

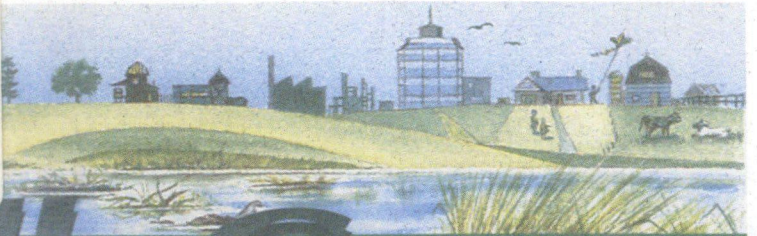
Let's talk green

Vol: 6 No: 4 Date: 960700 JU/AU

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# Let's Talk Green

The National Newsletter of Environment Canada

Volume 6, No. 4, July/August 1996  
ISSN 1188-3022

## LITE from the space shuttle

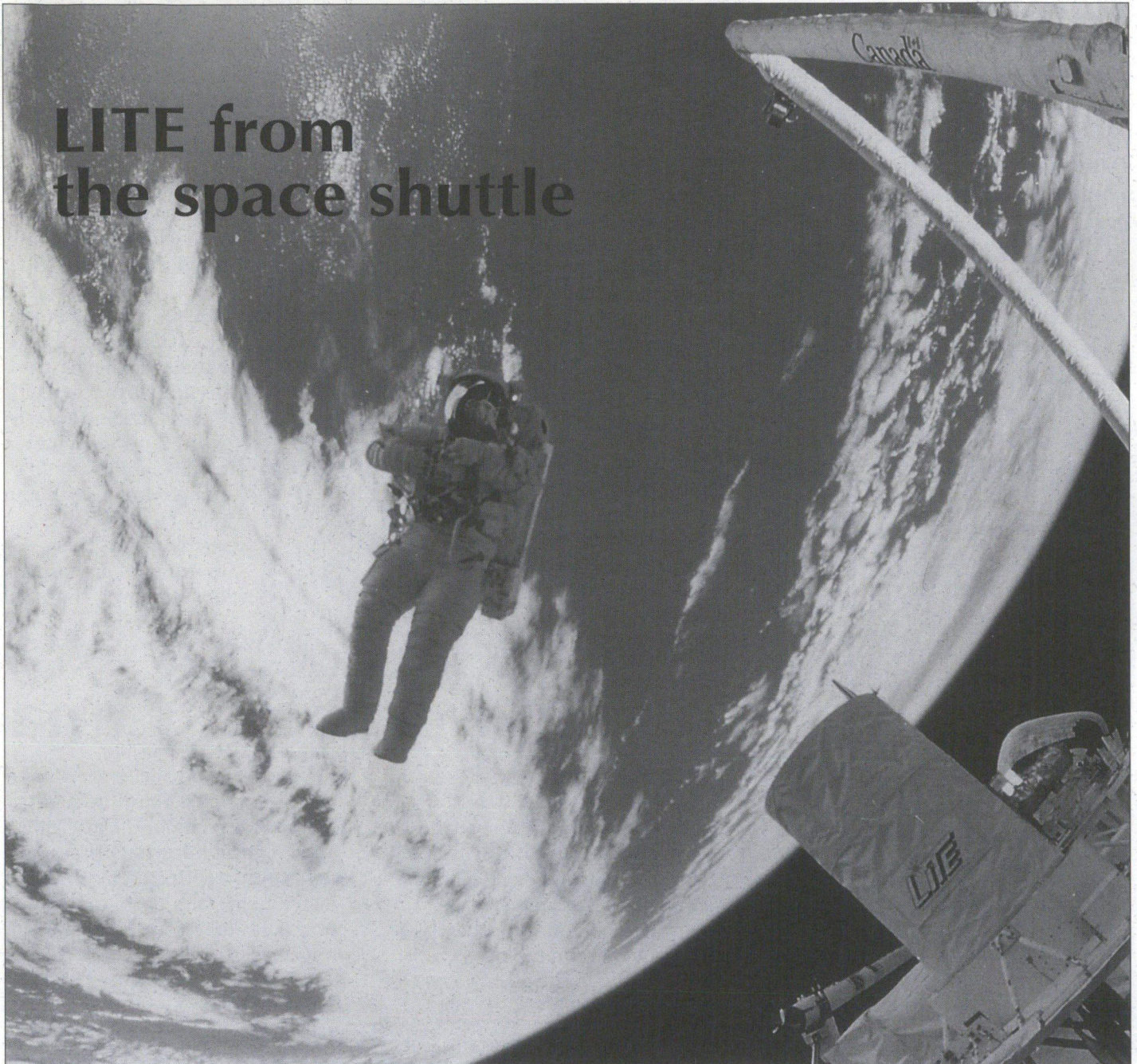


Photo by NASA



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# LITE from the space shuttle A laser's look at the earth's atmosphere

When the space shuttle Discovery blasted off in September 1994, Environment Canada (EC) scientists Drs. Ray Hoff and Kevin Strawbridge, from EC's Centre for Atmospheric Research Experiments in Egbert, Ontario, participated in the Lidar In-space Technology Experiment (LITE). The laser-based LITE instrument was the shuttle's primary payload.

Lidar, "light detection and ranging", is similar to radar but uses short pulses of laser light which reflect off aerosols (particles in the air) suspended in the atmosphere, then back to a telescope aligned with the laser.

Timing the lidar "echo" and measuring reflected laser light permit scientists to accurately determine the location,

distribution and nature of aerosols as well as to measure cloud characteristics.

## Aerosols may modify climate

Aerosols are of interest to scientists because they reflect light from the sun back into space and cool the climate. They can affect cloud formation and rain fall.

"One of the things that has been observed in the last few years is that pollutants created by man, sulphate aerosols for example, may be causing small particles which create cloud nuclei over the ocean," says Ray Hoff. "The particles absorb water and form more clouds, and if that's happening, the climate may be modified by the fact that these man-made pollutants are changing the global cloud cover."

**Aerosols are of interest to scientists because they reflect light from the sun back into space and cool the climate.**

# The Environment Canada

While Ray Hoff was in Houston coordinating lidar data from the shuttle and interpreting it for the outside world, Kevin Strawbridge, with team members Mike Harwood and Andrew Sheppard were validating the shuttle's measurements by underflying its flight path.

Using the National Research Council's Convair 580 aircraft,

the team traced the space shuttle's laser "footprints" on nine flights over Nevada, Arizona and California, allowing the lidar to gather similar data to that collected by the LITE instrument. One path, up the coast from Los Angeles to San Francisco, was chosen for its diverse geographic and topographic features and the high concentration of aerosols in the lower atmosphere over Los Angeles.



## Facts from the LITE flight

An orbiting laser system can:

- penetrate multi-layered clouds all the way to the surface;
- measure clouds, aerosols, lower and middle atmosphere, density and temperature changes in the stratosphere;
- present characteristics of the Planetary Boundary Layer, the one to two kilometre deep breathing space in which we live;
- detect the aerosol pollutant emissions from urban areas world-wide;
- discern natural aerosols from dust storms, biomass burning and clouds.

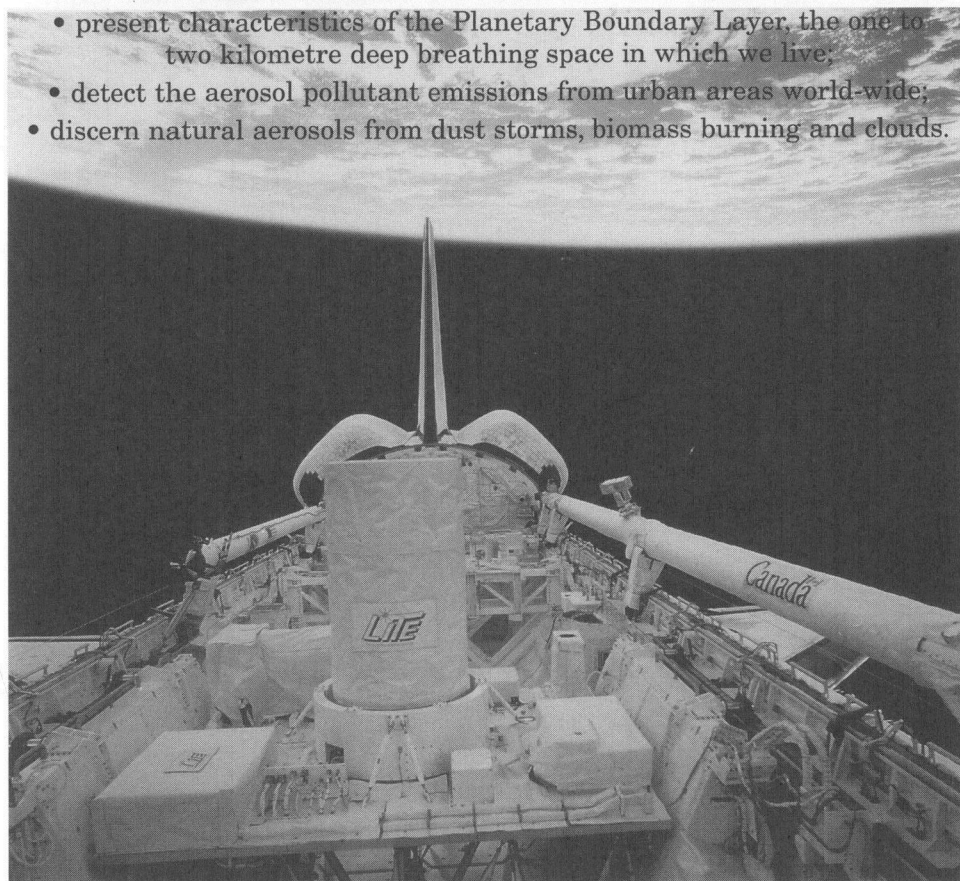


Photo by NASA

LITE rides atop the space shuttle as EC scientists take a new slant on analyzing the earth's atmosphere.

## Lidar may help weather forecasting

When the space shuttle Discovery flew directly over typhoon Melissa, the Lidar In-space Technology Experiment was able to plot the depth and width of the eye of the storm.

This type of information could help weather forecasters determine the strength of winds, cloud height and density, even the life span of such a storm.

## Air pollution travels long distances

LITE detected man-made pollution stretching in a 200-mile wide band, from eastern North America along the gulf stream highway to the coast of Spain, providing concrete evidence for the theory that air pollution travels long distances.

## team

"There's no question that this project was a good investment for Environment Canada," says Kevin Strawbridge. "We provided a valuable contribution to LITE's research and development, and by funding our own portion of the validation segments, we have access to an exceptional data base that will offer findings for years to come."

## Gathering gigabytes

While scientists continue to study the 60 gigabytes of data collected (see Facts from the LITE flight), it is already known that the quality and quantity of information and the instrument's performance in space, exceeded all expectations.

LITE technology could be used in permanently-orbiting satellites to:

- track the global movement of aerosols,
- improve weather forecasting and climate studies,
- enable scientists to predict the behaviour of the atmosphere more accurately, and
- determine the impact of human activities on climate change.

Thanks to Environment Canada's contribution, LITE has taken science a step closer to understanding the world above.

For more information on this story or to obtain one of the limited editions of the video "A Laser's Look at the Earth's Atmosphere" contact: **Kevin Strawbridge** at (705) 458-3314 or e-mail: [kstrawbridge@dow.on.doe.ca](mailto:kstrawbridge@dow.on.doe.ca)





## Ozzie Ozone takes a bronze

**Ozzie Ozone lost by a nose ... and a tail!**

The Environment Canada mascot for the Prairie & Northern Region is a real "wiz". Actually, Ozzie (aka Curt Dixon) is a wizard who travels to various events from his home base in Edmonton. He reminds Canadians to help protect the environment from ozone-depleting substances, and to protect themselves from UV rays. His activities complement EC's "Healthy Living with Sunshine" display.

Recently, Ozzie was invited to participate in *The Edmonton Journal's* 18th Annual Indoor Games by running—in costume—in a special "Mascot Mile" Invitational Race. Actually, organizers shortened the "mile" to about 60 m, in deference to the poor aerodynamic qualities of costumes used by the various mascots.

Ozzie was the only mascot to wear appropriate footwear, which undoubtedly helped him finish in third place. Reports indicate he lost to the first place finisher by a nose, and to the second place finisher by a tail. In any event, Ozzie sure made a winner of the ozone depletion message!

For more information:  
**Brigitte Langevin**  
(403) 951-8830.

## Warming up to a new century

This year marks the 100th anniversary of research on greenhouse gases and global climate change—not surprising when you consider that the idea of a "greenhouse effect" has an even longer history (French mathematician Jean Baptiste-Joseph Fourier was working on the subject as early as 1827.)

Swedish chemist Dr. Svante Arrhenius was the first to estimate and publish the effects of changes in global concentrations of carbon dioxide (CO<sub>2</sub>) on average surface temperatures. That was a century ago—April, 1896. Arrhenius wanted to explain variances in global climates. While modern scientists may disagree with many of his assumptions and arguments, his work remains a remarkable pioneering effort, introducing important conclusions which are still valid today.

### Arrhenius' Radiative Climate Model

Arrhenius developed complex calculations to establish his hypothesis regarding the response of temperature to changing CO<sub>2</sub> concentrations. He argued that previous climate variations were the result of volcanic activity having changed the CO<sub>2</sub> levels in the atmosphere. Comparing his model results with estimated temperatures for past periods in the earth's history, Arrhenius contended that temperatures some 8-9°C warmer than present had occurred several million years ago. Twenty-five thousand years ago, during the last ice age, temperatures approximately 4-5°C colder than average corresponded to a relative decrease in CO<sub>2</sub> concentrations of 55 to 62 percent.

Arrhenius' work is still notable and is a testimony to the longevity of the many principles he developed. Some of his early estimates and conclusions are still broadly consistent with today's much more complex climate models.

### Since Arrhenius...

In 1938, British engineer G.S. Callendar reintroduced the debate on Arrhenius' work. Callendar was first to suggest that humans could influence atmospheric CO<sub>2</sub> concentrations, but estimated that it would take several centuries of continued industrial emissions to achieve a doubling of concentrations.

By the mid 1950s, CO<sub>2</sub> emissions were escalating rapidly. A paper by Roger Revelle and Hans Suess outlined how humans had begun an unprecedented "large scale geophysical experiment" with the planet. Climate change had finally become an "environmental" concern.

As the next century approaches, citizens, industry, and government continue to demand and discover new methods of reducing CO<sub>2</sub> levels on a global scale. Thanks to the research done by early scientists such as Fourier and Arrhenius, a problem which could get out of hand may be that much closer to a solution.

For more information:  
**Henry Hengeveld**  
(416) 739-4323.



## Environment Canada – a science-based department

# Making the best use of science and technology

According to former Deputy Minister Mel Cappe in his introductory speech to new summer students, Environment Canada (EC) has always been a science-based department.

Nowhere is this more understood than with EC's Science and Technology Forum, whose secretary Allan Kovacs says: "The Forum helps scientists, research managers and others to exchange and share science and technology results and to build linkages with policy makers on strategic directions and emerging issues."

Kovacs, with the Science Policy Division, Environmental Conservation Service, is a strong supporter of the use of science, be it to formulate policy or to solve problems with the right technologies.

"Scientists are excellent communicators," he says. "You do not have to look further than the latest Forum in Montreal to see that."

Meeting there in May, the Forum discussed technology development and field research in the Quebec Region, the Northern River Basins Study, the NAFTA environmental side agreement, and the Green Corps Program.

"The Forum provides a venue for scientists to discuss their ideas, strategies and results of their work," says Kovacs. "That contributes to the advancement and integration of our science and technology work vertically and across the department."

When asked how the Science and Technology Forum could be improved, Kovacs continued: "Sustainable development is a shared agenda. Perhaps we could involve more people from outside Environment Canada or possibly the science and technology topics could be selected so as to be more inclusive of the problems in the five regions of our department."

Participants can thank Karen Brown for the success of the Forum to date. Brown, the Director General of Ecosystem Conservation, was the main proponent for creating such an atmosphere for science within the department.

The next Forum is scheduled for Sackville, Nova Scotia this fall.

For more information or to offer members and past participants feedback: **Allan Kovacs** at (819) 953-3878 or e-mail: kovacs@cpits1.am.doe.ca

### *Environment Canada S&T Forum*

The chair, appointed by the S&T Executive Committee, is responsible for receiving directions from and reporting to that committee and to the S&T Management Committee on behalf of the Environment Canada S&T Forum

### *Meetings*

The Forum meets twice a year in the spring and fall or at the call of the Chair if special needs arise.

Presentations will be made, and debated on substantive scientific and science management questions from the R&D community, the issue tables, or on other policy issues with strong linkages to S&T.

Meetings will normally be held at or near R&D establishments.

### *Secretariat*

Provided by the Science Policy Division with the support of its S&T friends.

## S&T Forum – Terms of Reference

### The Forum's mandate is:

- to foster exchanges and share scientific and technological results between research and development (R&D) managers across the department;
- to foster linkages between science and technology and policy, especially on strategic directions and emerging issues; and
- to identify new strategic issues, build consensus on scientific and technological issues and develop clear advice to support the S&T management system.

### Membership includes:

- directors general and directors of all R&D establishments in Environment Canada,
- regional representatives,
- chairs of the Lab Managers' Committee and the regional S&T tables,
- staff engaged in the R&D business plan,
- leaders of issue tables, and
- representatives of the policy community.



# Emergency response plan in action

## Laval paint factory fire sparks joint effort

At 1:00 p.m. on Thursday, May 23, fire broke out in a Laval paint company, just north of Montreal. As thick black smoke rose in the sky, soot fell onto nearby homes, generating concern for residents.

Within the hour, the Laval emergency response bureau requested Environment Canada (EC) assistance to determine weather conditions for the site, survey the hazard area for contaminants and assess pollutant dispersion. The City of Montreal fire prevention service requested the same help because the smoke cloud had crossed the des Prairies River which separates the two cities. At 3:40 p.m., 70 residents and approximately ten commercial buildings were evacuated.

The EC emergency weather station was deployed and launched a probe balloon to take ongoing weather readings (wind force and direction, temperature, etc.) and officers also proceeded to analyse air contaminants.

The River Road Environmental Technology Centre team (Gloucester, Ontario) was also mobilized to analyse the air, water and soot outside the evacuated area. This was done to assess the concentration and dispersion of pollutants in order to determine whether the evacuation area was large enough, and to help



Fire fighters join forces with EC and others to control paint factory blaze.

public health officials determine when the residents could return to their homes.

The paint plant was destroyed; however, there were no victims, save inconvenienced residents.

The effective emergency plan prompted the Laval executive director, Jean-Marc Aurèle, to commend everyone for their excellent work, saying that the services provided had been outstanding.

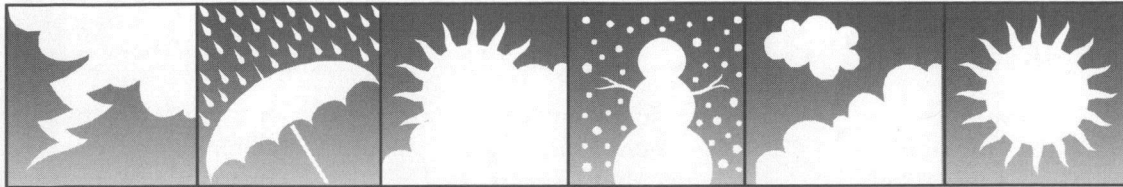
For more information: **Robert Reiss** at (514) 283-0822.

## Who made up the team?

Responding to an emergency takes coordination and team work.  
Here are some of the people who participated in the emergency service:

- **Yvon Royal**, coordinator Laval emergency measures, requested Environment Canada's expertise;
- **Gilles Courtemanche**, hazardous materials team leader, Montreal fire prevention service, requested similar assistance from Environment Canada;
- **Diane Dupras**, emergency operations officer, Quebec Region Protection Branch, mobilized EC's weather services;
- **Yves Bélland** and **Daniel Dubé** launched weather balloons and continued monitoring;
- **Donald St-Laurent** and **Claude Rivet**, respectively, acted as coordinators on the site, while **Robert Reiss**, emergency measures, analysed the air for contaminants;
- Environmental technology centre team (Gloucester, Ontario), **Merv Fingas**, **Pat Lambert**, **Robert Nelson** and **Michael Goldthorp** were mobilized to analyze air and water quality and to evaluate the dispersion of contaminants in and around the evacuation zone.
- Based on the analysis and advice of the Environment Canada team, **Dr. Archambault** and his public health colleagues authorized the return of evacuated residents.





## Mackenzie Basin – It's getting hotter up there

**Y**ou've read about it—perhaps watched a television special on it. It's called global warming—the systematic warming of the earth's climate—and scientists generally agree that human activity is the cause.

Environment Canada (EC) assessed the impact of climate changes on the Great Lakes in the late 1980's. Now, the Mackenzie River Basin is a major focus for climate change studies in Canada. The Mackenzie Basin Impact Study (MBIS) aims to evaluate potential impacts of climate change on the northern economy, forestry, wildlife, river flows and levels, permafrost thaw, and more. The Global Energy and Water Cycle Experiment (GEWEX) will develop improved weather forecasting, flood forecasting and climate change prediction models from their studies of the linked atmosphere/surface hydrology system.

Why the Mackenzie? This river was selected because it is the major Canadian contributor of freshwater to the Arctic Ocean, and has significantly different flow characteristics than the other North American pilot study basin, the Mississippi River. It is of extreme importance as a navigation artery for the transportation of bulk goods (including fuel) to points in the basin and on the Arctic coast and Arctic islands.

Other researchers include EC's National Hydrology Research Centre (NHRC) in Saskatoon who are focusing on northern hydrologic processes in small watersheds and on basin precipitation/runoff. EC staff in Yellowknife are evaluating the water balance of Great Slave and Great Bear lakes, and the effects of anticipated changes in lake outflows and downstream tributary inflows on flow and water levels along the Mackenzie River and in the Mackenzie Delta. There are also several Canadian and international studies based in the Mackenzie area. By sharing the results of Mackenzie Basin studies, Canada will be making a valuable contribution towards analysis of climate change.

The human effects on the earth's climate may prove to be both severe and devastating. Through the work of researchers such as those with MBIS, there is hope to slow and stop global warming before the harm is irreversible.

For more information:  
**John Kerr**, EC, Yellowknife, (403) 920-8500 (lake/river/delta/ impact engineering analyses in Mackenzie Basin)  
or **Stewart Cohen**, University of British Columbia, Vancouver, (604) 822-1635 (climate change impacts in Mackenzie Basin in general).

### What does the future hold?

**Climate change models suggest that these present trends will continue. Here's what they may bring with them:**

- several decades from now the average air temperature in the northern part of the Mackenzie Basin will have increased from 8 to 12°C in the winter and from 1 to 2°C in the summer.
- Winters are expected to be not only warmer, but also shorter by several months, and to have greater snowfall.
- Vegetation will change as southern species spread north, and forest fire seasons will be longer and more severe.
- Earlier spring snowmelt and continued longer drier summers may result in flows and water levels on the lower Mackenzie River falling to levels unsafe for river transportation of bulk materials by mid-summer rather than in the fall as can occur now.



## The skies are alive again!

North American waterfowl populations have rebounded dramatically since the late 1980s, thanks to a decade of conservation efforts that cover millions of hectares of wildlife habitat. The 1995 count, just compiled by Canadian and U.S. officials, shows a mid-continent autumn flight of 77 million ducks—up 22 million from 1985, and an increase of 18 million in the last two years alone.

According to Environment Minister Sergio Marchi, “These remarkable results bear testimony to the thousands of Canadians from all walks of life who have dedicated their time, money and energy to the cause.”

The results are attributed to a combination of favourable weather conditions and the habitat work of over 500 Canadian, U.S. and Mexican partner agencies. Work continues under the banner of the

15-year North American Waterfowl Management Plan (*The PLAN*), signed in May 1986 by the U.S. and Canada, and updated in 1994 to include Mexico. Federal, state, provincial and territorial governments, non-government agencies, the private sector and landowners are working together. Using a truly continental approach to wetlands conservation, they are securing and enhancing over 4.5 million hectares of wetlands and uplands habitat.

*The PLAN* is an innovative partnership program, implemented and funded through regional joint ventures. Its aim is to restore waterfowl populations in North America to 1970s levels by securing, enhancing and managing key wetland ecosystems across North America.

In addition to advancing waterfowl conservation, *The PLAN*

has made a substantial contribution to biodiversity conservation, improved environmental quality, and fostered the economic well-being and conservation ethics of private landowners.

“The job is far from over,” noted Marchi. “Nature is a fragile thing, and we know that the progress that has been made can be turned around very quickly by long droughts and significant habitat loss. We have a long way to go, and must work even harder to do everything we can to ensure the long-term stability of waterfowl populations.”

*PLAN* partners will spend this tenth anniversary year celebrating their outstanding results, and paying tribute to all those who have contributed to the cause.

For more information:  
**Danielle Bridgett** (819) 953-8664  
 or **Kelly Sagi** (819) 953-9414.

## Action Committee inspires “Eco”—kids

By making youths aware of the importance of protecting the environment, the Gloucester Environmental Action Committee is hoping to make them environmental ambassadors at home, and in their communities.

The committee devised an environmental awards program to be linked to science fairs held yearly in local schools. Henry Munro Middle School in Gloucester Ontario agreed to host the pilot program. The

competition, judged by science teacher Gary Broom, produced outstanding results.

Winners were awarded a t-shirt, donated by *Let's Talk Green* on behalf of Environment Canada, and other prizes by Pat Clark, councillor for the City of Gloucester, on behalf of the Gloucester Environmental Action Committee.

For more information:  
**Laura Ouellette**  
 (613) 952-0822.

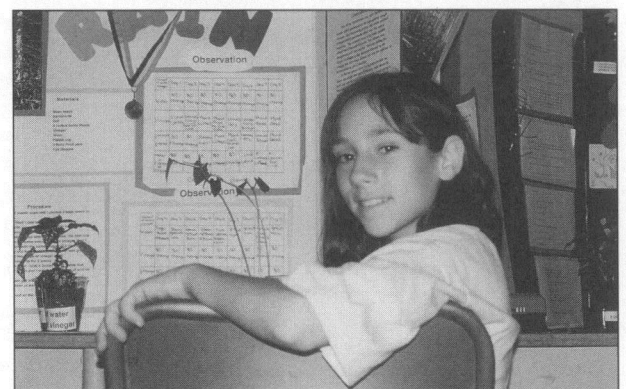


Photo by Janet Fewster

*Melissa Abraham (Grade 6) received the Environmental Award for her project on the effects of acid rain on bean plants.*

### Other winners included:

- Grade 7** – Elias Macaluso and Nathan Perrott for their simulation of a partial ecosystem.
- Grade 8** – Michele Cousins and Kathleen Saso who found that home made cleaners could be environmentally friendly and equally as effective as their commercial equivalents.





# Canadian program takes off

Canada's diverse habitats provide key nesting and migration areas for more than 425 species of North American birds. Here, they breed and raise their young. More than half of these species are classed as "landbirds," as opposed to waterfowl or shorebirds.

Unfortunately, bird populations are declining as our landscape changes. Landbirds' food sources are being depleted as a result forestry operations, urbanization and development, climate changes, agricultural expansion and intensification, and toxic chemicals. What's more, these birds have not benefitted from organized conservation efforts. EC's Canadian Wildlife Service took the lead in developing the Canadian Landbird Conservation Program to ensure the long-term viability of native Canadian landbirds.

The program is a partnership among governments, industry associations, non-government organizations, academics and other individuals. It also works in cooperation with similar groups in the U.S., Latin America and the Caribbean. The whole idea is to safeguard the birds' habitats across North America, and identify other causes of population decline.

For more information: **Judith Kennedy**  
(819) 953-4390.

*The White Throated Sparrow is one of the many landbirds being threatened by human intervention.*



Photo by Steve Wendt

They are called landbirds because, for the most part, they tend to live their lives on land. About 220 species of the following groups of birds are classed as landbirds: Hawks, eagles and falcons; partridges, grouse and quail; pigeons and doves; cuckoos; owls; nightjars; swifts and hummingbirds; kingfishers; woodpeckers; and passerines.

## International media stars

They're about to fly the coop— in fact, they will probably have spread their wings by the time you read this. "They" are four Peregrine Falcon chicks; "the coop" is a 20th floor ledge on a downtown office tower in Toronto.

In the September/October issue of *Let's Talk Green*, we featured a story about Peregrine Falcons, and the first successful nesting in southern Ontario in more than 40 years. Environment Canada has been coordinating recovery efforts, which have included breeding and release programs, monitoring nesting sites, and installing nesting boxes across the country.

This year, the pair returned to the site and raised four chicks. It's an environmental success story—a positive sign that the Great Lakes ecosystem is improving and that these majestic birds are returning to their nesting range. Food has been plentiful (they love Toronto pigeons), and the chicks are growing fast.

Some 200 people a day drop into the downtown Toronto information centre, where they're captivated by a live broadcast of the falcon family. The Internet site (<http://www.on.doe.ca/falcon/>) is the second most popular on the EC Ontario Region Green Lane (second only to general weather forecasts). Bird

enthusiasts from as far away as Africa have been logging on every morning to check on the falcons!

EC partners in this unique cooperative effort include World Wildlife Fund Canada, the Ontario Ministry of Natural Resources, the Horizon Group, Intercon Security, the Greater Toronto Raptor Watch, Print Three, Mitsubishi Electric and Bell Mobility.

They may have flown the coop, but we can hope that next year will see them back again, nesting in their urban abode in the heart of Toronto.

For more information:  
**Peter Ewins** (416) 739-5846.



# NO WASTE success leads to Phase II

Following the success of Phase I, the Greening Operations Branch has launched NO WASTE Phase II in the National Capital Region (NCR), starting with a pilot project on the 2nd, 7th and 14th floors at Place Vincent Massey (PVM).

In 1994, the initial phase introduced desktop "baby-bins", central recycling stations on every floor, and polystyrene and rigid plastics were added to the existing can, glass and paper recycling. As a result, waste generation at PVM and Les Terrasses de la Chaudière has been reduced by 30 per cent. Of the remaining waste, over 70% is now diverted from landfill.

Now comes the additional challenge of (for) meeting EC's goal (80% diversion from landfill of all waste). NO WASTE Phase II is a multi-faceted initiative which comprises recycling of:

- Plastic bags (which make up more than half of the plastic waste);
- Batteries (virtually all battery material will be extracted and recycled); and
- Toner cartridges (which will be sent for refurbishing and re-use).

## The initiative also involves:

- Expanded PaperSave – Paper bags, photocopy paper wrappers, paper cups, and tissue boxes will be recycled with newspapers, magazines and office paper in blue bin.
- "NO WASTE of paper" – EC employees in this region are still consuming the equivalent of 4,000 mature trees every year. This program will give us a number of tools which will help reduce that level of consumption.
- The Green Exchange - Discarded binders, file folders, tape dispensers and even staplers have been valued at \$20,000 annually in the NCR. A pilot project during Environment Week collected and redistributed these materials. The feasibility for an ongoing program will now be assessed.

## For information:

E-Mail at [ECHO@am@ncrsv2](mailto:ECHO@am@ncrsv2) (Teamlinks or Internal Users) and [ECHO@ncrsv2.am.doe.ca@igw](mailto:ECHO@ncrsv2.am.doe.ca@igw) (Internet Users).

NO WASTE Phase II will move to all of Environment Canada's NCR offices in the fall. In the meantime, kudos to senior management, the PVM Green Committee's members, in particular, Pierre Trudel, Sandra Rossiter and Heather Atkinson.

As a matter of interest, the NO WASTE program has been introduced to seven other federal departments and has even been recommended by the British Department of Environment for all government offices in the United Kingdom.

## Improving res decision-maki

EC's Environmental Assessment Branch sponsored an EA Practitioners' Workshop in Rockland, Ontario, during April. The workshop focused on improving the distribution of EC information and advice, and on international conventions and protocols with regard to environmental assessment. It attracted about 35 dedicated practitioners from across Canada. Speakers came from the Biodiversity Convention Office, Global Air Issues Branch, and NWRI.

Various regional representatives presented local case studies. The question and ethics of project-splitting was raised by Prairie and Northern Region, and participants got a chance to discuss a client questionnaire probing the



Photo by Jim Haskill

The NO WASTE team is all smiles over the success of their Greening Initiatives.



# Employment Equity: Stamp out landfill – Employees take a bow

“The annual Headquarters Employment Equity campaign has just finished,” says Lise Dubrûle, Employment Equity coordinator. “Its aim is to help various disabled groups by raising awareness through recycling projects.”

Last year, with suggestions from the local Girl Guides, pop can tabs were collected to purchase a wheelchair. This year, one activity involved collecting used stamps. The Girl Guides sent them to the Canadian Guide Dogs for the Blind to help train a new pup.

In a thank you letter, Ottawa Girl Guide coordinator Sheila Urquhart writes: “We would like to formally thank all the employees of Environment Canada who have contributed to this collection of used stamps. What might have ended in a landfill is being saved.”

Lise would also like to thank the River Road Environmental Technology Centre (Ottawa) and the Atlantic Region for significant contributions. “As an environmental department, it's nice to be able to recycle and help people at the same time,” says Dubrûle.

“We have already started to collect labels for the 1996-97 campaign,” she says. “Labels from Campbell's, Swanson, Franco American, Le Menu, Prego, Pepperridge Farm, V8 and Heinz baby products will be used to raise money for Ontario children's hospitals and a school for the deaf.” Contributions can be sent to Lise Dubrûle, Place Vincent Massey, 5th floor, or to Rachel Labelle, Les Terrasses de la Chaudière, 3rd floor. The 1996-97 campaign will run until May 10, 1997.

For more information: **Lise Dubrûle** at (819) 953-3940.



*EA Workshop attracts dedicated practitioners from across Canada.*

## possible ng

satisfactory delivery of EA in Ontario. Atlantic Region focused discussions on Cumberland Crossing (PEI Fixed Link), Hibernia, Terranova and Point Aconi.

A highlight of the workshop was a presentation by Avrim Lazar (ADM, Policy and Communications), who outlined—from the Minister's perspective—new directions and approaches that must be taken as the Program evolves.

The job of the Environmental Assessment Branch in EP's National Programs Directorate is to make sure that environmental assessments and positions taken by departments remain consistent nationwide.

For more information: **J. Moenig** (819) 953-1524.

### Why We Do It

The Environmental Assessment Program is a vital tool in improving internal decision-making.

When environmental factors are taken into account early in the planning process, it is possible to make better decisions. What's more, the possible adverse environmental impacts of projects or programs are either mitigated or avoided altogether.

Under the Canadian Environmental Assessment Act (CEAA), Environment Canada is responsible for assessing its own programs, and for providing scientific or technical advice to others. About 90 percent of the Department's EA role falls into this category.



# Pollution prevention is **BIG** in the Atlantic Region

“Preventing Pollution is everyone's business!” is hard to miss when it's on a billboard that covers the surface the size of 18 average office desks.

And that was the Atlantic Region's idea when they spread the giant message in ten locations across the four Atlantic Provinces.

An estimated 150,000 to 170,000 passers-by a day saw the Environment Canada message during Environment Week and throughout the month of June.

The “Preventing Pollution” billboard also accented the St. John, New Brunswick scene where Environment Canada staff took part in the industrial and environmental trade fair *North East Enviro Tec 96*.



Setting the pace – (left-right) George Lindsay, Provincial Manager, Environmental Protection, New Brunswick; Patrick McMahon, Instructor, New Brunswick Community College, Miramichi; Rodger Albright, Micheline Riou, Peter Eaton, Louise Foley, Environment Canada, Atlantic Region.



Interested in the big picture? These inspiring billboards focus on Preventing Pollution and are available, on a cost-recovery basis (\$130 each), by calling C. Spencer at (902) 426-7123.

The pollution prevention booth, one of the 150 exhibits, was a popular attraction that featured the video *Rethink – Pollution Prevention Pays*, and offered a direct on-ramp to Environment Canada's Green Lane. It made an excellent meeting place where staff, delegates and visitors made contacts and discussed environmental issues.

For information contact: **Micheline Riou** (902) 426-9358 or fax (902) 426-8373.

## Let's Talk Green

### Editor-in-chief

Tony Clark, ADM, EPS

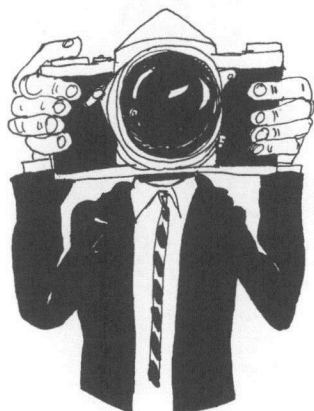
### Editor

Janet Fewster (819) 997-2037

This issue made possible with a little help from our friends: Lucille O'Grady, Jim Haskill, Rhonda Arsenault, Louise Charest and Louise Durocher.

### How to reach us

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 Environment Canada  
 351 St. Joseph's Blvd.  
 15th Floor, PVM  
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 K1A 0H3



## Cover Photo Needed...

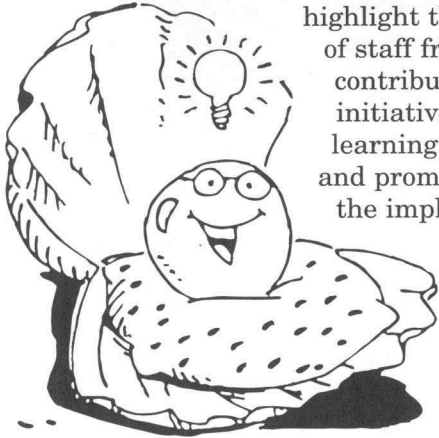
We need a cover photo for the next issue of *Let's Talk People* (November 1996). This national edition will profile ECS employees (teams and individuals). If you have a good “people” and/or “teams” picture, please give us a call at (819) 997-2037.



# In search of innovative management practices

Getting the job done—for Environment Canada employees—often means using innovative management practices. Problem is, these practices aren't always shared (or recognized) nationwide. The Corporate Affairs and Management Practices Branch (CAMPB) in Ottawa has come up with a solution: they're putting together an Innovative Practices Index, to be released—God willing, weather permitting—in late September. The index will

highlight the experiences of staff from coast to coast; contribute to departmental initiatives for continuous learning and quality services; and promote and facilitate the implementation of practices developed as part of these initiatives.



The project is being stick-handled by Pierre-Claude Roy and Bersabel Ephrem, under the direction of CAMPB Director Sophie Boisvert. Pierre-Claude and Bersabel will be looking at existing internal resources (for example departmental reviews, management directed reports, etc.). And because this research won't necessarily uncover all of the innovative practices used at EC, they're asking you to get involved. Let them know what you and your colleagues have done to:

- improve client satisfaction and quality of service;
- improve employee satisfaction;
- improve efficiency (for example eliminate paperwork, simplify procedures, exchange information, foster cooperation and partnerships); and
- maximize savings (for example share services and resources).

For more information: **Pierre-Claude Roy** (819) 994-3116 or **Bersabel Ephrem** (819) 994-3512.

# Taking Up the Challenge

Environment Canada proudly displayed its new national exhibition booth on pollution prevention in Montreal on April 29-30. This second environmental symposium was organized by the Office of pollution prevention, Québec Region, in collaboration with the Environmental Industries Development Group. The conference brought together more than 100 participants from manufacturing companies, consultancy groups and the academic community.

The objective was to promote networking, and create a catalyst for the introduction of an environmental training program for companies. Round table discussions on the four steps of environmental training—identifying needs, preparing a training plan, implementing the plan and evaluating and following up the training program—allowed participants to share experience and opinions. Seven lectures and two discussion panels focused on the importance of taking action in the field of environmental training and management.

The success of this green training symposium was due mainly to the enthusiastic involvement of workshop participants and the exceptional demonstrations provided by participating businesses. Organizers are already planning their third annual event.

For more information: **Jean-Claude Prévost** (514) 496-6856; fax (514) 496-6982.

## Did you hear?

LTG has a new fax number...



**(819) 953-8279**



## Because some things shouldn't change with the times...

About 15 years ago, Brock University researchers, in conjunction with the Ontario Ministry of Environment and Energy (MOEE), found contaminated sediments in the lower Welland River, a relatively short waterway located on the Niagara Peninsula. These sediments were contained heavy metal, oil and grease. In addition, reef-like deposits were found near two sewer outfalls used over the previous 50 to 60 years by Atlas Specialty Steels, and other industrial and municipal dischargers.

In 1991, Environment Canada's (EC) Great Lakes 2000 Cleanup Fund initiated a pilot project in the Welland River (part of the Niagara River Area of concern (AOC)). About 130 cubic metres of contaminated sediment were removed. The project demonstrated the effectiveness of innovative hydraulic suction dredging technology and a high-flow physical/chemical treatment process.

The remainder of the contaminated sediments were removed during the fall 1995 clean-up, at which time another 10,000 cubic metres of contaminated sediment was excavated using an Amphibex dredge. The Amphibex is a self-propelled combination back hoe/suction dredge with a bucket to remove larger objects. It's also cheaper to use than conventional equipment.

## What Are AOCs?

An Area of Concern (AOC) is a specific area within the Great Lakes Basin which requires remedial action to restore it for recreation, fish and wildlife habitat, and drinking water quality. The States surrounding the Great Lakes, and the Province of Ontario, are developing remedial action plans for AOCs within their jurisdiction.

The project described here was part of a \$150 million initiative to clean up the AOCs. Some of these funds are used to demonstrate new technologies for the removal and treatment of contaminated sediments. These innovative technologies are then transferred for commercial application, here and abroad.

A pipeline was used to remove material for treatment and the cleaned water was eventually returned to the river. Solid wastes which met Ontario Ministry of Environment and Energy criteria were used as cover material at a local landfill. Steps were taken to stabilize the river bed slope to protect against erosion.

Atlas Specialty Steels acknowledged responsibility for the metallic portion of the reef deposits; they were the primary sponsor of the clean-up project, along with EC, MOEE, the City of Welland and the Regional Municipality of Niagara.

Clearly, government/industry partnerships can result in innovative solutions to environmental problems. This successful remedial project also underscores the federal government's commitment under the Great Lakes Water Quality Agreement between Canada and the United States.

For more information: **Ian Orchard** (416) 739-5874 or fax (416) 739-4342.

## Capacity building elementary style: Grade 4 students impress with environmental awareness

Accompanied by daughter Jillian, Jim Taylor (Headquarters Policy and Communications) celebrated Environment Week and World Environment Day by speaking to two Grade 4 classes at Our Lady of Wisdom Elementary School in Orléans, just east of Ottawa.

Jim and the students discussed the major components of environment – air, water and land – and the Canadian Wildlife Service poster on Wetlands proved to be

very popular. *Let's Talk Green* t-shirts were donated and teachers were pleased to receive Environment Canada 25th anniversary pins.

The Environment Week theme of "Clean air/Give your car a break" struck a chord with the students. They were enthusiastic about reducing air pollution and improving air quality by making choices in their daily lives, such as walking, bicycling and taking the bus.

Jim was impressed with the level of environmental awareness of the 9 and 10 year-old kids. He was stumped when asked if driving from their school to the free car emissions inspection clinic at a shopping centre in Ottawa's west end (a distance of approximately 45 kilometres) would unnecessarily cause air pollution and a waste of energy!

For more information:  
**Jim Taylor** at (819) 997-8382.



# Access the future

The face of Canadian society has changed dramatically over the past decades. As a nation, we can be proud of the progress we've made to embrace the perspective of many different people, and to meet their special needs. National Access Awareness Week (NAAW) has done a lot to help us along that road.

This year, NAAW took place from May 27 to June 2. Activities were organized around the theme of "Access the Future," including a technical aid display at PVM headquarters by *Ergosanté*, information booths at the two NCR buildings, and product label collections to raise funds for organizations that support people with disabilities.

"Access the Future" also means accessing fitness. That's something Donna Shaw of the Public Service Commission (PSC) knows a lot about. Donna received her certification from the YMCA in December 1995, and now teaches aerobics from a wheelchair. At lunch time on May 28, as part of NAAW, Donna offered an excellent aerobics program, geared to those wanting to really work the upper body muscles. For the 20 or so participants, this was no doubt a first; in fact, some mentioned that they did not expect such an intense workout.

For more information: **Rachel Labelle** (819) 994-1705.



The PSC recently published a brochure entitled "Everyone is different." It details the technical aids, and the auxiliary and specialized services, offered to employees with disabilities working in the federal public service. Those who might benefit from these aids and services should advise their supervisor of their job-related needs.

Instructor Donna Shaw leads lunch time aerobics session during National Access Awareness Week.

# Knowing when to water the grass...



Here's a familiar scenario: you've just finished watering the lawn; the garden hose is neatly rewound; and the first drops of rain splatter the deck. If you think you've just wasted money and resources, you're right. Now imagine what it means to your municipality. Indeed, traditional approaches to irrigation can result in over-watering, or watering at inappropriate times. In fact, a Saskatoon study suggests that savings of almost \$2,000 a day would be realized if we could correctly forecast significant rainfall two days in advance.

That's where the Watering Index Program comes in. This new service, offered by EC's Saskatchewan Environmental Services Centre, provides a watering index tailored to your specific location and soil type. Here's what you get:

- an opportunity to take a proactive approach to irrigation;
- an objective method of assessing the weather's impact;
- information on how much water to use;
- in the case of drought, information on increased irrigation;
- potential water savings of 15 to 40 percent.

The program produces index and precipitation data for six historical days and three forecast days, a daily consultation, training in the use of the Watering Index, and program evaluation. By calculating the amount of moisture lost from the soil, the timing and amount of irrigation can be adjusted according to need. (It's necessary to know the soil type in the area because water filters through some soils quicker than others—sandy loam as opposed to heavy clay, for instance.) The Index takes into account air temperature, relative humidity, wind speed, cloud cover and rainfall. With that information, it calculates the daily evapotranspiration for turf grass.

The City of Saskatoon has been using the program for the past two summers. Looking back at the data over this period, it is estimated that the index afforded savings in the order of 20 percent a year! Other municipalities have been approached to participate.

For more information: **Paul Mallinson**  
(306) 975-6912 or fax (306) 975-5954.



# The Irving Whale legacy – no treasure for the Magdalens

When the Irving Whale barge sank nearly 26 years ago in the Gulf of St. Lawrence, approximately 200 metric tonnes of fuel oil spilled onto the coast of the Magdalen Islands, soiling about 80 kilometres of shoreline.

The extensive clean-up operation by Transport Canada mobilized 300 people over a two-month period. One hundred thousand sacks of oil residue were recovered and buried in the sand dunes.

Over the years, wind erosion has exposed some of the bags and even complete burial sites. While most of the sacks have been removed, those remaining present an environmental problem since it is now known that PCBs were on board the Irving Whale. Removing the bags could be just as destructive to the fragile dunes and resident species such as the endangered Piping Plover. This catch-22 poses a tremendous challenge.

The objective of Environment Canada's Regional Environmental Emergency Team (REET) is to remove these bags without damaging the Magdalen Islands dunes.

Last spring, Environment Canada (EC) scientists took an electromagnetic survey of the West Dunes, located between Cap-aux-Meules and Havre-Aubert. They mapped an area 12 kilometres long by 100 metres wide, identifying about 20 possible burial sites.

This fall, when summer species will have left and the dunes will be more stable, the EC scientists will revisit the dunes looking for more buried sacks. Excavation could then be considered.

Because the local population, environmental protection groups and REET members are concerned about the negative impact that a systematic clean-up could have on the dunes, only burial sites that have



*An electromagnetic survey (see sidebar) - locating possible burial sites for sacks of oil residue.*

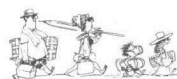
been accurately identified will be restored, using methods that are least harmful to the environment. Where sacks cannot be removed, research will explore ecotoxicologic hazards and assess environmental impacts.

If the content of the oil residue sacks is non-toxic, monitoring will continue. If the content is considered toxic, caution will be exercised, considering the fragility of the dunes and the presence of rare or endangered species. Sites would be continuously monitored using a sensor that sends an alert signal if sacks are exposed through wind erosion.

This action plan stems from a commitment to protect the fragile environment and the population of the Magdalen Islands, and to find a global solution to the problems caused by bags of oil residues buried in the dunes. Using innovative technologies, this project is a big step towards erasing one of the regrettable legacies of the Irving Whale.

(Thanks to Annie St-Jacques, Information Officer on contract with the Irving Whale Recovery Project for providing this story to Environment Canada).

For more information: **Vincent Jarry** (514) 283-6418 or **Thérèse Drapeau** (418) 986-6547.





# New research facility set to combat pollution

AQUEREF—the Aquatic Ecosystem Restoration Experimental Facility—is now open! Part of Environment Canada's Laboratory Revitalization program, its mandate is twofold:

1. To undertake pilot-scale experiments in contaminant hydrogeology; and
2. To develop remediation options for contaminated sediments in aquatic environments.

These studies are required in order to validate experimental concepts before they are applied in the field. There are three separate laboratory complexes in AQUEREF, each one designed for a specific area of applied research.

## The Irving Whale legacy ...continued

### Surveying – electromagnetically

Here's how a survey was used on the Magdalen dunes. An electromagnetic signal was transmitted in the dune with an antenna. The signal spread through the soil until it met a change in conductivity that corresponds to new surroundings showing different characteristics.

This method accurately pinpointed areas referred to as resistance zones, which registered as anomalies. The survey on the Magdalen dunes identified about 20 irregular areas which could indicate the presence of buried sacks of oil residue.

EC scientists will use ground probing radar (GPR) this fall to make sure that the irregular areas are not due to the specific topography of the dunes.

## Groundwater remediation

Gasoline and Diesel-fuel contamination of groundwater is a widespread environmental problem. Many of these chemicals remain in the soil for a long time, and some are carcinogenic. Surfactants are used in pump-and-treat remediation of this type of groundwater contamination. National Water Research Institute (NWRI) researchers are doing experiments in AQUEREF to determine whether humic acids—natural/soil compounds—can be used as a cost-effective and environmentally sensitive replacement for surfactants.

## Sediment remediation

Researchers are developing and testing methods of dealing with contaminated sediments. Current projects include assessment of sediment quality (biological methods and physicochemical properties), cleanup techniques for mine tailings and contaminated

sediments using different substrates and revegetation by various plants.

## In-situ sediment treatment

Scientists of this project are developing methods to treat aquatic sediments in place. These cleanup technologies are cheaper and more environmentally sensitive than previously used dredging operations. NWRI has patented processes and equipment to do this and has licensed the technology to the private sector.

The official opening of AQUEREF, attended by all past Institute directors, was part of NWRI's 25th anniversary celebration. The celebration included planting of 25 trees by special guests, a presentation of the EC Award of Excellence to the Institute staff—past and present—and a BBQ for CCIW (Canda Centre for Inland Water) staff and colleagues.

For more information:  
**Dr. Rod Allan** (905) 336-4678



NWRI AQUEREF Groundwater Remediation Facility - another tool in the battle against pollution.



## Testing, testing, one two three!

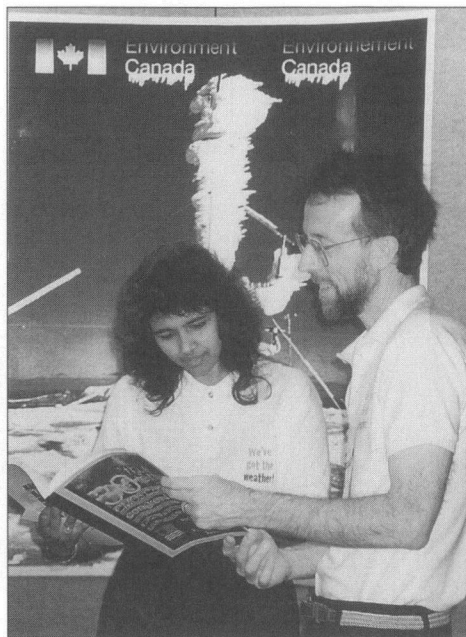
The Test and Evaluation Section (TES), which is part of Environment Canada's Atmospheric Environment Service (AES), is made up of meteorologists, engineers, computer scientists and technologists.

"We have many years experience in testing and evaluating meteorological and hydrological instrumentation for both private enterprise and government departments," says Brian Sheppard, Head of Test and Evaluations Section, Downsview, Ontario. "Our service includes instrument installation, calibration and maintenance at a number of field test sites across Canada."

A typical example might be testing Transport Canada equipment used at airports, or taking newly developed instruments from a commercial manufacturer and appraising them under field conditions.

Using custom software running on a personal computer, TES members record data from instruments and human observations and bundle it up for transmission to a central computer in Downsview. Information is validated through daily graphical and database assessment, then distributed to clients.

"Test sites are maintained by TES staff," says Sheppard, "and reference data are provided by qualified meteorological observers and standard reference instrumentation."



*Conference Capers – Test and Evaluation Services' Brian Sheppard and Merlyn Persaud show their stuff at a recent Canadian Meteorological and Oceanographic Society Conference in Toronto.*

Established sites are located at St. John's, Newfoundland; Toronto's Pearson International Airport; the Centre for Atmospheric Research Experiments in Egbert, Ontario; and Stony Plain, Alberta.

For more information:  
**Brian Sheppard** (416) 739-4102 or  
**Merlyn Persaud** (416) 739-4566;  
e-mail: [testsite@am.dow.on.doe.ca](mailto:testsite@am.dow.on.doe.ca)

## ETC to launch new Environmental Management System

There's a new Environmental Management Strategy and Action Plan in the works. It focuses on Ozone Depleting Substances (ODS) in use at the Environmental Technology Centre (ETC). The Centre is now finalizing the comprehensive document, with the help of EPS's Building Technologies and Environmental Systems and Ontario Region's Federal Programs Division.

A first for an Environment Canada facility, the plan is essentially a single-issue Environmental Management System (EMS). It will address the use of ODS in refrigeration equipment, fire extinguishers and for laboratory analyses. Look for more information in a future issue of *Let's Talk Green*, or contact **Lawrence King**, Federal Programs Division, Ontario Region at (613) 952-8679.

### Facts on Test and Evaluation Section data

- collected, processed, verified and adapted to user's requirements
  - time stamped and stored
- remote direct access to sensor allows new calibration constants or software to be uploaded
  - real-time interactive screen for clinical observations
- client can arrange frequency of distribution using Internet or direct access
  - can be transferred to CD-ROM



## Regina staff Adopt-A-Highway

**E**C staff in Regina spent two evenings during Environment Week down in ditches along the Trans-Canada Highway. Twelve volunteers collected about 60 bags of garbage and flagged larger items for pick-up along a 5 km stretch, west of Regina. Recyclable items were separated and returned. Volunteers were dismayed by the amount and variety of items found.

The Saskatchewan Department of Highways and Transportation (SDHT) recently joined other highway jurisdictions in litter abatement through the "Adopt-A-Highway" program. Volunteer groups assume responsibility for the clean-up of a specific section of a provincial highway; SDHT provides highway signage, safety vests, garbage bags and volunteer training. Groups adopting a section of highway agree to conduct two clean-ups a year. EC staff plan to do their second sweep in October.

For more information: **Rod Slatnik** (306) 780-6465.



Photo by Christina Ruiiu

EC Road Warriors battle garbage in Saskatchewan. (left to right) Back row: Dave Munro, Fraser Hunter, Ross Herrington, Rod Slatnick, Bruce Holiday; front row: Lisa Kooy, Alice Widgren, Ruth Geck, Kathe Giles, Andy Smart, Donna Davies.

### Got a good idea for a story?

Why not call the editor and we'll discuss it? If you want, we'll even write the article and arrange for any photos.

Call Janet Fewster at (819) 997-2037.

#### Deadlines:

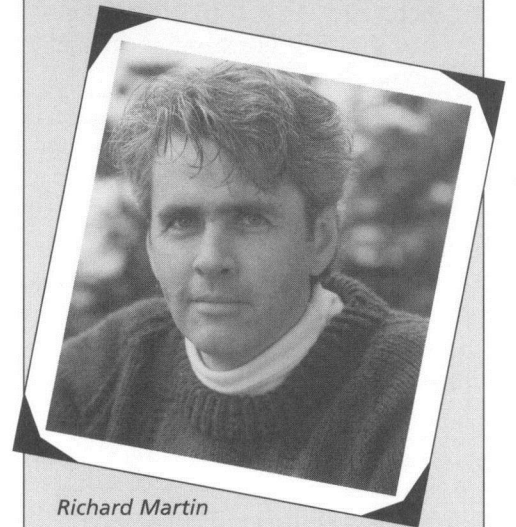
November/December: October 15

January/February: December 15



## Richard Martin to judge 1996 Photo Contest

**A** professional photographer living in Kingston, Ontario, Richard Martin's work follows a personal direction, pursuing photography "for the sheer love of it".



Richard Martin

Richard's images have appeared in many exhibitions and magazines, with portfolios and essays published in *Camera Canada*, *Photo Digest*, *Photo Sélection*, *Best of Photography Annual*, and *Queen's Quarterly*. He is also a guest contributor for *Photo Life* magazine (formerly *Photo Digest*). Richard instructs the Vision and Discovery Photography Workshops where his passion and enthusiasm for visual expression through photography serve as catalysts for the enhancement of the participants' work. *Let's Talk Green* is honoured to have such an experienced photographer judging this year's contest.



## Edmonton Regional Science Fair

Two EC staffers were asked to judge the Clean Air, Land and Water Award at the Edmonton Regional Science Fair in March. Margaret Fairbairn (Alberta Division, Environmental Protection Branch) and Dr. Karen McDonald (Atmospheric Environment Branch) participated in the event.

A total of 18 projects were entered. The competition showcased junior and senior high projects. A grade seven student, Jonathan Clark, won with his project on reducing polystyrene waste. Grade seven student, Klyment Tan, won an Honourable Mention for his project on underground farming. Both students won other awards at the Fair.

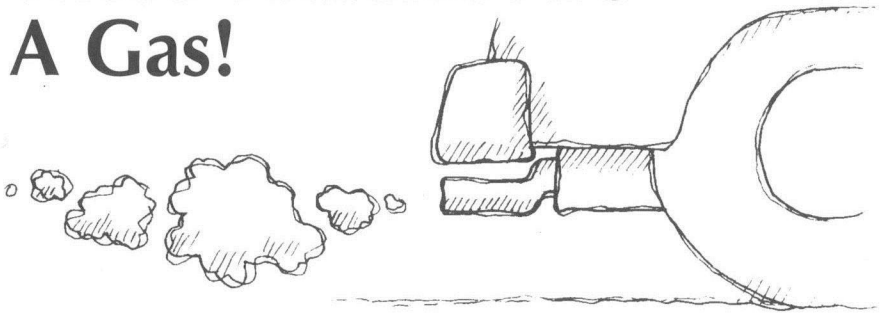
Jonathan was also chosen to go to the National Science Fair in North Bay, Ontario. He received a Silver medal in the Junior Engineering category and a \$300 cash prize. As well, he won second place in the Engineering Institute of Canada Life Members Organization and was awarded a cash prize of \$200.

For more information:  
**Margaret Fairbairn**  
 (403) 951-8750.

*Margaret Fairbairn presents award to Jonathan Clark for his project on reducing polystyrene waste.*



## These Vehicles Are A Gas!



Environment Canada is contributing to the development of a greener mode of transportation. Alternative fuels are the wave of the future at EC, reducing emissions of nitrogen oxides, particulates, carbon dioxide and carbon monoxide from vehicles.

The Federal Programs Division (FPD) of Environmental Protection Branch in Ontario Region has responded wholeheartedly to the federal government's FleetWise initiative and EC's Fleet Action Plan.

Inspired by the FleetWise national forum, manager Dale Cameron has reduced FPD's fleet, and authorized the conversion of the remaining two vehicles to dual fuel (gasoline and Natural Gas—or NG). Even when running on gasoline, FPD staff make a point of filling up with ethanol-blend gasoline whenever possible.

So what is it like to drive an NGV (a Natural Gas Vehicle)? Count on a very short learning curve to understand the automatic and manual switching features for the dual fuel vehicle. The vehicle always starts on

gasoline and switches automatically to natural gas once a certain engine RPM is reached. Before the vehicle is put in drive you rev your engine slowly, let off the gas and the system switches over to NG. If you're on the road and run low on NG, you can manually override the auto switch on the dash

**Some people are a little nervous about driving around with a tank full of compressed gas; however, these fuel systems are actually safer than gasoline.**

without even slowing down. You then continue on gasoline because the switch-over is that fast.

Some people are a little nervous about driving around with a tank full of compressed gas; however, these fuel systems are actually safer than gasoline. While drivers do notice some loss of "pep," the minor loss does not affect passing capability.

The greening of our environment will be even easier in the near future due to better retrofit systems, and NG vehicles available directly from the manufacturer.

For more information:  
**Paul Mudroch** (613) 952-8677.  
 For information on Ontario Region's fleet management plans:  
**Steve Hicks** (905) 336-4990.



# A wealth of information for Canadian business



Providing information on a company's environmental record is in keeping with Environment Canada's vision of a country where people make environmentally responsible decisions. Environment Canada gets hundreds of requests each year for information on compliance, information which is now becoming a valuable decision-making tool.

EC and other government departments are seeing a rise in demand for access to information. What's more, people making requests seem to readily accept the fact that they will be asked to pay for this information. The problem we've identified at EC is that, right now, the requests are being handled unevenly across the country.

## What we're doing about it

Our goal is to provide the information people need to make environmental awareness an integral part of their business practices. At the same time, we want to comply, both in spirit and principle, with the requirements of the *Access to Information Act*.

EC is looking at what information is available, what information should be given out - and whether this information is likely to meet the needs of various end-users. As a pilot project, we propose to supply legal searches of three EC databanks in the Pacific and Yukon Region, on a cost-recovery basis: the PCB Inventory Database, the Inspectors' Database, and the Emergency Spills Database.

Later, the best strategy may well be to make Environment Canada compliance databases available in raw form to the public at large. This way, clients could do their own searches, and would be responsible for interpreting the data. Another option could be to license an individual or company to sell the information on the Department's behalf.

Fees have been established by an EC committee reviewing commercial activities, and are in accordance with Treasury Board policy. The committee has set a rate of \$87/hour for services rendered. This rate will apply across Canada and is consistent with other EC cost-recovery initiatives. Suitable accounting procedures will be put in place, as well.

By sharing information, Canadians will be able to make responsible environmental decisions, leading to a brighter future for this generation and the next.

For more information: **Marlene Elliott** (604) 666-5958.

# Keeping in Touch in Rugged B.C.

Car phones and cell phones aren't of much use in many parts of British Columbia or the Yukon—the areas are too remote for these services. Personnel in Environment Canada's Enforcement and Emergencies Division, Pacific & Yukon Region, often have trouble staying in touch while dealing with spills or other emergencies. The west coast of Vancouver Island, where there have been several occurrences, is a good example.

In an effort to solve these communication problems, the Division purchased five Mobile Satellite Communication (MSAT) units in January 1996. The mobile communicators were delivered in April, and are being field tested. Part of the initial trial package included "free" calls anywhere in North America until March 31, 1997.

Those testing the units have indicated that the electronics are reasonably-sized, and have so far worked without fail. However, there appears to be a delay in the voice signal transmission, which can be annoying. And the antenna—which is large, unsightly and has to be mounted on the vehicle—is finicky to operate (it has to be correctly aligned and preferably stationary to provide reliable service).

To date, the units have not been tested extensively in remote locations. This will be done before a final assessment of the units is completed.

For more information:  
**Nick Russo** (604) 666-6864 or  
**Chris LeRock** (604) 666-8241.



# Environment Canada expertise needed? Call in Ed Norrena

When the Pakistan Government requested Canada's help implementing a National Environmental Quality Standards (NEQS), Environment Canada sent Ed Norrena, Director General, Environmental Technology Advancement Directorate, an expert in environmental protection application and legislation.

He was tasked to assess Pakistan's environmental standards, NEQS compliance, hold discussions with government and private sector, share Canada's experience and offer appropriate recommendations.

Norrena visited Islamabad, Karachi and Lahore for two weeks in May. He met with a number of stakeholders in the environment sector, including government policy-making and regulatory agencies, business associations, non-government organizations, media, consultants, academics, industrial establishments as well as government and private sector committees. All sectors shared their concerns with him in an atmosphere of mutual trust and openness.

While Pakistan is neither a major consumer of resources nor a major polluter by international standards, its dense population places tremendous demands on the limited national resources and its cities suffer from urban pollution. Pakistan has a long way to go in terms of industrialization but even at its current level, pollution from industrial and commercial activities is creating unsustainable conditions for present and future populations. Pollution levels are further augmented by raw sewage discharged into local rivers. Norrena commented that he was surprised by the level of pollution and the lack of care for human health.

The federal government has the overall responsibility for the environment, however the provinces are responsible for most of the implementation and enforcement. Local agencies have modest facilities with qualified staff in various environmental disciplines, but they have limited experience with enforcement, implementation and environmental impact assessments.

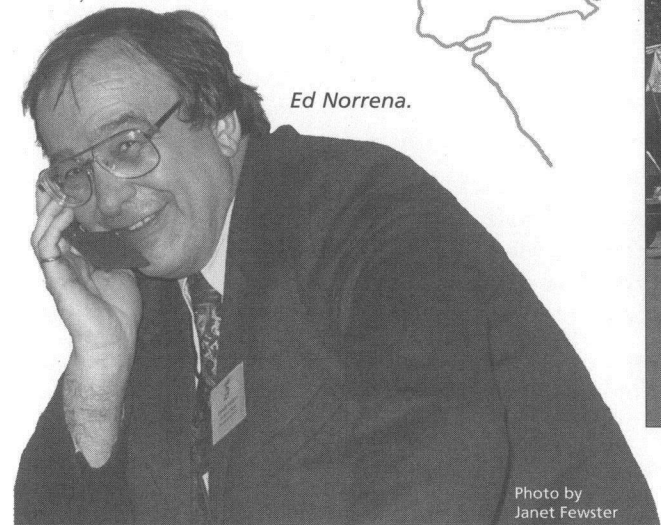
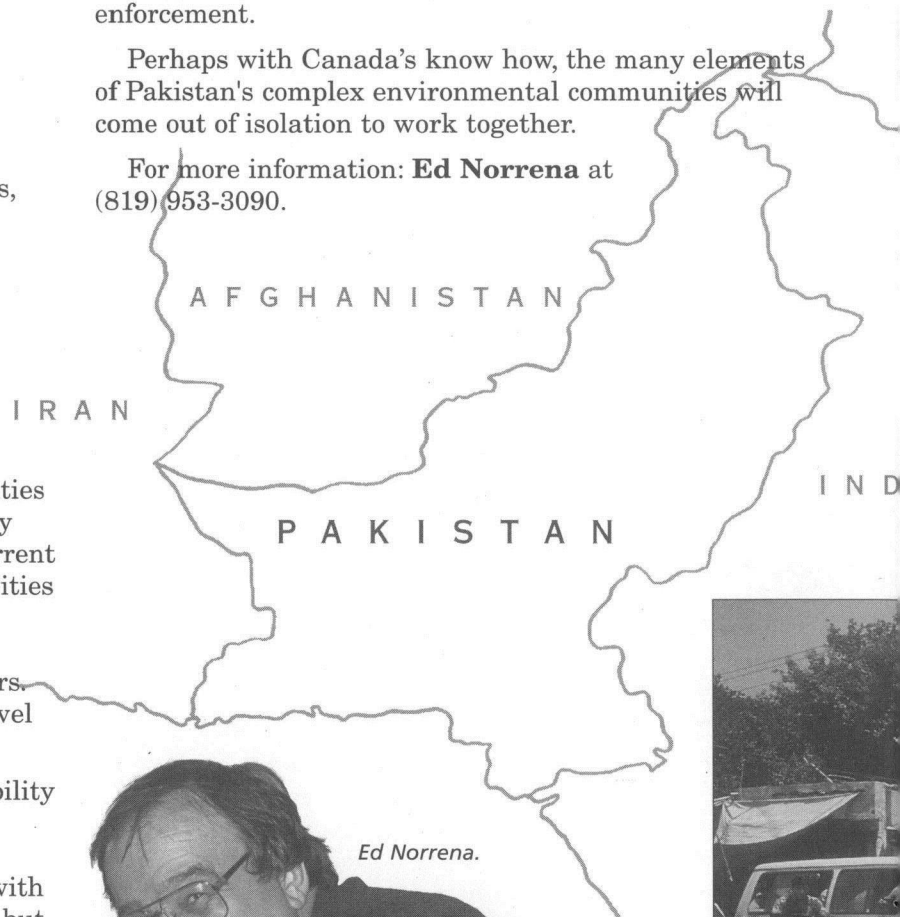
Canada, through the Canadian International Development Agency, played a leading role in creating Pakistan's National Conservation Strategy wherein a number of programs were identified to help develop a significant environmental framework. This evolution

includes Canadian funding and institutional links such as those with Environment Canada.

A comprehensive draft *Environmental Protection Act* has been prepared; NEQS for municipal and liquid industrial effluent, industrial gaseous emissions and motor vehicle exhausts have been developed; but there has been a general lack of attention by the industrial sectors, and both provincial and federal governments do not appear to be taking any across-the-board enforcement.

Perhaps with Canada's know how, the many elements of Pakistan's complex environmental communities will come out of isolation to work together.

For more information: **Ed Norrena** at (819) 953-3090.



Ed Norrena.



Photo by Janet Fewster



## For Pakistan: Advice based on experience

Given that the environmental situation in Pakistan is remarkably similar to Canada's, the advice given through suggestions and recommendations were rooted in the Canadian experience:

- Industry-specific standards - developing key industry standards for each industry group
- Polluter pays for pollution prevention
- Waste water treatment technology transfer
- Textile industry technology transfer mission
- Private sector development project
- Voluntary compliance
- Lessons learned from local experience
- Private testing and monitoring laboratories
- Institutional linkages
- Mass awareness, communications and international coordination unit
- Strengthening environmental protection agencies
- Defining Federal-Provincial dimensions
- Government leadership in green operations
- Vehicular emissions control
- Building decision support capacity

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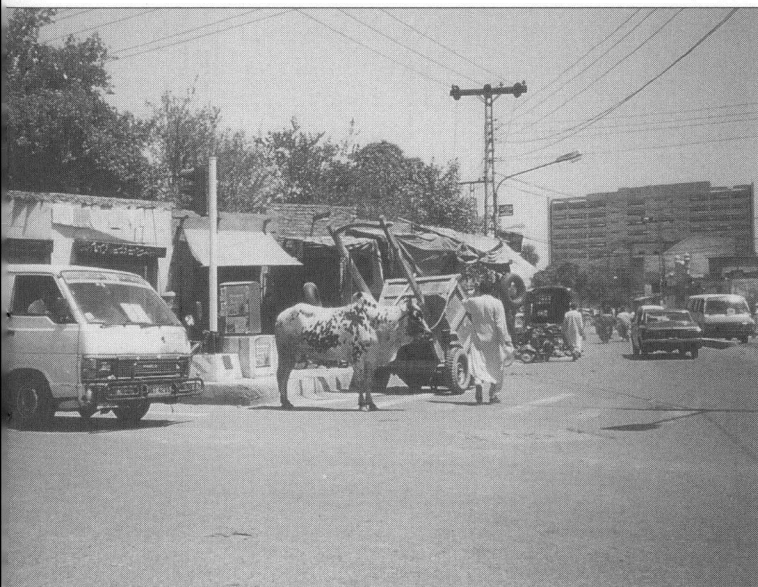


Photo by Ed Norrena

Pakistan is on the road to recovery – Canadian aid requested to help pollution problem.

## Badges— A new emblem of duty



Photo by Jim Haskill

New badges for EC Office of Enforcement - Daniel Couture and Tim Fowler display the badge they helped design.

By the end of the summer, Enforcement officers will be sporting brand-new badges. The Deputy Minister approved the design on January 31, and the badges are in production now.

Office of Enforcement (OOE) Deputy Director Daniel Couture, Régent Lalonde, National Operations Coordinator of the OOE Wildlife Division, and Tim Fowler, OOE information and investigation analyst, worked with EPS' Graphics and Design Unit to develop the gold and blue badge, which features a maple leaf and a loon. Each officer will receive two versions of the badge—one with a clasp, to be worn on the belt, and the other with a pin, to be carried inside a wallet with the officer's identification card.

Wearing a badge isn't new for game officers. However, when those officials joined forces with *CEPA* and *Fisheries Act* inspectors to form an enforcement force under the OOE, a new badge—for all EC inspectors, investigators and game officers—was in order. That said, the badge for investigators is somewhat premature. Although EPS regional offices have investigative specialists, there is no provision in *CEPA* or the *Fisheries Act* for enforcement officers other than inspectors. Amendments to renew *CEPA* will specifically provide for a new category of officer called inspector. Until the renewed *CEPA* is in place (1997), EC investigators will carry an investigator badge along with their inspector's ID card. It must be noted that it is the ID card and not the badge that provides proof of the law enforcement officers' powers.

For more information: **Carmen Bigras**  
(819) 997-3656.



# Atlantic Coastal Action Program – Really pushing forward!

**H**ave you ever been stuck in PEI clay? Delegates attending the 5th Annual Atlantic Coastal Action Program (ACAP) Conference were briefly delayed when their bus became firmly stuck in the mud. The ACAP passengers tried pushing it out themselves, but in the end, it took the strength of a local tractor to get them out of their sticky situation.

This year's conference was held in Prince Edward Island from May 23 to 26. Dianne Griffin—Deputy Minister, Prince Edward Island Department of Environmental Resources and a strong supporter of the program—acted as facilitator for the conference, which attracted over 100 delegates.

Invited guests included Mike Duffy, native PEIer and CTV parliamentary reporter; Art Smith, Director of Fish and Wildlife; Tom Ford, Damariscotta Planning Alliance in the U.S.; and, Dr. Lawrence Jones-Walters, English Nature, England. Jones-Walters told ACAP groups that they can make a difference—globally there is a shift towards community-based sustainability and something is happening out there! He suggested they continue to communicate to a broader audience, involve more community stakeholders, and take time to implement the blueprints. “You do not have to deliver it all tomorrow. Your success and achievements will equal accountability.”



ACAP – A “hands-on experience”. Regional Director General, Garth Bangay joins group trying to free their bus from the depths of the PEI mud.

The ACAP program originated as an Environment Canada initiative to restore, protect and enhance 13 Atlantic Canada hot spots, and to deliver blueprints for their future. ACAP attributes its success to the active participation of its committees, which are comprised of community residents, industry, business, academia, non-government groups, and three levels of government, all sitting around the table as equals. The committees are responsible for planning, developing and implementing specific environmental management plans, taking into account social, economic and environmental factors. EC is one of many partners involved in this initiative. All 13 groups depend on active volunteers taking action towards improving and protecting their areas.

Conference attendee, Garth Bangay, Atlantic Regional Director General, sees an active role for Environment Canada to integrate community with science. Bangay stated “The ACAP groups are innovators in community-based ecosystem management and are presently leading the pack ... in Atlantic Canada and across the country.” He is confident that sustainable ecosystem initiatives are the way of the future, and believes that ACAP is a unique approach that works exceptionally well.

For more information: **Jim Ellsworth** (902) 426-2131 or **Karen Swan** (902) 426-3766.

### A Green Tip from Environment Canada



**U**se the old before ordering new! Have a place in the office for used binders, diskettes, envelopes and file folders to encourage reusing and reduce waste.





## State of the Environment: A sleek vehicle on the information highway

Conquering numerous challenges, the Headquarters State of the Environment Directorate (SOED) is to be commended for its unsurpassed efforts in submitting its third and final national report before being disbanded. Their chronicle, part of a large database, is state of the art in its presentation.

Continuing in print form since the original 1986 release, *The State of Canada's Environment* has now advanced to an impressive Internet exposition on the Green Lane, and will be released in a CD-ROM version this fall.

Free Internet access is available with the purchase of the CD-ROM or the printed version and Internet surfers have the advantage of *The State of Canada's Environment* Infobase search tools and hyperlinks. The Green Lane address is: <http://www.ec.gc.ca>. Ordering information is available by calling 1-800-734-3232.

Congratulations to the SOED team, the Knowledge Integration Division, the Technology Transfer Office, and the hundreds of others who wrote, reviewed, responded, assessed and evaluated – for a job well done.

For more information: **Rosaline Frith** (819) 994-9872.

### “The most comprehensive knowledge base on Canadian Environmental conditions ever created.”

*The State of Canada's Environment – 1996* is current, important and usable, backed by statistics that offer a refreshing look at the state of our nation. It contains:

- current environmental trends and conditions;
- how human activities affect environmental change;
- impacts of change on our ecosystems and resources; and
- current efforts to protect and restore the environment.

The Internet version currently has eight of the report's 16 chapters on line, including a complete Chapter 1 and highlights of Chapters 2, 3, 9, 10, 12, 14 and 15.

Besides the report, *The State of Canada's Environment Infobase* contains *Canada's Environmental Indicators Series*, a fully indexed glossary, fact sheets, reports, illustrations, graphs and tables.

## Access Environment offers “paperless” conferences and trade fairs

*Access Environment* is a “paperless” exhibit that uses multi-media technology to give Environment Canada's representatives the edge in greening the government.



Lise Gendron, Ela Kinowska and Michel Brazeau show off the *Access Environment* exhibit.

The computerized display provides a touch screen interface that allows the public to view lists of programs, products, services and environmental experts, while using graphics, sounds and videos.

*Access Environment* was started in March during *Globe 96* when the Technology Transfer Office of the Headquarters Environmental Technology Advancement Directorate came up with a “paperless” policy when organizing events.

Environment Canada's kiosk is now travelling worldwide with *Access Environment*, presenting EC knowledge and expertise in an entertaining yet effective way.

*Access Environment* is also available in CD-ROM format to use with regular computers.

For more information:  
**Michel Brazeau** (819) 953-4710.



# It's back to school for technology pros



For Environment Canada Project Manager Faye Lemay, Enforcement Branch—Headquarters, going back to school has helped her sharpen her skills and learn new techniques.

For anyone working in the information technology (IT) field, the pace of change is unrelenting. In 1991, the Institute for Government Informatics Professionals was set up to help technology professionals keep abreast of new developments. A part of Government Telecommunications and Informatics Services (GTIS), the Institute offers university-level courses designed to help IT professionals upgrade their technology skills and broaden their abilities in key non-technical areas. Over the past four years, the Institute has received nearly 3,000 registrations from 50 departments and agencies.

Faye recently completed the Institute's Introduction to Project Management course. She's a satisfied customer who gives the instructor, Dr. Mike Bennett of the University of Western Ontario, rave reviews. "This is the first project management course I've taken," she

says. "It gave me an opportunity to learn a structured methodology for managing projects and become more effective at really prioritizing my key responsibilities."

Next on Faye's list is the more advanced Professional Project Management course. "I would definitely recommend the Institute to other technology professionals," she says.

Departments and agencies are rushing to implement new systems designed to improve service delivery and save taxpayer dollars. The Institute for Government Informatics Professionals works hard to help IT pros keep pace with new developments.

For information on upcoming courses: **Lisa Ersil** (819) 956-4259, fax (819) 956-7223, or e-mail [Lisa.Ersil@HQASD1.SSC.ssc-asc.x400.gc.ca](mailto:Lisa.Ersil@HQASD1.SSC.ssc-asc.x400.gc.ca)

## Atlantic breakfast energizes EC summer students

To kick off this year's summer student program, Garth Bangay, Regional Director General, Environment Canada Atlantic Region, hosted a breakfast in May. The gathering allowed summer students and young employees from the Halifax metro area to get together. EC summer students don't

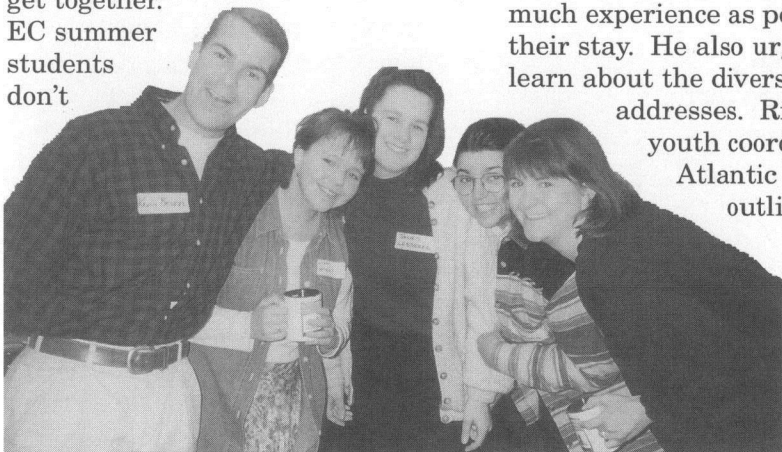
often have the opportunity to meet their peers because the department is spread across several locations. As well, summer students often do field work, which keeps them out of the office.

Bangay welcomed participants and encouraged them to gain as much experience as possible during their stay. He also urged them to learn about the diverse issues EC addresses. Rita Mroz, youth coordinator for the Atlantic Region, briefly outlined the federal

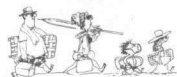
government's current youth initiative and stressed that this meeting would be the first of several organized. EC is very interested in the youth perspective on various issues.

By all accounts, the breakfast was an eye-opener. In fact, many commented on how much they enjoyed sharing ideas and information with their peers—and the opportunity to find out what's going on at Environment Canada.

For more information: **Rita Mroz** (902) 426-9405.



Keven Beson, Colleen McNeil, Janis Lesbirel, Elisabeth Adams, Louise Foley



# The future is here to stay

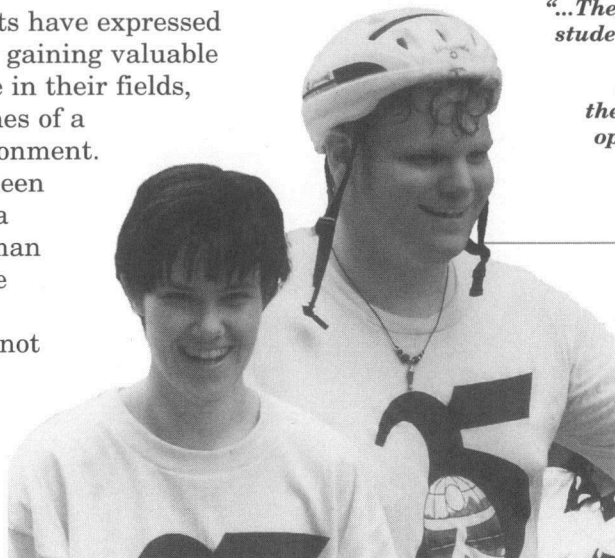
A traditional Haida proverb states, "We do not inherit the land from our forefathers, we borrow land from our children."

Environment Canada (EC) has taken this one step further through its commitment to a youth strategy.

This summer, EC has employed a booming 340 students throughout the department—up from 199 last summer. Their presence is greatly appreciated. The Department has ensured that students have been well integrated into EC by providing them with orientation kits and giving them the opportunity to meet with senior management. According to Avrim Lazar, ADM Policy and Communications, EC is committed to empowering youth by giving them the opportunity to engage their voice and be advisors and partners in a range of strategies and programs to help safeguard our shared environment. The energy, enthusiasm and vitality from this year's summer students is an inspiration to us all and has enabled many of us to not only witness the special connection between Canada's youth and the environment, but also to see our mandate as a Department in a new light.

Many students have expressed their thanks for gaining valuable work experience in their fields, out of the confines of a classroom environment. According to Eileen Vivian Colotla, a student for Human Resources in the Pacific & Yukon Region; "...I am not in the technical or scientific side of things, [but] I have

Photo by Jim Haskill



had some exposure to EC's green initiatives and projects,...from talking to people and reading articles in the various newsletters and reports." Jean-Francois Turcotte, (Communications and Consultations Directorate-National Capital Region (NCR) ) is a geography student who enjoys applying his scientific and physical knowledge to public consultations,

thus allowing him to broaden his views and his knowledge. Kevin Hill (Emergencies and Enforcement—Ontario Region) values the mentoring program for youth, saying that; "Mentoring enables students to learn about other possibilities for a career at EC beyond the confines of their own section".

*continues on page 31...*

## What they like about working at EC:

**Rhonda Arsenault (Let's Talk Green-EPS)** "...having the opportunity to deal with diverse projects from across the country. I enjoy knowing that I work for such an effective and interesting department."

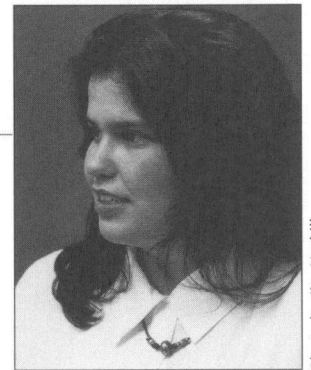


Photo by Jim Haskill

Photo by Jim Haskill



**Meghan McKellar (Ecological Monitoring and Assessment Network-ECS)** "...it has given me the opportunity to meet and work with many interesting and talented individuals."

**Gina Catenazzo (Air Pollution Prevention Directorate-EPS)** "...They actually care what the students think about environmental matters.

I appreciate being given the opportunity to voice my opinions, and the courtesy of having my opinions considered."



Photo by Rhonda Arsenault

**Brian Sulley (Air Pollution Prevention Directorate- EPS)** "What I like most about working at EC is dealing with pollution issues which actually have an effect on industry and public health."

**Lorie Cummings (Air Pollution Prevention Directorate-EPS)** "It's great to work with people who are environmentally concerned about our planet and who have accepted the challenge of making a difference."





# Awards

**The Andrew Thomson Prize in Applied Meteorology** is presented each year by the Canadian Meteorological and Oceanographic Society to a member who has demonstrated an outstanding contribution to the application of meteorology in Canada. Awards in this category are given for the publication of scientific papers, and for the ability to apply test results to meet the needs of Canadians. This year the award went to **Richard Raddatz**, an AES Meteorologist from the Prairie and Northern Region, "in recognition of (his) innovative studies and the development of techniques in mesoscale meteorology on the prairies".

In early March, the Minister of Foreign Affairs, André Ouellet, presented **John Herity** and **Avrim Lazar** (Headquarters) with **Public Service Merit Awards**,

for their work on Montreal's successful bid to host the permanent secretariat of the Biodiversity Convention.

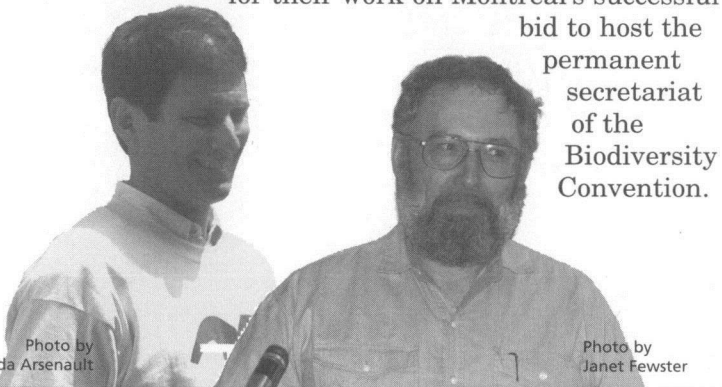


Photo by Rhonda Arseneault

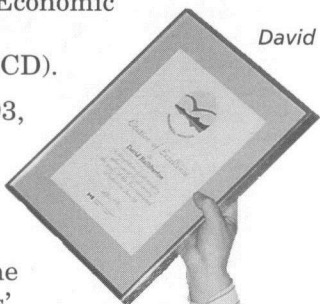
Photo by Janet Fewster

Avrim Lazar

John Herity

**David Halliburton** (EPS, Headquarters) received an **Award of Excellence** for his outstanding work on the "Environmental Requirements for Industrial Permitting" initiative of the International Organization for Economic Cooperation and Development (OECD).

David Halliburton



In September 1993, the OECD's Pollution Prevention and Control Group decided to examine Member countries' use of environmental regulatory requirements based on "best available technology" and "environmental quality objectives". Results from these studies now aid

Photo by Jim Haskill



Member countries in identifying and debating the key issues related to industrial permitting, and will possibly lead to the development of OECD recommendations. Canada was a leader in the Pulp and Paper case studies, as well as in the development of a questionnaire used in surveying Member countries for all four case studies. David played a key role in the initiative, and his dedication and hard work made it a great success.



Photo by Rhonda Arseneault

Halifax G7 Summit Team - Wayne Barchard bottom right

The **Halifax G7 Summit Team** received the **Award for Environmental Achievement Excellence** "for their outstanding success in making the G-7 Summit in Halifax the first GREEN International Summit meeting". Foreign Affairs Deputy Minister Gordon Smith, presented the award and noted that "the precedents established in Halifax created a solid foundation for future international events hosted by Canada, beginning with the APEC Summit in Vancouver in 1997". **Wayne Barchard** from the Atlantic region was the Environment Canada representative on the team.

**Bertin Francoeur**, Head of the Nutrients Laboratory at the National Water Research Institute in Burlington Ontario, received a **Suggestion Award** from Karen Brown, Director General Ecosystem Conservation, ECS. The award was presented for Bertin's suggestion for internally redesigning and developing custom-made data processing software to replace obsolete data capture capability for various testing instruments. This suggestion was successfully implemented at NWRI, with a total savings of \$22,550.



# Awards



Photo by Rhonda Arsenault

Nature Conservancy Award

An award was recently presented to **all CWS employees** across the country. The **Nature Conservancy Award** is presented to individuals or groups who have contributed to the preservation of natural Canadian habitat. David Brackett, ECS Headquarters, accepted the award on behalf of Canada's CWS staff.

**Dr. Robert Slater**, ADM, Environmental Conservation Service, was awarded the first **Association of Professional Executives (APEX) Award for Career Contribution**.

This award is presented to an individual who has been with the public service for at least 10 years, who is a leader in their field, and who has brought positive recognition to their department. Bob's career highlights include: the development of a set of national pollution standards for the mining industry in 1971; the establishment of the first regional office for environmental protection in Ontario; a leading role in the 1978 revision of the Canada/US Great Lakes Water Quality agreement; focusing public and government concern on acid rain as well as being the driving force behind Canada's Green Plan.



Photo by Janet Fewster

Dr. Robert Slater

**Dr. Anthony Keith**, who recently retired, has become the first **Associate of Environment Canada**. Bob Slater, ADM, ECS, awarded the designation to Anthony in early June. Dr. Keith has many "firsts" with Environment Canada. He was the founding director of the National Wildlife Research Centre, and his ground breaking work with toxic chemicals and their effects on the environment and wildlife are extensive. He also initiated the *Environmental Contaminants Act*, and was chairman of the first OECD standing committee on toxic chemicals. When not dealing with toxic chemicals, Dr. Keith became the founding chairman of the Committee on the Status of Endangered Wildlife in Canada where he continued as chairperson for ten years. He directed government and native people in developing caribou management practices, and led the development of Canada's first national wildlife policy. Associates of Environment Canada are people who are not EC employees but who support our initiatives and programs. Our congratulations to Dr. Keith.

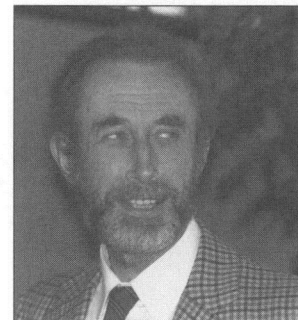


Photo by Janet Fewster

Dr. Anthony Keith

**Certificates of Merit** were presented to the Headquarters "**CEPA Team**" by Tony Clarke, ADM, EPS, on behalf of former Deputy Minister, Mel Cappe. The recipients were recognized for their exceptional and distinguished efforts in formulating a renewed *Canadian Environmental Protection Act* and for their overall contribution to the effectiveness and efficiency of the Public Service. Team members included; **Ed Norrena, Martin Boddington, Roy Begin, Ruth Wherry, Denis Landry, Janet Fewster, Lise Anne James, Lucille O'Grady, Louise Durocher, Connie Zary, Nadine Levin, Barbara Hoglund, Judy Vincent, J.R. Rousseau, Dave McBain and Mark Colpitts.**

A **Suggestion Award** was presented to **Kerry Peru** for his idea which has been implemented at his workplace—the National Hydrology Research Institute in Saskatoon. His suggestion involved the large scale separation of pesticides from water. This process is now user friendly, efficient, and provides the ability to concentrate the contaminants in small volumes of water.





# Awards

**Human Resources employees** in the National Capital Region have received **Team Certificates of Recognition** for the work they accomplished during the first phase of Program Review. Individual regions will undertake similar presentations. Teams achieved the objective of treating each employee as an individual – not as a statistic. Their approach has become a model for the rest of the Public Service who have since begun their own down-sizing exercises.

Long-time service awards were presented during the 25 year reunion of Meteorologist Course #28 held in Toronto Ontario. **A 35 year medallion** was presented to **Ken Devine** (AES). **25 year plaques** were given to **Dave Dockendorff** (AES), **Paul Delannoy** (Ontario Region), **Tom Noga** (Ontario Region), **Glenn Vickers** (P&N Region), **Larry Funk** (P&Y Region), **Bruce Thomson** (P&Y Region), and **Mary Regan** (ADM, AES).



Human Resource employees receive special team awards

Photo by Rhonda Arsenault

**The Canadian Healthy Environment Awards** were presented in Ottawa by Minister of Environment, **Sergio Marchi**, at a ceremony during the 1996 Environment Week. This award, part of Environment Canada's Action 21 Program, is given to individuals and organizations which have taken positive action in support of Canada's Environment. 1996 winners and finalists follow:



Minister Marchi with some of the recipients of the 1996 Canadian Healthy Environment Awards.

Photo by Jim Haskill

## Non-profit Organizations

**Winner:** Partners for the Saskatchewan River Basin Project, Saskatoon Saskatchewan

**Finalists:** Clean Annapolis River Project, Annapolis Royal, Nova Scotia; Société des parcs de Baie-Comeau, Baie-Comeau, Québec; Salmon River Watershed Roundtable, Salmon Arm, British Columbia

## Arts, Media and Communications

**Winner:** JoDee Samuelson, Cornwall, P.E.I.

**Finalists:** Chris McKhool Environmental Concerts, Toronto Ontario; Tim Roark, Charles Young and Verna Hall Media Productions, Maple Ridge, British Columbia

## Corporate Leadership

**Winner:** The North West Company, Winnipeg, Manitoba

**Finalists:** W.B. Coburn & Sons Ltd., Mouth of Keswick, New Brunswick; Kelly Auto Body Ltd., Hamilton, Ontario

## Environmental Leadership by a Municipality

**Winner:** The City of Red Deer, Alberta

**Finalists:** Task Force to Bring Back the Don, Toronto, Ontario; City of Ottawa Task Force on the Atmosphere, Ottawa, Ontario

## Youth Leadership

**Winners:** Jean-Dominic Lévesque-René, Île-Bizard, Québec; Sarah McEachern, Maple Ridge, British Columbia

**Finalists:** David Grassby, Thornhill, Ontario; Shawna McMahan, Winnipeg, Manitoba; Robert Strong, St. John's, Newfoundland

## Lifetime Achievement

**Winners:** Mary Majka, Albert, New Brunswick; Dr. Jennifer Shay, Winnipeg, Manitoba

**Finalist:** Dr. and Mrs. Urquhart, Scarborough, Ontario





# Upcoming Events

*September 18-21*

Winnipeg, Manitoba

**International Conference  
on Building Material Reuse/  
Recycling "Looking to the Future:  
Building with the Past"**

Contact: Elaine Mathieson  
(204) 289-2739

*September 22-24*

Charlottetown, P.E.I.

**Atlantic Canada Water Works  
Association (AWWA) Annual  
Conference**

Contact: Blaine Rooney  
(902) 421-6918  
Fax: (902) 421-6408

*September 23-26*

Portland, Oregon

**WASTECON '96 - 34th International  
Solid Waste Exposition**

Contact: Solid Waste Association  
of North America  
(301) 585-2898

*September 24-27*

Regina, Saskatchewan

**Western Canada Water &  
Wastewater Association Annual  
Conference**

Contact: J. Taylor  
(403) 259-4041  
Fax : (403) 258-1631

*September 25-27*

Golden, Colorado

**ModelCARE '96 - International  
Conference on Calibration and  
Reliability in Groundwater  
Modelling**

Contact: ModelCARE '96  
(303) 273-3108 Fax: (303) 273-3278  
E-mail: igwmc@mines.colorado.edu

*September 28-30*

Niagara Falls, New York

**International Specialty Conference  
on Atmospheric Deposition to the  
Great Waters**

Contact: Stephen Vermette  
(716) 878-4734 Fax: (716) 878-4009

*October 2-4*

Hamilton, Ontario

**17th Annual Recycling Council of  
Ontario Conference and Trade  
Show**

Contact: Recycling Council  
of Ontario  
(416) 960-1025

*October 5-9*

Dallas, Texas

**Water Environmental Federation  
(WEF) 69th Annual Conference and  
Exhibition**

Contact: WEF  
1-800-666-0206

*October 6-9*

Kananaskis, Alberta

**Canadian Wind Energy Conference  
and Exhibition '96**

Contact: CanWEA  
(403) 289-7713 or 1-900-9CANWEA  
Fax: (403) 282-1238

*October 6-10*

Calgary, Alberta

**Annual Aquatic Toxicity Workshop**

Contact: Arthur Niimi  
(905) 336-4868 Fax: (905) 336-6437

*October 11-12*

Winnipeg, Manitoba

**Course on In-situ and On-site  
Bioremediation (offered by INET)**

Contact: INET  
(301) 299-1150 or (301) 320-4854  
Fax: (301) 299-8653

*October 14-23*

Montréal, Québec

**World Conservation Congress**

Contact: Nicole Racette  
(514) 283-1544 Fax: (514) 283-7727

*October 15-17*

Washington, D.C.

**Superfund XVII Exhibition**

Contact: Susan Newman  
(301) 986-7800 Fax: (301) 986-4538

*October 21-23*

Washington, D.C.

**International Conference on Ozone  
Protection Technology  
"Stratospheric Ozone Protection for  
the 90's"**

Contact: Jan McCusker  
(301) 695-3762 or 1-800-296-1996  
Fax: (301) 695-0175

## The future is here to stay

*...continued from page 27*

This summer, many students have been involved in initiatives developed under EC's Youth Strategy Group. One such initiative is the EC Youth Caucus, consisting of students and employees under the age of 30 who are located in the National Capital Region. The Caucus has three groups which have been meeting throughout the summer to develop strategies on how to influence young Canadians

in the 18-30 age range to become more environmentally conscious and active. As well, EC youth from all regions and services have been able to exchange ideas through the "listserv", an electronic e-mail system which operates like a Bulletin Board System.

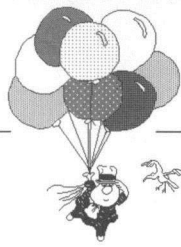
The youth of Environment Canada have been enjoying their stay, their work, and the opportunity to make their voices

heard. Their EC experience will no doubt pave the way towards great careers for them in the future, as well as a heightened understanding of the department and the environment as a whole.

For information contact:  
**Christina Ferguson**  
(819) 997-1770



# Going Places



- ➔ A warm welcome to our new Deputy Minister **Ian Glen** who comes to Environment Canada from the Privy Council Office, where he worked as Deputy Secretary to Cabinet (Operations). Ian has held many high profile positions within the Public Service, including Associate Deputy Minister of Citizenship and Immigration, and Associate Deputy Minister of Public Security and the Department of Employment and Immigration. His outstanding professionalism and dedication to the public service will surely enhance the department.
- ➔ Prime Minister Jean Chrétien has appointed former Deputy Minister, **Mel Cappe** to the position of Deputy Minister of Human Resources Development and Deputy Minister of Labour. Mel had been with Environment Canada for just over two years and was well known for his openness, his professionalism, and his respect for the individual—especially his excellent communication with staff during Program Review.
- ➔ **Luke Trip** (819) 997-1967, manager of the National Environmental Emergencies Centre moved to the Air Pollution Prevention Directorate in the Transboundary Air Issues Branch. The assignment, dealing with heavy metals and related air issues, will last for one year.
- ➔ Another new face for the Air Pollution Prevention Directorate is **Sandy Matheson** (819) 994-3215, Chief of the Hazardous Air Pollutants Division. Sandy was formerly the Head of the New Chemical Evaluations Section—EPS.

- ➔ **Terry McIntyre** (819) 994-1105, is on assignment to Environmental Technology Advancement Directorate as Manager of the Biotechnology Advancement Program since February 1996. Formerly with the New Substances division, EPS, Terry will return to his previous position in February.
- ➔ Health Canada's loss is now EC's gain. **Nigel A. Skipper** (819) 953-1678, is the new Head of Biotechnology Section, New Substances Division, EPS. Nigel was on loan to us from Health Canada, and has recently joined us as an EC employee.
- ➔ **Bernard Conilh de Beyssac** (819) 953-1510 accepted a one year assignment with the Endangered Species Division of the Canadian Wildlife Service, ECS. Bernard was formerly with the Chemicals Evaluation Division, EPS.
- ➔ **Dwayne Moore** of the Chemicals Evaluation Division, EPS, has accepted a private sector position in Ottawa with a U.S. consulting firm.
- ➔ **Philippa Cureton** (819) 953-0385, formerly on assignment with the Guidelines Division, Evaluation and Interpretation Branch, ECS, accepted a permanent position as a senior evaluator with the Commercial Chemicals Evaluation Branch, EPS. Former Director General of Corporate Management and Review, **Samuel Wex** (819) 947-3681, has left EC to become a Visiting Fellow at the Canadian Centre for Management Development. In the last six years, Sam made various key contributions to

management practices within the Department. Director of the Review Branch, **Cynthia Wright** (819) 953-2091, will take over as Director General on an acting basis.

- ➔ **Lise Anne James** (819) 994-1000, formerly with the *Let's Talk Green* office is now working with Greening Operations as a communications assistant.
- ➔ **Rachel Labelle** (819) 994-1705 from Treasury Board, has joined Human Resources as the Employment Equity and Official Languages Advisor for the National Capital Region. Rachel replaces **Doreen Seguin** (613) 996-8398 who has accepted an assignment with Foreign Affairs.
- ➔ The **CEPA office** has moved to the 18th floor, PVM under the direction of new CEPA Manager, **Heather Smith** (819) 953-1652.

**Write to us!** Letters to the editor

*Let's Talk Green* will publish your signed letter to the editor, providing it is within the boundaries of good taste and Canadian law.







# Retirements

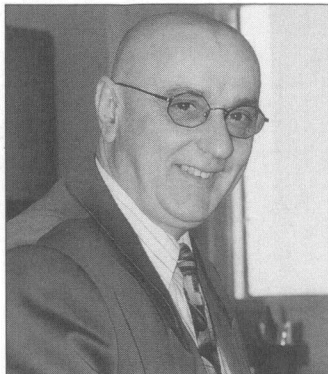


Photo by Janet Fewster

Dr. Martin Boddington

A retirement party for **Martin Boddington** was held at Headquarters PVM in late May. Martin joined Environment Canada in 1981 after a number of years with the National Research Council. During his years with EC, he worked on a number of high-profile issues including toxics, biotechnology, and the Green Plan. Most

leave in 1966, he joined the numerical prediction research group in Dorval Quebec, where he was able to work with one of the department's first super computers. Here he was able to analyse world-wide weather patterns, as well as produce numeric simulation modelling of weather evolution. After 20 years as a research scientist, Ian was promoted to Director General of Weather Services in 1984, and Director General of National Parks for Parks Canada in 1988. Ian returned to Environment Canada in 1992 as the Director General for State of the Environment Reporting. Ian is well known for his calm attitude and his ability to get things done – this EC gentleman will surely be missed.

recently, Martin oversaw the establishment of the CEPA Office and steered the CEPA Review through to the preparation of the Government Response. Martin's contribution to strategic planning and his ability to get to the heart of an issue will be sorely missed by his many friends and colleagues. Congratulations Martin, your retirement has been well-earned.

**Raymond Ménard** retired from Environment Canada in late May, where he was working on the State of the Environment Reports. He was one of the pioneers in the era of the world famous Canada Land Inventory of the 1960's. Information which he coded and synthesized are still considered to be integral for understanding the resource capabilities of the country. Since then, Raymond has continued to apply his cartographic skills and talents in other landmark initiatives involving the Canadian geographic system and the National Ecosystem Framework.

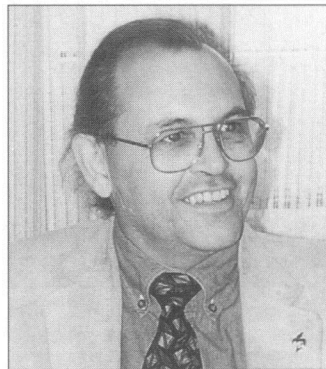
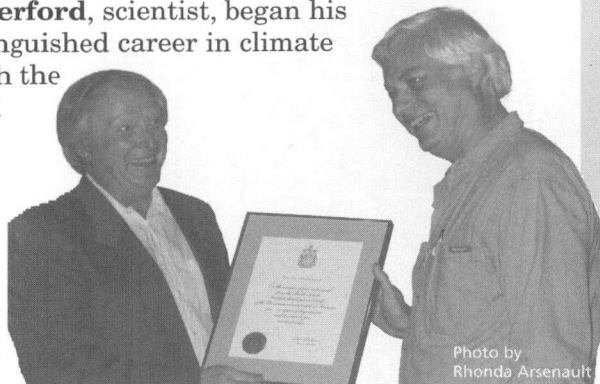


Photo by Haskill

Raymond Ménard

**Dr. Ian Rutherford**, scientist, began his long and distinguished career in climate prediction with the meteorological branch of Transport in 1962. After taking education



Dr. Bob Slater (l) and Dr. Ian Rutherford (r)

Photo by Rhonda Arsenaault

## 25TH ANNIVERSARY CENTERFOLD

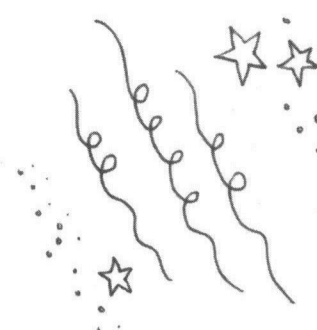
### Celebrating from Coast to Coast!

1. *The Canadian Healthy Environment Awards bring smiles to Minister Marchi and two youth recipients.*
2. *EC onlookers enjoying the balloon toss.*
3. *Robert Shaw, our first Deputy Minister and Dorothy Neil, his former Assistant return to enjoy the 25th Anniversary festivities at the HQ BBQ.*
4. *Let them eat cake!*
5. *The Great Balloon Toss!*
6. *Geostationary Operational Environmental Satellite Team receives 25th Anniversary awards. (left to right) Kelsey Spring, Dietmar Uberschar, Laurie Neil, Neil McLennan (Absent: John Thomas and John Spagnol).*
7. *Summer students are "geared up" for EC's celebrations.*
8. *Minister Marchi chats with Janet Bax and Debbie Griff.*
9. *Avrim Lazar, ADM, prepares for his bike ride with HQ's students.*
10. *Karen Brown really "digs" the NWRI picnic and tree planting ceremony.*
11. *...and Vickie says "Hi!"*



# 25<sup>th</sup> anniversary

Celebrating from Coast to Coast!



1 Headquarters/Administration centrale



Photo by/par Janet Fewster

2 Downsview



«...Au cours des 25 dernières années, vous avez fait de notre pays un chef de file dans les efforts pour éviter la destruction de notre planète. Je suis très fière de la législation sévère et des programmes positifs que nous avons mis en place au Canada. Alors que je ressens, avec tous les Canadiens, une grande fierté à cet égard, c'est à vous qu'en revient le mérite.»

L'honorable Sheila Copps

"...In 25 years, you have made our country a world leader in saving our planet from environmental destruction. I'm very proud of the tough legislation and the positive programs we have developed in Canada. And while I and all Canadians can take pride in that, you should take the credit."

Hon. Sheila Copps

3 Headquarters/Administration centrale



Photo by/par Jim Haskill

5 Downsview



4 Prairie & Northern Region/  
La région des Prairies et du Nord



"...The eight years I spent as DM of the environment was one of the best periods of my forty-one years in the public service of Canada - seldom easy, usually fascinating, always challenging...."

Blair Seaborn

«...Mes huit années de service comme sous-ministre de l'Environnement ont été un point culminant des 41 ans que j'ai passés au sein de la fonction publique du Canada - ce fut rarement facile, généralement fascinant et offrant toujours des défis à relever.»

Blair Seaborn

6 Pacific & Yukon/Pacifique & Yukon



7 Headquarters/Administration centrale



Photo by/par Rhonda Arsenaault

8 Headquarters/Administration centrale



Photo by/par Janet Fewster



Photo by/par Rhonda Arsenaault

10 Ontario Region/La région de l'Ontario



11 Headquarters/Administration centrale



Photo by/par Jim Haskill

# 25<sup>ième</sup> anniversaire

Des célébrations d'un océan à l'autre!

