



A T M O S P H E R I C E N V I R O N M E N T P R O G R A M

# Zephyr

## A Time for Renewal

**N**o one looks forward to spring with quite the same sense of anticipation as Canadians do. We pore over seed catalogues, dig out rubber boots and chop away the remaining ice to hasten the changing season. In keeping with the theme of springtime and renewal, this issue of Zephyr focuses on the new directorates of the Atmospheric Environment Service, their mandates, activities and priorities.

Since I announced the reorganization of the AES last November, the people responsible for the new directorates have logged a lot of travel miles. They have worked out the responsibilities their directorates will handle, asked people to take interim positions in the new structure, and talked to staff and stakeholders about how the reorganization will affect them.

Many of the changes we have introduced took root in the Alternative Service Delivery

discussions. They address the calls for national coherence, a clear mandate, greater partnering and a strong scientific base. We are also clarifying our goals and ways of doing business through a submission to Treasury Board. I hope to discuss the Board's decision in an upcoming issue of Zephyr.

I would also like to thank everyone whose insightful comments and hard work have brought us this far along the path to renewal. At the end of the process, I am confident that staff and stakeholders alike will see a strengthened national atmospheric and environmental prediction program.

Sincerely,

Gordon McBean

## AES Reorganization

**S**ince the reorganization of the AES was announced last November, the five new headquarters directorates have been taking shape. Senior managers have worked out the responsibilities that each directorate will take on and asked people to assume new duties on an interim basis. The directors general have also hit the road to explain the new structure to employees and answer their questions.

The organization chart on page 3 and portrait of the new directorates gives you a look at the shape of things to come. Work is still progressing in some areas as details are being clarified.

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## Letter from the Editor

**W**elcome to the Spring issue of **Zephyr**, your staff newsletter. To keep you up-to-date about recent changes to the AES, we've decided to include a special emphasis on the new directorates. This section highlights the mandate, structure and priorities of each directorate – information that helps to clarify AES' new focus.

A heartfelt thanks to everyone who took the time to send us your comments to our questionnaire.

I can be contacted via e-mail, Jennifer.McKay@ec.gc.ca, or by phone at (416) 739-4759.

Sincerely,

Well, the responses are in! In our last issue, we asked for your feedback about **Zephyr**. All of our respondents liked **Zephyr** and mostly used it to maintain contact with colleagues in the AEP.

Jennifer McKay  
AES Communications

## The AES Green Lane Gets a Facelift

**S**urfing the 'net lately? Check out our new and improved AES Green Lane! The site will allow visitors to find information in a fast, friendly and efficient manner.



The former AES Green Lane architecture emphasized the organizational structure of AES to find information. It was easy enough to find information on a specific topic for those familiar with the organization, but extremely difficult for a first time visitor. We sought out to solve this problem and at the same time decided to update our design.

Over the years, the AES Green Lane has enjoyed growing success. Last year, it averaged about 11 million hits per month. In February 1999, we reached over 23 million hits in one month. The Green Lane's biggest drawing card – weather information of course.

The AES Green Lane Advisory Committee (AGLAC) was formed to oversee the task and provided valuable feedback on the architecture and design. In December, the senior managers approved AGLAC's approach.

So next time you have a minute, check out the new AES Green Lane at [www.tor.ec.gc.ca](http://www.tor.ec.gc.ca). and let us know what you think!

### THE ZEPHYR TEAM

**Jennifer McKay, Editor  
and the  
AES Communications Team**

Published by the Communications Directorate of AES, Environment Canada, **Zephyr** is a newsletter for and about the staff of the Atmospheric Environment Program.

**Zephyr** is your newsletter. We would like to hear from you. Your submissions, story ideas, graphics and pictures are most welcome. Submissions for the spring issue should be sent to us by May 3, 1999.

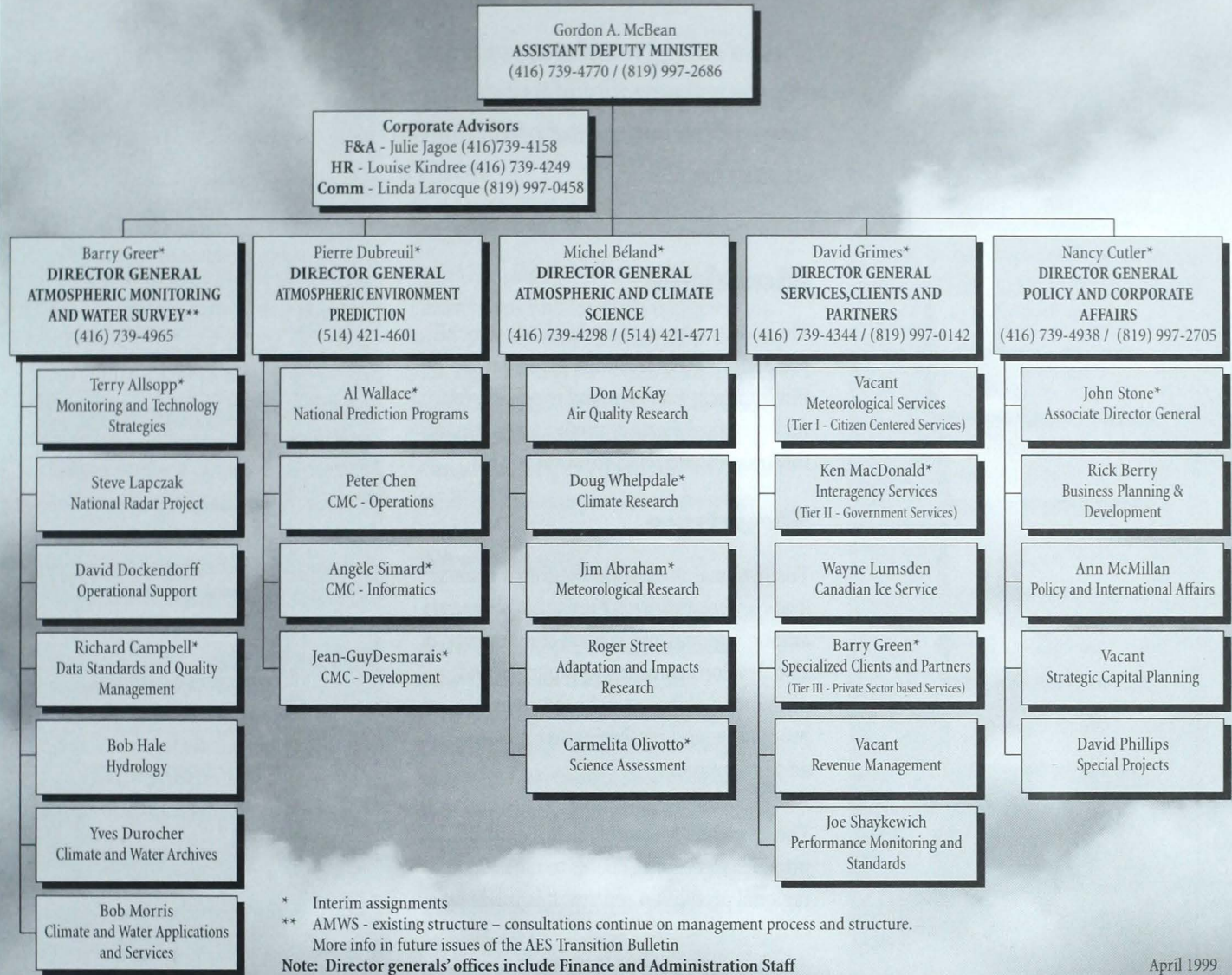
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**Zephyr** is now available electronically on the Intranet [wwwib.tor.ec.gc.ca/zephyr](http://wwwib.tor.ec.gc.ca/zephyr) and the Internet [www1.tor.ec.gc.ca/zephyr](http://www1.tor.ec.gc.ca/zephyr)



## Atmospheric Environment Service Interim Organizational Chart



April 1999

# Atmospheric Monitoring and Water Survey

**T**his directorate provides national leadership for AES activities in atmospheric and water monitoring, archiving and data management. Through national standards and strategic planning, it works with the regions to supply the fundamental observations for weather and environmental prediction.

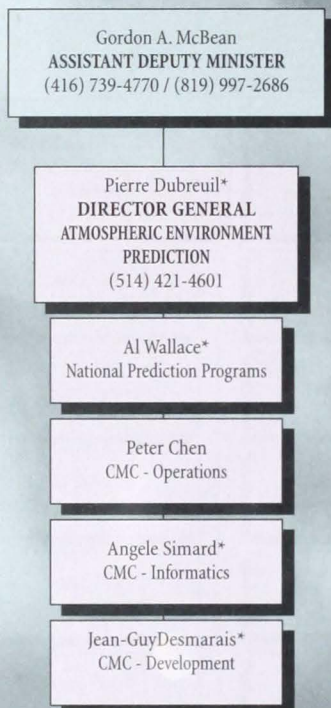
Director General Barry Greer says that discussions are taking place now to flesh out the directorate's structure and activities. A more definitive description of the directorate will be announced this spring.



# Atmospheric Environment Prediction

*"I see a stronger and more coherent prediction system that continuously improves the quality of its products and services, provides a broader range of environmental predictions to meet user needs, and cares about its staff."*

*Pierre Dubreuil*



## Mandate

The directorate provides leadership for all prediction activities of the Atmospheric Environment Program and is responsible for numerical weather prediction, national informatics and telecommunications.

## Structure

The National Prediction Programs Branch leads and coordinates prediction programs among regional and central components. It also develops common approaches and promotes collaboration in the areas of production and dissemination systems and programs.

The Canadian Meteorological Centre provides forecast guidance to national and regional prediction centres. It is made up of three branches:

The Informatics Branch provides centralized computing and telecommunications services to meet the Atmospheric Environment Programs' objectives, support other departmental operations, and assist other approved users. It operates and maintains the supercomputer facility in Dorval and various telecommunications networks.

The Operations Branch is responsible for the operation of the weather, climate and air quality programs at the Canadian Meteorological Centre, and for the national

and international Environmental Emergency Response service.

The Development Branch ensures that research findings are transferred into the operations of the Canadian Environmental Forecasting Systems, develops systems and products for the Canadian Environmental Forecasting Systems, and advises senior managers on forecasting techniques and related infrastructure.

## Priorities

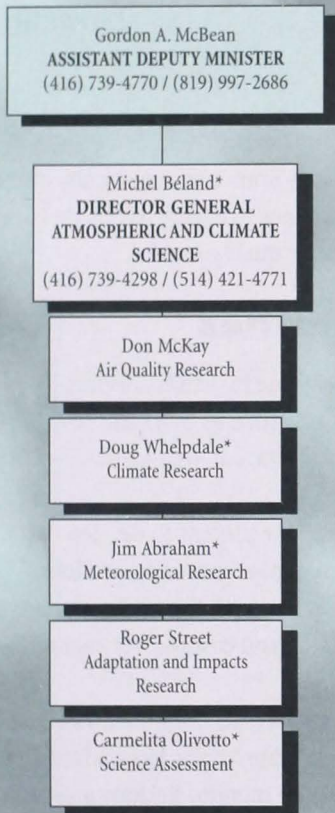
- Address the prediction deficiencies and opportunities that were noted during the Alternative Service Delivery consultations with staff and stakeholders.



# Atmospheric and Climate Science

*"We have established a reputation for excellence nationally and internationally. That's our culture, and I'd like to keep it that way."*

*Michel Béland*



## Mandate

Working closely with Canadian universities and international scientific organisations, this directorate researches the mechanisms that control atmospheric evolution. This information is used to forecast atmospheric changes and help Canadians adapt to them, and to prevent or mitigate atmospheric catastrophes.

## Structure

The Air Quality Research Branch does research on important atmospheric constituents such as ozone and greenhouse gases, and on atmospheric pollutants, such as acid rain, smog and toxics, and particulate matter, including their transport, deposition and transformation.

The Climate Research Branch does research on three main areas: producing numerical models to see how climate variations or the production of greenhouse gases will affect our climate in the future; monitoring and analyzing climates, principally in Canada and the Arctic; and examining climate processes, such as land-surface atmospheric exchanges, which are crucial in our ability to understand and simulate its evolution.

The Meteorological Research Branch does research to help the weather and environmental services program improve the accuracy and timeliness of its analyses and forecasts. It focuses on data

assimilation and remote sensing, numerical weather prediction and physical atmospheric processes. It does so in close collaboration with the Canadian Meteorological Centre.

The Adaptation and Impacts Research Group looks at the socio-economic impacts of climate change and atmospheric pollution and develops adaptation strategies for Canadians.

The Science Assessment Branch produces assessments of federal, national and international science in the fields of climate and air quality, which are used to develop policies.

## Priorities

- Ensure that the R&D program will meet future needs for climate, weather and air quality information related either to policy formulation or services to the taxpayers. The program will focus particularly on severe and extreme weather in the near term.
- Maintain a monitoring program that gives us feedback on the effectiveness of environmental decisions and policies related to air quality and climate change.
- Ensure we have the people and skills to meet the needs of clients, partners and Canadians, while contributing at a high level of excellence to international atmospheric science.



# Services, Clients and Partners

*“By building more harmonious and productive relationships between the AEP and our partners and clients, we can deliver better meteorological services to Canadians in all sectors.”*

*David Grimes*



## Mandate

This directorate focuses on the needs of clients and partners and acts as a conduit for communications between clients, partners and the Atmospheric Environment Program (AEP). It also provides direct services to major clients through the Canadian Ice Service and the Interagency Service Branch.

## Structure

The Meteorological Services Branch focuses on the relationship with public good clients and ensures their perspective is represented in policies.

The Interagency Services Branch manages the relationship with National Defence and NAV CANADA and coordinates national delivery of services to them.

The Canadian Ice Service Branch delivers services to the Canadian Coast Guard concerning the movement of ice.

The Specialized Clients and Partners Branch maintains contact with all cost-recovery clients and helps to develop and implement a cost recovery framework.

The Revenue Management Branch advises on major contract renewals and sets up a cost accounting system.

The Performance Monitoring and Standards Branch systematically monitors performance to ensure AES is meeting its targets for quality service.

## Priorities

- Continue to deliver services for major clients such as DND and NAV CANADA.
- Lead the process to develop national standards for service, products, relations with the media and private sector, and cost recovery activities.
- Work in cooperation with Policy and Corporate Affairs to standardize the way we monitor performance in terms of specific services and the way we do business overall.



# Policy and Corporate Affairs

*"The health of the Program will depend on our success at using the tools of policy, planning and performance frameworks to connect people, program components and our departmental and international partners."*

*Nancy Cutler*



## Mandate

This Directorate provides an ongoing assessment of the health of the Weather and Environmental Predictions program. This broad focus is reflected in the directorate's activities. International Affairs and relations with the planning and policy functions of Environment Canada are at its core. It also handles strategic capital planning and the overall stewardship of national standards and performance assessment reporting.

Through the planning process, this directorate helps to implement the changes resulting from the Alternative Service Delivery initiative and is also responsible for the Weather and Environmental Prediction Table and overall strategic planning with the regions.

## Structure

The Business Planning and Development Branch provides planning support for WEP, including measuring program results to ensure they meet performance targets. The group also provides a program evaluation service for all national and regional components of WEP, and is the corporate secretariat for the Atmospheric Environment Service and WEP.

The Policy and International Affairs Branch ensures the Weather and Environmental Prediction (WEP) program is represented at international fora; acts as

a liaison for policy initiatives inside and outside Environment Canada that relate to WEP.

The Strategic Capital Planning Branch oversees the administration and management of major capital investments related to Weather and Environmental Prediction.

## Priorities

- Develop a performance measurement framework for the WEP and implement a visible and vibrant reporting function based on the framework.
- Ensure that the new decision-making bodies for the WEP (the Table, the Management Board, and the Operations Management Committee) are working well.
- Develop and implement key components of the Human Resources Plan.
- Use major capital resources to advance the strategic objectives of WEP, including addressing the rustout problem.
- Challenge all contributors to WEP to maintain the vital links between science and policy.



# Testing... Testing... Y2K!

**E**ver wonder what our Year 2000 experts mean by Year 2000 testing? Making an application 'Y2K-compliant' involves an enormous amount of work – examining the code, making changes, if necessary, and testing to ensure the application works in the same way afterwards. We also need to ensure the hardware used by the application is compliant.

"The AEP's Y2K Project Team is not performing miracles – our success is due to a lot of carefully planned, hard work" said Gavin O'Hara, Y2K Coordinator.

The first stage is to verify that the hardware (e.g. a PC, a workstation, etc.) is Y2K-compliant. Software is then tested in isolation. If data is input to an application, it is provided in a 'canned' format (i.e.

custom data sets are built, not provided by another application). The test suite is run against the original software (this is called a 'baseline' test), then run against the new code and the results compared (this is known as 'system' testing).

Testing for applications identified as Government Wide Mission Critical was completed at the end of December 1998. At that point, application owners started to run their systems in combination with other applications to monitor how the data is exchanged and to show how applications handle data internally. This is known as 'integration testing'.

Large-scale testing is planned for early March 1999. This 'end-to-end' test involves 30-odd applications in a test lasting several days. Applications span the entire spectrum from data collection through

*Continued on page 9*

## GOES Satellite Testing

**G**eneration of products (forecasts, imagery, etc.) for the public and other clients of the AEP are an important part of our Year 2000 efforts. We are now starting to test with our partners in providing meteorological services.

A key component of the data collected by the AE is satellite imagery from the American GOES (Geostationary Operational Environmental Satellite) satellites. Due to the nature of the data stream, it is almost impossible to conduct tests using 'canned' data without building expensive custom simulators.

On Monday January 25, 1999 and Wednesday January 27, 1999, the U.S. National Environmental Satellite, Data and Information Service (NESDIS) Office of Satellite Operations conducted a GOES end-to-end test to simulate the Year 2000 Leap Year and Rollover transition dates. Current GOES data was time-tagged with Year 2000 dates and transmitted via a spare GOES satellite. AES staff participated in this end-to-end test which involved coordinating the efforts of American scientific staff, AE staff maintaining the satellite data receivers and staff in Prairie and Northern Region who set up and monitored receive equipment in Saskatoon and Winnipeg. The test was further constrained by a very tight test window imposed by the US team.

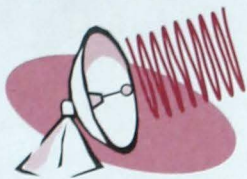
Preliminary analysis of the results indicates that it was a success. Further analysis will be done shortly, but the teams are confident we are one step closer to full Year 2000 compliance for these applications. Test results will be posted shortly. Refer to the AE's Year 2000 web site at <http://aep2000.ec.gc.ca/> for more information. See also: <http://www.oso1.x3.nws.noaa.gov/y2k/nesdis.htm>.

Congratulations to our 'local' team members Victor Ruseckas in Downsview and Lorne Potter in Winnipeg for a job well done.

## Year 2000 Information

**T**reasury Board recently began reporting year 2000 readiness for the federal government as a whole and also by individual departments. You can view this at [http://www.info2000.gc.ca/Introduction/FedGovActivity\\_E.htm](http://www.info2000.gc.ca/Introduction/FedGovActivity_E.htm) Industry Canada presents the Millennium Bug Home Check Guide (a web version of the mailing that went to millions of Canadians in February) at <http://strategis.ic.gc.ca/SSG/yk04717e.html>





# All systems go!

**W**ork on the National Radar Project is well underway with a new Doppler weather radar installation near Regina fully operational. The official opening of the Bethune radar took place in Regina on November 20th with several media outlets in attendance.



(Left to right): The Honourable Ralph Goodale, Minister of Natural Resources announces Regina's new Doppler weather radar with Nancy Cutler, Vic McDougall, Councillor, City of Regina, Steve Lapczak and Carol Klaponski.

The Lac Castor (Quebec) radar team of engineers, technicians, computer scientists, project managers and research scientists are working in high gear preparing the retrofit. The Lac Castor Doppler radar will be announced this Spring.

For information about the National Radar Project check out the website at [www1.tor.ec.gc.ca/doppler](http://www1.tor.ec.gc.ca/doppler)



Lac Castor Doppler radar installation team (left to right): Todd Benko, Garry Tofflemire, Ron Ruff, Tony Hilton and Delroy Barrett.

*Continued from page 8*

processing, analysis and dissemination. Operational forecasting staff will play a key role in the execution of this test. In effect, we will be creating a miniature AES and simulating how it will react on the rollover to January 1, 2000 and also over the leap year in February 2000.

Each level of testing increases our confidence that the applications will continue to work in the year 2000. As applications are implemented in an operational mode (a task that should be

complete by June 30, 1999), we will have a further six months of real-time operation – the penultimate test to the rollover itself.

So, next time you see a beleaguered and weary IT or Y2K colleague, thank them for their hard work and dedication!

For more information on testing for Y2K, check out the AES Year 2000 web site at <http://aep2000.ec.gc.ca>.

## INFORMATION NUGGET



Many people have asked me why this staff newsletter is called **Zephyr**. Frankly, I do not know. But I do know that Zephyr has been around for a very long time – since around 1920 in fact. And that Zephyr is “a westerly breeze with pleasant warm weather supposed to prevail at the summer solstice” (HMSO, Meteorological Office, 1991). Perhaps someone can help me out and tell me why our newsletter was named Zephyr. I’ll publish your responses in the next issue.



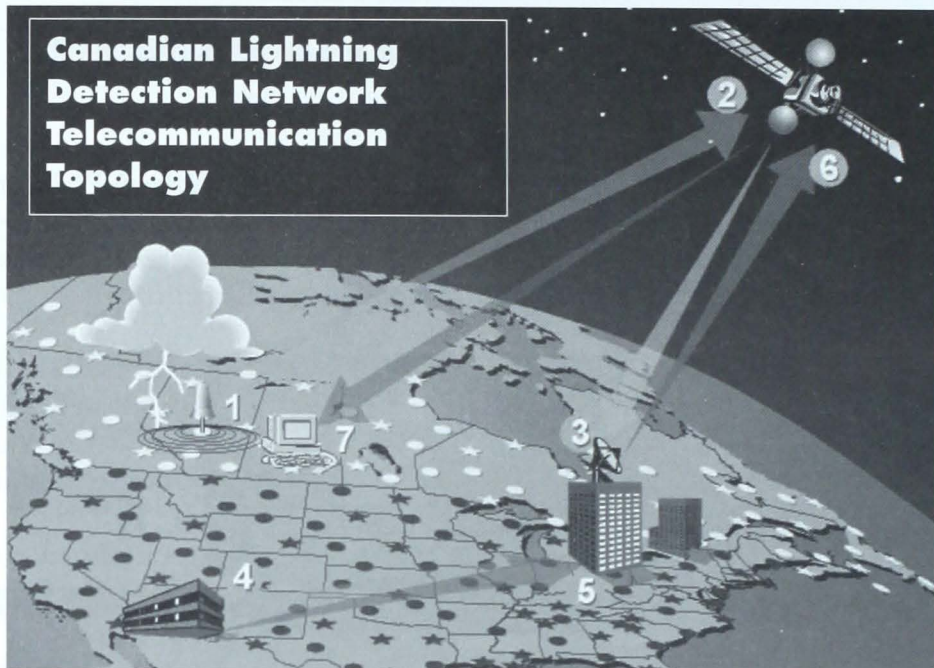
# The Canadian Lightning Detection Network

**M**eteorologists are getting a more detailed picture of lightning strikes in close to real time through the new Canadian National Lightning Detection Network (CLDN).

The CLDN is integrated with the U.S. National Lightning Detection Network. Together, they form the largest and most advanced lightning detection network in the world with 187 sensors — 81 in Canada and 106 in the United States. The network can process well over 200,000 strokes of lightning per hour. The CLDN is also the first national network to be able to detect cloud-to-cloud lightning as well as cloud-to-ground lightning.

“The network will improve Environment Canada's ability to detect and predict severe weather,” said Gilles Fournier, Network Planning and Project Support

## Canadian Lightning Detection Network Telecommunication Topology



Meteorologist at the Atmospheric Monitoring and Water Survey Directorate. “There is a benefit for Canadians and for organizations that subscribe to our data.”

When lightning occurs, the sensors beam electromagnetic signals via satellite to the Network Control Center in Tucson, Arizona. The center processes the data to determine the location of the lightning strikes and transmits the information to Environment Canada's weather centres.

The whole process takes about 30 to 40 seconds from lightning flash to on-screen

data, versus 5 minutes for a conventional radar system to do a full scan of an area. Fournier explained that the radar and sensors complement each other, but the new network offers some flashes of brilliance.

The project started in February 1997, when Environment Canada hired Global Atmospherics Inc. of Tucson to design and install the network. The company also upgraded the Network Control Center to handle Canadian data, enabling Canada to piggyback on an existing infrastructure and still get a separate data stream for our country alone.

The sensors are located across the country, including some unique spots like the Thompson zoo in Manitoba and the gymnasium roof at Hydro-Québec's LG-4. Installation began in May 1997 and was completed by November 1998. Fournier said 1999 marks the first full year that the entire network will be operating and he's eager to see how it helps meteorologists during this summer's peak lightning season.

## INFORMATION NUGGET



The public often questions the use of the word “meteorology” in our publications and wonders why we do not simply write “weather” or perhaps even “climate”. Well, I think I found the answer to this one — meteorology means the science of the atmosphere and the word comes from the Greek word *meteoros* meaning lofty or elevated, and *logos* meaning discourse. “Meteorology embraces both weather and climate and is concerned with the physical, dynamical and chemical state of the earth's atmosphere (and those of the planets), and the interaction between the earth's atmosphere and the underlying surface. The term was first used by Aristotle” (HMSO, Meteorological Office, 1991).



## A Model of Cooperation

The Hydrology Division of the Atmospheric Monitoring and Water Survey Directorate and the National Research Council (NRC) recently unveiled their new computer-based system for managing environmental resources and predicting environmental disasters.

The Environmental Prediction Decision Support System, or EPDSS, turns information about the environment and human activities into a computer image. The EPDSS takes information from a range of sources - organizations, databases, systems and equipment - and puts it together in one integrated system. Using sophisticated modelling techniques, the EPDSS simulates the physical, chemical and biological factors that occur in nature as well as the effects of human activities, and predicts what could happen in the future.

"The system displays problems in a way that both experts and non-experts can understand," explained Jean-Guy Zakrevsky, Head of Hydrologic Applications. "It also creates 'what if' scenarios to help people weigh options and make good environmental decisions."

The system has a major role to play in predicting and preventing environmental disasters or at least minimizing their effects. Norm Crookshank, co-developer of the system at the NRC, demonstrated how the EPDSS can model the progression of a flood wave along the Red River and help determine the best locations for dikes.

The system has stirred up interest in a couple of Canadian cities already. It has been used to monitor sedimentation in Vancouver's Capilano water reservoir and

water quality in the Rideau and Jock rivers around Ottawa.

Gordon McBean and Jacques Lyrette, Vice-President of Technology and Industry Support at the NRC, attended the EPDSS demonstration and praised it as a model of cooperation between the two organizations. The EPDSS was developed through a Memorandum of Understanding between Environment Canada and the NRC. For information contact: Jean-Guy Zakrevsky (613) 992-2927



Norm Crookshank (NRC) and Jean-Guy Zakrevsky.

## Canada-China Workshop

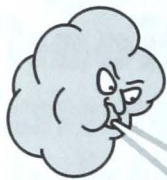
In December, the China Meteorological Administration (CMA) hosted the Canada-China Workshop on Atmospheric Observing Systems in Beijing. Representatives from South Korea, Japan, Malaysia, Hong Kong and Macao were in attendance. Garry Pearson and Tsoi-Ching Yip represented Canada as co-hosts. The workshop was a success with a great deal of information exchange on observing practices in Southeast Asia and Canada. The next workshop will take place in Canada in the year 2001.

Tsoi was very pleased by the hospitality shown by the Chinese hosts. She commented that "our hosts showed a genuine interest in us and what was going on in Environment Canada and at times surprised us with their detailed knowledge of our organization".



(Front row from left to right) Eliseo Salazar (Malaysia representative), Tong Si Man (Macao), Chee-Young Choi (South Korea), Garry Pearson (Canada), Li Wong (CMA duty administrator), Tsoi-Ching Yip (Canada), Masanori Shitamichi (Japan), W.L. Chang (Hong Kong). Rows 2 and 3: Chinese workshop participants from CMA.





## Winter Winds Whip West Coast

**A**s of February 22, British Columbia's lower mainland and Sunshine Coast have experienced 14 winter wind storms. Gary Myers, Superintendent, Climate Services in Pacific and Yukon Region, says this is the windiest winter season the region has experienced since 1972, when 18 storms buffeted the region. Since wind speeds were first recorded in 1955, the average number of storms for the area has been 8.2 between November and February. The record winter for wind storms was 22, set in 1955/56. When wind speeds hit 60 km/h or higher, they are defined as a wind storm.

Myers attributes this winter's storms to a pocket of warm water in the western Pacific associated with last year's El Nino and this year's La Nina. It's a new theory that Myers says seems to work. This year many of the winter storms have originated in the western Pacific.

Earlier this winter a small tornado touched down on top of a Coquitlam shopping mall. Fortunately, damage was not extensive. In November, 104 km/h winds cut power to more than 175,000 lower mainland and Sunshine Coast homes. During a late January

wind storm, 70,000 homes were left in the dark. At Deroche, in the Fraser Valley, two mobile homes were knocked off their pads. The series of storms has caused the cancellation of 80 BC Ferry sailings.




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## Business Development with the Vietnamese

**F**or 8 weeks last summer, EC in Regina hosted four Vietnamese delegates for an international work term adventure as part of the Vietnam-Canada Environment Project. Russell Boals, Manager of Prairie and Northern Region's Business Development Unit indicated that "the goal of the project is to strengthen environmental monitoring and protection capacities of key Vietnamese national and provincial agencies".

The four delegates participated in water quality monitoring field and field-lab activities in Manitoba, toured industries in

the Regina area, including the Co-op Oil and Gas Upgrader, Shand (a coal power generation station), and IPSCO (a local steel recycling plant). They also participated in training sessions on topics relating to decision support systems, data management, environmental assessment, environmental effects monitoring, field screening, air monitoring, and pollution prevention.

The work term was an educational and cultural learning experience for both the delegates and Environment Canada staff. "It will be interesting to see how the

delegates apply the first-hand experience in environmental monitoring and management they gained in Canada" said Russ Boals.

The Vietnamese project is one of many involving the Business Development Unit, and providing a responsive and cost-effective means of linking regional environmental monitoring expertise and knowledge with private sector counterparts. For more information please contact Russell Boals at [russ.boals@ec.gc.ca](mailto:russ.boals@ec.gc.ca)



# New Brunswick Weather Centre: Leaders in Air Quality Prediction

Imagine a sunny, warm July afternoon with temperatures in the high twenties and a light southwesterly wind. These are perfect weather conditions for outdoor activities like tennis, swimming or taking an evening walk. Unfortunately, these conditions are also conducive to smog formation which results in the deterioration of air quality. Poor air quality has led many Canadians, especially those suffering from heart and respiratory illnesses, to make adjustments in their daily lifestyle.

Poor air quality in the Maritimes is due, in large part, to long-range transport of ground-level ozone and its precursors. Prevailing winds from mid-May to mid-October have a westerly component, which bring pollutants to the Maritimes from areas such as the Washington-Boston corridor, the Great Lakes, the Ohio River Valley and Southern Quebec.

EC's Atlantic Region recognized the need to provide air quality information to the public by giving them access to both actual and forecast conditions. As a result, the New Brunswick Weather Centre (NBWC), developed and implemented a daily Smog Forecast program for the southwestern counties of New Brunswick in 1997. "We are very proud of this program initiative in New Brunswick," says Michael Howe, Air Quality meteorologist with the NBWC. "This program is quite timely since more people are concerned about the quality of air they breathe". The Smog Forecast gives individuals the information required to make informed decisions and take the steps necessary to protect themselves, their families and the environment.



*NBWC meteorologists Claude Côté (sitting) and Mike Howe (standing) discuss the air quality information.*

Being the only program of its kind currently in Canada, there are plans to broaden it in this summer. "We are expanding the program to other regions of New Brunswick, including the cities of Fredericton and Moncton," says Claude Côté, Regional Air Quality Coordinator. "The feedback we've received from the public has been extremely positive".

The program is delivered in partnership with the New Brunswick Department of Environment, indicating a common commitment from both federal and provincial departments to harmonize their efforts in the area of air quality. "We anticipate provincial coverage in the very near future and plan to develop and deliver additional air quality products such as ventilation coefficients and particulate matter forecasting," says Côté. "This program," he adds, "has proven to be

so successful, we would like to see similar programs established across Canada."

The New Brunswick Weather Centre works in collaboration with the Canadian Meteorological Centre in Montreal, the Atmospheric and Climate Science Directorate in Downsview, Atmospheric Science Division in Dartmouth, as well as the New Brunswick Departments of Environment and Health and Community Services. Together they follow the formation, evolution and transport of ground level ozone and its precursors.

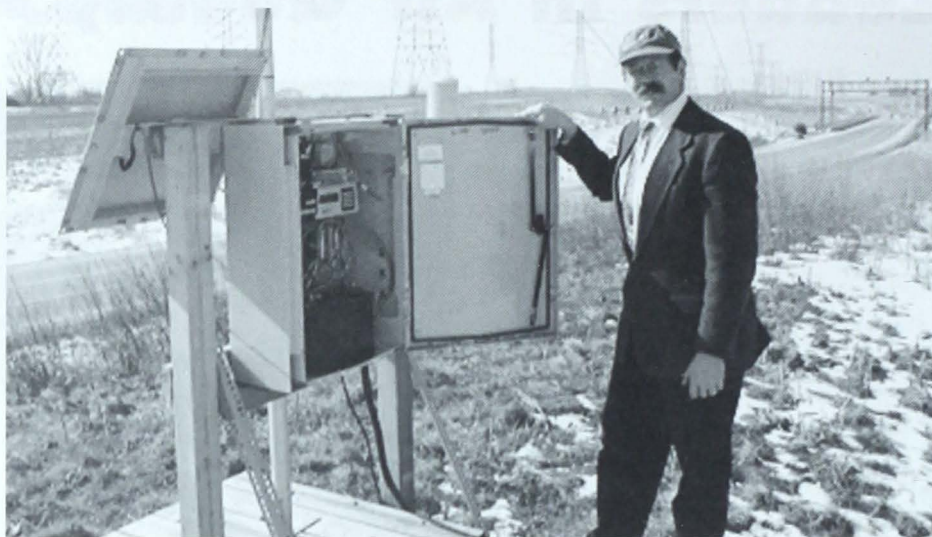
Thanks to this important new program, New Brunswickers are better served and informed about the quality of the air that they breathe.



## On the Road in Ontario Region

**R**oad Weather Information Systems (RWIS) are simply automatic weather reporting systems installed along roadways but with a twist. Besides reporting on air temperature, humidity, wind speed and direction, RWIS possess unique road sensors or "pucks" embedded in the slow-lane of the roadways to provide surface road temperature, below surface temperature, wetness, and salinity. This information allows work crews to concentrate on certain areas for salting and sanding in hazardous road conditions.

What do Torontonians take twice a day to reduce congestion? The 407 Electronic Toll Route (407 ETR). And to make sure the traffic moves efficiently along this most modern concrete toll highway, the maintainers from Canadian Highways Maintenance Corporation have installed 2 systems along their roadway.



*George Weaver, Acting Chief of Air Monitoring for Ontario Region (notice his fish tie) who oversaw the Highway 407 installations. At this rate, George will need to have his job title changed to Chief of Road Monitoring!*

So, next time you are driving along a highway, look out the window and see if you can spot a RWIS installation. RWIS sites are popping up all along Ontario roads, including Chatham, the City of York, along the 410 in the south part of the

province, near Barrie and in Ottawa. In fact, the Regional Municipality of Ottawa-Carleton already has one of the most complete RWIS networks of any Canadian city with 6 sites and another 3 planned for the spring.

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## Quebec City to Host the Ninth International Weather Festival

**T**he Ninth International Weather Festival will take place in Quebec City from April 15 to 18, 1999, the first time this event will be held outside the French city of Issy-les-Moulineaux, where it originated.

With the theme of this year's festival focusing on climate change, the event is expected to attract weather reporters from around the world and thousands of visitors to its Festival grounds. Program activities include a Salon de la météorologie (weather show), participation in an exhibition at the Musée de la Civilisation, a number of lectures for the public and for scientists, a festival of scientific films and a competition involving some 60 weather broadcasters from various parts of the world. It is estimated that

over 400 participants from 58 nations will attend the four day festival. At last estimate, some 116 television stations will cover the event.

Dr. Gordon McBean, Assistant Deputy Minister of AES, and the Honorary Chair of the Festival, indicated that the "International Weather Festival will provide an excellent forum to make Canadians more aware of the science of the weather and climate change". For further information, please contact Jacques Lavigne (514) 283-1105.







## Patrick McTaggart-Cowan: a Career of Distinction



*Parliamentary Secretary Paddy Torsney presents the plaque to Mrs. McTaggart-Cowan.*

“McFog” Auditorium is hardly the way to honor a respected colleague, and so the more proper McTaggart-Cowan Auditorium was dedicated in November to pay tribute to a career of rare distinction, integrity and dedication to public service. The naming took place at AES headquarters in Downsview, with Parliamentary Secretary Paddy Torsney and Dr. Gordon McBean in attendance.

“McT-C and McFog were nicknames given over the years to Dr. Patrick McTaggart-Cowan,” said Dr. McBean. “The nicknames notwithstanding, he was a visionary and a man of many accomplishments both in the public service and academia. It is extremely fitting we name the auditorium at AES headquarters in his honor.”

Dr. McTaggart-Cowan was a Rhodes Scholar at Oxford University in 1934, specializing in quantum physics. In 1938 he joined the Canadian Meteorological Service to organize meteorological services in Newfoundland for transatlantic trials by flying boats. After World War Two, he was instrumental in the drafting of regulations for the Provisional International Civil Aviation Organization, and then became Assistant Director in charge of the forecasting division at Toronto Meteorological Division Headquarters in 1946.

In 1957, Dr. McTaggart-Cowan became Associate Director, and in 1959 Director, of the Canadian Meteorological Service. Over two decades he led the expansion of Canadian meteorology to meet the demand for forecasts and services.

Unable to resist the invitation, he joined Simon Fraser University as a professor when it opened in 1965, and it was here students nicknamed him “McFog.” When he passed away in October of 1997, flags were lowered to half-mast in honour of the former meteorologist turned president.

Dr. McTaggart-Cowan’s wife Margaret, and daughter Gillian Elliott, were in attendance at the dedication of the auditorium.



*Dr. Gordon McBean, Dr. Gillian Elliott (the daughter of Dr. McTaggart-Cowan) and Mrs. McTaggart-Cowan.*

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**T**o recognize her contribution to the Chinese community by acting as a media spokesperson, Tsoi Yip of the Atmospheric Monitoring and Water Surveys Directorate, was presented with a gift from the Canadian Chinese Broadcasting Corporation.



*Mable Wong (CCBC), Tsoi Yip (AES media darling) and Paul Wan, CCBC*

## AWARDS

Dr. George Boer, a senior scientist in the Climate Research Branch of AES, was recently honoured with the Jim Bruce Award in recognition of his more than 25 years of exceptional service to the AES, as an outstanding scientist, a mentor, and as a leader in the field of climate modelling and diagnostics. The Award, presented annually in honour of Jim Bruce, a past Assistant Deputy Minister, is awarded to an individual who has made an outstanding contribution to the Atmospheric Environment Program and its objectives.



*Dr. George Boer is presented with the award by Dr. Gordon McBean*

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In December, senior managers surprised Heather Mackey, AES Communications, with an award to recognizing her contribution to the National Public Service Week.



*Dr. Gordon McBean presented the award to Heather Mackey*

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In December, Serge Nadon, Policy and International Affairs, received the Head of the Public Service Award for his past efforts as part of the fire detection research team for Canada Center for Remote Sensing (NRCAN). Congratulations Serge!