

is expected to double in North America during the next 15 years. And now the industry is looking to our low grade coal deposits as a potential source of our oil needs of tomorrow.

It becomes evident when we contemplate these facts that the time is here now for an increasing awareness by the coal industry and by the citizens of North America concerning our respective needs and problems. We can no longer live in an isolated world of our own concerned on the one hand about how much coal can be mined or concerned on the other hand about maintaining the pristine nature of our countryside. We must recognize that the ecology of the particular locality we live in demands intelligent consideration. Emotional and unrealistic thinking must give way to careful

planning by groups including experts in all related fields as well as the mining industry in order to establish a sensible approach to reclamation with full recognition of relative values and economics. Certainly the reclamation of mined lands must in the future be considered a cost-sharing program with not only the mining company, but all others who benefit from this resource, sharing in the cost of reclamation.

Only by such an intelligent and cooperative approach will the problem of reclamation of mined lands to their highest potential use be solved, and the mining company permitted at the same time to recover the ever-increasing tonnage of coal needed to maintain the benefits you and I demand in our modern society.

## POLLUTION AND THE NORTH SASKATCHEWAN RIVER

by **Beattie Martin**, CBC, Regina

**EDITOR'S NOTE:** So little information is available to the public about the extent of water pollution in our rivers, and what is being done to control it, that we thought our readers would be interested in this broadcast given by Mr. Martin on Sports Week, a CBC western regional radio programme, October 21, 1968. We should ask ourselves whether public agencies are actually doing enough to control pollution.

"Growing pollution of our waterways is a threat not only to our fish and wildlife, but to all outdoor recreation involving water and, indeed, to the very health and welfare of neighboring communities."

This is a quote from a Remington Newsletter statement made by Mr. Bud Goodwin representing the Lions of Michigan. They had every reason to be concerned because pollution has reached the critical level in the Great Lakes area, and is becoming a problem along our oceanic shoreline. We on the prairies have been fortunate in that water pollution hasn't been a serious problem here. We can benefit from the unfortunate experiences of other communities. We are not an industrial area, thus we don't produce

effluents which would pollute the water or air on a large scale. I'm sure there has been some pollution but it hasn't been of major concern, at least the public hasn't been aware of it. It is interesting to note that the North Saskatchewan has been used for sewage for many years by cities along the river. The new pulp mill at Prince Albert must first purify the water from the river before running it through its plant. The entire operation depends on the quality of the water.

The development of the Prince Albert Pulp Mill has caused concern because of the threat of pollution. There is the possibility that effluents from the mill could pollute the river, and based on the production potential of the mill, these effluents, if not controlled, could affect a large area along the North Saskatchewan River. It has been estimated that 72 miles of the river could be affected, an area which produces pike, pickerel, goldeye and sturgeon for sport and commercial

fishing; the Tobin Lake area, a commercial fishing lake for goldeye and a waterfowl producing area; the Cumberland Lake and River system, 62,000 acres of highly productive muskrat marsh and a waterfowl area. These are the areas that could be adversely affected if the effluents produced by the pulp mill are not controlled.

What are the effluents in question? For the answer I asked Omar Ashem, the technical control supervisor for the Prince Albert Pulp Mill. He told me:

"There are three main types of wastes in a pulp mill such as this one: there are neutral wastes, acid wastes and alkaline wastes. These are kept separate in the mill until they are brought together in the proper type of equipment where they're mixed together and neutralize each other. This has to be properly done just before settling so that best results can be obtained." By name the three toxic chemicals are methyl mercaptan, rosen acids and sulphides.

In the initial stages of negotiations for the pulp mill, the Saskatchewan Government considered the pollution possibilities and conferred with various branches of the government that have an interest in the Saskatchewan River and related resources. These would include Natural Resources, Fisheries, Wildlife, Industry and Commerce, Water Resources, Public Health, etc., and these departments are satisfied, at least as far as I can determine, that pollution will not be a problem if pollution controls are used. There will be some effluents poured into the river, but the Water Resources Commission and the Department of Public Health feel that the natural flow of the river will handle these effectively. The main danger is in the first 40 miles.

The Government set three conditions for pollution control:

1. That the B.O.D. (biological oxygen demand) not exceed 50,000 pounds a day.
2. That from 1969 to 1973 the B.O.D. shall not exceed 40,000 pounds a day.
3. That the total suspended solids shall not exceed 10,000 pounds a day.

When I asked Omar Ashem what steps would be taken by the Company to control pollution, he said: "The Prince Albert Pulp Company sewage treatment plant is designed to take out solid material from the wastes before they are discharged into the River. The first step is that the various liquid wastes are mixed together so that they neutralize each other. They then pass into two settling basins where the solid particles settle to the bottom. The clear liquid sewage then drains to a dispersion pipe which mixes it evenly into the river water. This way an even dilution in the river is achieved."

The Company has agreed that if the Government is not satisfied with the pollution control it must proceed with a secondary control measure which would cost an additional one and one-half million dollars. The Government feels that at this time this step is not necessary and the first tests taken by the plant indicate that there is a very high level of efficiency in removing the solids. However, tests will be taken during the first five years of operation to determine pollution and if it is felt that there is a danger to other users of the river, the Company has agreed to proceed with the additional control measure.

I think we must be realistic in that we must live with some pollution if we are going to develop the industries in the province, like pulp and potash. However, despite the positive advantages such as employment, development, increased revenue, etc., it is equally important to remember that other industries, such as commercial fishing, trapping, recreation and waterfowl production, could be endangered if the effluents from the pulp mill, or other industries are left unchecked.

Water pollution is a subject that concerns, or should concern all of us. We are fortunate that we can benefit from the experience of other communities where water pollution has gone unchecked. We must be certain that it doesn't happen here.