



## Tom McMillan's day in North York hinges on ice



Smiling happily, Environment Minister Tom McMillan gives a thumbs-up salute from the cockpit of the de Havilland DASH-7 aircraft.

Environment Minister Tom McMillan spent an action-packed day in Metropolitan Toronto May 23. The two major events of his lightning visit were the official acceptance of an extended range de Havilland DASH-7 ice reconnaissance aircraft on behalf of Environment Canada and the signing of an agreement with Toronto's York University to establish a centre for weather forecasting. This latter concentrates on the application of satellite data to the production of ocean weather and ice conditions in Canada.

The handing-over ceremony of the DASH-7 took place in a hangar belonging to de Havilland at Downsview, Ontario. A crowd of more than 100 de Havilland employees, AES officials, ice observers and media gathered to watch de Havilland Canada president William Boggs present the plane's log book to Mr. McMillan.

In a short speech the Minister said the new aircraft, outfitted with a wide range of Canadian-designed and built high technology ice equipment, would help Environment Canada improve its key role of supplying ice data to Canadian offshore fishing, shipping and resource industries and in addition "enhance our abilities to protect our vast and fragile northern environment".

The aircraft was built by de Havilland/Boeing under a \$26 million contract signed in 1983. The modified DASH-7 has an extended range of 1150 nautical miles and is outfitted with side-looking airborne radar, a laser

profilometer for measuring ice contours, and a sophisticated data link between the aircraft, shipping below and Ice Central in Ottawa.

Also on the podium was ADMA Howard Ferguson who introduced the Minister and gave a short speech on the history of the Ice Service.

Former Minister of Transport, Don Mazankowski, sent his regrets at not being able to attend the ceremony. The department of Transport is the official signatory of the contract with de Havilland.

At York University, participating in a ceremony with vice-president, Dr. Kenneth Davey, the Minister said York's Centre for Research in Experimental Space Science (CRESS) is among the first of its kind in Canada. "The information extracted from this joint venture will help ensure the safety of our coastal fishermen and offshore industries," he said.

Mr. McMillan emphasized that the centre was a joint operation of Environment Canada's Ice Research and Development Division, CRESS, and Ph.D. Associates representing the high-tech industrial involvement.

Scientists at the centre will develop new techniques to use satellite data in forecasting weather and ice conditions. Satellite instruments turned to microwave energy emitted by the earth's surface can give a clear picture of weather and ice conditions over the ocean, even in total darkness. The Centre's techniques will be used as early as 1987 when a new US weather satellite will be launched. Such satellite data will probably aid forecasting of flood and heavy rain conditions for inland areas in the near future.

**Interview with  
Howard Ferguson  
pages 4 and 5.**

## AES Scientist wins Patterson Medal

An AES research scientist responsible for making computers an everyday tool in weather forecasting has been awarded the Patterson Medal for 1986.

Dr. André Robert, former director of the Canadian Meteorological Centre (CMC) in Dorval, Quebec and now a senior research scientist at the Numerical Prediction Research Division, received the highest award in Canadian meteorology at an awards banquet held by the Canadian Meteorological and Oceanographic Society (CMOS) in Regina, Saskatchewan, in June.

At the ceremony, Dr. Robert was praised for his fundamental contribution to numerical modelling prediction. His work dates back to 1962 when he first developed a model to be used in Canada for weather forecasting, later used on a routine basis from 1967-76. Dr. Robert then went on to develop other models,



M. André Robert

capable of achieving still greater efficiency and accuracy in numerical weather prediction. He is now continuing work on advanced models which promise to increase efficiency fivefold and keep Canada in the forefront of state of the art weather forecasting techniques during the next decade.

Continued on page 2

## Canada/China MOU signed



*The Canada/China Memorandum of Understanding on Cooperative Programs was signed on June 9 in Geneva by Mr. Zou Jingmeng, Administrator of the State Meteorological Administration and Mr. H.L. Ferguson, Assistant Deputy Minister, Atmospheric Environment Service. The MOU was signed in the presence of the Ambassadors of both countries accredited to the office of the United Nations in Geneva. The Memorandum of Understanding provides for an exchange of information, publications, documents, instruments and experts on various topics related to meteorology and hydrology. The Memorandum of understanding will be managed through a joint working group with Mr. Zou and Mr. Ferguson serving as co-chairmen. The first meeting of the joint working group is planned for 1987 in Beijing, China and the second meeting in Canada in 1988. Former ADMA Jim Bruce was involved in the preliminary discussions.*

*From left to right: Mr. J.P. Bruce, Mrs. Chen Guofan, Mr. Zou Jingmeng, Mr. H.L. Ferguson, Mr. J.G. Côté.*

### Dr. André Robert Continued

Dr. Robert joined the Canadian Meteorological Service in 1953 and at the same time pursued studies which culminated in his obtaining a Ph.D. in Meteorology from McGill University in 1965.

After starting work in the Dynamic Prediction Research Division in 1959, Dr. Robert rose to become director of the CMC in 1974, a post that he held until 1980. Between 1970 and 1971, he held the post of Professor of Meteorology at McGill. Among many international assignments, Dr. Robert served as chairman of the International Working Group on Numerical Experimentation from 1971 to 1973.

He was president of CMOS in 1972. In 1967 he received the President's Prize from CMOS and again in 1971. He received the Second Half Century Award of the American Meteorological Society in 1980, the first non-American to do so.

August 1, 1969: Montreal hailstones were 7 km in diameter.

## Dennis Stossel serves as consultant for Expo '86

Dennis Stossel AES Arctic Coordinator, based in Winnipeg, participated as an Arctic resource consultant for the Northwest Territories (N.W.T.) Pavilion at Vancouver's Expo '86 in April. Among other things Dennis reports that the following objectives were met:

- two inflated radiosonde balloons were provided and tethered to one of two exterior tents.
- large interlocking AES display panels were used as a backdrop in one of the tents with four radio-sonde instruments hung from tent poles.
- a satellite mosaic black and white photograph of Canada (approximately 2½ metres by 1½) was donated to the Pavilion and native communities were indicated on the map.
- with the help of Gary Schram (AWC) 250 polar stereographic projection plotting maps were supplied with the names of 13 upper air stations in the N.W.T. stamped on, and presented to the Northern Resource Library for distribution to school groups. (Various N.W.T. community schools would be sending selected students to Expo '86 each month.
- a collection of Dennis's Arctic photos over the past 25 years was assembled into five albums and presented to the Northern Resource Library (NRL) along with annotated captions. These included shots of aerology stations north of 60°, a sampling of polar expeditions through Eureka since 1967, photos of Clyde River showing Inuit hunting seal, bear and caribou and pictures of school activities dating back to the sixties.
- video cassettes were supplied on "Life at Mould Bay" and on "Stop the World".
- telephone contacts were made with the successful Steger International North Pole Expedition (SINPE) to arrange visits to the N.W.T. Pavilion by Canadian expedition members, two dogs and a sledge.

In conclusion Dennis writes: "The seeds may have been planted for a future generation of indigenous people to become meteorological technicians and professionals in the North."

August 7, 1979: A Woodstock tornado damaged 600 buildings, killed 3 persons and scores of livestock and injured 150 people. Damage exceeded \$100 M excluding crop losses.

## AES hosts Federal United Way in Greater Toronto

Each year on a rotational basis the federal departments in the Toronto area have the responsibility of hosting the Federal Services Division United Way Campaign. For 1986 Environment Canada will be the host department and AES will undertake this task for the department.

Howard Ferguson, assistant deputy minister has appointed Dr. Don McKay, Canadian Climate Centre as chairman with the responsibility for all aspects of organizing and running the campaign. Dr. McKay will be responsible for forty-eight federal departments or agencies totalling 27,000 people in Toronto and the surrounding areas that will participate in the 1986 campaign.

For the past three years and again this year the Federal Services United Way Campaign in Toronto is being run jointly between management and union. To assist Dr. McKay in running the campaign two co-ordinators have been assigned to his office, Sonia Ventresca, Weather Services Directorate, as the management co-ordinator and Richard Poersch, Atmospheric Research Directorate, as the PSAC union co-ordinator. Lloyd Barnaby is co-ordinator for the AES campaign.

August 13, 1806: "The summer's extraordinary rain, having overflowed the low country has caused the buffalo to resort to the highland southward. Famine general amongst the Indians". Henry Journal

August 5, 1859: A tornado described as the most terrific ever experienced on Prince Edward Island, uprooted trees and swamped boats; several persons drowned.

## ZEPHYR

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Environment Canada    Environnement Canada

Atmospheric Environment Service    Service de l'environnement atmosphérique

## 21.5% failed hearing test



**Organized by the Nurse, Maudrie Crichlow, the Safety and Health Committee sponsored a successful hearing and glaucoma clinic at the AES Downsview Headquarters. Like previous programs the object is to improve the health status of AES staff by early detection. Employees with the slightest deviation from normal were advised to have further investigation which tends to minimize, correct or treat the problem.**

**The Canadian Hearing Society said in a letter, "The staff of the Society's Mobile Audiometric Screening Program would like to thank you for your assistance in organizing our screening at Environment Canada on June 10. With your adept organization of the event, we were able to see a large number of people, making it a very successful visit. The total number of people seen were 191 of which 21.5% failed".**

**Added Ms. Crichlow, I hope the 21.5% take follow up procedures. Ms. Crichlow is seen in front of the van (right) accompanied by a large group of waiting employees.**

## New GOES satellite

Five spacecraft will be launched in the series of next-generation GOES satellites. Ford Aerospace has signed a contract to build three of them. These new satellites will supplement the International Search and Rescue program carried out by the U.S., Canada, France and the Soviet Union. GOES will provide early detection of distress signals from aircraft and ships and relay them to ground stations. The three-axis stabilized design of the new spacecraft will allow sensors to stare at the Earth continuously — a significant improvement in weather satellite technology. The satellites will provide full Earth disc measurements every half hour in five different spectral bands with resolution of one kilometre in the visible band. They are scheduled to be launched in 1989 and to have a design life of five years. They were designed to be launched by the Space Shuttle but following the Shuttle accident will probably be launched by Titan II rockets.

## Herb Wahl, Yukon booster, retires

A link with the first post-war University of Toronto Masters of Arts course in Meteorology in 1948 has been weakened with the retirement last winter of Herb Wahl, OIC Yukon Weather Office after 36 years in Whitehorse.

Herb studied at the University of Toronto with other bright young meteorologists who were to make their mark in regional offices and at Downsview before retiring — Bob Stark, Hugh Fraser, Roy Lee, Morley Thomas, now AES historian, and the sole "survivor" Bill Clink, chief, Technology Support Division, Data Acquisition branch, Central Services Directorate, Downsview. Before joining the meteorological service Herb graduated in physics from the University of Alberta. A legend in his time, Herb was the Whitehorse weather office. He moved there permanently in 1950 and became the biggest Yukon booster the Territory has even seen.

He and his wife Dorreene, who earlier taught school in Whitehorse, were deeply involved in the social and community life of the town — curling, church, square dancing and choral singing, and they have taken their share of Yukon big game over the years. Herb and Dorreene plan to stay in Whitehorse for their retirement.

Over the years friends would periodically suggest to the Wahls that their future down south might be "rosier" as vacancies arose in research, administration or forecasting. But the Wahls knew what they wanted and Whitehorse was it.

A brief stay in the South in 1972 convinced them that a posting there would be "unfriendly." Instead, the Wahls made an enormous contribution to Whitehorse life and to the image of AES in the Yukon.

## Problem unto opportunity

### Manitoba station helps native people

A true test of an organization's abilities comes with the challenge of turning a problem into an opportunity. If anything the current aura of restraint coupled with the need to implement highly desirable affirmative action programs certainly presents a formidable challenge to all departments. This type of a challenge was recently met, head-on, in Central Region.

In 1970 a new semi-isolated weather station was opened in northeastern Manitoba at Island Lake. The physical establishment consisted of two staff dwellings, operations building, garage and storage buildings. Two staff assigned to the station, along with the MARS II, maintained a round the clock vigil on weather conditions.

Unfortunately costs associated with operating stations like Island Lake have reached a level which have placed unproportionate demands on AES's precious and dwindling resources. Yet the need for timely and accurate weather information from the community was, if anything, becoming more important. Under these circumstances other alternatives of conducting an observing program had to be found.

Through negotiations with the provincial government it was determined that there were benefits to both levels of government through the combination of our resources and efforts. The Manitoba Highways Department, while operating the Island Lake Airport, also provides a UNICOM service to support burgeoning aviation traffic in the community. Those employees who operate the UNICOM service were found to be ideal candidates for weather observing roles.

The final result was the termination of the AES Weather Station, WGB, on April 1st and the inauguration of an AES supported

Manitoba Airports Weather Observing Station, YIV, 2 kilometres away. The new station will employ six AES-trained and certified provincial airport staff under a Manitoba Government administered contract. They will conduct an increased manned program of 24 hourlies and 4 synoptics, as well as PIBALS and other supplementary observations. Of significance to AES is an increased observing program with substantial overall cost reductions.

Another important benefit of the program change is the employment of an observing staff who are all local indigenous residents of the community. Their participation in this observing program represents another major milestone in AES's Affirmative Action Program through the provision of employment opportunities for native peoples, particularly in northern or remote communities.

**Brian Kahler, AES, Central Region Superintendent Station Operations**



**Front: Brian Kahler CAEOO, Sid Heaney CAEOM, Len Chornoby APM; rear: Larry Monias, Mathew Harper, Eric Wood, Sylvia McPherson, Robert Flett.**

# Strength of staff makes ADMA optimistic about AES



**Howard Ferguson**

After being appointed assistant deputy minister, responsible for the Atmospheric Environment Service at a crucial moment in its history and future development, Howard Ferguson replied to these questions put to him by Zephyr.

**Zephyr:** What important changes do you see for AES now that you are the assistant deputy minister?

**Mr. Ferguson:** The major change facing us is budget reduction, resulting from government efforts to reduce the deficit. For the first time in 7 years, AES's spending power is decreasing in this fiscal year. The service will also experience a reduction in PY's, since all federal departments are expected to contribute to the reduction of 15,000 in the federal public service by 1991 announced by the President of the Treasury Board. Of course these restraint measures will affect nearly all federal departments and are not related to changes in senior managers. Budget reductions may continue for several years. We are all faced with a renewed emphasis on economy, efficiency and productivity.

**Zephyr:** Which will be more noticeable — changes in organization or alterations in policy?

**Mr. Ferguson:** I'm not at the moment contemplating large organizational changes. We all recognize that there have been significant changes in overall government policy over the past two years. These include ways in which we interact with the private sector, the provinces and other countries. Perhaps the most significant impact on AES, apart from budget changes, has been the need to examine and define our Level of Service. The AES has struggled periodically for many years to define its "core services". The Auditor

General and several Ministerial Task Forces indicated that the previous results were imprecise and inadequate. In April of this year, after further effort, we were successful in obtaining the Minister's approval for an AES Level of Service Policy. In turn this will allow us to specify our policy on cost recovery and will serve as the basis for our increased use of federal/provincial agreements. It should enable us to contribute more effectively to government policy on development of the Canadian private sector. We may also decide to move ahead with a proposal for a national Weather Service Act.

**Zephyr:** Do you remain optimistic despite proposed cuts in services and reduction in employment?

**Mr. Ferguson:** Very much so. By far the greatest reason for optimism is the strength of AES staff. We have an excellent record of productivity improvement. Although our budget in comparison to the size of the area we serve is one of the smallest among the world's national weather services, we are still recognized as being one of the best. Our contributions internationally to research on weather forecasting, and on acid rain and climate change and their impacts, are well known. We have provided leadership in promoting international agreements and other actions to counteract threats to the global environment. Our most recent initiative resulted in Canada being the first nation to ratify the Vienna Convention on the protection of the stratospheric ozone layer. The Service came through a period of significant PY and dollar reductions in the late seventies with flying colours. I am confident that we will respond equally well to the challenges of the late eighties. I believe it should be possible to maintain our most vital services to Canadians at a high quality level. I'm also hopeful that most of our PY reductions can be absorbed through attrition.

**Zephyr:** As a scientist do you feel that AES still has a major role to play in scientific research especially in the atmosphere, the stratosphere and outer space?

**Mr. Ferguson:** As well as providing essential services to Canadians, AES acts as a national centre for atmospheric research and development. We should continue in a leadership role while promoting, to the extent

we can, increased involvement of universities and the private sector. Clearly, some of our most exciting and productive research involves atmospheric chemistry to an increasing degree. Our continued involvement since the mid seventies in acid rain research and stratospheric ozone research, for example, in spite of perennial budget problems, has paid handsome dividends. Our expertise has allowed us to deal at a peer level with other countries in negotiating remedial measures. Public and political support for the AES and its programs is derived from its environmental quality expertise as well as the excellence of its weather forecasts and warnings. I said "environmental quality" expertise advisedly because increasingly there is an emphasis on interdisciplinary research, on a "total ecosystem" (including man) approach to environmental impact studies and remedial measures. There is a continuing need for better communications between researchers and decision makers. The former need to formulate their results in ways which are most understandable and directly useful to decision makers. The latter need to specify their needs, ask the right questions, and understand the limitations of the research results.

**Zephyr:** Do you feel the current Levels of Service represents the right balance between core services, revenue producing activities and farming out to the private sector?

**Mr. Ferguson:** Not yet. Further adjustments are needed to implement our level of service and cost recovery policies. I don't see revenue generation as a big part of our business. "Farming out to the private sector" is not a very accurate description of government policy. What AES is expected to do is to identify those kinds of activities and services which we are involved in now but which should be transferred to the private sector. We should then develop and implement a plan for transferring these activities to industry, universities or other levels of government. This will require consultation, cooperation and probably several multi-year joint ventures with the private sector. The number of activities to be transferred is likely to be quite small. As far as I can see, this poses no threat of sudden, dramatic, or extensive cutbacks in our programs. And, in fact, if this has the desired effect of contributing to economic

recovery and of building up the total meteorological activity in the country, it will open up new and diversified job opportunities.

**Zephyr:** Do you foresee major improvements in the weather service despite current budget cuts?

**Mr. Ferguson:** In some aspects, improvements are possible despite budget reduction, for example, there is definite improvement in Day 1 forecasting. The lessons of the Canadian Atlantic Storms Program (CASP) are valuable ones; there will be greater concentration on smaller weather offices where trained meteorologists can prepare highly accurate short term weather forecasts.

There will be improvements in the quality of the final product received by the user and its dissemination will be a shared responsibility with the media.

In climate, increasing skills and resources will be directed to the production and distribution of monthly and seasonal temperature and precipitation forecasts. In Ice Branch there will be some devolution to the private sector; but we will be maintaining quality at lower cost.

And we will continue improving our productivity. We can be proud that we've met the challenge of an increase from 7 to 20 million public requests to the weather service per year over the last decade, all this with fewer PYs and little increase in spending power. Our efforts to do more with less will have to continue.

**Zephyr:** Will you continue to emphasize acid rain, or will you stress atmospheric pollution more generally?

**Mr. Ferguson:** I'd like to see acid rain regarded as one manifestation of changes in the chemistry of the atmosphere which will increasingly affect us all. This does not mean that acidification of the environment should have a lower priority, only that it should be seen as one major symptom of a larger problem.

Some processes giving rise to acid rain also contribute to the depletion of stratospheric ozone and to climate change. Intelligent solutions will be found only if these problems are examined in a comprehensive manner. For example, we should not choose a "solution" for one problem that simply exacerbates another. Neither should we "solve" local or regional water quality problems by simply diverting the same burden of waste into the atmosphere, or vice versa. We can't view air quality in isolation. Rather it must be seen as a component of environmental quality.

**Zephyr:** How do you relate to AES employees? Do you feel that your having served for some considerable time with AES gives you a closer, more personal link to the staff?

**Mr. Ferguson:** I have many friends, acquaintances and colleagues at AES. I have always felt that my diversified job experience has helped me considerably, especially on the human relations level. Within AES, I've walked many miles, in many different shoes.

**Zephyr:** Will Canada continue to play a major role in WMO? Do we have the resources to fund training and expansion of the weather services to developing countries?

**Mr. Ferguson:** Yes, but the United Nations organization is also feeling the financial pinch. This is logical when contributing countries are undergoing restraints.

However, AES has an excellent record of helping out; a fine reputation internationally. Actually we all profit from belonging to international associations. It makes sense to try to contribute to the social and economic welfare of developing countries. What work could be more humanitarian than helping solve the dreadful climate problems of the African Sahel? It serves our purpose too if we assist them in becoming less vulnerable and less dependent on developed nations.

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## Eye on sky met tech's job

It's 3:30 a.m. and Carol Dale has started her day.

Like clockwork, the 25-year-old former Mission resident will stand outdoors and examine the sky minutes before every hour as part of her job.

Dale is a meteorological technician — or as they are known in the weather forecasting business a "met tech."

No matter what the conditions are outside — sleet, snow, hail, or rain — Dale and the hundreds of other met techs across the country have to make it through the weather so that others can do the same, safely.

Lives depend on the accuracy of their work. Aircraft pilots and ship captains share their travels around a weather forecast.

Employed by the federal government department Environment Canada, met techs man weather stations throughout the country collecting information so that regional offices can predict the weather accurately.

Information is gathered on an hourly basis, or whenever a sudden change in the weather makes a new synopsis necessary.

With various instruments installed inside and outside the weather station, a met tech takes readings for wind speed and direction, air pressure, temperature and precipitation. Codes are used to describe every weather occurrence.

The data are then fed into a computer which relays the information to Vancouver. The met tech spends the rest of each hour of a 9 1/2-hour shift filling reports, answering weather-related inquiries from the public, and in Hope providing weather broadcasts for two radio stations.

There are three met tech's in Hope to deal with the public's questions. The station moved from downtown to Hope airport in 1973 to meet the needs of air traffic passing over the canyon, said station manager Peter Willms.



**Carol Dale, is seen carrying out hourly observations at the Hope, B.C. weather office.**

Dale, Willms, and weather station veteran Keith Collins work a six-day schedule of three morning shifts, three afternoon shifts, before taking three days off.

Women met techs are as rare as snow in April. During the intensive five-month training program in Ontario, Dale was told only two per cent of met techs were women.

"It's a super job for women. It's not really that physically demanding and it's interesting," she said.

Dale is enthusiastic about her job despite the sacrifices it requires on the family and social life. Since being hired more than a year ago, Dale has been posted in Lytton and Cape St. James on Queen Charlotte Islands.

She returns to Cape St. James in July and will continue "filling in" at various stations for five years until she has earned the seniority to receive full-time posting.

Local forecasts are right a good part of the time, but when they're not Dale says she "feels very guilty."

"I take it very personally when I'm wrong," she said, "I think about the weather 24 hours a day."

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From the Hope Standard, Hope, B.C.

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**August 19, 1968:** A severe hailstorm left ice up to 17.5 cm deep on the streets of Lambeth Ont.; losses to agriculture and of property were extensive.

**August 21, 1816:** During the "Year Without A Summer" a heavy snowfall on this date covered fields in Eastern Canada. The worst frost ever also occurred in August.

# EMPLOYEE EQUIPMENT



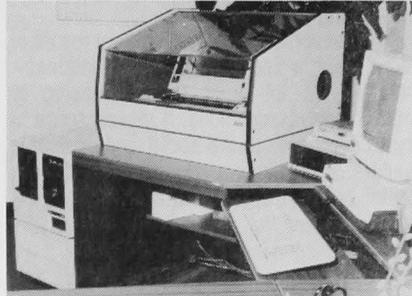
As key items of office equipment, word processors are by now almost old hat. Stand-alone units, some with communications ability can be found in most offices in and out of government including a considerable number within AES.

For readers of this series it is the more complex, state of the art systems that hold the most interest. A good example is the AES 7300 clustered system, that enables several offices in the AES Headquarters building to share one Central Processing Unit (CPU).

The supervisory terminal is located within the Program Development and Evaluation Branch (APEC) and there are direct links to five other terminals. In Finance Division, Assistant Deputy Minister's office, Communications Directorate, the office of the Advisor on Inter-governmental Affairs and finally a second terminal in the APEC office. The cluster could be extended to accommodate a total of 8 units.

The supervisory or main terminal consists of the CPU or nerve centre, a keyboard, a terminal, a printer, a modem, and automatic calling unit (ACU) for outside communications links. Although interaction between these offices is quite common, this is not the real reason they are linked up in a cluster. It is quite simply a cost-cutting measure. The system enables several busy offices to share word processing equipment in an economical and efficient way. For example, unlike most word processors, the AES 7300 uses relatively few discs.

The person who sits at the heart of this efficient modern system is **Julie Young**, an experienced office composing equipment operator who has been on permanent AES staff for about a year and who worked here on



a contract basis for about three years before that.

Julie says that sitting at the supervisory terminal does not make her a supervisor. "Mind you", she adds, "I do have more control over the system than anyone else. The network operates on a priority basis. If I believe that one particular outlet has precedence for a particular job, I can reshuffle other users' priorities. Nobody else can do this. I can also stop other printers and mine is the only terminal that has this capability."

Despite Julie's command position, she stresses that the AES 7300 system is very much a shared one, allowing each unit to do its own independent work. Julie says she enjoys working on the AES 7300 and claims it has many features that put it right in the forefront of word processing technology. The major disadvantage of the current system is that it has to be shut down for 30-minute bi-weekly back-ups (this stores the system's texts safely on tape), and for retrieving "lost" information from the memory. Some delays are inevitable.

Besides keeping an eye on the whole system, Julie also participates fully in the APEC workload, sharing it with Jeanette Carter on the other terminal. She says that the AES 7300 is quite suitable for APEC work. For example Treasury Board submissions, and a number of lengthy publications including the Program Digest, Part III of Main Estimates and the Multi-Year Operational Plan are prepared. The AES 7300 also has a communications mode which handles APEC's frequent communications needs with Ottawa (or the ADM's for that matter). There is a dictionary feature, that highlights misspelled words. Finally, if necessary, there is a science package.

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August 26, 1891: Weather forecasts were first published for Manitoba and the Northwest Territories (present day Saskatchewan and Alberta).

## Vanpooling for AES?

The AES Client Committee for Parking is investigating the possibility of organizing a vanpooling program for AES personnel. Vanpooling is somewhat similar to carpooling where three or four employees drive to work in one car instead of three or four cars. In vanpooling, a van is the pool and can pool ten or more passengers. In fact, a minimum of ten passengers is projected as a requirement for vanpooling viability.

Like all human enterprise, vanpooling has its plus and minus factors. The problem is to arrive at a clear and accurate assessment in favour of the profitability of vanpooling. This requires some rather nice cost accounting. Factors to be weighed are variable and will differ from person to person. For example, vanpooling can eliminate the need and expense of keeping a second car. The van takes the place of the second car. This would amount to a considerable reduction in domestic expenses. But not everybody has a second car. On the other hand, some other person may see vanpooling as an opportunity to be rid of a car entirely. Another person may have a third reason for joining a vanpool.

But in general, the Client Committee has good grounds for assuming that vanpooling can be a practical operation in AES because vanpooling has succeeded in such companies as Defasco, Ford Canada, Northern Telecom and General Electric, whether it can succeed at AES is what now must be found out.

At present the Client Committee is sticking a wet finger in the air to see if the winds of interest among AES personnel are blowing hard enough to encourage the launching of a feasibility study a questionnaire and a test project.

The questionnaire summarizes the hassle that will be involved in obtaining and operating a van very bluntly and breaks them down into ten points — such as "6. Recruit, train and compensate back-up drivers to ensure daily operation of the van at all times". But with ten or more co-operating passengers, there is plenty of scope to meet every foreseeable emergency. The questionnaire discusses van fares and gives a comparative estimate of savings. It also tots up the costs of operating a car and a second car too — the cost of gas, oil, maintenance, tire replacement, the initial cost of buying the car, cost of insurance, etc. — all of which quickly mounts up to a scary figure. Vanpooling may indeed be an attractive alternative to driving your car to work.

The questionnaire includes an "I am interested in vanpooling" memo that can be filled out, detached, and sent to Michael Lazare CCRN, AES Downsview.

## Busy day at the Forces forecast centre (part two)

CFB Moose Jaw, with over 100 jet trainers on site, is Air Command's primary flight training facility. Here, new pilots entering the system, after a basic course given at CFB Portage La Prairie, embark on a 10-month course to teach them the skills necessary to fly high performance jet aircraft. Because several courses are ongoing at any one time, with pilots at various levels of ability, weather conditions impact heavily on their program. Certain ceilings and visibilities, for example, may keep pilots attempting a solo flight grounded, while other students with instructor assistance, may still be able to fly. These factors must always be kept in mind whenever forecasts are written for this area.

2:00 pm — Weather radar indicates the first echoes of convective cloud forming over the foothills west of Edmonton. Satellite photos confirm the radar's accuracy and after monitoring the situation and plotting the system's movement a base weather warning is issued. The briefer contacts all relevant personnel concerning the warning and continually updates information during the event to those parties most concerned. During the period of the warning all refueling activities on the base cease.

5:00 pm — As the thunderstorm activity ends over Edmonton, the action shifts to Cold Lake. After consultation with the Cold Lake briefer, another weather warning is issued. A

direct line to the office in Cold Lake ensures rapid dissemination of the warning. The briefer is also quick to call with updates as the weather situation unfolds.

CFB Cold Lake is home of 419 and 410 training squadrons which employ CF-5's, and the latest, state of the art CF-18 fighter aircraft. Here pilots who pass their initial training at Moose Jaw, are brought up to performance standards prior to deployment with the First Canadian Air Group in Europe. Training occurs over a large area of northeastern Alberta and western Saskatchewan. Because of the base's somewhat isolated location, combined with the limited fuel capacity of these jets, weather again plays a critical role in all squadron activities. Timely and accurate warnings and amendments are therefore essential, not only at the base itself, but at the few alternate locations available to the type of aircraft.

6:00 pm — The briefer at Cold Lake phones to say all aircraft are down and secure prior to the onset of convective activity. At the same time in Edmonton, warnings are being transmitted by the NORAD forecaster to those radar sites which may be affected by the late afternoon thunderstorms. Many of these later warnings will carry into the early evening hours at sites across Saskatchewan.

6:45 pm — Shift change briefing for the midnight forecasters. Now the day's activities



Left to right at Alberta Forces Weather Centre: Meteorologists Gary Burke (The author of this two-part article); and George Ingles and M. Cpl. Charlie Kennedy (briefer in the Forecast Centre).

are reviewed and the sites currently with warnings are left with the new shift. It will be their responsibility to watch developments and update or end the warnings as required. And so, after 12 relatively busy hours, the two forecasters finally are able to go home for a few hours relaxation. The time to rest is short, however, for at 6:45 am. the next day, they will both be back at their desks, ready for another day's work for the Canadian Forces Weather Service.

Gary Burke, CFFC meteorologist

## Themes new and old support WMO Day

This year — 1986 — is the 25th anniversary of World Meteorological Day, celebrated each March 23 by the World Meteorological Organization (WMO). The first WMO Day was in 1961. Each annual World Day has had its own theme. For example, in 1982, the theme was "Observing Weather for Space".

The very first World Meteorological Day in 1961 had no theme, rather, its theme was **general** interpretation of the weather. But the next year — 1962 — WMO Day got down to brass tacks. Its theme was "Contribution of Meteorology to Agriculture and Food Production". It was apt because weatheradio was just beginning to make its contribution. Analyzing the statistics, it seems meteorology and agriculture has been the most popular WMO theme over the years. It recurred in 1968, 1976, and 1984. Then in 1986, the theme was "Climate variations, Drought, and Desertification" which directly applies to agriculture and food production. Judging by the frequency of WMO Day themes the United Nations body considers food production its

most important and vital area of contribution. Meteorology and Aviation might have expected to have more than one "Day" devoted to them in two decades — but this theme has come up only once — in 1963.

Strangely, "Meteorology and Human Environment" came up twice — two years in succession in 1971 and 1972. The theme was so rich that two years instead of one were needed to deal with it!

"Weather and Water" occurred twice, in 1967 and 1977. Water, of course, is very important both as a world theme and as a Canadian one. "Weather and Economic Development" came up twice, in 1964 and 1969.

From the above we can see the **major** themes that capture the interest of world meteorology. "Meteorology and Tourism" occurred just once, in 1974 — as did "Telecommunications" in 1975 — and "Research for the Future" in 1978. Then the WMO returned to the familiar Food and Water.



At last, a WMO theme that will interest the press!

World Meteorological Day themes for the next two years are already scheduled. 1987's theme will be "Meteorology: a Model of International Co-operation" — a near repeat of 1973 — then in 1988 the United Nations body will try something quite different, "Meteorology and the Media". Perhaps they are hoping to quell newswriters' apathy towards meteorology by turning the tables and focusing world attention on media coverage of the weather.

## Bill Kiely's guide to the AES Super-Lobby



Two employees relaxing on a sofa contemplating a complex scene — this sets the mood of one of AES's lesser know showpieces, the large, attractive lobby of the Downsview Headquarters Building. The array of instruments, both operational and historic, plus several other display items, form a sort of mini-exhibition, livened up with flags, banners, tapestries, climbing plants and a polished stone floor.

Jim McCulloch, director general, Central Services Directorate whose office adjoins the lobby, says the show was never planned and simply grew up "by accident". Originally there were just a few antique instruments and some dials linked up to the instrument compound outside. He recalls the day when the operational weather radar screen was installed

and he considers the lobby reached permanent exhibition status when display cases went up to house a unique collection of antique weather instruments. Mr. McCulloch adds he especially likes the contrasts: a 130-year anemometer beside the ultra-modern — TABS pilot briefer, for example. Mr. McCulloch foresees the day (budget permitting) when lobby exhibits will be deliberately planned and areas set aside for both temporary and permanent displays.

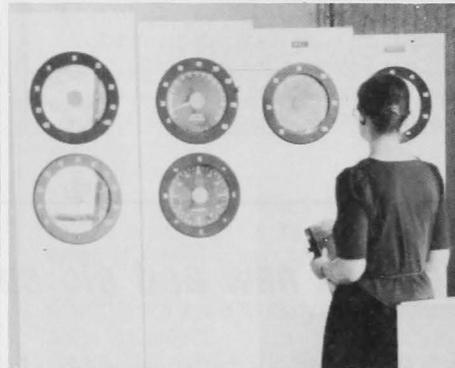
Bill Kiely, in charge of the AES audio-visual section, considers the lobby a unique piece of AES "scenery" because it is evolving at an incredible rate. As these photos show, Bill sees the area as both a people place and as a record of weather technology spanning nearly two centuries.



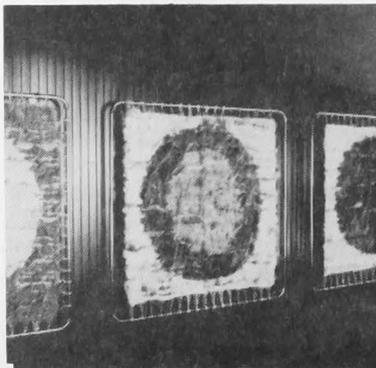
Begin the tour by joining Mary Rossetti-Longarini at the antique instrument showcase, the splendid collection that forms the piece de resistance of the whole lobby.



You can obtain an immediate overview of the weather by studying the maps and charts laid out on a table near the parameter dials. Nancy Hamer points out an item in the general synopsis to Lorraine Kiely.



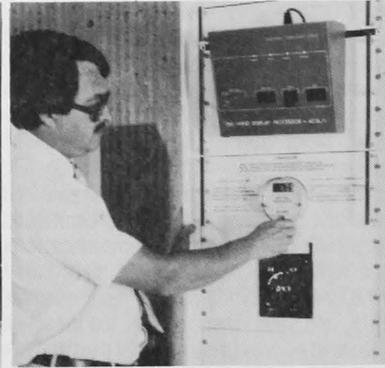
Next obtain a run-down of all weather parameters including temperature and relative humidity, wind speed and wind direction, pressure and monthly precipitation. Karin Schasmin studies the pressure dial.



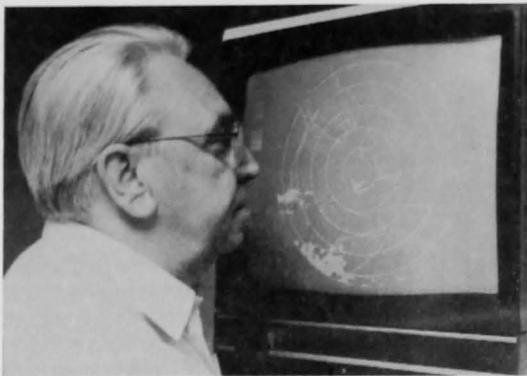
As a change from meteorology you can admire the textured tapestries adorning the area are the Auditorium — sewn by the wife of sculptor Ron Baird, who forged the huge weather sculpture on the front lawn.



These old-time mercury barometers seem to have taken over the lobby's rest area for a conference of their own.



If you want maximum and minimum temperature information for the past nine days you can emulate Brian Taylor and actuate a switch. Other parts of the module give accurate wind information.



*Bill Johnson is seen here obtaining the local severe weather picture from the lobby's weather radar screen, directly linked to the King City radar station.*



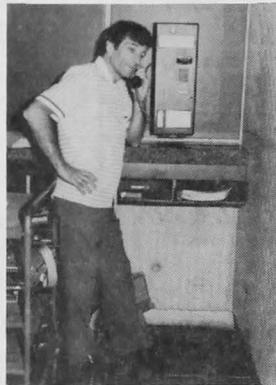
*AES Ice Reconnaissance Services are not forgotten. Enclosed in the plastic dome is a model of the sophisticated new DASH-7 now being used by our ice observers.*



*Commissionaire Gasper Belen's desk is the hub of the lobby. If you want information on any aspect of the building he is more than ready to respond. Even while on the phone he has to keep an eye on the monitor that does surveillance on 10 areas of the building.*



*The lobby has other practical aspects: you can avail yourself of this oxygen unit and/or stretcher if the grand tour proves too much for you.*



*The lobby also contains the building's only pay phone. That's why Gilles Tardif feels comfortable making a personal call — no one can listen in on another extension.*



*The lobby also salutes leading weather people of the past. High up beneath the banners is part of the "Downsview Wall" a portrait gallery of former meteorological directors. Flanking the commissioner's desk are historic building pictures.*



*Lastly, Bill Kiely is seen activating one of the lobby's more recent installations — the TABS (Telidon Aviation Briefing Service) a rapid means for pilots to obtain auto-briefings on aviation weather, but an attraction exhibit for all AES employees.*

## THE ENCASTING

### Weather service joined Transport 50 years ago

This is the 50th anniversary of the weather service's migration from the old Department of Marine to the then newly established Department of Transport.

From its foundation in 1871, the Meteorological Service was included in the Department of Marine and Fisheries and remained with Marine when Fisheries became a department of its own in 1930. Then by a federal act on November 2, 1936, two departments, Marine, and Railways and Canals, together with Civil Aviation transferred from the Department of National Defence, were merged into a single new department, the Department of Transport. The

Meteorological Service was included in this merger. In the new Department, meteorology was assigned a place with the Air Services Branch, along with Civil Aviation and Radio.

While with the Department of Marine, the Meteorological Service had suffered some curtailment on account of the Depression. Weather observers at airports in Windsor, London, and Toronto were no longer needed, leaving a weather observer only at Montreal (St-Hubert) airport. However, as aviation flights increases, demand for meteorological services grew too. Plans for a Trans Atlantic Air Mail Service in 1935, with Canada responsible for the western side of the Atlantic,

resulted in the creation of the Air Services Branch within the Department of Transport in 1936. Then in 1937, Trans-Canada Airlines came into existence and in 1938 the Meteorological Division was providing twenty-four hour, seven days a week, weather service from forecast offices at Vancouver, Winnipeg, Toronto Malton and Montreal.

Finally, with the Second World War and the British Commonwealth Air Training Plan, according to AES historian Morley Thomas, "the Service increased by an order of magnitude in order to serve the postwar requirements for weather services and eventually environmental services".

# ZEPHYR BREEZES

## Flapjacks and sausages for "Stampede breakfast"

Bright and early on the morning of July 5 the second day of the 1986 Stampede, the staff of the Calgary Weather Office hosted their second annual "stampede breakfast".

The cloudy skies, intermittent rain, and strong north winds failed to dampen the spirits of over one hundred friends and staff of the Calgary office that attended the event.



**Nelson Medinski in apron with flapjacks assists Keith Rogers on the sausages at "stampede breakfast".**

Cooks (and we use the term loosely) Steve Rothfels (CBC-TV weatherman), John Yarema (Calgary O.I.C.), staff members; Keith Rogers, Jim Edwards, and Nelson Medinski, dished out an authentic meal of "flapjacks" and sausages with plenty of coffee and juice.

With no charge for the meal, those attending were requested to donate foodstuffs to the "Calgary Food Bank". With the money donated in lieu of foodstuffs, an arrangement was made with Calgary co-operatives, to supply food at near cost. They out did themselves. Total donations were in excess of two hundred items ranging from jars of babyfood to a ten pound sack of potatoes.

The Public Service Alliance environment component local 30704 — southern Alberta, and staff member Jim Edwards, donated money.

**August 24, 1984:** Hot dry summer fostered a grasshopper infestation and grass land fires over Southern Saskatchewan and Alberta.

Razoul Jabbar, who has worked in Finance and Administration at AES Downsview Headquarters for the past six months, is a founder member of Fellowship International, an association promoting the rehabilitation and "normalization" of disabled Southeast Asians living in Canada. At present he is involved in two major projects: organizing a dinner on September 19 at Toronto's McCormick Community Centre to be attended by Toronto's mayor Art Eggleton and the Hon. David Crombie to honor Mrs. Beryl Potter, a triple amputee who has devoted enormous energies to "putting teeth" into the federal Employment Equity Bill as far as disabled people are concerned. The other project is coordinating the production and funding of a film about Southeast Asians in Canada who have learned to overcome their disabilities. Mr. Jabbar hails from Bombay, India and is a chartered accountant, a Master of Laws and a literary writer in Hindi and Urdu.

The Employee/Equipment article on page (6) features an interview with Julie Young, who is an operator on the AES 7300 word processor, located at Program Development and Evaluation Branch, Downsview. The final paragraph adds that Julie shares her work with Jeanette Carter on another terminal. Until only a few weeks ago, Ms. Carter was using her first name, Julia, but having two employees with similar names working on adjacent word processors causes endless confusion. The situation got so bad, that Julia, finally threw up her arms and sent a memo around to management and all her associates stating, "due to the rising confusion . . . in the future I will be using my middle name Jeanette". She adds, "As far as our work goes, Julie and I operate practically as one person, but we still need to be addressed separately". Before working for AES, Jeanette (Julia) was a word processing instructor at a school.

Observations of the recent passage of Halley's comet have confirmed astronomer Fred Whipple's 1951 theory that comets are composed primarily of frozen water. Halley's comet, say astronomers, is a dirty snowball! They are now asking, perhaps with some indignation, "Who threw this dirty snowball?"

AES, Quebec Region, has for the past several years been putting out a single page fact sheet called Weather News. The latest issue is dated May 1986 Vol. 3 No. 1. Weather News evidently intends to be both information and educational. The May 1986 issue is devoted to items pertinent to spring and summer weather. There are items about farmers and weather, weather warnings, watches, summer severe weather, and so on, and dates of the latest spring frost for 18 regions in Quebec. A final item compares heating degree-days (HDD), an index of winter heating needs during winters 1985-1986 and 1984-1985 in seven Quebec regions.

**Last year, the Canadian Meteorological Centre's objective for the United Way Campaign was \$3,500.00 and 45% participation. Thanks to the generosity of 69 donors, the sum of \$5,549.50 was collected, a raise of \$2,561.50 over the previous year. The rate of participation was 69% with an average of \$80.43 per donor or \$58.42 per employee.**

**Danielle O'Shaughnessey was the campaign organizer and solicitor at the CMC, Dorval, Quebec. Because she did so well, the Canadian Meteorological Centre was honoured with a silver certificate in recognition of its outstanding contribution to the community through support of United Way.**



**We see Danielle in the picture with Mr. Jean Lessard, president and director general of United Way (Centraide) Montreal holding the certificate.**

**August 11, 1914:** Newfoundland's warmest temperature ever: 41.7° at Northwest River.

A portrait of Professor George Kingston, the first professor of meteorology in the British Empire who was appointed Director of the Meteorological Service of Canada in 1871, hangs on a wall in the Downsview building. It became of interest to Zephyr that 1986 appeared to be the centenary of Professor Carpmael's succession to the directorship, as the brass plate on Kingston's portrait gave his retirement date as 1886. After some shocked confusion, it turned out that the brass plate was wrong! Carpmael succeeded Kingston in 1880, not 1886. 1886 is the date of Kingston's death. The portrait was taken down, a corrected brass plate hurriedly affixed, and hung back up again. The Richter scale reading of this shock was barely **one** though.

What are the odds of an Aerological Technician being struck by a falling radiosonde? Probably far more likely to get struck by lightning! Neil Fraser of the Prince George Weather Station isn't too sure but plans to invest heavily in lotteries for a while.

The balloon and radiosonde were launched by Neil at 4:15 pm May 13, 1986. (Thank goodness it wasn't Friday the 13th!) It ascended to 26,788 metres which took 95 minutes before the balloon burst and the unit plummeted back to earth where it landed 500 metres from the launch site. It was found two days later just off the edge of the main runway. Further investigation showed that it had actually crossed the station five times!



**Wearing special "Arctic Haze Study" T-shirts this group of AES scientists and technicians gathered in the AES Downsview lobby before taking off March 29 for a month-long stay at Alert N.W.T. working on the Arctic Gas and Aerosol Sampling Program (AGASP). They are, left to right; Len Barrie, Bob Mickle, Richard Leatch, Ray Hoff, Jerry den Hartog, Neil Trivett (leader), Mohammed Wasey, Wes Kobelka, Joe Kovalick, John Bellefleur, Frank Froude. Doug Worthy, was also a member of the team but is not in the photo.**

Oceanroutes Inc. of New York and Palo Alto, California, has issued a one-page guide to world-wide weather and sea conditions as they occur throughout the year. It is called a "Meteorological Event by Month Chart". The "colourfully produced" guide indicates periods of "likely occurrence" and "peak occurrence" of eleven different meteorological conditions. Monthly global weather events shown on the chart include monsoons, tropical cyclones, typhoons, hurricanes, icebergs, pack ice, superstructure icing, and so forth. Regions of the world covered by the chart include South China Sea, Bay of Bengal, Arabian Sea, Indian Ocean, eastern and western Australia, north Pacific, north Atlantic, Grand Banks, eastern Canada, Gulf of Bothnia, Kurile Basin, south

coast of Mexico, Mediterranean, and South Africa. A free copy of the guide can be obtained by writing to Oceanroutes Inc., 3260 Hillview Ave., Palo Alto CA, or 17 Battery Place, New York, NY 10004.



**A cross-section of the Ice Branch and of senior AES officials attending the handing-over ceremony for the de Havilland DASH-7. A group of them is seen beside the aircraft here with Environment Minister Tom McMillan (fourth from the left). They are left to right: John Comeau, Emil Stasyshyn, Don Champ (director Ice Branch), Tom McMillan, Bob Zacharuk, Brian Kirkpatrick, Howard Ferguson (ADMA), Bernie Wyer, Jim McCulloch (director general, Central Services Directorate), Tom Kilpatrick, Jim Woods.**

A former AES employee, Derek Faust, has been awarded the Governor-General's medal as York's top science graduate for 1986. Mr. Faust achieved an A-plus standing in the university's mathematics program.

Mr. Faust graduated in 1973 from Saint Francis Xavier University in Antigonish, Nova Scotia in Geology. The following year he pursued graduate studies at the Memorial University of Newfoundland. In 1974 he joined the AES as a meteorological technician and served at five Arctic upper air stations. He also participated in some administrative activities in Winnipeg, and Downsview, in the development of training programs and as an instructor at TCTI in Cornwall.

In 1981 Mr. Faust was accepted on the AES education leave program for studies in Computer Science at York University. In 1983 he resigned from the service to pursue his studies in mathematics.

This fall he plans to enter graduate school at York for studies at the Master's and ultimately perhaps Ph.D. level.

August 29, 1982: Across southern Ontario, the temperature dipped below 2°, the lowest in 66 preceding Augusts.

# CHANGEMENT DE PERSONNEL / STAFF CHANGES

## Nominations/Avancements Appointments/Promotions

B. Kessler (EG-7) Agent, installation et entretien/Installation Main. Officer, WAED, Edmonton, Alb./Alta.

B. Christians (EG-2) Tech. en mét./Met. Tech. SM3/WS3, Coronation, Alb./Alta.

M. Darr (EG-6) Tech. en prés./Pres. Tech. BM4/WO4, Calgary, Alb./Alta.

B. Forsyth (EG-2) Tech. en mét./Met. Tech. SM3/WS3, Cape Parry, T.N.-O./N.W.T.

A. Pankratz (MT) Météorologiste/Meteorologist, ALWC, Edmonton, Alb./Alta.

R. Pilling (EG-2) Tech. en mét./Met. Tech. SM3/WS3, Fort Reliance, T.N.-O./N.W.T.

Y. Gendron (MT-5) Météorologiste/Meteorologist, Edmonton, Alb./Alta.

J. Cummine (MT-3) Niv. perf. met./Met. Dev. Level, ALWC, Edmonton, Alb./Alta.

G. Neault (MT-5) Météorologiste/Meteorologist, PAED, Vancouver, C.-B./B.C.

J. Everson (EG-3) Tech. du contrôle de la qualité climat./Quality Control Climat. Tech. aéroport int. Pearson/Pearson Int'l. Airport, Toronto, Ont.

W.J. Whittaker (EG-6) Tech. en mét./Met. Tech. BM4/WO4, Sault Ste. Marie, Ont.

K. Buerfeind (EG-2) Tech. en mét./Met. Tech. SM3/WS3, Slave Lake, Alb./Alta.

N. Draper (EG-2) Tech. en mét./Met. Tech. SM3/WS3, Slave Lake, Alb./Alta.

G. Pearce (EG-2) Tech. en mét./Met. Tech. SM1/WS1, Sachs Harbour, T.N.-O./N.W.T.

J. Poirier (MT-5) Météorologiste/Meteorologist, BM1/WO1, Whitehorse, Yuk./Y.T.

A. Price (EG-2) Tech. en mét./Met. Tech. SM3/WS3, Cape Parry, T.N.-O./N.W.T.

K. Ryan (EG-2) Tech. en mét./Met. Tech. SM3/WS3, Coronation, Alb./Alta.

A. Godin (CR-4) Commis/Clerk, AAFA, Downsview, Ont.

A. Baron (CR-4) Commis/Clerk, AAFA, Downsview, Ont.

S. Romano (CR-4) Commis/Clerk, AAFA, Downsview, Ont.

E. Dixon (CR-5) Commis/Clerk, AAFA, Downsview, Ont.

M. Gervais (AS-1) Agent d'administration/Admin. Officer, QAEM, St-Laurent, Qc/P.Q.

E.L. Becker (MT-5) Prévisionniste des glaces/Ice Forecaster, ACIF, Ottawa, Ont.

T. Carrieres (MT-5) Prévisionniste des glaces/Ice Forecaster, ACIF, Ottawa, Ont.

D.R. Fequet (EG-5) Tech. des glaces/Ice Tech. ACIF, Ottawa, Ont.

A. Charpentier (EG-7) Chef de service/Supervisor, BM4/WO4, Val-d'Or, Qc/P.Q.

R. Desjardins (EG-6) Tech. en prés./Pres. Tech., BM4/WO4, Val-d'Or, Qc/P.Q.

P. Fichaud (EG-6) Tech. en prés./Pres. Tech. BM4/WO4, Val-d'Or, Qc/P.Q.

P.A. Renaud (EG-6) Chef de service/Supervisor, BM4/WO4, Sherbrooke, Qc/P.Q.

D. Taylor (AS-3) Agent fonctionnel en communications/Staff Officer Communications, DMETOC, Ottawa, Ont.

R.L. Wagner (MT-5) Météorologiste/Meteorologist, CFWS, Cold Lake, Alb./Alta.

R. Touchette (EG-1) Tech. en mét./Met. Tech. BM4/WO4, Windsor, Ont.

M. Baltazas (CS-3) Superviseur de la production, Unité centrale/Supervisor Prod. Unit Central, CMCFI, Dorval, Qc/P.Q.

W. Hodgins (CS-3) Chef d'équipe, CMCOA/Project Leader, CMCOA, Dorval, Qc/P.Q.

R. Stackley (CS-1) Programmeur/Programmer, CMCFI, Dorval, Qc/P.Q.

L. Lane (CS-1) Programmeur/Programmer, CMCFI, Dorval, Qc/P.Q.

J. Garcia (CS-1) Programmeur/Programmer, CMCFI, Dorval, Qc/P.Q.

## Mutations/Transfers

M. Trueman (SM) Chef/Chief, AWPC, Downsview, Ont.

G. LeDrew (EG-2) Tech. en mét./Met. Tech. SM3/WS3, Cape Parry, T.N.-O./N.W.T.

S. Schmidt (EG-2) Tech. en mét./Met. Tech. SM3/WS3, Edson, Alb./Alta.

B. Wiens (MT-3) Météorologiste/Meteorologist, ALWC, Edmonton, Alb./Alta.

C. Olsen (EG-3) Tech. en mét./Met. Tech., PAED, Vancouver, C.-B./B.C.

G. Châtaigneau (GT-4) Coordonateur des publications/Publications Coordinator, AWSC, Downsview, Ont.

J. Sauriol (EG-1) Tech. en mét./Met. Tech. QAEOO, Chibougamau, Qc/P.Q.

P.A. Learmonth (AS-4) Agent administratif en chef/Chief, Administration, OAEA, Toronto, Ont.

J.A. Sale (EG-6) Tech. en mét./Met. Tech., BM4/WO4, Sault Ste. Marie, Ont.

D. Lofstrom (MT-2) Niv. perf. met./Met. Dev. Level, BM4/WO4, Gander, T.-N./Nfld.

A. Valton (MT-2) Niv. perf. met./Met. Dev. Level, MWC, Bedford, N.-É./N.S.

T. Canavan (MT-2) Niv. perf. met./Met. Dev. Level, Halifax, N.-É./N.S.

D. Jones (MT-2) Niv. perf. met./Met. Dev. Level, Halifax, N.-É./N.S.

B. Thomas (MT-2) Niv. perf. met./Met. Dev. Level, Halifax, N.-É./N.S.

K. Little (MT-2) Niv. perf. met./Met. Dev. Level, Comox, C.-B./B.C.

T.B. Shannon (MT-6) Instructeur en météo/Met. Instructor, Winnipeg, Man.

R. Campbell (EG-2) Tech. en mét./Met. Tech., SM3/WS3, Cape St. James, C.-B./B.C.

A. Schmiedel (EG-2) Tech. en mét./Met. Tech., SM3/WS3, Hope, C.-B./B.C.

P. Chan (EG-1) Tech. en mét./Met. Tech., SM3/WS3, Vancouver, C.-B./B.C.

P. Lang (MT-2) Niv. perf. met./Met. Dev. Level, PWC, Vancouver, C.-B./B.C.

B. Bilodeau (MT-2) Niv. perf. met./Met. Dev. Level, PWC, Vancouver, C.-B./B.C.

D. McCollor (MT-2) Niv. perf. met./Met. Dev. Level, PWC, Vancouver, C.-B./B.C.

G. Neault (MT-5) Météorologiste/Meteorologist, PWC, Vancouver, C.-B./B.C.

C. Powell (EG-2) Tech. en mét./Met. Tech., SM3/WS3, Vancouver, C.-B./B.C.

J. Derham-Reid (EG-2) Tech. en mét./Met. Tech., SM3/WS3, Vancouver, C.-B./B.C.

J. How (EG-2) Tech. en mét./Met. Tech., SM3/WS3, Cape St. James, C.-B./B.C.

R. Russell (FI-3) Chef, Services de gestion, financière/Head, Financial Management Services, AWFH, Downsview, Ont.

M. Larocque (EG-3) Tech. en aér./U/A Tech., QAEOU, SM1/WS1, La Grande IV, Qc/P.Q.

A. Lemyre (EG-3) Tech. en aér./U/A Tech., QAEOU, SM2/WS2, Kuujuaq, Qc/P.Q.

G. Sanscartier (EG-7) Chef de service/Supervisor, BM4/WO4, St-Hubert, Qc/P.Q.

G. Fillion (EG-6) Tech. en prés./Pres. Tech., Quebec, Qc/P.Q.

F. Aronson (EG-6) Tech. en prés./Pres. Tech. BM4/WO4, St-Hubert, Qc/P.Q.

M. Gélinas (EG-6) Tech. en prés./Pres. Tech. Montreal, Dorval, Qc/P.Q.

D.E. Steeves (MT-3) Prévisionniste de service/Duty Forecaster, CFWS, Greenwood, N.-É./N.S.

D. Paquette (EG-2) Tech. en mét./Met. Tech., BM4/W04, Sudbury, Ont.

C. Hopkins (CS-1) Programmeur/Programmer, CIDS, Dorval, Qc/P.Q.

S. VanBalén, ACIF, Ottawa, Ont. — ACIR, Downsview, Ont.

S.L. Thompson, ACIF, Ottawa, Ont. — ACIR, Downsview, Ont.

### **Postes temporaires ou intérimaires/ Temporary or Acting Positions**

J.H. Alexander, (SM) Chef/Int./A/Chief, ACEC, Downsview, Ont.

J. Selmes-Brymer (CR-4) Commis/Clerk, ARQD, Downsview, Ont.

R. Serna (CS-1) Programmeur/Computer Programmer, WAED, Edmonton, Alb./Alta.

P. Roske (CS-1) Programmer/Computer Programmer, Whitehorse, Yuk./Y.T.

S. Lee (CS-1) Programmer/Computer Programmer, WAED, Edmonton, Alb./Alta.

A. Myles (CS-1) Programmeur/Computer Programmer, WAED, Edmonton, Alb./Alta.

M. MacGregor (CR-3) Commis/Clerk, ALWC, Edmonton, Alb./Alta.

J. Bird (CR-3) Commis/Clerk, ALWC, Edmonton, Alb./Alta.

A. O'Toole (MT-7) Météorologiste/Meteorologist, Chef/Int. A/Head, ACET, Downsview, Ont.

J.J. Carter (SCY-2) Secrétaire/Secretary, APEC, Downsview, Ont.

A. Solimene (SCY-3) Secrétaire/Secretary, APDG, Ottawa, Ont.

C.P. Lum (CR-2) Commis/Clerk, APEC, Downsview, Ont.

K. Garrison (FI-1) Agent des services financiers/Financial Officer, AAFP, Downsview, Ont.

E. Robilliard (EG-5) Tech. en prés./Pres. Tech., BM4/W04, Vancouver, C.-B./B.C.

K. Perry (EG-5) Tech. en prés./Pres. Tech., BM4/W04, Vancouver, C.-B./B.C.

B. Lohnes (EG-5) Tech. en prés./Pres. Tech., BM4/W04, Vancouver, C.-B./B.C.

B. Robilliard (EG-6) Spécialiste des services météo/Weather Services Specialist, BM4/W04, Vancouver, C.-B./B.C.

P. Rainville (EG-6) Spécialiste des services météo/Weather Services Specialist, BM4/W04, Vancouver, C.-B./B.C.

J. Cissel (EG-6) Spécialiste des services météo/Weather Services Specialist, BM4/W04, Vancouver, C.-B./B.C.

N. Andrews (EG-6) Spécialiste des services météo/Weather Services Specialist, BM4/W04, Penticton, C.-B./B.C.

J. Glover Chef/Int. Services de gestion A/Chief, Management Services, AAG, Downsview, Ont.

E. Sheehy (AS-2) Agent d'administration/Admin. Officer, AWDH, Downsview, Ont.

J. Beudet (CR-4) Commis/Clerk, QAEM, St-Laurent, Qc/P.Q.

S. Leger (EG-5) Tech. des glaces/Ice Tech., ACIF, Ottawa, Ont.

M. Benjamin (MT-2) Météorologiste/Meteorologist, QAEM, St-Laurent, Qc/P.Q.

A. Plante (MT-2) Météorologiste/Meteorologist, QAEM, St-Laurent, Qc/P.Q.

D. Ouellet (MT-2) Météorologiste/Meteorologist, QAEM, St-Laurent, Qc/P.Q.

### **Détachements/Secondment**

R. Gratton, ACPC, Downsview, Ont. — ACPD, Downsview, Ont.

A.N. Auclair, du Service Canadien des forêts/ from Canadian Forestry Service, Ottawa, Ont. au Bureau de liaison pour le TADPA/LRTAP Liaison Office, Downsview, Ont.

### **Départs/Departures**

A. Bunning, SM3/WS3, Fort McMurray, Alb./Alta.

J. Diagle, SM3/WS3, Cape Parry, T.N.-O./N.W.T.

M. Lambert, BM4/W04, Inuvik, T.N.-O./N.W.T.

S. Jenkins, ARQA, Downsview, Ont.

K. McCarthy, Personnel, WAED, Edmonton, Alb./Alta.

A. Wallace, APEC, Downsview, Ont. — Edmonton, Alb./Alta.

J. Carignan, QAEM, CMQ, St-Laurent, Qc/P.Q.

P. Madhavan, ACIF, Ottawa, Ont.

D. Terzian, QAEM, St-Laurent, Qc/P.Q.

J.A. Lalonde, BM4/W04, Toronto, Ont.

### **Décès/Deaths —**

R.N. Fawcett, ACIF, Ottawa, Ont. juin/June, 1986.

### **Congés autorisés/Leave of Absence**

S. Roy, QAEMM, St-Laurent, Qc/P.Q. Congé de maternité/Maternity Leave.

H.W. Teunissen, ARMA, Downsview, Ont. — CSTB, Nantes, France.

### **Retraites/Retirements**

I. Moldouan, CID, Dorval, Qc/P.Q. avr./April 1986.

D. Kuiper, SM3/WS3, Fort Reliance, T.N.-O./N.W.T. mars/March, 1986.

G. Emes, BM4/W04, aéroport int. d'Edmonton/Edmonton Int'l. Airport, Edmonton, Alb./Alta. avr./April, 1986.

P. MacKenzie, PWC, Vancouver, C.-B./B.C., avr./April, 1986.

F.W. Trow, ACSQ, Downsview, Ont., juillet/July, 1986.

A. Missio, ACGH, Downsview, Ont. juin/June, 1986.

N. Penny, Services des données climat./Climate Data Services, Vancouver, C.-B./B.C., mai/May, 1986.

B. Watson, CFWS CFB, Ottawa, Ont. juillet/July, 1986.

M. Mitchell, ACSN, Downsview, Ont. avr./April, 1986.

G. Tremblay, AABD, Downsview, Ont. juillet/July, 1986.