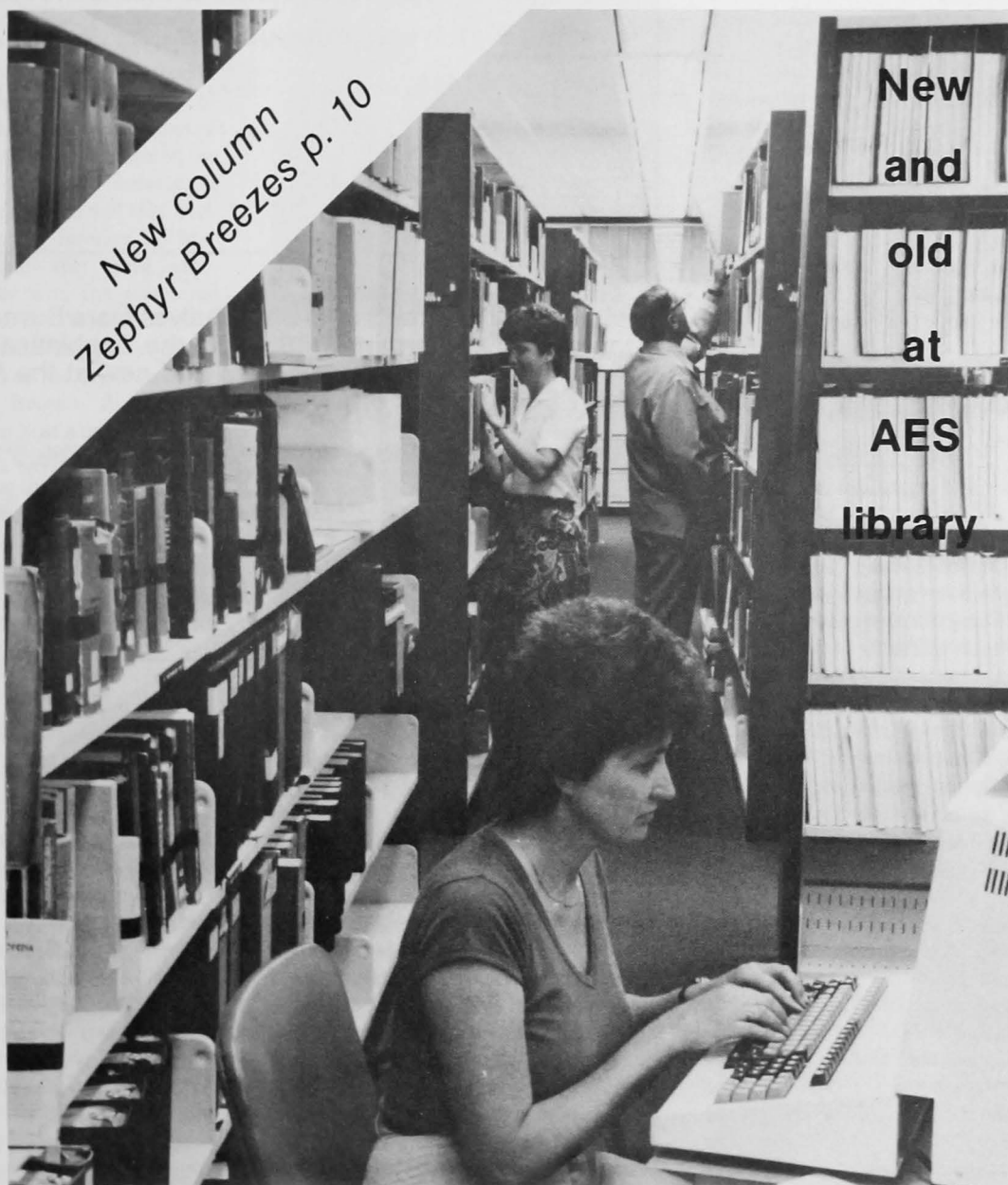


July/August 1983

ZEPHYR

New column
Zephyr Breezes p. 10

New
and
old
at
AES
library



Environment
Canada

Environnement
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Canada

Patterson Medal to Svenn Orvig

Svenn Orvig, a top Canadian expert in the field of arctic meteorology, was awarded this year's Patterson Medal at a special luncheon held during the annual meeting of the Canadian Meteorological and Oceanographic Society in Banff, Alberta in May.



Svenn Orvig (left) receives the Patterson Medal from Dr. Warren Godson, director general Research Directorate at a ceremony in Banff, Alta.

Addressing the gathering, Dr. Warren Godson, director general, Atmospheric Research Directorate, praised Dr. Orvig's outstanding contribution to our knowledge of the climate of polar regions. Dr. Orvig is currently dean of science at McGill University, Montreal and has had a distinguished career as researcher, teacher, author, arctic explorer and university administrator. Dr. Orvig has also had a major influence on climate research in Canada and on the character and scientific standards of professional meteorology in general.

Born and educated in Norway, he served with the Norwegian Air Force during the Second World War. In 1954 he obtained a Ph.D. from McGill. He was named director of the Arctic Institute of North America in 1954; then joined the Department of Meteorology at McGill, eventually becoming chairman of the department.

Dr. Orvig is a Fellow of the Royal Society of Canada, a Fellow of the American Meteorological Society and a past secretary of the International Union of Geodesy and Geophysics Commission on Polar Meteorology.

Zephyr Highlights

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Cover:

Surrounded by traditional bookshelves Nora Burnett operates the ALLCOM terminal linked to the sophisticated DOBIS system in a scene depicting old and new at the AES library. See library stories on page 4.

Zephyr is a periodical publication for employees of the Atmospheric Environment Service, Environment Canada. It is produced for the Atmospheric Environment Service by the Information Directorate of Environment Canada.

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Environment Canada Environnement Canada

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Atmospheric Environment Service Service de l'environnement atmosphérique

Janice Glover named convenor

Janice Glover, acting chief librarian, AES Library, Downsview, has been named convenor of the Council of Federal Libraries continuing education committee, it was announced this summer by the Steering Committee of the Council.

The appointment is a first for a federal librarian from outside the Ottawa-Hull area. Miss Glover has held her present position since the retirement last fall of Mary Skinner as AES chief librarian.

Among other things, the committee aims to assess the development and training needs of public service library personnel; to examine existing programs, recommend changes and propose new programs; to cooperate with other organizations in exchanging informa-

tion and setting up joint programs and to hold continuing education seminars and workshops to benefit government library personnel.

The Council of Federal Libraries was established by the National Librarian in 1976 to advise him on the coordination of federal library services. The council is made up of chief library officers from various federal departments, branches and agencies. Most of its activities are carried out by the various committees, sub-committees and working groups.

See further library stories on pages 4 & 5

Jim Bruce vice president of WMO

Jim Bruce, the assistant deputy minister, AES was elected to the position of third vice-president of the World Meteorological Organization (WMO) during the Ninth Meteorological Congress held in Geneva, Switzerland from 2 to 27 May, 1983. The position is for a four year period.

Other top officials elected during the Congress included Dr. R.L. Kintamar (Philippines) — president, Professor Ju. A. Izrael (USSR) — first vice-president, Mr. Zou Jingmeng (China) — second vice-president, Dr. Patrick Obasi of Nigeria, educated at the University of McGill (Montreal), was appointed as secretary-general of WMO, succeeding Dr. Axel Wiin-Nielsen and will take over that post commencing January 1, 1984. The president and the three vice-presidents together with the secretary-general constitute the WMO Bureau, which functions as the central core of the Executive Council of the organization.

One of Mr. Bruce's first major functions will be to host a meeting of the WMO Bureau in Canada in late January 1984. In addition to the secretary-general and the Weather Service heads from the Philippines, U.S.S.R., China and Canada, the permanent representatives of the U.S.A. and Australia with the WMO are expected to attend the meeting including functions in Ottawa, Toronto and Montreal.

Accompanying Mr. Bruce to the Congress in his role as Canada's principal delegate were Jim McCulloch, director general, Central Services Directorate, Fred Page, head, Atmospheric International Affairs, AES and Norton James, director general, Inland Waters Directorate, ECS.

Highlights of the WMO Congress attended by delegates from 138 countries included the setting of a new four-year budget for the period 1984-1987. In Mr. Bruce's view the hold-the-line budget of \$76.7 million (U.S.) will provide for an adequate program to support the World Weather Watch, including major new initiatives in an "integrated systems study" to lead to an optimum mix of satellite, aircraft and more conventional observation programs. It also provides a significant increase for the World Climate Program with special emphasis on research and on applications of climate information in developing

countries for water, food and energy. The program of Research and Development co-ordination emphasizing stratospheric ozone layer, LRTAP, carbon dioxide and weather forecasting research continues at a slightly higher level. Support for weather modification



Jim Bruce

research, however, was reduced.

In one of the special sessions on meteorology and society, the importance of technological transfer in hydrology and agricultural meteorology to improve life in third world countries was stressed. In a later session on the topic one of the speakers suggested that by the early 21st century wheat production in Canada and the U.S.S.R. will have increased by 8% due to climate change, but will have been reduced in the U.S.A. and the southern hemisphere and these changes could have major impacts on world trade. During the discussion of observing systems, Jim McCulloch gave a presentation on the Automated Shipboard Aerological Program (ASAP). This Program was looked upon as a good low-cost way to obtain upper air data over ocean areas and generated a very favourable response from all delegates.

"Mr. Spontaneity" retires

Known to thousands of people in southern Ontario simply as "The Weatherman" because of his easygoing broadcasts on CBC radio, Gord Gee, chief meteorologist at the Ontario Weather Centre has retired from AES service after 33 years.

Mr. Gee joined the weather service after serving in the Navy (RCNVR) 1941-45. One of the ships he served on, the corvette Buctouche was also served on by his father, possibly the only father-son shipboard combination in the Navy.

He did most of his service at the Toronto/Ontario weather office but also did a tour of duty at Gander (Nfld). By 1957 he was a shift supervisor and in April 1973 he became chief meteorologist, which involved frequently acting as Officer-in-Charge. His duties also involved writing numerous reports and he became the regional expert on aircraft accident reports.

Mr. Gee attended the University of Western Ontario and graduated in 1949 with honors in Math and Physics. This was followed by an M.A. course 1949-50.

Gord Gee is married with four children and two grandchildren. He was born in England but came to Canada when only four months old. He grew up in London, Ont.

His hobbies include jogging and cycling and "championing the underdog".

His wife Birdie is a well-known local artist.

A retirement dinner/dance was held for Gord Gee at the Brampton Golf and Country Club. A presentation was made by Don Smith, director general, field services directorate, Downsview. The occasion was attended by AES well-wishers, CBC personnel, relatives and friends.

Despite his retirement, Gord Gee will continue his witty, unscripted but carefully prepared weather commentaries over CBC radio.



Gord Gee receives a presentation during his retirement party.

These pages make AES library

DOBIS links to 2 million sources

This summer the AES library (Downsview) signed on with DOBIS, the versatile new Canadian Government on-line library management system.

Developed in West Germany as the Dortmund Bibliothekssystem, DOBIS has been modified to suit Canadian needs: for example it has become bilingual and it has been expanded to serve 12 federal libraries so far, using almost 300 terminals.

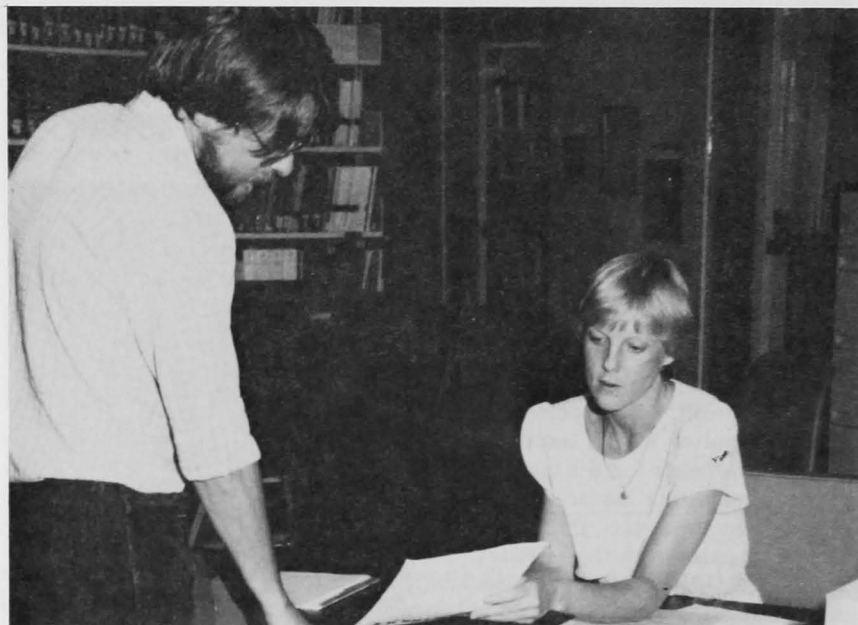
Adoption of DOBIS means user libraries have access to over two million source records from the National Library in Ottawa and the Library of Congress, to many records from participating libraries and to the comprehensive Canadian Union catalogues for locating both books and serials.

The first step in allowing the AES library to join DOBIS occurred in June with the delivery of a new ALLCOM terminal. This replaces the old batch mode ELIAS cataloguing system.

According to Judy Mills, acting cataloguing librarian, the DOBIS system should benefit the AES library in the following ways:

- It will enable library staff to greatly increase cataloguing production.
- Its products include a general monthly microfiche catalogue also useable in the Canadian Meteorological Centre library and in AES regional libraries. In addition, a monthly AES accessions list is provided.
- In the near future ELIAS records, catalogued between 1976 and 1982 will be added to the DOBIS file.
- DOBIS will enable reference staff to perform subject searches in a large and growing data base and find Canadian locations for items requested on inter-library loan.

Commenting on the DOBIS system, Janice Glover, acting chief librarian, says it is exciting, after seven years of batch mode operations to have instant updates to cataloguing records and direct data entries as major functions of the system. She adds, "We are encouraging AES personnel to approach library staff for a demonstration and inquire about future developments in library automation."



Lilita Stripnieks assists inquirer at reference desk.

Enquiries cover currency, disasters

The Reader Services Unit in the Downsview Library responds not only to queries from AES personnel but also to those from other government departments, private companies and individuals. The information needs of enquirers vary, and range from fairly straightforward questions like verifying a symposium, journal title, bibliographic citation, or association address, or coming up with a chemical formula or list of Royal Commissions, to more complex enquiries involving research on the lives of meteorological pioneers or in-depth literature searches.

Literature searches for AES headquarters and regional staff have been conducted on meteorological and non-meteorological topics, and have included ice accretion on marine structure, iceberg deterioration and drift, verification of precipitation forecasts, volcanic effects on climate change and atmospheric pollution, fog dispersal and cloud seeding techniques, federal guidelines for environmental impact assessment, project management, interior climate of domed stadiums, historic currency exchange rates and disaster planning.

Among outside enquiries, engineering firms need observational data for non-Canadian locations, particularly solar radiation and wind data for the Near East, travel agencies require data for Caribbean and Pacific islands, oil companies and boat manufacturers are interested in wave heights on the Pacific and Atlantic coasts, marketing agencies use past and present data to correlate weather sales trends.

In addition, the general public consults the library on personal questions such as the effects of climate on asthma or wind data for Mediterranean and Pacific sailing vacations. Historians seek information on the use of weather discs on railway cars in the 1880's, the climate during the French Revolution or the role of the Meteorological Service in Canada during World War II.

All in all, the unit receives many hundreds of enquiries a year from all parts of Canada and manages to come up with most of the answers.

For assistance on reference services or inter-library loans, please call (416) 667-4891; circulation enquiries: (416) 667-4880.

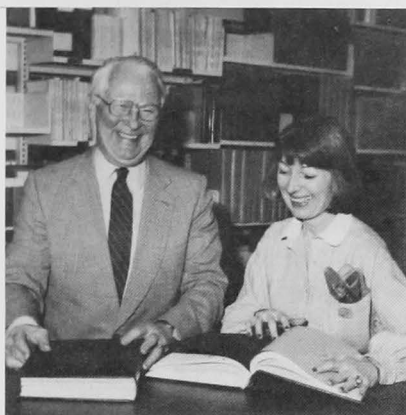
news come to life for you

Regions have same sources

The main AES library is located in the Downsview headquarters building, but all AES employees in the regions have equal access to library services. For those unable to consult a librarian personally, here is a brief summary of library services available to regional staff.

1. All regional directors' offices (except Ontario region) and the Canadian Meteorological Centre receive union catalogue microfiches (author, title, subject lists of all AES/DOE library material since 1976, with AES western region and CMC material included).
2. The loan period for personnel in the regions is four weeks, with extensions allowed if there is no waiting.
3. Reference help is available (between 8:30 a.m. and 4:30 p.m. EST) by calling the reference librarian at 416-667-4500. (For kinds of service available, please see item on reference services).
4. You can make use of on-line information retrieval services with access to over 100 subject data bases. The reference librarian can help you with your search and will send print-outs when the search is completed (usually the same day). Lengthy print-outs will be printed off-line and sent directly to you from the source computer.
5. The monthly acquisitions list receives wide circulation in regional and weather offices. Attached to each list is a loan request form allowing regional staff to request any listed item. If you do not see the list, please contact us.
6. Ways to help you purchase books for your own office collection are the same in the regions as in Downsview.
7. If you need a library title not in our possession, we can get it for you on interlibrary loan.
8. In 1982 we published a library manual of AES library services. Every two years we also publish a list of serials to which we subscribe. For a copy of either, please contact us.

Morley Thomas donates works



Acting chief librarian Janice Glover smiles as Morley Thomas donates a leather bound edition of his written works to the AES library (Downsview).

The latest works to join the AES library's rare book collection are a two volume edition entitled "The Selected

Writings of Morley K. Thomas, 1948-1982."

The red, leather-bound books were presented to the library this spring by Mr. Thomas a couple of months after his retirement from AES as director general of the Canadian Climate Centre. They were the second set of a pair of the collected works given Mr. Thomas by Gord McKay, now acting CCDG during the retirement ceremonies.

Mr. Thomas is keeping the first set as a souvenir of his more than 40 years association with Canada's weather service. (The first item is a series of climate studies on selected meteorological stations done with C. Boughner for the Department of Transport in May 1948 and the final item is an article written by MKT for the McGill Climatological Bulletin in October 1982.)



Library users in all AES branches can do quiet research on their own in the library.

AMC approves collections policy

The AES library now has an official collections policy approved by the Atmospheric Environment Service Management Committee (AMC).

The new written guidelines will help the library maintain a high level of service to AES personnel during a time of financial restraint and the policy underlines the library's responsibility to maintain its national resource collections in meteorology which includes intensive collections of English, French and foreign language monographs and serials, AES and WMO publications, world climate data and archival materials to support historical research on Canada's weather service.

While formulating the collections policy and after thorough consultations with AES directorates and branches, the library was strongly recommended to strengthen its acquisitions in long range transport of airborne pollutants, toxic substances, telecommunications, computer sciences, project management and office automation. In addition, all subjects were given intensity ratings to help library staff make future decisions re acquisitions and weeding. These ratings were also developed to prevent unnecessary overlap with collections of other federal libraries, particularly those in the DOE network where the AES Library plays a key role.

Appraisals now less subjective

by Jim McCulloch

Mr. McCulloch, director general, Central Services Directorate, is AES member on the departmental Advisory Committee on Personnel and participated in discussions leading to adoption of a new policy on employee appraisal. If response to the article is good, Mr. McCulloch offers to contribute more material on the topic.

Personally I feel that the new policy on employee appraisal is a major step forward. It makes the appraisal process a much more effective tool of both management and employees for conveying concerns in both directions, identifying training needs, finding where performance difficulties exist and corrective action is appropriate, clarifying expectations for the next review period and ensuring a more standard overall rating.

Perhaps the most radical change is to recognize that an appraising supervisor has only his/her subjective views of what constitutes "superior" or "outstanding" performance. In the past, this has led to inequities. Now the supervisor must justify such evaluations to a review committee comprising others with similar staff responsibilities, thus ensuring a much more uniform standard of appraisal. Another change is that the employee's statements on training, development and career aspirations are now alongside the appraiser's recommendations, so failure of the supervisor to address these concerns becomes very apparent.

The system has worked well with SM's and EX's over the past two years and, after an initial shakedown, should be effective at all levels. Below, I have attempted to answer some of the questions that have been asked about the new policy.

Questions and Answers

- Q1. *Why are appraising supervisors no longer permitted to assess an individual as superior or outstanding?*
- A. The categories "unsatisfactory", "satisfactory", and "fully satisfactory" are all measurable

against an absolute standard; that standard will be either the statement of goals for the review period that were agreed to during the previous review, or the person's job description. In contrast, "superior" and "outstanding" are relative; one of these terms can be applied to an individual only if his/her performance is better than that of others operating at the same level across the Branch, Directorate or Service. Recognition of this distinction, and reserving the awarding of "superior" and "outstanding" to a review committee chaired by at least the Branch Director, assures a more meaningful and uniform application than has been possible in the past.

- Q2. *Will there be quotas on "superior" and "outstanding" given to review committees?*

A. For persons below the SM level, review committees will not be required to stay within a quota, but the old guideline of no more than 30 percent (of a sufficiently large population) above fully satisfactory still appears to be reasonable. At one end of the scale, if everyone at a particular level were rated "superior", then by definition everybody would be "fully satisfactory". At the other end, we must recognize that some people do perform at a higher level than others.

- Q3. *Is there a minimum number that a supervisor must appraise in order to recommend a "superior" rating?*

A. No. Even with only one person at that level, an appraising supervisor does have some grounds for recommending a higher than "fully satisfactory" rating. For example, "superior" can be recommended on the basis of a person achieving all his/her goals against especially difficult circumstances. Another approach that could be used is a comparison with a previous incumbent of that position.



- Q4. *Is an appraising supervisor restricted as to the number of above "fully satisfactory" ratings that he can recommend?*

A. No. However, appraisors should remember that if their recommendations are deemed to be of poor quality, that will be reflected in their own appraisals in the special section applied to supervisory and managerial staff.

- Q5. *By what mechanism should recommendations for ratings other than "satisfactory" or "fully satisfactory" be made to avoid creating documentation which is illegally kept a secret from an employee?*

A. The recommendation could well be made orally to the Division Chief who may make notes by which he/she can support this recommendation at the meeting of the review committee. Further, the descriptive material in the appraisal should also support the recommendation.

- Q6. *What should be the composition of the review committee?*

A. Normally, for staff below the SM level, the review committee will be made up of the Branch Director and the Division

(contd on p. 7)

Operational meteorology CMOS theme

The problems faced by meteorologists working in operational offices, particularly when preparing weather warnings and forecasts for Day-1, was the primary focus of the 17th Annual Congress of the Canadian Meteorological and Oceanographic Society, held in Banff, May 3 to 5. The main theme of the meeting, which was attended by over 200 delegates, was Day-1 Forecasting; the remote sensing of sea ice was a secondary theme. Over 140 scientific papers were presented during 25 sessions.

The opening session of the Congress dealt with Day-1 forecasting, and Don Smith, AFDG, presented the first paper. He said it was appropriate that he should introduce the topic because improving the timeliness, utility, credibility and



Don Smith, director general, Field Services Directorate, gave the first paper on Day 1 forecasting at the CMOS convention.

accuracy of its weather forecasts and severe weather warning for the next 24 hour period is one of AES's top priorities.

He spoke of the important role that the forecaster will play in helping AES achieve this goal. He remarked that although the AES was on the verge of implementing many technological advances into its forecast system — the vector processor, a new communications system etc. — “these changes are not likely to replace the human-intensive processes now used for the detailed forecasting of weather elements in the first few hours of the forecast period. People will remain the strength of the modern weather service.”

Mr. Smith emphasized that all those involved in AES — research scientists, computer specialists, managers, technicians, specialist staff officers and

(contd on p. 8)

(from p. 6) APPRAISALS

Chiefs. For SM or SME staff, the first review committee will normally be composed of the Director General and the Branch Directors, but the final review will be made at a higher level. The same applies to Directors and Directors General.

Q7. *Will it be possible to carry out the review before discussion of the appraisal with the employee?*

A. Ordinarily, this will not be feasible because the appraisal would have to be done too much ahead of the end of the review period. In exceptional circumstances, for staff below the SM level the normal sequence could be disturbed.

Q8. *Is there a restriction on the use of “fully satisfactory” for an appraisal of a person in his first year in the position?*

A. No. However, supervisors must remember that “fully satisfactory” implies that there is little or no improvement possible by the person being appraised in achievement of the requirements of the job. Clearly, if a person has acted in a position previously, or if the job requirements are similar to those of a previous position, it would be possible to be “fully satisfactory” during the first year of appointment. Appraisors are cautioned

again to be very careful since the quality of their appraisals is considered in their own annual personal evaluation.

Q9. *Why must “unsatisfactory” evaluations be reviewed by a higher level committee rather than just by the supervisor of the appraiser?*

A. An unsatisfactory rating is a very serious step to take but one which is necessary from time to time. For staff below the SM level, the review committee consisting of at least the Branch Director and the Division Chiefs must give special attention to those receiving such ratings and assure that some appropriate action is taken. In some cases, if the unsatisfactory is a repeat, then a recommendation of release may be made to the DG and ADM. In other cases, the review committee may wish to recommend to the organizational unit affected, some action which could lead to a correction of the situation during the following review period.

Q10. *Is there not a danger that a fully deserving performer be overlooked in this system where people who do not know him/her are judging whether or not his work may be superior?*

A. All systems have some dangers, but experience shows that this is not likely the case if all levels of management are alert to superior or outstanding performances by people within their staff. Under the old system, it was too easy for an appraising supervisor to give a “superior” to avoid a confrontation. Now it is necessary to convince his peers that a “superior” or “outstanding” rating is valid, and this is seldom difficult if the evidence is there.

Q11. *Will there be a safeguard against possible misinterpretation of the significance of changes in overall ratings between the new system and earlier ones?*

A. The safeguard comes with the knowledge of a greater uniformity of application of the terms than ever before. In the past, staff has complained (with some justification) that manager A was an easy person on appraisals while manager B had much higher and tougher standards. This was perceived as a disadvantage in promotional competitions for those being appraised by manager B. The new approach not only is fairer, but it will force both A and B to adopt more reasonable standards.

Weather Watch program success

by Bob Barrett

The Severe Weather Watch Program operated by Environment Canada with the assistance of many hundreds of volunteer personnel has proven to be an effective method of identifying and reporting hazardous or potentially hazardous severe weather events.

This service, which was introduced as a pilot project in 1978 by Central Region, is also used each summer season by other AES Regions prone to severe weather. The main object of the Severe Weather Watch Program is to offer improved services which are easily identifiable to the Canadian public. It is closely patterned after the program employed in the United States.

Severe weather phenomena can be generally described as events which pose a threat to human life or personal property. Damaging winds, large hail, tornadoes or extensive precipitation amounts capable of causing local flooding are excellent examples of weather events identified with the severe weather program.

In compliance with North American convention, special terminology is now used to warn localities of possible severe weather events. The familiar "Weather

(contd on p. 9)



The flat terrain of Winnipeg International Airport provides a striking setting for this typical funnel-cloud tornado.

(from p. 7) CMOS THEME

theoreticians — must have a better understanding of the unique tasks and problems of the professional meteorologists in operational offices. "That understanding is essential," Mr. Smith continued, "if AES is to use scientific and technological advances to best advantage in providing weather information to Canadians."

In his welcoming address, Richard Asselin, President of CMOS, noted that this year's Congress marked a special attempt by CMOS to bring together meteorologists who deal with the practical problems of producing daily weather forecasts and researchers and theoreticians. He continued "in future, CMOS intends to pay more attention to the operational aspects of meteorology and those who practice operational meteorology."

To that end, the Society, at its annual general meeting held the day before the Congress opened, voted to change its

membership fee structure. CMOS fees will no longer include subscription costs for *Atmosphere-Ocean*, a research oriented scientific journal of marginal interest to operational meteorologists. Thus, membership fees have been reduced to \$20 per year and subscription to a wide range of journals will be offered to members separately.

Other sessions dealt with forecast verification, aviation and marine forecasts, forecast delivery and several case studies of meso-scale weather events which presented short-range forecast problems. The Congress ended with a panel discussion on Day-1 forecasting, during which the CMOS was asked to form a Special Interest Group on operational meteorology. This group would encourage the continued exchange of ideas among operational meteorologists.

At the annual banquet, AES staff took three of the CMOS awards. Morley

Thomas, recently retired CCDG, won the Andrew Thomson Prize for his substantial contribution to applied climatology and Dr. George Boer, CCRN was awarded the President's Prize for his outstanding contributions to climate modelling and diagnostics, particularly of general circulation. The Rube Hornstein Prize went to Peter Haering, PAEM, in recognition of his work in the application of satellite data to operational meteorology.

Dr. J.R. Wilson, Director of the Marine Environmental Data Service of DFO won the Applied Oceanography Prize and Glen B. Lesinn, the Graduate Student Prize for his design and construction of a wind tunnel. Ross Howard, a reporter with the Toronto Star, was honored with the Citation Award for his significant contribution towards public awareness of air pollution and acidic precipitation problem.

AES probes severe weather



A tornado severely damaged this Yorkton, Sask. farm.

From May through September this year AES had the special problem of forecasting and warning Canadians of severe summer weather — thunderstorms, hail, torrential rain, and tornadoes, all threatening people's lives, property and livelihoods.

Since severe summer weather strikes suddenly and almost anywhere in the country, specially trained forecasters took many steps to help Canadians deal with the dangers.

Every day they pored over weather maps in the large regional weather offices and looked for signs of severe thunderstorms and related perils occurring over the next 24 hours. Then they watched for similar developments on satellite and radar screens; they narrowed down severe weather risks to small areas covering two or three counties or municipalities and issued severe weather watches three to six hours in advance.

When severe weather was imminent they issued severe weather warnings for all places on a storm's path during the next one to three hours. Then they quickly sent weather warnings from the

large centres to smaller weather offices who deal with storms on the local scale. They also advised radio and television stations in affected areas via the wire services or by telephone.

In addition, Environment Canada used its coast to coast network of Weatheradio Canada stations. Sirens and flashing lights were activated on the special FM radio receivers prior to weather warning or weather watch broadcasts being given. At the same time regular weather programming was preempted.

During dangerous weather, special teams at the weather centres obtained reports on occurrences from police, radar, aircraft pilots or from specially trained severe weather watchers. About 5,000 of these, all volunteers and mostly located in "severe weather provinces" like Ontario, Quebec, Manitoba and Saskatchewan, supply key information to Environment Canada.

Based on further observations received during the day, the weather centres, cancelled, updated or issued new weather

watches and warnings.

Staff of local weather offices confirmed severe weather in the vicinity, then in all likelihood telephoned public officials, utilities, construction companies and local media to warn of its approach.

Publicizing AES's severe weather forecasting activities DOE's Information Directorate distributed a list of do's and don'ts for Canadians to follow in summer weather emergencies. Copies were sent to all radio and television stations.

(from p. 8) WEATHER WATCH

Advisory" designation is now preempted in summer by Severe Weather Watch or Severe Weather Warning statements.

A "Watch" is issued by the Weather Centre for a specific area when a potentially hazardous weather situation exists and extensive amounts of precipitation, hail, damaging winds or tornadoes are expected to occur over the next few hours. A "Warning" is issued for an area when an actual severe weather event is confirmed.

A program of this type is heavily dependent on a dense network of volunteer observers, who after witnessing a severe weather event, relay this information by telephoning a designated Weather Office. In each region where the Severe Weather Program operates, there are hundreds of volunteers enrolled in the Watch Program. Included are both federal and provincial government agencies, amateur radio clubs and interested individuals from the private sector. AES volunteer weather observers have also substantially contributed to the effectiveness of the program.

The work is not time consuming but the role each observer plays, is vitally important to the overall success of the program.

AES is most appreciative of each person's past, present and continuing support of the Severe Weather Watch Program.

Bob Barrett is supervisor of severe weather services, AES Central Region.

FEATURES

Zephyr Breezes



Bob Zacharuk

With AES Ice Reconnaissance since 1975, there is little Bob Zacharuk does not know. He has worked on aircraft, helicopters and ice breakers and visited remote spots like Cape Parry, N.W.T.; Alaska; Thule, Greenland and Hibernia oilfield off Newfoundland. On the current Lockheed Electra he handles visual sightings, SLAR radar, remote sensing, chart plotting and communications. Despite long hours, bad weather and lots of night flying, Bob says he enjoys the job because he is always on the move and is never bored since no two ice situations are alike. An observing shift lasts eight hours and he sometimes flies six or seven days a week for a couple of months. Despite this he still finds time to take correspondence courses at the University of Waterloo — in logic, psychology and management. Not all Bob's work is in isolated areas. He observes ice over the Great Lakes and the St. Lawrence Estuary, but rarely touches down at his home base of Toronto. (He has an apartment there, but actually hails from Saskatchewan). Last March 30 was an exception. The Electra flew into Downsview airbase to obtain bids on a contract to do a major inside refit so that it can continue serving alongside the brand new Dash 7R when it begins ice observing around 1985. Bob was kept so busy showing the SLAR to visitors and AES staff, he barely got time to go home. Promptly next day the plane took off for Hibernia to resume iceberg reconnaissance.

* * * *

Children who get the opportunity to visit AES weather offices sometimes come up with unusual insights. Recently a grade four class did the grand tour

of the WO3 in Regina. When it was over, the teacher asked all the young visitors to write thank you notes to AES staffer David Ryback who conducted the tour. Here are some sample phrases: "Thank you for your interesting trip. It was very fun. I was most interested in the computer that would put what you wanted to know and would put it on paper. I also liked the answering machine which would tell the weather when someone phones in" . . . "I liked the radar the most. It was neat how it could zoom in and make the picture big" . . . or finally, "What I like the best is the telephones and that you know how many calls you get in a day. I learned something about the telephones I did not know you knew how many calls you had in a day."



Ephraim Kihato

Returning to Kenya after a 15 month stay with AES Data Acquisition Services branch is Ephraim Kihato, a meteorologist with his government's weather service and a lecturer at the East African Institute of Meteorological Training and Research. Here on a World Meteorological Organization scholarship, Kihato decided to specialize in instrument maintenance because he believed a wider range of sophisticated weather instruments should be used in his country and the rigorous standards used for testing AES instruments should be emulated in East Africa. While here Kihato was noted for his friendly, outgoing manner and informally has been referred to as "the goodwill ambassador". On his return to Nairobi, the Kenyan capital, noted for its congenial climate, Kihato will specialize in instrumentation both at the weather office and at the Institute.

This item involves a bouquet for Zephyr and a slight correction to a list that accompanied an article on Resolute, N.W.T., by John McBride in the Jan-Feb issue. Captain Doris Siemieniuk, an AES meteorologist seconded to the Canadian Forces Base in Baden Soellingen, West Germany, writes: "Your magazine is read with pleasure by our small collection of 'displaced meteorologists' here at the base and we all appreciate your efforts." Capt. Siemieniuk adds that she also enjoyed McBride's article, but she wanted to indicate an omission in the published list of meteorologists serving tours as Resolute OICs. In September-October 1976 she was there on temporary duty. "To my knowledge," she concludes, "I am the only female meteorologist to have occupied that position."



Walter Williams

Walter Williams, Central Registry clerk at AES regional headquarters, Bedford, N.S. is up at 5.30 a.m. these days busily pounding out a 20 km run in preparation for the Boston Marathon which he expects to enter in April 1984. Returning to competitive running after a 20 year absence, Walter knew he qualified for the big Massachusetts event when he successfully completed the Ottawa Marathon this spring coming in 164th out of 4320 runners. In order to keep expanding his prowess, he plans to run in three more marathons this year. After Boston he is considering running an 80 km marathon in England and hopes to break six hours. Walter says he resumed his interest in running because of the federal government Participation campaign highlighting the running skills of former Governor General Roland Michener.

(contd on p. 11)

BOOK REVIEW

Carbon Dioxide: Friend or Foe?

Sherwood B. Idso, IBR Press, (Tempe, Arizona) 1982,
92 pages, paperback.

by Henry Hengeveld

During the last few years short articles by Dr. Idso have appeared in numerous scientific journals to dispute the emerging consensus among climate modelers that increasing atmospheric CO₂ concentrations will significantly alter the world's climate. However, these articles, largely based on results of empirical studies performed by Idso, have generally been criticized for their incompleteness and lack of support documentation. In the book "Carbon Dioxide: Friend or Foe?", Idso attempts to address his critics by consolidating his disagreements with the modeling community into a provocative, all-out attack on the "establishment", particularly the climate modelers and the U.S. National Academy of Science. Some of his key arguments are:

- that the emerging consensus among climate modelers on the effects of

CO₂ is an inevitable result of the basic similarity of the various models used and hence a delusion.

- that clouds, humidity, oceans and sea ice, all key climatic elements, are poorly parameterized in the models in a manner far removed from the "real world", thus rendering the results of the models "highly tentative at best."
- that the positive water vapour feedback so critical to the results of these models is non-existent or negated by other negative feedbacks.
- that the "real world" climatic record for the past 100 years indicates trends diametrically opposed to the predicted effect of CO₂ indicating that at best the CO₂ effect on climate is minor and may actually be slightly negative (no credence is given to explanations of solar and volcanic influences used in other studies).

(suite à la page 12)

(from p. 10) ZEPHYR BREEZES

Morley Thomas has now completed nearly six months research on his specially commissioned history of the Canadian weather service. After dealing with endless facts and figures the retired director general of the Canadian Climate Centre is pleased to report that he has now entered the "people stage" of the project. This will entail interviewing many retired met. service directors, managers and senior meteorologists, especially those familiar with operations in the twenties and thirties. This is important because retired employees of the period have expertise and detailed recollections that risk being lost if not recorded in Morley's book. Talking of people, the former climate head notes that relatively few staff joined the weather service before the big aviation boom of the late thirties and that right now there are only five AES employees whose meteorological service dates back to World War II: Dr. Warren Godson (ARDG), Bill Markham (ACIX), Gord McKay (A/CDDG), Fred Page (AIA) and Jack Mathieson (PAED).

* * * *

The book review published in most

regular report he sends to Energy, Mines and Resources.

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Most AES regions kept records of their March 23 Climate observer day activities, but Pacific Region outdid itself. Jack Mathieson, regional director, sends us an album full of presentation pictures, news clippings and media coverage lists. There were interviews of climate observers in five B.C. dailies and at least eight weekly newspapers. There was radio coverage out of five WO4s plus CBC rebroadcasts of interviews on the subject given by Kelowna OIC Ralph Janes over 96 remote radio transmitters. Finally, there was detailed observer Day coverage on Phil Reimer's CBC weather program. The region's two Morley Thomas award winners, Norman Green and Gilean Douglas, received the lion's share of media coverage, both having served for 30 years as individual weather observers. But awards also went to people associated with government and institutional stations. For example, Dave Phillips, chief of Data Acquisition for Pacific Region made a special presentation to Don Pearce, weather observer at the University of British Columbia and meteorological station inspector Neil Andrews made one to Arthur Bowen, current climate observer at the large Coldstream Ranch which has kept climate records, invaluable to the Okanagan meat and fruit producing sectors, for the past 82 years.

What is a Port Meteorological Officer?

See next issue
of Zephyr for first
in new series on
AES occupations

STAFF CHANGES

Promotions/ Appointments

D. Aguilar (EG-6) Inspector, QAEOI, St-Laurent, P.Q.
D. Bancroft (MT-4) Meteorologist, CFFC CFWS, Edmonton, Alta.
R.D. Bojkov (SE-RES-2) Research Scientist, ARPD, Downsview, Ont.
B. Brisebois (MT-4) Meteorologist, CFFC CFWS, Edmonton, Alta.
G. Burrige (CS-1) Computer Systems, CMC, Dorval, P.Q.
S. Filion (CS-1) Computer Systems, CMC, Dorval, P.Q.
B.N. Grogan (SCY-3) Secretary, ARQD, Downsview, Ont.
C. Jollet (EG-8) Communicator, QAEC, St-Laurent, P.Q.
A. Massy (CR-3) Clerk, WAED, Edmonton, Alta.
A.W. Miskolczi (EG-6) Pres. Tech. WO3, Saskatoon, Sask.
L. Welsh (MT-5) Meteorologist, CCAI, Downsview, Ont.

Transfers

B. Armstrong (EG-6) Pres. Tech. WO4, North Bay, Ont.
G. Bolduc (EG-4) U/A Tech. WO4, Sept-Îles, P.Q.
W.R. Hepburn (EG-3) U/A Tech. WO3, Resolute, N.W.T.
R. Lagacé (EG-6) Pres. Tech. WO4, St. Hubert, P.Q.
M. Law (EG-1) Met. Tech. WS3, Dease Lake, B.C.
G. Ledrew (EG-1) Met. Tech. WS3, Cape Parry, N.W.T.
K. Little (EG-5) Pres/Obs. Tech. WO4, Calgary, Alta.
R. Ouimet (EG-6) Pres. Tech. WO4, Dorval, P.Q.
M. Rice (EG-1) Met. Tech. WS3, Fort Reliance, N.W.T.
L. Richard (EG-6) Pres. Tech. WO4, Val d'Or, P.Q.
M. Saumure (EG-6) Pres. Tech. WO4, Frobisher Bay, N.W.T.
T. Sawchuk (EG-6) Inspec. Standards Officer, WAED, Edmonton, Alta.
B. Scott (EG-2) Met. Tech. WS3, Port Alberni, B.C.

R.J. Spokes (EG-4) Climat. Tech. SSU, Winnipeg, Man.
N.B. Trivett (SE-RES-2) Research Scientist, ARQM, Downsview, Ont.
D. Wood (EG-1) Met. Tech. WS3, Fort Reliance, N.W.T.

Temporary or Acting Positions

G. Coulombe (EG-5) Supervisor, QAEOU, Nichequon, P.Q.
P. Gunst (EG-6) Inspector, CAED, Winnipeg, Man.

Departures

J. Albert, PWC, Vancouver, B.C.
M. Buller, Vancouver Harbour Weather Station, Vancouver B.C.
D. Gosselin, CMQ, St-Laurent, P.Q. to Customs & Excise, Montreal, P.Q.
R. Jelinski, WAED, Edmonton, Alta.
D.K. Langer, WO4, North Bay, Ont.
D. Petrunik, PWC, Vancouver, B.C.
G. Vickers, WAED, Edmonton, Alta.

(from p. 11) BOOK REVIEW

- that dramatic ecological benefits of increased CO₂ concentrations or global vegetation will be crucial in meeting impending world food crises and could lead us back to "the Eden which we left so long ago."

The book is interesting, provocative, well written and satirically laced with literary quotes. Idso focuses attention on some serious faults and shortcomings of climate modeling experiments which are generally recognized but perhaps inadequately stressed by the climate modeling community. However, in doing so he considerably weakens his own credibility by using some of the very methods for which he criticizes the modelers.

He supports some of his arguments from studies carefully selected to agree with his conclusions, while ignoring those which do not and he dismisses the possible influences of solar and volcanic factors in the climatic trends of the past 100 years as "hypothetical and arbitrary." Yet he fully supports the argument that the warming trend in the

early part of the century was due to causes other than CO₂ increases.

In his zealous attack on the "establishment", Idso questions the credibility and honesty of the climate modeling community in general and the National Academy in particular, while suggesting that he is one of the few in touch with the real world.

Although his arguments and conclusions may not be acceptable to the informed reader, they do serve as a reminder of the degree of confusion and uncertainty that still surrounds the CO₂/climate issue and the continued need for caution in deriving definitive conclusions, particularly with respect to responsive political action. As Idso states (p. 92), "the National Academy would call for a reduction in CO₂ emissions to the atmosphere, while I would call for augmenting them." He concludes "I could be wrong. Cannot the National Academy admit as much?"

Henry Hengeveld is advisor, CO₂ related matters, Canadian Climate Centre, Downsview.

Leave of Absence

P. Blanchet, PWC, Vancouver, B.C.
M. Collins, WS3, Edson, Alta.
D. Tomlinson, WS2, Inuvik, N.W.T.

Secondment

W.R. Broughton, Resolute Bay, N.W.T. to ICEC, Ottawa, Ont.

Retirements

E.J. Holman, CCAS/M, Downsview, Ont. June 1983.
H. Vallieres, ACSS, Downsview, Ont. May 1983.

Deaths

G. Eatough, AAM, Downsview, Ont. July 31, 1983.
J.E. Parker, ACSM, Downsview, Ont. August 23, 1983.