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Presented at the twelfth annual meeting of the
Western Association of Sociology and Anthropology

Banff, Alberta, Canada
December 28-30, 1970

WHERE WILL ALL THE NATIVE GO?*

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PRIME (Prairie Rivers Improvement, Management, and Evaluation) is a program conceived by the Water Resources Division, Alberta Department of Agriculture, to guide the development of the province's water resources. Although in Alberta, the water resources are generally adequate, they are hampered by two major problems: variation in seasonal water availability and distribution of water throughout the province. Alberta has 85% of its population in the southern half of the province but only 11% of the water flows into streams going south, the remaining 89% flows through the Athabasca and Peace River into the Arctic Ocean. Prime proposes to capitalize on this distribution imbalance by building a series of forty dams and canals within the province to divert northern waters south, including some 5 on the Smoky-Peace River system, 11 on the Athabasca, 9 on the North Saskatchewan and 15 on the South Saskatchewan. These diversion dams will hopefully meet growing irrigation, industrial, domestic, and municipal demands in the south, as well as provide greater flood control and a more even seasonal distribution of water.¹

On the negative side PRIME, if carried out, could increase erosion in the North (since such a drop in water levels would destroy large areas of vegetation and forest which hold the soil intact), drastically alter climate patterns, cause earthquakes in geologically unstable areas, upset the ecological balance of plants and animals in the North and perhaps even destroy most of the large game animals and fish who depend on the food chain (consequently affecting hunters, fishermen, and even future development and expansion of peoples in the North as the population increases), and flood many major archaeological sites which could provide a key to man's migration into the New World. It has even been suggested in the press that the area into which they plan to bring irrigation waters has such high alkaloid salts in the soil that even if irrigated, crops could not be raised.²

Given the disadvantages of PRIME, are there other plausible reasons for continuing support of the plan? Although there is no absolute proof, the name of the game seems to be in part water export. One or two more dams in southern Alberta could divert much of the water to the United States. Water shortages are already developing in the States and numerous schemes have

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¹This paper will also appear in the January 1971 issue of the Western Canadian Journal of Anthropology, a special issue on Athabascans.

been developed to bring Canadian waters to the States for irrigation and other uses. Given the conception of the Federal Government in Ottawa that vast resources in Northern Canada are just waiting to be tapped (with a small voting population unable to protect itself), matched with a multi-billion dollar carrot with which the U. S. could entice water from Ottawa, such fears are not unfounded. Progress has been budding for an International Power agreement between Canada and the U.S. which would include water, gas, and oil, and in business and government circles, water runs a big risk of being bartered off by Canadians in exchange for, say, sovereignty in Arctic waters.

For example, Dr. A.H. Leyland, geography professor at the University of Alberta, as well as Chairman of the U. of A. Water Resources Research Centre Committee and Vice-President of the American Water Resources Association, has published numerous articles on the subject of water export, and more recently, such in favor of it. He believes that Canada will develop its development potential unless it negotiates water agreements with the United States in the near future (based on current alternative methods of fresh water supply are developed such as desalination of sea water) and has been told by some of the United States to discuss such possibilities with various states and Federal officials. He feels Canada has a water surplus that she will never deplete; this view tends to take into account expanding demands due to increased Canadian development and the tremendous construction costs Canada will have to bear with a minimum of benefit.³ But most astonishing of all are the water export schemes already being designed for Canada, primarily by American companies. There are 8 or 10 major plans, one of which is a project labelled N.A.W.A.P.A., and the government of Alberta is most certainly aware of them, since the Water Resources Division of the Department of Agriculture has published a pamphlet which reviews them.⁴

The North American Water and Power Alliance (NAWAPA), proposed by the Ralph M. Parsons Company of Los Angeles and New York, combines 508 separate projects which would take the excess water of Alaska, the Northwest Territories, and the Rocky Mountain region of Canada and divert it to the United States and Mexico in order to irrigate 10 million acres of land at an estimated cost of some \$100 billion and to generate 100,000 megawatts. The headwaters of the Columbia, Missouri, and the Great Plains would be dammed to form a 10,000 mile long, 100,000 ft. high wall in the Canadian Rockies; a canal could be built from there to provide an inland waterway to the central United States and Great Lakes; other canals would carry water to the American Southwest and even Mexico. While both Canada and the United States would benefit from this in terms of navigation and navigation, the ecological, geological, and meteorological risks could be all Canada's.

Under NAWAPA, Canada supplies the lion's share of the water and pays a disproportionate amount of the expenses (a shortcoming of most of the plans); in return for the use of Canadian water, the scheme provides for no water-usage payments by the United States or Mexico. Finally, Canadians living along the large northern river systems, many of whom depend on the rivers for their transportation, food, and income, are the peoples most affected by NAWAPA or by any other water diversion scheme.

But we need not stay in the realm of conjecture as to the harmful effects of building dams and diverting and exporting water, since we have concrete examples of what some of these dams are already doing. One of the first of the dams in the PRIME scheme is the Bighorn Dam, currently under construction on the North Saskatchewan River near Nordegg.

The purpose of this dam is somewhat vague, and the procedures the government used to investigate the benefits of such a dam are certainly suspect. Even more significant perhaps, is that hearings which were held to discuss the pros and cons of the dam's construction were not undertaken until the forest clearing for the reservoir had already begun, and the clearing was not discontinued while the hearings were conducted.^{5*} Obviously, the government had its mind made up, which might explain in part why witnesses against the dam were insulted and harassed during the hearings and asked to supply detailed proof for just those details about which the government should have provided the proof.⁶ But what of the people living in the area? Are any of them to be affected by the dam? Aside from the fact that the Bighorn will probably necessitate the later building of dams at Rocky Mountain House which will ultimately flood several adjacent villages and 1/4 of the town of Rocky Mountain House⁷, the people immediately affected by this dam are native people living in and around the Kootenay Plains which will be flooded by the dam.

Chief Snow, who is the head of the Stoney Indian Band on the Kootenay Plains, testified that the dam will destroy or flood many Indian graves and sundance locations which are sacred to them; grazing lands for horses, elk, deer, trapping lines, old landmarks used by the people for many generations, and use of the area as a recreational site for the children will be eliminated. Chief Snow has said "our history is written on the land; we didn't write books but go to certain places."⁸ Also affected by the dam is the breakaway Cree band of Chief Smallboy, who left the Hobbema reserve to try to live off the land in the

*The Bighorn Hearings are available to the public by special and personal request of a Member of the Legislative Assembly of Alberta.

go to other areas such as Edmonton to find jobs return sooner or later to Fort Chipewyan where they feel most at home. The native peoples include Chipewyan, Cree and Metis, only some of whom have treaty status. Although an area on the Athabasca Delta, called the Jackpine Reserve, has been set aside as a reserve for the Chipewyan Indians, the Cree and Metis have no reserve. Most of the Chipewyan band live in Fort Chipewyan, and live in Fort Chipewyan, and only four families live on the Jackpine reserve all year around, since the original purpose for the establishment of the reserve was for trapping and not habitation.*

All told, there are some 598 Cree (an Algonkian group) 224 Chipewyan (an Athabaskan group) and 495 Metis (most of whom are a combination of Cree and white or Chipewyan and white) in Fort Chipewyan.¹⁰

In the past three years, however, the impact of the outside world with its technology has affected the Fort Chipewyan natives in a way that none of them had anticipated. The building of the Bennett Dam, completed in 1967 by the British Columbia government, has robbed the Athabasca Delta of the spring floods which are necessary to fill its many lakes and sloughs, as well as maintain the water level of Lake Athabasca. The consequent effects on the Fort Chipewyan environment and the native peoples living in it are already drastic. Wood Buffalo National Park, one of the largest in the world, has already evolved from a beautiful and varied natural complex of lakes and marshes to a succession of isolated mud flats which in turn may affect the supply of natural forage available to the 17,000 buffalo grazing free in the Park. The rapidly disappearing complex of lakes and marshes was the most important staging area for migratory birds in North America and perhaps the world, with great undeveloped potential as a breeding ground. All four major migratory bird flyways in North America cross at the Delta and 22 species of ducks and 5 of geese feed there, including rare birds such as whooping cranes, trumpeter swans, whistling swans, and Ross's geese. Spawning grounds for pike, walleye, and cisco have been drastically affected and lake trout which feed on cisco are also sure to decrease. Barges operated by the Department of Public Works have had to dredge one to two miles further out into Lake

*There has been little information collected on Fort Chipewyan by social scientists. Readers might refer to "A Colonial Factory: Fort Chipewyan," an Honors Thesis submitted to the Department of Anthropology, University of Alberta, by Patricia McCormack, May 6, 1969. Other materials in this paper were obtained from two field trips of a month's duration to the Fort Chipewyan area by the author of this paper in the spring of 1970.

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Athabasca from the mouth of the Athabasca River as a result of lowered water levels. The delta area's potential as a major recreational area has been severely decreased, perhaps even eliminated.

These changes have affected the native peoples living in the area, who depend on the environment for their subsistence. The shrinking of shore edges makes the subsistence hunting of birds almost impossible, because mud flats eliminate any near approach to the birds. During the past year an attempt has been made to set up a local Fresh Water Fish Marketing Cooperative run by native peoples. It is expected that the commercial fisheries in Lake Athabasca, as well as the Cooperative newly begun by the native peoples, will collapse within three to five years as the fish population declines. It also forces the native people, who lack sophisticated machinery, to go six or eight miles out into the lake to reach water deep enough for their nets, instead of just netfishing offshore. Potential increase in guiding jobs has been severely affected by the alteration in the ecological and aesthetic appeal of the delta. Barge transportation on the Peace River is also threatened; the Swanson Lumber Company, the only major industry in the area that hires natives, depends on barges to take out its timber cuttings.¹¹

Perhaps the most important activity in the area, the trapping of muskrat and to a lesser extent beaver, has been drastically reduced: these animals are not only a source of food for the native peoples, as well as their dog teams, but trapping for the fur market is the one most important and reliable source of income drawn on by the native peoples to buy clothes, motorboats, food, rifles, and other equipment.

Muskrat trapping has many complications and for several reasons it is difficult to collect data on this subject. First, no complete records are kept on muskrat and beaver catches. All trappers, whether white, native or metis, must have a license to trap and must also report their catch to the local Fish and Wildlife officer stationed at Fort Chipewyan, who is in charge of licensing all of the trap lines in the area. However, complete records have been kept and totals computed only for the past two or three years, so there is no baseline of data going back into the past to show how much the muskrats have increased or decreased.

Secondly, while most of the local natives have traded their furs at the local Hudson's Bay stores, this does not account for all of the furs. Independent fur dealers from Edmonton and even Saskatchewan have come to the area to buy furs and some of the natives send their furs out to fur markets in other provinces. There are records of this, since they have to pay an export tax, but obviously such data are scattered and would take a great deal

of time to obtain. Even then, this would not take into account the amount of muskrat, beaver, etc. that the natives catch for their own consumption (food and clothes), since such catches are not reported to the Fish and Wildlife Officer.

Thirdly, the fur market is not an open and free market, and the prices fluctuate for a variety of reasons. A direct consequence of this is that during years or periods when comparatively little is being paid for muskrats, beavers, and other fur bearing animals, at least some natives will refuse to go out and trap, because it is not worth their time and trouble.

Fourthly, in the past, it was traditional to take the entire family out to the spring camp and trap in the bush for a month or two before returning. With government regulations requiring children to attend school, families are faced with the choice of either pulling their children out of school to take them on the lines (rarely done), or else waiting until school is out to go out trapping. However, once the spring thaw has occurred (usually late April or early May) the muskrat and beaver begin to mate and consequently fight, the pelts get torn and the native gets very little return for his work, since, for example, a muskrat pelt in poor condition will bring perhaps 25 cents, while one in prime condition may bring \$2.00 or more.

Finally, with the increase in social welfare payments, medical aid, Newstart projects and various other governmental programs, some natives do not feel the economic need to go out on the trap lines. Since the Metis peoples in the area do not qualify for many of these programs, it would appear that the drop in water levels has a more direct effect on them than the treaty Chipewyan and Cree. It is unfortunate, therefore, that the drop in water levels has threatened to remove one of the few reliable resources of income and food upon which a native in the Fort Chipewyan area can depend--the trapping of beaver and especially muskrat in the delta area.

While, as stated, statistics showing the effects of the Bennett Dam on trapping are difficult, if not impossible, to collect, the personal testimony of individual trappers who have consistently trapped in the same areas have been obtained and some are presented below. These clearly indicate that in the Athabasca Delta, as well as in Wood Buffalo National Park, catches of muskrat have been sharply reduced. Without the annual floodings from the Peace River, the shallow sloughs have gradually begun to dry up, in winter freezing to the bottom, forcing the muskrats to either move or starve to death because they cannot get food off the bottom. Since each slough is already filled with muskrats who defend their territory, eventually the migrating muskrats also die.

Fred Marcel, Chief of the Chipewyan band, said that his nephew, Danny Marcel, who was one of the best trappers on the Jackpine reserve, was out four days in the spring of 1969 and brought home 18 muskrats; he used to get 100 rats in 3 days. According to Marcel, trappers could no longer get into some areas with their canoes because the creeks and sloughs have dried up, and he estimated that there were only 4 or 5 sloughs with rats on the reserve that spring, whereas usually there were hundreds.

In the spring of 1969 some of the local natives hitched their dogs to a skiff to go across Lake Mamawi (which is some 4 miles by 8 miles, and used to be about 6-10 feet deep), planning to put their dogs in the skiff when the water got too deep, but the dogs managed to pull them completely across. In the spring of 1970 it took some 6 hours of pulling and digging with bulldozers to get a barge to the end of the Gulf Oil dock; the dock is about 10 feet high and has been covered with water in the past. One can clearly see on some of the rocks where the old water line used to be, and trappers and fishermen are seeing rocks in the lakes that had never been visible before, even during the severest drought.

Ernie Bourque, a Metis who traps in Wood Buffalo National Park, has a reputation for being one of the best trappers in the area. In fact, there have been years when Ernie has made as much as \$10,000.00 trapping muskrat and he normally makes his entire living this way. In 1969, the sloughs on his trap line were already beginning to dry up badly and he had to work during the summer of 1969 as a fire spotter to bring in some extra money for his family. This past winter and spring, his sloughs were completely depleted of muskrats, and so he began to trap on his brother's line, which his brother was not using. His take was minimal. Out of the 45 traps set he should have taken 35 muskrats on one day, but the day I went out with him he got only 14. On his own line he used to get 5,000 to 6,000 a year and now he does not get any.

While only a few native families depended completely on trapping for subsistence and income, most families trapped at least part-time to supplement their income, and all natives, even those on welfare, engage in hunting and fishing to supplement their subsistence.

Anger and dissatisfaction are beginning to build. Several trappers told me: "what we need to do is get some dynamite and blow that sonovabitching dam up!"* One caustic native, observing

*See also the remarks made by Dr. J. Herman Dirschl, Canadian Wildlife Service, Saskatoon, in an article entitled "Only Blowing up Bennett Dam will Save Peace Delta," Edmonton Journal, July 17, 1970.

that the lake bottoms are returning to willows and prairie grass, said: "Well there aren't any more muskrats, but there is a lot of hay and mice. If Premier Bennett of B.C. buys our mice and hay, maybe we don't need muskrats after all." Another threatened to send a box of mud to Premier Bennett.

Not many alternatives are left for these native peoples who have lived off the land for many generations. Their choices are not pleasant. They could move to a larger city like Fort McMurray or even Edmonton, but with a society geared to employ those who have had an education that these natives are generally lacking, they will be forced to take unskilled labor, which is scarce. The people could go on welfare. Many of the old and sick are already on welfare, and are being criticized for this; yet there is no present tenable solution to the problem of providing for a family when the only known way of caring for them--through hunting, fishing, and trapping--has been eliminated by the building of a dam 600 miles away. A third possibility is to stay in the Fort Chipewyan area and take jobs with local industrial projects developed in the area by private enterprise and with the encouragement of government. The government is certainly anxious to bring in industry, but neglects the cost to the environment and peoples in it: examples include the presence of lumber company operations in the Wood Buffalo National Park, which is not supposed to have such lumbering activity going on within its boundaries, the oil spillage of the Great Canadian Oil Sands Co. at Fort McMurray (which was more serious than the government or the press presented to the public, and did affect trapping, hunting, and fishing at Fort Chipewyan), and the failure of this same company to fulfill their promise to give priority in hiring to the native peoples in the area.¹²

The same argument, that the native peoples would be provided jobs, was used by government and company officials when a coal mine was set up in 1968 in the Grand Cache area of Alberta. The local native peoples, who succumbed to the "more jobs" argument, are unskilled at such labor and were not hired, and cannot be hired until the government or the company instituted a large and costly crash training program for them.¹³

It thus appears that poor planning and the concomitant lack of foresight by the government has not only drastically disrupted the lives of a whole community of native people, but that the government has taken a unilinear approach to the problem. Dams and diversionary schemes are approached from an engineering point of view (the problems being merely logistical ones, such as moving water from point A to point B), with an eye to the economic benefits, of course. No studies have been done in advance on the detrimental economic, ecological, geological, meteorological, social, and other impacts such plans might have. Unfortunately, the whole process by which river systems are

changed and altered after a dam is built often takes three or four years of study (given the cautious methods of scientists).^{*} At that, it can often only be done if someone has had the foresight to do studies which would provide baseline data for comparison before the dam was built.

The effects on native peoples are many and drastic; this is so for Athabascans as well. In the case of the Bennett Dam, not only have native peoples including Chipewyans been affected, but the Dam is having effects on the whole Mackenzie River system, and this system provides subsistence for numerous other Athabaskan groups located in the Northwest Territories. The Bennett Dam is not affecting the Peace-Athabasca delta alone, but the Slave delta and the Mackenzie delta as well. Project PRIME, by building more dams, not for storage, flood control, or power (which are among the "benefits" of the Bennett Dam), but for permanent diversion, could only make matters worse, and ultimately destroy some of the best trapping, hunting, and fishing areas in the world.

Two key issues, those of ecological imbalance and the resulting problems of native peoples who depend on the natural environment, are closely related, and require joint treatment. Some possible solutions follow.

To begin with the most specific and immediate one, there is the problem of the Bennett Dam. A report submitted to the Provincial and Federal governments, entitled "Death of a Delta," has given some concrete suggestions, which include 1) the initiation of Emergency Water Management Measures, by putting in dirt dams in the outlet channels which are draining the lake, slough, and channel waters of the delta back into the Peace River: this would allow the delta system to survive until more permanent solutions are found; 2) the development of long-term solutions which take into account geological and biological considerations; 3) the restoration of the status quo ante of the delta by allowing free water flowage through the dam, as well as restitution of damages to affected peoples; 4) the enforcement by the government of laws protecting the Wood Buffalo National Park, the Migratory Birds Treaty, and Acts in behalf of the Treaty Indians with immediate diligence; 5) and the undertaking of studies of future ecological consequences to other areas of water management planning such as the Saskatchewan-Nelson basin and the Peace-Mackenzie basin.¹⁴

^{*}See, for example, the statements made by Dr. S.B. Smith, Provincial Director of Fish and Wildlife, Alberta, in an article entitled "Wildlife Threatened by Low River Levels," Edmonton Journal, May 30, 1969.

More specific action which might be taken in regards to broader concepts like Project PRIME and water export schemes could include:

1) Greater usage of a cost-benefit analysis approach: this forces the government to classify expenditures on an ends rather than an input basis, sets out alternative choices, forces the government to view projected benefits and costs over a number of years, overcomes one-sided enthusiasm, and takes a multi-purpose view which deals not only with engineering and economic benefits and costs, but also takes into account social, agricultural, ecological, meteorological, legal, sanitary, and other factors.

2) An interdepartmental coordinating agency needs to be set up which will allow the citizens of Alberta to plan their futures in a coordinated way. Future planning schemes are needed not only in engineering but in all fields. If the North Commission can investigate Alberta's education in the year 2,005, we could also be working with social problems and institutions in the future using an integrated approach. Futures planning in one department, like the Water Resources Division of the Department of Agriculture, which has more developmental funds than most government groups, can leave us committed to a position where future choices in other fields would be eliminated to meet the resource demands of this one narrow field.

3) The setting up of a Civilian Review Board to investigate all major proposed governmental projects. The Bighorn Hearings, to anyone who reads them, clearly show that the Alberta government is not acting with the best interests of the public at heart. Such a board could force the government to make formal reports of their proposed projects rather than continuing the present informal planning methods. It could enable any member of the public to obtain public documents that are already legal, public knowledge without undue harassment or stalling. It could ensure that all peoples potentially affected by government projects be clearly notified well in advance, ensure that public hearings be held on government projects when requested, that the hearings be held well in advance, and that independent cost-benefit analysis or other evaluations be made by people with no vested interest in the situation. These things did not happen in the case of the Bighorn Dam planning or construction.

None of the above suggestions would cost the Alberta government as much as the \$32 million Bighorn Dam fiasco alone, much less the cost of the Bennett Dam or other future dams to be built under the PRIME scheme.

A further conclusion can be drawn from this general analysis of water diversion plans and the specific analysis of the effects of the Bennett Dam on the Delta region. One of the similarities that anthropologists have posited about the world views of native peoples in North America is the value placed on living in "harmony with nature;" these studies also show that western

man values "control over nature."¹⁵ It is not the native peoples who build the dams and strip mines that scar the landscape or who cause the oil and chemical pollution and drastically alter the ecology; it is not the native peoples who hunt and trap animals for pleasure rather than for food and furs; yet it is the native people who, so far, have suffered most from the devastation wrecked on the environment by the white man. Given the results in terms of pollution* of the western value orientation of "control over nature," a valuable lesson could be offered to the public at large by native peoples (and anthropologists) who are already aware of or practice the value: "harmony with nature."

The Indians were not just exploited yesterday, they remain exploited today. Explicit plans for "extermination" were part of yesterday's attempt to find the "Final Solution to the Indian Problem:" today the answer may be project PRIME and other water diversion schemes, but these solutions carry effects that go far beyond injury to native peoples.

*Ecologists and biologists predict that in the near future, if present practices are continued, all humans will not only suffer but be unable to live in the environment western man has recreated.

FOOTNOTES

1. Bailey 1969, n.d.
2. Poppe 1970:62-66.
3. Laycock 1970; Suxrendl 1970; Currie 1970.
4. Primus and Paul 1968.
5. The Bighorn Hearings 1969:74-75, 115, 132.
6. The Bighorn Hearings 1969:120, 200, 175, 189, 568, 206, 158, 439-440, 145, 204, 569, 585, 592-593; Poppe 1970: 52-56.
7. The Bighorn Hearings 1969: 373-374, 233, 370, 113.
8. The Bighorn Hearings 1969: 309, 310, 330.
9. A Summary Community Study of Fort Chipewyan, Alberta, 1967.
10. Church Bulletin 1969.
11. Schultz 1970.
12. Daniels 1970.
13. Hetland 1969.
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15. Kluckhohn and Strodtbeck 1961.

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