

zephyr

ATMOSPHERIC ENVIRONMENT SERVICE NEWSLETTER

July-August-September 1991

Working around the clock

Is the scene of you relaxing with a drink and a newspaper after a full course meal, familiar in your home at 8 o'clock in the morning? Are tiny scrawled notes the standard form of communication between you and your spouse? Do you look at pictures of your children and wonder if they've grown since you last saw them? Do you eat your Christmas dinner on Boxing Day? If you answer yes to some of these questions, you are probably a shiftworker!

Five o'clock may be quitting time for most people, but not for those who work on shift. Almost half of AES employees are shiftworkers. The ability to cope with this lifestyle varies. Some people thrive on the variety and free time this work pattern brings into their lives, while others find it very trying.

Much of the literature on shiftwork focuses on the physical and psychological problems related to altering sleep patterns. The root of the problem lies in the brain where a circadian clock primes the human body for restful nights and peak performance during the day. Under normal conditions the clock is set when daylight enters the brain through the eyes and enables the brain to distinguish day from night. Waking and sleeping at different times upsets this balance.

In talking with a number of AES shiftworkers, most would not switch to days, given the option. Many have their own techniques for adapting and those who could not adapt have moved to positions where they can work straight days. Surprisingly, most shiftworkers questioned felt the advantages of shiftwork outweigh the disadvantages.

Camil Laprise of the Ottawa Weather Office is one who thrives on the varied schedule and the free time his shifts allow. Camil and his spouse pursue activities they personally enjoy while the other is at work. Camil for example, sails on his days off. When the Laprise's are off at the same time, they stick to land-based activities. Camil and his wife have adapted so well to the shifting schedule, the adjustment is most difficult when they work the same hours for any length of time.

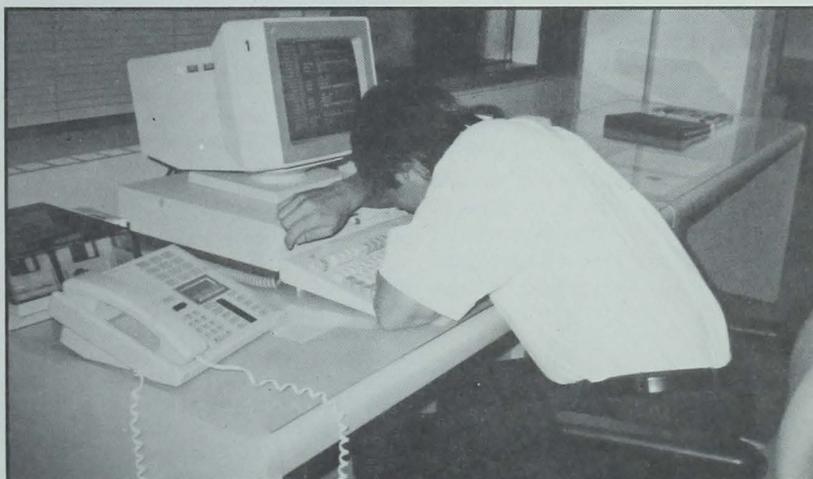
Glen Hamilton of the Regina Weather Office is another who finds that shiftwork suits his lifestyle. Glen has young children and the shifting schedule gives him more time to spend with his children and more time to pursue leisure activities.

Many feel the length of the shift is critical to how one adapts. Mark McCrady of the Newfoundland Weather Centre enjoys his schedule much more

now that his office has switched to 12 hour shifts. While working eight hour shifts Mark felt tired most of the time. Now, after working for five days, Mark generally gets five days off, during which he recuperates from his night shifts, and still has plenty of time for hobbies.

But not everyone is the same. Don Layton of the Maritimes Weather Centre has worked 12 hour shifts in the past and felt he spent a large portion of his time off sleeping to catch up. Don has also worked straight days and found this reduced his freedom. He disliked for example, "grocery shopping at the same time as the rest of the world." Don feels he is best suited to the eight hour shifts he presently works.

Most shiftworkers have their own methods of adapting to the changing shifts. Larry Romaniuk of the Prairie Weather Centre has worked on shift for the past 30 years and is finding coping in-



Unidentified night worker

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Environment
Canada

Environnement
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Think recycling



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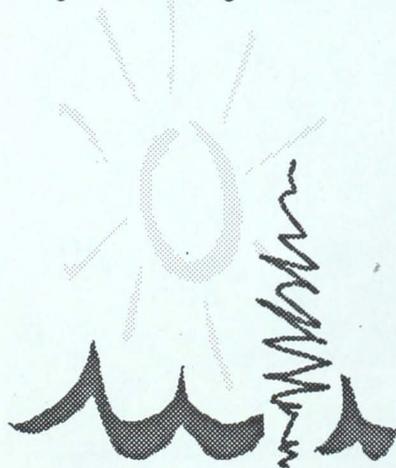
creasingly difficult. Larry knows he will have a headache after his night shifts so takes aspirin in advance as a precaution. He also knows he's not the best company when he is tired so he stays away from friends and family until he has rested. Larry has encountered a number of medical problems over the years related to shift work, but, nonetheless enjoys operational meteorology of which he knows night shifts are a reality.

Carol Evans of the Lower Mainland Weather Office in Vancouver follows all the rules. She is careful not to drink too much caffeine, gets lots of sleep and tries to maintain regular meals. But Carol's husband also works on shift. Often they only get one day a month off together and this is something to which Carol will never adapt.

By far, the most interesting technique for adapting was that of Phil Garrison who recently retired from CMC. Phil had an extremely difficult time sleeping during the day, so he built himself a box. The box was wooden, and suspended by springs inside another wooden box. The box was complete with ventilator and Phil slept soundly in it for four years.

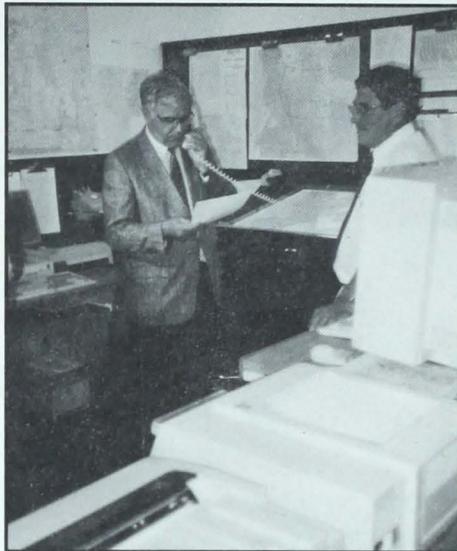
Mike Hewson, formerly of the Newfoundland Weather Centre, is one who didn't adapt. Mike could not sleep during the daytime, and as a result found himself awake for 48 hours or more when working nights. Mike is presently working straight days in Ottawa.

Everyone's story is different. Some love it, some hate it. Some grumble through the night shifts because they love meteorology and some plainly just give it up. Regardless, while you're snuggled in your bed tonight, today or whenever you sleep, you can be certain that some of your colleagues somewhere are working, having lunch or building wooden boxes.



Weatheradio: A Growing Enterprise

by J.R. Janzen



Lee Clark records the first official Brandon Weatheradio broadcast on June 27, 1991. Shown on right is Eric Stanzeleit, Brandon OIC.

AES is becoming one of the larger radio broadcasters in the country. That's WEATHERADIO of course; a VHF radio service which broadcasts weather information around the clock and throughout the year.

Since 1977, Weatheradio has been expanding, and has proven its effectiveness by being the "first on the block" with Weather Warnings. Weather information is available continuously on Weatheradio. But some receivers are equipped with an "ALERT" mode. The radio receiver operating in this mode is normally silent, but when a WARNING is broadcast, the set "turns on" and signals to those nearby, that a Weather Warning has been issued.

The recent tornado warning issued in Essex County, Ontario is yet another example of the effectiveness of Weatheradio. But, it was the Edmonton Tornado and a number of highly publicized marine disasters in the mid 1980s that provided a boost to the expansion.

At last count, AES was operating approximately 90 Weatheradio transmitters in the main population belt of Canada. At least seven new stations will be added by April 1992, and by the late 1990s it is expected the number will swell to 160. The expansion is being coordinated with the WSO Project and with the National Search and Rescue Secretariat (NSS). NSS recognizes the value of Weatheradio in warning mariners of upcoming dangerous weather at sea and on the Great Lakes. This expansion is

also in line with federal Green Plan commitments made last year to improve the early detection, prediction and warning of severe weather events, and to upgrade emergency communication capabilities.

One of the few drawbacks of Weatheradio is that, while over 70 per cent of Canadians are within range of a Weatheradio transmitter, only about five per cent have the special VHF receivers needed to pick up the signal. These VHF receivers are readily available commercially at low cost, but are still uncommon in Canadian homes. It is expected however, as new transmitters open and publicity increases, the listening audience will grow. Some Cable TV companies are now carrying the Weatheradio broadcast on their special information channels. So, support your local AES broadcaster, buy a Weatheradio receiver, and tell your neighbors about it!

New Weatheradio Stations

Several new Weatheradio stations have recently opened across Canada. During Environment Week, stations were opened in conjunction with the National Search and Rescue Secretariat in Beardmore and Kenora, Ontario in late June, Lee Clark, Member of Parliament for Brandon-Souris and Environment's Parliamentary Secretary, announced the opening of stations in Midale, Yorkton, Prince Albert, Stranraer and North Battleford, Saskatchewan and in Brandon, Manitoba. In July, another two new stations were announced in Val D'Or and Chibougamau, Quebec.

Young prodigies

Most parents hope their children will follow in their footsteps. In recent science competitions, three whiz kids did just that, and made their AES parents proud.

Young scientist, Marie-Claude Blanchet, daughter of J.P. Blanchet, formerly of CCRN, brought home from Canada's national science fair, a gold medal for Ontario. Her experiment was aimed at quantifying the tone of an instrument or measuring the richness of sound so that it might be measured before the sound is actually heard. She would someday like to conduct this experiment on an entire orchestra.

While Marie-Claude's project was quite different from his speciality,

climate modeller J.P. Blanchet admitted he was able to discuss with his 13 year old daughter, sound waves as a mathematical function. In addition to the gold medal, Marie-Claude was presented with an award for excellence in science communications and with \$500 for both herself and her school by the Canadian Association of Physicists.

At the York regional competition, a gold medal went to Peter Saulesleja, son of Andrej Saulesleja, Superintendent of the CCC's Arctic Adaptation Division. Peter prepared a Solar powered, Homostatically Regulated Environment for an Iguana. The solar cells created the energy to maintain a simulated environment for an Iguana. The project took a year to complete.

Peter is studying engineering at McMaster University this fall.

Also at the York regional competition, 13 year old Vikram Venkatesh won a silver medal for his entry in the applied science and engineering category. Vikram studied oil spills, the impact of oil on beaches and how oil collects and spreads. Vikram, approached his father Srinivasan Venkatesh, ARMF, an oil spill modeller, with questions on the feasibility of the project early on, but worked on the project with the assistance only of his partner. As a scientist, Venkatesh Sr. felt his efforts were best directed at providing an atmosphere in which his son would be encouraged to answer scientific questions himself.

ERS-1: another step towards improved forecasts

Almost one billion dollars worth of equipment and 10 years of worth of work were launched into space on July 17, as the European Space Agency's (ESA) ERS-1 satellite departed for polar orbit. As a member of ESA, Canada will receive satellite data on wave height, surface temperature and wind speed over oceans, as well as data on ice and land surface conditions. Over the two to three year life span of the satellite, AES will use many of these data and be instrumental in feeding some of them to other Canadian users.

Seas and oceans cover the equivalent of almost three quarters of the Earth's surface and are the main driving force of global weather and climate. Presently data over oceans is available only sporadically from weather buoys, ships and other satellites. The wind scatterometer on ERS-1 will measure wind speed over oceans on a highly repetitive basis, thus making available more detailed information for regional weather forecasts. The ERS-1 mission will determine among other things if the data can be re-

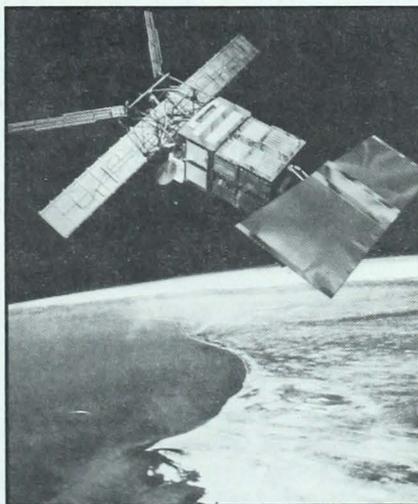
ceived in regional centres in ample time to be incorporated into routine forecasts, according to Dr. Hans Teunissen, the AES Coordinator for Space Activities.

Procedures will be in place this fall to move data from the satellite to Canadian users. Before reaching AES, data will be collected from the satellite in five locations around the

world, including Gatineau, Quebec and Prince Albert, Saskatchewan. These data will be consolidated in Frascati, Italy and then forwarded to the United Kingdom and Washington enroute to CMC in Montreal. CMC will then forward the data to Weather Centres.

Another feature useful to AES is the SAR or Synthetic Aperture Radar which will produce images of ice through cloud cover. At present, satellite pictures of ice used by the AES Ice Center are often obscured by cloud cover. ERS-1 SAR data collected at the Gatineau station, will be forwarded to the Ice Center in Ottawa for integration with aircraft and surface measurements. The experience of working with these data will be invaluable in preparing to handle data from Canada's own satellite, Radarsat, to be launched in 1995.

ERS-1 is another significant step on the road to improving weather forecasts. ESA is presently preparing a follow-on satellite for launch in 1993.



Drawing courtesy European Space Agency

EG dedicates time to fire effort



On June 20, 1991 a forest fire started on Haeckel Hill north of Whitehorse. The fire spread rapidly and by evening had forced more

than 100 people from their homes in a northern suburb of Whitehorse. Ken Roth, an AES EG in Whitehorse responded, when his community needed help.

Ken learned of the evacuation and immediately offered his assistance to emergency officials. From 11:00 p.m. on the 20th until 3:30 a.m. the following morning he acted as a runner, delivering messages necessary to the emergency effort. Four hours later he returned, and for 11 hours worked on the registration and inquiry desk assisting families and friends in establishing contact with evacuees. Fortunately, the Yukon Forestry Service controlled the fire quickly and residents were able to return home.

Good work Ken! Your concern and hard work helped to ease a difficult time for many.

WSOs south of the border

AES is not the only weather service in the midst change. Our neighbors to the south, the US National Weather Service (NWS), are also in the process of executing a plan to modernize the Service and make it more cost effective.

At the national level, the NWS is presently comprised of The National Meteorological Center, the National Hurricane Center and the National Severe Storms Forecast Center. In the regions, there are 52 Weather Service Forecast Offices (WSFOs), organized on a geographical basis. In addition, there are 197 smaller offices including Weather Service Offices (WSOs) and Weather Service Meteorological Observatories (WSMOs). The WSOs issue local area forecasts and warnings based on the products of the WSFOs.

In the restructured NWS, there will be

Changes for WSD and CSD

Weather Services Directorate and Central Services Directorate will be taking on a new identity and structure as reorganization plans come to fruition. In June, ADM Elizabeth Dowdeswell announced a number of structural changes to ensure that AES can continue to provide top quality service to its publics.

The new WSD, expanded with the addition of Training Branch, Ice Branch, and Data Acquisition Services will provide program guidance for the National Weather Services Program and the Ice Program. The Director General, Weather Services will direct the Program. This role is being filled by John Mills. The Regional Directors General have, for the past year and a half, been reporting directly to the ADM. The structural changes presently being implemented will support these reporting relationships.

Phil Aber will head the Canadian Atmospheric Centre. The new organization will be comprised of the current Computing and Telecom-

munications Branch and the Canadian Meteorological Centre. The focus for this organization will be the provision of real-time services on a national basis.

The new senior managerial reporting relationships took effect July 8th. Management positions below the DG-level and the structures which support them will be defined soon. An ad-hoc Union/Management Consultation Committee has been established as a forum to discuss the concerns of both groups and had their first meeting on July 15th. This group will convene again in September, after the delayed and downsized management structure is presented to Treasury Board.

ADM Elizabeth Dowdeswell expects the changes will have minimal impact on staff and on the services they provide. She encourages everyone to present their ideas and opinions to local UMCCs, staff meetings, their managers, or in writing to John Mills and/or Phil Aber.

ADM elected to co-chair

Canada was elected to co-chair one of two working groups supporting the United Nations committee negotiating a global agreement on climate change. ADM Elizabeth Dowdeswell, along with a representative from Vanuatu, a South Pacific island state, will co-chair the working group on implementation mechanisms. These selections were made on June 21 in Geneva.

The objective of the negotiations is the development of a climate change convention in time for signature at the United Nations Conference on Environment and Development in June 1992. Progress was made on substantial issues at the June session; however, work will continue at the fall sessions in Nairobi and Geneva.

Awards, awards...

Order of Canada - Reuben Hornstein (employee of the Meteorological Service 1938-1972) has contributed greatly in making weather information both interesting and useful to Canadians and continues to be a stalwart supporter of meteorology in Canada.

Patterson Medal - Dr. Gordon McBean - in recognition of his numerous accomplishments and distinguished service to meteorology in Canada. Dr. McBean is Professor and Chair of the Atmospheric Science Program of the Departments of Geography and Oceanography at the University of British Columbia. In the past few years Dr. McBean has played a strong leadership role in the planning for the World Climate Research Program. He has been a strong and respected proponent of Canadian points of view in international fora.

Michael Persaud Award - Trevor White - presented by the Continuing Education Students' Association at Ryerson (CESAR) for involvement in organizations and events outside the work and school areas, while working full time and maintaining a minimum B average in the Public Administration degree program



Pictured Assoc. DM Lorette Goulet, Gary Wells and Larry Funk

Associate Deputy Minister visits Lotus Land

Associate Deputy Minister Lorette Goulet brought smiles to the staff of AES Pacific Region during her visit June 13th. Ms. Goulet saw first hand, AES services being used by the many client user groups and toured the Pacific Weather Centre. Following the tour, she was joined by staff for coffee and conversation.

Bill to support overhaul of federal Public Service

In June, Treasury Board President Gilles Loiselle introduced to Parliament the Public Service Reform Act, an omnibus Bill which will allow for the modernization of legislation which controls collective bargaining, staffing and human resources management.

Agencies such as the Treasury Board Secretariat, the Public Service Commission, Supply and Services Canada and Public Works Canada, are loosening controls on departments, increasing accountability and allowing more decision-making by managers.

Deputy Ministers are responsible for overseeing the implementation of changes in their departments. Louise Girouard-Morin of DOE Human Resources has been appointed as PS2000 Coordinator within Environment Canada to assist and to stimulate the implementation of change as the Public Service Reform Act is only one part of the package of the renewal and modernization of the federal Public Service. Employees at all levels are encouraged to participate and to come up with suggestions on how procedures and services can be improved. The following are some of the expected changes.

Delegation of authority: Departments will be delegating to the lowest level practical, the authority to make decisions. The issuing of corporate credit cards to responsibility centre managers for purchases of up to \$1000 is imminent.

Reducing levels of management: The number of management levels below the Deputy Minister will be reduced to three and the management category will be cut by 10 per cent. All delayering and downsizing to the management category will be completed by March 31, 1993.

Operating budgets: The current practice of splitting budgets in three — one budget for person years, one for operations, and one for capital expenditure — prevents managers from making the maximum use of their resources. This system will be replaced with an operating budget to cover salary, operational and minor capital expenses. Person year controls will be discontinued, allowing managers to allocate funds in a more effective manner and give them the flexibility to make sound spending decisions. Presently, the operating budgets are being tested in AES in Central Region, Ice Branch and the Canadian Climate Centre. The entire

federal government will switch to this process in the 1993-1994 fiscal year.

Classification simplification: There are now 69 different occupational groups and many levels within each. The number of groups and levels will be reduced in an effort to remove perceived barriers and allow for greater job mobility and opportunities to learn new skills. Dave Pollock (APDG) and Ken Morris (ACTT/C), were the AES representatives on a Treasury Board task force to review the universal job classification system for which implementation will begin in 1993.

Deployment: Because the Public Service is shrinking in size, there are fewer new job opportunities for public servants. Provisions for deployment would encourage those who want to try their hand at new jobs, by providing a greater opportunity to do so. These deployments would be voluntary.

Employment Equity: New employment equity provisions will better ensure that all Canadians have fair and equal access to satisfying, rewarding jobs in the Public Service.

Thank you AES

Fisheries and Oceans Canada would like to thank all the marine forecasters in **Pacific Region** who participated in the 1991 roe herring season. "The professional and cheerful manner in which they conducted themselves while responding to our difficult requests such as weather conditions hour-by-hour or long-range forecasts is a credit to Atmospheric Environment Service. Their responses greatly assisted the department in managing the roe herring fishery and more importantly, added

to the safety of the fishermen involved."

Gayle Thody of ACSO/P would like to thank Downsview nurse **Olga Leskiw**, for recommending yoga as an appropriate treatment for her neck and back problems. Olga went beyond the call of duty and helped Gayle gain entry into a yoga program, thus encouraging a speedy recovery. Without Olga's assistance, Gayle would have been on a waiting list for months.

Transport Canada thanks those at the **Ontario Weather Centre** and elsewhere for the rapid and professional response during the recent Eastern Shell grounding and subsequent discharge of gasoline and diesel fuel into the waters of Parry Sound. D.I. McMill, DG Transport Canada said "Your staff conducted themselves in a manner which demonstrated their commitment to excellence in all that they undertake."

On the move...

Assignment

Bidinski, T. to EG Edmonton
Black, G. from MT Downsview to Edmonton
Boughton, B. from Chief, Stan. Off. CFB Winnipeg to DMETOC CFB Baden
Carrier, M. from MT Quebec to Edmonton
Chang, M. from Human Res. Adv. to Supt., Gen. Admin. Vancouver
Charko, D. from MT CFFC Trenton to Gander
Chretien, D. from MT Quebec to Edmonton
Devoe, G. from Allot. Cont. Off. Finance to FI ARDG
Fraser, N. from EG Prince George to A/PAEOS Vernon
Gladish, M. to EG Whitehorse
Goodacre, H. from MT CFFC Trenton to Gander
Hadad, J. from CR AAM to AS AWDA
Heney, J. from Supply Officer to Communicator Vancouver
Jackson, G. to EG Van. Tech. Pool
Jutras, C. from MT CMQ to Gander
Kagawa, H. from MT ACSD to ACDG-E
Lister, K. to Clerk Edmonton
MacLaren, C. from MT Downsview to Edmonton
Oates, C. from Proj. Off. AHRD to Tech. Off. AWSD
Pawley, D. from Van. Tech. Pool to EG WO4 Penticton
Prasiazniuk, J. to FI Edmonton
Proulx, S. to Sys. Anal. CMQ
Ratte, G. from MT CMQ to Gander
Sands, L. from Clerk Ottawa to Admin. Asst. Whitehorse
Simon, P. to EG Cambridge Bay
Stedel, L. from EG to Comm. Vancouver
Stevens, M. from Van. Tech. Pool to WO4 Lower Main.
Williams, V. from Van. Tech. Pool to Marine Data, Vancouver
Wong, B. from MT Germany to Chief, Stan. Off., CFB Winnipeg

Secondment

Webster, R.A. from Met. Insp. Vancouver to EG EPF

Departure

Demantha, M. from CM OAEW to Diamond and Fairburn (Law Firm)
Edgar, P. from CR OAEW to New York
Karpenic, F. from OIC Stoney Plain to Downsview
Kite, G. from Res. Scient. CCAX to NHRI

Leave without pay

Kitchikeg, M. from CR ACTD
Stewart, J. from SCY ACSL

Passings

Peteherych, S. ARMD

Promotion

Berthelot, L. from OIC Banff to OIC Calgary
Bissada, C. from MOC to MT CFB Trenton
Hunter, C. from SCY APDG to ADMA Ottawa
Lafortune, R. from MOC to MetOc Halifax
McLean, J. from MOC to MetOc Halifax
Moore, V. from SCY CCAD to AS CARE
Nickerson, C. from MOC to MetOc Halifax
Paola, J. from MT OWC to AWDH
Said, A. from CR NRC to ACIF
Weinberg, S. from SCY to CR ASCI
Veale, B. from MT Gander to ACIF

Retirement

Burge, P. from SCY ACIF
Dillistone, P. from Commander CFB Winnipeg
Hacking, T. from EG ACSL
Minier, P. from EG QAEM
Payment, G. from AWDH

Transfer

Blais, R. to MT MetOc Halifax
Brière, J. from MOC Course
Brown, D.J. from MT Gander to OWC
Canning, F. from CM Gander to MWC
Daigle, C. from EG Gander to Moncton WO4

Doyle, C. from MetOc Halifax to Maritimes WO4
Dubé, I. from MOC
Dudley, D. from MT Gander to PWC
Elliott, R. from EG Gander to Saint John
Goodacre, H. from MT Gander to CFFC Trenton
Hartman, W.H. from A/Commander to Commander CFB Winnipeg
Heck, P. from Ice Serv. Spec. ACIF to EG Egbert
Henry, N. from MT Gander to CFFC Trenton
Howe, B. from EG Winnipeg Pool to Calgary WO4
Jang, T. from Sys. Anal. CCRD/P to CCRD/N
Jean, M. from MT QAES to CMC
Kimbell, P. from MT OWC to CFB Greenwood
Kirkwood, K. from Shift Sup. Nfld. WO4 to Maritimes WO4
Ling, A. from ACTP to MT CFB Edmonton
MacPhee, J.P. from MT ARWC to CFB Greenwood
MacPhee, M.S. from MT ARWC to CFB Greenwood
McCarthy, P. from MT Gander to PWC
Newhook, J. from EG Gander to MWC
Reichheld, G. from DMETOC CFB Summerside to Shearwater
Richards, W.G. from MT SSD Bedford to Fredericton
Spiker, P.A. from MT MWC Bedford to Inst. CFB Moose Jaw
Szeto, M. from COM
Veale, B. from MT Gander to Ice Central

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