risk and will provide Canadians with a wide range of new information on effects and mitigation Government efforts will include assessing the socio-economic repercussions of climate change on the Great Lakes and St Lawrence River Basin, the Prairies, and the MacKenzie Basin

Assess Policy Changes/Rising Sea Levels on Coasts

The Government will identify those areas that are at risk and will provide Canadians with a wide range of new information on effects and mitigation Government efforts will include assessing policy changes that might be needed to deal with rising sea levels along both the east and west coasts of Canada

Improve Understanding of Climate Change Rate

Significant improvement in our understanding of the rate of climate change and in our understanding of the distribution of regional repercussions

- **Climate Modeling and Monitoring.**

  The research effort will include more sophisticated climate modeling and monitoring, development of a network of private sector and university labs, and active participation in international research programs A major element in this program is to initiate the development of the next generation global circulation climate model

- **Provide Annual Reports on State of Canadian Climate**

  Through the National Action Strategy on Global Warming, as well as through the Green Plan, the Government will significantly increase its commitment to scientific research on climate change Specific elements of the program will include annual reports on the state of the Canadian climate

Complete Climate Change Detection Network

Through the National Action Strategy on Global Warming, as well as through the Green Plan, the Government will significantly increase its commitment to scientific research on climate change Specific elements of the program will include a climate change detection network consisting of stations operated by volunteers across all of Canada's climate zones

- **Negotiate International Framework Convention Climate Change**

  Canada will actively pursue an International Framework Convention on Climate Change and development of any necessary protocols The Government will also press for the conclusion on the Framework Convention and appropriate binding protocols In pursuing the Convention, Canada will be seeking a comprehensive international agreement on targets and schedules for the reduction of CO2 (Carbon Dioxide) and other greenhouse gas emissions

- **Enhance Co-operation on International Climate Change Science**

  Canada will seek to ensure that the International Framework Convention on Climate Change includes provision for enhanced co-operation on international climate change science

Second World Climate Conferences

Canada will work to address the special concerns of developing countries so that they can participate fully

- **Pursue Bilateral Diplomacy/International Agreements**

  Canada will pursue bilateral diplomacy to encourage other countries to abide by essential international agreements

- **Enhance International Commercialization of Technology to Reduce Greenhouse Gases.**

  Canada will seek enhanced international cooperation in the development and commercialization of technologies that reduce greenhouse gas emissions

  Establish Arctic Observatory for studying Ozone Depletion

  The Government will establish an Arctic observatory for research and monitoring of the Arctic stratosphere as Canada's contribution to a series of such observatories in the Arctic nations

- **Augment the Canadian Ozone Monitoring Program**

  The Government will augment the Canadian Ozone Monitoring Program to determine the effects of ozone depletion on people in all parts of the country

- **Provide Ultraviolet Radiation Level Warnings**

  The Government will provide warnings of ultraviolet radiation levels for major cities across Canada so that the public can guard against excessive exposure to direct sun

  Participate in Joint Research Program with respect to Ozone Depletion

  The Government will participate in and support joint research programs with the United States, the Soviet Union, Japan and Europe to ensure that global solutions to the ozone depletion problem are developed

- **Publish Progress Reports on Acid Rain Control Program**

  The Government will provide regular progress reports on the extended and expanded Canadian Acid Rain Control Program

Better Warnings of Severe Weather/Atmospheric Pollution Events

Environment Canada will provide earlier detection, better prediction and more timely warnings of severe weather events and of major airborne pollution emergencies such as volcanic eruptions and severe weather, and will seek to increase use of satellite data in weather prediction models

- **Install Doppler Radar Facilities**

  Four Doppler radar facilities will be installed Some existing weather offices will be restructured to provide better delivery of weather warning in priority areas where gaps in service currently exist

- **Upgrade Emergency Communication Capabilities.**

  Emergency communications capabilities will be upgraded, including demonstrations of a national television environmental warning capability that will flash emergency information on television screens, and a simultaneous telephone call-out system to emergency organizations and civil authorities

- **Expand Iceberg Surveillance**

  Expanded iceberg surveillance will be implemented Modern, automated local area environmental weather observation networks and detection systems will be set up in priority areas to monitor natural and man-made environmental disasters For example, automated water-level monitoring equipment will be installed in streams above flood-prone, major urban centres Flood forecasting agreements with other parties will also be in place, together with better computer facilities and improved models of nuclear and volcanic contamination

CHAPTER 3

AES FOCUS ON CLIENT NEEDS AND RESULTS

ATMOSPHERIC ENVIRONMENT SERVICE

3 AES FOCUS ON CLIENT NEEDS AND RESULTS

MANAGEMENT BY RESULTS as a basis for planning in AES

AES has adopted a Management by Results tool for strategic, operational and activities planning, and for program evaluation This move towards Management by Results (Results Definition Model) is occurring throughout Environment Canada The Results Definition Model is consistent with the Federal Government's Public Service 2000 initiative to reform the operations of the Public Service It focuses AES decision-making on the needs of Canadians within the defined mandate of the Department of the Environment This approach differs from past methods which tended to focus on the products rather than the client (e g improving forecasts) under the implicit assumption that the client would benefit

The AES **RESULTS DEFINITION MODEL** links the **MISSION** of the organization (a given to the model), the client **NEEDS** that are to be satisfied, and **RESULTS** (impacts of program on the client) **Strategies** and **Activities** are not stated on the Model, but are developed through the planning process **Strategies** and **Activities** are managerial statements of how Results will be achieved, and hence link Activities to Results

The strength of the model is in its identification of Client Needs and clear articulation of organizational expectations or "Results" intended to meet those Needs This ensures that the AES activities are focused for maximum effect The model has the added advantage of flexibility It is a dynamic, as opposed to static, management tool able to respond to changing client needs, emerging issues and unforeseen events Finally, through a set of **RESULT MEASURES**, the model facilitates the assessment of an organization's success Result Measures highlight strengths and weaknesses in Program delivery and the strategies selected to achieve intended Results

The Results Definition model is incorporated in this edition of the Program Digest and Addendum The Program Activity Structure is used to describe program activities and to allow comparisons with previous years' activities The Results Definition is described in following paragraphs, indicating the Needs, Results and Sub-Results Each Sub-Result is described in order to give an overview of the following program outputs that support that particular Sub-Result

Need 1. Canadians need protection from Environmental Hazards (1996 6 PY, $200,748 5 K total of Results 1 1 and 1 2)

Result 1.1. Deaths and injuries to Canadians and damage to property in incidents where meteorological conditions are a factor are prevented or minimized. (1990 1 PY, $200,254 1 K total of Sub-Results 1 1 1, 1 1 2 and 1 1 3)

Sub-Result 1.1.1. Canadians are aware of weather, sea-state and ice hazards and know how to react. (48 1 PY, $4,280 2 K)

In order for Canadians to understand meteorological hazards, it is important that they be aware of the hazards which occur in Canada, of the methods and means by which they will be warned of their occurrence, and of the options (be they protection of life or property) they have to deal with these hazards AES publishes and distributes information on atmospheric, sea-state and ice hazards, and on associated AES warning services In addition, AES actively pursues, often with partners, the education of media, emergency response agencies, stakeholders and the public at large in these matters

Sub-Result 1.1.2. Canadians are warned of weather, sea-state and ice hazards and know how to react. (1921 4 PY, $194,204 0 K)

The provision of the warnings and advisories is the major product of this result AES's capability to predict hazard occurrence and issue warnings is dependent upon an extensive operational infrasture which must be in use 24 hours a day, 365 days of the year, and cover all of mainland Canada and territorial waters

Sub-Result 1 1 3 Canadians structures and industrial operations are designed safely based on climate, sea state and ice information (20 6 PY, $1,769 9 K)

Canadians live in an environment of extremes It is essential that their structures and operations be designed to withstand these conditions for the safety of lives and the security of property AES develops and implements analysis systems that provide extreme event information and provides advice on the application of this information (e g building codes, structural designs) to a wide variety of government and private sector client groups

Result 1.2. Deaths and illness to Canadians and damage to property caused by pollution are prevented or minimized (6 5 PY, $494 4 K total of Sub-Results 1 2 1 and 1 2 2)

Sub-Result 1.2.1. Canadians are aware of the dangers of atmospheric pollution and know how to react. (0 4 PY, $25 6 K)

In order for Canadians to understand the dangers of atmospheric pollution, it is important that they be aware of the hazards which occur in Canada, of the methods and means by which they will be warned of their occurrence, and of the options they have to deal with these hazards AES researches these topics, publishes and distributes information on the hazards, and on associated AES warning services In addition, AES actively pursues, often with partners, the education of media, emergency response agencies, stakeholders and the public at large in these matters

Sub-Result 1.2 2. Canadians are warned of hazardous pollution events in time to react (6 1 PY, $468 8 K)

AES has implemented a system by which Canadians are warned of UV-B radiation levels and the consequence of exposure AES is in the process of developing a system for warning Canadians of smog levels in selected centres

In the event of a hazardous pollution occurrence, AES also provides air quality, meteorological and sea state information to emergency response agencies, predicts conditions to follow, and provides information bulletins to the public As well, AES performs air quality research and development including modeling chemical and physical processes directly and in collaboration with other domestic and international agencies

Need 2. Canadians need a Good Quality of Life.
(314 8 PY, $30,321 7 K total of Sub-Results 2 1 1, 2 1 2 and 2 1 3)

Result 2.1. From the wise adaptation to their natural environment, Canadians achieve economic and social benefits which are sustainable
(314.8 PY, $30,321 7 K · total of Sub-Results 2 1 1, 2 1 2 and 2 1 3)

Sub-Result 2.1.1. The gap between available and needed scientific knowledge and environmental information is reduced.
(92 7 PY, $11,000 3 K)

There is much to be learned in order to reduce the uncertainties in our understanding of the natural environment and its impact on our lives AES seeks to create an increased understanding of the physical and chemical processes of the atmosphere and its interaction with the earth's surface by conducting basic research, participating in international research projects, participating in science committees, hosting science conferences, supporting professional societies and universities, and promoting the benefits of atmospheric sciences among policy makers and other stakeholders

Sub-Result 2.1.2. Canadians are knowledgeable of the value of environmental information and the implications of the environment on their activities. (9 8 PY, $1,391 2 K)

All the earth's population live immersed in the atmosphere AES endeavours to educate Canadians on the value of understanding the environment, by conducting studies on the impacts of the environment on people and their activities, by distributing specialized publications on this topic and by contributing to State of the Environment reporting Understanding and educating Canadians on the impacts of Climate Change is a current priority of AES

Sub-Result 2 1 3. The environment is factored into decisions related to health, convenience and enjoyment (44 9 PY, $3,610 6 K)

In addition to Canadians being knowledgeable about the impact of the environment on their lives, it is important that they factor this knowledge into their everyday decisions and activities This Sub-Result focuses on those activities related to human health, convenience and enjoyment AES prepares and distributes public weather forecasts, prepares advice on local weather, climate, air quality, and sea state and performs research and development on the relationship between weather and human comfort and well-being Public weather forecasts provide AES its greatest public visibility

Sub-Result 2.1.4. The environment is factored in economic decisions
(167 4 PY, $14 319 6 K)

Similar to Sub-Result 2 1 3, it is important that Canadians factor the environment into their economic decisions AES conducts activities in a variety of arenas in an attempt to achieve this result In particular, AES provides forecasts and climate information tailored to various economic sectors (e g forestry, agriculture, aviation), participates in environmental assessments, performs research and development in these areas and contributes to public economic policy decisions by influencing decision makers

Need 3. Canadians need a Clean Environment. (104 6 PY, $11,685 0 K total of Sub-Results 3 1 1, 3 1 2 and 3 1 3)

Result 3.1. Damage to the environment through human activities is minimized (104 6 PY, $11,685.0 K total of Sub-Results 3 1 1, 3 1 2 and 3 1 3)

Sub-Result 3.1.1. Canadians are aware of the threat of human activities to the environment. (1 8 PY, $149 9 K)

Human activities, both individual and collective, have a significant impact on environmental quality Canadians need to be aware of the threat which various activities and actions pose to the environment AES collects and analyses impact data in co-operation with other government departments, participates in domestic and international research projects, provides expert testimony, monitors compliance with the Weather Modification Information Act, educates and consults with selected sectors (e g forestry, energy, agriculture) in these matters, and provides information to the public

Sub-Result 3.1.2 Canadians and others make knowledgeable decisions to reduce or avoid adverse chemical and physical alterations to the environment. (102 1 PY, $11,488 9 K)

Once Canadians are knowledgeable about the impact which their individual and collective actions have on the environment, it is important that they factor this knowledge into their everyday decision making This Sub-Result focuses on those activities which assist Canadians in their decision making AES acquires, analyses and interprets air quality and climate data, participates in socio-economic impact studies of policy, participates in the development and maintenance of domestic and international accords, protocols, agreements, legislation and regulations, and performs and reports on air quality and climate research and development in these areas Current priorities include Acid Rain, Smog, Stratospheric Ozone Depletion, and Climate Change

Sub-Result 3.1.3. Pollution episodes where meteorological conditions are a factor are prevented or minimized. (0 7 PY, $46 2 K)

AES in limited cases provides forecast information to regulatory agencies and industry which can assist in the scheduling of activities in a manner which minimizes the impact of pollution releases

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

TOTAL AES BUDGET

RESULTS DEFINITION		PY	SALARY	O&M	CAPITAL ($000)	G&C	TOTAL
1 1 1	CANADIANS ARE AWARE	16 5	919 4	153 0	12 7		1085 1
1 1 2	CANADIANS ARE WARNED	1916 5	106590 0	63672 5	25317 9	1517 0	197097 4
1 1 3	SAFE DESIGN	26 6	1461 2	533 4	822 1		2816 7
1 2 1	POLLUTION AWARENESS	6 5	343 3	96 6	51 1		491 0
1 2 2	POLLUTION WARNING	14 9	882 4	930 8	298 1		2111 3
	TOTAL	1981 0	110196 3	65386 3	26501 9	1517 0	203601 5
2 1 1	REDUCE GAP	142 8	7893 7	6268 7	4270 8	559 8	18993 0
2 1 2	KNOWLEDGE/INFORMATION/VALUE	27 9	1503 6	1537 2	114 3		3155 1
2 1 3	ENVIRONMENT/HEALTH	38 3	1725 0	959 5	251 1	103 7	3039 3
2 1 4	ENVIRONMENT/ECONOMY	153 5	7389 8	3533 8	1358 3		12281 9
	TOTAL	362 5	18512 1	12299 2	5994 5	663 5	37469 3
3 1 1	AWARE ACTIVITIES THREAT	6 9	348 4	118 0	45 4		511 8
3 1 2	KNOWLEDGEABLE DECISIONS	111 3	5746 1	4268 5	2281 4	155 5	12451 5
3 1 3	POLLUTION PREVENTION	2 5	132 1	13 6	5 0		150 7
	TOTAL	120 7	6226 6	4400 1	2331 8	155 5	13114 0
GRAND TOTAL		2464 2	134935 0	82085 6	34828 2	2336 0	254184 8

CHAPTER 4

AES PROGRAM ACTIVITY STRUCTURE

ATMOSPHERIC ENVIRONMENT SERVICE

4 1 AES PROGRAM ACTIVITY STRUCTURE

4 1 1 OVERVIEW

Environment Canada has three Main Estimates Programs as described in Section 1 2 Administration, Environmental Services and Parks Canada The Environmental Services Program is divided into two activities, one of which is AES, as indicated below

As a service, AES provides

i) past, present and future weather, climate, sea state and ice information for all areas of Canada and contiguous waters,
ii) advice on the impact of these elements on human activities and on the application of the atmospheric sciences to weather sensitive operations in such activities as forestry, agriculture, aviation and national defense,
iii) research on chemical and physical processes of the atmosphere to improve the prediction of environmental elements, and co-operation with emergency response organizations in the prediction of the dispersion of substances accidentally released into the atmosphere,
iv) assessments of the impacts of human activity on the atmospheric environment, including the provision of information and policy advice on the atmospheric aspects of greenhouse gases, acid rain, toxic chemicals and the depletion of the stratospheric ozone layer,
v) participation in international programs and negotiations related to the above elements, and
vi) promotion and/or co-ordination of scientific programs in these areas including the scientific leadership of the Canadian Long Range Transport of Airborne Pollutants program

The Atmospheric Environment Service has four different program activity levels to depict and describe budgets and program information in varying degrees of detail with the program activity element providing the most detail They are

Sub-Activity	SA 1 Level
Sub-Sub-Activity	SA 2 Level
Sub-Sub-Sub-Activity	SA 3 Level
Program Activity Element	SA 4 Level

The AES budget and programs are given by the following sub-activity (SA 1) and sub-sub-activity (SA 2) later in this chapter

Sub-Activity (SA 1)	Sub-Sub-Activity (SA 2)
1000 Weather Services	1100 Public Weather Services
	1200 Marine Weather Services
	1300 Aviation Weather Services
	1400 Economic Weather Services
	1500 Canadian Forces Weather Service
	2000 Data Acquisition
	3000 Weather Services Support Systems
4000 Climate Services & Research	4100 Climate Data and Information
	4300 Climate Adaption and Assessment
	4600 Climate Services Support Systems
	4700 Climate Response Strategies
5000 Ice Services	5100 Ice Reconnaissance, Data Acquisition and Service Delivery
	5200 Ice Analysis and Forecasting
	5300 Ice Climate Services
	5400 Ice Services Management Support Systems
	5500 Ice Services Research and Development
6000 Air Quality Services and Research	6100 Air Quality Services
	6300 Air Quality Research
	6700 Air Quality and Research Support Services
0800 Management and Common Support Services	0810 Management
	0830 Common Support Services

The Addendum of the Program Digest contains the AES sub-sub-sub-activity (SA 3) and program activity element (SA 4) structures and the corresponding budget information

For the Climate Services and Research, Ice Services, Air Quality Services and Research, and Management and Common Support Services Sub-Activities the highest level of detail is at the sub-sub-sub-activity (SA-3) level For the Weather Services Sub-Activity the program activity element (SA-4) provides the highest level of detail

(Note On the maps contained in this chapter, some detail on forecast areas may have been omitted due to space limitations)

ATMOSPHERIC ENVIRONMENT SERVICE

4 1 1 1992 93 BUDGET BY SUB ACTIVITY (SA 1) AND SUB SUB ACTIVITY (SA 2)

($000)

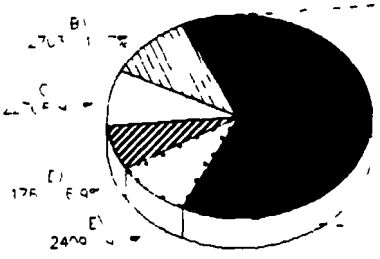
SA1	SA2		PY	SALARY	O&M	CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
	0810	MANAGEMENT	42 0	2418 4	1169 9	672 9		4261 2
	0830	COMMON SUPPORT SERVICES	117 9	6286 7	4669 5	6192 9	1296 0	18445 1
		TOTAL	159 9	8705 1	5839 4	6865 8	1296 0	22706 3
1000		WEATHER SERVICES						
	1100	PUBLIC WEATHER SERVICES	466 1	27463 5	2830 9	992 4		31286 8
	1200	MARINE WEATHER SERVICES	23 0	1277 2	156 3			1433 5
	1300	AVIATION WEATHER SERVICES	136 5	7937 4	598 2			8535 6
	1400	ECONOMIC WEATHER SERVICES	17 9	738 5	61 4	43 7		843 6
	1500	CANADIAN FORCES WEATHER SERVICES	111 0	6352 3	725 0			7077 3
	2000	DATA ACQUISITION	383 1	20623 2	14858 9	8211 2		43693 3
	3000	WEATHER SERVICES SUPPORT SYSTEMS	689 3	36635 6	24226 8	7903 3	480 2	69245 9
		TOTAL	1826 9	101027 7	43457 5	17150 6	480 2	162116 0
4000		CLIMATE SERVICES AND RESEARCH						
	4100	CLIMATE DATA & INFORMATION	99 3	4650 6	1483 1	1956 9		8090 6
	4300	CLIMATE ADAPTATION & ASSESSMENT	44 5	2424 4	1245 8	264 9		3935 1
	4500	CLIMATE RESEARCH	51 5	2851 0	2685 8	1251 4	433 7	7221 9
	4600	CLIMATE SERVICES SUPPORT SYSTEMS	72 2	3774 2	3306 8	1-1 7		7222 7
	4700	CLIMATE RESPONSE STRATEGIES	5 1	258 0	257 0	46 0		561 0
		TOTAL	272 6	13958 2	8978 5	3660 9	433 7	27031 3
5000		ICE SERVICES						
	5100	ICE RECONNAISSANCE AND DATA ACQUISITION	22 0	1281 6	12503 0	50 0		13834 6
	5200	ICE ANALYSIS AND FORECASTING	33 0	1811 6	3621 7	600 5		6033 8
	5300	ICE CLIMATE SERVICES				25 0		25 0
	5400	ICE SERVICES MANAGEMENT SUPPORT SYSTEMS	7 2	406 0	306 0	68 0		780 0
	5500	ICE SERV RESEARCH AND DEVELOPMENT	6 0	391 7	765 8	2265 3		3422 8
		TOTAL	68 2	3890 9	17196 5	3008 8		24096 2
6000		AIR QUALITY SERVICES & RESEARCH						
	6100	AIR QUALITY SERVICES	35 8	1901 8	773 0	273 3		2948 1
	6300	AIR QUALITY RESEARCH	83 8	4553 2	4607 7	3499 6	116 1	12776 6
	6700	AIR QUALITY & RESEARCH SUPPORT SERVICES	17 0	898 1	717 1	269 2	10 0	1894 4
		TOTAL	136 6	7353 1	6097 8	4042 1	126 1	17619 1
GRAND TOTAL			2464 2	134935 0	81569 7	34728 2	2336 0	253568 9

ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L'ENVIRONNEMENT ATMOSPHERIQUE
1992-1993

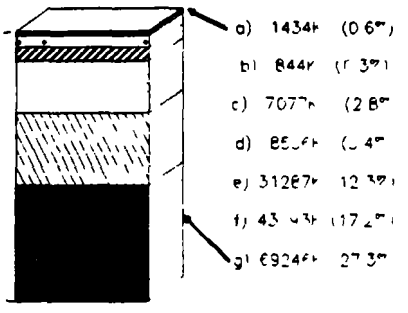
4 1 2 TOTAL BUDGET BY SUB-ACTIVITY
BUDGET TOTAL PAR SOUS-ACTIVITE

ALL SERVICES/TOUS LES SERVICES

TOTAL BUDGET TOTAL - 2535693K



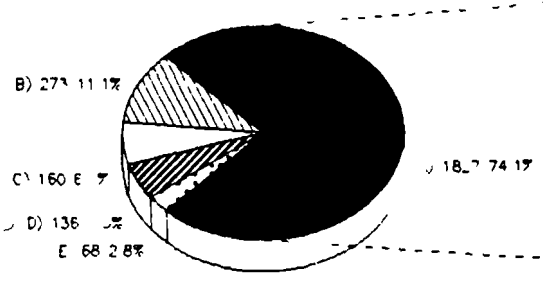
WX SERVICES/SERV METEOROLOGIQUES
IN MORE DETAIL/PLUS DETAILLES



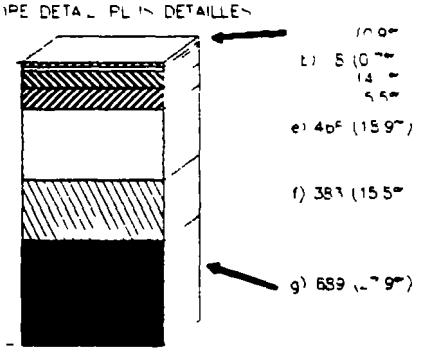
4 1 3 PERSON YEARS BY PROGRAM SUB-ACTIVITY
ANNEES-PERSONNES PAR SOUS-ACTIVITE

ALL SERVICES/TOUS LES SERVICES

TOTAL PYS/TOTAL DES AP - 2464



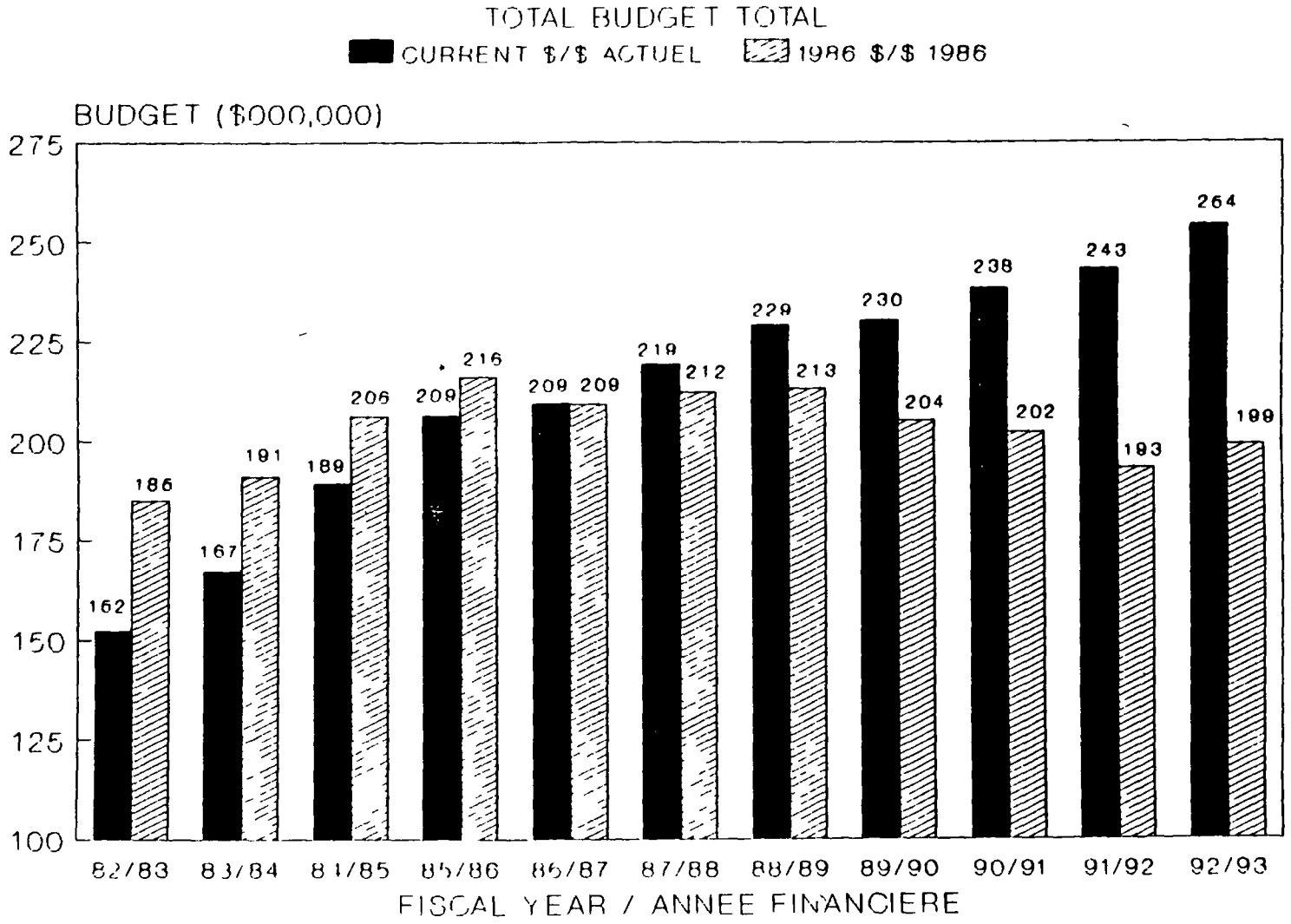
WX SERVICES/SERVICES METEOROLOGIQUES
IN MORE DETAIL/PLUS DETAILLES



A WEATHER SERVICES/SERVICES METEOROLOGIQUES
B CLIMATE SERVICES/SERVICES CLIMATOLOGIQUES
C MANAGEMENT/GESTION
D AIR QUALITY SERVICES/SERVICES RELATIFS A LA QUALITE DE L'AIR
E/ ICE SERVICES/SERVICES DES GLACES

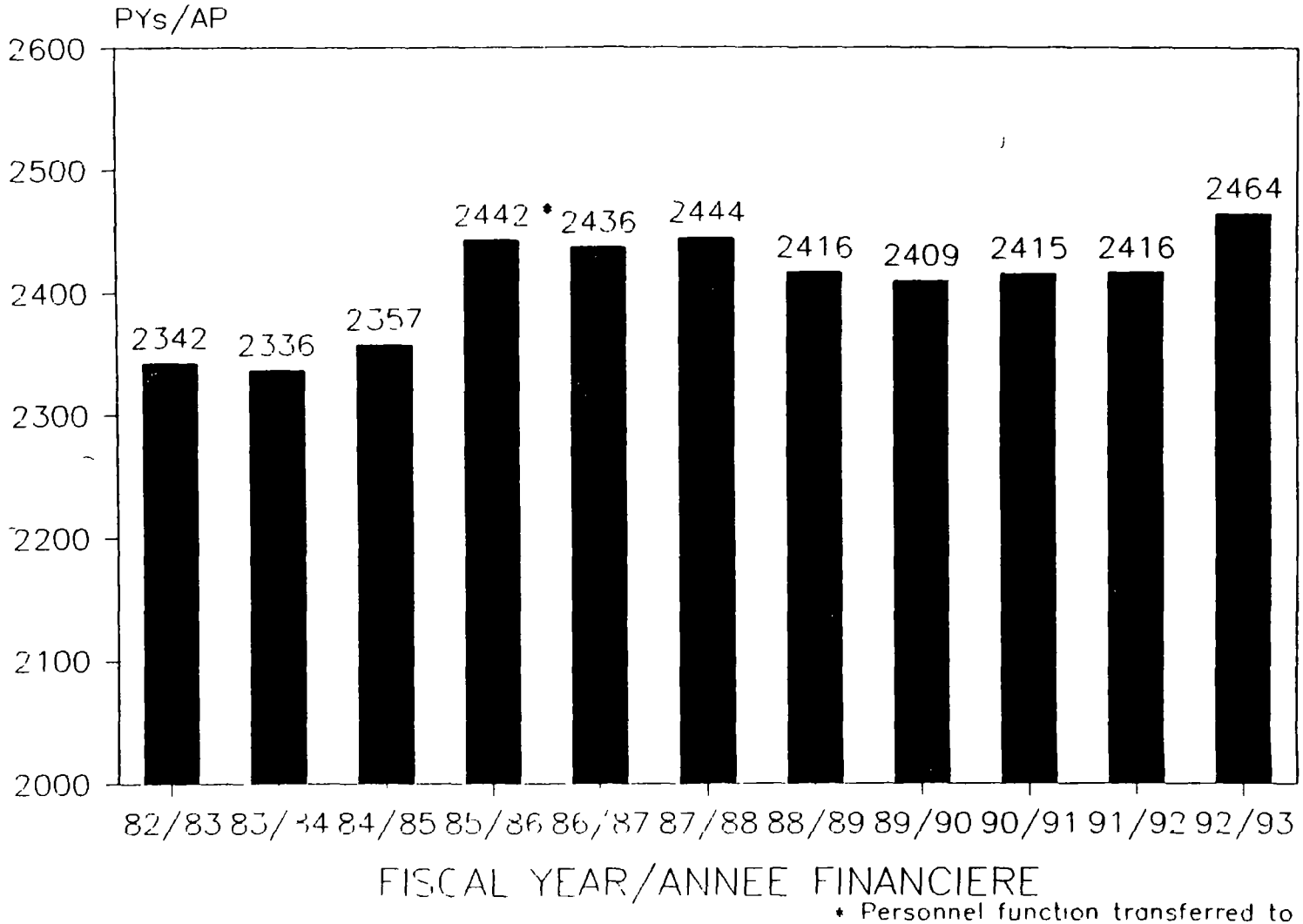
a) MARINE/MARITIMES b) ECONOMIC/ECONOMIQUE
c) CFWS/SMF d) AVIATION
e) PUBLIC WEATHER SERVICES/SERVICES METEOROLOGIQUES AU PUBLIC
f) DATA/DONNEES
g) WEATHER SERVICES SUPPORT/SOUTIEN DE SERVICES METEOROLOGIQUES

414 BUDGETS 1982 - 1992



Personnel function transferred to AES
Fonction du personnel transferee du SEA

4 1 5 PERSON YEARS/ANNEES-PERSONNES 1982-1992



* Personnel function transferred to AES
Fonction du personnel transferee au SEA

4 2 WEATHER SERVICES Sub-Activity

4 2 1 Objectives WEATHER SERVICES

- to provide present and predicted weather and marine data and advice for the safety of Canadians, the security of their property, the support of economic activities and the protection of environmental quality in Canada, and
- to acquire the basic understanding of atmospheric properties and behaviour needed to maintain and enhance such services

4 2 2 Budget WEATHER SERVICES 1992-93 Budget by Sub-Sub-Activity (SA 2)

For further details on the Weather Services 1992-93 Budget by Sub-Sub-Activity refer to p 31, chart 4 1 1

4 2 3 Description WEATHER SERVICES

4 2 3 1 Public, Marine, Aviation, Economic and Canadian Forces Weather Service Sub-Sub-Activities

The functions of these sub-sub-activities include the commitment to provide information, on a 24 hour per day basis, on current and predicted weather for all land areas of Canada and the adjacent waters The information provided includes weather warnings, forecasts, and also sea state conditions for the Atlantic and Pacific Oceans and the Great Lakes, particularly within the 370 kilometer (200 nautical mile) economic zone When compiled, the information is offered to the public and to users in the marine transportation, aviation, fishing, agriculture, forestry and tourism sectors AES, in accordance with a Memorandum of Understanding, also provides support to the Department of National Defence to meet its meteorological and oceanographic service requirements

Across Canada, there are nine Weather Forecast Centres which are supported by the Canadian Meteorological Centre These offices carry out analysis and prediction activities and then prepare the warnings, forecasts and other bulletins for users in their respective geographical areas (see map on page 71) There are another 62 smaller Weather Offices located across Canada which serve as distribution and consultation points for the forecasts and warnings issued by the Weather Forecast Centres (see page 51) Weather information can be obtained through telephone, automatic telephone answering devices, Weatheradio Canada (see pages 52 and 53), broadcasts on local radio and television, Coast Guard marine radio and aviation radio The number of contacts/requests by users is displayed on page 37

The forecast service provided varies according to the needs of the user The chart "Weather Forecast Centres/Weather Offices" on page 38 identifies each Centre and Office The forecast service to the public includes emphasis on temperature and precipitation and the provision of warnings of extreme weather events Marine forecast services are concerned with wind, sea-state, visibility and freezing spray Services to aviation include weather conditions at airports, and significant clouds, icing, turbulence, winds and temperatures at flight levels Services to the agricultural sector and forestry industry are directed toward the provision of guidance on the occurrence of frost, the timing of crop spraying and the severity of forest fire hazard The Weather Centres and Offices and regional Scientific Services Divisions also deliver air quality and climate services including weekly information to the public on the status of the ozone layer (Ozone Watch) and the daily Ultraviolet (UV) Index values as part of Canada's Green Plan, as well as supporting the environmental assessment programs of the federal government

Maps which present the geographical coverage of forecasts for Canada and adjacent waters are located as follows

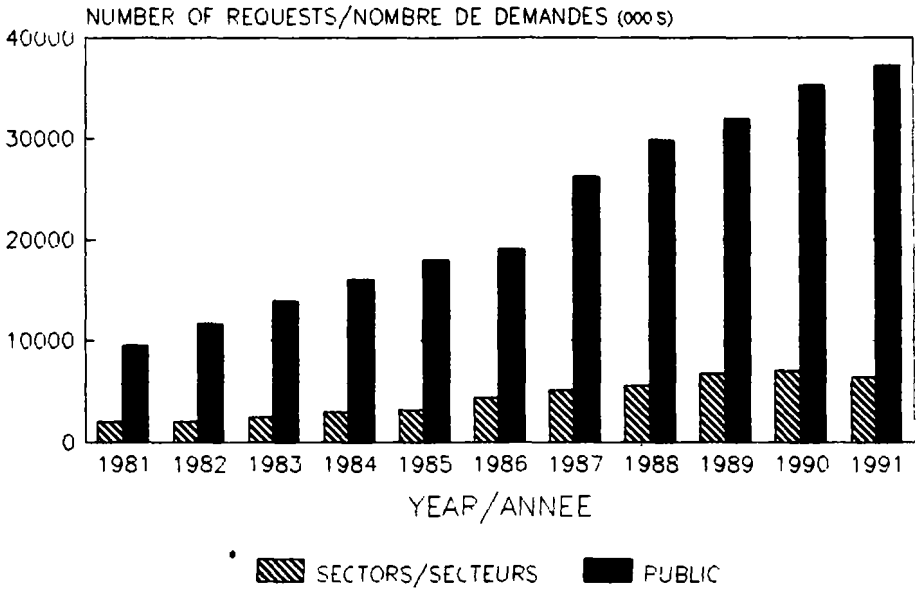
1) Public forecast regions - pages 54 - 55,
2) Airport forecast locations - page 56,
3) Aviation weather forecast regions - pages 57 - 59,
4) Marine forecast areas - pages 60 - 61

In the fifth year of implementation of its long-term strategic plan, the Weather Services Program has begun construction of the Southern Interior B C Weather Services Office (WSO) at Kelowna which will begin operations in April 1993

In step with these efforts will be the further development of the regional computational and work station technologies with delivery of the first operational systems to the Kelowna WSO in 1992-93 The AES weather radar network now includes two Doppler radars which will improve severe weather detection capabilities and action will be taken to add further Doppler capability to the network The efficiency and effectiveness of AES dissemination systems will be improved through the expansion of Canada's weatheradio network By Autumn of 1992, Weathercopy, a new system using the Weatheradio network, will become operational at 14 locations across Canada Weathercopy allows the transmission of textual and graphical information (especially severe weather warnings), to various Environment Canada clients, including emergency measures organizations, police and school boards All of these efforts are coordinated and consistent with the implementation of Canada's Green Plan

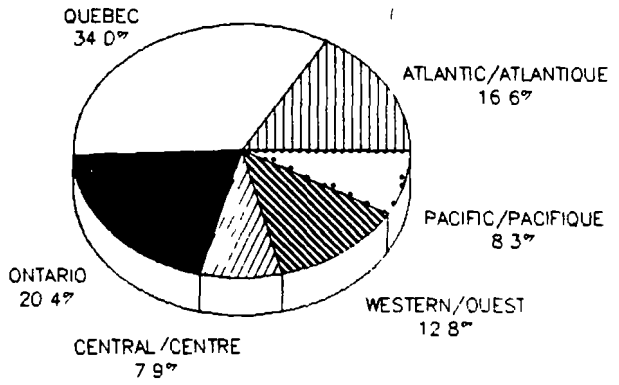
ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L'ENVIRONNEMENT ATMOSPHERIQUE
1992 - 1993

WEATHER SERVICES CONTACTS
CONTACTS DES SERVICES METEOROLOGIQUES



(ECONOMIC TRANSPORTATION ETC)
(ECONOMIQUES TRANSPORTS ETC)

WEATHER SERVICES CONTACTS
CONTACTS DES SERVICES METEOROLOGIQUES
BY REGION FOR 1991 / PAR REGION POUR 1991



WEATHER FORECAST CENTRES/WEATHER OFFICES
1992/93

REGION	PACIFIC	WESTERN	CENTRAL	ONTARIO	QUEBEC	ATLANTIC
TYPE						
AES Weather Forecast Centres 9	Pacific Weather Centre, Vancouver	Alberta Weather Centre, Edmonton Arctic Weather Centre, Edmonton Yukon Weather Centre, Whitehorse	Prairie Weather Centre, Winnipeg	Ontario Weather Centre, Toronto	Quebec Weather Centre, Montreal	Maritimes Weather Centre, Halifax Newfoundland Weather Centre Gander
WO with Prof. Consult 2		Yellowknife	Regina			
Weather Offices 58	Castlegar Kamloops Kelowna Penticton Port Hardy Prince George Terrace Vancouver Fort St John Fort Nelson Victoria	Calgary Edmonton Int'l Airport Edmonton Municipal Airport Grande Prairie Inuvik Lethbridge Banff Edmonton Whitehorse	Brandon Dauphin Prince Albert Resolute Thompson Winnipeg Saskatoon Churchill	Hamilton Kingston London St Catherines North Bay Ottawa Peterborough Sarnia Sault Ste Marie Sudbury Thunder Bay Toronto Waterloo-Wellington Windsor	Igaluit Montreal/ Mirabel Montreal/ Dorval Quebec Sept-Iles Sherbrooke St Hubert Trois Rivieres Val D'Or Jonquière Baie Comeau	Charlottetown Fredericton Halifax Int'l Airport Moncton Saint John St John's Sydney Yarmouth
Canadian Forces Forecast Centres 3		Edmonton		Trenton		Halifax
Canadian Forces Weather Office 17	Comox Exquimalt	Cold Lake	Moose Jaw Portage la Prairie Winnipeg	North Bay Ottawa Petawawa	Bagotville St Hubert	Gagetown Greenwood Shearwater Goose Bay
TOTAL 92	14	15	13	19	14	15

4 2 3 2 Data Sub-Sub-Activity

Data are gathered in Canada, in Canadian airspace and adjacent waters for weather, climate and research services Outlined below are the various data gathered and the number of stations and locations involved

1) Surface weather observations are taken at 325 AES and 200 Other Government Department (OGD) weather observation stations (see maps on pages 62 - 64) Included in the above, are 198 AES and 9 OGD automatic stations AES also has 30 buoys strategically located in Canadian waters and on the ice in the Arctic Ocean to provide weather data The above are supplemented by voluntary observation programs undertaken by 420 ships operating on the Great Lakes and in the Atlantic, Pacific and Arctic Oceans,
2) Thirty-three Upper Air Stations measure temperature, pressure, relative humidity and wind velocity in the free atmosphere, from the surface to 35,000 metres (see map on page 65) In addition, AES operates an automated shipboard aerological program (upper air) on one volunteer commercial ship operating on the Pacific Ocean,
3) The above observations 1) and 2) are taken at regular intervals, are available in real-time and are used in the production of weather forecasts and weather warnings, and are archived for climatological purposes,
4) The position, and movement of severe storms and precipitation is provided by 16 AES weather radar stations (see map on page 66), including two Doppler radar systems implemented under Canada's Green Plan,
5) Satellite imagery of North American and oceanic weather systems and ice conditions in Canadian waters is provided by 8 weather satellite read-out stations,
6) Climatological data are gathered by a network of 221 AES and 74 OGD synoptic weather stations and 2492 climatological stations run by volunteers,
7) Radioactive fallout is monitored at 20 AES and 3 OGD locations in Canada (see map on page 68),
8) Observations of total ozone and the vertical distribution of ozone are taken at 11 locations in Canada, and
9) Other programs conducted at weather stations include
   i) seasonal freeze-up and break-up of water bodies, sunshine, soil temperatures and evaporation,
   ii) seismic observations of tectonic events at 6 locations for the Department of Energy, Mines and Resources,
   iii) air quality measurements are taken at 24 locations, and
   iv) solar radiation measurements are taken at 50 locations

AES DATA ACQUISITION STATIONS BY TYPE AND LOCATION

1992-93

TYPE	REGION								
	PACIFIC	WESTERN	CENTRAL	ONTARIO	QUEBEC	ATLANTIC	AES TOTAL	OGD+	TOTAL
Automatic Stations	55	29	52	31	30	43	152	9	161
Upper Air Stations	5*	6	9	2	6	5	32	1	33
Synoptic Stations	33	49	35	42	27	26	234	74	308
Buoys	22	4***	2	4	1	3	30	0	30
Climate Stations	518	549	402	380	374	281	2535	15	2550
Weather Radar Stations	0	2	3	6	1	2	14	0	14
Satellite Stations	1	4	1	2	1	1	10	0	10
Air Quality Stations	1	2	3	8	5	5	24	0	24
Solar Radiation Program Locations	8	8	12	6	9	6	49	1	50
Seismic Program Locations	0	2	3	0	1	0	6	0	6
Radioactive Fallout Monitoring Program Locations	1	5	6	6	2	2	23	3	26
Ozone Program Locations	1	1	5****	1**	2	1	7	1	8

* Includes automated shipboard aerological program
** AES Headquarters (Downsview, Ontario)
*** Includes ice buoys
**** Brewer maker provides yearly data from roof top location in Saskatoon
\+ Other Government Departments

Voluntary ships = 420
Weather Reporting Stations Total = 525 (AES = 325, OGD = 200)

4 2 3 3 Weather Services Support Systems Sub-Sub-Activity

This sub-sub-activity provides support services necessary for the efficient functioning of a modern weather service Some of these services are described below

1) The Canadian Meteorological Centre (CMC), in Montreal, uses very powerful computers and mathematical models of the atmosphere to create meteorological forecasts for periods of up to five days in advance These forecasts are used as guidance by the Weather Forecast Centres and Weather Offices,

2) Research is conducted in both Downsview and Montreal Its primary objective is to support AES operational weather and ice services, more specifically, to ensure that services and decisions are based on the best available scientific knowledge The research program also provides a large body of knowledge and expertise to support air quality and climate research activities,

   Current priorities are to maintain a world class Numerical Weather Prediction group, to advance knowledge of regional scale weather phenomena, to make better use of available satellite data, to enhance the utility of Doppler radar data for severe weather forecasting and to investigate technology that can increase production efficiency at Weather Services Offices,

3) The AES Communications System, a branch of CMC, is required for the rapid collection and dissemination of national/international weather data and information Text-based, graphical and imagery products are provided from this system A major 6-year project to modernize the system has been completed,

4) Ab-initio and advanced training programs are provided for meteorologists, meteorological technicians, Transport Canada and National Defence personnel Courses and workshops are delivered at AES training facilities in Toronto, Cornwall and Montreal and at regional weather centres and offices, and training is also offered through distance learning methods In concert with the implementation of Canada's Green Plan, Training Branch has begun to provide services in public education, and air quality and climate services The Branch also provides liaison with Canadian universities and recruits personnel

5) In the Weather Services Program Branch, of Weather services Directorate, the design, development and evaluation of meteorological data acquisition systems to meet the requirements of the Weather Services sub-activity is carried out The Branch is also responsible for the procurement and testing of field systems as well as the standards for their installation and maintenance

4 3 CLIMATE SERVICES AND RESEARCH Sub-Activity (272 6 PY, $27,031 3 K)

4 3 1 Objectives CLIMATE SERVICES AND RESEARCH

- to provide information and enhance our understanding of climate in order to promote economic and social development, protect the environment and advance knowledge of the atmosphere,

- to provide Canadians with information on the chemical composition of the atmosphere to support decision-making, and

- to inform Canadians and advise Canadian policy-makers regarding potential socio-economic impacts and adaptive strategies in the face of a changing climate

4 3 2 Budget CLIMATE SERVICES AND RESEARCH 1992-93 AES Budget by Sub-Sub-Activity

For further details on the Climate Services and Research 1992-93 AES Budget by Sub-Sub Activity, refer to p 31, chart 4 1 1

4 3 3 Description CLIMATE SERVICES AND RESEARCH

4 3 3 1 Climate Services Sub-Sub Activity

This activity aims to provide the Canadian Public and climate sensitive agencies and industries with information and advice Functions include climate data acquisition and archiving, provision of basic and special climate information and monitoring climate trends in real time Climate data is collected from about 2,800 observing stations across Canada, quality controlled and placed in the National Climate Archive managed by the Canadian Climate Centre in Downsview Users are provided with access This activity is also responsible for developing and implementing network and data standards for such things as automatic station data

Over 120 million data entries of meteorological, air quality, sea-state and ice information are maintained in a national archive It is planned to add data from provincial and other agencies The archive includes summarizes and dervived data, including normals, extremes, freqencies and durations for various time scales

Statistical summaries defining the climate of Canada and climatological data, studies and analyses in standard generalized form are constantly being updated and published Guides and handbooks on climatological practices are maintained

National and regional climatic trends and anomalies are monitored and predicted, primarily through the weekly publication, "Climatic Perspectives"

4 3 3 2 Climate Adaptation and Assessment sub-sub Activity

This activity provides climate information and advice to water resource/marine, industrial and bioclimate sectors to improve their safe operation, efficiency and management Such information is based on rigorous analyses of past and present climate and its variability extremes This activity is now adding a new dimension, focussing on providing information to clients on possible future climates

Other activities include integrated socio-economic impact studies, in the face of climate change, in the Prairies, Great Lakes Basin and the Mackenzie Basin Climate change detection activities are also conducted using improved climate data sets and special statistical techniques, a state of the Canadian climate report is produced annually

4 3 3 3 Climate Research sub-sub Activity

This activity aims to improve our ability to understand and predict climate through research into large-scale climate processes that influence and control climate, e g the brome-atmosphere interactions Other research focusses on developing increasingly sophisticated global climate models to simulate existing climate, conducting experiments on a perturbed atmosphere, development of regional scale models, and techniques to predict climate one month to one season ahead

4 3 3 4 Climate Services Support Systems and Planning sub-sub Activity

This sub-sub activity provides the support and planning services necessary for the efficient functioning of climate services including the support for the operation, development and maintenance of the Downsview mainframe and systems used to house the National Climate Archive and for communications purposes There is also a small planning and liaison unit responsible for coordinating Climate Services and Research Program activities within AES and to provide a focus for Canadian climate activities carried out under the Canadian Climate Program by OGDs, provincial agencies and others

4 3 3 5 Climate Response Strategies sub-sub Activity

This sub-sub activity began in FY 90-91 and aims to provide advice and information to stakeholders and policy makers regarding implementation of the National Action Strategy on climate warming as well as to the Canadian negotiators to the Global Convention on Climate Change

4 4 ICE SERVICES AND RESEARCH Sub-Activity

4 4 1 Objectives ICE SERVICES AND RESEARCH

- to provide ice information (analyses, prognoses and warnings) to support operational and design decisions for the safety of Canadians involved in fishing, marine transportation and offshore petroleum exploration, and for the protection of life and property such as ships and drilling platforms, and
- to protect the quality of the maritime environment by supporting the prevention of environmental disasters related to ice conditions

4 4 2 Budget ICE SERVICES AND RESEARCH 1992-93 Budget by Sub-Sub-Activity (SA 2)

For further details on Ice Services and Research 1992-93 Budget by Sub-Sub-Activity, refer to p 31, chart 4 1 1

4 4 3 Description ICE SERVICES AND RESEARCH

This sub-activity

i) operates, develops and maintains ice data acquisition systems,

ii) provides forecasts of ice formation, growth, deterioration and movement in Canada's major rivers, lakes and adjacent waters (see map page 69) These activities are in support of the Canadian Coast Guard, and offshore development and fishing industries, National Energy Board, the commercial shipping transportation industries and the public,

iii) provides ice climatology information and interpretative support to planning and design decisions by operators such as the Canadian Coast Guard, offshore development and fishing industries, National Energy Board, and the commercial shipping transportation industries, and to the public, and

iv) includes ice research to develop and improve remote sensing, ice forecast capabilities, and the effectiveness of ice climatology

Ice Observations

Ice observation programs are conducted from aircraft, ship, and shore stations to support marine operations in the ice congested waters of Canada during the appropriate seasons Aerial ice reconnaissance is carried out every month of the year in one or more areas of the Eastern Canadian Seaboard, Canadian Arctic Waters, Hudson Bay, Hudson Strait and Inland Waterways Satellite observations have been integrated into the data acquisition system Approximately 3000 analyses and "nowcasts" are prepared in chart form annually

Ice Forecasts

Ice advisory and forecast services are provided from the AES Ice Centre in Ottawa Approximately 1500 short-range tactical forecasts and bulletins (including some 300 ice hazard warnings), along with some 1500 chart depictions of both current and forecast ice conditions and about 30 longer-range strategic forecasts are provided annually for the following areas

- Gulf of St Lawrence,
- Coastal Waters of Newfoundland, and Hudson Bay and its approaches,
- Waters of the Canadian Arctic, including the Beaufort Sea,
- St Lawrence River Seaway and Great Lakes

Iceberg Advisories

The spatial distribution of icebergs off the East Coast along with information on iceberg drift is provided daily in an iceberg advisory bulletin, and to the Canadian Coast Guard in chart form for further distribution to users

Ice and Iceberg Climatology

In response to about 2000 information requests annually, ice climatological services and information on ice climatology applications is provided to a wide variety of clients, including Canadian Coast Guard and the National Energy Board to support planning and design decisions leading to sustainable benefits

4 5 AIR QUALITY SERVICES AND RESEARCH Sub-Activity (136 6 PY, $17,619 1 K)

4 5 1 Objective AIR QUALITY SERVICES AND RESEARCH

- to provide the Canadian government and provincial agencies with adequate information and advice on the chemical and physical state of the atmospheric environment as a basis for informed policy decisions relating to environmental quality

4 5 2 Budget AIR QUALITY SERVICES AND RESEARCH 1992-93 AES Budget by Sub-Sub-Activity (SA 2)

For further details on Air Quality Services and Atmospheric Research 1992-93 by Sub-Sub-Activity, refer to p 31, chart 4 1 1

4 5 3 Description AIR QUALITY SERVICES AND RESEARCH

The most important and publicly visible atmospheric change issues which we face today are climate change, stratospheric ozone depletion, long range transport of acidic or toxic substances and increasing ground-level ozone Two other issues which are gaining importance are the atmospheric component of Global Change (i e , the changing chemical composition of the atmosphere, not solely the increased concentration of greenhouse gases), and atmospheric interaction with the oceans

This sub-activity provides

1) long-term measurement as well as research in support of the Long Range Transport of Air Pollutants Program (LRTAP),
2) research on the atmospheric component of the Toxic Chemicals problem, including support required under Annex 15 of the Canada-U S Great Lakes Water Quality Agreement (GLWQA),
3) long-term measurements and research related to the surveillance, understanding and prediction of stratospheric pollution, the ozone layer and atmospheric radiation,
4) co-ordination of the national scientific program on acid rain,
5) research and measurements in support of the National Management Plan for nitrogen oxides and volatile organic compounds (NO_x/VOC) and the control of Smog, and
6) air quality services such as advice on environmental assessments and support for environmental emergencies to AES Regions and other organizations

Long Range Transport of Air Pollutants (LRTAP)

The LRTAP program was established within Environment Canada to co-ordinate and evaluate the federal research and monitoring efforts and to provide the air quality monitoring data and atmospheric processes and transport information required to reduce damaging pollution from the long-range transport of airborne pollutants to environmentally acceptable levels Activities in the Department, underway since 1976, form the basis for the implementation and evaluation of national control strategies and to support the Air Quality Agreement with the United States AES is responsible for the co-ordination and provision of the information on the atmosphere to elected officials, the media and the general public

AES maintains and is currently upgrading a national sampling network to monitor the atmospheric concentration and deposition of sulphur, nitrogen and other compounds with special emphasis on acidic precipitation This includes the operation of the Canadian Air and Precipitation Monitoring network (CAPMoN) for sampling precipitation on a daily basis This network, displayed on page 67 consists of 24 stations monitoring precipitation Eleven of these stations also sample air daily Extensive research is carried out by AES to improve the knowledge of physical and chemical processes involving LRTAP and to develop predictive models of the long-range transport, transformation and deposition of air pollutants in order to develop source-receptor relationships between emitting regions and sensitive receptor regions

Great Lakes Water Quality

The Great Lakes Water Quality Program has been designed to provide the information necessary to restore and maintain the chemical, physical and biological integrity of the waters of the Great Lakes Basin ecosystem in support of the Canada-U S Great Lakes Water Quality Agreement The objectives of the program are to provide environmental data for a better understanding of the Great Lakes Basin ecosystem and to develop measures to reduce the discharge of pollutants into the Great Lakes system

The national program is led by Environment Canada's Ontario Region which chairs an interdepartmental committee The AES component, which addresses Annex 15 of the Great Lakes Water Quality Agreement, is concerned with estimating the atmospheric input of certain organic contaminants and heavy metals into the Great Lakes Basin AES is taking a lead role in the establishment of a Canada-U S Integrated Atmospheric Deposition Network for the measurement of selected chemicals The first research grade Master Station has been established at Point Petre, Ontario The second Master Station, on Burnt Island near Manitoulin Island, began operations in January 1992 As well, research and modeling are used to examine the role of the atmospheric pathway and to assess the importance of various sources of toxic substances

AES Toxics Program

The AES Toxics program focuses primarily on support to Annex 15 of the Great Lakes Water Quality Agreement as described above Research into the environmentally sound aerial application of pesticides and organochlorine pollution in the Arctic is also being done AES pesticide research is studying the drift and eventual deposit of pesticides released from aircraft under varying conditions Results will be valuable in assessing the validity of models used to determine off-target pesticide deposits and will assist in setting appropriate buffer zones for aerial applications Research on organochlorines in the Arctic has led to the development of a robust sampler for Arctic applications and a rudimentary modeling capability for that region

Stratospheric Ozone

After many years of research and systematic ozone monitoring, there is now clear evidence of a thinning of the global ozone layer and that man-made chlorofluorocarbons (CFCs) are the essential cause It is anticipated that this ozone depletion will increase the intensity of biologically damaging solar ultraviolet radiation at the earth's surface

The AES activities include

- Monitoring ozone through the operation of the Canadian ozone measurement network with stations at Toronto, Saskatoon, Goose Bay, Edmonton, Churchill, Resolute, Alert and Saturna, and new stations are planned for Halifax, Winnipeg and the province of Quebec Automatic measurements of ozone have been carried out more reliably in the last few years with a new system, called the Brewer ozone spectrophotometer, an instrument designed and developed by AES

- Monitoring ultraviolet irradiance in the Canadian Brewer network in order to detect increases in biologically damaging radiation due to ozone depletion

- Managing the World Ozone Data Centre (WODC), a responsibility given to AES by the World Meteorological Organization (WMO) This task consists of carefully compiling, archiving, and publishing a daily summary of measurements from the global network

- Developing a number of computer simulation models for predicting the effects of various changes to the ozone layer

- Conducting intercomparisons of instrumental techniques for WMO

Stratospheric Research

Since 1974, with the start of Project STRATOPROBE, scientists at AES have also studied the altitude profiles of stratospheric gases that directly and indirectly affect the ozone layer This research is carried out by means of remote-sensing apparatus carried aloft by high-altitude balloons Data obtained on flights at different latitudes and in different seasons are valuable for detecting variability and trends in gases such as CFCs Balloon flights made to coincide with similar flights conducted by other scientific groups, or with satellite overpasses, have led to a better understanding of the results obtained from the different measurement techniques and have facilitated validation of remote sensors on satellites Most recently, in view of the alarming ozone reduction in the Antarctic spring, AES has launched its stratospheric balloon flights from Alert to study ozone depletion in Canada's high arctic

High-altitude measurements have also been made from a space shuttle by Canadian astronaut Marc Garneau using an AES instrument Currently three instruments are being developed for space shuttle flights starting in September 1992

NOx/VOC (Smog)

The Canadian Council of Ministers of the Environment in October 1988 decided to develop a Management Plan to control emissions of NOx (nitrogen oxides) and VOCs (volatile organic compounds), with the aim of reducing ground level ozone concentrations to below the national maximum acceptable 1 hour objective of 82 ppb in regions of the country where exceedences are frequent AES is responsible for the scientific leadership in support of this program, including the measurement of ground level ozone and its precursors at rural and remote locations and the development and validation of suitable diagnostic and predictive models

AES is currently monitoring ozone concentrations at seven of the CAPMoN stations It is developing methods to measure NOx and VOC's at rural stations and it is preparing a plan to adapt existing meteorological and air quality models to address the smog issue

Extensive atmospheric process research is required to develop models capable of predicting the transformation and deposition required to determine source-receptor relationships Modelling programs have been initiated with the AES Regions in the Lower Fraser Valley, Windsor-Quebec corridor and Maritimes to simulate smog episodes

4 6 MANAGEMENT AND COMMON SUPPORT SERVICES Sub-Activity (159 9 PY, $22,706 3 K)

4 6 1 Objectives MANAGEMENT AND COMMON SUPPORT SERVICES

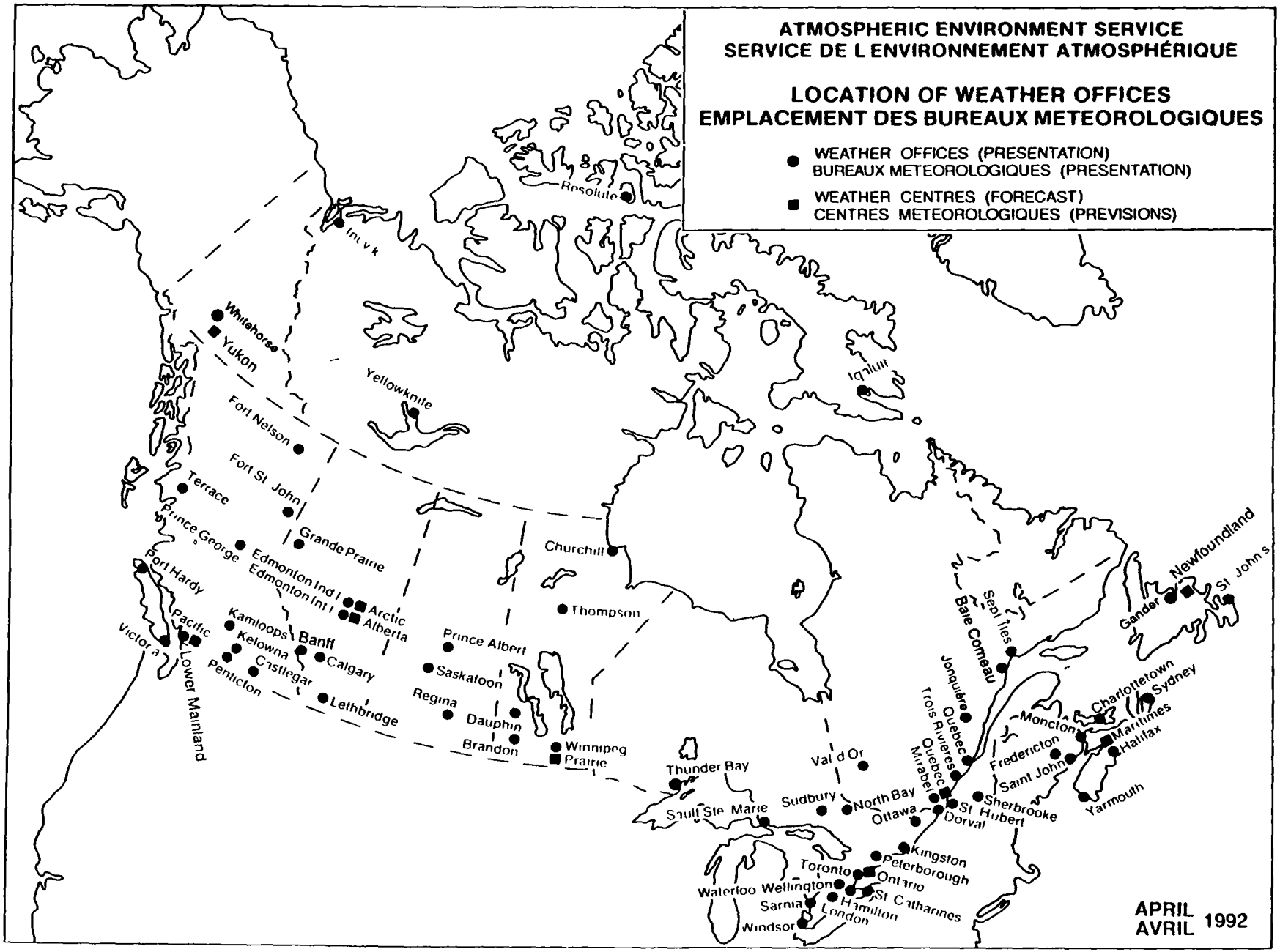
- to provide continuous policy guidance and leadership for the service including the establishment of objectives, goals and priorities,
- to provide management and administrative support to the Atmospheric Environment Service in the area of financial management, human resources management, management information and office technology systems, materiel management, policy and planning, facilities management, office services, health and safety, library services, official languages, and affirmative action,
- to co-ordinate participation in international programs in accordance with Canada's commitment to the World Meteorological Organization, and to contribute to the development of the AES scientific and technological base, and
- to promote the science and public awareness of meteorology and other environmental disciplines in Canada by
  - i) supporting organizations concerned with the advancement of meteorology and other environmental disciplines,
  - ii) supporting meteorological and other environmental research in Canadian universities, and
  - iii) encouraging the development of meteorological and other environmental services in the private sector within Canada

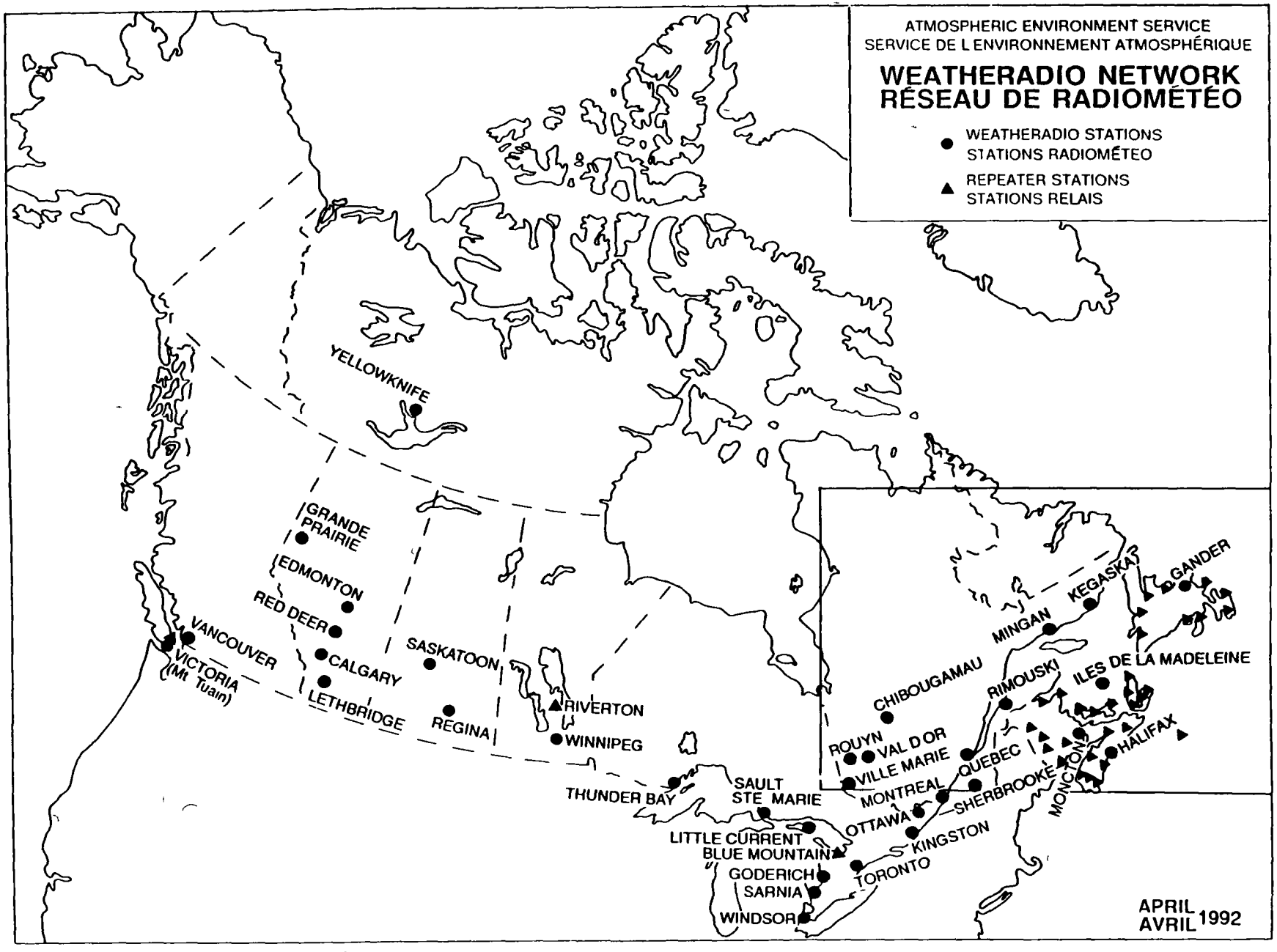
4 6 2 Budget MANAGEMENT AND COMMON SUPPORT SERVICES 1992-93 Budget by Sub-Sub-Activity (SA 2)

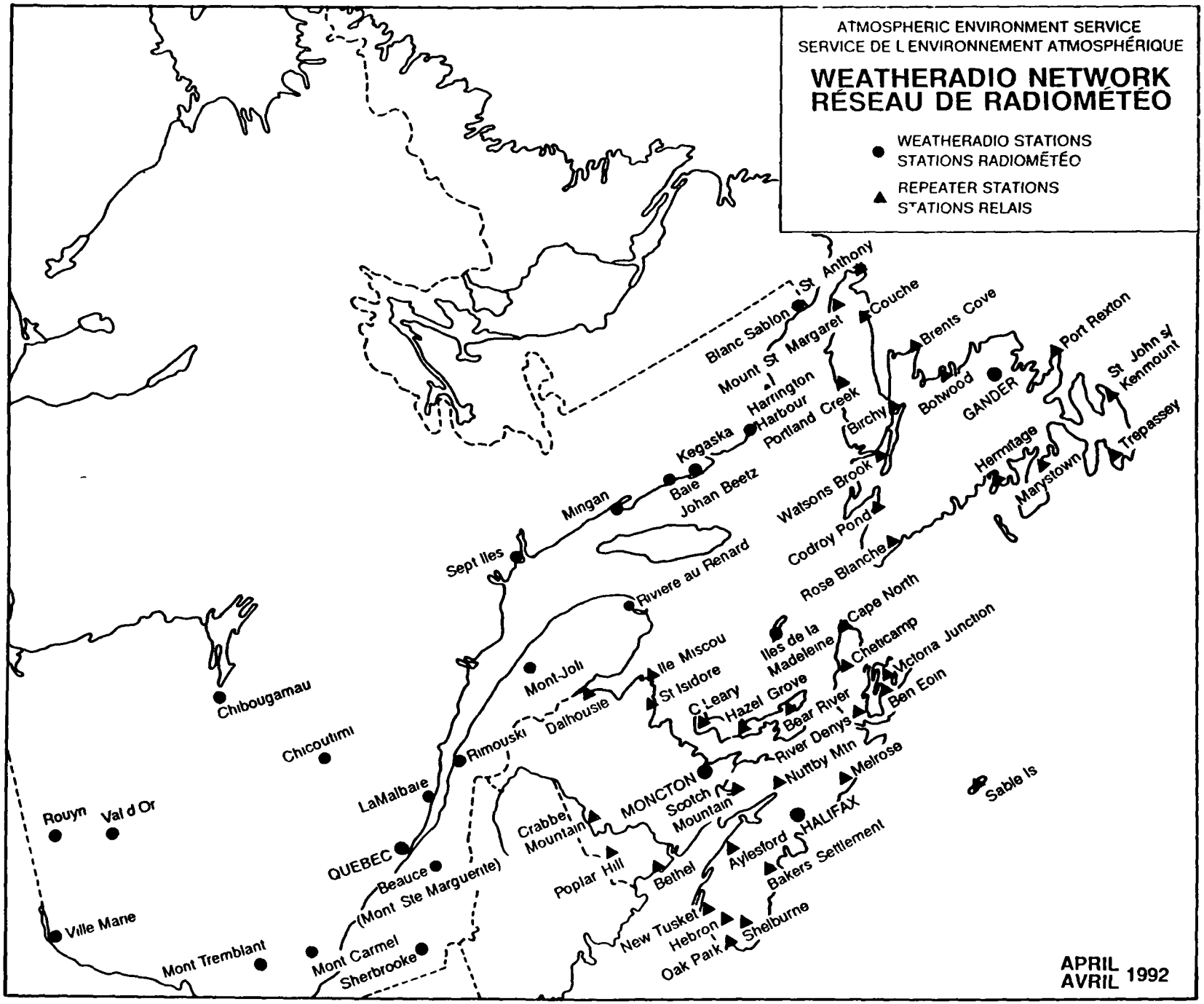
For further details on Management and Common Support Services 1992-93 Budget by Sub-Sub-Activity, refer to p 31, Chart 4 1 1

4 6 3 Description MANAGEMENT AND COMMON SUPPORT SERVICES

This sub-activity includes the executive direction of the AES, the management function related to the development and maintenance of overall goals and objectives for the AES, policies, and program development and evaluation, information services, and participation in international meteorological affairs This also includes those common services which support AES in areas of administration, personnel, facilities, library, materiel, health and safety and financial management


ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L ENVIRONNEMENT ATMOSPHÉRIQUE
LOCATION OF WEATHER OFFICES
EMPLACEMENT DES BUREAUX METEOROLOGIQUES
WEATHER OFFICES (PRESENTATION)
BUREAUX METEOROLOGIQUES (PRESENTATION)
WEATHER CENTRES (FORECAST)
CENTRES METEOROLOGIQUES (PREVISIONS)
Resolute
Inuvik
Whitehorse
Yukon
Yellowknife
Iqaluit
Fort Nelson
Fort St John
Terrace
Prince George
Grande Prairie
Edmonton Ind
Edmonton Int l
Arctic
Alberta
Churchill
Thompson
Fort Hardy
Victoria
Pacific
Lower Mainland
Kamloops
Kelowna
Penticton
Castlegar
Banff
Calgary
Lethbridge
Prince Albert
Saskatoon
Regina
Dauphin
Brandon
Winnipeg
Prairie
Thunder Bay
Sault Ste Marie
Sudbury
Val d Or
North Bay
Ottawa
Baie Comeau
Sept Iles
Jonquière
Trois Rivieres
Quebec
Quebec
Mirabel
Dorval
St Hubert
Sherbrooke
Kingston
Peterborough
Toronto
Ontario
Waterloo
Wellington
Hamilton
St Catharines
Sarnia
London
Windsor
Gander
Newfoundland
St John s
Moncton
Fredericton
Saint John
Charlottetown
Sydney
Maritimes
Halifax
Yarmouth
APRIL
AVRIL 1992


ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L ENVIRONNEMENT ATMOSPHÉRIQUE
WEATHERADIO NETWORK
RÉSEAU DE RADIOMÉTÉO
WEATHERADIO STATIONS
STATIONS RADIOMÉTÉO
REPEATER STATIONS
STATIONS RELAIS
YELLOWKNIFE
GRANDE PRAIRIE
EDMONTON
RED DEER
VANCOUVER
VICTORIA (Mt Tuam)
CALGARY
LETHBRIDGE
SASKATOON
REGINA
RIVERTON
WINNIPEG
THUNDER BAY
SAULT STE MARIE
LITTLE CURRENT
BLUE MOUNTAIN
GODERICH
SARNIA
WINDSOR
TORONTO
OTTAWA
KINGSTON
MONTREAL
SHERBROOKE
QUEBEC
VILLE MARIE
VAL D OR
ROUYN
CHIBOUGAMAU
MINGAN
KEGASKA
GANDER
RIMOUSKI
ILES DE LA MADELEINE
MONCTON
HALIFAX
APRIL
AVRIL 1992


ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L ENVIRONNEMENT ATMOSPHÉRIQUE
WEATHERADIO NETWORK
RÉSEAU DE RADIOMÉTÉO
WEATHERADIO STATIONS
STATIONS RADIOMÉTÉO
REPEATER STATIONS
STATIONS RELAIS
Blanc Sablon
St Anthony
Couche
Mount St Margaret
Harrington Harbour
Portland Creek
Brents Cove
Botwood
GANDER
Port Rexton
St John s/ Kenmount
Trepassey
Hermitage
Marystown
Birchy
Watsons Brook
Codroy Pond
Rose Blanche
Kegaska
Baie Johan Beetz
Mingan
Sept Iles
Riviere au Renard
Cape North
Iles de la Madeleine
Chetticamp
Victoria Junction
Ben Eoin
Ile Miscou
St Isidore
C Leary
Hazel Grove
Bear River
River Denys
Nuttby Mtn
Melrose
Mont-Joli
Dalhousie
Rimouski
Chibougamau
Chicoutimi
LaMalbaie
Rouyn
Val d Or
QUEBEC
Beauce
(Mont Ste Marguerite)
Ville Marie
Mont Tremblant
Mont Carmel
Sherbrooke
Crabbe Mountain
MONCTON
Scotch Mountain
Poplar Hill
Bethel
Aylesford
HALIFAX
Bakers Settlement
Sable Is
New Tusket
Hebron
Oak Park
Shelburne
APRIL
AVRIL 1992

ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L'ENVIRONNEMENT ATMOSPHÉRIQUE

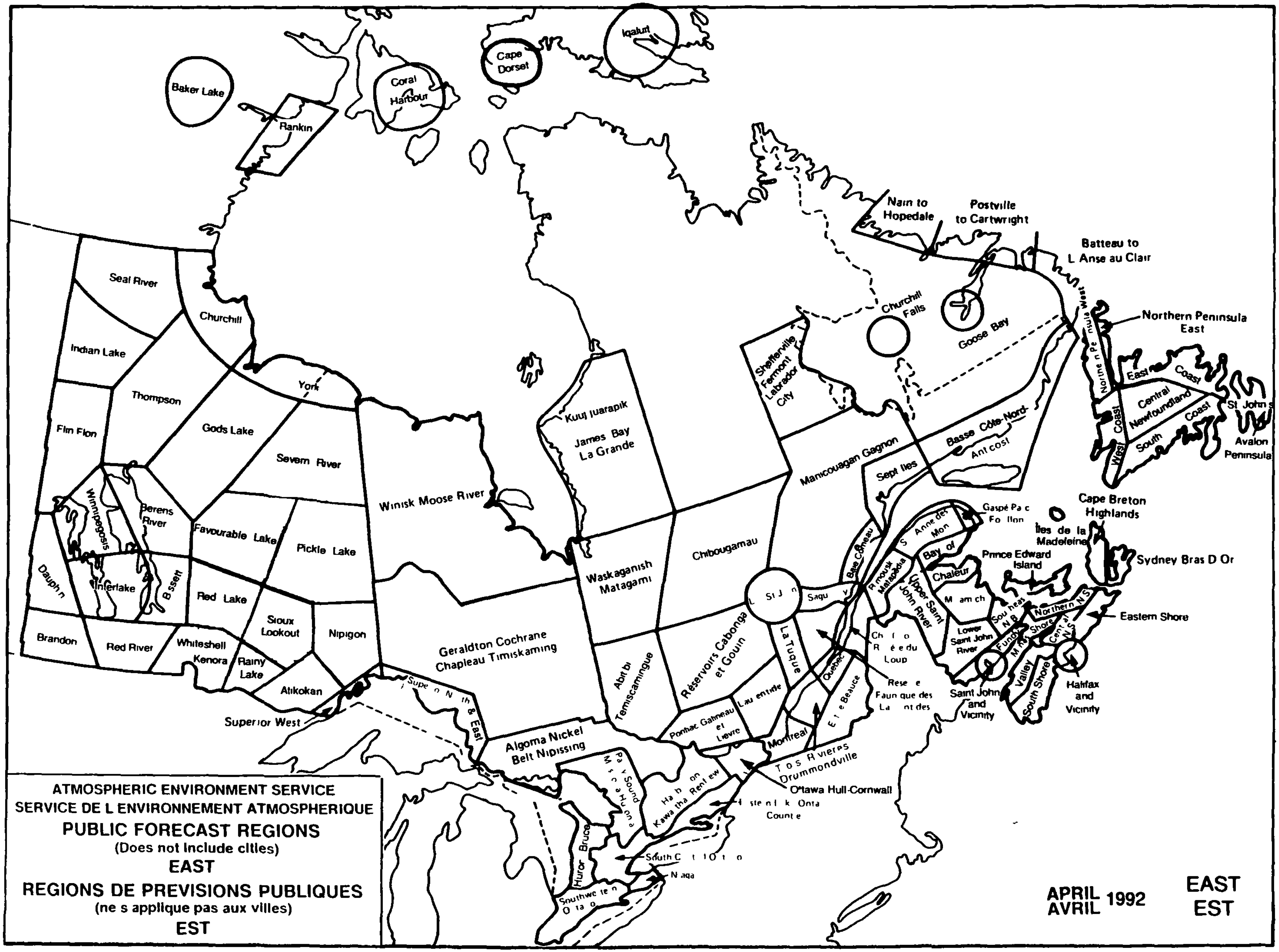
PUBLIC FORECAST REGIONS
(Does not include cities)

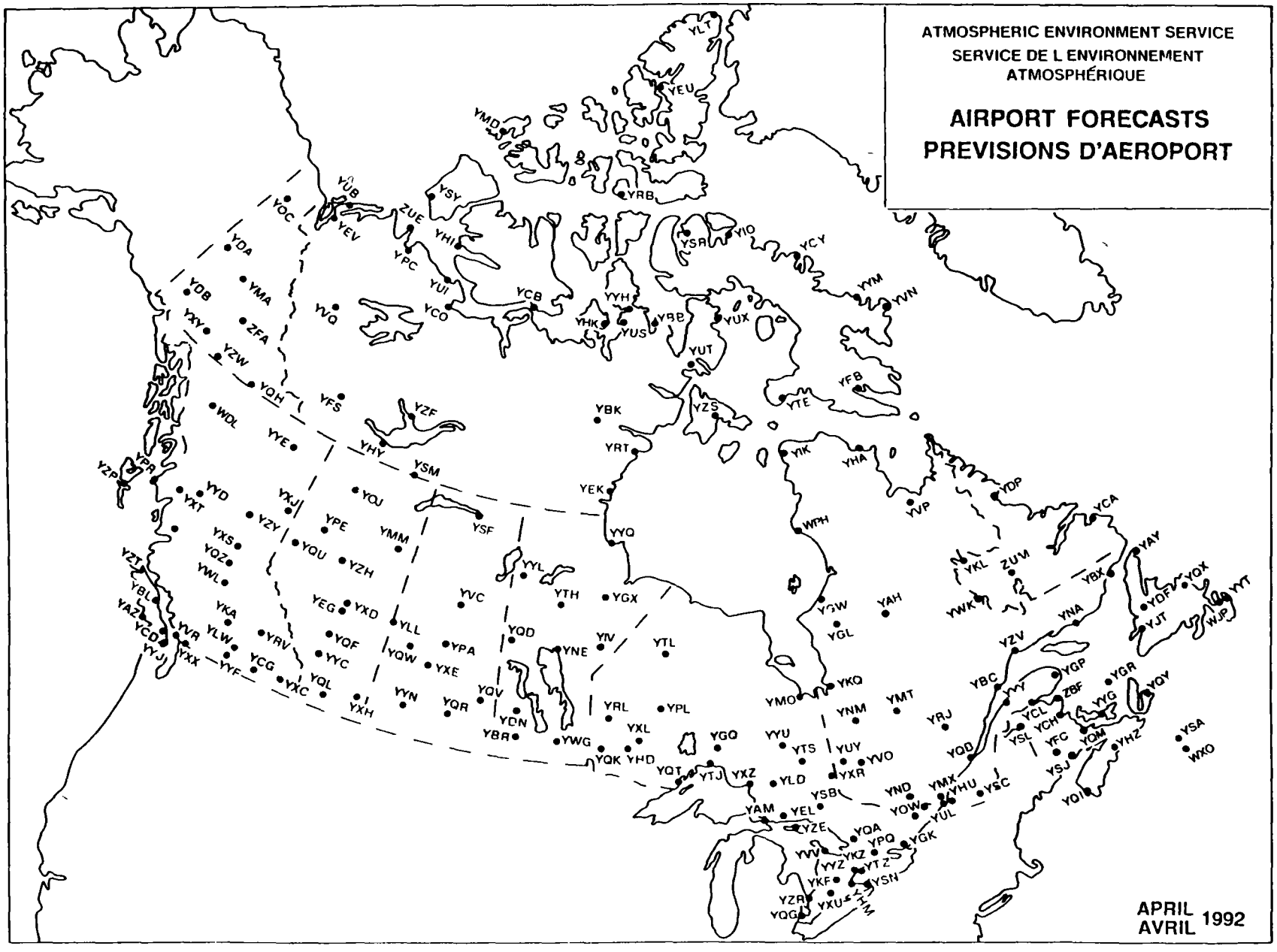
WEST

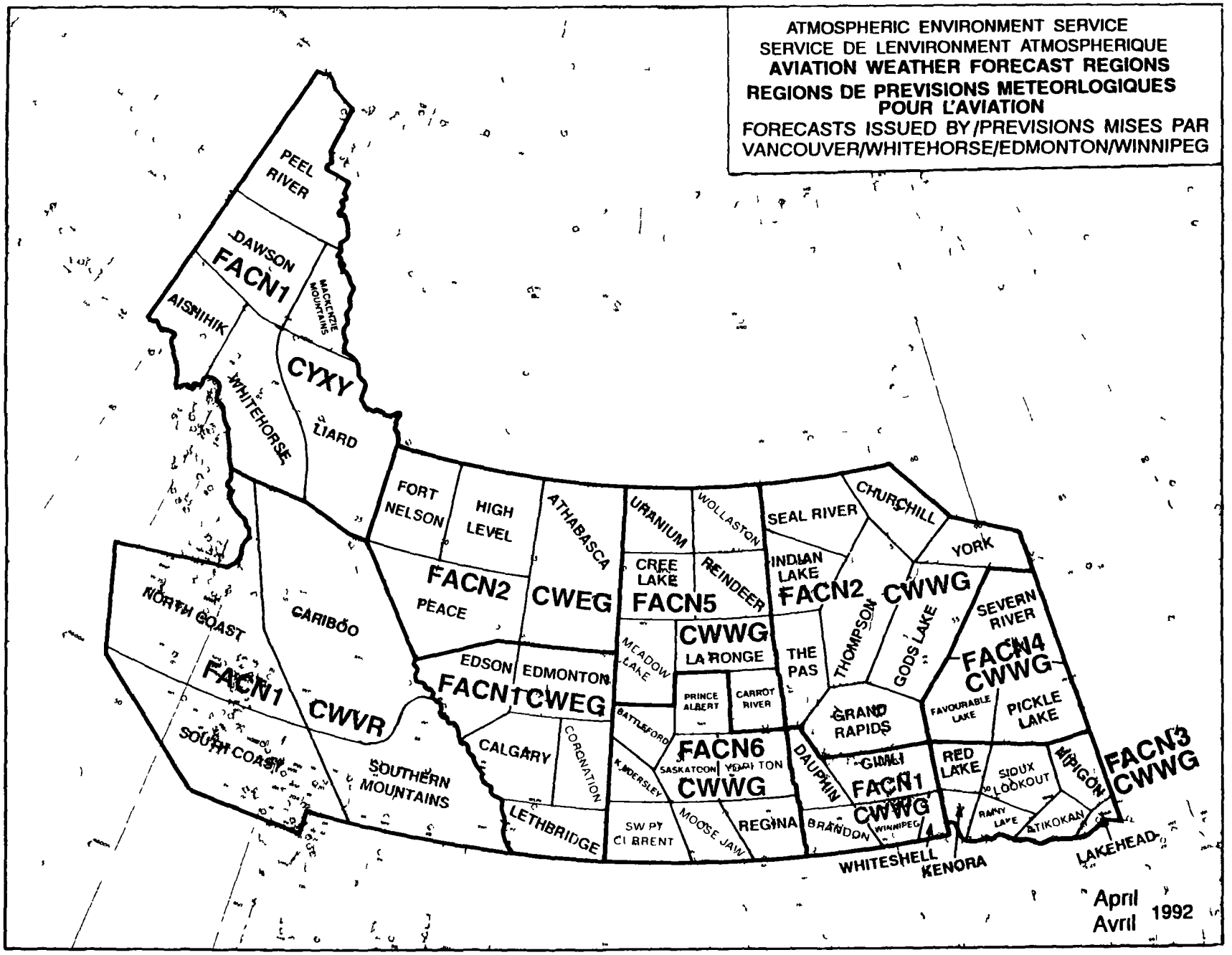
RÉGIONS DE PRÉVISIONS PUBLIQUES
(ne s'applique pas aux villes)

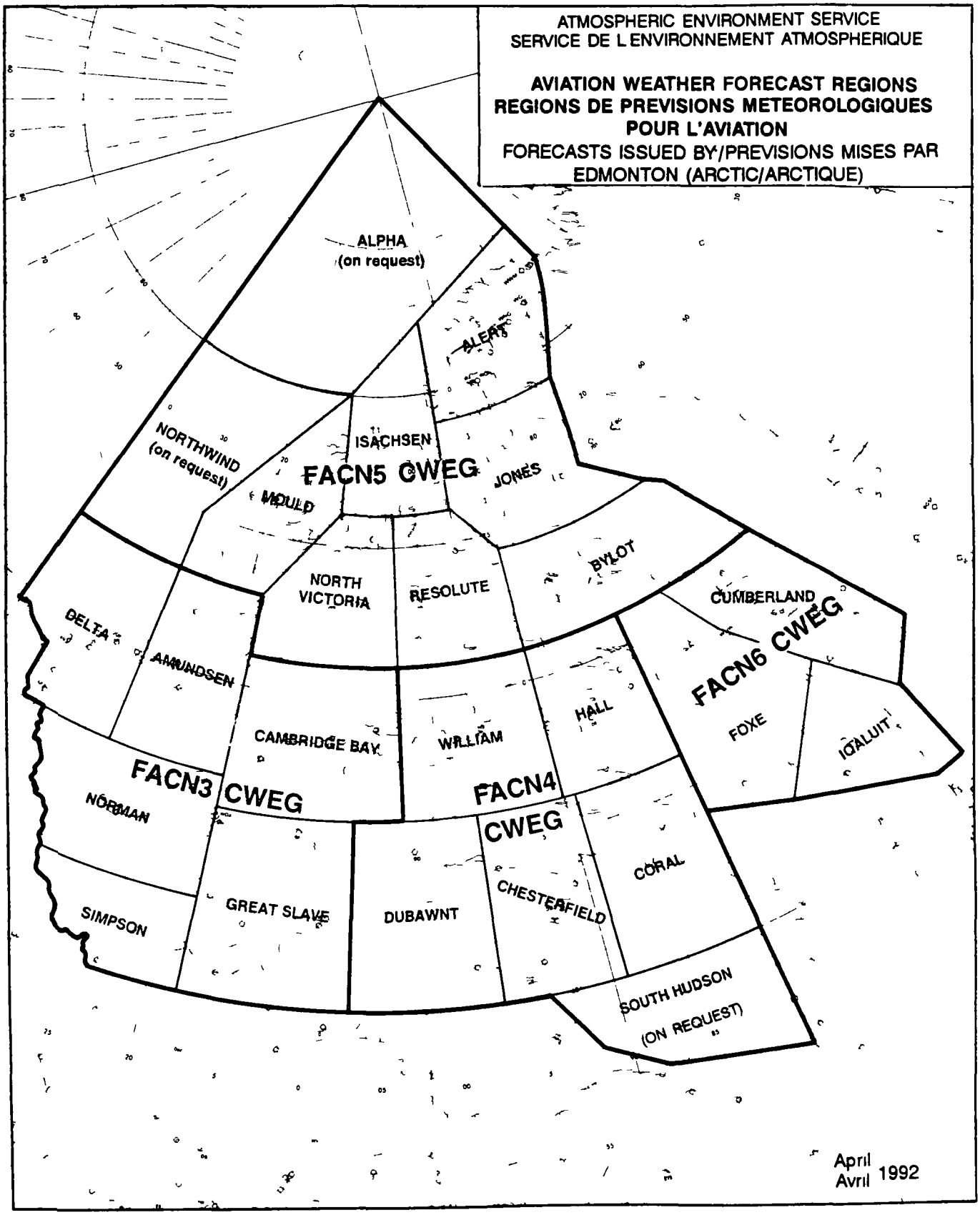
OUEST

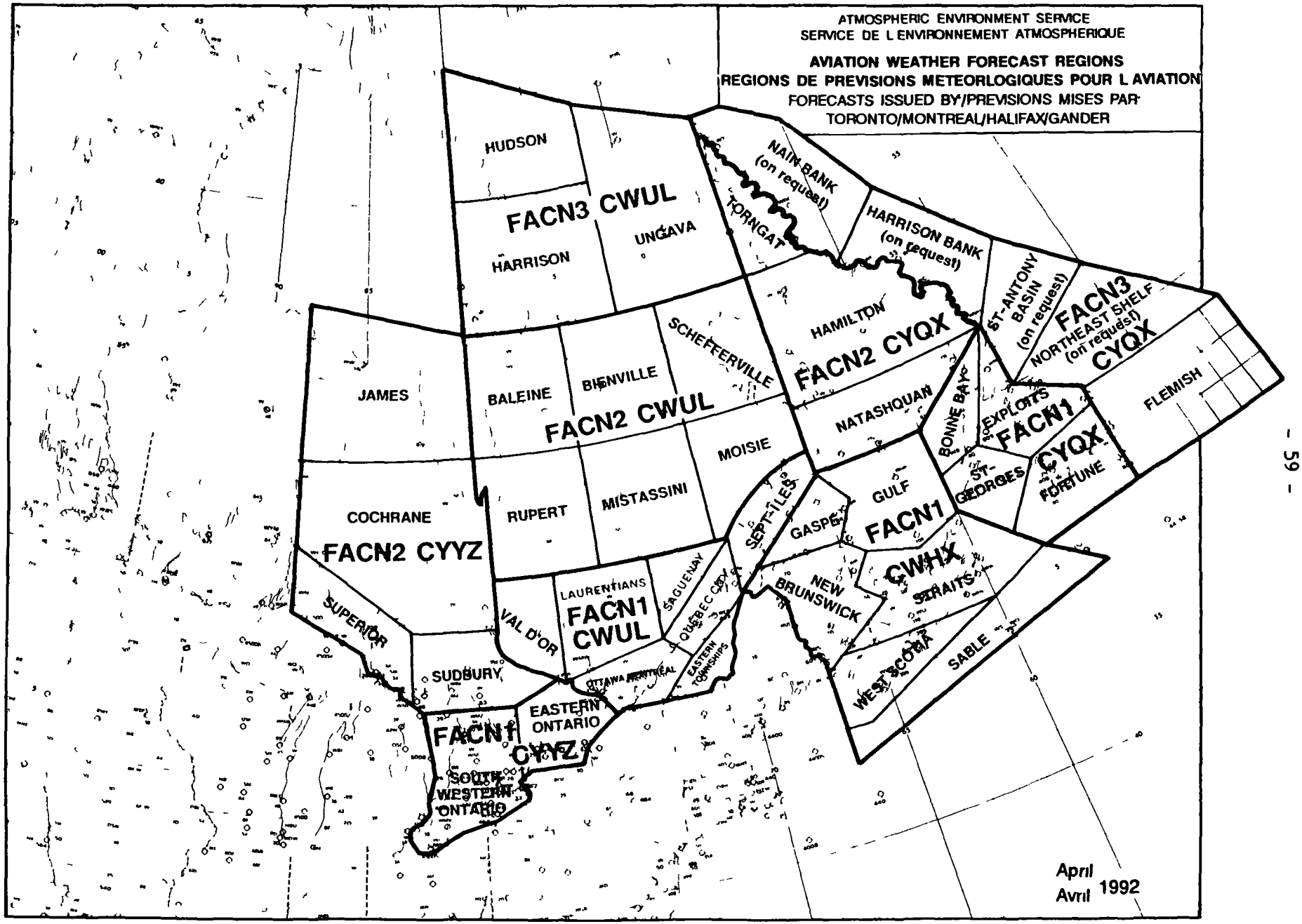
APRIL
AVRIL 1992

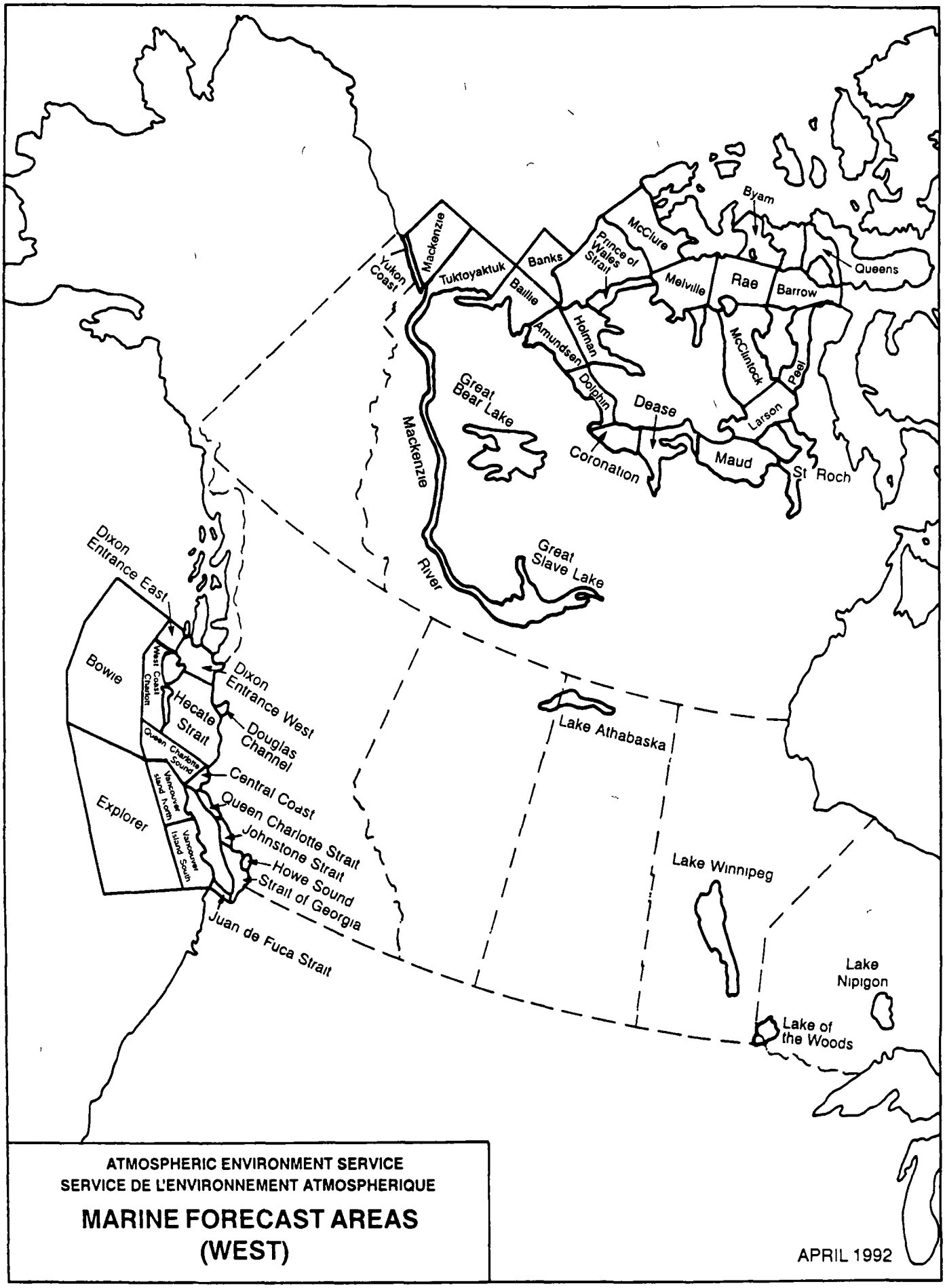

ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L ENVIRONNEMENT ATMOSPHERIQUE
PUBLIC FORECAST REGIONS
(Does not include cities)
EAST
REGIONS DE PREVISIONS PUBLIQUES
(ne s applique pas aux villes)
EST
APRIL
AVRIL
1992
EAST
EST
Baker Lake
Rankin
Coral Harbour
Cape Dorset
Iqaluit
Seal River
Churchill
Indian Lake
Thompson
York
Flin Flon
Gods Lake
Severn River
Winnipegosis
Berens River
Favourable Lake
Pickle Lake
Dauphin
Interlake
Bissett
Red Lake
Brandon
Red River
Whiteshell
Kenora
Rainy Lake
Sioux Lookout
Nipigon
Atikokan
Superior West
Winisk Moose River
Geraldton Cochrane
Chapleau Timiskaming
Algoma Nickel
Belt Nipissing
Kuujjuarapik
James Bay
La Grande
Waskaganish
Matagami
Chibougamau
Abitibi
Temiscamingue
Réservoirs Cabonga et Gouin
La Tuque
Pontiac Gatineau et Lievre
Montreal
Ottawa Hull-Cornwall
Drummondville
Huron Bruce
Nain to Hopedale
Postville to Cartwright
Batteau to L Anse au Clair
Churchill Falls
Goose Bay
Schefferville Fermont Labrador City
Manicouagan Gagnon
Basse Côte-Nord
Sept Iles
Northern Peninsula East
East Coast
Central Newfoundland
West Coast
South Coast
St John s
Avalon Peninsula
Cape Breton Highlands
Iles de la Madeleine
Sydney Bras D Or
Prince Edward Island
Bay of Chaleur
Upper Saint John River
Lower Saint John River
Fundy
Northern N S
Eastern Shore
Saint John and Vicinity
Halifax and Vicinity
Valley
South Shore


ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L ENVIRONNEMENT ATMOSPHÉRIQUE
AIRPORT FORECASTS
PREVISIONS D'AEROPORT
APRIL 1992
AVRIL


ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE LENVIRONMENT ATMOSPHERIQUE
AVIATION WEATHER FORECAST REGIONS
REGIONS DE PREVISIONS METEORLOGIQUES POUR L'AVIATION
FORECASTS ISSUED BY/PREVISIONS MISES PAR
VANCOUVER/WHITEHORSE/EDMONTON/WINNIPEG
PEEL RIVER
DAWSON
FACN1
MACKENZIE MOUNTAINS
AISHIHIK
WHITEHORSE
CYXY
LIARD
FORT NELSON
HIGH LEVEL
ATHABASCA
FACN2
CWEG
PEACE
URANIUM
WOLLASTON
CREE LAKE
REINDEER
FACN5
SEAL RIVER
CHURCHILL
INDIAN LAKE
FACN2
CWWG
YORK
THOMPSON
GODS LAKE
SEVERN RIVER
FACN4
CWWG
NORTH COAST
CARIBOO
FACN1
CWVR
SOUTH COAST
SOUTHERN MOUNTAINS
MEADOW LAKE
CWWG
LA RONGE
THE PAS
EDSON
EDMONTON
FACN1
CWEG
PRINCE ALBERT
CARROT RIVER
GRAND RAPIDS
FAVOURABLE LAKE
PICKLE LAKE
BATTLEFORD
FACN6
CWWG
SASKATOON
YORKTON
K. MOOSEJAW
CALGARY
CORONATION
DAUPHIN
GIMLI
FACN1
CWWG
RED LAKE
SIOUX LOOKOUT
MINIGON
FACN3
CWWG
LETHBRIDGE
SW PY CLBRENT
MOOSE JAW
REGINA
BRANDON
WINNIPEG
RAINY LAKE
ATIKOKAN
WHITESHELL
KENORA
LAKEHEAD
April
Avril
1992


ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L ENVIRONNEMENT ATMOSPHERIQUE
AVIATION WEATHER FORECAST REGIONS
REGIONS DE PREVISIONS METEOROLOGIQUES
POUR L'AVIATION
FORECASTS ISSUED BY/PREVISIONS MISES PAR
EDMONTON (ARCTIC/ARCTIQUE)
ALPHA
(on request)
ALERT
NORTHWIND
(on request)
ISACHSEN
FACN5 CWEG
JONES
MOULD
NORTH
VICTORIA
RESOLUTE
BYLOT
CUMBERLAND
FACN6 CWEG
DELTA
AMUNDSEN
CAMBRIDGE BAY
WILLIAM
HALL
FOXE
IQALUIT
FACN3 CWEG
NORMAN
FACN4
CWEG
CORAL
SIMPSON
GREAT SLAVE
DUBAWNT
CHESTERFIELD
SOUTH HUDSON
(ON REQUEST)
April
Avril 1992

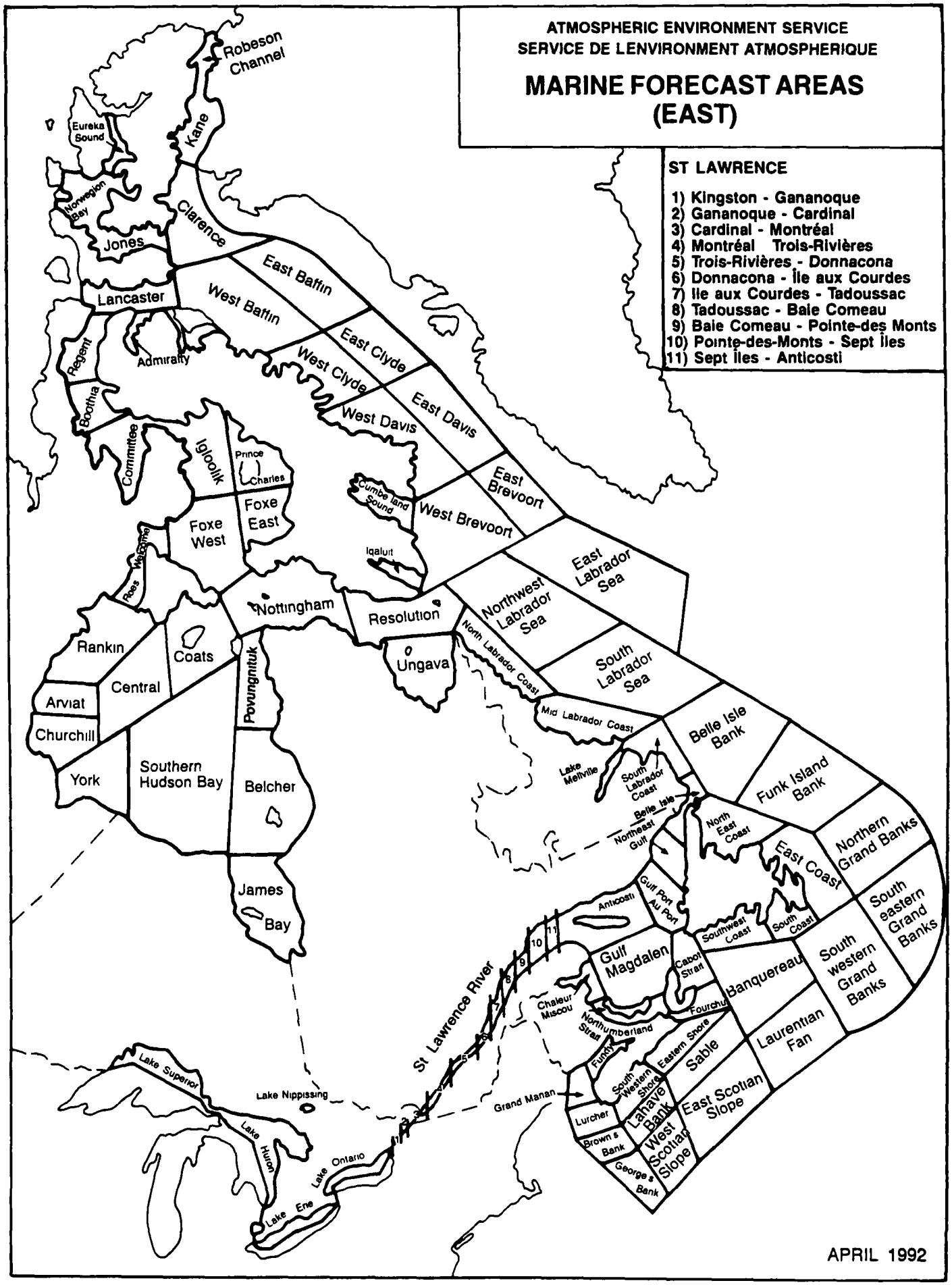

ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L ENVIRONNEMENT ATMOSPHERIQUE
AVIATION WEATHER FORECAST REGIONS
REGIONS DE PREVISIONS METEORLOGIQUES POUR L AVIATION
FORECASTS ISSUED BY/PREVISIONS MISES PAR
TORONTO/MONTREAL/HALIFAX/GANDER
HUDSON
FACN3 CWUL
HARRISON
UNGAVA
NAIN BANK (on request)
TORNGAT
HARRISON BANK (on request)
ST-ANTONY BASIN (on request)
FACN3 NORTHEAST SHELF (on request) CYQX
FLEMISH
HAMILTON
FACN2 CYQX
SCHEFFERVILLE
JAMES
BALEINE
BIENVILLE
FACN2 CWUL
NATASHQUAN
BONNE BAY
EXPLOITS
FACN1 CYQX
ST-GEORGES
FORTUNE
MOISIE
COCHRANE
FACN2 CYYZ
RUPERT
MISTASSINI
SEPT-ILES
GASPE
GULF
FACN1 CWHX
NEW BRUNSWICK
STRAITS
SUPERIOR
LAURENTIANS
FACN1 CWUL
SAGUENAY
QUEBEC CITY
VAL D'OR
SUDBURY
OTTAWA
MONTREAL
EASTERN TOWNSHIPS
EASTERN ONTARIO
FACN1 CYYZ
SOUTH WESTERN ONTARIO
WEST SCOTIA
SABLE
April
Avril 1992

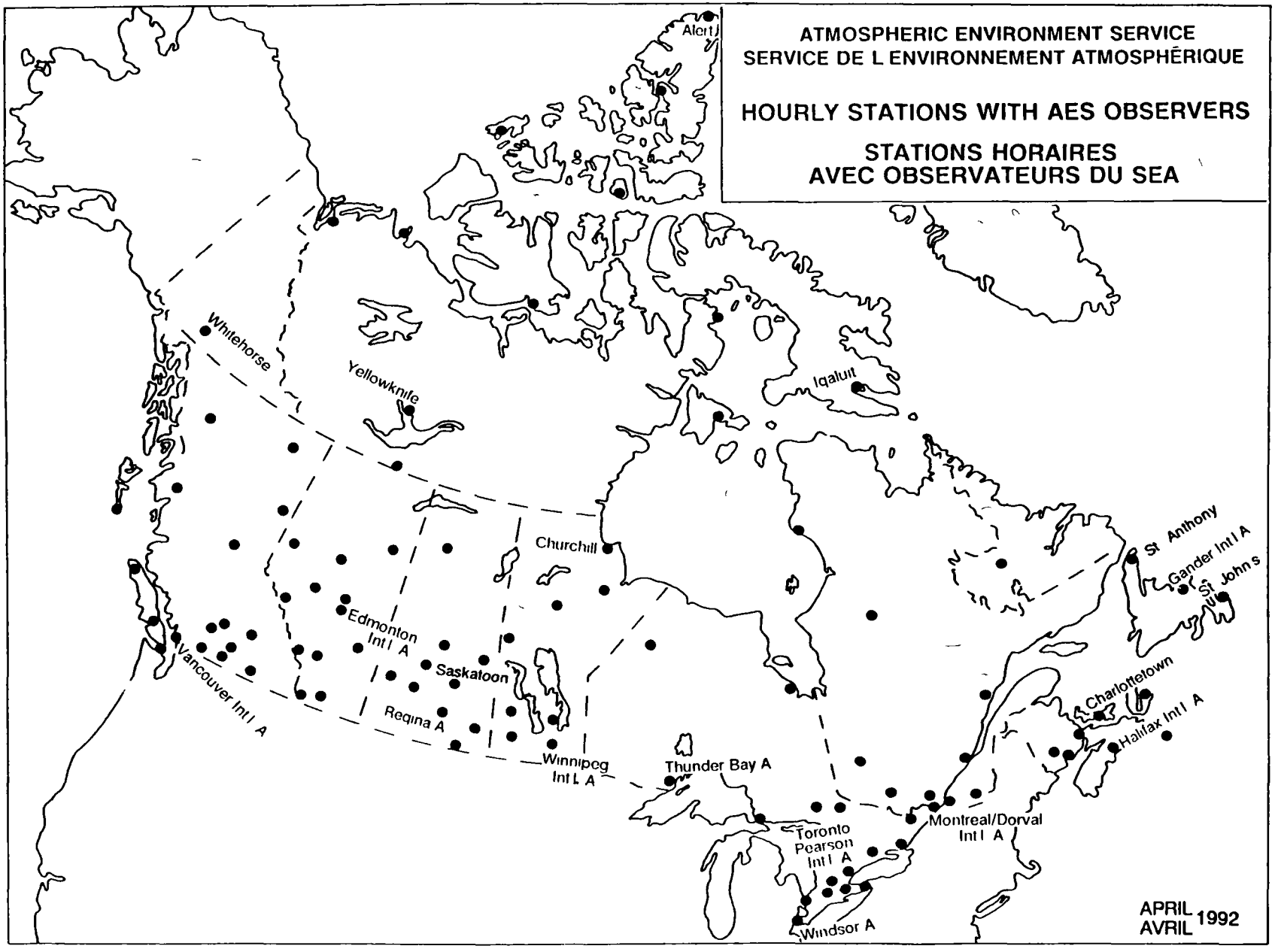


ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L'ENVIRONNEMENT ATMOSPHERIQUE

MARINE FORECAST AREAS (WEST)

APRIL 1992


ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE LENVIRONMENT ATMOSPHERIQUE
MARINE FORECAST AREAS
(EAST)
ST LAWRENCE
1) Kingston - Gananoque
2) Gananoque - Cardinal
3) Cardinal - Montréal
4) Montréal Trois-Rivières
5) Trois-Rivières - Donnacona
6) Donnacona - Île aux Courdes
7) Ile aux Courdes - Tadoussac
8) Tadoussac - Baie Comeau
9) Baie Comeau - Pointe-des Monts
10) Pointe-des-Monts - Sept Îles
11) Sept Îles - Anticosti
Robeson Channel
Eureka Sound
Kane
Norwegian Bay
Clarence
Jones
Lancaster
East Baffin
West Baffin
East Clyde
West Clyde
East Davis
West Davis
Regent
Admiralty
Boothia
Committee
Igloolik
Prince Charles
Foxe East
Foxe West
Cumberland Sound
West Brevoort
East Brevoort
Iqaluit
Rees Welcome
Nottingham
Resolution
Ungava
East Labrador Sea
Northwest Labrador Sea
North Labrador Coast
South Labrador Sea
Mid Labrador Coast
Rankin
Coats
Central
Arviat
Churchill
Povungnituk
York
Southern Hudson Bay
Belcher
James Bay
Lake Melville
South Labrador Coast
Belle Isle
Northeast Gulf
Belle Isle Bank
Funk Island Bank
North East Coast
East Coast
Northern Grand Banks
South eastern Grand Banks
Anticosti
Gulf Port Au Port
Southwest Coast
South Coast
Gulf Magdalen
Cabot Strait
Banquereau
South western Grand Banks
Chaleur Miscou
Northumberland Strait
Fourchu
Eastern Shore
Sable
Laurentian Fan
St Lawrence River
Lake Superior
Lake Nipissing
Grand Manan
Funday
South Western Shore
Lahave Bank
East Scotian Slope
Lurcher
Brown's Bank
West Scotian Slope
George's Bank
Lake Huron
Lake Ontario
Lake Erie
APRIL 1992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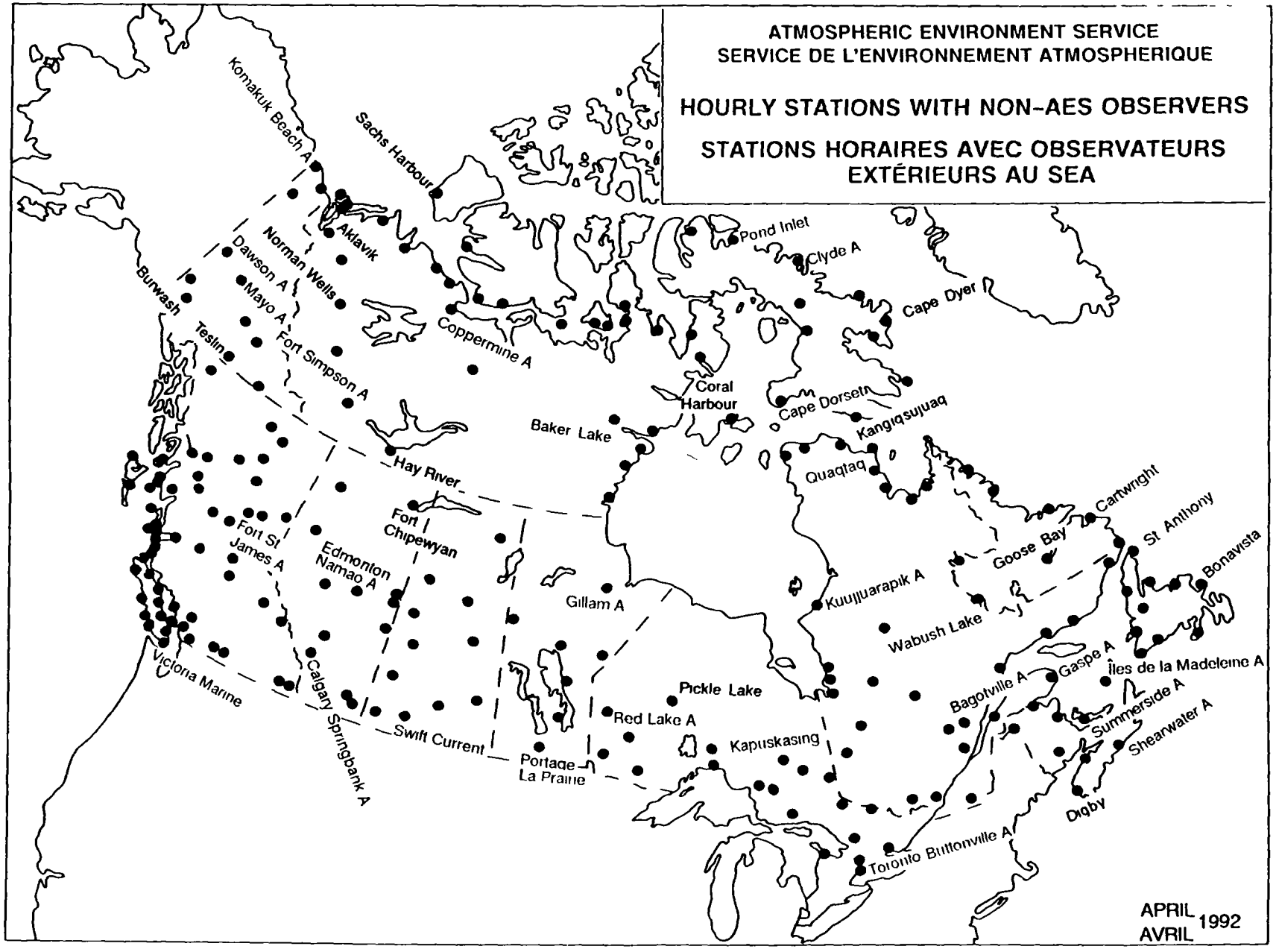
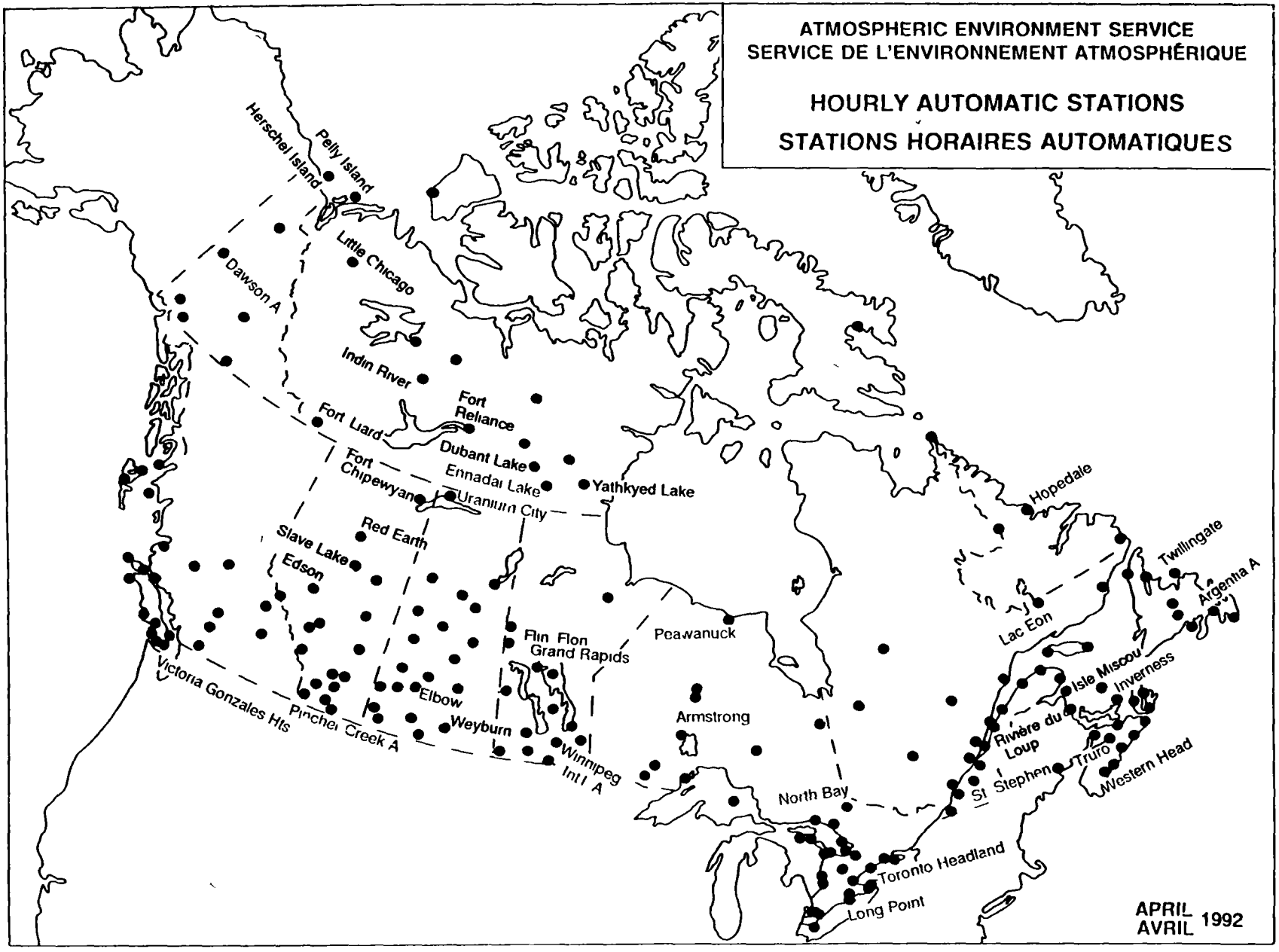
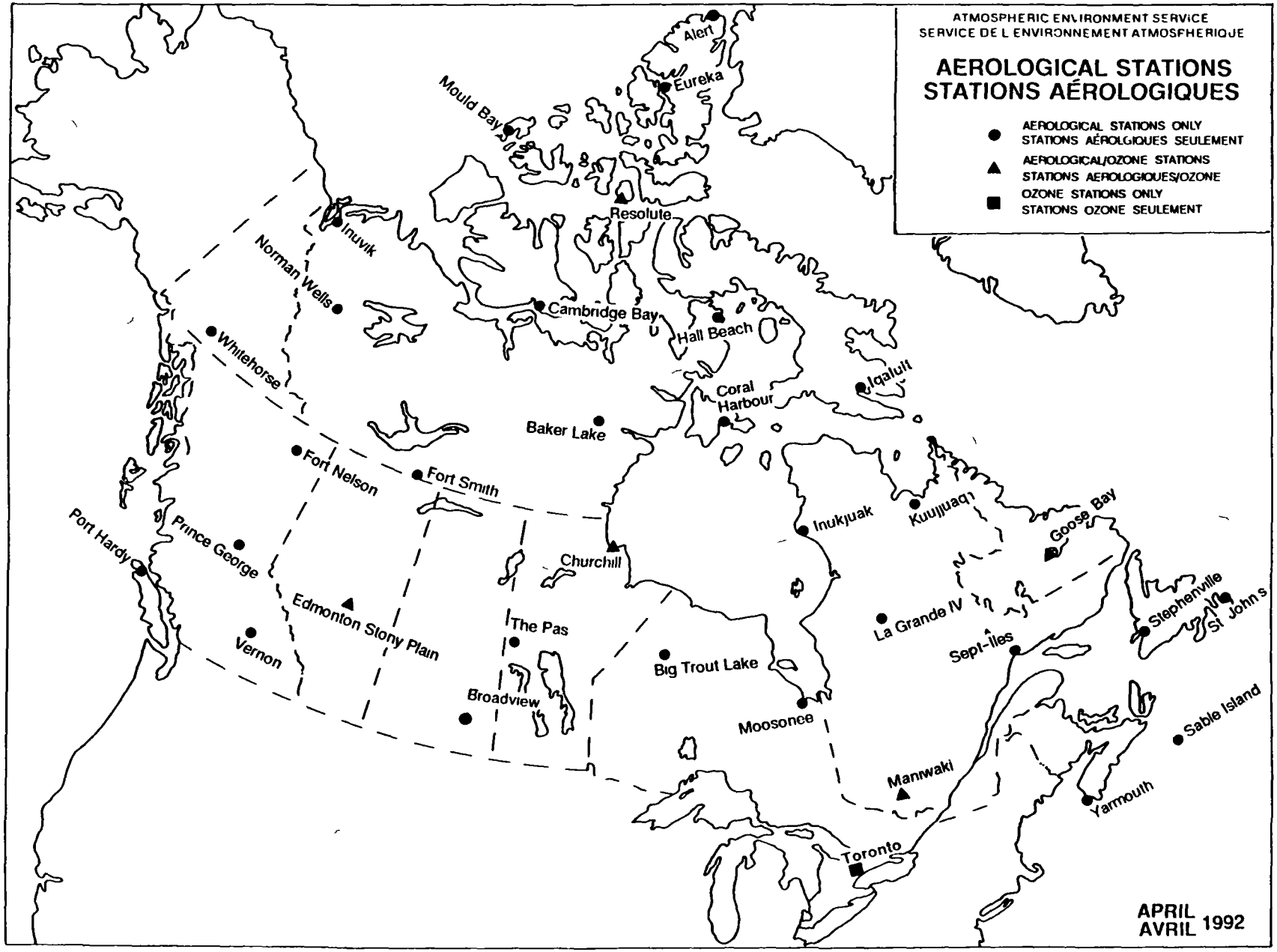
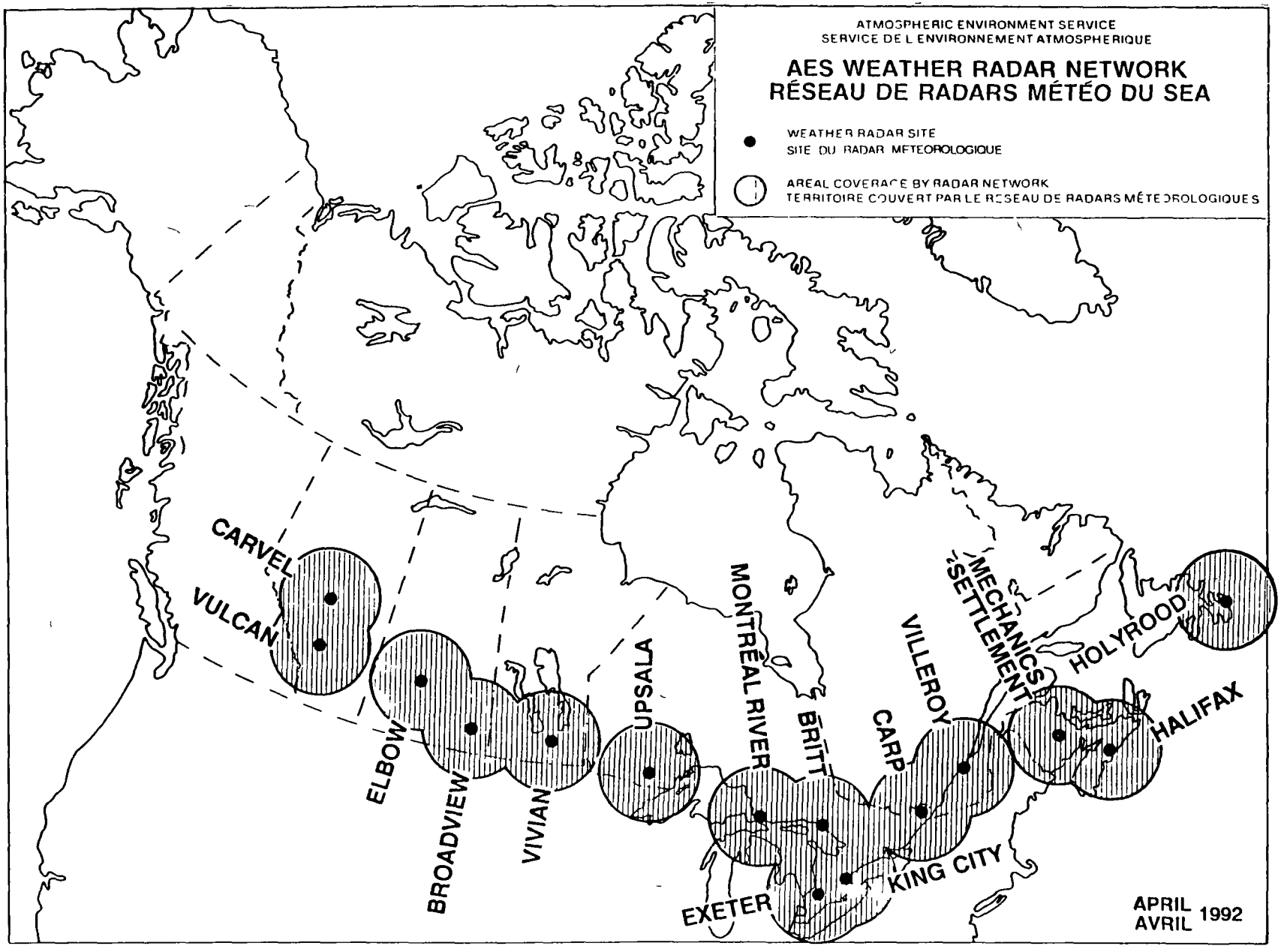
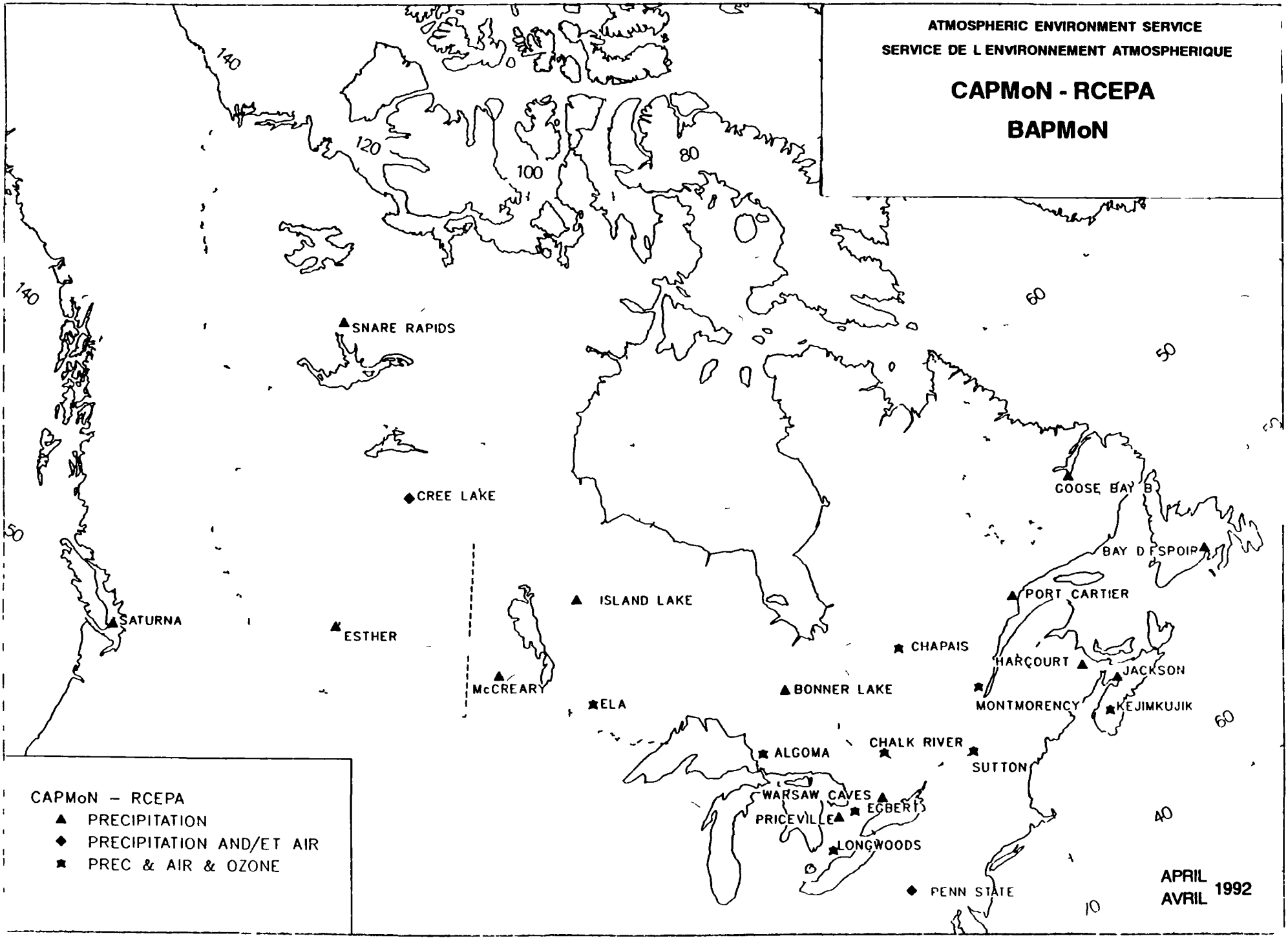
SERVICE DE L ENVIRONNEMENT ATMOSPHÉRIQUE
HOURLY STATIONS WITH AES OBSERVERS
STATIONS HORAIRES
AVEC OBSERVATEURS DU SEA
Alert
Whitehorse
Yellowknife
Iqaluit
Churchill
Edmonton Intl A
Saskatoon
Regina A
Vancouver Intl A
Winnipeg Intl A
Thunder Bay A
Toronto Pearson Intl A
Windsor A
Montreal/Dorval Intl A
St Anthony
Gander Intl A
St John's
Charlottetown
Halifax Intl A
APRIL 1992
AVRIL

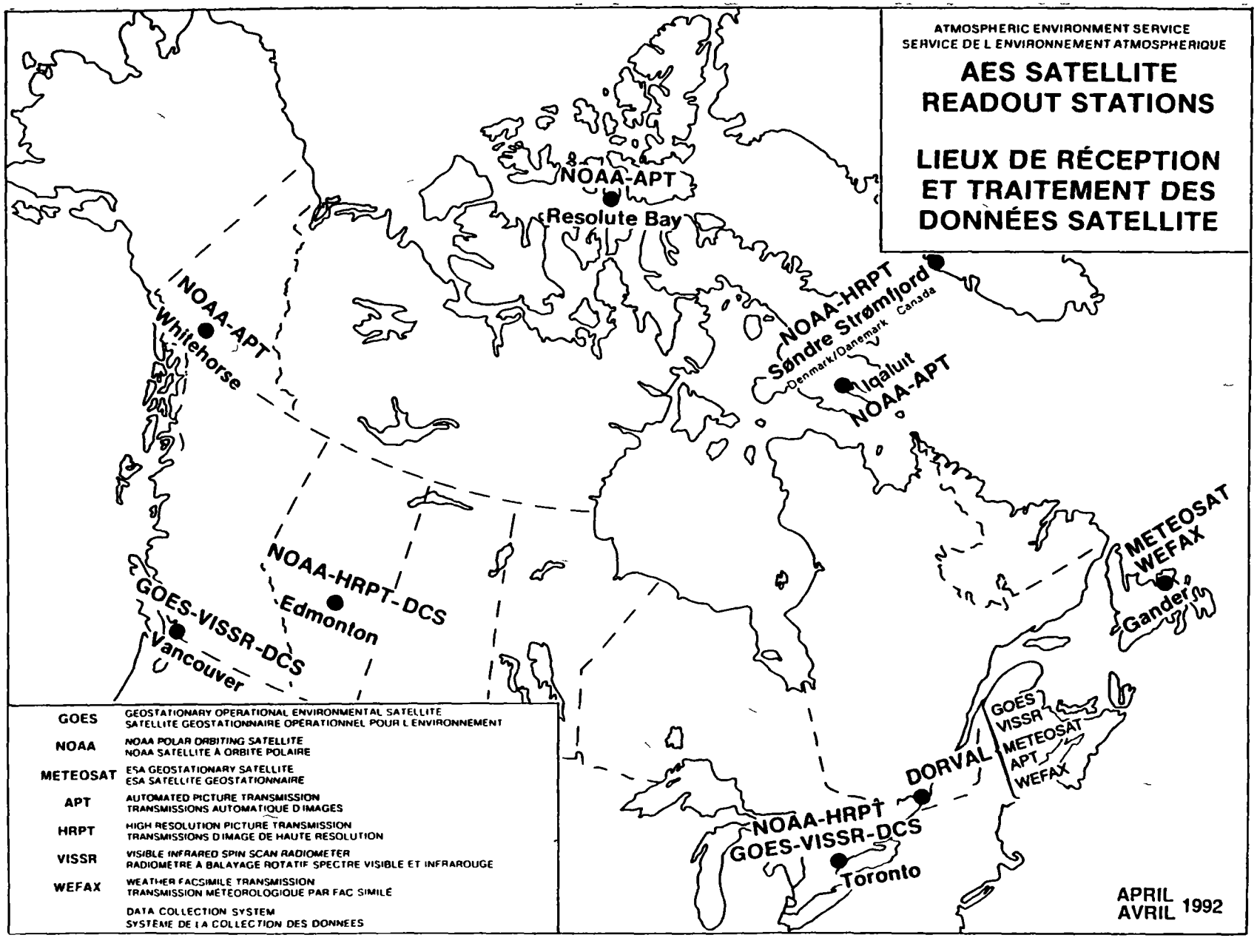

ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L'ENVIRONNEMENT ATMOSPHERIQUE
HOURLY STATIONS WITH NON-AES OBSERVERS
STATIONS HORAIRES AVEC OBSERVATEURS EXTÉRIEURS AU SEA
Komakuk Beach A
Sachs Harbour
Aklavik
Pond Inlet
Clyde A
Cape Dyer
Dawson A
Norman Wells
Burwash
Mayo A
Fort Simpson A
Teslin
Coppermine A
Coral Harbour
Cape Dorset
Kangiqsujuaq
Baker Lake
Hay River
Quaqtaq
Cartwright
Goose Bay
St Anthony
Bonavista
Fort St James A
Fort Chipewyan
Edmonton Namao A
Gillam A
Kuujjuarapik A
Wabush Lake
Victoria Marine
Calgary
Springbank A
Swift Current
Pickle Lake
Red Lake A
Portage La Prairie
Kapuskasing
Bagotville A
Gaspe A
Îles de la Madeleine A
Summerside A
Sheanwater A
Digby
Toronto Buttonville A
APRIL
AVRIL
1992

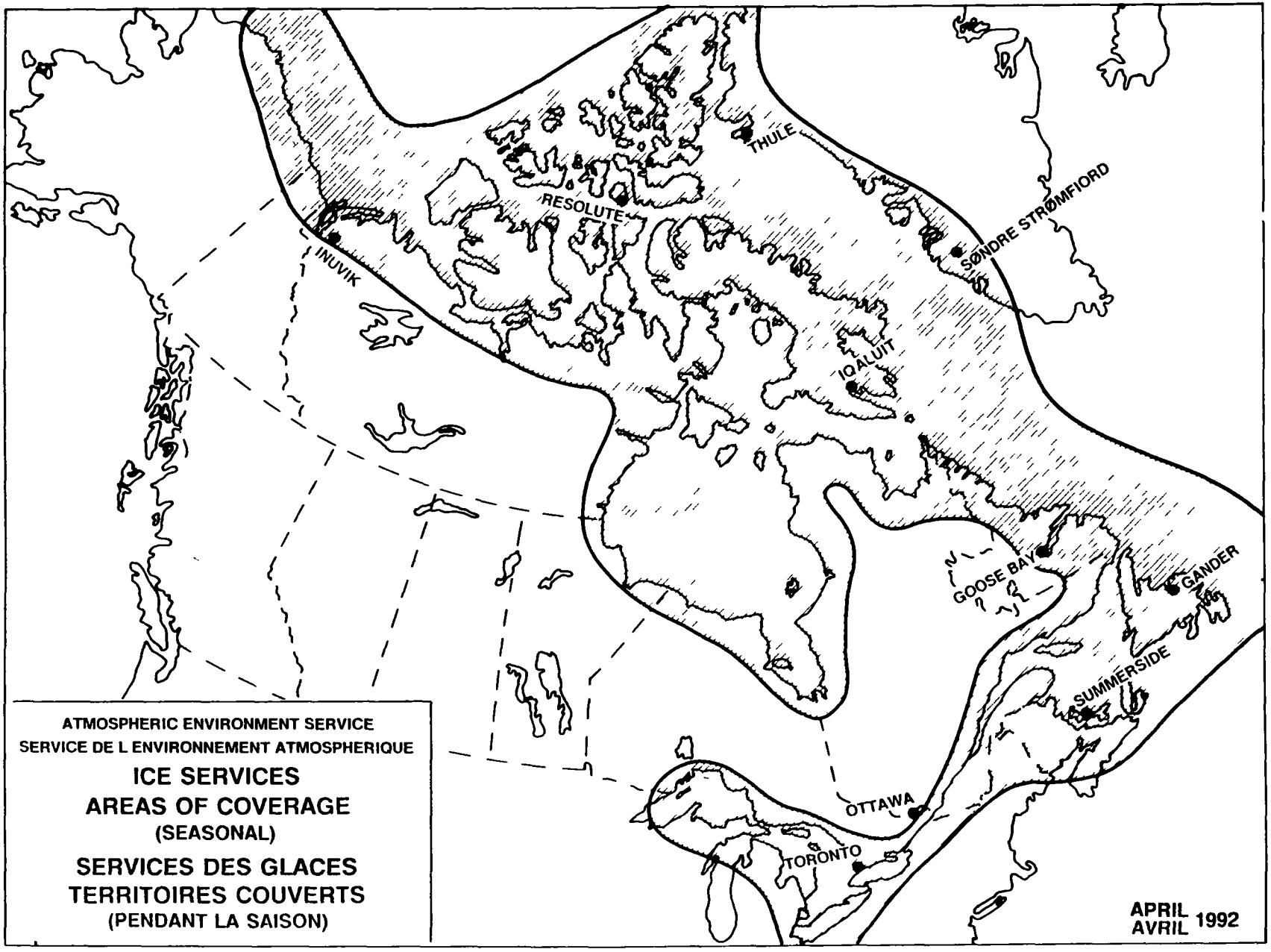

ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L'ENVIRONNEMENT ATMOSPHÉRIQUE
HOURLY AUTOMATIC STATIONS
STATIONS HORAIRES AUTOMATIQUES
Herschel Island
Pelly Island
Little Chicago
Dawson A
Indin River
Fort Reliance
Fort Liard
Dubant Lake
Ennadai Lake
Fort Chipewyan
Uranium City
Yathkyed Lake
Red Earth
Slave Lake
Edson
Flin Flon
Grand Rapids
Peawanuck
Victoria Gonzales Hts
Pincher Creek A
Elbow
Weyburn
Winnipeg Int'l A
Armstrong
North Bay
Hopedale
Lac Eon
Twillingate
Argentia A
Isle Miscou
Inverness
Rivière du Loup
St Stephen
Truro
Western Head
Toronto Headland
Long Point
APRIL 1992
AVRIL

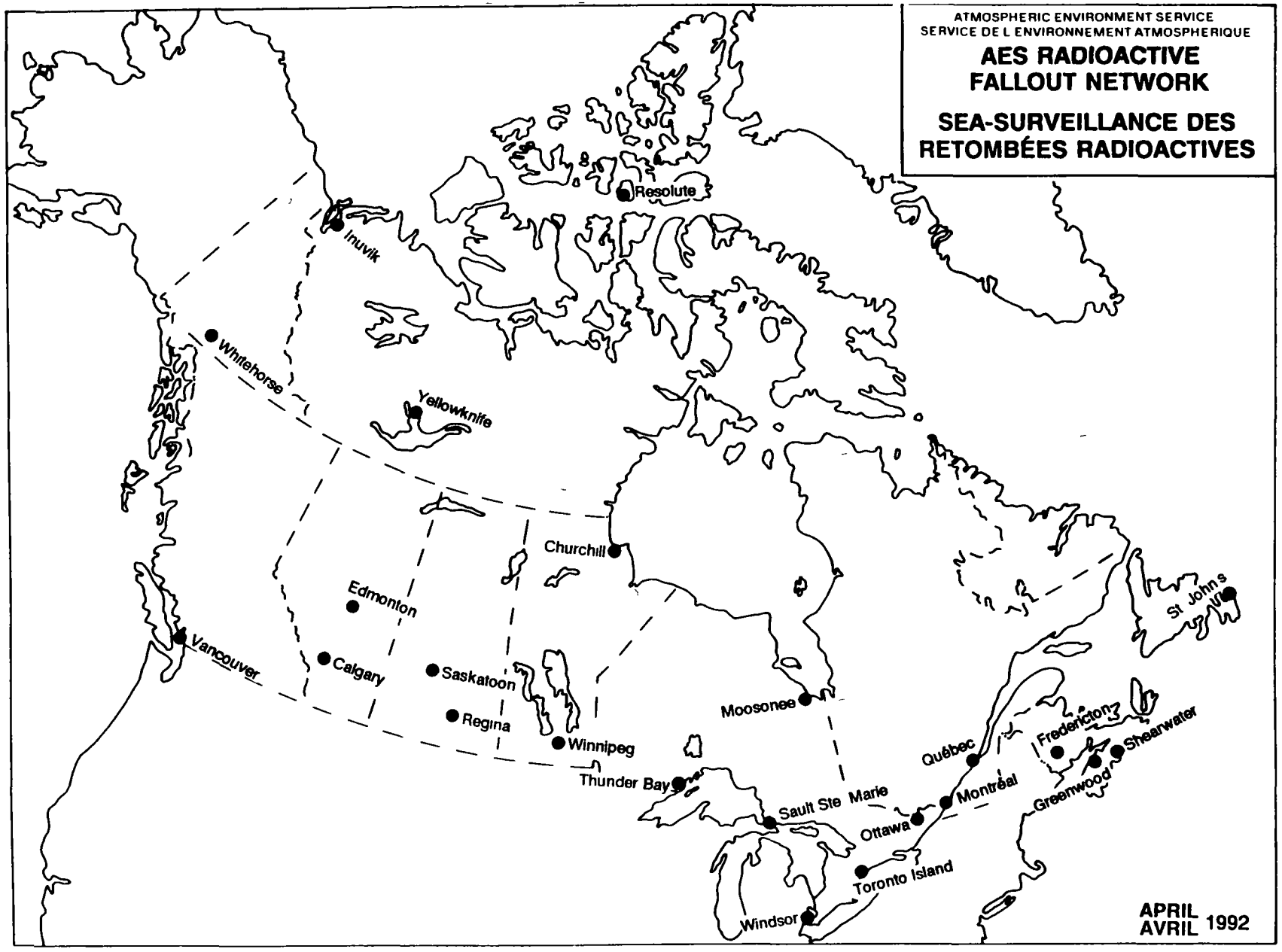

ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L ENVIRONNEMENT ATMOSPHERIQUE
AEROLOGICAL STATIONS
STATIONS AÉROLOGIQUES
AEROLOGICAL STATIONS ONLY
STATIONS AÉROLOGIQUES SEULEMENT
AEROLOGICAL/OZONE STATIONS
STATIONS AEROLOGIQUES/OZONE
OZONE STATIONS ONLY
STATIONS OZONE SEULEMENT
Alert
Eureka
Mould Bay
Resolute
Inuvik
Norman Wells
Cambridge Bay
Hall Beach
Whitehorse
Iqaluit
Coral Harbour
Baker Lake
Fort Nelson
Fort Smith
Inukjuak
Kuujjuaq
Goose Bay
Port Hardy
Prince George
Churchill
Edmonton Stony Plain
The Pas
La Grande IV
Stephenville
St. John's
Sept-Îles
Vernon
Big Trout Lake
Broadview
Moosonee
Sable Island
Manwaki
Yarmouth
Toronto
APRIL
AVRIL 1992

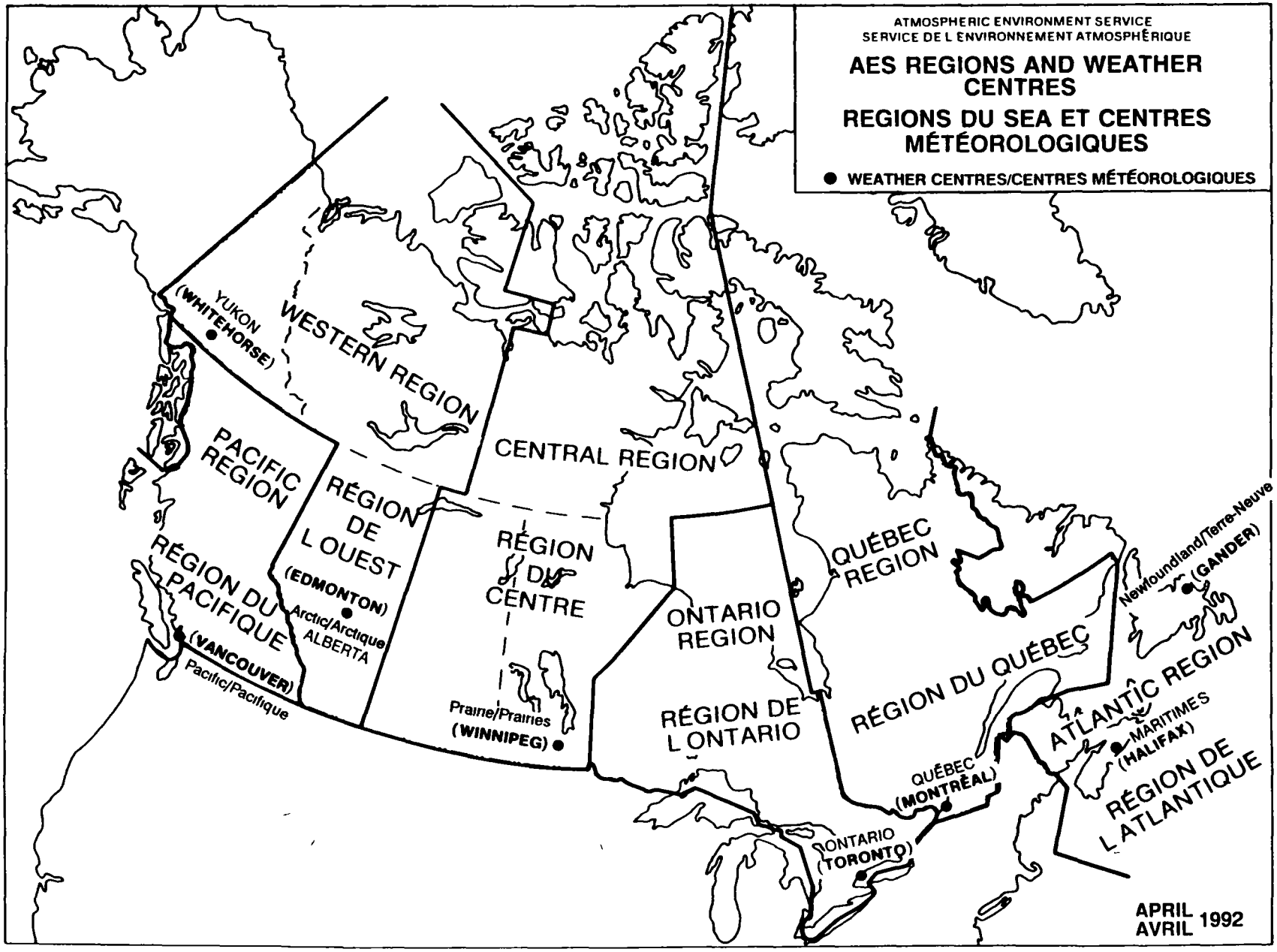

ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L ENVIRONNEMENT ATMOSPHERIQUE
AES WEATHER RADAR NETWORK
RÉSEAU DE RADARS MÉTÉO DU SEA
WEATHER RADAR SITE
SITE DU RADAR METEOROLOGIQUE
AREAL COVERAGE BY RADAR NETWORK
TERRITOIRE COUVERT PAR LE RESEAU DE RADARS METEOROLOGIQUES
CARVEL
VULCAN
ELBOW
BROADVIEW
VIVIAN
UPSALA
MONTREAL RIVER
BRITT
CARP
VILLEROY
MECHANICS SETTLEMENT
HOLYROOD
HALIFAX
KING CITY
EXETER
APRIL
AVRIL 1992


ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L ENVIRONNEMENT ATMOSPHERIQUE
CAPMoN - RCEPA
BAPMoN
SNARE RAPIDS
CREE LAKE
ISLAND LAKE
SATURNA
ESTHER
McCREARY
ELA
BONNER LAKE
CHAPAIS
GOOSE BAY B
BAY D ESPOIR
PORT CARTIER
HARCOURT
JACKSON
MONTMORENCY
KEJIMKUJIK
ALGOMA
CHALK RIVER
SUTTON
WARSAW CAVES
EGBERT
PRICEVILLE
LONGWOODS
PENN STATE
140
120
100
80
60
50
40
10
CAPMoN – RCEPA
PRECIPITATION
PRECIPITATION AND/ET AIR
PREC & AIR & OZONE
APRIL
AVRIL 1992


ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L ENVIRONNEMENT ATMOSPHERIQUE
AES SATELLITE READOUT STATIONS
LIEUX DE RÉCEPTION ET TRAITEMENT DES DONNÉES SATELLITE
NOAA-APT
Resolute Bay
NOAA-APT
Whitehorse
NOAA-HRPT
Søndre Strømfjord
Denmark/Danemark
Canada
Iqaluit
NOAA-APT
METEOSAT
WEFAX
Gander
NOAA-HRPT-DCS
Edmonton
GOES-VISSR-DCS
Vancouver
DORVAL
GOES
VISSR
METEOSAT
APT
WEFAX
NOAA-HRPT
GOES-VISSR-DCS
Toronto
GOES GEOSTATIONARY OPERATIONAL ENVIRONMENTAL SATELLITE
SATELLITE GEOSTATIONNAIRE OPÉRATIONNEL POUR L ENVIRONNEMENT
NOAA NOAA POLAR ORBITING SATELLITE
NOAA SATELLITE À ORBITE POLAIRE
METEOSAT ESA GEOSTATIONARY SATELLITE
ESA SATELLITE GEOSTATIONNAIRE
APT AUTOMATED PICTURE TRANSMISSION
TRANSMISSIONS AUTOMATIQUE D IMAGES
HRPT HIGH RESOLUTION PICTURE TRANSMISSION
TRANSMISSIONS D IMAGE DE HAUTE RESOLUTION
VISSR VISIBLE INFRARED SPIN SCAN RADIOMETER
RADIOMETRE À BALAYAGE ROTATIF SPECTRE VISIBLE ET INFRAROUGE
WEFAX WEATHER FACSIMILE TRANSMISSION
TRANSMISSION METEOROLOGIQUE PAR FAC SIMILE
DATA COLLECTION SYSTEM
SYSTEME DE LA COLLECTION DES DONNEES
APRIL
AVRIL 1992


THULE
RESOLUTE
INUVIK
SØNDRE STRØMFIORD
IQALUIT
GOOSE BAY
GANDER
SUMMERSIDE
OTTAWA
TORONTO
ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L ENVIRONNEMENT ATMOSPHERIQUE
ICE SERVICES
AREAS OF COVERAGE
(SEASONAL)
SERVICES DES GLACES
TERRITOIRES COUVERTS
(PENDANT LA SAISON)
APRIL
AVRIL 1992


ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L ENVIRONNEMENT ATMOSPHERIQUE
AES RADIOACTIVE FALLOUT NETWORK
SEA-SURVEILLANCE DES RETOMBÉES RADIOACTIVES
Resolute
Inuvik
Whitehorse
Yellowknife
Churchill
Edmonton
Vancouver
Calgary
Saskatoon
Regina
Winnipeg
Thunder Bay
Moosonee
Québec
Fredericton
Shearwater
Greenwood
St John's
Sault Ste Marie
Montréal
Ottawa
Toronto Island
Windsor
APRIL
AVRIL 1992


ATMOSPHERIC ENVIRONMENT SERVICE
SERVICE DE L ENVIRONNEMENT ATMOSPHÉRIQUE
AES REGIONS AND WEATHER CENTRES
REGIONS DU SEA ET CENTRES MÉTÉOROLOGIQUES
WEATHER CENTRES/CENTRES MÉTÉOROLOGIQUES
YUKON
(WHITEHORSE)
WESTERN REGION
PACIFIC REGION
RÉGION DU PACIFIQUE
(VANCOUVER)
Pacific/Pacifique
RÉGION DE L OUEST
(EDMONTON)
Arctic/Arctique
ALBERTA
CENTRAL REGION
RÉGION DU CENTRE
Prairie/Prairies
(WINNIPEG)
ONTARIO REGION
RÉGION DE L ONTARIO
ONTARIO
(TORONTO)
QUÉBEC REGION
RÉGION DU QUÉBEC
QUÉBEC
(MONTRÉAL)
Newfoundland/Terre-Neuve
(GANDER)
ATLANTIC REGION
MARITIMES
(HALIFAX)
RÉGION DE L ATLANTIQUE
APRIL
AVRIL 1992

CHAPTER 5

FUNCTIONS AND BUDGETS BY ORGANIZATION

ATMOSPHERIC ENVIRONMENT SERVICE

5 1 ATMOSPHERIC ENVIRONMENT SERVICE

5 1 1 AES Organizational Structure

The Atmospheric Environment Service is organized functionally into five Directorates, three Branches, six Regions, and two special purpose offices

Weather Services Directorate	AWDG
Atmospheric Research Directorate	ARDG
Canadian Climate Centre	CCDG
Canadian Meteorological Centre	CMDG
Policy, Planning and Assessment Directorate	APDG
Corporate Planning and Accountability Branch	APEC
Finance and Administration Branch	AABD
Human Resources Branch	AHRD
Pacific Region	PAED
Western Region	WAED
Central Region	CAED
Ontario Region	OAED
Quebec Region	QAED
Atlantic Region	MAED
International Affairs	AIA
Climate Change Conventions Negotiations Office	AOCD

Three of the five Directorates plus the Finance and Administration Branch , the Corporate Planning and Accountability Branch, and the Human Resources Branch have their headquarters in Downsview, Ontario The Policy, Planning and Assessment Directorate has its office in Ottawa, Ontario The Canadian Meteorological Centre has its office in Dorval, Quebec, but also maintains staff in Downsview The six regions are located across Canada, with headquarters in Vancouver, British Columbia (PAED), Edmonton, Alberta (WAED), Winnipeg, Manitoba (CAED), Toronto, Ontario (OAED), Montreal, Quebec (QAED), and Bedford, Nova Scotia (MAED) The Assistant Deputy Minister has an office in both Ottawa and Downsview Downsview, of course, houses more than just H Q management and administration units Telecommunications, research and training staff, laboratories, instruments experts, the library, and other national operational units are also located there

The International Affairs Co-ordinator reports directly to the ADM, and co-ordinates and assists with official business with other countries and organizations

The Climate Change Convention Negotiations Office reports directly to the ADM, and will represent Environment Canada in a multi-departmental effort to take Canada through the negotiating process for an international agreement on Climate Change

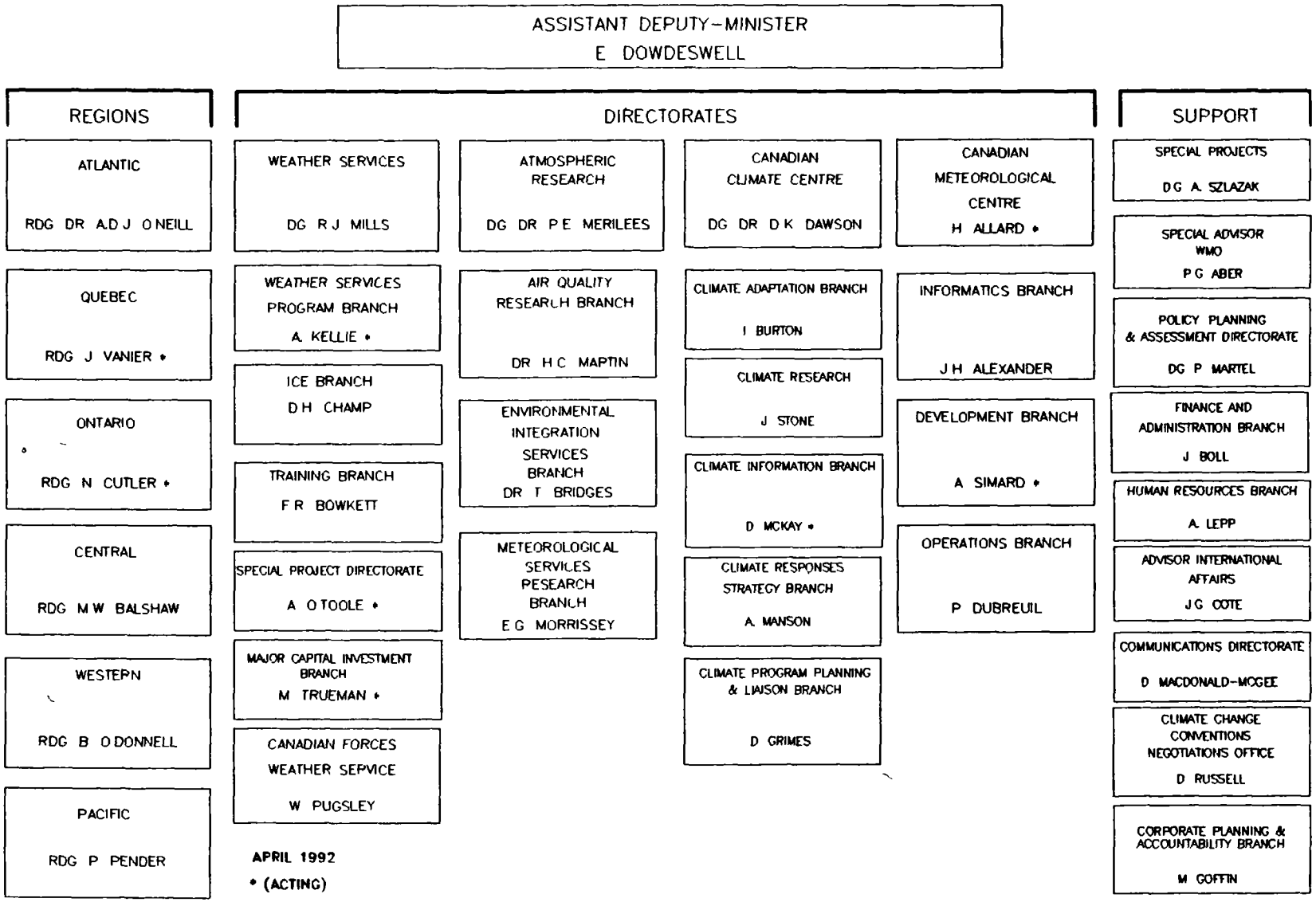
It should be noted that while there is a relationship between the organizational structure and the five program components (sub-activities) of the AES, they do not correspond exactly For program support purposes, certain "common service" directorates have been created within AES to achieve such objectives as efficiency, effectiveness and the centralization of expertise These directorates include Atmospheric Research Directorate, Canadian Meteorological Centre, Policy, Planning and Assessment Directorate, Finance and Administration Branch, Corporate Planning and Accountability Branch, and Human Resources Branch

Working Closely with AES

The Atmospheric Environment Service provides weather, ice and sea-state services to the Department of National Defense as provided for in a Memorandum of Understanding between the two parties For this purpose DND maintains a Canadian Forces Weather Service headed by the Director of Meteorology and Oceanography (DMetOc) in Ottawa The DMetOc formally reports to a higher level DND authority while, functionally the Director reports to either the ADM of the Atmospheric Environment Service or to the Director General of the Weather Services Directorate as appropriate, and is a full member of the AES Management Committee

The AES part of the DOE Communications Directorate (CD) is located in Downsview with its headquarters in Ottawa CD provides direct support to the ADM and full services to AES managers This includes development and implementation of AES's public information and media relations programs (in particular press releases)

ATMOSPHERIC ENVIRONMENT SERVICE
ORGANIZATION 1992 – 93



1992 93 Budget

ATMOSPHERIC ENVIRONMENT SERVICE

5 1 2 BY ORGANIZATIONAL UNIT

	PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
OFFICE OF THE ASSISTANT DEPUTY MINISTER	6 0	384 2	394 8	13 9		792 9
POLICY, PLANNING AND ASSESSMENT	18 0	988 8	174 2	24 6		1187 6
CORPORATE PLANNING AND ACCOUNTABILITY	5 0	278 6	90 0	5 0		373 6
ADVISOR ON INTERNATIONAL AFFAIRS	3 0	173 8	239 7	9 6		423 1
CLIMATE CHANGE NEGOTIATIONS OFFICE	5 0	309 5	221 2	10 0		540 7
COMMUNICATION DIRECTORATE	2 0	124 0	115 2			239 2
CANADIAN CLIMATE CENTRE	152 1	7862 5	4772 0	3326 0		15960 5
PERSONNEL DIRECTORATE	41 4	2756 4	562 5	31 0		3349 9
FINANCE AND ADMINISTRATION BRANCH	106 8	5109 2	4066 8	6771 7	1296 0	17243 7
WEATHER SERVICES DIRECTORATE	255 4	13661 8	19307 6	14729 7	96 0	47795 1
ATMOSPHERIC RESEARCH DIRECTORATE	208 9	11683 3	8349 1	5562 3	944 0	26538 7
CANADIAN METEOROLOGICAL CENTRE	212 5	11627 7	15468 0	867 4		27963 1
ATLANTIC REGION	224 2	12317 4	3798 1	551 8		16667 3
QUEBEC REGION	202 4	11434 2	4869 7	678 9		16982 8
ONTARIO REGION	200 4	10977 4	2898 0	410 6		14286 0
CENTRAL REGION	247 7	13313 2	6711 8	643 2		20668 2
WESTERN REGION	265 1	14807 1	4270 3	485 9		19563 3
PACIFIC REGION	197 3	10773 6	4535 7	606 6		15915 9
CANADIAN FORCES WEATHER SERVICE	111 0	6352 3	725 0			7077 3
AES TOTAL	2464 2	134935 0	81569 7	34728 2	2336 0	253568 9

1992-93 Budget
($000)

5 1 3 ATMOSPHERIC ENVIRONMENT SERVICE

RECONCILIATION TO MAIN ESTIMATES

AND NET REFERENCE LEVEL

1)	Allocated Within AES (Total in Program Digest)	$253,568 9
2)	Plus Employee Benefit Plan	21,280 0
3)	Plus Treasury Board X Budget	4,786 1
4)	Plus Frozen Allotment	2,461 0
5)	Main Estimates (Blue Book)	282,096 0
6)	Less Vote Netted Revenue	33,696 8
7)	Less Non-tax Revenue	1,803 0
8)	1992/93 Net Reference Level	$246,569 2

5 1 4 AES Main Estimates By Organization and Input Factor 1992/93

	PY	SALARY	OVERTIME	OPC	CEBP	O&M	CAPITAL	G&C	TOTAL (1)
ADMA	6 0	375 5	4 4	4 3	61 5	180 4	15 0	0 0	641 1
APDG	18 0	973 9	3 3	11 6	158 2	174 2	26 0	0 0	1347 2
APEC	5 0	304 2	1 0	3 3	48 7	90 0	2 0	0 0	449 2
AIA	3 0	166 4	4 4	3 0	27 8	248 3	10 0	0 0	459 9
AOCD	3 0	305 0	1 8	2 3	49 5	0 0	10 0	0 0	368 6
CD	2 0	124 0	0 0	0 8	19 8	122 4	0 0	0 0	267 0
AWDG	262 4	11202 5	660 6	1738 7	2185 9	19505 6	13782 6	96 0	49171 9
CFWS	111 0	5957 3	204 0	191 0	1016 4	725 0	0 0	0 0	8093 7
PAED	197 6	9523 0	851 6	399 0	1723 8	4847 9	670 3	0 0	18015 6
WAED	266 1	12297 3	1809 0	700 8	2369 1	4230 3	796 4	0 0	22202 9
CAED	250 7	10886 2	1685 4	741 6	2130 1	6857 9	873 8	0 0	23175 0
OAED	200 4	9304 3	1330 5	342 6	1756 4	2973 0	472 3	0 0	16179 1
QAED	201 4	9610 1	1286 2	537 9	1829 5	5090 3	723 2	0 0	19077 2
MAED	224 2	10623 8	1131 1	562 5	1970 8	3838 1	604 9	0 0	18731 2
CCDG	152 1	7657 5	53 3	35 7	1258 0	4811 1	2571 6	0 0	16387 2
ARDG	201 4	11584 5	399 2	152 2	1960 3	8326 5	2531 8	944 0	25898 5
CMDG	212 5	10768 2	591 1	414 5	1883 8	18062 1	458 2	0 0	32177 9
AABD	108 8	2842 9	56 9	545 1	618 4	4191 4	2240 7	1296 0	11791 4
AHRD	41 4	1598 8	23 9	1133 7	441 0	504 8	31 6	0 0	3733 8
TOTAL	2467 0	116105 4	10097 7	7520 6	21509 0	84779 3	25820 4	2336 0	268168 4

Notes (1) VNR included
OPC - Other Personnel Costs
CEBP - Employee Fringe Benefits
G&C - Grants and Contributions

5 1 5 VOTE NETTED REVENUE ALLOCATIONS (1992/93)

SALARY
(000's $)

	CMDG	AABD	AWDG + Regions	CFWS	TOTAL	P-Ys
DOT-MARINE			1666 0		1666 0	31 0
DOT-AIR			8284 8		8284 8	141 0
EM&R			39 9		39 9	
DND		6746 0			6746 0	111 0
MISCELLANEOUS					0 0	
TOTAL SAL		6746 0	9990 7	0 0	16736 7	283 0

NON-SALARY
(000's $)

	CMDG	AABD	AWDG + Regions	CFWS	TOTAL	P-Ys
DOT-MARINE			12659 0		12659 0	
DOT-AIR	81 0		2592 5		2673 5	
EM&R			27 4		27 4	
DND		219 2	146 2	1059 6	1425 0	
MISCELLANEOUS	148 7		26 5		175 2	
TOTAL O&M	229 7	219 2	15451 6	1059 6	16960 1	
TOTAL VNR (000's $)	229 7	6965 2	25442 3	1059 6	33696 8	283 0

5 1 6 PERSON-YEARS BY ORGANIZATION AND BY LOCATION
(TOTAL 2464 2)

	Location	Branch	Region/ Directorate
OFFICE OF THE ASSISTANT DEPUTY MINISTER			6 0
Downsview, Ont	3 0		
Ottawa, Ont	3 0		
POLICY, PLANNING AND ASSESSMENT			18 0
Ottawa, Ont	18 0		
CORPORATE PLANNING AND ACCOUNTABILITY BRANCH			5 0
Downsview, Ontario	5 0		
ADVISOR ON INTERNATIONAL AFFAIRS			3 0
Downsview, Ont	3 0		
CLIMATE CHANGE NEGOTIATIONS OFFICE			5 0
Ottawa, Ontario	5 0		
COMMUNICATIONS DIRECTORATE			2 0
Ottawa, Ontario	1 0		
Downsview, Ontario	1 0		
FINANCE AND ADMINISTRATION			106 8
Downsview, Ont	106 8		
HUMAN RESOURCES BRANCH			41 4
Downsview, Ont	41 4		
ATMOSPHERIC RESEARCH DIRECTORATE			208 9
Director General's Office		6 0	
Downsview, Ont	5 0		
Vancouver, B C	1 0		
Air Quality Research Branch		112 4	
Downsview, Ont	112 4		
Meteorological Services Research Branch		85 5	
Dorval, Que	25 0		
Downsview, Ont	60 5		
Environmental Integration Services Branch		5 0	
Downsview, Ont	5 0		
CANADIAN CLIMATE CENTRE			152 1
Director General's Office		7 0	
Downsview, Ont	7 0		
Climate Planning and Liaison		6 5	
Downsview, Ont	6 5		
Climate Research Branch		40 0	
Downsview, Ont	32 0		
Saskatoon, Sask	8 0		
Climate Adaptation Branch		44 5	
Downsview, Ont	44 5		

	Station Type *	Location	Branch	Region or Directorate
Climate Information Branch			49 0	
Downsview, Ont	49 0			
Climate Response Strategy Branch			5 1	
Downsview, Ont	5 1			
CANADIAN METEOROLOGICAL CENTRE				212 5
Director General's Office			12 5	
Dorval, Quebec		12 5		
Operations Branch			53 0	
Dorval, Quebec		53 0		
Informatics Branch			109 9	
Dorval, Quebec		38 0		
Downsview, Ontario		71 0		
Development Branch			36 0	
Dorval, Quebec		36 0		
Facilities Management			2 0	
Dorval, Quebec		2 0		
WEATHER SERVICES DIRECTORATE				255 4
Toronto (Downsview), Ontario		159 2		
- Directors General's Office			21 7	
- Program Branch			82 7	
- Ice Branch			11 0	
- Training Branch			25 0	
- Major Capital			18 8	
Ottawa, Ontario		58 2		
- Ice Branch			58 2	
Cornwall, Ontario		31 0		
- Training Branch			31 0	
Dorval, Quebec		8 0		
- Training Branch			8 0	
ATLANTIC REGION				224 2
Charlottetown, P E I	W04	4 0		
Churchill Falls, Labrador	WS3	4 0		
Fredericton, N B	W04	5 0		
Gander, NFLD				
- Newfoundland Weather Centre	W01/W04	42 0		
Halifax, N S (Bedford)				
- Regional Headquarters		76 2		
- Maritmes Weather Centre	W01/W04	51 0		
Moncton, N B	W04	10 0		
Sable Island, N S	WS1	5 0		
Saint John, N B	W04	5 0		
St John's, Nfld	W04	9 0		
Stephenville, Nfld	WS2	3 0		
Sydney, N S	W04	6 0		
Yarmouth, N S	W04	4 0		

* See page 98 for definitions of station types

QUEBEC REGION			202 4
Baie Comeau, Que	WO4/WS3	6 0	
Iqaluit, N W T	WO4/WS2	6 0	
Inukjuak, N W T	WS1	5 0	
Kuujjuaq, Que	WS2	3 0	
La Grande IV, Que	WS1	4 0	
Maniwaki, Que	WS1	5 0	
Mirabel, Que	WO4/WS3	7 0	
Montreal, Que			
- Regional Headquarters (Ville St Laurent)		64 9	
- Quebec Weather Centre (Ville St Laurent)	WO1	57 5	
- International Airport Weather Office (Dorval)	WO4	13 0	
- International Airport Weather Station (Dorval)	WS3	3 0	
Quebec City, Que	WO4/WS3	7 0	
Saguenay/Lac St-Jean, Que	WO4	2 0	
Sept-Iles, Que	WO4/WS2	4 0	
Sherbrooke, Que	WO4	2 0	
St Hubert, Que	WO4/WS3	6 0	
Trois Rivieres, Que	WO4	1 0	
Val d'Or, Que	WO4	6 0	
ONTARIO REGION			202 4
Hamilton, Ont	WO4	4 0	
Kingston, Ont	WO4	3 0	
London, Ont	WO4	5 0	
Moosonee, Ont	WS1	4 0	
Niagara District, Ont	WO4	2 0	
North Bay, Ont	WO4	2 0	
Ottawa, Ont	WO4	9 5	
Peterborough, Ont	WO4	2 0	
Pickle Lake, Ont	WS1	1 0	
Sarnia, Ont	WO4	2 0	
Sault Ste Marie, Ont	WO4	6 0	
Sudbury, Ont	WO4	6 0	
Thunder Bay, Ont	WO4	7 0	
Toronto, Ont			
- Regional Headquarters		68 4	
- Ontario Weather Centre	WO1	38 5	
- International Airport Weather Office	WO4	26 0	
Big Trout Lake, Ont	WS1	2 0	
Waterloo-Wellington, Ont	WO4	2 0	
Windsor, Ont	WO4	7 0	
CENTRAL REGION			247 7
Alert, N W T	WS1	2 0	
Baker Lake, N W T	WS2	2 0	
Brandon, Man	WO4	1 0	
Broadview, Sask	WS3	5 0	
Churchill, Man	WS1	7 0	
Cree Lake, Sask	WS3	4 0	

* see page 98 for definitions of station types

Dauphin, Man	WO4	1	0
Estevan, Sask	WS3	4	0
Eureka, N W T	WS1	7	0
Hall Beach, N W T	WS1	5	0
Mould Bay, N W T	WS1	6	0
Prince Albert, Sask	WO4	3	0
Regina, Sask	WO3	17	0
Resolute, N W T	WO4/WS2	5	0
Saskatoon, Sask			
- Weather Office	WO4	11	0
- Inspection		3	0
S W Saskatchewan District Office		1	0
The Pas, Man	WS1	6	0
Thompson, Man	WO4	1	0
Winnipeg, Man			
- Regional Headquarters		96	7
- Prairie Weather Centre	WO1	44	0
- International Airport Weather Office	WO4	18	0
Yorkton District Office		1	0
WESTERN REGION			265 1
Banff, Alta	WO4	3	0
Calgary, Alta	WO4	16	0
Cambridge Bay, N W T	WS1	6	0
Cape Parry, N W T	WS3	3	0
Coronation, Alta	WS3	2	0
Edmonton, Alta			
- Regional Headquarters		88	1
- Alberta Weather Centre	WO1/WO4	32	0
- Arctic Weather Centre	WO1/WO4	31	0
- International Airport Weather Office	WO4	6	0
- Municipal Airport Weather Office	WO4	5	0
Edson, Alta	WS3	4	0
Fort McMurray, Alta	WS3	3	0
Fort Reliance, N W T	WS3	3	0
Fort Smith, N W T	WS2	3	0
Grande Prairie, Alta	WO4	4	0
Inuvik, N W T	WO4/WS2	8	0
Jasper, Alta	WS3	3	0
Lethbridge, Alta	WO4	5	0
Norman Wells, N W T	WS2	3	0
Pincher Creek, Alta	WS3	1	0
Rocky Mountain House, Alta	WS3	3	0
Slave Lake, Alta	WS3	4	0
Stony Plain, Alta	WS2	3	0
Whitehorse, Yukon			
- Yukon Weather Centre	WO1/WO4	18	0
- Weather Station	WS2	3	0
Yellowknife, N W T	WO3	6	0

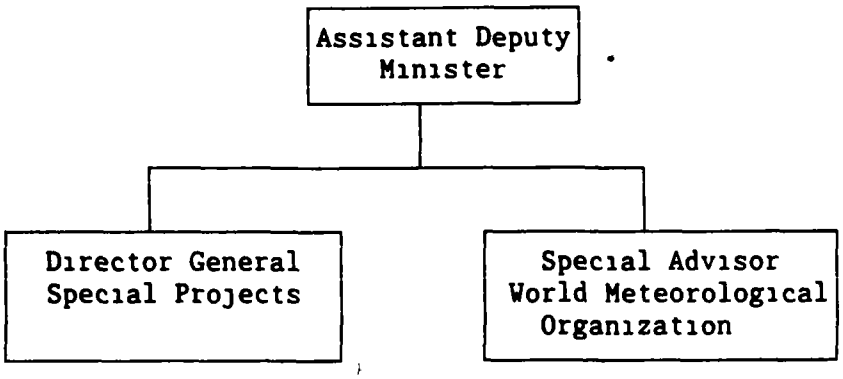
* see page 98 for definitions of station types

PACIFIC REGION			197 3
Cape St James, B C	WS3	1 5	
Castlegar, B C	W04	3 0	
Dease Lake, B C	WS3	2 0	
Fort St John, B C	W04	3 0	
Fort Nelson, B C	W04/WS2	3 0	
Hope, B C	WS3	3 0	
Kamloops, B C	W04	4 0	
Kelowna, B C	W04	7 0	
Penticton, B C	W04	2 0	
Port Alberni, B C	WS3	1 0	
Port Hardy, B C	WS2/W04	4 0	
Prince George, B C	WS2/W04	8 0	
Revelstoke, B C	WS3	2 0	
Terrace, B C	W04	3 0	
Vancouver, B C			
- Regional Headquarters		79 3	
- Pacific Weather Centre	W01	43 5	
- Lower Mainland Weather Office	W04	12 0	
- International Airport Weather Station	WS3	5 0	
Vernon, B C	WS2	2 0	
Victoria, B C			
- Weather Office	W03	9 0	
CANADIAN FORCES WEATHER SERVICE		111 0	111 0
AES TOTAL			2464 2

Station types

W01 - a primary forecast office which provides forecasts, consultation and in some cases, presentation services
W03 - provides consultation and presentation services to a wide variety of users, in addition to taking surface weather observations
W04 - provides presentation services to a wide variety of users, in addition to taking surface weather observations
WS1 - takes both surface and upper air (radiosonde and rawinsonde) observations and provides weather information service
WS2 - takes upper air observations
WS3 - maintains a full or partial surface observing program, with observations taken by AES technicians and provides weather information service

5 2 OFFICE OF THE ASSISTANT DEPUTY MINISTER



5 2 1 FUNCTIONS OF THE OFFICE OF THE ADM (6 0 PY, $792 9 K)

The Assistant Deputy Minister (ADM)

- provides executive direction to, and management of, the Atmospheric Environment Service,
- participates in the corporate executive management of Environment Canada,
- serves as the alternate head of the Canadian Delegation to the Intergovernmental Negotiating Committee on Climate Change (INC) and co-chairs the INC Working Group on Implementation Measures,
- is Canada's Permanent Representative to, and serves on the Executive Council of, the World Meteorological Organization, and
- is the principal Canadian delegate to the Intergovernmental Panel on Climate Change (IPCC)

The Director General, Special Projects reports directly to the ADM and is responsible for

- developing Environment Canada's objectives for participation in the Canadian program for the United Nations International Decade for Natural Disaster Reduction (IDNDR)

The Special Advisor, World Meteorological Organization reports directly to the ADM and is responsible for

- assisting in representing Canada on the World Meteorological Organization, by being a full-time representive on the body

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY SUB ACTIVITY (SA 1) AND SUB SUB ACTIVITY (SA 2)

OFFICE OF THE ASSISTANT DEPUTY MINISTER

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
	0810	MANAGEMENT	6 0	384 2	394 8	13 9		792 9
		TOTAL	6 0	384 2	394 8	13 9		792 9
1000		WEATHER SERVICES						
4000		CLIMATE SERVICES AND RESEARCH						
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			6 0	384 2	394 8	13 9		792 9

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

OFFICE OF THE ASSISTANT DEPUTY MINISTER

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED	4 6	297 9	306 2	10 8		614 9
1 2 2	POLLUTION WARNING	0 1	4 2	4 3	0 2		8 7
	TOTAL	4 7	302 1	310 5	11 0		623 6
2 1 1	REDUCE GAP	0 6	40 2	41 3	1 4		82 9
2 1 4	ENVIRONMENT/ECONOMY	0 4	23 1	23 7	0 8		47 6
	TOTAL	1 0	63 3	65 0	2 2		130 5
3 1 2	KNOWLEDGEABLE DECISIONS	0 3	18 8	19 3	0 7		38 8
	TOTAL	0 3	18 8	19 3	0 7		38 8
GRAND TOTAL		6 0	384 2	394 8	13 9		792 9

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET ($000)

TOTAL BUDGET BY SA1, SA2 AND SUB RESULTS

OFFICE OF THE ASSISTANT DEPUTY MINISTER

Sa1 Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
0800 0810		614 9			8 7	82 9			47 6		38 8		792 9
TOTAL		614 9			8 7	82 9			47 6		38 8		792 9
GRAND TOTAL		614 9			8 7	82 9			47 6		38 8		792 9

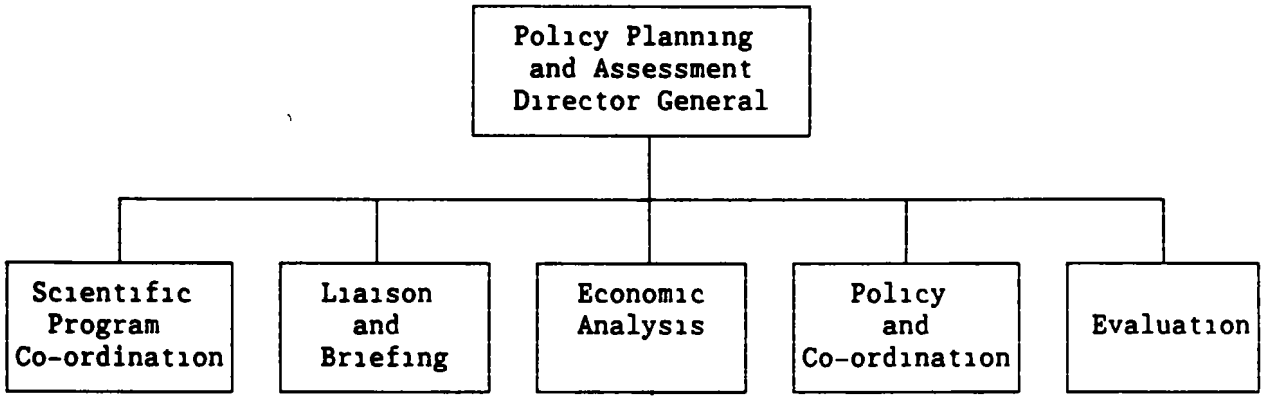
ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET

PERSON YEARS BY SA1, SA2 AND SUB RESULTS

OFFICE OF THE ASSISTANT DEPUTY MINISTER

Sa1 Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
0800 0810		4 6			0 1	0 6			0 4		0 3		6 0
TOTAL		4 6			0 1	0 6			0 4		0 3		6 0
GRAND TOTAL		4 6			0 1	0 6			0 4		0 3		6 0

5 3 POLICY, PLANNING AND ASSESSMENT DIRECTORATE



5 3 1 FUNCTIONS OF THE POLICY PLANNING AND ASSESSMENT DIRECTORATE (18 0 PY, $1,187 6 K)

The Director General, Policy Planning and Assessment (APDG) is accountable to the Assistant Deputy Minister (ADM), Atmospheric Environment Service (AES) for the following

1) Ministerial needs are satisfactorily met and concerns handled expeditiously and sensitively,

2) The focus of the entire AES policy and directional framework is relevant to the government's agenda and supportive of the public interest,

3) The AES policies and strategies are balanced and reconciled effectively with the varied interests at play,

4) There is broad support among partners and stakeholders for the policies and directions espoused by AES,

5) The overall performance of AES in attaining results corresponds to public needs and is consistent with public service management imperatives,

6) National and Regional DGs are supported in the discharge of their programs and operational responsibilities through functional direction, interpretation and advice in policy-related matters, as required,

7) The interests of AES are represented and advanced in a variety of decision-making and consultative fora nationally, and in particular in the National Capital Region, and

8) The operations of the Directorate are managed efficiently and APDG contributes constructively, as a member of the AES executive team, to the overall management of the Service

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB ACTIVITY (SA 1) AND SUB-SUB ACTIVITY (SA 2)

POLICY, PLANNING AND ASSESSMENT

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
	0810	MANAGEMENT	18 0	988 8	174 2	24 6		1187 6
		TOTAL	18 0	988 8	174 2	24 6		1187 6
1000		WEATHER SERVICES						
4000		CLIMATE SERVICES AND RESEARCH						
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			18 0	988 8	174 2	24 6		1187 6

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

POLICY, PLANNING AND ASSESSMENT

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 1	CANADIANS ARE AWARE	0 3	27 0	3 7	1 5		32 2
1 1 2	CANADIANS ARE WARNED	0 4	36 0	4 8	2 0		42 8
1 1 3	SAFE DESIGN	0 3	27 0	3 6	1 5		32 1
1 2 1	POLLUTION AWARENESS	0 5	34 5	6 1	2 5		43 1
1 2 2	POLLUTION WARNING	0 5	34 3	6 0	2 3		42 6
	TOTAL	2 0	158 8	24 2	9 8		192 8
2 1 1	REDUCE GAP	2 0	140 0	20 0			160 0
2 1 2	KNOWLEDGE/INFORMATION/VALUE	5 0	220 0	45 0			265 0
2 1 4	ENVIRONMENT/ECONOMY	3 0	160 0	30 0			190 0
	TOTAL	10 0	520 0	95 0			615 0
3 1 1	AWARE ACTIVITIES THREAT	1 0	50 0	10 0			60 0
3 1 2	KNOWLEDGEABLE DECISIONS	5 0	260 0	45 0	14 8		319 8
	TOTAL	6 0	310 0	55 0	14 8		379 8
	TOTAL	18 0	8	174 2	24 6		1187 6

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET ($000)

TOTAL BUDGET BY SA1, SA2 AND SUB-RESULTS

POLICY, PLANNING AND ASSESSMENT

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
0800	0810	32 2	42 8	32 1	43 1	42 6	160 0	265 0		190 0	60 0	319 8		1187 6
	TOTAL	32 2	42 8	32 1	43 1	42 6	160 0	265 0		190 0	60 0	319 8		1187 6
GRAND TOTAL		32 2	42 8	32 1	43 1	42 6	160 0	265 0		190 0	60 0	319 8		1187 6

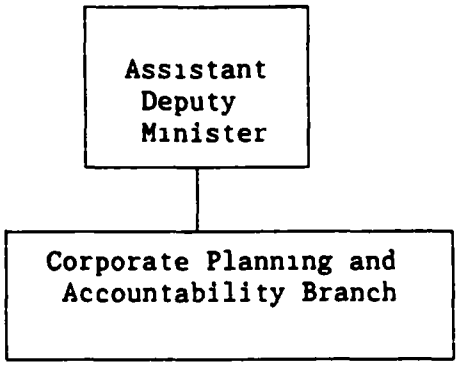
ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET

PERSON YEARS BY SA1, SA2 AND SUB RESULTS

POLICY, PLANNING AND ASSESSMENT

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
0800	0810	0 3	0 4	0 3	0 5	0 5	2 0	5 0		3 0	1 0	5 0		18 0
	TOTAL	0 3	0 4	0 3	0 5	0 5	2 0	5 0		3 0	1 0	5 0		18 0
GRAND TOTAL		0 3	0 4	0 3	0 5	0 5	2 0	5 0		3 0	1 0	5 0		18 0

5 4 CORPORATE PLANNING AND ACCOUNTABILITY BRANCH



5 4 1 FUNCTION OF THE CORPORATE PLANNING AND ACCOUNTABILITY BRANCH (5 PY, $ 373 6 K)

The role of the organization is to facilitate effective Service level decision-making within AES, principally through the management of Service level planning, reporting and accountability mechanisms This role includes

- provide lead in establishing requirements for preparation of plans and reports,
- provide input to Central Agency reporting which is focused primarily on resource allocation and utilization,
- provide lead in managing the update and validation of the AES Result Model and coordinate the ongoing development of the Result Measurement exercise,
- provide secretariat to AMC, serve as Corporate Secretary as required,
- provide lead or support to internal program evaluations and other management studies as required,
- provide point of contact for all external AES programs,
- provide tracking of Green Plan deliverables, ADM's priority issues, and audit recommendations,
- provide a point of contact with Treasury Board, and
- preparation of the AES Program Digest

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB-ACTIVITY (SA 1) AND SUB SUB ACTIVITY (SA 2)

CORPORATE PLANNING AND ACCOUNTABILITY

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
	0810	MANAGEMENT	5 0	278 6	90 0	5 0		373 6
		TOTAL	5 0	278 6	90 0	5 0		373 6
1000		WEATHER SERVICES						
4000		CLIMATE SERVICES AND RESEARCH						
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			5 0	278 6	90 0	5 0		373 6

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

CORPORATE PLANNING AND ACCOUNTABILITY

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED	3 9	216 1	69 8	5 0		290 9
1 2 2	POLLUTION WARNING	0 1	3 1	1 0			4 1
	TOTAL	4 0	219 2	70 8	5 0		295 0
2 1 1	REDUCE GAP	0 5	29 0	9 4			38 4
2 1 4	ENVIRONMENT/ECONOMY	0 3	16 7	5 4			22 1
	TOTAL	0 8	45 7	14 8			60 5
3 1 2	KNOWLEDGEABLE DECISIONS	0 2	13 7	4 4			18 1
	TOTAL	0 2	13 7	4 4			18 1
GRAND TOTAL		5 0	278 6	90 0	5 0		373 6

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET ($000)

TOTAL BUDGET BY SA1, SA2 AND SUB-RESULTS

CORPORATE PLANNING AND ACCOUNTABILITY

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
0800	0810		290 9			4 1	38 4			22 1		18 1		373 6
	TOTAL		290 9			4 1	38 4			22 1		18 1		373 6
GRAND TOTAL			290 9			4 1	38 4			22 1		18 1		373 6

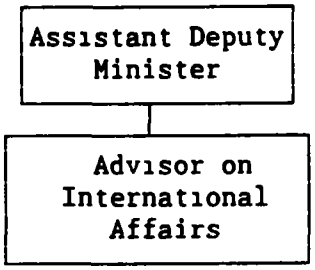
ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET

PERSON YEARS BY SA1, SA2 AND SUB-RESULTS

CORPORATE PLANNING AND ACCOUNTABILITY

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
0800	0810		3 9			0 1	0 5			0 3		0 2		5 0
	TOTAL		3 9			0 1	0 5			0 3		0 2		5 0
GRAND TOTAL			3 9			0 1	0 5			0 3		0 2		5 0

5 5 ADVISOR ON INTERNATIONAL AFFAIRS



5 5 1 FUNCTIONS OF THE ADVISOR ON INTERNATIONAL AFFAIRS (3 0 PY, $423 1 K)

Reporting to the ADM, AES, the Office of International Affairs is responsible for

- facilitating the coordination of AES's multilateral and bilateral activities
- coordinating international activities with Corporate Policy Group - International Affairs Directorate, External Affairs and International Trade Canada, other Government Departments, Provincial Governments, universities and the Private Sector
- supporting the Assistant Deputy Minister in her role with the World Meteorological Organization, other UN Agencies and international organizations

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB ACTIVITY (SA-1) AND SUB-SUB ACTIVITY (SA 2)

ADVISOR ON INTERNATIONAL AFFAIRS

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
	0810	MANAGEMENT	3 0	173 8	239 7	9 6		423 1
		TOTAL	3 0	173 8	239 7	9 6		423 1
1000		WEATHER SERVICES						
4000		CLIMATE SERVICES AND RESEARCH						
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			3 0	173 8	239 7	9 6		423 1

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

ADVISOR ON INTERNATIONAL AFFAIRS

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED	1 0	57 9	79 9	3 2		141 0
1 2 2	POLLUTION WARNING	1 0	57 9	79 9	3 2		141 0
	TOTAL	2 0	115 8	159 8	6 4		282 0
2 1 2	KNOWLEDGE/INFORMATION/VALUE	1 0	58 0	79 9	3 2		141 1
	TOTAL	1 0	58 0	79 9	3 2		141 1
GRAND TOTAL		3 0	173 8	239 7	9 6		423 1

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET ($000)

TOTAL BUDGET BY SA1, SA2 AND SUB RESULTS

ADVISOR ON INTERNATIONAL AFFAIRS

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
0800	0810		141 0			141 0		141 1						423 1
	TOTAL		141 0			141 0		141 1						423 1
GRAND TOTAL			141 0			141 0		141 1						423 1

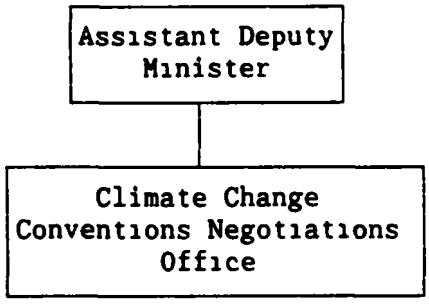
ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET

PERSON YEARS BY SA1, SA2 AND SUB RESULTS

ADVISOR ON INTERNATIONAL AFFAIRS

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
0800	0810		1 0			1 0		1 0						3 0
	TOTAL		1 0			1 0		1 0						3 0
GRAND TOTAL			1 0			1 0		1 0						3 0

5 6 CLIMATE CHANGE CONVENTIONS NEGOTIATIONS OFFICE



5 6 1 FUNCTIONS OF THE CLIMATE CHANGE CONVENTIONS NEGOTIATIONS OFFICE (5 0 PY, $540 7 K)

Reporting to the Assistant Deputy Minister, AES, the Climate Change Convention Negotiations Office is responsible to ensure that

- Canada's negotiating positions on the issues to be addressed in the international negotiations leading to the signature in 1992 of a Framework Convention on Climate Change and any follow-on negotiations promote broad based international actions on climate change as well as Canada's environmental goals and are consistent with domestic policy directions on the economy, energy, forestry, agriculture, etc

- The participation in, and preparations for, negotiations both before and after the UN Conference on Environment in Rio de Janeiro, are based on the best available scientific knowledge

- All primary stakeholders in the climate change issue in Canada are consulted on the Canadian positioning at the negotiating sessions (including provincial/territorial governments, other federal department, and relevant non-government organizations)

- The Assistant Deputy Minister is supported in her role as a member of the Bureau of the Intergovernmental Negotiating Committee

- Canada pursues effective bilateral diplomacy by conducting country studies with key developing countries in an effort to have as many nations as possible prepared to sign and implement the Convention

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY SUB ACTIVITY (SA 1) AND SUB SUB ACTIVITY (SA 2)

CLIMATE CHANGE NEGOTIATIONS OFFICE

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
	0810	MANAGEMENT	5 0	309 5	221 2	10 0		540 7
		TOTAL	5 0	309 5	221 2	10 0		540 7
1000		WEATHER SERVICES						
4000		CLIMATE SERVICES AND RESEARCH						
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			5 0	309 5	221 2	10 0		540 7

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

CLIMATE CHANGE NEGOTIATIONS OFFICE

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
3 1 2	KNOWLEDGEABLE DECISIONS	5 0	309 5	221 2	10 0		540 7
	TOTAL	5 0	309 5	221 2	10 0		540 7
GRAND TOTAL		5 0	309 5	221 2	10 0		540 7

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET ($000)

TOTAL BUDGET BY SA1, SA2 AND SUB RESULTS

CLIMATE CHANGE NEGOTIATIONS OFFICE

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
0800	0810											540 7		540 7
	TOTAL											540 7		540 7
GRAND TOTAL												540 7		540 7

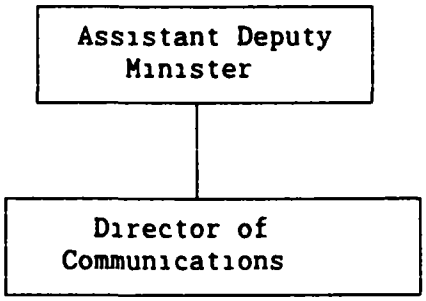
ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET

PERSON YEARS BY SA1, SA2 AND SUB RESULTS

CLIMATE CHANGE NEGOTIATIONS OFFICE

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
0800	0810											5 0		5 0
	TOTAL											5 0		5 0
GRAND TOTAL												5 0		5 0

5 7 COMMUNICATIONS DIRECTORATE



5 7 1 FUNCTIONS COMMUNICATIONS DIRECTORATE (2 0 PY, $ 239 2 K)

The Director of Communications reports in line to the Director General, Communications and functionally to the Assistant Deputy Minister, AES

The Directorate is responsible for

1) ensuring AES managers are aware of the public environment (public needs, wants, perceptions and understandings as they relate to AES issues and concerns),

2) developing and implementing communications plans to ensure the various publics are made fully aware of AES programs and policies,

3) ensuring AES has a strong corporate image and employees are aware of service policies and objectives,

4) providing strategic communications advice to the AES management team, and

5) effective and efficient management of the communications function

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB ACTIVITY (SA 1) AND SUB SUB ACTIVITY (SA 2)

COMMUNICATION DIRECTORATE

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
	0830	COMMON SUPPORT SERVICES	2 0	124 0	115 2			239 2
		TOTAL	2 0	124 0	115 2			239 2
1000		WEATHER SERVICES						
4000		CLIMATE SERVICES AND RESEARCH						
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			2 0	124 0	115 2			239 2

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

COMMUNICATION DIRECTORATE

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 1	CANADIANS ARE AWARE	0 5	31 0	28 8			59 8
1 2 1	POLLUTION AWARENESS	0 5	31 0	28 8			59 8
	TOTAL	1 0	62 0	57 6			119 6
2 1 2	KNOWLEDGE/INFORMATION/VALUE	0 5	31 0	28 8			59 8
	TOTAL	0 5	31 0	28 8			59 8
3 1 1	AWARE ACTIVITIES THREAT	0 5	31 0	28 8			59 8
	TOTAL	0 5	31 0	28 8			59 8
GRAND TOTAL		2 0	124 0	115 2			239 2

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET ($000)

TOTAL BUDGET BY SA1, SA2 AND SUB-RESULTS

COMMUNICATION DIRECTORATE

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
0800	0830	59 8			59 8			59 8			59 8			239 2
	TOTAL	59 8			59 8			59 8			59 8			239 2
GRAND TOTAL		59 8			59 8			59 8			59 8			239 2

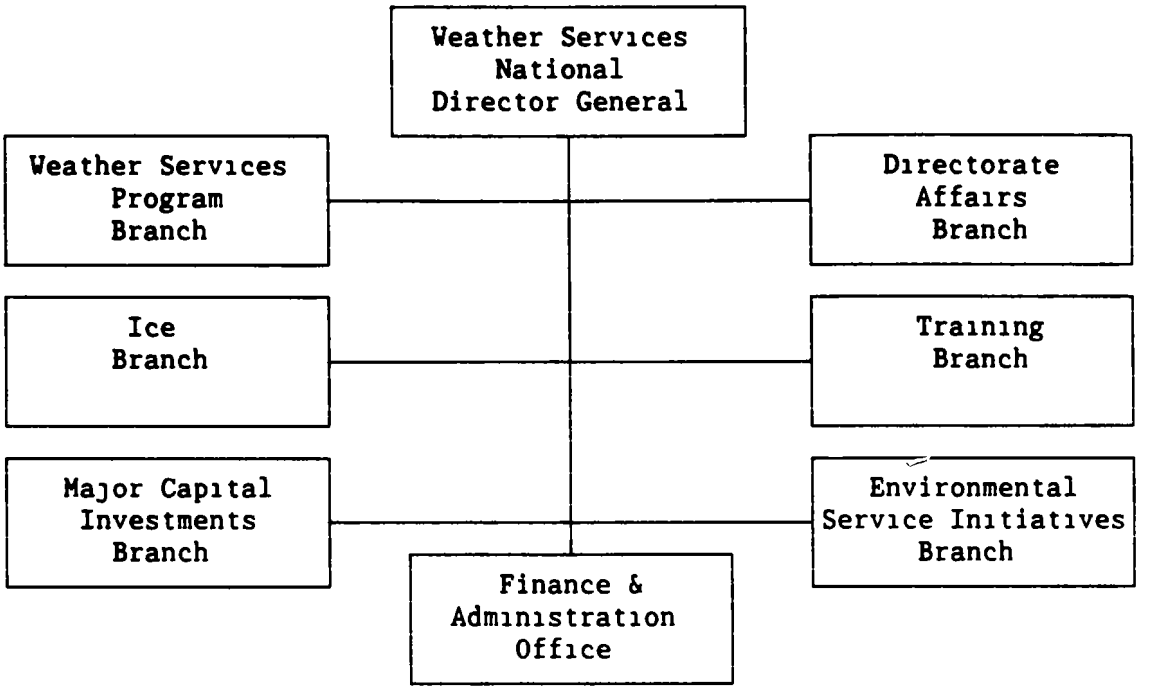
ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET

PERSON YEARS BY SA1, SA2 AND SUB RESULTS

COMMUNICATION DIRECTORATE

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
0800	0830	0 5			0 5			0 5			0 5			2 0
	TOTAL	0 5			0 5			0 5			0 5			2 0
GRAND TOTAL		0 5			0 5			0 5			0 5			2 0

5 8 WEATHER SERVICES DIRECTORATE



5 8 1 FUNCTIONS WEATHER SERVICES DIRECTORATE (255 4 PY, $ 47,795 1 K)

WEATHER SERVICES NATIONAL DIRECTOR GENERAL (21 7 PY, $ 1645 1 K)

This Directorate is accountable for the overall program management of the Weather Services and Ice Services Programs setting the programs' direction and priorities; establishing the programs' plans, policies and standards, and reporting on assessment of the Weather Services and Ice Services Programs including data acquisition, forecast production and delivery to clients It supports all AES Programs including, the Climate Services Research Program and the Air Quality Services and Atmospheric Research Program through the provision of training, instrumentation testing, evaluation and development, as well as the provision of national support for the integration of climate and air quality and weather services delivery The National Director General is supported by the Directorate Affairs, Weather Services Program, Ice, Training, Major Capital Investments and Environmental Service Initiatives Branches, and the Finance and Administrational Office

Finance and Administration Office

The Finance and Administration Office provides pertinent financial analysis and reporting of the resources managed by the National Director General, Weather Service Directorate, for effective decision making within the directorate and the Weather and Ice Services Programs

Directorate Affairs Branch

The Directorate Affairs Branch manages, Program Information Services, and Corporate and Issue Advice units, to support the work of the National Director General, Weather Services Directorate It is also responsible for the Directorate's Results Measurement program.

Weather Services Program Branch (82 7 PY, $ 5,660 1 K)

The Weather Services Program Branch is accountable for national Weather Services Program priorities, policy, strategic and routine planning including resources, liaison/partnership with TC, DND, NWS and international agencies, data standards, product and service guidelines, program evaluation, national verification, national data acquisition support, and program delivery technologies The Branch is made up of five Divisions Priorities and Planning, Technology, Operational Support, Quality Assurance, and Standards and Evaluation, and the Weather Services Program Liaison Office

Ice Branch (68 2 PY, $ 21,974 9 K)

Ice Branch is accountable for the provision of ice condition information for decision support to operators in and near ice covered waters to result in safe, environmentally healthy and economic maritime enterprise, for the integration and provision of real-time information from an Ice Centre in Ottawa, for field operations which include data acquisition and detailed support to the Canadian Coast Guard's icebreaking, ship routing and regulatory functions, for the archival of historical data which are used along with global change models to support the design and planning of future marine operations, and for R&D which is carried out to support the effective and efficient continuation of service excellence in a scenario of decreasing tax-based resources

There are six Divisions in the Branch Four of the Divisions (Ice Forecasting, Ice Program Planning and Development, Ice Climatology & Applications and Ice Research) are located in Ottawa and are commonly referred to as Ice Centre Environment Canada (ICEC) The Director's Office and the Ice Reconnaissance Division are currently located in Downsview

Training Branch (64 0 PY, $ 3,963 0 K)

Training Branch manages training and development strategies and activities that provides employees with the knowledge and skills necessary for excellent job performance Training Branch is accountable for analyses of AES' training requirements, the design and development of training, including workshops, seminars, classroom-style training courses, and distance-learning programs, the delivery of training, and co-ordination of the delivery of training provided by others, the production and provision of training materials, and the technical editing of French documents Training Branch also provides a focal point for Departmental integrated training activities The Branch is composed of three Divisions Professional Training and Development, Technical Training and Development, and Training Coordination, Evaluation and Services

Major Capital Investments Branch (18 8 PY, $ 14,552 0 K)

The Major Capital Investments Branch is accountable for the development of appropriate life cycle management strategies for technological systems, for the identification of opportunities to improve productivity and lower costs through capital investments, for identification of opportunities to develop new or improved products and services through the application of technology, for planning and directing the use of major capital resources, for the establishment of projects to manage major capital initiatives, and for the provision of general direction to project managers Current projects being managed include those associated with

- Surface-based remote sensing systems, (Radar Data Processor and Doppler Radar Projects),
- Satellite based remote sensing systems, (GOES-90 Project),
- EDP systems, (RSERP and WSO Workstation Projects), and
- In situ data acquisition systems, (NAVAID Upper Air and READAC Autostation Projects)

Environmental Service Initiatives Branch

The Environmental Service Initiatives Branch is responsible for emerging issues that have broad Service implications The Branch

- leads the national coordination and support needed to develop and deliver Green Plan air quality services, Smog advisories and UVb Information, from AES Regional Offices,
- promotes and establishes collaborative efforts in providing environmental services, such as Smog and UVb advisories, with other government departments (federal, provincial and municipal), health agencies and the private sector
- designs and implements a management approach based upon extensive partnerships and assesses the effectiveness of these networks
- delivers Ozone Watch/Info-Ozone and provides support to the regions in integrating this service with operations

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB ACTIVITY (SA-1) AND SUB SUB ACTIVITY (SA 2)

WEATHER SERVICES DIRECTORATE

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
	1100	PUBLIC WEATHER SERVICES				531 0		531 0
	2000	DATA ACQUISITION	69 3	3639 2	419 1	6781 0		10839 3
	3000	WEATHER SERVICES SUPPORT SYSTEMS	117 9	6131 7	1692 0	4350 9	96 0	12270 6
		TOTAL	187 2	9770 9	2111 1	11662 9	96 0	23640 9
4000		CLIMATE SERVICES AND RESEARCH						
5000		ICE SERVICES						
	5100	ICE RECONNAISSANCE AND DATA ACQUISITION	22 0	1281 6	12503 0	50 0		13834 6
	5200	ICE ANALYSIS AND FORECASTING	33 0	1811 6	3621 7	600 5		6033 8
	5300	ICE CLIMATE SERVICES				25 0		25 0
	5400	ICE SERVICES MANAGEMENT SUPPORT SYSTEMS	7 2	406 0	306 0	68 0		780 0
	5500	ICE SERV RESEARCH AND DEVELOPMENT	6 0	391 7	765 8	2265 3		3422 8
		TOTAL	68 2	3890 9	17196 5	3008 8		24096 2
6000		AIR QUALITY SERVICES & RESEARCH						
	6700	AIR QUALITY & RESEARCH SUPPORT SERVICES				58 0		58 0
		TOTAL				58 0		58 0
GRAND TOTAL			255 4	13661 8	19307 6	14729 7	96 0	47795 1

1992 93 BUDGET BY RESULTS DEFINITION

WEATHER SERVICES DIRECTORATE

RESULTS DEFINITION			PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED		251 0	13410.5	19212 1	14727 7	96 0	47446 3
1 1 3	SAFE DESIGN		1 4	75 9	70 5	2 0		148 4
		TOTAL	252 4	13486 4	19282 6	14729 7	96 0	47594 7
2 1 3	ENVIRONMENT/HEALTH		2 0	115 4	25 0			140 4
2 1 4	ENVIRONMENT/ECONOMY		1 0	60 0				60 0
		TOTAL	3 0	175 4	25 0			200 4
	TOTAL		255 4	13661 8	19307 6	14729 7	96 0	47795 1

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB ACTIVITY (SA-1) AND SUB SUB-ACTIVITY (SA 2)

OFFICE OF THE DIRECTOR GENERAL WSD

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
	3000	WEATHER SERVICES SUPPORT SYSTEMS	21 7	986 3	658 8			1645 1
		TOTAL	21 7	986 3	658 8			1645 1
4000		CLIMATE SERVICES AND RESEARCH						
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			21 7	986 3	658 8			1645 1

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

OFFICE OF THE DIRECTOR GENERAL-WSD

RESULTS DEFINITION			PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2		CANADIANS ARE WARNED	19 7	870 9	633 8			1504 7
		TOTAL	19 7	870 9	633 8			1504 7
2 1 3		ENVIRONMENT/HEALTH	2 0	115 4	25 0			140 4
		TOTAL	2 0	115 4	25 0			140 4
GRAND TOTAL			21 7	986 3	658 8			1645 1

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY SUB-ACTIVITY (SA 1) AND SUB-SUB ACTIVITY (SA 2)

WEATHER SERVICES PROGRAM BRANCH

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800	MANAGEMENT & COMMON SUPPORT SERVICES							
1000	WEATHER SERVICES							
	2000 DATA ACQUISITION		58 5	2993 9	419 1	259 0		3672 0
	3000 WEATHER SERVICES SUPPORT SYSTEMS		24 2	1455 9	441 0	91 2		1988 1
		TOTAL	82 7	4449 8	860 1	350 2		5660 1
4000	CLIMATE SERVICES AND RESEARCH							
5000	ICE SERVICES							
6000	AIR QUALITY SERVICES & RESEARCH							
GRAND TOTAL			82 7	4449 8	860 1	350 2		5660 1

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

WEATHER SERVICES PROGRAM BRANCH

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED	82 7	4449 8	860 1	350 2		5660 1
	TOTAL	82 7	4449 8	860 1	350 2		5660 1
GRAND TOTAL		82 7	4449 8	860 1	350 2		5660 1

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB ACTIVITY (SA 1) AND SUB SUB-ACTIVITY (SA 2)

ICE SERVICES BRANCH

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
4000		CLIMATE SERVICES AND RESEARCH						
5000		ICE SERVICES						
	5100	ICE RECONNAISSANCE AND DATA ACQUISITION	22 0	1281 6	12503 0	50 0		13834 6
	5200	ICE ANALYSIS AND FORECASTING	33 0	1811 6	3621 7	227 5		5660 8
	5400	ICE SERVICES MANAGEMENT SUPPORT SYSTEMS	7 2	406 0	306 0	68 0		780 0
	5500	ICE SERV RESEARCH AND DEVELOPMENT	6 0	391 7	765 8	542 0		1699 5
		TOTAL	68 2	3890 9	17196 5	887 5		21974 9
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			68 2	3890 9	17196 5	887 5		21974 9

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

ICE SERVICES BRANCH

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED	66 8	3815 0	17126 0	885 5		21826 5
1 1 3	SAFE DESIGN	1 4	75 9	70 5	2 0		148 4
	TOTAL	68 2	3890 9	17196 5	887 5		21974 9
GRAND TOTAL		68 2	3890 9	17196 5	887 5		21974 9

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB-ACTIVITY (SA 1) AND SUB SUB ACTIVITY (SA 2)

TRAINING BRANCH

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800	MANAGEMENT & COMMON SUPPORT SERVICES							
1000	WEATHER SERVICES							
	3000 WEATHER SERVICES SUPPORT SYSTEMS		64 0	3231 3	515 0	120 7	96 0	3963 0
		TOTAL	64 0	3231 3	515 0	120 7	96 0	3963 0
4000	CLIMATE SERVICES AND RESEARCH							
5000	ICE SERVICES							
6000	AIR QUALITY SERVICES & RESEARCH							
GRAND TOTAL			64 0	3231 3	515 0	120 7	96 0	3963 0

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY RESULTS DEFINITION

TRAINING BRANCH

RESULTS DEFINITION			PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED		63 0	3171 3	515 0	120 7	96 0	3903 0
		TOTAL	63 0	3171 3	515 0	120 7	96 0	3903 0
2 1 4	ENVIRONMENT/ECONOMY		1 0	60 0				60 0
		TOTAL	1 0	60 0				60 0
GRAND TOTAL			64 0	3231 3	515 0	120 7	96 0	3963 0

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY SUB ACTIVITY (SA 1) AND SUB SUB-ACTIVITY (SA-2)

MAJOR CAPITAL INVESTMENTS

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
	1100	PUBLIC WEATHER SERVICES				531 0		531 0
	2000	DATA ACQUISITION	10 8	645 3		6522 0		7167 3
	3000	WEATHER SERVICES SUPPORT SYSTEMS	8 0	458 2	77 2	4139 0		4674 4
		TOTAL	18 8	1103 5	77 2	11192 0		12372 7
4000		CLIMATE SERVICES AND RESEARCH						
5000		ICE SERVICES						
	5200	ICE ANALYSIS AND FORECASTING				373 0		373 0
	5300	ICE CLIMATE SERVICES				25 0		25 0
	5500	ICE SERV RESEARCH AND DEVELOPMENT				1723 3		1723 3
		TOTAL				2121 3		2121 3
6000		AIR QUALITY SERVICES & RESEARCH						
	6700	AIR QUALITY & RESEARCH SUPPORT SERVICES				58 0		58 0
		TOTAL				58 0		58 0
GRAND TOTAL			18 8	1103 5	77 2	13371 3		14552 0

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

MAJOR CAPITAL INVESTMENTS

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED	18 8	1103 5	77 2	13371 3		14552 0
	TOTAL	18 8	1103 5	77 2	13371 3		14552 0
GRAND TOTAL		18 8	1103 5	77 2	13371 3		14552 0

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB ACTIVITY (SA-1) AND SUB-SUB ACTIVITY (SA 2)

CANADIAN FORCES WEATHER SERVICE

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
	1500	CANADIAN FORCES WEATHER SERVICES	111 0	6352 3	725 0			7077 3
		TOTAL	111 0	6352 3	725 0			7077 3
4000		CLIMATE SERVICES AND RESEARCH						
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			111 0	6352 3	725 0			7077 3

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

CANADIAN FORCES WEATHER SERVICE

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED	111 0	6352 3	725 0			7077 3
	TOTAL	111 0	6352 3	725 0			7077 3
GRAND TOTAL		111 0	6352 3	725 0			7077 3

1992 93 Budget

WEATHER SERVICES DIRECTORATE

BY ORGANIZATIONAL UNIT

($000)

	PY	SALARY	O&M	CAPITAL	G&C	TOTAL
TRAINING BRANCH	64 0	3231 3	515 0	120 7	96 0	3963 0
ICE SERVICES BRANCH	68 2	3890 9	17196 5	887 5		21974 9
MAJOR CAPITAL INVESTMENTS	18 8	1103 5	77 2	13371 3		14552 0
OFFICE OF THE DIRECTOR GENERAL WSD	21 7	986 3	658 8			1645 1
WEATHER SERVICES PROGRAM BRANCH	82 7	4449 8	860 1	350 2		5660 1
WSD TOTAL	255 4	13661 8	19307 6	14729 7	96 0	47795 1
CANADIAN FORCES WEATHER SERVICE	111 0	6352 3	725 0			7077 3
CANADIAN FORCES WEATHER SERVICE	111 0	6352 3	725 0			7077 3

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET ($000)

TOTAL BUDGET BY SA1, SA2 AND SUB-RESULTS

WEATHER SERVICES DIRECTORATE

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
1000	1100		531 0											531 0
	2000		10839 3											10839 3
	3000		12070 2						140 4	60 0				12270 6
	TOTAL		23440 5						140 4	60 0				23640 9
5000	5100		13834 6											13834 6
	5200		6033 8											6033 8
	5300		25 0											25 0
	5400		631 6	148 4										780 0
	5500		3422 8											3422 8
	TOTAL		23947 8	148 4										24096 2
6000	6700		58 0											58 0
	TOTAL		58 0											58 0
GRAND TOTAL			47446 3	148 4					140 4	60 0				47795 1

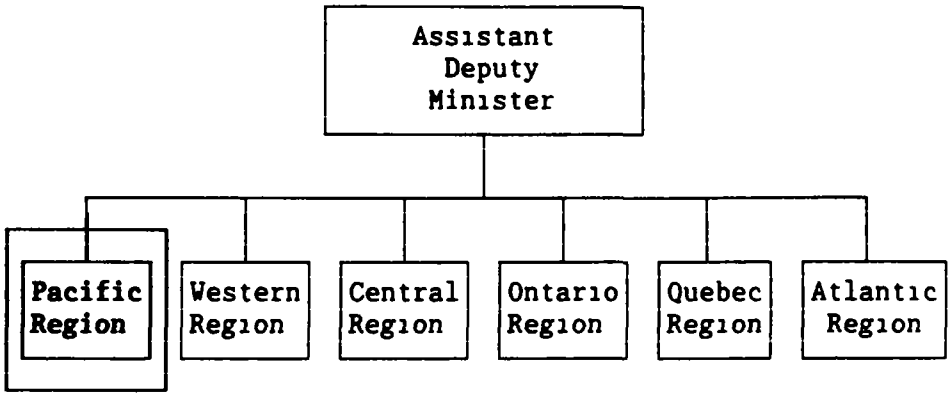
ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET

PERSON YEARS BY SA1, SA2 AND SUB-RESULTS

WEATHER SERVICES DIRECTORATE

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
1000	1100													
	2000		69 3											69 3
	3000		114 9						2 0	1 0				117 9
	TOTAL		184 2						2 0	1 0				187 2
5000	5100		22 0											22 0
	5200		33 0											33 0
	5300													
	5400		5 8	1 4										7 2
	5500		6 0											6 0
	TOTAL		66 8	1 4										68 2
6000	6700													
	TOTAL													
GRAND TOTAL			251 0	1 4					2 0	1 0				255 4

5 9 REGIONAL DIRECTORATES



5 9 1 FUNCTIONS OF THE PACIFIC REGION (197 3 PY, $16,367 6 K)

The Pacific Region delivers the AES weather services, air quality services and climate services programs in British Columbia and the Eastern Pacific Ocean to approximately 300 km offshore

As of April 1, 1992, the program activities of the Region will be managed through three branches as follows

Meteorological Services Branch - Responsible for the production and delivery of warnings and forecast of weather, sea-state and air quality, as well as the human component of the weather observing network in the province Included within these activities are marketing initiatives with respect to clients and development of partnerships, operational development of local forecasting techniques, and serving as the Western Canada Hurricane/Typhoon Centre

Meteorological Systems and Applications Branch - Responsible for all of the technological and applied science support relative to the delivery of weather, climate and air quality services Included are the management of data acquisition networks, operation of several nationally relevant support resources such as the AES Western Canada GOES-West Satellite reception facility and the national BUOY Technical Centre, the management of all computer and telecommunications systems, and the management of operational meteorological research, techniques development, regional training, quality assurance, and satellite development Vote netted revenue of approximately $1 million is managed for the operation of 15 contract weather observing stations on behalf of Transport Canada

Atmospheric Issues and Services Branch - Responsible for the provision of climate and air quality services which includes the provision of information, consultation and advice on climate and air quality science issues, the management and development of the climate and air quality programs, the conduct of applied research, and the coordination of activities with other jurisdictions, other federal agencies, academia, and the private sector

In support of these programs, there is a regional Finance and Administration Branch, and a Human Resources Branch

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY SUB-ACTIVITY (SA 1) AND SUB SUB-ACTIVITY (SA-2)

PACIFIC REGION

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
	1100	PUBLIC WEATHER SERVICES	64 0	3750 7	373 1	69 8		4193 6
	1200	MARINE WEATHER SERVICES	6 0	346 8	52 7			399 5
	1300	AVIATION WEATHER SERVICES	23 0	1332 9	13 6			1346 5
	1400	ECONOMIC WEATHER SERVICES	1 0	57 8	36 4	25 7		119 9
	2000	DATA ACQUISITION	44 8	2412 6	2407 9	272 1		5092 6
	3000	WEATHER SERVICES SUPPORT SYSTEMS	43 5	2096 8	1471 8	197 3		3765 9
		TOTAL	182 3	9997 6	4355 5	564 9		14918 0
4000		CLIMATE SERVICES AND RESEARCH						
	4100	CLIMATE DATA & INFORMATION	8 5	437 2	131 0	7 7		575 9
	4600	CLIMATE SERVICES SUPPORT SYSTEMS	0 5	26 0	5 0			31 0
		TOTAL	9 0	463 2	136 0	7 7		606 9
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
	6100	AIR QUALITY SERVICES	6 0	312 8	44 2	34 0		391 0
		TOTAL	6 0	312 8	44 2	34 0		391 0
GRAND TOTAL			197 3	10773 6	4535 7	606 6		15915 9

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY RESULTS DEFINITION

PACIFIC REGION

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 1	CANADIANS ARE AWARE	1 0	40 0	50 0			90 0
1 1 2	CANADIANS ARE WARNED	180 3	9905 6	4290 5	554 9		14751 0
1 2 1	POLLUTION AWARENESS	0 5	26 0	5 0	30 0		61 0
1 2 2	POLLUTION WARNING	0 5	26 0	7 5	5 0		38 5
	TOTAL	182 3	9997 6	4353 0	589 9		14940 5
2 1 1	REDUCE GAP	0 2	10 4	4 0			14 4
2 1 2	KNOWLEDGE/INFORMATION/VALUE	0 2	10 5	2 0			12 5
2 1 3	ENVIRONMENT/HEALTH	0 2	10 5	3 0			13 5
2 1 4	ENVIRONMENT/ECONOMY	8 5	437 0	130 0	7 7		574 7
	TOTAL	9 1	468 4	139 0	7 7		615 1
3 1 1	AWARE ACTIVITIES THREAT	0 4	21 0	4 0			25 0
3 1 2	KNOWLEDGEABLE DECISIONS	5 0	260 6	32 2	4 0		296 8
3 1 3	POLLUTION PREVENTION	0 5	26 0	7 5	5 0		38 5
	TOTAL	5 9	307 6	43 7	9 0		360 3
GRAND TOTAL		197 3	10773 6	4535 7	606 6		15915 9

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET ($000)

TOTAL BUDGET BY SA1, SA2 AND SUB-RESULTS

PACIFIC REGION

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
1000	1100		4116 6			38 5							38 5	4193 6
	1200		399 5											399 5
	1300		1346 5											1346 5
	1400		119 9											119 9
	2000		5092 6											5092 6
	3000	90 0	3675 9											3765 9
	TOTAL	90 0	14751 0			38 5							38 5	14918 0
4000	4100						7 2	12 5		512 7	12 5	31 0		575 9
	4600									31 0				31 0
	TOTAL						7 2	12 5		543 7	12 5	31 0		606 9
6000	6100				61 0		7 2		13 5	31 0	12 5	265 8		391 0
	TOTAL				61 0		7 2		13 5	31 0	12 5	265 8		391 0
GRAND TOTAL		90 0	14751 0		61 0	38 5	14 4	12 5	13 5	574 7	25 0	296 8	38 5	15915 9

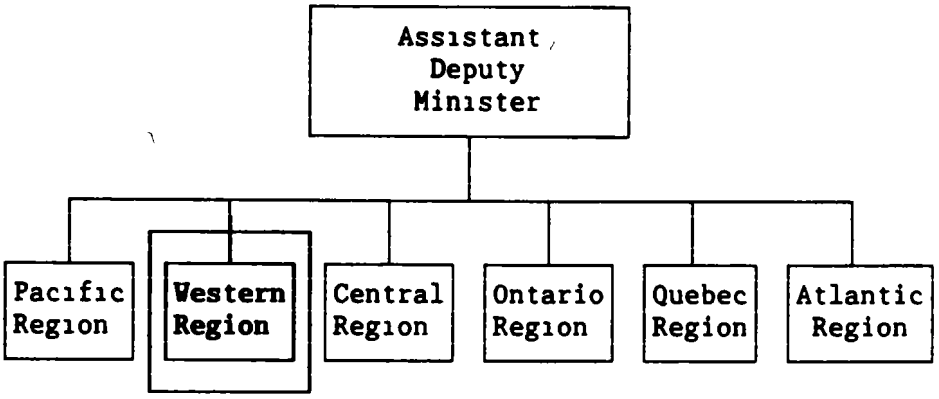
ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET

PERSON YEARS BY SA1, SA2 AND SUB RESULTS

PACIFIC REGION

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
1000	1100		63 0			0 5							0 5	64 0
	1200		6 0											6 0
	1300		23 0											23 0
	1400		1 0											1 0
	2000		44 8											44 8
	3000	1 0	42 5											43 5
	TOTAL	1 0	180 3			0 5							0 5	182 3
4000	4100						0 1	0 2		7 5	0 2	0 5		8 5
	4600									0 5				0 5
	TOTAL						0 1	0 2		8 0	0 2	0 5		9 0
6000	6100				0 5		0 1		0 2	0 5	0 2	4 5		6 0
	TOTAL				0 5		0 1		0 2	0 5	0 2	4 5		6 0
GRAND TOTAL		1 0	180 3		0 5	0 5	0 2	0 2	0 2	8 5	0 4	5 0	0 5	197 3

5 10 REGIONAL DIRECTORATES



5 10 1 FUNCTIONS OF THE WESTERN REGION (265 1 PY, $19,563 3 K)

Western Region of the Atmospheric Environment Service provides weather and climatological services to the people of Alberta, Yukon and western Northwest Territories There are four main programs within the Region and these are supported by Finance and Administration Division, Human Resource Division and Informatics Division Also, the Director General, as a member of CORE, share accountability for the delivery of coporate programs in Western Canada

Data Acquisition - Collects data on atmospheric conditions as input to the AES weather forecast and Canadian climate programs through a network of four Aerological Stations, two weather radars (including a Doppler Radar System), manned weather stations, automatic weather stations and climate stations Provides other environmental data on air quality, acid rain, ozone, radioactivity, etc Ensures that meteorological instruments are maintained and calibrated, and also trains volunteer and contract weather observers Through partnerships, contracts, nad quid pro quo arrangments with other Federal Departments, notably Transport Canada, provincial and territorial governments, and aboriginal groups, 231 additional sources of atmospheric data have become an integral part of the Western Regional network Over 300 volunteers provide daily/weekly climate reports

Forecast Operations - Weather warnings and forecasts are produced for various user groups such as mariners, aviators, farmers, the media and public The Arctic Weather Centre produces forecasts for the NWT and Arctic Ocean, and the Alberta Weather Centre produces forecasts for the province Both are located in Edmonton The Yukon Weather Centre is in Whitehorse An HRPT Satellite Receiving Station, located in Edmonton, supports forecast production and the ice services program

Weather Services - Eleven Weather Offices disseminate weather information and forecasts to a myriad of users using Weatheradio, automatic telephone answering devices (ATAD's), facsimile and personal contacts These offices are located in the major population centres of Alberta, the Yukon and western half of the NWT Staff at these offices promote the application of weather information in their region of responsibility

Scientific Services - Studies are conducted into regional meteorological problems related to agriculture, forestry, air quality, energy applications and hydrometeorology As well there are studies of the regional impact of climate change and consultative services to various sectors of society on the impacts of climate change Air quality and atmospheric chemistry studies are done and reports produced The division acts as the lead for regional environmental assessment and emergency response In addition to providing climatological information to users and controlling the quality of climatological change issues within the region, between regions and with international neighbours

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY SUB ACTIVITY (SA 1) AND SUB SUB-ACTIVITY (SA-2)

WESTERN REGION

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
	1100	PUBLIC WEATHER SERVICES	81 0	4962 5	428 7			5391 2
	1200	MARINE WEATHER SERVICES	1 0	64 3	3 6			67 9
	1300	AVIATION WEATHER SERVICES	41 0	2300 3	142 9			2443 2
	2000	DATA ACQUISITION	69 3	3372 9	1650 0			5022 9
	3000	WEATHER SERVICES SUPPORT SYSTEMS	57 3	3347 0	1885 3	485 9		5718 2
		TOTAL	249 6	14047 0	4110 5	485 9		18643 4
4000		CLIMATE SERVICES AND RESEARCH						
	4100	CLIMATE DATA & INFORMATION	10 5	481 3	81 3			562 6
	4600	CLIMATE SERVICES SUPPORT SYSTEMS	2 0	103 5	43 5			147 0
		TOTAL	12 5	584 8	124 8			709 6
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
	6300	AIR QUALITY RESEARCH	3 0	175 3	35 0			210 3
		TOTAL	3 0	175 3	35 0			210 3
GRAND TOTAL			265 1	14807 1	4270 3	485 9		19563 3

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY RESULTS DEFINITION

WESTERN REGION

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 1	CANADIANS ARE AWARE	1 0	63 4	7 7			71 1
1 1 2	CANADIANS ARE WARNED	245 2	13787 7	3999 8	485 9		18273 4
1 1 3	SAFE DESIGN	0 5	30 0	3 0			33 0
1 2 2	POLLUTION WARNING	1 3	75 0	4 5			79 5
	TOTAL	248 0	13956 1	4015 0	485 9		18457 0
2 1 1	REDUCE GAP	0 5	30 0	3 0			33 0
2 1 3	ENVIRONMENT/HEALTH	4 3	226 3	53 3			279 6
2 1 4	ENVIRONMENT/ECONOMY	9 3	439 7	155 5			595 2
	TOTAL	14 1	696 0	211 8			907 8
3 1 2	KNOWLEDGEABLE DECISIONS	3 0	155 0	43 5			198 5
	TOTAL	3 0	155 0	43 5			198 5
GRAND TOTAL		265 1	14807 1	4270 3	485 9		19563 3

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET ($000)

TOTAL BUDGET BY SA1, SA2 AND SUB RESULTS

WESTERN REGION

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
1000	1100	69 4	5321 8											5391 2
	1200		67 9											67 9
	1300		2443 2											2443 2
	2000		5022 9											5022 9
	3000	1 7	5417 6			5 0			166 3	127 6				5718 2
	TOTAL	71 1	18273 4			5 0			166 3	127 6				18643 4
4000	4100			33 0			33 0		113 3	383 3				562 6
	4600											147 0		147 0
	TOTAL			33 0			33 0		113 3	383 3		147 0		709 6
6000	6300					74 5				84 3		51 5		210 3
	TOTAL					74 5				84 3		51 5		210 3
GRAND TOTAL		71 1	18273 4	33 0		79 5	33 0		279 6	595 2		198 5		19563 3

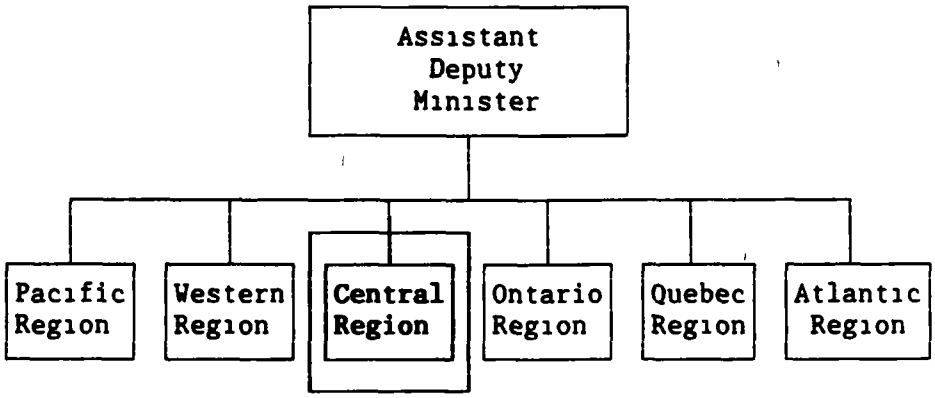
ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET

PERSON YEARS BY SA1, SA2 AND SUB RESULTS

WESTERN REGION

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
1000	1100	1 0	80 0											81 0
	1200		1 0											1 0
	1300		41 0											41 0
	2000		69 3											69 3
	3000		53 9			0 3			2 8	0 3				57 3
	TOTAL	1 0	245 2			0 3			2 8	0 3				249 6
4000	4100			0 5			0 5		1 5	8 0				10 5
	4600											2 0		2 0
	TOTAL			0 5			0 5		1 5	8 0		2 0		12 5
6000	6300					1 0				1 0		1 0		3 0
	TOTAL					1 0				1 0		1 0		3 0
GRAND TOTAL		1 0	245 2	0 5		1 3	0 5		4 3	9 3		3 0		265 1

5 11 REGIONAL DIRECTORATE



5 11 1 FUNCTIONS OF THE CENTRAL REGION (247 7 PY, $20,668 2 K)

The Central Region is the largest of the six AES Regions both from the point of view of geographic area and budgetary considerations The Regional Director General reports directly to the Assistant Deputy Minister The Region includes all of the Provinces of Manitoba and Saskatchewan and portions of the Central and High Arctic of the North West Territories

There are three main programs within the Region and these are supported by Regional Finance and Administration Division, and a Human Resource Division The main program areas are as follows

Weather Services - All aspects of forecast production including public, marine, aviation, and special forecasts (i e for fighting forest fires) All aspects of the development and delivery of weather services to routine and special users, including the staffing and operation of nine weather offices, technician and meteorologist development training, and coordination with Transport Canada on aviation services, requirements and standards

Meteorological Systems - All aspects of meteorological observing programs (weather, climate and air quality) including related environmental and geophysics data, the staff and instrumentation of the field stations including District Offices and the High Arctic Weather Stations, plus standard, electronic maintenance, inspection and site development functions associated with their operation, techniques and technology development and computer and communications operations and development in support of all Service activities and regional Services program evaluation

Environmental Services - Regional development and delivery of Climate and Air Quality Services Programs including data processing, climate monitoring and reporting, information services, consultative services in areas of special applications or expertise and program assessment and development It has lead responsibility in Federal/Provincial relations, Environmental Assessment and Review Process, and Environment Emergency Response

The Regional Director General is currently the Co-Chair for the Western and Northern Committee of Regional Executives (CORE) and is responsible for regional corporate activities and programs in Manitoba and Saskatchewan Corporate communications, the CORE Secretariat activities and the Environmental Partners Fund (EPF) program are administered by a staff of eight located in a sub-office adjacent to the Central Region office The CORE Co-Chair also represents regional corporate interests as a full member of Environment Management Board and of several Board and Transition Team steering committees

ATMOSPHERIC ENVIRONMENT SERVICE

1992 93 BUDGET BY SUB-ACTIVITY (SA-1) AND SUB-SUB-ACTIVITY (SA 2)

CENTRAL REGION

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
	1100	PUBLIC WEATHER SERVICES	68 4	3841 4	230 8	130 1		4202 3
	1300	AVIATION WEATHER SERVICES	12 0	691 0				691 0
	1400	ECONOMIC WEATHER SERVICES	2 9	160 3				160 3
	2000	DATA ACQUISITION	84 7	4862 5	4689 8	276 1		9828 4
	3000	WEATHER SERVICES SUPPORT SYSTEMS	59 1	2845 0	1635 7	235 0		4715 7
		TOTAL	227 1	12400 2	6556 3	641 2		19597 7
4000		CLIMATE SERVICES AND RESEARCH						
	4100	CLIMATE DATA & INFORMATION	12 8	620 2	141 3			761 5
	4600	CLIMATE SERVICES SUPPORT SYSTEMS	4 2	96 6	10 6	2 0		109 2
		TOTAL	17 0	716 8	151 9	2 0		870 7
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
	6100	AIR QUALITY SERVICES	3 6	196 2	3 6			199 8
		TOTAL	3 6	196 2	3 6			199 8
GRAND TOTAL			247 7	13313 2	6711 8	643 2		20668 2

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

CENTRAL REGION

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 1	CANADIANS ARE AWARE	6 2	332 8	17 8	11 1		361 7
1 1 2	CANADIANS ARE WARNED	206 7	11239 6	6371 9	554 4		18165 9
1 1 3	SAFE DESIGN	4 8	250 6				250 6
1 2 1	POLLUTION AWARENESS	1 0	44 6	26 9	10 5		82 0
1 2 2	POLLUTION WARNING	1 0	44 6	26 9	10 5		82 0
	TOTAL	219 7	11912 2	6443 5	586 5		18942 2
2 1 1	REDUCE GAP	3 3	147 9	56 8			204 7
2 1 2	KNOWLEDGE/INFORMATION/VALUE	4 2	226 2	114 1	44 7		385 0
2 1 3	ENVIRONMENT/HEALTH	6 2	344 4	17 8	11 1		373 3
2 1 4	ENVIRONMENT/ECONOMY	7 5	358 0	58 3	0 3		416 6
	TOTAL	21 2	1076 5	247 0	56 1		1379 6
3 1 1	AWARE ACTIVITIES THREAT	2 4	109 2	7 6	0 3		117 1
3 1 2	KNOWLEDGEABLE DECISIONS	2 4	109 2	7 6	0 3		117 1
3 1 3	POLLUTION PREVENTION	2 0	106 1	6 1			112 2
	TOTAL	6 8	324 5	21 3	0 6		346 4
GRAND TOTAL		247 7	13313 2	6711 8	643 2		20668 2

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET ($000)

TOTAL BUDGET BY SA1, SA2 AND SUB RESULTS

CENTRAL REGION

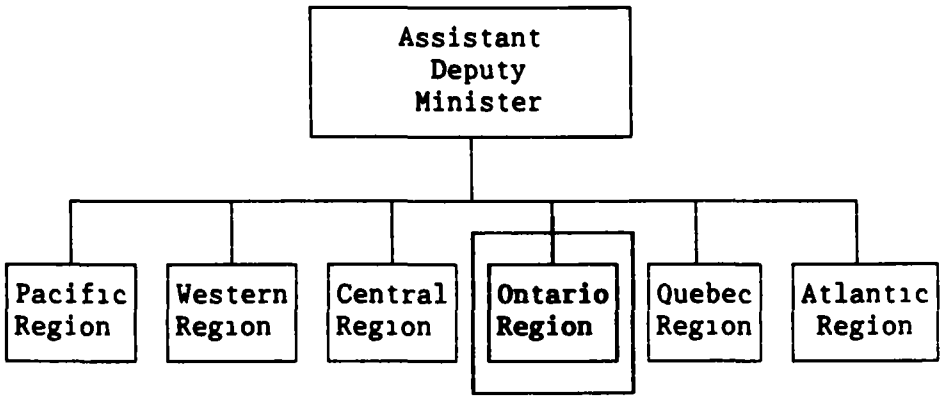
Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
1000	1100	245 4	3030 3	199 2	63 1	63 1		267 9	256 2	66 4			10 7	4202 3
	1300	57 6	575 8							57 6				691 0
	1400	20 9	15 7	51 4						72 3				160 3
	2000		9828 4											9828 4
	3000		4715 7											4715 7
	TOTAL	323 9	18165 9	250 6	63 1	63 1		267 9	256 2	196 3			10 7	19597 7
4000	4100						182 5	79 3	79 3	182 5	79 3	79 3	79 3	761 5
	4600	15 6			7 8	7 8		15 6	15 6	15 6	15 6	15 6		109 2
	TOTAL	15 6			7 8	7 8	182 5	94 9	94 9	198 1	94 9	94 9	79 3	870 7
6000	6100	22 2			11 1	11 1	22 2	22 2	22 2	22 2	22 2	22 2	22 2	199 8
	TOTAL	22 2			11 1	11 1	22 2	22 2	22 2	22 2	22 2	22 2	22 2	199 8
GRAND TOTAL		361 7	18165 9	250 6	82 0	82 0	204 7	385 0	373 3	416 6	117 1	117 1	112 2	20668 2

PERSON YEARS BY SA1, SA2 AND SUB RESULTS

CENTRAL REGION

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
1000	1100	3 9	52 6	3 8	0 5	0 5		1 8	3 8	1 3			0 2	68 4
	1300	1 0	10 0							1 0				12 0
	1400	0 3	0 3	1 0						1 3				2 9
	2000		84 7											84 7
	3000		59 1											59 1
	TOTAL	5 2	206 7	4 8	0 5	0 5		1 8	3 8	3 6			0 2	227 1
4000	4100						2 9	1 4	1 4	2 9	1 4	1 4	1 4	12 8
	4600	0 6			0 3	0 3		0 6	0 6	0 6	0 6	0 6		4 2
	TOTAL	0 6			0 3	0 3	2 9	2 0	2 0	3 5	2 0	2 0	1 4	17 0
6000	6100	0 4			0 2	0 2	0 4	0 4	0 4	0 4	0 4	0 4	0 4	3 6
	TOTAL	0 4			0 2	0 2	0 4	0 4	0 4	0 4	0 4	0 4	0 4	3 6
GRAND TOTAL		6 2	206 7	4 8	1 0	1 0	3 3	4 2	6 2	7 5	2 4	2 4	2 0	247 7

5 12 REGIONAL DIRECTORATES



5 12 1 FUNCTION OF THE ONTARIO REGION (200 4 PY, $14286 OK)

AES Ontario Region delivers weather, sea state, climate, air quality and other environmental services for Ontario and the Great Lakes through four operational divisions Data Acquisition, Forecast Operations, Weather Services, and, Scientific Services These are assisted by three support divisions Informatics & Systems, Human Resources, and, Finance & Administration

The region is responsible for the delivery of the following general results

Weather, sea state, climate and air quality data are provided in Ontario and adjacent waters through cooperative networks comprised of automatic and manned observing stations with volunteers and partnerships with other agencies in place where opportunities are available Inspection & maintenance, training, and contract management services are also provided,

The General Public, marine clients on the Great Lakes & major inland waterways, aviation clients, forestry and agricultural clients in Ontario are made aware of weather/sea state hazards and information through warnings and forecasts Central Region and Quebec Region issue the products for Northwestern Ontario and the National Capital Region, respectively,

Weather, sea state, climate, air quality and other environmental information is distributed in mass form through the media, the telecommunications system, and Weatheradio broadcasts and the distribution systems of other agencies such as the Coast Guard Individual services are provided via telephone and personal briefings from fourteen weather offices, the Scientific Services Division, and the Port Meteorological program In 1992, the Ozone Watch was added to the list of products

Meteorological services (weather, air quality, marine) are provided in support of federal environmental emergency responses to air and water pollution events in Ontario and adjacent international waters,

Scientific studies, advice and consultations are provided about air quality, environmental impact assessment, climate change, energy, agricultural and forestry issues in Ontario and the Great Lakes area in partnership with other DOE Services, other government departments, the province and academia

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB-ACTIVITY (SA 1) AND SUB-SUB-ACTIVITY (SA-2)

ONTARIO REGION

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
	1100	PUBLIC WEATHER SERVICES	77 5	4708 2	243 7			4951 9
	1200	MARINE WEATHER SERVICES	5 0	262 0				262 0
	1300	AVIATION WEATHER SERVICES	18 0	1178 2				1178 2
	1400	ECONOMIC WEATHER SERVICES	9 0	284 9				284 9
	2000	DATA ACQUISITION	33 0	1770 7	1666 7	278 0		3715 4
	3000	WEATHER SERVICES SUPPORT SYSTEMS	40 9	2061 5	851 5	82 2		2995 2
		TOTAL	183 4	10265 5	2761 9	360 2		13387 6
4000		CLIMATE SERVICES AND RESEARCH						
	4100	CLIMATE DATA & INFORMATION	9 0	371 3	73 3	25 0		469 6
	4600	CLIMATE SERVICES SUPPORT SYSTEMS	3 0	137 1	29 3			166 4
		TOTAL	12 0	508 4	102 6	25 0		636 0
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
	6100	AIR QUALITY SERVICES	5 0	203 5	33 5	25 4		262 4
		TOTAL	5 0	203 5	33 5	25 4		262 4
GRAND TOTAL			200 4	10977 4	2898 0	410 6		14286 0

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

ONTARIO REGION

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED	174 4	9980 6	2761 9	360 2		13102 7
	TOTAL	174 4	9980 6	2761 9	360 2		13102 7
2 1 3	ENVIRONMENT/HEALTH	9 0	284 9				284 9
2 1 4	ENVIRONMENT/ECONOMY	12 0	508 4	102 6	25 0		636 0
	TOTAL	21 0	793 3	102 6	25 0		920 9
3 1 2	KNOWLEDGEABLE DECISIONS	5 0	203 5	33 5	25 4		262 4
	TOTAL	5 0	203 5	33 5	25 4		262 4
GRAND TOTAL		200 4	10977 4	2898 0	410 6		14286 0

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET (($000)

TOTAL BUDGET BY SA1, SA2 AND SUB-RESULTS

ONTARIO REGION

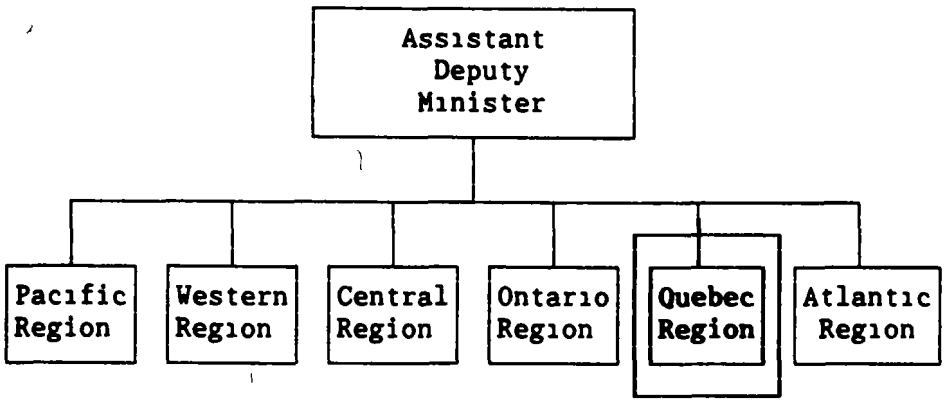
Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
1000	1100		4951 9											4951 9
	1200		262 0											262 0
	1300		1178 2											1178 2
	1400								284 9					284 9
	2000		3715 4											3715 4
	3000		2995 2											2995 2
	TOTAL		13102 7						284 9					13387 6
4000	4100									469 6				469 6
	4600									166 4				166 4
	TOTAL									636 0				636 0
6000	6100											262 4		262 4
	TOTAL											262 4		262 4
GRAND TOTAL			13102 7						284 9	636 0		262 4		14286 0

PERSON YEARS BY SA1, SA2 AND SUB RESULTS

ONTARIO REGION

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
1000	1100		77 5											77 5
	1200		5 0											5 0
	1300		18 0											18 0
	1400								9 0					9 0
	2000		33 0											33 0
	3000		40 9											40 9
	TOTAL		174 4						9 0					183 4
4000	4100									9 0				9 0
	4600									3 0				3 0
	TOTAL									12 0				12 0
6000	6100											5 0		5 0
	TOTAL											5 0		5 0
	TOTAL		174 4						9 0	12 0		5 0		200 4

5 13 REGIONAL DIRECTORATES



5 13 1 FUNCTION OF THE QUEBEC REGION (202 4 PY, $16,982 8 K)

Quebec Region provides weather services to the Province of Quebec, to a portion of eastern Ontario and to Baffin Island It has four divisions

Data Acquisition Division
- provides weather data to AES forecasting systems and Climate Programs through a network of upper-air, surface and automated stations,
- ensures that meteorological instruments are maintained and calibrated,
- trains volunteer and contract station observers

Weather Forecasting Division
- prepares and issues all weather forecasts for the region's areas of responsibility,
- provides certain weather services to the media, the forestry and agricultural sectors, and other users,
- issues weather warnings to the public, aviation, carriers and other users

Weather Services Division
- provides weather information to users in the region through bulletins in newspapers, radio and television broadcasts and Weatherradio Canada, and answers requests for information made by telephone or in person,
- sees that needs for regional meteorological services are met

Scientific Services Division
- studies regional meteorological problems related to agriculture, forestry, air quality, energy applications and hydrometeorology, and studies the regional impact of climate changes on these activities,
- ensures AES participation in the assessment of environmental impacts,
- issues acid rain bulletins,
- controls the quality of climatological data in the region and responds to user requests

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB ACTIVITY (SA-1) AND SUB SUB-ACTIVITY (SA 2)

QUEBEC REGION

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800	MANAGEMENT & COMMON SUPPORT SERVICES							
1000	WEATHER SERVICES							
	1100 PUBLIC WEATHER SERVICES		64 0	3913 5	457 3	71 5		4442 3
	1200 MARINE WEATHER SERVICES		1 0	64 1				64 1
	1300 AVIATION WEATHER SERVICES		25 5	1490 2	413 7			1903 9
	1400 ECONOMIC WEATHER SERVICES		4 0	190 5	25 0	18 0		233 5
	2000 DATA ACQUISITION		50 0	2914 8	2247 8	444 0		5606 6
	3000 WEATHER SERVICES SUPPORT SYSTEMS		47 5	2343 6	1115 6	131 4		3590 6
		TOTAL	192 0	10916 7	4259 4	664 9		15841 0
4000	CLIMATE SERVICES AND RESEARCH							
	4100 CLIMATE DATA & INFORMATION		5 5	262 1	474 2			736 3
		TOTAL	5 5	262 1	474 2			736 3
5000	ICE SERVICES							
6000	AIR QUALITY SERVICES & RESEARCH							
	6100 AIR QUALITY SERVICES		2 5	141 4	10 5			151 9
	6300 AIR QUALITY RESEARCH		2 4	114 0	125 6	14 0		253 6
		TOTAL	4 9	255 4	136 1	14 0		405 5
GRAND TOTAL			202 4	11434 2	4869 7	678 9		16982 8

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

QUEBEC REGION

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 1	CANADIANS ARE AWARE	2 6	156 0	15 0			171 0
1 1 2	CANADIANS ARE WARNED	184 9	10535 2	4204 4	626 9		15366 5
1 2 1	POLLUTION AWARENESS	0 3	11 7				11 7
1 2 2	POLLUTION WARNING	1 1	40 0				40 0
	TOTAL	188 9	10742 9	4219 4	626 9		15589 2
2 1 1	REDUCE GAP	1 3	75 0	15 0	20 0		110 0
2 1 2	KNOWLEDGE/INFORMATION/VALUE	3 0	170 0	22 0			192 0
2 1 3	ENVIRONMENT/HEALTH	2 5	92 1	452 2			544 3
2 1 4	ENVIRONMENT/ECONOMY	3 2	150 5	25 0	18 0		193 5
	TOTAL	10 0	487 6	514 2	38 0		1039 8
3 1 1	AWARE ACTIVITIES THREAT	0 5	16 7	1 5			18 2
3 1 2	KNOWLEDGEABLE DECISIONS	3 0	187 0	134 6	14 0		335 6
	TOTAL	3 5	203 7	136 1	14 0		353 8
GRAND TOTAL		202 4	11434 2	4869 7	678 9		16982 8

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET ($000)

TOTAL BUDGET BY SA1, SA2 AND SUB-RESULTS

QUEBEC REGION

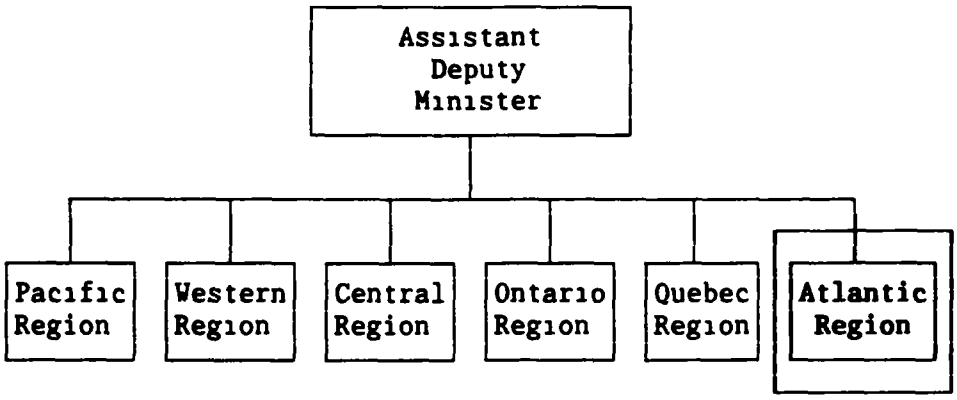
Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
1000	1100	59 0	4383 3											4442 3
	1200		64 1											64 1
	1300		1903 9											1903 9
	1400						40 0			193 5				233 5
	2000		5606 6											5606 6
	3000	112 0	3408 6				70 0							3590 6
	TOTAL	171 0	15366 5				110 0			193 5				15841 0
4000	4100							192 0	544 3					736 3
	TOTAL							192 0	544 3					736 3
6000	6100										18 2	133 7		151 9
	6300				11 7	40 0						201 9		253 6
	TOTAL				11 7	40 0					18 2	335 6		405 5
GRAND TOTAL		171 0	15366 5		11 7	40 0	110 0	192 0	544 3	193 5	18 2	335 6		16982 8

PERSON YEARS BY SA1, SA2 AND SUB RESULTS

QUEBEC REGION

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
1000	1100	0 6	63 4											64 0
	1200		1 0											1 0
	1300		25 5											25 5
	1400						0 8			3 2				4 0
	2000		50 0											50 0
	3000	2 0	45 0				0 5							47 5
	TOTAL	2 6	184 9				1 3			3 2				192 0
4000	4100							3 0	2 5					5 5
	TOTAL							3 0	2 5					5 5
6000	6100										0 5	2 0		2 5
	6300				0 3	1 1						1 0		2 4
	TOTAL				0 3	1 1					0 5	3 0		4 9
	TOTAL	2 6	184 9		0 3	1 1	1 3	3 0	2 5	3 2	0 5	3 0		202 4

5 14 REGIONAL DIRECTORATES



5 14 1 FUNCTION OF THE ATLANTIC REGION (224 2 PY, $16,667 3 K)

The Atlantic Region of AES provides Weather, Climate, Air Quality, and Sea State services to Canadians in the provinces of Prince Edward Island, New Brunswick, Nova Scotia, Newfoundland, Labrador as well as offshore waters The Atlantic Region has four operational divisions

Data Acquisition - Collects weather, climate, air quality, and sea state data as inputs to the AES forecast operation systems and the climate and air quality programs through a network of upper air stations, surface weather stations, buoys, automatic stations, climate stations, voluntary ships, precipitation chemistry stations, and air quality stations Ensures that meteorological instruments are installed, maintained and calibrated as well as trains volunteer and contract weather observers including climate and severe weather observers

Forecast Operations - Produces weather warnings and weather forecasts at the Maritimes Weather Centre in Bedford, N S and the Newfoundland Weather Centre in Gander, Newfoundland for Atlantic Canada and adjacent waters The forecasts are prepared for use by the public, aviation, marine, and various other interests

Weather Services - Ensures that the need for weather services of Atlantic Canada and adjacent waters are met through consultation with clients and development/adaptation of services Provides weather information to Atlantic Canadians using the regional Weatheradio Network, the media, telephones and personal contact through a network of Weather Offices providing consultation to users Provides meteorological support during Environmental Emergencies

Scientific Services - Conducts studies into regional atmospheric issues related to agriculture, forestry, air quality, energy applications and hydrometeorology Conducts studies of the regional climate and the impact of climate change and provides consultative services to the public on the impacts of climate change Conducts air quality and atmospheric chemistry studies and provides consultation services to the public on air quality and atmospheric chemistry matters Acts as the focal point for regional environmental assessment Provides climatological services to users and controls the quality of climatological data in the Atlantic Region Undertakes educational activities (lectures, talks, interviews) on atmospheric issues such as climate change, ozone layer, smog, etc and is the regional centre of expertise on such matters

In addition to the above responsibilities for AES programs, the Atlantic Region contributes to DOE corporate management and program delivery through CORE The developing Service involvement in Corporate Program delivery adds a new dimension to the Region's role during 1992-93 In addition, the RDG, as incumbent Chair of CORE Atlantic, bears direct responsibility for cross Service issues and the corporate DOE priorities in the Region, including Green Plan coordination with the four Atlantic provinces This CORE responsibility inevitably draws other AES regional managers and staff into corporate activities such as Atlantic Teamwork initiatives and Ministerial announcements and visits

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY SUB ACTIVITY (SA-1) AND SUB-SUB ACTIVITY (SA-2)

ATLANTIC REGION

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
	1100	PUBLIC WEATHER SERVICES	99 2	5549 1	525 3			6074 4
	1200	MARINE WEATHER SERVICES	10 0	540 0	100 0			640 0
	1300	AVIATION WEATHER SERVICES	17 0	944 8	28 0			972 8
	1400	ECONOMIC WEATHER SERVICES	1 0	45 0				45 0
	2000	DATA ACQUISITION	32 0	1650 5	1777 6	160 0		3588 1
	3000	WEATHER SERVICES SUPPORT SYSTEMS	45 0	2376 6	1094 2	383 8		3854 6
		TOTAL	204 2	11106 0	3525 1	543 8		15174 9
4000		CLIMATE SERVICES AND RESEARCH						
	4100	CLIMATE DATA & INFORMATION	7 0	495 9	200 1			696 0
	4600	CLIMATE SERVICES SUPPORT SYSTEMS	11 0	595 5	72 9	8 0		676 4
		TOTAL	18 0	1091 4	273 0	8 0		1372 4
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
	6100	AIR QUALITY SERVICES	2 0	120 0				120 0
		TOTAL	2 0	120 0				120 0
GRAND TOTAL			224 2	12317 4	3798 1	551 8		16667 3

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

ATLANTIC REGION

RESULTS DEFINITION		PY	SALARY	O&M	CAPITAL ($000)	G&C	TOTAL
1 1 1	CANADIANS ARE AWARE	4 2	231 0	20 2			251 2
1 1 2	CANADIANS ARE WARNED	183 4	10196 4	3402 4	473 8		14072 6
1 1 3	SAFE DESIGN	2 6	143 0	12 2			155 2
1 2 1	POLLUTION AWARENESS	3 6	190 0	28 7	8 0		226 7
	TOTAL	193 8	10760 4	3463 5	481 8		14705 7
2 1 1	REDUCE GAP	2 0	110 0	10 0			120 0
2 1 2	KNOWLEDGE/INFORMATION/VALUE	4 0	220 0	58 6	20 0		298 6
2 1 3	ENVIRONMENT/HEALTH	3 6	180 0	24 7			204 7
2 1 4	ENVIRONMENT/ECONOMY	16 6	830 0	206 8	40 0		1076 8
	TOTAL	26 2	1340 0	300 1	60 0		1700 1
3 1 2	KNOWLEDGEABLE DECISIONS	4 2	217 0	34 5	10 0		261 5
	TOTAL	4 2	217 0	34 5	10 0		261 5
GRAND TOTAL		224 2	12317 4	3798 1	551 8		16667 3

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET ($000)

TOTAL BUDGET BY SA1, SA2 AND SUB-RESULTS

ATLANTIC REGION

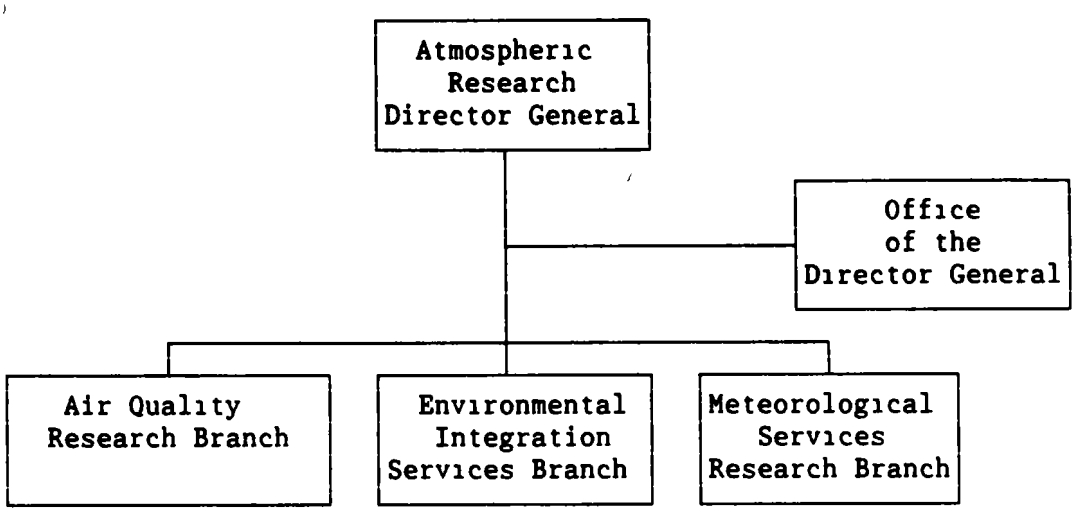
Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
1000	1100	144 2	5503 1						153 5	231 6		42 0		6074 4
	1200	17 0	623 0											640 0
	1300		972 8											972 8
	1400		45 0											45 0
	2000		3467 2							120 9				3588 1
	3000	90 0	3461 5				15 0	73 6	35 0	135 0		44 5		3854 6
	TOTAL	251 2	14072 6				15 0	73 6	188 5	487 5		86 5		15174 9
4000	4100			64 2				37 5	5 0	589 3				696 0
	4600			91 0	226 7		105 0	187 5	11 2			55 0		676 4
	TOTAL			155 2	226 7		105 0	225 0	16 2	589 3		55 0		1372 4
6000	6100											120 0		120 0
	TOTAL											120 0		120 0
GRAND TOTAL		251 2	14072 6	155 2	226 7		120 0	298 6	204 7	1076 8		261 5		16667 3

PERSON YEARS BY SA1, SA2 AND SUB RESULTS

ATLANTIC REGION

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
1000	1100	2 3	86 1						3 0	6 8		1 0		99 2
	1200	0 3	9 7											10 0
	1300		17 0											17 0
	1400		1 0											1 0
	2000		30 0							2 0				32 0
	3000	1 6	39 6				0 3	0 5	0 3	2 5		0 2		45 0
	TOTAL	4 2	183 4				0 3	0 5	3 3	11 3		1 2		204 2
4000	4100			1 1				0 5	0 1	5 3				7 0
	4600			1 5	3 6		1 7	3 0	0 2			1 0		11 0
	TOTAL			2 6	3 6		1 7	3 5	0 3	5 3		1 0		18 0
6000	6100											2 0		2 0
	TOTAL											2 0		2 0
	TOTAL	4 2	183 4	2 6	3 6		2 0	4 0	3 6	16 6		4 2		224 2

5 15 ATMOSPHERIC RESEARCH DIRECTORATE



5 15 1 FUNCTIONS ATMOSPHERIC RESEARCH DIRECTORATE (208 9 PY, $26,538 7 K)

Offices of the Director General and Research Policy and Planning (6 0 PY, $1930 3 K)

These offices provide the following services

- executive and management direction for ARD,
- long-term direction to Service programs,
- ensures scientific representation of AES nationally and internationally,
- manages Post-Graduate Scholarships, Visiting Fellowships and Science Subventions for AES, and
- coordinates the management of the AES Scientific Research Group

Air Quality Research Branch (112 4 PY, $15,678 4 K)

This Branch analyzes the atmospheric chemical and physical environment as it relates to environmental (air) quality This is done by measuring (to ascertain the extent and quality), by studying processes (to understand the method of operation), through integration (combining parts into a whole) and through the provision of services A major part of these efforts has been in support of the Long-Range Transport of Air Pollutants (LRTAP) program, and to monitor and study the stratospheric ozone layer Currently, the Branch is shifting some attention toward assessing the significance of the transport and deposition of toxic chemicals, exploring the linkage between atmospheric composition and climate change, and studying the process of smog formation

Environmental Integration Services Branch (5 0 PY, $521 1 K)

This Branch is responsible for the coordination of federal and provincial research projects on acid rain, ground-level ozone and associated LRTAP issues, and provides advice to policy-makers

Meteorological Services Research Branch (85 5 PY, $8,408 9 K)

This Branch carries out research and development in support of the prediction services of the AES for weather, sea-state, ice and other environmental elements

The Aerospace Meteorology Division develops techniques for using meteorological satellite data in AES weather services To accomplish this task the division carries out research on assimilation of satellite data into numerical weather prediction models, radiative transfer modeling for remote sensing, and automated analysis of satellite images

La Division de la Recherche en Prevision Numerique located in Dorval, Quebec develops numerical weather forecasting models in support of the forecasting operations at the Canadian Meteorological Centre

Forecast Research Division develops statistical/dynamical models and procedures for forecasting various weather elements and environmental parameters such as sea-state, ice and ice-related variables Also, the Division participates in the development and evaluation of automated systems to support the weather services function of the AES

The Cloud Physics Research Division is involved in many different cloud related projects including studying techniques for detection of severe weather using Doppler Weather Radar, conducting mesoscale field projects to improve our understanding of storm systems, studying cloud chemical processes important to the deposition and redistribution of atmospheric pollutants, and quantifying the impact of clouds on our climate and their role in climate change This Division also administers the Weather Modification Information Act

ATMOSPHERIC ENVIRONMENT SERVICE

1992 93 BUDGET BY SUB ACTIVITY (SA 1) AND SUB-SUB ACTIVITY (SA 2)

ATMOSPHERIC RESEARCH DIRECTORATE

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
	3000	WEATHER SERVICES SUPPORT SYSTEMS	81 3	4734 4	1805 0	1359 4	384 2	8283 0
		TOTAL	81 3	4734 4	1805 0	1359 4	384 2	8283 0
4000		CLIMATE SERVICES AND RESEARCH						
	4500	CLIMATE RESEARCH	15 5	859 0	698 7	292 2	433 7	2283 6
		TOTAL	15 5	859 0	698 7	292 2	433 7	2283 6
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
	6100	AIR QUALITY SERVICES	16 7	927 9	681 2	213 9		1823 0
	6300	AIR QUALITY RESEARCH	78 4	4263 9	4447 1	3485 6	116 1	12312 7
	6700	AIR QUALITY & RESEARCH SUPPORT SERVICES	17 0	898 1	717 1	211 2	10 0	1836 4
		TOTAL	112 1	6089 9	5845 4	3910 7	126 1	15972 1
GRAND TOTAL			208 9	11683 3	8349 1	5562 3	944 0	26538 7

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

ATMOSPHERIC RESEARCH DIRECTORATE

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED	80 3	4667 1	1655 8	1338 4	384 2	8045 5
1 2 2	POLLUTION WARNING	3 9	263 6	283 6	86 6		633 8
	TOTAL	84 2	4930 7	1939 4	1425 0	384 2	8679 3
2 1 1	REDUCE GAP	73 6	3993 1	3816 1	3150 6	559 8	11519 6
	TOTAL	73 6	3993 1	3816 1	3150 6	559 8	11519 6
3 1 2	KNOWLEDGEABLE DECISIONS	51 1	2759 5	2593 6	986 7		6339 8
	TOTAL	51 1	2759 5	2593 6	986 7		6339 8
GRAND TOTAL		208 9	11683 3	8349 1	5562 3	944 0	26538 7

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY SUB ACTIVITY (SA 1) AND SUB SUB-ACTIVITY (SA 2)

OFFICE OF THE DIRECTOR GENERAL ARD

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
	3000	WEATHER SERVICES SUPPORT SYSTEMS					384 2	384 2
		TOTAL					384 2	384 2
4000		CLIMATE SERVICES AND RESEARCH						
	4500	CLIMATE RESEARCH					433 7	433 7
		TOTAL					433 7	433 7
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
	6300	AIR QUALITY RESEARCH					116 1	116 1
	6700	AIR QUALITY & RESEARCH SUPPORT SERVICES	6 0	404 4	395 1	196 8		996 3
		TOTAL	6 0	404 4	395 1	196 8	116 1	1112 4
GRAND TOTAL			6 0	404 4	395 1	196 8	934 0	1930 3

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

OFFICE OF THE DIRECTOR GENERAL ARD

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED					384 2	384 2
1 2 2	POLLUTION WARNING	2 0	134 8	131 7	65 6		332 1
	TOTAL	2 0	134 8	131 7	65 6	384 2	716 3
2 1 1	REDUCE GAP	2 0	134 8	131 7	65 6	549 8	881 9
	TOTAL	2 0	134 8	131 7	65 6	549 8	881 9
3 1 2	KNOWLEDGEABLE DECISIONS	2 0	134 8	131 7	65 6		332 1
	TOTAL	2 0	134 8	131 7	65 6		332 1
TOTAL		6 0	404 4	395 1	196 8	934 0	1930 3

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY SUB-ACTIVITY (SA-1) AND SUB SUB ACTIVITY (SA-2)

ENVIRONMENTAL INTEGRATION BRANCH

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
4000		CLIMATE SERVICES AND RESEARCH						
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
	6100	AIR QUALITY SERVICES	5 0	268 6	248 2	4 3		521 1
		TOTAL	5 0	268 6	248 2	4 3		521 1
GRAND TOTAL			5 0	268 6	248 2	4 3		521 1

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY RESULTS DEFINITION

ENVIRONMENTAL INTEGRATION BRANCH

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
3 1 2	KNOWLEDGEABLE DECISIONS	5 0	268 6	248 2	4 3		521 1
	TOTAL	5 0	268 6	248 2	4 3		521 1
GRAND TOTAL		5 0	268 6	248 2	4 3		521 1

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB ACTIVITY (SA 1) AND SUB SUB-ACTIVITY (SA 2)

AIR QUALITY RESEARCH BRANCH

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
4000		CLIMATE SERVICES AND RESEARCH						
	4500	CLIMATE RESEARCH	15 5	859 0	698 7	292 2		1849 9
		TOTAL	15 5	859 0	698 7	292 2		1849 9
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
	6100	AIR QUALITY SERVICES	7 5	427 3	273 8	90 7		791 8
	6300	AIR QUALITY RESEARCH	78 4	4263 9	4447 1	3485 6		12196 6
	6700	AIR QUALITY & RESEARCH SUPPORT SERVICES	11 0	493 7	322 0	14 4	10 0	840 1
		TOTAL	96 9	5184 9	5042 9	3590 7	10 0	13828 5
GRAND TOTAL			112 4	6043 9	5741 6	3882 9	10 0	15678 4

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

AIR QUALITY RESEARCH BRANCH

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 2 2	POLLUTION WARNING	0 9	61 5	2 7			64 2
	TOTAL	0 9	61 5	2 7			64 2
2 1 1	REDUCE GAP	67 4	3626 3	3525 2	2966 1	10 0	10127 6
	TOTAL	67 4	3626 3	3525 2	2966 1	10 0	10127 6
3 1 2	KNOWLEDGEABLE DECISIONS	44 1	2356 1	2213 7	916 8		5486 6
	TOTAL	44 1	2356 1	2213 7	916 8		5486 6
GRAND TOTAL		112 4	6043 9	5741 6	9	10 0	15678 4

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY SUB ACTIVITY (SA 1) AND SUB SUB ACTIVITY (SA-2)

METEOROLOGICAL SERVICES RESEARCH BRANCH

SA1	SA2			PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES							
1000		WEATHER SERVICES							
	3000	WEATHER SERVICES SUPPORT SYSTEMS		81 3	4734 4	1805 0	1359 4		7898 8
			TOTAL	81 3	4734 4	1805 0	1359 4		7898 8
4000		CLIMATE SERVICES AND RESEARCH							
5000		ICE SERVICES							
6000		AIR QUALITY SERVICES & RESEARCH							
	6100	AIR QUALITY SERVICES		4 2	232 0	159 2	118 9		510 1
			TOTAL	4 2	232 0	159 2	118 9		510 1
GRAND TOTAL				85 5	4966 4	1964 2	1478 3		8408 9

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY RESULTS DEFINITION

METEOROLOGICAL SERVICES RESEARCH BRANCH

RESULTS DEFINITION			PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED		80 3	4667 1	1655 8	1338 4		7661 3
1 2 2	POLLUTION WARNING		1 0	67 3	149 2	21 0		237 5
		TOTAL	81 3	4734 4	1805 0	1359 4		7898 8
2 1 1	REDUCE GAP		4 2	232 0	159 2	118 9		510 1
		TOTAL	4 2	232 0	159 2	118 9		510 1
GRAND TOTAL			85 5	4966 4	1964 2	1478 3		8408 9

1992 93 Budget

ATMOSPHERIC RESEARCH DIRECTORATE

BY ORGANIZATIONAL UNIT

($000)

	PY	SALARY	O&M	CAPITAL	G&C	TOTAL
AIR QUALITY RESEARCH BRANCH	112 4	6043 9	5741 6	3882 9	10 0	15678 4
METEOROLOGICAL SERVICES RESEARCH BRANCH	85 5	4966 4	1964 2	1478 3		8408 9
OFFICE OF THE DIRECTOR GENERAL ARD	6 0	404 4	395 1	196 8	934 0	1930 3
ENVIRONMENTAL INTEGRATION BRANCH	5 0	268 6	248 2	4 3		521 1
GRAND TOTAL	208 9	11683 3	8349 1	5562 3	944 0	26538 7

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET ($000)

TOTAL BUDGET BY SA1, SA2 AND SUB-RESULTS

ATMOSPHERIC RESEARCH DIRECTORATE

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
1000	3000		8045 5			237 5								8283 0
	TOTAL		8045 5			237 5								8283 0
4000	4500						2199 4					84 2		2283 6
	TOTAL						2199 4					84 2		2283 6
6000	6100					64 2	510 1					1248 7		1823 0
	6300						8052 9					4259 8		12312 7
	6700					332 1	757 2					747 1		1836 4
	TOTAL					396 3	9320 2					6255 6		15972 1
GRAND TOTAL			8045 5			633 8	******					6339 8		26538 7

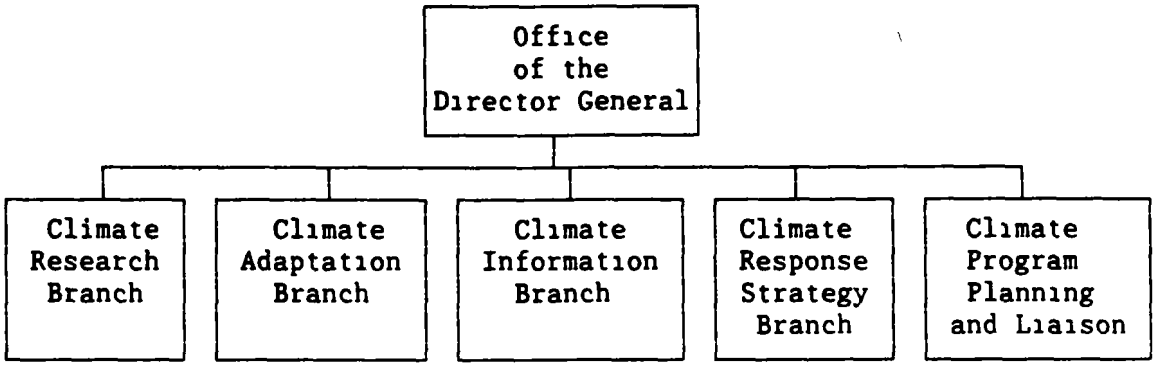
ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET

PERSON YEARS BY SA1, SA2 AND SUB RESULTS

ATMOSPHERIC RESEARCH DIRECTORATE

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
1000	3000		80 3			1 0								81 3
	TOTAL		80 3			1 0								81 3
4000	4500						14 6					0 9		15 5
	TOTAL						14 6					0 9		15 5
6000	6100					0 9	4 2					11 6		16 7
	6300						47 3					31 1		78 4
	6700					2 0	7 5					7 5		17 0
	TOTAL					2 9	59 0					50 2		112 1
GRAND TOTAL			80 3			3 9	73 6					51 1		208 9

5 16 CANADIAN CLIMATE CENTRE



5 16 1 FUNCTIONS THE CANADIAN CLIMATE CENTRE (152 1 PYs, $15,960 5K)

The Canadian Climate Centre was organized in 1978 to provide a focus for climate activity in Canada In 1991 a major reorganization was put into place so that the Centre could respond effectively to the Climate Change issue and the Green Plan The Centre acts as the lead organization for the Climate Services and Research Program of AES, whose objectives are to provide data information and advice to government and others on the climate (past, present and future) and its interface with land and sea In addition, it acts as the lead agency for the Canadian Climate Program under whose auspices fall all climate activity in Canada

The Centre consists of the office of the Director General, which includes the Chief Scientist, Senior Climatologist and an Administrative/Financial Unit Other units of the Centre comprise of a Climate Research Branch, a Climate Adaptation Branch, a Climate Information Branch, a Climate Response Strategy Branch and a Climate Program Planning and Liaison Branch

Office of the Director General (7 PYs, $673 9K)

- provides the executive scientific direction and management of the Canadian Climate Centre,
- promotes understanding and awareness of the weather and climate of Canada,
- ensures effective scientific programs, and
- promotes understanding and awareness of the weather and climate of Canada

Climate Research Branch (40 PYs, $5,201 3K)

This Branch consists of a Director's Office which includes a Special Projects unit focusing on remote sensing issues and an advisor on the build-up and trends of greenhouse gases and three Divisions

1 Climate Modeling and Diagnostic studies
- undertakes modeling research to gain knowledge of climate system, climate variability and climate change, and
- conducts climate diagnostic studies

2 Hydrometeorological Processes Research
- undertakes research to improve understanding of physical processes within the hydrological cycle, and
- conducts investigations into climate variability and change and impacts on water resources on the Prairies

3 Extended Range Forecast Research
- conducts research to increase understanding of climate forecasting over monthly and seasonal time scales

Climate Adaptation Branch (44 5 PYs, $3,935 1K)

This Branch consists of a Directors Office and six Divisions

1 Data Integration
- develops and provides integrated data sets containing conventional and non-conventional data, and
- develops tools to provide spatial distribution of climate parameters

2 Climate Change Detection
- issues annual reports on State of Canadian Climate, and
- conducts studies on Canadian climate including variability and trends

3 Water Resources and Marine Adaptation
- develops and promotes use of hydrometeorological and marine climate data for safe operations, and
- analyses and interprets climate and water resources data to improve management of water resources

4 Industrial Adaptation
- develops and provides information to industrial and energy sectors to develop building and safety codes taking into account a changing climate, and
- provides climatic information to support building energy efficiency analyses

5 Bioclimate Adaptation
- determines the relationship between climate and the biosphere, and
- conducts adaptation studies in agriculture and forestry

6 Arctic Adaptation
- analyses arctic climate and climate related processes to assess climate change impacts on health and safety, and
- identifies adaptative activities to promote safe operations

Climate Information Branch (49 PYs, $4476 2K)

This Branch consists of a Director's office and six Divisions

1 Data Management
- quality controls and archives meteorological information, and
- maintains documentation on past and present observing stations

2 System Development and Implementation
- develops, implements and maintains software systems to improve the operation and accessibility of the National Climate Archive

3 Network Data and Standards
- develops climate network and data standards to assure integrity of archived data

4 Forecasting and Real-time Reporting
- produces monthly climate forecasts (temperature), and
- monitors developing climate trends and distributes information

5 Products and Publications
- provides access to digital and paper archives,
- generates standard climate reports, and
- produces and makes available publications and specialized products

6 Development Climatology
- develops new climate publications and products for use by a variety of users, and
- supports and maintains standard software used to access climate information

Climate Response Strategy Branch (5 1 PYs, $561 0K)

This Branch is comprised of an office of the Director and staff examining adaptive, and limitation strategies Its responsibilities include influencing and collaborating with other government departments and agencies to establish and implement adaptive and limitation strategies on climate change and educating Canadians on the impact of their actions on the environment

Climate Program Planning and Liaison Branch (6 5 PYs, $1,113 0K)

This Branch's role is to ensure coordination and planning and support of Climate Services and Research Program and the Canadian Climate Program, nationally and internationally, to provide the secretariat for the various climate program committees, and to manage climate change impact studies as part of the Canadian Climate Program

ATMOSPHERIC ENVIRONMENT SERVICE

1992 93 BUDGET BY SUB-ACTIVITY (SA-1) AND SUB SUB-ACTIVITY (SA 2)

CANADIAN CLIMATE CENTRE

($000)

SA1	SA2		PY	SALARY	O&M	CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
4000		CLIMATE SERVICES AND RESEARCH						
	4100	CLIMATE DATA & INFORMATION	46 0	1982 6	381 9	1924 2		4288 7
	4300	CLIMATE ADAPTATION & ASSESSMENT	44 5	2424 4	1245 8	264 9		3935 1
	4500	CLIMATE RESEARCH	36 0	1992 0	1987 1	959 2		4938 3
	4600	CLIMATE SERVICES SUPPORT SYSTEMS	20 5	1205 5	900 2	131 7		2237 4
	4700	CLIMATE RESPONSE STRATEGIES	5 1	258 0	257 0	46 0		561 0
		TOTAL	152 1	7862 5	4772 0	3326 0		15960 5
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			152 1	7862 5	4772 0	3326 0		15960 5

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

CANADIAN CLIMATE CENTRE

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 1	CANADIANS ARE AWARE	0 5	27 2	7 5			34 7
1 1 3	SAFE DESIGN	16 5	901 6	437 3	818 2		2157 1
	TOTAL	17 0	928 8	444 8	818 2		2191 8
2 1 1	REDUCE GAP	55 0	3064 5	2241 3	1095 9		6401 7
2 1 2	KNOWLEDGE/INFORMATION/VALUE	9 5	534 8	1180 0	46 0		1760 8
2 1 3	ENVIRONMENT/HEALTH	0 5	27 2	17 0			44 2
2 1 4	ENVIRONMENT/ECONOMY	58 5	2653 1	521 9	1264 9		4439 9
	TOTAL	123 5	6279 6	3960 2	2406 8		12646 6
3 1 1	AWARE ACTIVITIES THREAT	2 0	115 0	65 0	45 0		225 0
3 1 2	KNOWLEDGEABLE DECISIONS	9 6	539 1	302 0	56 0		897 1
	TOTAL	11 6	654 1	367 0	101 0		1122 1
GRAND TOTAL		152 1	7862 5	4772 0	3326 0		15960 5

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY SUB ACTIVITY (SA 1) AND SUB SUB-ACTIVITY (SA 2)

OFFICE OF THE DIRECTOR GENERAL-CCC

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
4000		CLIMATE SERVICES AND RESEARCH						
	4500	CLIMATE RESEARCH	1 0	60 0	30 0			90 0
	4600	CLIMATE SERVICES SUPPORT SYSTEMS	6 0	370 0	134 2	79 7		583 9
		TOTAL	7 0	430 0	164 2	79 7		673 9
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			7 0	430 0	164 2	79 7		673 9

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY RESULTS DEFINITION

OFFICE OF THE DIRECTOR GENERAL CCC

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
2 1 1	REDUCE GAP	5 0	310 0	119 2	54 7		483 9
2 1 4	ENVIRONMENT/ECONOMY	2 0	120 0	45 0	25 0		190 0
	TOTAL	7 0	430 0	164 2	79 7		673 9
GRAND TOTAL		7 0	430 0	164 2	79 7		673 9

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB ACTIVITY (SA 1) AND SUB SUB-ACTIVITY (SA 2)

CLIMATE RESEARCH BRANCH

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
4000		CLIMATE SERVICES AND RESEARCH						
	4500	CLIMATE RESEARCH	35 0	1932 0	1957 1	959 2		4848 3
	4600	CLIMATE SERVICES SUPPORT SYSTEMS	5 0	283 0	50 0	20 0		353 0
		TOTAL	40 0	2215 0	2007 1	979 2		5201 3
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			40 0	2215 0	2007 1	979 2		5201 3

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

CLIMATE RESEARCH BRANCH

RESULTS DEFINITION			PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
2 1 1	REDUCE GAP		39 0	2155 0	1997 1	979 2		5131 3
		TOTAL	39 0	2155 0	1997 1	979 2		5131 3
3 1 1	AWARE ACTIVITIES THREAT		1 0	60 0	10 0			70 0
		TOTAL	1 0	60 0	10 0			70 0
GRAND TOTAL			40 0	2215 0	2007 1	979 2		5201 3

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB ACTIVITY (SA 1) AND SUB SUB ACTIVITY (SA 2)

CLIMATE ADAPTATION BRANCH

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
4000		CLIMATE SERVICES AND RESEARCH						
	4300	CLIMATE ADAPTATION & ASSESSMENT	44 5	2424 4	1245 8	264 9		3935 1
		TOTAL	44 5	2424 4	1245 8	264 9		3935 1
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			44 5	2424 4	1245 8	264 9		3935 1

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

CLIMATE ADAPTATION BRANCH

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 1	CANADIANS ARE AWARE	0 5	27 2	7 5			34 7
1 1 3	SAFE DESIGN	16 0	871 6	382 3	103 0		1356 9
	TOTAL	16 5	898 8	389 8	103 0		1391 6
2 1 1	REDUCE GAP	11 0	599 5	125 0	62 0		786 5
2 1 2	KNOWLEDGE/INFORMATION/VALUE	6 5	354 2	489 0	36 0		879 2
2 1 3	ENVIRONMENT/HEALTH	0 5	27 2	17 0			44 2
2 1 4	ENVIRONMENT/ECONOMY	8 5	463 0	150 0	55 9		668 9
	TOTAL	26 5	1443 9	781 0	153 9		2378 8
3 1 2	KNOWLEDGEABLE DECISIONS	1 5	81 7	75 0	8 0		164 7
	TOTAL	1 5	81 7	75 0	8 0		164 7
GRAND TOTAL		44 5	2424 4	1245 8	264 9		3935 1

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB ACTIVITY (SA 1) AND SUB SUB ACTIVITY (SA 2)

CLIMATE INFORMATION BRANCH

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
4000		CLIMATE SERVICES AND RESEARCH						
	4100	CLIMATE DATA & INFORMATION	46 0	1982 6	381 9	1924 2		4288 7
	4600	CLIMATE SERVICES SUPPORT SYSTEMS	3 0	147 5	25 0	15 0		187 5
		TOTAL	49 0	2130 1	406 9	1939 2		4476 2
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			49 0	2130 1	406 9	1939 2		4476 2

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

CLIMATE INFORMATION BRANCH

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 3	SAFE DESIGN	0 5	30 0	55 0	715 2		800 2
	TOTAL	0 5	30 0	55 0	715 2		800 2
2 1 4	ENVIRONMENT/ECONOMY	48 0	2070 1	326 9	1184 0		3581 0
	TOTAL	48 0	2070 1	326 9	1184 0		3581 0
3 1 1	AWARE ACTIVITIES THREAT	0 5	30 0	25 0	40 0		95 0
	TOTAL	0 5	30 0	25 0	40 0		95 0
GRAND TOTAL		49 0	2130 1	406 9	1939 2		4476 2

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB-ACTIVITY (SA 1) AND SUB SUB-ACTIVITY (SA 2)

CLIMATE RESPONSE STRATEGY BRANCH

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
4000		CLIMATE SERVICES AND RESEARCH						
	4700	CLIMATE RESPONSE STRATEGIES	5 1	258 0	257 0	46 0		561 0
		TOTAL	5 1	258 0	257 0	46 0		561 0
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			5 1	258 0	257 0	46 0		561 0

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

CLIMATE RESPONSE STRATEGY BRANCH

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
2 1 2	KNOWLEDGE/INFORMATION/VALUE	0 5	25 0	30 0	5 0		60 0
	TOTAL	0 5	25 0	30 0	5 0		60 0
3 1 1	AWARE ACTIVITIES THREAT	0 5	25 0	30 0	5 0		60 0
3 1 2	KNOWLEDGEABLE DECISIONS	4 1	208 0	197 0	36 0		441 0
	TOTAL	4 6	233 0	227 0	41 0		501 0
GRAND TOTAL		5 1	258 0	257 0	46 0		561 0

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB ACTIVITY (SA 1) AND SUB SUB ACTIVITY (SA 2)

CLIMATE PLANNING & LIAISON BRANCH

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
4000		CLIMATE SERVICES AND RESEARCH						
	4600	CLIMATE SERVICES SUPPORT SYSTEMS	6 5	405 0	691 0	17 0		1113 0
		TOTAL	6 5	405 0	691 0	17 0		1113 0
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			6 5	405 0	691 0	17 0		1113 0

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

CLIMATE PLANNING & LIAISON BRANCH

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
2 1 2	KNOWLEDGE/INFORMATION/VALUE	2 5	155 6	661 0	5 0		821 6
	TOTAL	2 5	155 6	661 0	5 0		821 6
3 1 2	KNOWLEDGEABLE DECISIONS	4 0	249 4	30 0	12 0		291 4
	TOTAL	4 0	249 4	30 0	12 0		291 4
GRAND TOTAL		6 5	405 0	691 0	17 0		1113 0

1992 93 Budget

CANADIAN CLIMATE CENTRE

BY ORGANIZATIONAL UNIT

	PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
CLIMATE PLANNING & LIAISON BRANCH	6 5	405 0	691 0	17 0		1113 0
CLIMATE ADAPTATION BRANCH	44 5	2424 4	1245 8	264 9		3935 1
OFFICE OF THE DIRECTOR GENERAL CCC	7 0	430 0	164 2	79 7		673 9
CLIMATE RESEARCH BRANCH	40 0	2215 0	2007 1	979 2		5201 3
CLIMATE RESPONSE STRATEGY BRANCH	5 1	258 0	257 0	46 0		561 0
CLIMATE INFORMATION BRANCH	49 0	2130 1	406 9	1939 2		4476 2
GRAND TOTAL	152 1	7862 5	4772 0	3326 0		15960 5

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET ($000)

TOTAL BUDGET BY SA1, SA2 AND SUB RESULTS

CANADIAN CLIMATE CENTRE

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
4000	4100			800 2						3393 5	95 0			4288 7
	4300	34 7		1356 9			786 5	879 2	44 2	668 9		164 7		3935 1
	4500						4938 3							4938 3
	4600						676 9	821 6		377 5	70 0	291 4		2237 4
	4700							60 0			60 0	441 0		561 0
	TOTAL	34 7		2157 1			6401 7	1760 8	44 2	4439 9	225 0	897 1		15960 5
GRAND TOTAL		34 7		2157 1			6401 7	1760 8	44 2	4439 9	225 0	897 1		15960 5

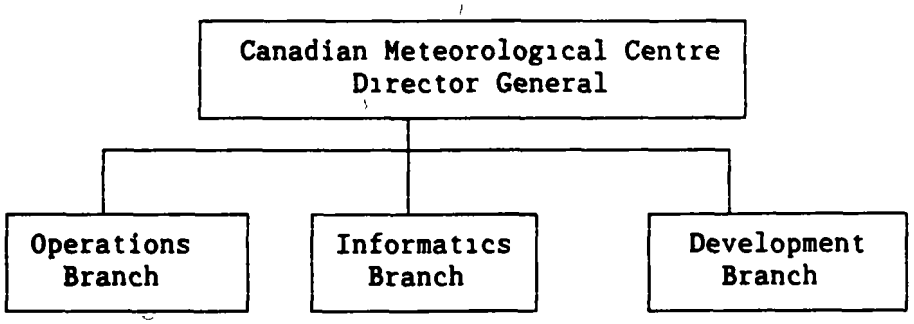
ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET

PERSON YEARS BY SA1, SA2 AND SUB-RESULTS

CANADIAN CLIMATE CENTRE

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
4000	4100			0 5						45 0	0 5			46 0
	4300	0 5		16 0			11 0	6 5	0 5	8 5		1 5		44 5
	4500						36 0							36 0
	4600						8 0	2 5		5 0	1 0	4 0		20 5
	4700							0 5			0 5	4 1		5 1
	TOTAL	0 5		16 5			55 0	9 5	0 5	58 5	2 0	9 6		152 1
GRAND TOTAL		0 5		16 5			55 0	9 5	0 5	58 5	2 0	9 6		152 1

5 17 CANADIAN METEOROLOGICAL CENTRE



5 17 1 **FUNCTIONS· CANADIAN METEOROLOGICAL CENTRE DIRECTORATE**
(212 5 PY, $27,963 1 K)

The CMC is mainly based in Dorval, but also includes components of Informatics Branch which are Downsview based The Centre is responsible for providing atmospheric environmental information and computer and telecommunication services in support of AES and DOE program delivery The Centre also contributes to the maintenance and development of Canada's role and reputation at the international level in environmental matters By virtue of its national mandate and location in Dorval, it contributes to Canadian national unity by fostering personnel exchanges with all regions of the country, providing a fully bilingual working milieu and providing national services

Office of the Director General (14 5 PY, $ 1524 8 K)

The Director General of the CMC reports directly to the Assistant Deputy Minister The CMC includes three branches Operations, Development and Informatics They are supported by a Finance and Administration division as well as Facilities and Publication managers

1 Operations Branch (53 PY, $4,039 4 K)
- assimilates and controls the quality of atmospheric data into operational runs,
- implements and maintains the computerized production system,
- monitors and evaluates automated analyses, prognoses and statistical outputs, prepares technical user bulletins and other graphical outputs,
- operates a french briefing service for Canadians,
- operates media transmission of atmospheric maps,
- coordinates all AES activities for environmental emergencies, maintains and runs the Canadian Emergency Response Model

2 Informatics Branch (109 0 PY, $20,078 0 K)
- plans the development of national EDP and telecommunications facilities in order to meet AES current and future requirements,
- operates the national supercomputing facility for all AES programs,
- provides centralized supercomputing services to AES, DOE and other government departments and selected outside users,
- manages the AES/DOE national telecommunications system comprising a shared wide area network, terrestrial and satellite components to provide computer interoperability for applied meteorology, climatology, atmospheric research, environmental users and clients of the Department of the Environment,
- ensures telecom security, provides advice to AES, DOE, other users and international agencies on all aspects of telecommunications,
- provides computer, data processing services, and local area network services and client support to climatology, atmospheric research and administrative users and clients,
- provides office technology services to Downsview users and supports AES and national node managers,
- provide national application software/hardware development and maintenance support services,

3 Development Branch (36 0 PY, $2,230 9 K)
- improves the quality and range of atmospheric products, by ensuring effective and efficient transfer of technology from research to operations,
- increases the scientific quality of AES outputs,
- develops systems and products related to satellite data,
- develops post-processing techniques and automated products for AES and external users,
- develops and supports informatic and graphics applications

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY SUB-ACTIVITY (SA 1) AND SUB-SUB-ACTIVITY (SA 2)

CANADIAN METEOROLOGICAL CENTRE

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
	1100	PUBLIC WEATHER SERVICES	12 0	738 1	572 0	190 0		1500 1
	3000	WEATHER SERVICES SUPPORT SYSTEMS	169 5	9279 6	12650 7	677 4		22607 7
		TOTAL	181 5	10017 7	13222 7	867 4		24107 8
4000		CLIMATE SERVICES AND RESEARCH						
	4600	CLIMATE SERVICES SUPPORT SYSTEMS	31 0	1610 0	2245 3			3855 3
		TOTAL	31 0	1610 0	2245 3			3855 3
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			212 5	11627 7	15468 0	867 4		27963 1

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

CANADIAN METEOROLOGICAL CENTRE

RESULTS DEFINITION			PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED		175 5	9666 6	13226 6	777 4		23670 6
1 2 2	POLLUTION WARNING		5 0	308 1	512 0	190 0		1010 1
		TOTAL	180 5	9974 7	13738 6	967 4		24680 7
2 1 3	ENVIRONMENT/HEALTH		1 0	43 0				43 0
2 1 4	ENVIRONMENT/ECONOMY		31 0	1610 0	2245 3			3855 3
		TOTAL	32 0	1653 0	2245 3			3898 3
GRAND TOTAL			212 5	11627 7	15983 9	967 4		28579 0

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB-ACTIVITY (SA 1) AND SUB SUB-ACTIVITY (SA 2)

OFFICE OF THE DIRECTOR GENERAL CMC

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
	3000	WEATHER SERVICES SUPPORT SYSTEMS	14 5	529 4	610 0	385 4		1524 8
		TOTAL	14 5	529 4	610 0	385 4		1524 8
4000		CLIMATE SERVICES AND RESEARCH						
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			14 5	529 4	610 0	385 4		1524 8

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY RESULTS DEFINITION

OFFICE OF THE DIRECTOR GENERAL-CMC

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED	14 5	529 4	610 0	385 4		1524 8
	TOTAL	14 5	529 4	610 0	385 4		1524 8
GRAND TOTAL		14 5	529 4	610 0	385 4		1524 8

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB-ACTIVITY (SA-1) AND SUB-SUB-ACTIVITY (SA-2)

OPERATIONS BRANCH

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
	1100	PUBLIC WEATHER SERVICES	12 0	738 1	572 0	190 0		1500 1
	3000	WEATHER SERVICES SUPPORT SYSTEMS	41 0	2470 0	69 3			2539 3
		TOTAL	53 0	3208 1	641 3	190 0		4039 4
4000		CLIMATE SERVICES AND RESEARCH						
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			53 0	3208 1	641 3	190 0		4039 4

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

OPERATIONS BRANCH

RESULTS DEFINITION			PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED		47 0	2857 0	129 3			2986 3
1 2 2	POLLUTION WARNING		5 0	308 1	512 0	190 0		1010 1
		TOTAL	52 0	3165 1	641 3	190 0		3996 4
2 1 3	ENVIRONMENT/HEALTH		1 0	43 0				43 0
		TOTAL	1 0	43 0				43 0
GRAND TOTAL			53 0	3208 1	641 3	190 0		4039 4

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY SUB-ACTIVITY (SA 1) AND SUB-SUB ACTIVITY (SA 2)

INFORMATICS BRANCH

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800	MANAGEMENT & COMMON SUPPORT SERVICES							
1000	WEATHER SERVICES							
	3000 WEATHER SERVICES SUPPORT SYSTEMS		78 0	4212 7	11718 0	292 0		16222 7
		TOTAL	78 0	4212 7	11718 0	292 0		16222 7
4000	CLIMATE SERVICES AND RESEARCH							
	4600 CLIMATE SERVICES SUPPORT SYSTEMS		31 0	1610 0	2245 3			3855 3
		TOTAL	31 0	1610 0	2245 3			3855 3
5000	ICE SERVICES							
6000	AIR QUALITY SERVICES & RESEARCH							
GRAND TOTAL			109 0	5822 7	13963 3	292 0		20078 0

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

INFORMATICS BRANCH

RESULTS DEFINITION			PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED		78 0	4212 7	12233 9	392 0		16838 6
		TOTAL	78 0	4212 7	12233 9	392 0		16838 6
2 1 4	ENVIRONMENT/ECONOMY		31 0	1610 0	2245 3			3855 3
		TOTAL	31 0	1610 0	2245 3			3855 3
GRAND TOTAL			109 0	5822 7	14479 2	392 0		20693 9

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB ACTIVITY (SA-1) AND SUB-SUB ACTIVITY (SA 2)

DEVELOPMENT BRANCH

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
1000		WEATHER SERVICES						
	3000	WEATHER SERVICES SUPPORT SYSTEMS	36 0	2067 5	253 4			2320 9
		TOTAL	36 0	2067 5	253 4			2320 9
4000		CLIMATE SERVICES AND RESEARCH						
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			36 0	2067 5	253 4			2320 9

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

DEVELOPMENT BRANCH

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED	36 0	2067 5	253 4			2320 9
	TOTAL	36 0	2067 5	253 4			2320 9
GRAND TOTAL		36 0	2067 5	253 4			2320 9

1992 93 Budget

CANADIAN METEOROLOGICAL CENTRE

BY ORGANIZATIONAL UNIT

	PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
OFFICE OF THE DIRECTOR GENERAL CMC	14 5	529 4	610 0	385 4		1524 8
INFORMATICS BRANCH	109 0	5822 7	13963 3	292 0		20078 0
OPERATIONS BRANCH	53 0	3208 1	641 3	190 0		4039 4
DEVELOPMENT BRANCH	36 0	2067 5	253 4			2320 9
GRAND TOTAL	212 5	11627 7	15468 0	867 4		27963 1

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET ($000)

TOTAL BUDGET BY SA1, SA2 AND SUB RESULTS

CANADIAN METEOROLOGICAL CENTRE

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
1000	1100		490 0			1010 1								1500 1
	3000		22564 7						43 0					22607 7
	TOTAL		23054 7			1010 1			43 0					24107 8
4000	4600									3855 3				3855 3
	TOTAL									3855 3				3855 3
GRAND TOTAL			23054 7			1010 1			43 0	3855 3				27963 1

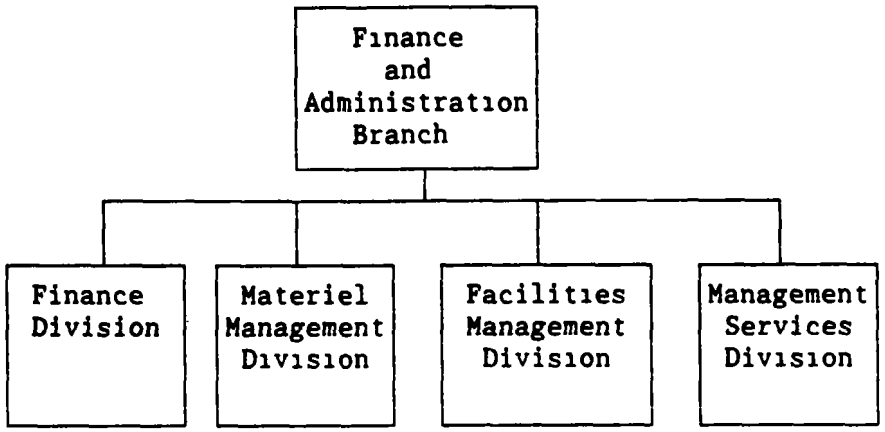
ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET

PERSON YEARS BY SA1, SA2 AND SUB RESULTS

CANADIAN METEOROLOGICAL CENTRE

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
1000	1100		7 0			5 0								12 0
	3000		168 5						1 0					169 5
	TOTAL		175 5			5 0			1 0					181 5
4000	4600									31 0				31 0
	TOTAL									31 0				31 0
GRAND TOTAL			175 5			5 0			1 0	31 0				212 5

5 18 FINANCE AND ADMINISTRATION BRANCH



5 18 1 FUNCTIONS OF THE FINANCE AND ADMINISTRATION BRANCH (106 8PY, $17,243 7K)

This branch supports all AES results and ensures that AES has the expertise, policies, procedures and systems to manage physical, financial and information resources to achieve all AES results Functional direction, advice and services are provided to headquarters elements and Regions As well the Branch serves as a focal point for the implementation of concepts inherent in Comptrollership There are four divisions

1) Finance Division
Ensures that AES has financial information, accounting services and expert advice by
- Developing and implementing financial planning and management policies, procedures and systems including those relating to the results management plan,
- Ensuring, with the Corporate Planning and Accountability Branch, that both financial and planning systems incorporate adequate linkage between resource plans and program objectives, goals and outputs,
- Providing guidance and advice on financial matters to senior management,
- Coordinating and reporting on the preparation of Treasury Board submissions including those relating to the Green Plan and resulting from the Internal Review Committee decisions,
- Processing and paying all invoices and providing accounting services to AES headquarters,
- Preparing and submitting Treasury Board Multi-Year Operational Plan and Main Estimates financial data and providing a functional lead for MYOP update and parts II and III of Estimates,
- Recommending LTOP and Management Contract (Work Planing) allocations to the Resource Allocation Committee (RAC), the AES Management Committee (AMC), and the Assistant Deputy Minister,

- Analyzing and outlining the financial status of the AES and recommending to Assistant Deputy Minister and AMC, corrective action, and
- Ensuring that the AES accounting and financial information systems function effectively

2) Material Management Division
Ensures that AES has meteorological/research equipment, materiel, supplies and services where and when needed by
- Developing related Service policies, procedures and systems,
- Providing procedural recommendations and advice on supply matters,
- Providing functional lead for the Material-In-Use system, Stores, Inventory Management system, Fleet Management, disposal, Procurement and Contracting,
- Purchasing, storing and distributing special meteorological instruments, equipment and supplies, and
- coordinating the annual Eastern Arctic resupply for Environment Canada

3) Facilities Management Division
Ensuring that AES has real property, facilities and access to management and administrative office technology systems within a secure work environment by
- Developing AES policies and procedures and providing support services in accommodation, real property, security, parking, accessibility and telecommunication (voice-Downsview) matters,
- Providing functional guidance to regional offices on facilities matters,
- Serving as Program Area coordinator for facilities, non-meteorological furniture and equipment,
- Coordinating major construction projects at the service level,
- Providing the lead for security for the service in the area of information, personnel, EDP and physical security, and
- Serving as the focal point for the delivery of the DOE Environmental Stewardship program as it applies to AES internally

4) Management Services Division
Ensures that AES has access to the world's meteorological literature and to AES correspondence and that AES has a safe and healthy work environment which recognizes the contribution of employees by
- Providing policy, procedural and system recommendations and advice on general administration matters,
- Developing policies and provides procedural recommendations and advice on the management of information,
- Acquiring and making available for reference and loan a collection of books, journals and other resource material,
- Providing support services to AES in records management, mail, publications, cartography, health and safety and information distribution, and
- Coordinating the planning, implementation and monitoring of activities for the Incentive Awards Program

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB-ACTIVITY (SA 1) AND SUB SUB ACTIVITY (SA 2)

FINANCE AND ADMINISTRATION BRANCH

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800	MANAGEMENT & COMMON SUPPORT SERVICES							
	0810 MANAGEMENT		5 0	283 5	50 0	609 8		943 3
	0830 COMMON SUPPORT SERVICES		74 5	3406 3	3991 8	6161 9	1296 0	14856 0
		TOTAL	79 5	3689 8	4041 8	6771 7	1296 0	15799 3
1000	WEATHER SERVICES							
	3000 WEATHER SERVICES SUPPORT SYSTEMS		27 3	1419 4	25 0			1444 4
		TOTAL	27 3	1419 4	25 0			1444 4
4000	CLIMATE SERVICES AND RESEARCH							
5000	ICE SERVICES							
6000	AIR QUALITY SERVICES & RESEARCH							
GRAND TOTAL			106 8	5109 2	4066 8	6771 7	1296 0	17243 7

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET BY RESULTS DEFINITION

FINANCE AND ADMINISTRATION BRANCH

RESULTS DEFINITION			PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 2	CANADIANS ARE WARNED		82 5	4146 5	2934 2	5373 8	1036 8	13491 3
		TOTAL	82 5	4146 5	2934 2	5373 8	1036 8	13491 3
2 1 3	ENVIRONMENT/HEALTH		8 7	379 1	362 0	239 8	103 7	1084 6
		TOTAL	8 7	379 1	362 0	239 8	103 7	1084 6
3 1 2	KNOWLEDGEABLE DECISIONS		15 6	583 6	770 6	1158 1	155 5	2667 8
		TOTAL	15 6	583 6	770 6	1158 1	155 5	2667 8
GRAND TOTAL			106 8	5109 2	4066 8	6771 7	1296 0	17243 7

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET ($000)

TOTAL BUDGET BY SA1, SA2 AND SUB RESULTS

FINANCE AND ADMINISTRATION BRANCH

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
0800	0810		943 3											943 3
	0830		11103 6						1084 6			2667 8		14856 0
	TOTAL		12046 9						1084 6			2667 8		15799 3
1000	3000		1444 4											1444 4
	TOTAL		1444 4											1444 4
GRAND TOTAL			13491 3						1084 6			2667 8		17243 7

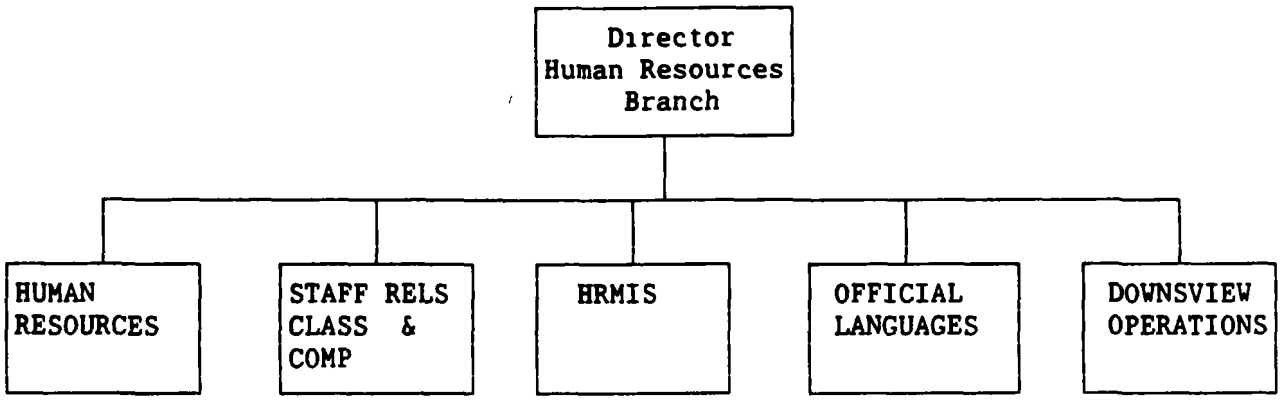
ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET

PERSON YEARS BY SA1, SA2 AND SUB RESULTS

FINANCE AND ADMINISTRATION BRANCH

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
0800	0810		5 0											5 0
	0830		50 2						8 7			15 6		74 5
	TOTAL		55 2						8 7			15 6		79 5
1000	3000		27 3											27 3
	TOTAL		27 3											27 3
GRAND TOTAL			82 5						8 7			15 6		106 8

5 19 HUMAN RESOURCES BRANCH



5 19 1 HUMAN RESOURCES BRANCH (41 4 PY, $3,349 9 K)

The Director, Human Resources is accountable for developing and managing human resource strategies, policies and action plans to meet the needs of AES He is also accountable for ensuring that the AES H R program reflects the ADM's and DM's overall H R priorities The branch provides services to the AES Headquarters components, the Regions and the Canadian Forces Weather Service (CFWS), either directly or functionally

The Director, Human Resources reports directly to the Assistant Deputy Minister The branch consists of two components, Corporate Human Resources and Downsview Operations Corporate Human Resources includes 2 divisions which are responsible for coordinating national programs and activities and which provide specialist advice to the operational components

Human Resources - responsible for management of the EX group, staffing, human resources planning, training and development, Education Leave program, workforce adjustment, management of the MT population, Employment Equity, EAP and harassment

Staff Relations, Classification and Compensation - responsible for grievances and adjudications, collective bargaining, and the health of the classification and compensation programs in AES

Corporate human resources is also responsible for HRMIS and Official Languages

Downsview Operations provides service to AES Headquarters units and Directors General

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY SUB-ACTIVITY (SA 1) AND SUB SUB ACTIVITY (SA 2)

PERSONNEL DIRECTORATE

SA1	SA2		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
0800		MANAGEMENT & COMMON SUPPORT SERVICES						
	0830	COMMON SUPPORT SERVICES	41 4	2756 4	562 5	31 0		3349 9
		TOTAL	41 4	2756 4	562 5	31 0		3349 9
1000		WEATHER SERVICES						
4000		CLIMATE SERVICES AND RESEARCH						
5000		ICE SERVICES						
6000		AIR QUALITY SERVICES & RESEARCH						
GRAND TOTAL			41 4	2756 4	562 5	31 0		3349 9

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET BY RESULTS DEFINITION

PERSONNEL DIRECTORATE

RESULTS DEFINITION		PY	SALARY	O&M	($000) CAPITAL	G&C	TOTAL
1 1 1	CANADIANS ARE AWARE	0 2	11 0	2 3	0 1		13 4
1 1 2	CANADIANS ARE WARNED	31 4	2094 0	427 2	23 5		2544 7
1 1 3	SAFE DESIGN	0 5	33 1	6 8	0 4		40 3
1 2 1	POLLUTION AWARENESS	0 1	5 5	1 1	0 1		6 7
1 2 2	POLLUTION WARNING	0 4	25 6	5 1	0 3		31 0
	TOTAL	32 6	2169 2	442 5	24 4		2636 1
2 1 1	REDUCE GAP	3 8	253 6	51 8	2 9		308 3
2 1 2	KNOWLEDGE/INFORMATION/VALUE	0 5	33 1	6 8	0 4		40 3
2 1 3	ENVIRONMENT/HEALTH	0 3	22 1	4 5	0 2		26 8
2 1 4	ENVIRONMENT/ECONOMY	2 2	143 3	29 3	1 6		174 2
	TOTAL	6 8	452 1	92 4	5 1		549 6
3 1 1	AWARE ACTIVITIES THREAT	0 1	5 5	1 1	0 1		6 7
3 1 2	KNOWLEDGEABLE DECISIONS	1 9	129 6	26 5	1 4		157 5
	TOTAL	2 0	135 1	27 6	1 5		164 2
GRAND TOTAL		41 4	2756 4	562 5	31 0		3349 9

ATMOSPHERIC ENVIRONMENT SERVICE
1992-93 BUDGET ($000)

TOTAL BUDGET BY SA1, SA2 AND SUB RESULTS

PERSONNEL DIRECTORATE

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
0800	0830	13 4	2544 7	40 3	6 7	31 0	308 3	40 3	26 8	174 2	6 7	157 5		3349 9
	TOTAL	13 4	2544 7	40 3	6 7	31 0	308 3	40 3	26 8	174 2	6 7	157 5		3349 9
GRAND TOTAL		13 4	2544 7	40 3	6 7	31 0	308 3	40 3	26 8	174 2	6 7	157 5		3349 9

ATMOSPHERIC ENVIRONMENT SERVICE
1992 93 BUDGET

PERSON YEARS BY SA1, SA2 AND SUB RESULTS

PERSONNEL DIRECTORATE

Sa1	Sa2	1 1 1	1 1 2	1 1 3	1 2 1	1 2 2	2 1 1	2 1 2	2 1 3	2 1 4	3 1 1	3 1 2	3 1 3	TOTAL
0800	0830	0 2	31 4	0 5	0 1	0 4	3 8	0 5	0 3	2 2	0 1	1 9		41 4
	TOTAL	0 2	31 4	0 5	0 1	0 4	3 8	0 5	0 3	2 2	0 1	1 9		41 4
GRAND TOTAL		0 2	31 4	0 5	0 1	0 4	3 8	0 5	0 3	2 2	0 1	1 9		41 4