



Bulletin

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WATER ACT FOR CANADA

The proposed new Canada Water Act, announced by the Government, is designed to break through "the bureaucratic and jurisdictional maze" that has up to now frustrated efforts at water-pollution control and conservation of water, according to Mr. Otto Lang, the Minister responsible for energy and water resources. "The Canadian public has become increasingly impatient with the failure to develop long-term plans and with the failure of the several levels of government to act in concert," Mr. Lang declared. "The Federal Government," he said, "has the responsibility to take the lead in co-operative action to deal with the growing problem of water pollution and to plan effectively for the management of Canada's water resources in the future. It is almost inconceivable that co-operation would not be secured in dealing with a problem of such public concern. However, in such an unlikely eventuality, the proposed act would give the Federal Government authority to act alone in dealing with the pollution of inter-jurisdictional waters."

Mr. Lang said that, although many projects for conserving Canada's water supply had been successful, there had been undue emphasis on "structural", piecemeal solutions. One of the innovations that would correct this situation would be the Water-Quality Management Agencies, which would be responsible to both the federal and provincial governments and would draw on the advice and knowledge of the people, municipalities and industries directly concerned in cases of pollution. Ratepayers, he added, would be more willing to authorize expenditures on municipal waste-treatment plants if they knew that other municipalities and private industry

were doing their part. Planning would embrace entire regions and river-basins.

Mr. Lang concluded by saying that he intended to meet almost immediately with his provincial colleagues to begin discussions on the implications of the proposed act.

HIGHLIGHTS OF WATER ACT

The following are the chief measures proposed in the new Act:

- (1) Together with the provinces, the Federal Government would designate as a water-quality management area any body of water where there is significant national interest.
- (2) Pollution of waters in such designated areas would be punishable by a fine of up to \$5,000 for each offence. Each day this pollution continued it would be regarded as a separate offence.
- (3) Together with the provinces, or alone, if necessary, on interjurisdictional waters, the Federal Government would launch water-quality management programs in designated problem areas, which would be administered by agencies that would recommend objectives of water quality and steps to achieve these objectives. Agencies would be charged with implementing approved water-quality management plans.
- (4) Water-quality management agencies would design and operate sewage-treatment facilities, col-

- lecting charges for the treatment of wastes delivered to these facilities.
- (5) The Federal Government would enter into agreement with any province to establish intergovernmental committees or agencies to advise on water research, planning, management, and development, and to help co-ordinate and implement water policies and programs.
 - (6) With the provinces, the Federal Government would establish joint commissions, boards or other agencies to conduct water-management programs. Such programs would be concerned with the supply, quality, distribution and other aspects of water – a comprehensive approach to multipurpose water – resource management.

MINISTER'S COMMENTS

A partial text of Mr. Lang's statement follows:

"Canada is faced with a serious situation in the deterioration in the value to Canadian society of our abundant supply of fresh water. The Federal Government is today issuing a statement of policy for water management in Canada, a policy which we intend to implement by legislation to be introduced when Parliament begins its new session in October.

"By issuing this policy statement on the proposed Canada Water Act we are initiating a co-operative attack with the provinces against pollution and a joint program for comprehensive water-resource development based upon the most modern management methods available.

"No other element of our natural environment seems to be in worse shape today than our once fresh waters. A large part of the problem, curiously enough, is that we have so much water – at least two billion acre-feet are annually renewed in the natural cycle of rainfall and runoff. Because everyone, including our neighbors to the south, is so conscious of our water abundance, conservation faces an uphill struggle. The common reaction seems to be: 'Why worry about the quantity or quality of resources in use when there is so much more waiting to be developed?' Some have seriously suggested that, rather than attack excesses in water use and pollution, we should simply import more water from the north to flush out or replace existing supplies.

"This philosophy of unlimited exploitation may have been appropriate to an earlier era when Canadians were preoccupied with developing a new land, the successive wars and the soul-destroying depression. But the waterways which carried the early explorers, fur traders and soldiers, are now being despoiled almost beyond recognition. The mighty lakes and rivers of Canada are now a sorry record of pollution. The St. Croix, the Ottawa, Lake Erie, the Red, the Qu'Appelle, the Saskatchewan, the Okanagan and the Fraser each has its own sad story. Truly a great heritage, and yet we cannot seem to spoil them fast enough. As a recent magazine article asks: 'The rivers have made this country, what have we made of the rivers?'...

WAR ON POLLUTION

"The Canadian people are rightfully impatient with continued inaction and evasive 'buck-passing'. The Federal Government will introduce legislation into Parliament this fall to implement a policy of co-operative and comprehensive management of our water resources, with particular attention to pollution problems. The proposed act will be a major new piece of legislation; but the inspiration behind it is not new. The Federal Government has been increasingly concerned with modern water-management needs in recent years, intensifying its efforts further after the 'Pollution and Our Environment' conference of 1966. Certainly we could have acted in greater haste on some water problems. But there is little to gain from rushing from one emergency to the next. We have been searching for means which are effective and equitable in the long run, qualities which too many past proposals have been unable to demonstrate....

PROGRAMS UNLIMITED

"The proposed legislation would provide for comprehensive water-resources programs. These programs would be broad in scope, would focus on the appropriate basin or region, would consider both confined to limited jurisdictions and limited purposes. The proposed water-quality management process has four elements: first, the designation of a particular body of water as a water-quality management area; second, the establishment of a water-quality management agency; third, the development of a water-quality management plan for describing the water-quality objectives, the waste treatment required, the appropriate effluent discharge fee and waste-treatment charges; and fourth, the implementation of that plan.

"The record of the past has been less than satisfactory. True, many desirable features have been incorporated in plans for development. But equally true has been the over-emphasis on structural solutions – from facilities for waste treatments to dams for the control of floods. We have allocated investments in terms of appropriate programs of financial assistance through outdated legislation. We have too frequently focused our planning on one or two uses, rather than on the total range of purposes to which water can be put. One small water development, planned independently, may set in motion inappropriate patterns of development for long periods of time. Management opportunities are wide and far-ranging, but as each irreversible development occurs, the choice becomes narrowed, and better opportunities are lost. The proposed legislation would provide the mechanism for multi-purpose water-resource planning and comprehensive water management....

MANAGEMENT AGENCIES

"One of the major innovative features of the proposed act will be the provision for Water-Quality

NEW TREATMENT FOR BIRTHMARKS

An instrument designed by engineers of the National Research Council of Canada is now being used by a Toronto plastic surgeon, in a program of experimental surgery that holds out new hope for those born with port-wine stain birthmarks.

The method, which was pioneered in the 1940s by a New York surgeon, Dr. Herbert Conway, resembles tattooing. It involves injection of pigments — primarily whites and greens — to combine with the reds of the stain to form a color-tone that, ideally, would blend perfectly into normal skin surrounding the stain area.

In 1960, this procedure had fallen into disrepute and was all but abandoned by plastic surgeons in North America, when Dr. H.G. Thomson of Toronto began to work on the refinement of the technique.

METHOD STILL NOT PERFECT

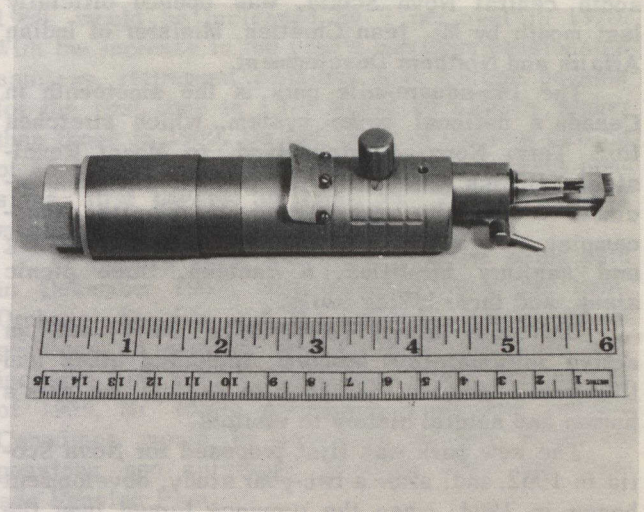
Unfortunately, the method does not solve three major problems: how to insert an adequate volume of pigment at the time of operation; how to prevent leaching away of the pigment particles; and how to obtain a color match of the pigment to the patient.

Five years ago, the first of 70 children was treated in a research program at the Hospital for Sick Children in Toronto. Work started with the original cable-driven Dermajector and then continued with a regular tattoo artist's machine.

It was established that small punctures permitted more pigment to be inserted than large ones, with less associated burning, dermis loss and external loss of pigment. It was also found that the higher the frequency of injection, the greater was



Demonstrated use of the new machine for treatment of the port-wine birthmark.



Close-up of the six-inch instrument currently being used in experimental surgery to remove the port-wine stain birthmark.

the amount of pigment inserted, giving the advantage of being able to inject a large amount of pigment before profuse bleeding started.

NRC EXPERIMENTS

This finding led to adaption of a high-speed air turbine motor to provide the desired high frequency of puncture. Initial designs were plagued with troubles and, in 1967, the project was turned over to S.H.G. Connock, head of the Instruments Section in NRC's Division of Mechanical Engineering.

Three prototype instruments were developed, the latest providing for combinations of 10, 20 and 26 needles held in "needle carriers". The operating frequency of the needles is about 20,000 to 22,000 cycles a minute.

The needles have an adjustable depth of penetration from zero to three millimetres. A "foot" on the instrument, which rests on the skin, controls the depth of penetration and also positions the needle carrier correctly in relation to the skin surface.

Dr. Thomson has turned over a duplicate instrument to Dr. Robert Newton, also a plastic surgeon, who has treated a total of 13 adult patients at the Toronto General Hospital. "We can now insert the pigment without difficulty," says Dr. Thomson. "And while the results of pigment insertion are excellent, that is not synonymous with clinical results being excellent. An evaluation panel has been invited to assess the results of our clinical work. This has been done to provide us with an impartial critical evaluation of the degree of patient improvement."

NINETEENTH NATIONAL PARK

Kejimikujik, Canada's newest national park, in south central Nova Scotia, was opened officially last month by Mr. Jean Chrétien, Minister of Indian Affairs and Northern Development.

The 145-square-mile park is the nineteenth in Canada's national parks system, which stretches from Terra Nova, Newfoundland, to Mount Revelstoke, British Columbia. Its present services include a 250-site campground, a 50-site group-camping area, a supervised swimming beach, boating and sanitary facilities, a canteen, three picnic areas, and three hiking trails.

University-trained naturalists carry out an active interpretation program, including hikes and illustrated lectures, designed to explain the park's human and natural history to visitors.

The new park was first proposed for Nova Scotia in 1962, and, after a two-year study, development began in 1964, when the province turned over the land to the Federal Government.

The park has been zoned to provide for a gradual return of the land to its natural state and in certain areas, a complete wilderness atmosphere is maintained, where travel is by canoe or on foot. Small overnight shelters are provided.

HUMAN AND NATURAL HISTORY

Kejimikujik National Park, a gently-rolling wilderness, is threaded by numerous rivers and sprinkled with some 35 shallow lakes.

Micmac Indians, who inhabited the area long before the first Europeans settled the Nova Scotian coast, left rock carvings on the shores of Kejimikujik Lake. An Indian cemetery on the same lake is to be studied by the National Museum of Canada in 1970.

The park was once the site of extensive lumbering operations and, until recent times, drew sportsmen, who hunted and fished there. Today, with the exception of fish, all wildlife including white-tailed deer, beaver, muskrat, and squirrel is protected. About 100 species of bird, including the blue and gray jay, robin, junco, warbler, and gull are known to nest in the park.

Plantlife varies from the mayflower, violet and other wildflowers that carpet the wooded areas in spring, to forests of red oak, sugar and red maple, beech, pine, and birch. It is believed that some of the islands in Kejimikujik Lake are covered by a relict forest (vegetation that has never been disturbed).

HOUSING STARTS IN JULY

Preliminary figures released recently by the Central Mortgage and Housing Corporation show that 14,955 dwelling units were started in Canada's towns and cities during July.

Urban starts for the first seven months of 1969 now total 100,055 dwelling units, some 17.4 per

cent, or close to 15,000, more units than during the same period last year. Contributing to this increase is a 20 percent increase in starts on apartments and other multiple dwellings and an 11.4 percent increase in starts on single-detached houses.

The July figures represent a seasonally-adjusted annual rate of 187,300 units (the June rate was 201,000).

Actual starts of single-detached houses during July 1969 were up slightly to 4,500 units from 4,487 in July 1968. Multiple-dwelling starts declined from 10,830 units in July 1968 to 10,455 units in July 1969.

STANDARD SIZES FOR CHILDREN'S CLOTHES

Consumer and Corporate Affairs Minister Ron Basford has announced a nation-wide program to promote the use of the Canada Standard Size (CSS) label on children's clothing. Such a label on a garment means that it is sized according to body measurement rather than age.

During a press conference at which young models demonstrated the size differences within a single age-group, Mr. Basford said: "Many parents have complained to us about the trouble they have buying children's clothes which fit properly. Obviously, all eight-year-olds are not the same size and the consumer should be able to buy by measurement rather than age. Today we are launching a program to encourage manufacturers to produce children's clothes in Canada Standard Sizes, and we are urging mothers to buy only those items carrying the CSS label."

The CSS program is voluntary, but manufacturers wishing to use the standard label must obtain a licence from the Department of Consumer and Corporate Affairs and conform to the regulations. Abuse of such a licence could lead to its suspension or prosecution with a maximum penalty of \$5,000.

Mr. Basford said that the major retailers and manufacturers had welcomed the program and were assisting in its promotion because a better fit for children's clothes would mean fewer returns of merchandise. The Department of Consumer and Corporate Affairs is publicizing the CSS label in its *Consumer Communiqué*, in retail outlets across the country, in the press, and on radio and television.

The children's sizing-standard based on body measurements was developed by the Canadian Government Specifications Board, which includes manufacturers, retailers, consumers and government officials.

Says Mr. Basford: "There is a good deal of economic waste and inconvenience to the public because of the lack of acceptable standards in many lines of consumer goods. The Consumers' Association of Canada and other interested groups have long advocated the action we are taking today, and the establishment of standards in other commodities is receiving our closest attention."

RESPONSE TO UNRWA SPECIAL APPEAL

The Government of Canada has announced a special supplementary contribution of wheat flour worth \$500,000 to the United Nations Relief and Works Agency. The contribution is being made through the Canadian International Development Agency in response to a special appeal by United Nations Secretary-General U Thant.

In making his appeal, the Secretary-General pointed out that without special contributions it would be necessary for UNRWA to reduce essential services to Palestine refugees in the Middle East. He said that the large number of refugees to which the United Nations Relief and Works Agency was extending assistance had placed the Agency in a difficult financial position.

The wheat flour contribution is in addition to Canada's pledge of \$1,200,000 to UNRWA for the current fiscal year.

SLIGHT RISE IN PENSIONS

Increases in the Old Age Security Pension and the Guaranteed Income Supplement in 1970 were announced on August 21 by Health and Welfare Minister John Munro. Mr. Munro and Revenue Minister J-P Côté also jointly announced similar increases in Canada Pension Plan retirement pensions, survivors' benefits and contributions, effective next year. Cheques issued in January will reflect these increases.

This action will follow a 2 percent increase in the pension index, the maximum allowed by legislation, from 113.7 for 1969 to 116.0 for 1970. The pension index reflects increases in the consumer price index which, beginning last January was converted to a 1961 time-base from the previous 1949 time-base.

BENEFICIARIES

The maximum monthly amount of the combined Old Age Security pension and Guaranteed Income Supplement in 1970 will be \$111.41 (at present \$109.20). The OAS pension will rise from \$78 to \$79.58 monthly. More than 1,600,000 Canadians will benefit, including those whose pensions will begin in January when the eligible age will drop to 65 years. In addition, 780,000 Old Age Security pensioners will benefit from an increase in the Guaranteed Income Supplement. The maximum monthly GIS payment will rise from \$31.20 to the 1970 rate of \$31.83.

Mr. Côté said that the maximum annual pensionable earnings under the Canada Pension Plan would reach \$5,300 in 1970, up from the 1969 figure of \$5,200. He also pointed out that the maximum yearly contributions by employers and employees would rise to a new figure of \$84.60 each. The 1969 rate was \$82.80. For self-employed persons, the new maximum would be \$169.20. It was \$165.60 this year.

CPP PENSIONS

Mr. Munro said that all retirement pensions under the Canada Pension Plan being paid in December 1969, would be increased by 2 per cent in 1970. With the increase in the year's maximum pensionable earnings, retirement pensions that become payable for the first time in 1970 would be slightly higher than those in 1969. On the basis of the new ceiling of \$5,300, the maximum rate of full retirement pensions, first payable in 1976, will rise to \$110.42 monthly from the present \$108.33.

In January 1970, survivors' benefits being paid in December 1969, will increase by 2 per cent. Orphans' benefits and the flat-rate components of pensions to widows and disabled widowers will increase from \$26.01 to \$26.53 a month. By the end of 1969, Mr. Munro estimated, more than 140,000 Canadians would be receiving monthly retirement pensions and survivors' benefits under the Canada Pension Plan.

The maximum death benefit payable under the Plan, for deaths in 1970, will be \$530.

SALE TO AIR INDIA

Air India has ordered a *Boeing 747* digital flight simulator worth \$2,800,000 from CAE Industries Ltd., bringing to three the number of 747 simulators now on order with the Canadian company. The sophisticated flight-training machine, with a unique six-degree motion system that can duplicate almost every movement of the actual aircraft, will be developed and manufactured by CAE.

This is the first CAE flight simulator to be ordered by India's international airline, which now operates a fleet of 10 *Boeing 747* aircraft over routes stretching from Japan and Australia, through Southern Asia, Africa and Europe, including the Soviet Union, to the United States, carrying some 300,000 passengers annually. Air India, which is expanding rapidly, has two *Boeing 747*s on order and four supersonic transports on option.

The CAE simulator will be delivered to the airline's flight-training center in Bombay in 1971.

Faithfully reproducing all the sights, sounds, motion and feeling of an actual aircraft, with complete flight deck identical to that of the plane and the most modern flight instructor's aids, the computer-controlled simulator is considered to be an essential flight-training aid by all modern airlines.

CAE is ranked among the world's top aircraft simulator manufacturers, with 15 commercial flight simulators under development or delivered to 10 major international airlines and one aircraft manufacturer, and another 78 military simulators in use with the defence forces of 10 Western nations. It is currently developing *Boeing 747* simulators for BOAC and a consortium of KLM Royal Dutch Airlines, Swissair and SAS Scandinavian Airways Systems, and a Lockheed *TriStar* simulator for the Lockheed California Company.

FOREIGN STUDENTS IN CANADA

The number of students from outside Canada at Canadian universities and colleges in 1968-69 was: Newfoundland, 98; Prince Edward Island, 79; Nova Scotia, 871; New Brunswick, 480; Quebec, 4,477; Ontario, 6,453; Manitoba, 1,316; Saskatchewan, 440; Alberta, 1,413; and British Columbia, 1,796. This brought the total number of foreign students in Canada to 17,423.

KILLAM RESEARCH AWARDS

Two of the 13 research projects receiving Izaak Walton Killam Memorial Awards from the Canada Council this year for the first time are major studies of the relation between the economies of Canada and the United States. Eight other projects receive renewed support for a second year.

The awards, worth a total of \$527,924 are made possible by a \$17-million bequest of the late Mrs. Izaak Walton Killam. They mark the second year of this special program which is aimed at the support of a few scholars of exceptional ability engaged in research projects of far-reaching significance.

Included in the awards is a grant of \$20,872 for research on the sensitivity of the Canadian economy to economic fluctuations in the U.S., which goes to Professor Gideon Rosenbluth of the University of British Columbia, Vancouver, in association with Professors Philip A. Neher, also at UBC and Keith A.H. Hay of Carleton University, Ottawa. This project will include both close statistical analysis of the two economies and theoretical study of short and long term changes. It should lead to greater understanding and control of disturbances of the Canadian economy from outside influences.

Also headed by an economist from UBC is a research project on the international repercussions of changes originating in the Canadian or United States' economies. Receiving an award of \$22,700 is Professor John F. Helliwell, UBC, in association with Professors Harold T. Shapiro, of the University of Michigan, Gordon R. Sparks, of Queen's University, Kingston, and Mr. Ian A. Stewart, Research

Adviser to the Bank of Canada. The project will be conducted by linking together quantitative models of the two economic systems. Apart from the theoretical value, the results of the research may have a bearing on policies regarding Canada's balance of payments.

WATER ACT FOR CANADA

(Continued from P. 2)

Management Agencies. We see in these a breakthrough in the bureaucratic and jurisdictional maze. These agencies would be established sequentially when and where they are needed. They would be responsible to both the federal and provincial governments, yet would employ the advice and knowledge of local people, local municipalities and local industry — those who create the pollution and yet are the most seriously affected by it. The proposed legislation would provide means, through a variety of processes — information exchange, data-collection, planning, pricing, operation and surveillance — of implementing plans for improved water quality. We see industry updating production processes, installing advanced waste-treatment facilities, or utilizing and helping to pay for central waste-treatment plants. We see ratepayers more willing to authorize municipal treatment plants, knowing that the quality requirements have been geared to their needs, that other municipalities are doing their part and that industry is shouldering its burden. These, then are some of the wider implications of the establishment of these agencies.

"These are some of the highlights of the proposed water legislation. First, co-operation through consultation, joint planning and shared development; second, flexibility in the formation of new institutions, in the setting of cost-sharing formulae, and in tailoring the programs to suit local conditions; third, breadth of concept and of concern for all views; fourth, emphasis on urgent problems, particularly pollution; and fifth, vigor in initiative and determination to achieve progress...."