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JULY 1974 JUILLET

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35 TECHNICIENS ET SCIENTIFIQUES CANADIENS À BORD DU "QUADRA"

Tiré de "Le Soleil" Dakar, Sénégal

Quand des membres de la presse sénégalaise sont invités à bord d'un des navires météorologiques les plus perfectionnés au monde, il est naturel qu'ils posent des questions sur la climatologie et le cycle de sécheresse qui est depuis quelques années le lot des pays du Sahel. Le "Quadra" participe à l'opération du programme mondial de recherche atmosphérique et il fait partie du noyau des 36 bateaux qui rayonnent sur 600 km autour de Dakar.

Le directeur scientifique du navire canadien, M. Bolton a déclaré hier que l'objectif du programme du GARP est d'améliorer les prévisions météorologiques à long terme dans la région atlantique tropical. Le programme du "Quadra" se subdivise en trois phases de trois semaines chacune. L'information est traitée par ordinateurs et parmi les autres équipements perfectionnés, il y a un radar qui prend la mesure des précipitations pluviométriques.

Le navire météorologique canadien entreprend un autre type d'observation au moyen d'un ballon lancé à une hauteur de 25.000 mètres d'altitude dans le but de connaître le degré d'humidité, la vitesse et la direction des vents dominants.

Les renseignements météorologiques recueillis par les bateaux participant à l'opération GARP sont centralisés et envoyés à Dakar-Yoff, à Washington et en Union Soviétique.

Conférence de presse à bord du "Quadra". Nos confrères visitent le navire canadien sous la conduite du capitaine.

Ces résultats viendront compléter ceux déjà obtenus par les satéllites. Puisque le "Quadra" mouille dans nos eaux, les journalistes ont demandé à M. Bolton si cette année l'hivernage se présente favorablement dans les pays du Sahel?

"Les photos prises par satellite montrent que les plus fortes précipitations se trouvent à mille kms de Dakar. On note un mouvement de vent fort vers la mer. Des indices, ajoute M. Bolton laissent apparaître que Dakar constitue un point de départ des phénomènes atmosphériques constatés à travers le monde. Actuellement, nous ne pouvons pas nous prononcer sur ce que sera l'hivernage. Les résultats de nos recherches ne seront connus que dans un délai de 5 ou 6 ans."

Parallèlement à des études de recherches dans l'atmosphère, le navire est conçu pour les opérations de mesure de profondeur et de la température de l'eau et d'évaluation du degré de pollution de la mer.

Les journalistes ont visité toutes ses installations ultra modernes en compagnie de M. Normand Riddel, 2ème secrétaire de l'ambassade du Canada et de M. Jean Nadaud de l'Agence Canadienne de développement international.

WHAT IT WAS LIKE THEN

By Susan Yellin

In the yellowed pages of an old scrapbook are remnants of an age gone by in the meteorological service. Photographs and newspaper clippings, some cracked, some well-preserved, date as far back as 1884.

There aren't many people today whose memory can match that 90-year-old date or even come close to it.

But even 43 years is a long time to be with one organization, and Frank Upton, Head of Standard Network Operations at AES Headquarters, will reach that mark on November first. Mr. Upton's memory needed no jogging as he related the differences and similarities of the service and its members, now, and in 1931.

Over 40 years ago at 315 Bloor St. West only around 35 people worked in the meteorological service. Still, a strict hierarchy was ever present, said Mr. Upton.

John Patterson was Director then, and he and his secretary used one large and one small room in the northeast corner of the building. The office was continually cluttered with books, instruments and paper, and a roll-top desk and three or four large tables were piled high with these and other meteorological paraphanelia.

On the right-hand side of the entrance hall was the room that housed General Administration. Miss Manning (who was never called anything but "Miss Manning") took command there in the post of Secretary of the Meteorological Service. The "chief cook and bottle washer" of the service, she could now be compared to what is called an office manager.

To the right of this office would come the occasional clatter of a teletype machine – a novelty in those days. Its operator was Arthur J. Childs who became the recipient of the Patterson Medal in 1961.

In a big office in the southeast corner was the forecast room. Frank O'Donnell was Chief Forecaster for Canada at this time and he, along with three assistants, predicted twice daily the weather for all of Canada except British Columbia, where a separate forecast office was maintained. These men also looked after storm warnings – the original reason for the meteorological forecasting service, explained Mr. Upton. Ships on the Atlantic coast, the approaches to the Gulf of St. Lawrence and on the Great Lakes were at the mercy of storms and depended greatly on the service for advice. Maximum and minimum temperatures for the following day were predicted for most of Canada and then issued to newspapers, radio stations, railroads and shipping lines. The work was hard in this area, recalled Mr. Upton, because of the immense pressure put on forecasters to meet deadlines, and seemed a great contrast to the leisurely pace that prevailed throughout the rest of the building. Two or three plotters also worked in this room – a task which Mr. Upton himself performed for a short while in the mid-1930's.

The room next door to the forecasting office was ruled by an imperious gentleman – Charles Ellsworth Tweedie, Chief Observer of the meteorological service. All his observations were taken in the backyard of the Toronto building with the aid of two assistant observers. Also located behind the meteorological office were his instrument screens and a workshop for the construction of instruments. It was not unusual to see Director John Patterson there tinkering with new inventions along with two highly-skilled instrument makers, and the burly jack-of-all-trades, Fred White.

Second in command of the Service was W.E.W. Jackson, a man who was not in the business of weather at all. Mr. Jackson, a former astronomer, was Assistant Director and Chief Magnetician for Canada. His domain was the Transit House, next to the main building. The House, turned on a slight angle because it was oriented in a true north direction, was characterized by a special telescope which protruded from the House's roof. The telescope, called a transit, was made to pivot only on its vertical axis, the plane of which was fixed on Toronto's meridian. A star's movement was calculated and when it crossed the meridian, Mr. Jackson was able to discern the exact, correct time. This then, served as the basis for the correct time for Canada, a system which survived until about the mid-1930's.

The climatological department occupied the upper floor of 315 Bloor. Eight clerks "slaved away" with pen nibs and ledgers, reminisced Mr. Upton. The head of this department occupied the third rung of the hierarchy and was a man of international renown. Amidst a mass of papers and maps, with his nose close to the paper he was reading, was Mr. Connor, Chief Climatologist for Canada.

The rest of the upper floor was chiefly occupied by the library. In 1931, the library was mainly a place to store numerous collections of statistics and scientific journals, some of which still remain in the library at AES Headquarters in Downsview.

In a small corner of this floor was the main communications room, run by "Jack" Harcourt. Four telegraph keys were operated by two permanent employees along with two or three other men from Canadian Pacific and Canadian National Telegraphs. Weather data sent and received through an exchange system from all over North America were handled in this Toronto office and forwarded to the forecast room below by pneumatic tube. Their work load was heavy during a seven-day work-week for about four hours in the morning and the same amount of time in the evening. Into these brief periods of

intense activity were crammed the reception of the few hundred available observations at morning and evening, followed shortly by the output from below of the national forecasts.

The feature in the basement was the printing room, with its small hand-fed press, cases of lead type and a map-engraving outfit. Here the "daily weather map" was printed (about 800 copies every week-day) for local, national, and even some international distribution. One of Mr. Upton's most vivid memories is of filling-in for the map engraver for periods of leave – a heavy dirty job, especially on a hot summer's day.

The Meteorological Service has come a long way since 1931 with its simple instruments and limited communications system. Instead of a few hundred stations sparsely scattered around the country there are about 2,400 stations in the basic weather observing networks. Studies on the Arctic, ozone, studies in agrometeorology, micrometeorology and biometeorology, the use of highly-advanced instrumentation and computers have now been added to the little nucleus of meteorologists who started over one hundred years ago.

WHY? WHY

R.R. No. 3,
Orillia, Ont.

July 27, 1974

The Weather Forecasters
Department of the Environment
Toronto International Airport
Toronto, Ont.

Sirs:

Weather forecasts are strange things. I am more convinced of this than ever after yesterday. Every one I heard said the same thing: a "cold front" was "sweeping" from the Northwest Territories, our way, and would probably keep our province cloudy all day today.

Consequently, it was a surprise to wake to yet another hot, humid, sticky day, pale sunshine, and blue mists across the fields. It was also a surprise to hear no mention of the so-called "cold front" on the morning forecasts at all! What happened to it? Did it ever exist? Or was it merely a figment of some weatherman's overactive imagination?

This I dislike very much about weather forecasts. There you are with, presumably, all the modern equipment and technology at your disposal, and still you put out forecasts like that, completely different from one day to the next, and completely *ignoring* the previous guess. It sort of reminds me of a public speaker on a platform, with his zipper open, desperately talking and pretending it isn't.

How much more honest it would be to say: "Ladies and gentlemen, we're certainly sorry, but we just completely goofed yesterday. Actually that cold front was sweeping *toward* the Northwest Territories, not from it. What we're really getting is the 29th consecutive day of heat and high humidity, which will continue indefinitely. We'll be sure to tell you when it's over.! "

I've even heard mention of a *night shift* at the airport, keeping an eye on the weather all night apparently. Strange that you can't be more accurate. Here, we've heard the refrain, "Showers and thundershowers" until we're absolutely sick of it – yet we have only had *two* good rains since late *May*. At last it has penetrated the minds of the Radio Noon people that a drought is on in Ontario. They, on a *farm* program, have been caroling away about the wonderful dry weather. We have been hurt by the drought for more than two weeks now; our strawberry crop, promising earlier, was just about halved by lack of rain, only one good one after picking began. After nine months of work on it, that's hard to take.

Actually, who is benefitted by your forecasts? They provide a number of fat-pay jobs, no doubt; but what real good do they accomplish? Who is helped by them? They failed miserably in that damaging tornado in Windsor last spring; in fact, I've noted that it is just those big storms which we never hear of on the weather reports until they're all over. I have often heard the propaganda that forecasts help the farmers to plan their work. However, I know a number of farmers, and I don't know of one who feels he can plan his work by them. They simply aren't that accurate . . . . not for such extremely local application. You may say, "we don't claim they are." But after all, the individual farmer is most concerned about what is going to happen in *his* hayfield, *his* grainfield, *his* summerfallow, where he is baling or combining or cultivating. That's where you fail so signally.

I remember one day when I was hoeing in my strawberry rows, carrying a small radio on my belt, and listening to the news and weather at intervals all day. Every forecast insisted on clear weather all weekend. (This was Friday.) All day, as well, I watched a cloud-bank slowly rise across the northwest; yet the forecasts kept up the song about a clear weekend, right through the day. Next morning it was raining. And I've often wondered since, *how*, with all the sophisticated equipment, and their reporting network, did the forecasters miss what must have been an obviously large front moving in? Yet miss it they most certainly did. This is why I can see very little real value in the forecasting system. You just can't depend on it.

Another very annoying habit of forecasters and radio announcers is their *attitude* to weather. Only the hot, dry kind is any good, the hotter and drier the better. Any showers or clouds are spoken of as "threatening." And the sacred weekend! It just *can't* rain then and spoil their pleasure. Apparently such people are just too ignorant to realize that, apart from relatively small irrigated areas, every bite of food they put into their mouths is dependent on *rain*. It's not a matter of, "Well, too bad for the farmers, but after all, it doesn't concern *us*." It is of the *utmost* concern to you, if you only realized it!

Just outside the cities, and for miles of surrounding countryside, farmers are scanning the sky and all but praying for rain – yet the silly radio people yap joyfully about the bee-yoot-iful hot dry day. Such abysmal ignorance on the part of people who look regularly for their three meals a day is nothing short of inexcusable.

I think the city people are in for a severe jolt fairly soon as regards the food situation. The farmers are dropping out at an alarming rate. In all of Simcoe County, I don't suppose you'd find *one* operating farm left per *mile* of road now, and I presume the

situation is basically the same in all the counties from Muskoka southward. There just isn't a cent of profit left in food production. Where you pay 10¢ or 15¢ more on an item, some things the farmer must buy to produce food have *doubled* or *tripled* in cost in the space of a single year. Baler twine is about *four times* last year's cost. Can't you just hear the city people scream if they were confronted with that kind of increase in food prices? Meanwhile the price paid *to* the farmer for pork decreased 30% in the first three months or so of 1974! Beef and eggs are about the same. So, in spite of all the politicians' hot air about how "we must keep farming profitable" – (too late for that already) the land operators are quietly dropping out. A city family is always ready and eager to take over, and turn a producing farm – keeping its owner and 40 to 50 others fed – into a glorified playground keeping one family only – and as far as food is concerned, not even that! They buy their food from the stores too, rather than grow their own! Too bad – but that's how it is. One thing about it – perhaps these city farmers will appreciate the hot, dry forecasts more than the genuine farmers did.

Yours truly,

George Whitney
R.R. No. 3
ORILLIA, ONTARIO

Toronto Weather Office
Box 159
Toronto AMP, Ont.
L5P 1B1

July 31, 1974

Mr. George Whitney
R.R. No. 3
Orillia, Ont.
L3V 6H3

Dear Sir:

Your letter of July 27, 1974, has been referred to me. While some of your criticisms of the weather service are indeed justified (the forecast you referred to in your opening paragraphs was indeed a bad forecast). I believe some of your other comments arise from either a lack of information, or a misunderstanding concerning the extent of forecast services available and the terminology used in forecasts.

I would like to correct your statements concerning the Windsor "Tornado". Weather Warnings for the Windsor area were issued on the day in question as early as 10:30 a.m. when a Heavy Thunderstorm Advisory was disseminated. At 12:55 p.m. the advisory was updated to a Severe Thunderstorm Warning for the Lake St. Clair region (which includes Windsor) and I quote a part of this warning:

> "Heavy Thunderstorm activity is expected over the Lake St. Clair Region . . . . with several of these likely to produce hail 1 to 1-1/2 inches in diameter and

wind gusts to 70 mph. There is also the slight possibility of a tornado touching down in the area . . . "

This warning would have provided a minimum of 6 hours advance warning to Windsor residents who heard it. Unfortunately, a forecaster has no way of communicating his advice to individual citizens, but must rely on the Communications media. Even if the warning had been heard, there is no way of controlling an individual's use of it.

In your letter you posed a question concerning the benefits to be derived from the forecast services provided by the Atmospheric Environment Service. Leaving aside the matter of Agricultural forecasts (which are considered of value in some quarters) I will mention a few of the users to whom we provide services.

1. *Aviation*

   The Toronto Weather Office prepares area and terminal forecasts 4 times daily for use by Airlines and general aviation. In addition, we provide a pre-flight briefing service to domestic and international carriers operating to hundreds of points on the North American and European continents.

2. *Forestry*

   Detailed forecasts are prepared daily which provide information for the calculation of fire danger indices and which are used to assist in the planning of fire fighting operations.

3. *Marine Interests*

   Forecasts are prepared daily for the Great Lakes and are used by "Lakers" and ocean going vessels. Near shore boating forecasts are also prepared for small craft.

4. *Highways*

   During the winter months, forecasts of snowfall amounts at numerous Ontario locations are prepared and are used by the Ontario Highways Department in deploying manpower and equipment for snow removal.

In addition to the above noted material, forecasts are prepared for the general public 4 times daily. The synopsis of a public forecast tends to be slanted towards those activities that the forecaster believes the general public to be particularly concerned with during that season of the year. Consequently, during the summer months, one often finds heavy emphasis placed on weather that is suitable for outdoor activities. But it is precisely because we *cannot* hope to serve all interests with a forecast as generalized as the Public Forecast that we issue special forecasts for special users. Consequently, I would suggest that you make use of the Farm Weather Forecasts which are heavily slanted towards agricultural interests and which have considerable input from agricultural representatives concerning crop conditions, and type of farm operations in progress as background information. Agricultural forecasts issued during July have more often referred to the *lack* of precipitation and to moisture stress conditions in crops rather than to the "beautiful sunny weather."

Most people hear the weather forecasts on radio. Again, and perhaps unfortunately, we are unable to control the manner in which they are presented by the media. It is equally distressing to me to hear a forecast that was written "Sunny but with afternoon thundershowers in a few localities" wind up "Showers and Thunderstorms" when it is

broadcast. On the other hand, we have not the capability of forecasting the occurrence of showers or thunderstorms on as fine a scale as from farm to farm, and I doubt that we ever will. But the forecasts can be useful if one understands what message the forecaster is trying to convey through his selection of terminology. For example, if the forecast were to say "showers in a few localities" one would expect that the probability of his particular farm receiving rain would be very small.

I hope that the above comments will provide you with some useful information.

Sincerely,

P.J. Pender
Acting Chief Meteorologist

GATE: LES CHERCHEURS FONT LA PAUSE

Tiré de "Le Soleil" Dakar, Sénégal

L'expérience du GARP (Programme Global de Recherches Atmosphériques) est maintenant dans une période que l'on dit d'interphase; en termes plus clairs, les opérations sont en veilleuse, et ne reprendront que le 28 juillet prochain. En somme, ce sont là des moments de répit que les chercheurs mettent à profit pour "récupérer" des efforts fournis ces derniers temps.

De fait, ils continuent à travailler, mais au ralenti . . . En effet, cette phase dans laquelle ils se trouvent leur permet, à la place des missions aériennes ou en mer, d'échanger des vues de discuter de problèmes relatifs à cette expérience, de repenser leur mondes d'observation . . .

Au reste, même les avions et les bateaux bénéficient de cette période d'"interphase"; il y en a qui sont restés à Dakar pour y subir des réparations éventuelles et aussi des opérations de maintenance, les autres se retrouvent maintenant à Abidjan, Monrovia, Freetown, ou encore du côté des Etats-Unis ou de l'Amérique du Sud. Mais ils seront bientôt de retour à Dakar, pour participer à la seconde phase de cette expérience du "Global Atmospheric Research Programme."

En attendant la reprise des opérations, qui doit avoir lieu le 28 juillet, on peut faire le point. M. Mansour Seck, le directeur de la Météorologie nationale, s'y est prêté. Mais d'abord, une petite rétrospective. On sait qu'un planning avait été elaboré par le Centre des Expériences Tropicales, et qui était relatif à cette "flotte" de bateaux et d'avions devant effectuer des mesures pendant l'expérience. Un planning qui, s'étendant du 15 au 25 juin, constituait une sorte d'inter-comparaison en ce qui concerne les bateaux et les avions sur le plan du ravitaillement, des dispositions à prendre durant la phase passée.

Ainsi, pendant la période allant du 26 au 16 juillet, quelque trente bateaux se trouvaient au large de Dakar, effectuant des mesures aussi nombreuses que diverses des mesures météorologiques aussi bien en surface qu'en altitude, des mesures océanographiques . . . qu'en principe, on effectuait toutes les trois heures, étaient ensuite communiquées par radio au centre de contrôle des opérations du GARP, situé dans le nouveau bâtiment de l'aéroport de Yoff. Ces observations sont également transmises à tous les pays par l'intermédiaire de ce que les techniciens appellent le système de télécommunications globales (GTS) qui relie les centres mondiaux aux autres centres régionaux . . . Ici, s'arrête la rétrospective. On aborde la seconde phase de l'expérience.

A ce propos, il faut noter que dix bateaux viendront s'ajouter à ceux déjà présents, portant ainsi le nombre de ces engins aux quarante dont il était question; à souligner également que ces mêmes bateaux seront renforcés par une soixantaine de bouées larguées dans l'océan pour compléter les mesures.

Il faut aussi parler de cette équipe dénommée "Mission Selection Team" qui, en fonction des conditions météorologiques et des cinq sous-programmes ETGA; en fonction également des mesures effectuées à bord de chaque avion et de la performance de chaque appareil, désignait un certain nombre d'aéronefs pour effectuer une mission le lendemain.

Et puis, un point qui a son importance. Dans le souci d'éviter des difficultés entre le trafic des avions du GARP et le trafic régulier, un espace aérien avait été réservé aux avions de l'ETGA; cet espace se situait à huit cents ou mille mètres de Dakar. Ces avions (ceux participant à l'opération) pouvaient voler des bas niveaux jusqu'à douze mille mètres, mais ils n'avaient pas le droit de sortir de l'espace qui leur avait été réservé; il faut aussi savoir que tous les avions réguliers volant à destination de l'Amérique du Sud devaient utiliser des routes aériennes ne traversant pas l'espace réservé.

M. Mansour Seck conlut. Les observations ainsi faites seront utilisées dans un triple but. "A court terme pour les prévisions à courte échéance (24 à 48 heures par rapport aux prévisions de Yoff); à moyen terme, elles seront utilisées par rapport au sous-programme pour une durée de trois à quatre jours; à long terme, ces données seront archivées pour tester les modèles mathématiques basés sur des lois de thermodynamique et de mécanique . . .

BODY CAN HANDLE SOME BUT NOT ALL FORMS OF POLLUTION

by Wolf Berger – German Tribune

Everyone knows that environmental pollution can be a health hazard, but in order to arrive at some scale of priorities, since the cost of implementing all possible precautions would be prohibitive, it must be understood that there are kinds of pollution with which the human organism is perfectly capable of coming to terms.

According to Prof. Hermann Eyer of the Pettenkofer Institute of Hygiene and Medical Microbiology at Munich University a certain degree of environmental pollution is inevitable. Its nature and extent must not, however, be allowed to exceed tolerable levels. these being reached at the moment health risks begin.

At what point does pollution come to be a health hazard though? Prof. Eyer maintains that industry and local authorities are a shrewd and well-informed judge of when this is the case. It is in rural districts and small firms that ignorance is more widespread and the consequent danger more serious.

"To gain the support of the small fry in actively combating environmental pollution would largely solve the problems with which we are confronted," the Professor claims.

As a medical man Prof. Eyer has decided views on the health hazard pollution represents, and his yardstick is as unusual as it is convincing. Pollution is only dangerous when the body is incapable of dealing with it by the natural processes of excretion or secretion.

The body is only capable of coping with pollution when it is an old friend, as it were. By no means all dust finds its way into the lungs, for instance, only particles that are clearly smaller in diameter than the red blood corpuscles.

The dust that descends in all shapes and sizes on built-up areas amounts to an average 500 mg per square metre per day. In certain trades and sectors of industry this level is exceeded a hundredfold, yet 500 mg is still rated the ceiling beyond which dust constitutes a health hazard.

The smaller particles that find their way into the alveolae are another matter altogether, however. In urban areas per capital intake amounts to several milligrams a day. At present lungs are free from these fine dust particles until children start going to school, but from the age of fifteen the lungs contain an average of more than 150 mg of dust.

For the next twenty years intake increases by ten to fifteen milligrams a year and by the time the lungs begin to lose their natural capacity to cleanse themselves at the age of forty or so the dust intake rapidly increases.

A few more grams per decade is the upshot for people working in dusty jobs. They grow short of breath and have to work fast so as to rid their lungs of this dangerous fine dust.

The amount of lead the body can handle per day amounts to several hundred micrograms, Prof. Eyer claims on the basis of years of experience. This amount can be handled because the body contains a storage system in the bones that is capable of warding off blood and tissue poisoning from lead within certain limits.

Benzpyrene is no stranger to the human body either. This toxic hydrocarbon can also be handled by natural processes. The nitrous oxides resulting from all manner of combustion ranging from car exhaust to cigarette smoke are far more dangerous, it would seem. City levels have long passed the danger point, particularly at busy traffic junctions.

A number of dangers claimed to result from environmental pollution may frequently be overrated, scientific evidence shows. Serious risks, remain in respect of both garbage and drinking-water. Sulphurous domestic heating oil and carbon monoxide can be killers – not only at busy road junctions but also in smoke-filled bars when inhaling cigarette smoke.

AES EXHIBIT AT FLARE SQUARE
CALGARY EXHIBITION AND STAMPEDE
July 4 – 13, 1974

The Calgary Exhibition and Stampede is well known across Canada but the term Flare Square is probably new to those who have never visited the Stampede. Several years ago a site was developed on the Exhibition grounds where it would be possible to feature special displays devoted to a particular group or industry. Flare Square is about 40 acres in size and is dominated by a large natural gas flare at the entrance which gives the display area its name. In previous years the agriculture and petroleum industries have been featured and last year the whole area was devoted to a salute to the R.C.M.P.

This year's theme was a 'Salute to Aviation'. Canada's major airlines, the Canadian Armed Forces, twenty-three Federal Government departments and agencies, NASA and the Lockheed Aircraft Corporation were among those with displays. Ron Miller, Head of Information Services, AES Headquarters was involved in the development of the AES display and travelled to Calgary to assist in setting up the display and to attend the official opening.

The Federal Government Exhibit which was co-ordinated by Information Canada was housed in three portable geodesic domes erected on the site. Outside, colourful banners carrying the federal logo invited visitors to enter. Domes 1 and 3 consisted of static displays while Dome 2 was an audio-visual presentation of 12 minutes duration orchestrated to convey quickly and impressively the federal role in aviation. The presentation was of the multiple screen variety with lively background music. AES aviation weather services and ice reconnaissance were featured in segments of the presentation.

The AES static display in Dome 1 consisted of models of the ice reconnaissance aircraft, a map showing the area of ice reconnaissance and forecast activities and a display board for facsimile and teletype traffic received 'live' from machines especially installed at the exhibit.

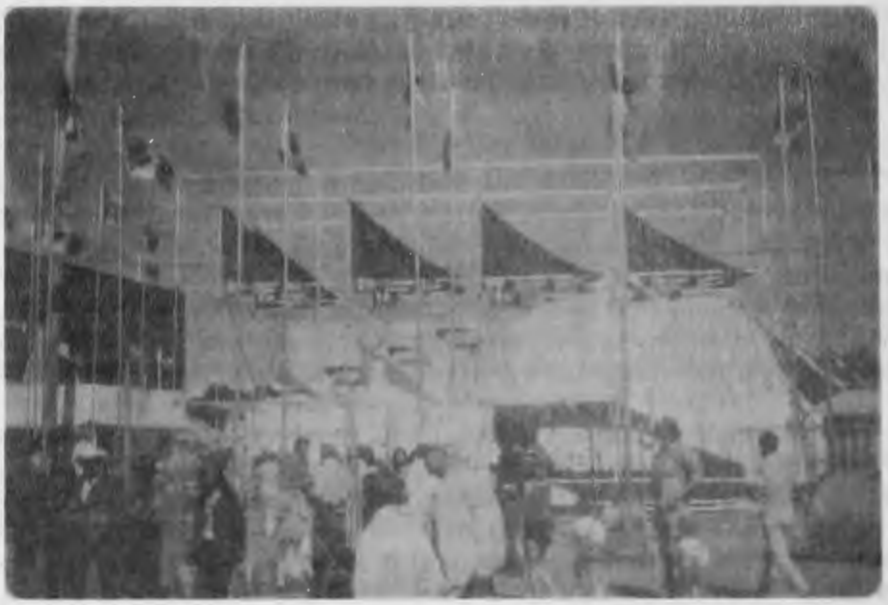
The display was co-located with the Department of Communications display which featured models of Canada's satellite and many visitors on hearing the facsimile machine in action asked if the signals were coming direct from a satellite!

The display was manned continuously – Clarence Milgate, Sr. Meteorological Inspector and Norm Gaskarth, Supervisor Weather Office Standards escaped Regional Office for about five days each to man the display. Gord McDonald, Sr. Observer at the Calgary Weather Office lent his assistance for a couple of days and the remaining hours were covered by a casual employee hired for the period of the display.

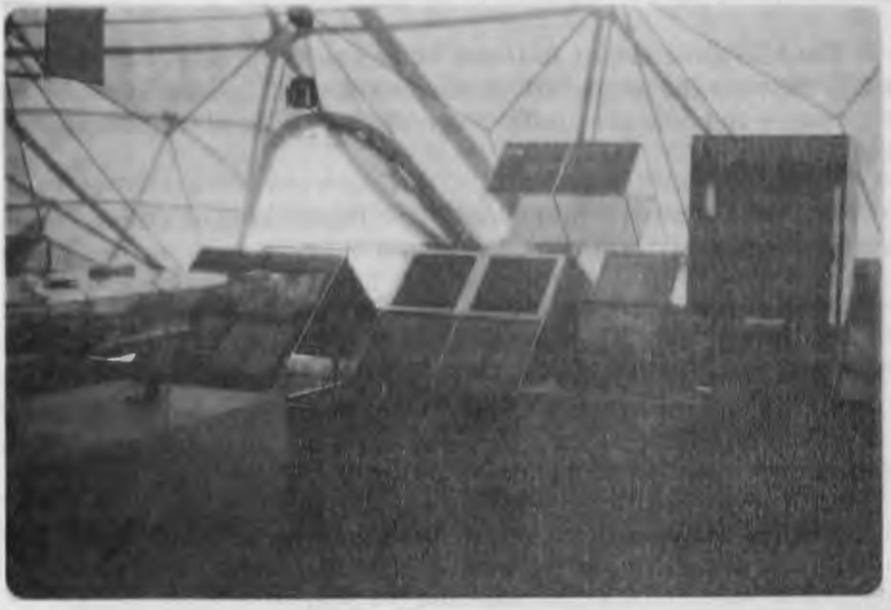
Manning the display proved to be interesting as many people stopped to ask questions or to just talk about the weather. A good many pilots and others in the aviation industry stopped to have a look at the maps and the aviation weather display.

The display was well received by the visitors to Flare Square and provided a good opportunity to meet some of the users of our services and to tell a little of the AES story to those who stopped to visit.

The federal exhibit is to be shown at the Canadian National Exhibition in Toronto in August.



Entrance to Exhibit – Flare Square.



AES Exhibit No 1 Dome Flare Square.

ALL ABOUT THE WEATHER . . .

by B.E. Goodison

On June 2, 1974 a special events day on "All About the Weather" was held at the Hydrometeorological Research Site at Cold Creek Conservation Area near Bolton, Ontario. In co-operation with the Metropolitan Toronto Region Conservation Authority, AES Headquarters staff, C.B. Adamson, B. Goodison, W. Hogg and M.E. Malone, gave brief talks and answered questions on many varied aspects of weather and our weather service. Special emphasis was given to forecasting and special use forecasts and to the general theme of weather and water which is of special concern to Conservation Authorities. A wide ranging visual display, prepared jointly by those involved, was set up in the Conservation Field Centre.

Technical questions on instrumentation at the Cold Creek station were answered by AES personnel. In this photo, M.E. Malone describes the operation of the Fischer-Porter Precipitation Gauge.

An unexpected visitor, H.L. Ferguson, was drawn into the discussion on the operation of the Class A Evaporation Pan and the possible uses of the data.

A centre of interest for many was the portable meteorological sensing and display unit kindly supplied by AES Information Services.

The highlight of the day was the release of a radiosonde package. Weather conditions were so perfect that the release was successfully made by two year old Stephen Hogg.

Photos courtesy of Dr. Neil B.A. Trivett

ATMOSPHERIC ENVIRONMENT SERVICE SAYS THANKS TO VOLUNTARY MARINE WEATHER OBSERVERS

J.R.H. Noble, Assistant Deputy Minister of Environment Canada's Atmospheric Environment Service, has announced the names of the ships and ships' officers who will receive the Service's annual award for excellence in weather observing at sea during 1973.

The Service maintains weather observing programs on over 200 merchant and government ships which operate in nearly all parts of the world, including Canadian coastal waters and the Great Lakes. Four times a day, at specified hours, their officers take a few minutes from their regular shipboard duties to record the wind, pressure, temperatures, visibility, clouds, waves, and other aspects of the weather. They transform all this information into a condensed code and hand the report to the Radio Officer, or transmit it themselves to the nearest coastal radio station. From there it goes to weather offices in many countries where it is used, along with hundreds of other such reports, to prepare weather bulletins and forecasts for the mariners themselves, the general public, and many other agencies.

Canada's voluntary weather observing fleet is part of a much larger international scheme in which about 7,000 ships belonging to 40 different nations participate. In 1973 Canada's ships produced over 75,000 weather reports – a new record. Besides their immediate value to weather forecasters, these reports eventually go into a vast international pool of marine weather data which is used by scientists for many purposes, not the least of which is the production of marine climatological atlases and Pilot Charts for mariners.

This is the twenty-sixth consecutive year in which these awards have been presented. Forty-three ships and the same number of individual ships' officers received recognition for their good work.

LE SERVICE DE L'ENVIRONNEMENT ATMOSPHÉRIQUE REMERCIE LES OBSERVATEURS MÉTÉOROLOGIQUES MARINS

M. J.R.H. Noble, Sous-ministre adjoint au Service de l'Environnement atmosphérique d'Environnement Canada a nommé les navires et les officiers de navire qui recevront le prix annuel du Service pour leur excellence en observation météorologique marine en 1973.

Le Service maintient des programmes d'observation météorologique sur plus de 200 navires marchands et gouvernementaux qui opèrent dans presque tous les ports mondiaux y compris les eaux côtières canadiennes et les Grands Lacs. Quatre fois par jour, à des heures spécifiques, les officiers délaissent quelques instants leurs tâches normales pour enregistrer le vent, la pression, les températures, la visibilité, les nuages, les ondulations et d'autres aspects du temps. Ils transforment toutes ces données en un code condensé et remettent le rapport à l'officier radio ou le transmettent eux-mêmes à la station de radio

côtière la plus proche. De là, le rapport va dans les bureaux météorologiques de plusieurs pays où il est utilisé avec des centaines d'autres rapports du genre pour préparer les bulletins et les prévisions météorologiques pour les officiers, eux-mêmes, pour le public en général et pour plusieurs autres agences.

La flotte volontaire d'observation météorologique du Canada fait partie d'un système international de plus grande envergure auquel participent environ 7,000 navires appartenant à 40 pays différents. En 1973, les navires canadiens ont de leur valeur immédiate pour les prévisionnistes en météorologie, ces rapports sont éventuellement envoyés dans une banque internationale de données météorologiques marines utilisés à plusieurs fins par les scientistes, dont la production d'atlas climatologiques marins et de cartes pilotes pour les officiers ne sont pas les moindres.

C'est la trente-sixième année consécutive que ces prix sont décernés. Quarante-trois navires et le même nombre d'officiers de navires individuels les ont reçus en reconnaissance de leur bon travail.

OTHER ACTIVITIES OF THE YELLOWKNIFE WEATHER OFFICE

1. Environment Protection are obtaining the current station barometric pressure on a regular basis for Lab. use.

2. Details were abstracted from Marine forecasts for use by North Cruise Lines. who are in the process of cleaning up an oil spill of two years ago. This involves laying booms in Great Slave Lake around the affected area then cleaning up the seepage. The seepage only occurs in the summer when temperature increases and the oil becomes liquid and flows from the otherwise frozen gravel beds.

3. The weather office supplied the noon meridian time to Telstat Canada for setting up a portable antenna. This antenna was used to make a phone call to London and Buckingham Palace, on the occasion of the official opening of the Explorer Hotel.

4. The weather office supplied copies of climatic temperatures and precipitation to the North West Territorial Department of Highways.

5. Two long distance phone calls were received from the U.S.A. regarding flying weather from Calgary and Regina. Information regarding Air Regulations was requested by one caller. Although providing this information is not our responsibility we supplied part of the answer and referred him to the appropriate manual for further details.

6. Several requests for pressure to set home barometers were handled.

7. The Workman's Compensation Board of Alberta, sitting in Yellowknife, required information on the weather and wind speeds for the Grace Lake area the night of July 4th, 1973. Grace Lake is located approximately three miles south of the airport.

8. Several wind forecasts, were provided for the aircraft changeover from wheels or skies to floats. This is critical as aircraft must be hoisted into the air and held by a crane for approximately one hour, if everything goes right, otherwise it can be for a much longer period.

9. A canoe party of twenty-four planning a trip down the Back River called at the office to request information on the breakup of ice in the areas of the headwaters of the Back River 250 miles northeast of Yellowknife. During the conversation it was learned that they were carrying emergency locator beacons for use in a case of dire emergency. Arrangements had been made with the USAF to monitor the frequencies during their weekly flight over the area. The duty briefer pointed out that there were many other flights over the area that might pick up a distress signal and so for everyones peace of mind a tentative plan was sent to area aeradio stations and to the Edmonton Area Control Centre. Then if a beacon signal were to be picked up, and there were no known aircraft in the area, Search and Rescue would know what action to take.

10. Several requests were received regarding rainfall at a highway construction site 30 miles northwest of Yellowknife. These came from the contractor and from the general public interested in navigating the highway.

11. The duty briefer assisted Mr. H. Irving in preparing for his instrument rating exam. Discussions included interpretation of weather information as required for self-briefing.

PERSONNEL

The following have accepted positions as a result of competition:

74-DOE-TOR-CC-39 (two positions)	Meteorology (MT7) Scientific Support Officers Atlantic Regional Headquarters A.D. Gates E.W. Brandon
74-DOE-TOR-CC-69	Meteorology (MT7) Operational Development Meteorologist Atlantic Weather Central Halifax D. Bellows
74-DOE-TOR-CC-303	Meteorology (MT8) Head, Economic Development Weather Services User Requirements Division Field Services Directorate AES HQ, Downsview D.M. Scott

C1902-73-DOE-TOR-CC-290	Meteorology Major Canadian Forces Weather Services Senior Meteorological Office ICAG, Detatchment Baden-Soellingen F.B. Kerkhoff
74-DOE-TOR-CC-61	Meteorology (MT8) Chief Meteorologist Atlantic WC/Maritimes WO Halifax F.G. Williams
74-DOE-TOR-CC-19	Meteorology (MT5) Supervising Forecaster Weather Office Toronto, Ontario A.M. Keating A.J. Shah M.J. Newark
73-DOE-TOR-CC-164	Meteorology (MT7) Supervising Prognostician Analyst – Shift Supervisor Meteorologist Prairie Weather Central A.W. Cott
74-DOE-TOR-CC-3	Meteorology (MT9) Superintendent, Arctic Met. Section, Application and Consultations Division, CSD D.A. Faulkner
74-DOE-TOR-CC-82	Meteorology (MT8) Training Branch CSD W.C. Thompson

The following transfers took place:

P.M. Carroll	From: Gander Weather Office To: Vancouver Weather Office/Weather Central
R.R. Duckley	From: Vancouver Weather Office/Weather Central To: CFWO Comox
W.R. Feverhert	From: Frobisher Weather Office To: Arctic Weather Central

D.A. Forbes	From: CFWO Comox To: Arctic Weather Central
B. Friesen	From: School of Meteorology, Trenton To: School of Meteorology, Winnipeg
D.F. Green	From: Goose Weather Office To: Whitehorse Weather Office
R.A. Howell	From: CFWO Moose Jaw To: CFWO Portage la Prairie
F.B. Kerkhoff	From: Goose Weather Office To: 1 CAG (Baden-Soellingen)
L.R. Legal	From: 1 CAG (Lahr) To: Central Region, Winnipeg
F.J. Letchford	From: CFWO Shearwater To: CFWO Cold Lake
L.K. McDonell	From: 1 CAG (Baden-Soellingen) To: CFWO Moose Jaw
L.J.A. Sortland (Ms.) (Nee Cummings)	From: CFWO Cold Lake To: CFWO Edmonton
F.G. Williams	From: Vancouver Weather Office/Weather Central To: Maritimes Weather Office
Dr. E. Yakimiw	From: CSD, AES HQ, Downsview, Ontario To: Toronto Weather Office

Graduates of Course MT 30 were posted as follows:

R.J. Cormier	To:	Regina Weather Office
R.E. Jones	To:	CFWO Summerside
K. Higuchi	To:	Edmonton Weather Office
B. Konzelman	To:	CFWO Comox
H.P. Schmidt	To:	Winnipeg Weather Office
E.E. Wilson (Mrs.)	To:	Toronto Weather Office

Graduates of UQAM #2 Course were posted as follows:

J.G. Babineau	To:	Maritimes Weather Office
J. Blouin (Miss)	To:	Edmonton Weather Office
J.G. Chouinard	To:	Toronto Weather Office

M.Sc. Graduates were posted as follows:

G.R. Schram	From: University of Alberta To: Arctic Weather Central

Retirements:

R. Anderson	CMC, Montreal
E.R. Burford	School of Met., Trenton
W.R. Hamilton	Vancouver Weather Office/Weather Central
E.J. Kermode	Vancouver Weather Office/Weather Central
G.G. Webster	Vancouver Weather Office/Weather Central
J.B. Wright	Pacific Region Headquarters

Deceased:

A. Moakler	Goose Weather Office

TRIVIA

OFFICE TERMS DEFINED:

Expedite:	Compound confusion with commotion.
Under Consideration:	Never heard of it!
Active Consideration:	Looking in the files for it.
Coordinator:	Staff member who talks and listens well but has no authority to act.
Modification of Policy:	Complete reversal, which nobody admits.

Office Overload Managementips

PSC Poster

"Area Specialist French-Romance Programs." Sounds interesting! !

Expressions diverses

Expression	*Signification ou équivalent*
Tu tombes mal	Tu arrives au mauvais moment
Il s'en fait pour rien	Il est inquiet inutilement
Briller par son absence	Se réjouir de l'absence de quelqu'un
Dans la fleur de l'âge	Au printemps de la vie
Faire une platitude	Une farce de mauvais goût
Bavasser	Dénoncer ou calomnier
S'adonner avec quelqu'un	Bien s'entendre avec quelqu'un
Pitcher une roche	Lancer une pierre
Brûler un feu rouge	Un automobiliste roule sur un feu rouge
Elle demande la lune	Elle demande l'impossible
C'est le dernier cri	C'est la dernière mode

"SI VOUS ÊTES MÉCONTENTS DE LA VIE ÉCRIVEZ MOI"

Il s'agit de la qualité de la vie. André Jarrot, qui en est le ministre, invite ses concitoyens à lui signaler tout ce qui ne va pas dans leur environnement . . .

"Si vous êtes mécontents, maussades, inquiets, écrivezmoi, je suis votre homme. Mon adresse: Ministère de la Qualité de la vie, 2, rue Royale, Paris-8^{e}. Mon ambition à moi, André Jarrot, rendre tous les Français heureux. Toutes les lettres recevront une réponse dans un délai de trois semaines. Les cas qui soulèveront un problème motiveront une enquête. Je connais mes concitoyens. Je sais que tous se lamentent des lenteurs de l'administration, de son accueil, de l'imbroglio des formalités. Désmormais, tous les deux mois je les exposerai au Premier ministre afin de simplifier la paperasserie."

Mais qu'est-ce, exactement, la qualité de la vie? Une idée généreuse du nouveau gouvernement conscient que les Français, moroses, aspirent à quelque chose d'autre, au changement. La preuve que ce bonheur du peuple préoccupe le chef de l'Etat se trouve dans une décision de l'Elysée de consacrer un conseil des ministres à l'amélioration des conditions d'existence des Français. Ce matin-là, indubitablement, M. André Jarrot, ancien champion motocycliste, député-maire de Montceau-les-Mines, ministre de la Qualité de la vie, subira un examen de passage. Un moment difficile qui ne semble pas troubler sa sérénité.

"La préoccupation première des Français, cet été, réside dans les vacances d'austérité. Eh bien! il s'est produit un phénomène encourageant. Beaucoup de ceux qui, par économie, ont renoncé à franchir nos frontières, ont choisi une région de France souvent délaisée: l'Auvergne.

"En 1974, malheureusement, il y aura encore un Français sur deux qui ne participera pas a l'exode estival. Faute de moyens. La première solution que j'ai trouvée avec mon équipe: accroître le tourisme social. Aussi, afin de faciliter l'expansion de ce tourisme de masse, afin de permettre même aux plus démunis de savourer des bols d'air, je compte obtenir que la T.v.a. des terrains de camping soit ramenée de 17 à 7%. Mais ce n'est pas tout. Les paysans qui pratiquent les chambres d'hôtes, un moyen peu onéreux de se loger en vacances, sont encouragés puisqu'ils bénéficieront pour leur installation d'une subvention de 10 000 F et de crédits avantageux."

C'est là le premier obstacle que le ministre devra franchir. Hélas! pour rendre le sourire aux Français devenus grincheux, d'autres difficultés le guettent. Ainsi, la protection des sites menacés par les installations nucléaires, indispensables à la vie du pays dont la consommation d'électricité double tous les sept ans.

"Je crois pouvoir vous faire une petite communication, confie M. Jarrot. Le ministère de la Qualité de la vie sera très vigilant sur le choix des sites pour la construction de ces centrales. Je crois que nous serons maintenant consultés, en accord avec le Premier ministre, le ministre de l'Industrie et celui de l'Equipement. Prenons un exemple: celui du bassin de la Loire. Les centrales nucléaires sont indispensables pour notre indépendance énergétique. Mais pour que ces centrales ne causent aucun préjudice, il faut régler l'étiage de la Loire qui, à son embouchure, passe, selon la saison, de 175 mètres/secondes à quelquefois 2 500. Cela exige la construction de barrages capables de mettre l'eau en réserve en période de crue. Ainsi les riverains trouveront plus acceptable la présence des centrales. Mais cette succession de centrales risque de saccager nos paysages. Et, par ailleurs, il faudra bâtir des tours de refroidissement imposantes: 150 mètres de haut, 100 mètres de diamètre. Comment les camoufler? Un sacré casse-tête."

La pollution est aussi en bonne place dans la liste des points noirs qui gâchent la qualité de la vie. Les remèdes? Voici la première parade. En attendant que la voiture électrique passe du gadget à l'utilisation courante – dix ans, pense-t-on au ministère –, une agence de l'air prendra soin de nos poumons. Il y en aura une par région, soit sept dans tout le pays. Chaque agence rassemblera les capitaux de l'Etat et les redevances versées par les communes et les industries polluantes; les pollueurs seront les payeurs. Chaque somme servira à financer des opérations locales.

"Parlons des lacs, dit M. André Jarrot. Dans ce domaine, il y a du nouveau. Tout d'abord celui d'Annecy: le retard des travaux d'assainissement est rattrapé. Ceux du lac du Bourget débuteront à l'automne prochain. Quant au lac de Nantua, son degré de pollution est tel qu'on envisage de le vider par le fond. Et puis, il y a nos rivières: quinze d'entre elles, fortement polluées, sont en 'traitement.' Alors que l'on prévoyait un délai de vingt ans pour ramener la qualité des eaux de nos rivières à un niveau acceptable, je compte réduire ce délai à dix ans! "

Si tout va vien, le ministre de la Qualité de la vie espère que le Parlement, se rendant à ses arguments, votera, en septembre prochain, une loi qui lui tient à coeur, un peu la pierre maîtresse de cet édifice difficile à bâtir, celui du bonheur: une loi anti-déchets. L'Etat paierait 40% des investissements des communes ou des industriels qui épureront leurs déchets, avant de les rejeter, ou les trieront en papiers, métal, plastique, pour leur récupération. Cette lutte contre le gaspillage économiserait 25 à 50% des matières premières.

"A Montceau-les-Mines, explique M. Jarrot, les ordures sont transformées en matériau à boucher les trous ou bien en engrais.

"Pour conclure, je dirai que tout sera mis en oeuvre pour que les Français soient bien dans leur peau, bien dans leur pays.

Des gendarmes à cheval patrouilleront dans les zones rurales pour empêcher la dégradation et la pollution de notre terre, des gendarmes marins veilleront à empêcher l'extermination de notre faune marine. Enfin, dans chaque préfecture, un chargé de mission de mon ministère siègera en permanence. Les Français doivent retrouver leur joie de vivre."

M. André Jarrot est décidé à devenir, selon le mot de certains de ses collaborateurs, la sentinelle de la qualité de la vie.