FALL 1999

Zephyr

ATMOSPHERIC ENVIRONMENT PROGRAM

Environment Canada Environnement Canada

Interview with the Deputy Minister

— *Jennifer McKay*

In August, the ***Zephyr*** *editor had the opportunity to meet with Deputy Minister, Len Good, to discuss his views on the AES organization.*

ZEPHYR: ***Last year when you visited Dorval and Downsview, staff raised concerns about the future of the AEP. What are some of the activities undertaken in the past year to address these concerns?***

LG: There has been a great deal of hard work over the past year. For instance, there has been a reallocation by the Department of $5.3 million to the Weather and Environmental Prediction Business Line. We're recruiting and training 20 new meteorologists with $1.1 million of that money. The rest is being used for long-standing problems with infrastructure.

Environment Canada has led the way on the "rust-out" issue across the federal government. It was because of us, and the information we received during the ASD Study, that there is a government-wide initiative called the Program Integrity Exercise. With our leadership on this issue, we're optimistic that our case is strong.

Combined with the Treasury Board submission, I am pleased to say that we have made good progress over the past year.

ZEPHYR: ***Will you return to these locations to talk to staff again? If so, when?***

LG: Yes, I have every intention of keeping my promise and returning to Downsview and Dorval. Tentatively, these visits are scheduled for November, and I will be able to discuss the Treasury Board submission, increased funding, infrastructure concerns and other issues raised last year.

ZEPHYR: ***The Treasury Board Secretariat is scheduled to review our submission shortly. What are we asking Treasury Board to do that will help the AEP face its many challenges?***

LG: The submission is a rather long and complicated process, but it places our needs squarely in the center as a priority of the federal government. We have worked closely with Treasury Board on this submission. An official confirmation of our mandate, increased flexibilities, and our Framework for Cost Recovery and User Charges will give us what we need to pursue more efficient operations and a level playing field with partners and stakeholders.

Continued on page 4

In this Issue

Letter from the Editor 2
Message from Gordon McBean 3
Canada Hosts the Inter-American Institute for Global Change Research 3
Weather and Environmental Predictions 5
Atmospheric Monitoring and Water Survey Directorate 6
Swatting the Millennium Bug 7
AES MAPping its way through the European Alps 8
Environmental Management & AES Operations 9
Discovering EC in the Arctic 11
Forecast: Coop venture better trains forecasters 12
Expedition reaches North Pole 13
Awards 14

Canada

Letter from the Editor

As the sweltering heat of summer gives way to shorter days and cooler evenings, autumn can't be far around the corner. So, as we wait for the splashes of aspen gold, maple crimson, and burnished copper that signal the beginning of fall, I would like to welcome you to the fall issue of ***Zephyr***.

This issue is filled with information AE staff want to know. From my interview with the Deputy Minister, to a Y2K update, to employee recognition awards, the fall issue of ***Zephyr*** is jam-packed with news for all.

Unfortunately, I have to use this space to announce that this will be my final issue as the Editor of ***Zephyr***. I've enjoyed revitalizing your staff newsletter and producing the last 5 issues. I would like to thank everyone who contributed to ***Zephyr***. I hope that you will continue to read ***Zephyr***, a premier source of information for AE employees.

A new Editor will be named shortly. In the meantime, Lucie Gagné of the Communications Directorate will be the primary contact for ***Zephyr***. You can reach Lucie at (819) 997-8899 or send a message to our new e-mail account at zephyr@ec.gc.ca.

Sincerely,

Jennifer McKay
AES Communications

ZEPHYR

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 winter issue should be sent to us by October 22, 1999.

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INFORMATION NUGGETS

Did you Know:

— Melissa Choong

- Ice Storm '98 was Canada's most costly natural disaster to date with insured losses of 1200 million and economic losses of 2000 million.
- The largest earthquake recorded in Canada occurred off the Queen Charlotte Islands (BC) on August 22, 1949, with a surface wave magnitude of 8.1 on the Richter Scale.
- The most severe floor recorded in Canada occurred in the Toronto area following Hurricane Hazel, on October 14 and 15, 1954, when more than 180 millimeters of rain fell in 24 hours. Eighty-one people died, 4000 families were left homeless, and roads were swept away.
- The greatest one-day snowfall–118.1 centimeters–occurred at Lakelse Lake, British Columbia, on January 14, 1974.
- Temperatures in Canada have ranged from 45°C in Midale, Saskatchewan to - 63°C in Snag, Yukon.

Message from Gordon McBean

As many of you may have read in the latest Transition Bulletin, the Treasury Board is scheduled to discuss the AES submission later this fall. The proposal addresses both the immediate issues and future needs of the service, and results of the decision will be communicated with everyone as soon as possible.

Preparing for the Treasury Board submission has been one of a number of activities on the vision of our service. For many months, the entire department has been working on reorganizing itself around four business lines. In this issue of ***Zephyr***, you'll find an article about the Weather and Environmental Predictions business line, now known as WEP.

The WEP business line includes the goals for AES. These are to use the best available science and research to help save lives, avoid health risks, reduce property losses, enhance economic productivity and assist in adopting the best environmental policies. By continuously monitoring conditions in the atmosphere, hydrosphere and cryosphere, our service provides the baseline data essential for understanding the state of health of the Canadian environment. The prediction activities undertaken every day, 24 hours a day, help Canadians respond to short- and long-term changes in their environment.

In planning for the WEP business line, we have set out priorities for the next five years. These include applying our expertise in meteorological prediction to other related elements of the environment, evolving toward an infrastructure that has multiple uses and can be shared with others and working with a broad range of partners to deliver a suite of complementary services to Canadians.

Gordon McBean

We already have a long and proud history of meeting these goals. We are taking steps to ensure that we can just as proudly continue to meet them in the future.

GA McBean

Gordon McBean

Canada hosts the Inter-American Institute for Global Change Research

— Bruce Angle

In June, Environment Canada and the Department of Foreign Affairs and International Trade hosted the Sixth Conference of the Parties (CoP VI) to the Inter-American Institute for Global Change Research (IAI). The objective of this institution is to foster collaborative research and understanding of global environmental change issues in the western hemisphere.

Prior to the CoP, Environment Canada organized a Symposium on "Building Collaborative Global Change Research in the Americas." The symposium was attended by scientists and decision-makers representing government, industry, academic and non-governmental institutions from the 18 IAI Member Countries. The purpose of this symposium was to raise awareness of the IAI in Canada and to discuss how Canada might enhance collaborative research in the Americas.

Participants, IAI Symposium on Building Collaborative Global Change Research in the Americas

Dr. Gordon McBean, First Vice-Chair of the IAI Executive Council, chaired the symposium. He stressed the need for regional assessments of climate change as well as an integrated approach to national assessments of environmental change impacts and adaptation. Dr. John Stone elaborated on existing collaborative mechanisms stressing the importance of the IAI in building synergies amongst diverse institutions who work on the various dimensions of this complex matter.

The outcome of the symposium was a recommendation to develop a Canadian National Committee for the IAI to connect researchers and research activities in Canada with those in other IAI Member Countries via national research networks. For more information about the IAI, please visit their Web Site: http://www.iai.int/iai. For more information, please contact Bruce Angle, (819) 997-3844.

Interview with the Deputy Minister

Continued from page 1

ZEPHYR: ***What will you do to address concerns should the Treasury Board not grant the full set of requests?***

LG: Discussions have been taking place with the Treasury Board Secretariat for some time now regarding the submission. I would rather not second guess the Treasury Board process, as they are aware of the priorities identified during the ASD consultations. I'm optimistic that we will get what we are asking for.

ZEPHYR: ***What is your vision for Environment Canada and how does AEP fit into this vision?***

LG: My vision is for Environment Canada to be a department that takes the best science-based approach to addressing government priorities. Weather and environmental prediction are clearly government priorities as they help to safeguard the health and security of Canadians. It follows that AEP is an invaluable part of this departmental vision.

The problem of climate change is showing us, as well as other departments, that we must work together to find solutions and adaptation strategies. In fact, since climate change is bringing with it more extreme weather events, forecasters are more important than ever before in providing timely and accurate weather information to the media and public.

ZEPHYR: ***The process to put together the Weather and Environmental Prediction business line is now complete. How does WEP support the Department's priorities?***

LG: Weather and environmental prediction activities are departmental priorities. In addition, atmospheric science is inextricably linked to climate change, clean air and clean water — other key departmental priorities. Atmospheric science is also linked to the science supporting the nature priority.

Change is necessary for improving any organization, and AES is no different. This new AES management structure clearly outlines our objectives and clarifies responsibilities and lines of accountability. I just want to let everyone know that I am very pleased with the reorganization of the directorates at AES. I've heard from some of our partners who are happy that we have a Services, Clients and Partners Directorate which focuses on their needs. With this realignment, I think the AES is well on its way to rejuvenating itself.

As we get accustomed to the new management structure, we will continue to keep staff well informed and to share information. I am pleased with our progress in implementing the new structure and I think we can all be proud of our work.

ZEPHYR: **Zephyr** ***readers will be curious about the new Minister of the Environment, David Anderson. Have you had an opportunity to discuss AEP with him?***

LG: Yes, I have met with Minister Anderson to discuss the AEP, and he has been informed on AE policies and organization. I told him about ASD, my decision and the reaction to that decision. Mr. Anderson is a strong supporter of AE, and a strong believer in the science capacity of the Department and of everything we are trying to achieve.

Minister Anderson has always had a healthy interest in environmental concerns. Working with Environment Canada is an excellent opportunity for him to combine his personal interests with his ministerial duties. In fact, his interest in the weather goes back to his experience as a pilot. When we met, he mentioned studying *Weather Ways*, a primer on weather that Environment Canada used to produce for aviators.

Minister Anderson also admires the strong science background of many of our staff, and he will preserve and improve the unique meteorological knowledge found here. This support will vault AEP into the next century with confidence in its policies, service, and science.

Weather and Environmental PREDICTIONS

— *Dave McCulloch*

Environment Canada (EC) has organized itself around four business lines – Clean Environment, Weather and Environmental Predictions (WEP), Nature and, Management, Administration and Policy. WEP contains most of the activities carried out by the old Atmospheric Environment Program (AEP). WEP remains responsible for issuing warnings of high impact weather and environmental hazards; providing weather and environmental information; and developing knowledge and understanding for environmental policies based on sound science.

Overall, WEP is part of a cooperative, international program which monitors and predicts changes in the global atmosphere (weather, climate and stratosphere), hydrosphere (rivers, lakes and oceans) and cryosphere (snow and ice). AES' Assistant Deputy Minister provides functional leadership for WEP which is comprised of the AES and components of Environment Canada's regions.

Challenges to long term stability

In the short term, WEP faces five major challenges:

- **Y2K** – WEP's environmental prediction system has been identified as one of the federal government's mission critical systems.
- **Technological obsolescence** – Over 40% of the infrastructure is beyond its useful life.
- **Budget shortfalls** – The ASD study has demonstrated that we have significant operating budget and capital shortfalls.
- **Attracting and retaining skilled personnel** – Over the next eight years, one-third of the WEP's S&T workforce and managers will be eligible for retirement.
- **Partnerships** – Alliances are eroding and the infrastructure's current state may inhibit our ability to attract new partners.

Setting priorities

To help us respond to the challenges while continuing to deliver our program, we have set four priorities for the next three years: ensuring that mission critical systems are Y2K compliant; restoring the health of Canada's warning system for extreme weather and related events; contributing to a solid scientific basis for policy development on atmospheric change issues; and, increasing the value of weather and environmental information to Canadians and in support of various economic sectors.

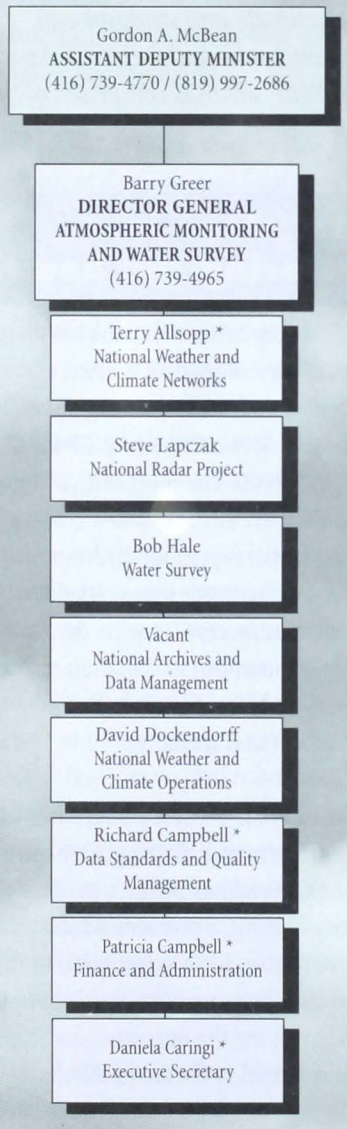
The first two priorities are clearly designed to meet the challenges. As you might expect, the second priority, "restoring the health," has several facets. It includes activities to: revitalize and create a sustainable S&T workforce; ensure the integrity of the national infrastructure; implement national standards; establish clear performance measures; and create a national identity.

First steps in restoring the health

As a first step to restoring the health of Canada's meteorological service, Environment Canada's Management Board reallocated $5.3 million to WEP for fiscal year 1999/2000. The most critical areas for investment are surface-based remote sensing (radar, upper air, hydrometric network and climate network), data management/access (marine data systems and dissemination) and human resources (salaries and benefits of interns, recruitment and training).

In addition, the Treasury Board is aware that infrastructure across government is rusting out and has begun a process to identify how big a problem it faces. To this end, we have made a submission to the Board detailing our infrastructure issues and identifying the operating and capital funds required to fix the problems.

In the Spring 1999 issue of ***Zephyr***, we featured an article on AES' new Directorates. At the time of publication, the description of the Atmospheric Monitoring and Water Survey Directorate was not finalized. In this issue, Director General Barry Greer presents his revised Directorate. Please note that the titles of certain branches and divisions have changed.



* Interim assignments

Atmospheric Monitoring and Water Survey Directorate

"Our goal is to ensure that nationally coherent, cohesive and cost-effective monitoring systems and related information services meet national and international standards and fulfill present and future user requirements."

Barry Greer

Mandate

This directorate provides national leadership to ensure that monitoring systems and related information services are provided to all Canadians. This enables them to make wise decisions regarding security of life and property, efficiency of the economy as well as conservation and protection of environmental quality.

Structure

The directorate is comprised of four branches and three divisions reporting to the Director General.

The National Weather & Climate Networks Branch provides functional leadership and coordination for the national weather and climate networks. This branch chairs the Meteorology and Climate component of the Monitoring Committee (MoC) and provides secretariat support.

The National Radar Project is responsible for the project management, coordination and implementation of the National Radar Plan (NRP). The responsibility for national radar support and the staff will be transferred to the National Weather and Climate Networks Branch after the completion of the NRP.

The Water Survey Branch will provide functional leadership and coordination for water survey networks and hydrology programs. This branch chairs the Water Survey component of MoC.

The National Archives and Data Management Branch will be responsible for the national archives, the provision of national climate services and related data management activities. This branch provides functional leadership, advice and coordination to ensure effective data management, life cycle management support systems and data access.

A major review of the functions is being carried out within this branch and of the organizational structure required to deliver these activities effectively. Completion is expected in a couple of months. All staff and managers are participating.

The Data Standards and Quality Management Division * establishes performance standards and operating procedures and will manage related documentation. In addition, the division is responsible for monitoring network performance in real-time and for central coordination of problem response actions.

The National Weather and Climate Operations Division * contributes to

Continued on page 7

Atmospheric Monitoring and Water Survey Directorate

Continued from page 6

the sustainable operation of Canada's atmospheric monitoring networks which provide Canadians with accurate, timely and reliable environmental data.

Finance & Administration Division will provide financial & administrative support for the directorate.

* The above two divisions receive functional direction from the Director, National Weather & Climate Networks to ensure effective integration and co-ordination.

Priorities

- ❑ To implement the National Radar Plan.
- ❑ To provide leadership and coordination for the rejuvenation of the national weather, climate, and hydrometric networks, including the establishment of a Life Cycle Management system and Human Resources workforce renewal plan.
- ❑ To develop national standards for the weather, climate and hydrometric networks.
- ❑ To improve data management practices.

Swatting the Millennium Bug: AES experts address the problem

— Gavin O'Hara

With four months to go before the biggest New Year's Eve party in history, Atmospheric Environment staff achieved a key milestone by putting Year 2000-compliant versions of its Government Wide Mission Critical (GWMC) software in operation.

This was no small feat. With over 210 applications coordinated as a set of 127 projects, it was a mammoth undertaking. Much remains to be done, however, with work focusing in three main areas.

Change is a constant in our organization. The challenge is to manage change in a way that does not put our hard work at risk. A process for change management is in place to ensure that we can maintain Y2K-compliance while ensuring that any new problems are addressed and that we can continue to meet our needs as well as the needs of our partners and clients.

Starting on September 29, 1999, AE will be conducting another full-scale test of our primary GWMC applications. The form of the test will be similar to the end-to-end test conducted in March, simulating the operation of a real-time weather centre to make sure that our systems will continue to function in a Year 2000 environment. This test will exercise changes made to software since the last end-to-end test. Additionally the AE will continue to work with external partners like the CBC, Broadcast News and Pelmorex, by conducting joint tests on vital weather equipment.

At the same time, work continues on the development, testing and implementation of contingency plans to protect us in the event of failures. Building on our tradition of providing service through weather both fair and foul, a team of regional and national representatives is enhancing contingency plans to handle the Year 2000 and the unique pressures that it will place on our organization.

With just a few months to go until December 31st, we remain confident that the hard work and enthusiastic involvement of staff on the Year 2000 project will prove the doomsayers wrong and make the Year 2000 a time of celebration.

For more information on what AE is going to combat the Y2K problem, visit our website at http://aep2000.ec.gc.ca/.

AES MAPping its way through the EUROPEAN ALPS

— Robert Benoit

After four years of preparation, AES researchers are proudly participating in the Mesoscale Alpine Program (MAP) — an experiment designed to improve weather forecasting in mountainous regions. This international, meteorological experiment, based in the European Alps is unique because of the region's physical geography and the proximity to the Mediterranean that together lead to extreme meteorological phenomena.

As a partner of the MAP, Canada is providing support in validating fine-scale models and is collaborating with Alpine European countries, the United Kingdom and the United States.

AES researchers will study the influence of mountainous topography on precipitation in the Alps, the alpine atmospheric flow, the boundary layer near ground level, cloud processes, strong valley winds and turbulence developing at the flight levels used for the commercial air traffic.

Robert Benoit, Senior Scientific Researcher at the Numerical Prediction Research Division (MRB) collocated with the Canadian Meteorological Centre (CMC) in Dorval and lead of the Canadian research team, indicated that his team has developed "the MC2 weather forecasting model. Combined with the Swiss national forecasting system, it will ensure complete and very finescale coverage of changes in all phenomena across the Alpine mountains – a world first in the 'operational' forecasting field."

The Canadian atmospheric research conducted during the course of MAP will lead to more detailed forecasts and the development of mesoscale prototype models. If the experiment is successful, these models could be applied in Canada to more accurately predict extreme weather incidents in mountainous regions.

For more information, please visit MAP's main web site (***www.map.ethz.ch***) and Environment Canada's MAP web site (***www.cmc.ec.gc.ca/rpn/map***).

Environmental Management and AES Operations

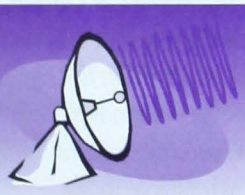
— *Dorothy Culic*

AES operations continue to integrate the department's Operational Environmental Policy and ISO 14000 principles for Environmental Management Systems into daily business.

EMS highlights from last year included:

- Compliance checklists for federal environmental legislation were created so that managers can track requirements through their operations. Directors, managers and staff learned more about federal legislation either through training or briefing sessions.
- An Ozone Depleting Substance Equipment Inventory was completed for AES operations, in support of the Draft Federal Halocarbon Regulations.
- Halon containing equipment for fire suppression was removed at CMC, Dorval and replaced with a system with zero ozone depleting potential.
- A comprehensive AES Health & Safety Manual has been drafted for the AESHQ Thomson Laboratory.
- The most current hazardous Material Safety Data Sheets (MSDS) are now available on the Intranet for staff.
- AES staff participated in an Environmental Emergency Branch study to assess emergency preparedness at the Lake Ontario Marine Buoy and the ASTRO Lab.
- The Water Survey Branch contributed expertise to the department's Potentially Contaminated Sites (PCS) Work Group, which has produced a clean up protocol for hydrometric sites.

Information on EMS is posted on a rotating basis on a bulletin board near you. Look for it and easy ways you can contribute to greening operations.



The Doppler Radar: Project Milestones

— *Jennifer McKay*

As always, the highly skilled National Radar Project's development and installation teams have been working in high gear installing new radars and retrofitting existing weather radars with Doppler capability.

So far, the Doppler radar teams are right on schedule. In February, the Lac Castor radar, located in the Saguenay region of Quebec, was retrofitted with Doppler capability. This summer, the Radisson radar located near Saskatoon, Saskatchewan, was completed and Ministers Anderson and Goodale announced the opening of the radar on August 26th.

Due to the in-house Doppler radar expertise, the Department of National Defence asked Environment Canada to upgrade and retrofit its existing Jimmy Lake, Alberta radar. This Doppler radar was not scheduled to receive a retrofit as part of the original National Radar Project, but Environment Canada is pleased to be able to increase its Doppler radar network even further.

"Thanks to all members of the development and installation teams for getting things working so well so quickly", says Gordon McBean, ADM of AES. For further information, please visit http://www1.tor.ec.gc.ca/doppler.

In praise of Nova Scotia's volunteer weather observers

— *Paula Kennedy*

This June, representatives of the Atmospheric Environment Branch (AEB) in Dartmouth paid special tribute to the staff of the Minas Basin Pulp and Power Co. Ltd. in New Minas, Nova Scotia for 60 years of continuous volunteer weather observation.

At a ceremony held at the company's offices, Bill Appleby, Regional Director, AEB Atlantic Region, presented Minas staff with a framed certificate commending the company for 60 years of service; a weather radio connecting them to 24-hour weather information from Environment Canada; a poster-size cloud chart; and two framed copies of the company's original weather records from 1938. They were also presented with a hand-held data logger device that will allow them to transmit weather information directly over the phone line.

Company founder, Roy A. Jodrey built the pulp mill's dam and power plant in 1938, before the necessary technology and labour for such a venture were readily available in the area. He set up a weather station to monitor and record temperature, wind direction, precipitation, and water levels on a daily basis to ensure the plant's continuous operation – but he gave that information a much broader purpose.

The data collected each day of the past six decades has been forwarded to the Atmospheric Environment Branch, making the company's readings part of a data bank that supports the study of our climate and its fluctuations.

Bill Appleby, Director, AEB Atlantic Region (second from left), presents a cloud chart to the staff of Minas Basin Pulp and Power Company in recognition of 60 years of voluntary weather observation service.

Thanks to the commitment of a network of more than 200 volunteer weather observers throughout Atlantic Canada, this region has some of the oldest, most extensive weather information in the country.

Minas Basin Pulp and Power Co. Ltd. has grown and changed significantly since its inception, but staff's dedication to voluntary weather observation has remained constant, and their contribution remains every bit as valuable today.

ANOTHER PERSPECTIVE:
A Chinese Meteorologist's view

— *Paula Kennedy*

When Suhong Ma, a meteorologist with the Chinese Meteorological Administration, accepted a one-year exchange posting with AEB in Dartmouth, she hoped to discover the rewards and challenges of living in a different country, while studying some of our most severe weather systems. Her introduction to both was much more immediate than she anticipated, as her

Suhong Ma in Downtown Dartmouth.

Continued on page 11

Discovering EC in the Arctic with Christine Stewart

— *David Law*

In July, Prairie and Northern Region hosted Christine Stewart, former Minister of the Environment, when she visited EC facilities in the High Arctic. Ms. Stewart was accompanied by her staff as well as Gordon McBean, ADM-AES; Jim Vollmershausen, RDG, Prairie and Northern Region; Don McKay, Director, Air Quality Research Branch; Jennifer Moore, Director, Ecosystems and Environmental Resources; and Dave Law, Chief, Atmospheric Monitoring Division, PNR.

Ms. Stewart visited Alert, Eureka and Resolute Bay. In Alert, she toured the Department of National Defence facilities, the upper air station and the Global Atmospheric Watch Laboratory. In Eureka, Rai Le Cotey and his staff made the group feel very welcome. He provided a tour of the infrastructure of the station and Stewart participated in an upper air sounding by releasing a balloon and ozonesonde. Don McKay explained the role of the Arctic Stratospheric Ozone Observatory (ASTRO). The day ended with a feast provided by the station cook Frank Washagler and the presentation of a plaque to the minister as a momento of her visit to Eureka. Stewart seemed very impressed at what she saw and was quoted as saying that "Eureka was one of Canada's beautiful hidden little secrets."

In Resolute Bay, the group toured the Polar Continental Shelf facility led by the manager Dave Maloley, and Terry Jesudisen provided a tour of the Thule Village historic site and Hamlet Office.

Former Minister Christine Stewart released a balloon and ozonesonde in Eureka, NT.

Sunny skies and warm temperatures (+4°C to +14°C) prevailed throughout the High Arctic portion of the trip, leaving the impression that the weather in the Arctic was similar to southern locations, at least in the summer. The exception was in Resolute Bay where the winds remained high and temperatures hovered near zero both times the group passed through.

ANOTHER PERSPECTIVE:

Continued from page 10

plane touched down in Halifax last February amidst a raging snow and ice storm — without her luggage filled with belongings to last a year.

Fortunately, things quickly improved as she settled into her new surroundings, and began studying hurricanes.

As part of an agreement between the governments of Canada and China to enhance cooperation in meteorological research, Suhong is helping Canadian researchers collect and analyze diagnostic information on hurricanes as they evolve and move northward into the mid-latitudes. According to Dr. Hal Ritchie, lead Research Scientist for the Atlantic Environmental Prediction Research Initiative, "She is helping EC do work that we wouldn't otherwise be able to do this year."

The main focus of her study is last year's Hurricane Earl, which re-intensified unexpectedly as it moved up the eastern seaboard and then tracked through Canadian waters. Suhong's work will improve the ability of the atmospheric model to forecast this kind of storm.

Not only is this her first opportunity to do diagnostic work, but Suhong is learning new technologies, and working closely with one of the foremost experts in the field, Dr. John Gyakum of McGill University. She is also grateful for all of the opportunities and support that her other colleagues continue to provide — those in the Dartmouth EC offices, Recherche en prévision numérique (RPN) of the Meteorological Research Branch, and the Canadian Meteorological Centre (CMC) in Montreal.

Despite Suhong's busy schedule, she found some time to enjoy the more pleasant side of Atlantic Canada this summer.

Forecast: COOP venture better trains forecasters

— *Laurie Neil and Mert Horita*

From (L) to (R), Dr. Ian Okabe (instructor), Aaron McCay, Ben Hiebert, Rohan Rajaratnam, Joel Torcolini, Russell Higginson, David Wray, Louis Kohanyi, Kwok (Ken) Lam and Tzung-May Fu.

During the past four months, a practicum in Operational Meteorology has been carried out at the Pacific Weather Centre (PWC). This has been a cooperative venture between Environment Canada and the University of British Columbia's (UBC) Atmospheric Sciences Program. Environment Canada provided the resources for the training room, computers and software, and instructor, while UBC published the practicum in their calendar, marketed the course and approved and administered a full three academic credits in their degree program.

Both UBC and Environment Canada benefit from this cooperative arrangement. UBC has been striving to provide students with a more complete and practical selection of courses in order to better prepare them for real-world opportunities. Environment Canada has been able to assist in curriculum development and to ensure that knowledge and skills required within the organization are being taught. EC also got a chance to have a first-hand look at potential future meteorologists.

The instructor, Dr. Ian Okabe, who also teaches meteorology at the University College of the Fraser Valley, is a former operational forecaster with Environment Canada. He was able to bring strong practical experience as well as theoretical knowledge to the task of leading these classes. Topics covered included meteorological datasets, satellite and radar analysis, short- and long-range motion, cloud and precipitation prediction, forecasts, and production of public, marine and aviation products. In fact, students used many of the same tools and data available to forecasters in the weather centre in preparing their forecasts.

UBC and Environment Canada have agreed to continue the practicum for at least another three years. Graduate students obtaining a "Diploma in Meteorology," as well as students studying towards a Bachelor of Science in Atmospheric Science are eligible to take this course, and it is expected that competition will be keen to enroll in next year's class.

Canadians North of 60 evaluate EC

— *Joanne Lancaster*

This Spring, AES, in conjunction with Prairie & Northern, and Pacific & Yukon Regions, initiated a public opinion survey to Canadians north of the 60th parallel. The goal of the study was to measure attitudes toward the products and services provided by the Weather and Environmental Prediction Business Line of Environment Canada. In particular, the survey set out to assess public awareness and satisfaction of EC products and services (including weather warnings and windchill), and perceptions of quality, effectiveness and utility of products. Participants were surveyed on their assessment of the overall importance of weather information, current usage and frequency of usage, sources of weather information, and assessment of service delivery systems.

Some preliminary results include:

- 91% of residents north of 60 consider weather information important.
- The majority of residents are satisfied with the information and services they receive; however, information is not always available in the native language or meaning may be lost in the interpretation.

Continued on page 13

EUREKA! Expedition reaches North Pole

— *Brian Kahler*

On April 26, 1999, the Aspirations '99 Dogsled and Ski Expedition reached the North Pole. The 11 person team, led by Paul Schurke of Ely, Minnesota included Corky Peterson, the oldest person to arrive at the Pole on foot and Alan Humphries the first Irishman to reach the Pole. The Aspirations '99 Dogsled and Ski Expedition set a record for charitable fundraising and engaged over 300,000 people in daily website updates as well as having expedition information distributed in 5 million Sunday papers.

Continued from page 12

- EC is cited most often as the source of weather information; however, there are problems with EC brand recognition of products.
- Radio and television are the primary sources for weather information. When radio stations are broadcasting, they are the main source for weather warning information.
- ATAD and Weatheradio are the most frequently used dissemination mediums north of 60 that are owned and operated by EC. These mediums are used more frequently than in south of 60.
- Windchill is considered important. Respondents prefer windchill expressed in equivalent temperature.

Their route retraced the historic "Last Dash," the final 150-mile segment of Admiral Peary's 1909 discovery trek to the Pole. Temperatures hovered around -25°C and the weather alternated almost daily between calm and clear to blizzards. The entire ice pack was moving steadily at about 10 km southwards each day so the team was obliged to trek a much larger distance northwards than anticipated.

After reaching their destination, the team needed immediate medical assistance. A Kenn Borek twin otter was summoned and picked them up near the pole. Shortly afterward, seven members of the party arrived unannounced at the Eureka Weather Station. They were cold, hungry and suffering from minor frostbite. Two had serious frostbite and were in danger of losing toes while one member was under heavy sedation and restricted to a stretcher with a dislocated back.

Recognizing the seriousness of the situation, Station Program Manager Rai Le Cotey and his staff at Eureka swung into action to assist the injured expedition members. The provision of warm meals, hot showers and tending to the injured became a station priority. Peter Ganong, the station chef provided immediate first aid treatment. Between attending to the injured guests, Mr. Ganong also prepared some very welcome hot and nutritious meals for the entire party. Peter spent a long night tending to the injured. Having an additional seven people drop in for dinner unexpectedly, in addition to the 25 personnel already on station, is a challenging enough task without having to worry about their general health too.

Peter Ganong (L) accepts Citation of Appreciation from Tim Goos, Director AEB at Eureka, Northwest Territories (R).

In large part due to the prompt and effective treatment provided by Mr. Ganong and the staff at Eureka, all members fully recovered from their injuries. Recognizing this exceptional level of dedication and commitment, P&NR Director of Atmospheric Environment Branch, Tim Goos, was pleased to present Mr. Ganong with a Regional Citation of Appreciation.

Congratulations Peter and to the rest of the staff at Eureka for dealing with a potentially dangerous situation with composure and promptness.

And, the Award goes to...

— *Melissa Choong*

Hard work and dedication were celebrated when the following EC employees were awarded Citations of Excellence:

Ron Fordyce

Mike Leduc

Ria Alsen

Julie Turner for launching the popular Sky Watchers program in Ontario. Thanks to Julie's enthusiasm and dedication, the Sky Watchers program will be expanded to all Ontario communities this fall.

Eldon Oja and **Ron Fordyce** were honoured for leading the Marine Weather Services and Marine Weather Observing Program respectively. Their commitment to Wind and Wave forecasting and interaction with diverse marine client groups exemplify the spirit of environmental preservation.

A regional award was presented to the following members of the weather office: **Mike Leduc, Phil Chadwick, Rob Kuhn, Brian Tugwood, Ela Ros, Ria Alsen, Isabel Ruddick**, and **Rob Paola**. The margin of safety for the public significantly improved as a result of the focused work of this group of severe weather specialists.

James Gaskin negotiated in considerations detailing the manned weather station in Big Trout Lake. James' patience and careful consideration to the remediation methodology were significant in successfully completing the negotiation process.

Students Give AES A+

— *Michael DeJong and Melissa Choong*

Ever wonder who crosses the t's, dots the i's and does all the little things that hold AES together each summer? You need not look far...high school, university, college and co-op students have been taking up the challenge in offices near you.

The opportunity to develop professional work ethics, apply academic knowledge to work situations and create networks of contacts for future job hunting makes AES a popular choice among students.

"My managers have allowed me to let my position grow, and have not limited me by the fact that I have had student status," says Sara Malton, Editor of *The Source*, the newsletter of AEP's Services, Clients and Partners. An English major returning to school for her Masters degree, Malton has been returning to AES since 1996 and feels a significant connection to her team.

Many students also think of their experiences with AES in terms of their future careers. "For me it's good because I just wanted a job with a science background. AES is a great opportunity to get my foot in the door," says Dave Testa of ADM support staff.

Wenzie Ng is impressed with the vast array of tasks she has been given. "I've been able to observe and experience everything from dealing with federal regulations regarding ozone depleting substances, to research into atmospheric formaldehyde," remarks Ng, a student chemist in the Air Quality Research Branch.

Jennifer Weiler, a Mass Communications major at York University and a returning AES student is finding that "working at EC allows me to utilize many of the intercommunications skills I'm learning at school and apply them through interacting with a variety of students, administrators, and scientists." Weiler believes that the combination of her academic skills and valuable job experience will present opportunities in both the private and public sector.

When asked to evaluate their temporary workplace, students gave the organization an exceptional grade as an employer.

WMO recognizes excellence of AES Scientists' work

— *Ronald Carrière and Melissa Choong*

Imagine a world where climate instruments and data provided 100% accurate forecasts. Well that day isn't here yet, but thanks to three AES meteorologists, climate techniques will dramatically improve the accuracy of climate monitoring in the future. Dr. Barry Goodison, Chief, Mr. Paul Louie, Research Meteorologist and Dr. Daqing Yang, a former post-doctorate Research Associate, Climate Processes and Earth Observation Division, were recently awarded the fourteenth Professor Vilho Vaisala Award. Presented at the World Meteorological Organization's 13th Congress and Executive Council held last May in Geneva, this prestigious award recognizes outstanding research by AES meteorologists .

The scientists were recognized for their contribution in producing the final report of WMO's Solid Precipitation Measurement Intercomparison. The report assessed national methods of measuring solid precipitation against accurate and reliable methods, including past and current procedures and automated systems. The intercomparison results showed that some precipitation gauges under-catch by as much as 70% and that data should be corrected for systematic errors, including wind speed, gauge design and type of wind shielding utilized.

The Professor Vilho Vaisala Award was established in 1985 in support of the work of WMO and in memory of the late Professor Vilho Vaisala. Presented annually to a scientist who has published an outstanding scientific paper on meteorological instruments and methods of observation, the award consists of a diploma, a medal and a cash prize.

CMOS Honours Rube Hornstein Medal Winners

— *Melissa Choong*

Andre Methot and Alain Patoine of the Development Branch of the Canadian Meteorological Center (CMC) have been honoured for their work leading to the operational implementation of the Global Environmental Multiscale (GEM) model. The unveiling of the GEM model has been instrumental for operational meteorologists around the country in the optimization of forecasting equipment around the country. Methot and Patoine were jointly awarded the Rube Hornstein Medal in Operational Meteorology for their crucial role in adapting and validating the GEM model.

Andrew Thompson Prize in Applied Meteorology Awarded

— *Melissa Choong*

At the annual CMOS Congress, Dr. Robert Benoit was awarded the 1999 Dr. Andrew Thomson Prize in Applied Meteorology for his leadership in the state-of-the-art Mesoscale Compressible Community (MC2) model. The model has been featured in numerous international field projects and intercomparison studies. It is also an important tool for mesoscale research in Canada and around the world.

The Rube Hornstein Medal is awarded each year at the Canadian Meteorological and Oceanographic Society's (CMOS) Congress. This year's Congress was held in Montreal in June 1999.

AES and Ontario grab spotlight during Public Service Week

— *Melissa Choong*

In a ceremony that took place during this year's National Public Service Week, Director General of Policy and Corporate Affairs, Nancy Cutler and John Mills, Regional Director General of Ontario Region, presented awards to AES and Ontario Region staff for their valuable contributions as public servants.

Candi Zell, Employee Recognition Coordinator (Centre), organized National Public Service Week activities and the awards ceremony with John Mills and Nancy Cutler.

Olga Abramowski, Henry Stanski, and Dennis Wintjes were recognized for their outstanding performance in the design, development, and operation of the Aviation Weather Forecast (TAF) Performance Measurement system. They received a Team Departmental Citation of Excellence award for operating the leading-edge TAF.

(L) Henry Stanski and Nancy Cutler (R).

(L) Dennis Wintjes and Nancy Cutler (R).

Andrew Hanssen, who was instrumental to the overall design of TAF, was awarded an Individual Departmental Citation of Excellence. The successful completion of the TAF facilitated the continued operation of the most rigorous system of its kind in the world and has resulted in a high level of achievement with international importance.

Since the enactment of the National Public Service Week Act in 1992, the third week in June has been a time to recognize the accomplishments of public servants in serving Canadians throughout the country. The theme of this year's week was "Public servants are people who make a difference in our communities."

(L) Nancy Cutler and Andrew Hanssen (R)

(L) Olga Abramowski and Nancy Cutler (R).