

The villagers of remote Bouchette, Quebec, drink the tea-colored water straight from the Gatineau River. This year typhoid hit. The Ottawa River and the St. Lawrence near Montreal are polluted badly, and across the continent near Vancouver the lower Fraser is growing foul. Parts of Lake Erie are nearly dead and Lake Ontario is dying.

been building for years, but recognition has been relatively recent. Norvald Femreite, a graduate student at Western University, tying together the rumors, ideas and suspicions of many scientists, measured the mercury in fish last year. He found the poison content far above a safe limit. People eating the contaminated fish were threatened and there were other dangers too. Mercury in alkaline waters evaporates easily, adding to the heavy amount in the air produced by burning coal and oil, and then rains down on fresh water and crops alike.

These conditions, duplicated and often magnified around the world, have created a strong movement in Canada to clean up now.

On a significant, if limited scale the Ontario government has sued Dow Chemical Co. of Canada, identified as the main source of mercury in Lake St. Clair and the St. Clair River, for \$25 million, to reimburse the fishermen for their massive financial loss. The Manitoba government already had sued a chemical firm for its pollution of Lake Winnipeg. And a hundred-mile stretch off the Arctic Coast of Canada has been set aside as a pollution free environment. The village of Bouchette is struggling with the fiscal problem of cleaning up the Gatineau.

The main action, however, centers on the border. This summer the Canadian and United States governments formally began their second crusade to clean up the two most contaminated Great Lakes, Erie and Ontario, and the international section of the St. Lawrence River.

J. P. Bruce, director of the Canadian Centre for Inland Waters at Burlington, Ontario, says Canada's problem can be divided into two main parts — the pollution of the Lakes and the pollution of the rest of the inland waterways.

"They are equally important in terms of local and regional effects," he said, "but the Great Lakes are by far the most important economically because of the great number of Canadians who live in the area."

By the last census, 74 per cent of all Canadians live within 100 miles of the Canadian-U.S. border, most of them in the Great Lakes region.

THE FIRST Canadian-U.S. clean-up started with the Boundary Waters Treaty, which prohibited pollution on either side "to the injury of the health and property on the other." The International Joint Commission was founded in 1909 to keep track of the treaty.

Waste from new towns and heavy industries was beginning to destroy the lakes' ecosystems and endanger the health of the people. The typhoid epidemic of 1912 caused the two governments to commission a six-year definitive report from the IJC, evaluating conditions of the Great Lakes and recommending solutions.

The broad solutions recommended were never adopted. Instead, by 1920, a much cheaper answer apparently was found: the bordering cities began to purify the lakes with chlorine, a new magic formula. Everyone relaxed; no one seriously thought the world's largest inland waterway ever would be threatened again.

Fifty years later, with thirty million people in the Great Lakes region, parts of Lake Erie are moribund and the other four lakes are failing fast.

Fish have died in great "kills" from the lack of oxygen. Blue pike, whitefish and cisco have almost vanished. The yellow walleye, the lake trout and the sauger are diminishing as less valuable, pollution-tolerant fish like the smelt and the yellow and white perch are taking over. Sometimes, particularly in late summer, no fish at all can live in the western end of Lake Erie, near Detroit and Windsor.

The 1970 IJC report, accepted by Canada and the United States, constitutes the basis for an agreement currently being drafted by the two countries. It will incorporate a number of measures, the most important of which is the agreement on common water quality objectives for the Great Lakes.

"The water will be good enough for any kind of fish to live in by 1975," Jack Davis, the new Minister of Environment, told a press conference following a joint meeting at the State Department in Washington, D.C. in June.

To accomplish this the nutrient removal program must be finished by the end of '73, and all treatment facilities brought up to standard by 1975.

Last month in a prelude, Canada's Federal Government agreed to lend up to \$167 million to Ontario, twenty-five per cent of it forgivable, to construct sewage treatment plants and trunk sewers around the lower Great Lakes and St. Lawrence River.

External Affairs Minister Mitchell Sharp and Russell Train, chairman of the U.S. Council on Environmental Quality, jointly announced the 21-

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