

6.0 ECONOMIC SPIN-OFF ISSUES

The direct and immediate benefits of an All-Weather Road are reduction in costs of transporting goods and people. The “spin-off” economic benefits are the opportunities for capital investment, income, and employment created by the improved access. This report notes some of the major categories, including commercial forestry, mineral exploration and mining, commercial fishing, tourism, and service-sector development. This a scoping study, and most of the information presented here has been assembled from information provided by various government departments and agencies and through personal communication with people in potentially impacted industries.¹ The impacts/benefits to these sectors are noted on an “order of magnitude” basis only.

The context of the “spin-off” economic benefits is important. Most isolated First Nation communities have extreme unemployment rates. These unemployment rates reflect the lack of opportunities outside of traditional pursuits. Without access to gainful employment, these people and communities are supported by transfer payments.

Mathias Columb Cree Nation has an On-Reserve population of some 1,700 and a total population of some 2700². Community members are actively engaged in commercial fishing, wild rice, and other resource harvesting, service-sector jobs, and provision of local government services. In common with other isolated First Nation communities, however, there is a high dependency on social assistance (1996 census indicated a 25% to 30% unemployment rate based on the active work force. The actual unemployment rate would be considerably higher if based on total community population). In this environment, any loss of employment or potential employment opportunity is a serious issue and any new employment opportunity created by an All-Weather Road is more beneficial than it would be in an environment where there are employment alternatives.

This section of the report looks at the major employment sectors in the region and considers the impact of losing rail service and the impact of an All-Weather Road.

¹ As All-Weather Road transport replaces air transport, there will be impacts to airline industry. We have not estimated the economic impact of dislocations and adjustments that would occur in the existing transportation system.

² Indian and Northern Affairs Canada, Community Profiles, lists the December 31, 1996 total population as 2,682.

6.1 Mining

Mining has been responsible for the development of much of the road, rail, and other infrastructure in northwest Manitoba. Figure 6.1 shows the general geology of Manitoba and the Greenstone Belts that host most of the mineral potential. South of Pukatawagan lies the Flin Flon/Snow Lake belt and to the north, the Lynn Lake belt. Pukatawagan itself lies in an area generally regarded as having low mineral potential.

The Flin Flon-Snow Lake belt is one of the most prolific mining belts in the world. A multitude of base and precious metal deposits of various sizes have been found in this relatively small area, some 250 km long and 45 km wide. There have been 25 operating mines in this area starting with the Mandy Mine, which first went into production in 1916. Most of these mines produce copper-zinc and associated precious metals, although at least three produced principally gold and silver. The mine at Flin Flon went into production in 1930. The discovery of that deposit led to the construction of a rail line from The Pas to Flin Flon in 1928, and the development of the Island Falls hydroelectric generating station on the Churchill River (upstream from Pukatawagan, in Saskatchewan).

The success at Flin Flon encouraged extensive exploration in the region, leading to the development of the Sherridon Mine. The mine at Sherridon went into production in 1931 and resulted in the rail line being extended from Flin Flon, 64 km north to the Sherridon community. Near the end of the life of the Sherridon Mine, new base metal deposits, and later gold, were discovered further north again, in the Lynn Lake greenstone belt. The rail line was again pushed further north, crossing the Churchill River east of the current community of Pukatawagan. All of the mines in the Lynn Lake area are now out of production with the exception of the Ruttan Mine, 25 km southeast of Leaf Rapids. The Lynn Lake mines have either exhausted their ore bodies or have become uneconomic due to a combination of low grades and low prices.

The Ruttan Mine is scheduled to go out of production in 2004. The Ruttan Mine is a low-grade copper-zinc deposit, producing some 2 million tonnes of ore per year. This results in a concentrate of 140,000 tonnes (per annum) hauled by truck to the railhead at Lynn Lake, and then by rail to the smelter at Flin Flon. Other significant transportation demands by the Ruttan Mine are for propane and lime. Propane is used to heat mine air, and lime is used as a reagent in the mill plus treating wastewater. Both come by truck via Thompson. Lime requirements are one truck load per day (35 tonnes) in summer (120 days) and two trucks per week in the winter. Propane requirements are 7.5 million litres per year. The Ruttan Mine directly employs some 388 people and is the principal employer in Leaf Rapids. It had an estimated remaining life of five years in 1987; it appears to still have five years left.

When the Ruttan Mine goes out of production, the rail line will lose most of its freight traffic originating in Lynn Lake and traffic on P.R. 391 will see a significant reduction.

Figure 6.1 General Geology and Metallogeny of Manitoba

There is ongoing exploration in the Lynn Lake greenstone belt. It is likely that at some time, commercial deposits will again be identified and brought into production. The timing of this is unpredictable and there is no way of reasonably forecasting when such an event might occur. A road to Pukatawagan, however, is not likely to stimulate additional exploration in the study area or result in any other economic activity related to mining.

The community of Pukatawagan on the other hand might be significantly affected by the closure of the Ruttan Mine mostly due to impact on the regional transportation system and in particular, the potential loss of rail service.

In some circumstances and types of mining, rail service increases the potential viability of a new deposit. Loss of rail service therefore will also reduce the attractiveness of the Lynn Lake greenstone belt for exploration.

6.2 Forestry

Forestry is one of the major land uses in the study area. The principal forestry company is Tolko Industries Ltd., which has a sawmill and paper mill located in The Pas. Figure 6.2 shows the Highrock Forest Section, which is one component of Forest Management Licence #2 (FML2).

The FML area derives from a Forest Management Licence Agreement under the *Forest Act* of Manitoba. There are only three FMLs in the province, all of which are reserved to sustain major forest companies. Other timber rights are granted by way of quotas and community allocations. Each of these are typically small entitlements. Quotas are renewable annually; subject to performance, while community allocations are for short terms of up to five years. There are no quota holders or community allocations in the study area. Within the study area, all of the timber rights are held directly by Tolko which harvests wood through contractors.

There are three main harvest areas in the study area:

- The Laurie River spur, north of the Churchill River, within Forest Management Unit (FMU) 64.
- Charles Spur, south of the Churchill River.
- The Jungle Lake spur, which takes in part of FMU 63 and 65.

Figure 6.2 Highrock Forest Section

The **Laurie River** spur is a contract operation managed by Black Sturgeon Logging, a corporation of the Marcel Columb First Nation from the Lynn Lake area. Production is 50 000 m³ per year. Production is achieved by a mixture of modern mechanical equipment and some older skidder technology. Logs are hauled to the rail siding shipped year around (three times a week) by rail to the Tolko facility in The Pas. Total employment is in the order of 13 people, harvesting and hauling mostly in the winter.

Production at this rate is forecasted to last through the life of the current operating plan to Year 2009 and beyond. Since the annual production is based on estimates of annual allowable harvest, it should be able to be sustained at this rate on an indefinite basis, and provide a secure source of income and employment for the people of Marcel Columb. This production, however, is totally dependent on the rail line. Loss of rail service will sever access to this area, and an All-Weather Road to Pukatawagan probably would not help.

The **Charles** spur is a proposed operation that would be operated under contract to members of the Mathias Columb First Nation. It is anticipated that production would also be in the order of 50 000 m³ per year. It would be operated on a similar basis as the Laurie River operation. The proposed Charles operation could potentially operate with an All-Weather Road alone, but it would be a high cost operation always subject to the vagaries of market conditions. If rail service were withdrawn, the operation would be re-evaluated on the revised economics of road haul versus rail.

A combination of an All-Weather Road and rail, however, would lead to an increase in viability, providing increased returns to the contractor. The increased viability comes from easier movement of staff, and the ready availability of parts, supplies, and service personnel.

The **Jungle Lake** operation is managed by four contractors working east of the rail line in FMUs 63 and 65. Two of these contractors are highly mechanized and two harvest with older equipment. In total, annual production averages 150 000 m³ per year. Woods employment associated with this harvest is in the order of 35 to 40 people, a significant percentage of whom are aboriginal, some being from Pukatawagan. Loss of rail service would reduce the returns to this operation, but it would continue.

In total, the operations in the study area employ some 85 to 90 people in woods operations, operating equipment worth \$7,500,000 and having a total payroll in the order of \$2,500,000. It is clearly a key industry to be considered in any further analysis of the regional transportation system.

6.3 Tourism

There is a significant tourism industry in the Flin Flon area and extending north through Pukatawagan and Lynn Lake. This is mostly lodge based, non-resident, sports fishing, and big game hunting.

Effectively, every large lake throughout this area that is not dedicated to commercial fishing has either a lodge, outpost, or boat cache. With all the lakes occupied, there is limited opportunity for expansion except within the established operations. The principal exception to this is that there is no lodge accommodation on the Churchill River in the vicinity of the Pukatawagan community. That opportunity exists with or without a road, but with a road in place, there is a potential for developing a destination facility with boat access to an extensive area.

Potential negative impacts of a new All-Weather Road derive from the potential to provide access to lakes that are now marketed as fly-in/wilderness locations. Lodge owners would have significant concerns about any road that provided vehicle access to these lakes, directly or indirectly via stream crossings that lead to these lakes. An alignment that follows the existing rail bed would likely provide the least impact to the existing industry. Most of the tourist lakes lie to the east or west of this alignment, with none directly in the path of this route.

We have not estimated the scale of a new (end of the road) tourism facility at Pukatawagan. Because of that potential created by the road, however, the overall tourist impact of this road will be positive - provided that the route location can be selected that does not impact existing facilities.

Third party consultation with the established tourist industry is very important in the route selection stage. Significant planning and consultation is required with Mathias Columb First Nation respecting the opportunity they will have to participate in the tourist industry. Planning will be necessary to ensure the road alignment provides for the maximum commercial tourism benefits. Consultation is required to establish the community interest in developing such a facility. At a minimum, it will be necessary to protect this opportunity for the future should the community not want to proceed in the near term.

6.4 Commercial Fishing

Commercial fishing is one of the more important industries to the community of Pukatawagan. As shown in Table 6.1, study area lakes have produced some 185 000 kg of fish work in excess of \$500,000.

Table 6.1: Commercial Fishing - Pukatawagan Area Deliveries (delivered weight in kilograms)

Lake	Export Whites	Cont. Whites	Cutter Whites	WF Roe	Pickarel	Northern Pike	Cont. Tail.	Mullet	Other	Total	Initial \$
Churchill River	0	0	14,439	267	21,497	19,649	6,852	2,413	506	65,623	\$164,273
Highrock	0	0	0	0	33	17	43	0	1	93	239
Russell	0	899	0	2,860	0	1,118	0	0	54	4,931	18,398
Sisipuk	0	0	77	0	14,204	7,545	0	0	268	22,094	90,995
Burntwood	970	0	0	0	9,921	1,664	0	11,708	138	24,401	64,323
Kississing	0	0	22,181	0	5,153	1,186	0	14,136	0	42,656	55,078
1999/2000	970	899	36,697	3,127	50,808	31,179	6,895	28,257	967	159,798	\$393,306
Churchill River	22,401	0	141	436	28,601	15,688	6,098	7,048	904	81,317	\$214,661
Highrock	0	222	0	0	607	265	0	0	0	1,094	3,818
Russell	0	3,157	0	0	4,955	3,035	28	291	650	12,116	33,609
Sisipuk	1,685	0	0	0	11,356	7,020	0	0	222	20,283	74,427
Burntwood	702	0	0	0	12,978	1,045	0	9,597	161	24,483	69,678
Guthrie	6,413	0	0	0	3,238	4,191	0	8,258	0	22,100	33,942
Kississing	0	0	9,709	0	5,450	1,027	0	7,122	0	23,308	42,724
1998/1999	31,201	3,379	9,850	436	67,185	32,271	6,126	32,316	1,937	184,701	\$472,859
Churchill River	12,336	0	0	124	17,417	7,071	1,994	1,428	676	41,046	\$107,219
Girouard	18	0	0	0	21	32	83	70	1	225	246
Highrock	0	73	0	0	44	66	0	0	0	183	349
Morin	0	505	0	0	282	198	1,066	264	4	2,319	2,781
Russell	0	546	0	0	3,304	1,174	0	0	542	5,566	18,165
Sisipuk	1,440	0	0	0	11,299	5,260	0	0	168	18,167	62,988
Burntwood	816	0	0	0	17,394	1,894	0	3,962	272	24,338	79,247
Kississing	0	0	6,447	0	5,232	1,084	0	3,628	0	16,391	33,231
1997/1998	14,610	1,124	6,447	124	54,993	16,779	3,143	9,352	1,663	108,235	\$304,226

Source: Fresh Water Fish Marketing Corporation

The Churchill River fishery is the largest single component. It is fished exclusively by some 25 licenced fishermen from Pukatawagan³ who fish these lakes under a single quota. This fishery operates like a community operation, although the fishermen are each independent producers. The Churchill River fishery includes Pukatawagan Lake, Highrock Lake, and Flatrock and the river system in between. In 1998/99, this produced some 82 000 kg of fish with an initial price of \$218,500. This is principally a summer fishery with all production shipped by rail south to The Pas. The rail delivery system has been problematic. Fishermen complain of an inconsistent train schedule, and problems with properly icing and loading fish in rail cars that are used for general freight. This has resulted in significant losses due to spoilage.

Loss of rail service (unsatisfactory as it may be) would significantly reduce this fishery. The Churchill River is affected by the Island Falls generating station, located upstream in Saskatchewan. The operation of this plant results in poor winter ice and heavy slush conditions that would make converting to a winter fishery difficult. Maintaining the current open water fishery without rail service would require flying out the catch or tying into some of the resource roads that are approaching the southern end of Flatrock Lake. The economics and logistics of this suggest a much reduced fishery if rail service is lost and not replaced with an All-Weather Road.

An All-Weather Road would maintain this fishery and increase returns to fishermen. While an All-Weather Road would increase the viability of the fishery and directly increase the incomes of individual fishermen, the Department of Conservation is of the opinion that it would not, result in significant expansion. Given the lack of employment opportunities in Pukatawagan, maintaining or enhancing the commercial fishing industry is a priority.

The Russell Lake fishery and other fisheries north of the Churchill River are at absolute risk if rail service is withdrawn. This is principally a fall fishery that has recently produced some 12 000 kg of fish worth some \$33,000. This production is shipped by rail north to Lynn Lake and by road to the packing facility at Leaf Rapids. The only alternative to rail is air, and this is likely uneconomical. A road to Pukatawagan would not maintain this component of the fishery, as there is no transportation link between Russell Lake and the community.

The Sisipuk fishery is unaffected by either the current rail service or a potential road. This is a summer fishery with production going by boat to Sandy Bay, Saskatchewan.

The Burntwood and Kississing fisheries shown in Table 6.1 are also unaffected by either the current rail service or a potential All-Weather Road. This production is currently shipped by a combination of resource and All-Weather Roads and production would not change with alternative road service.

³ There are 43 licenced fishermen resident in Pukatawagan, 25 of whom are consistent producers.

6.5 Wild Rice Harvesting

The community of Pukatawagan has identified a significant/active wild rice harvesting operation with an estimated value of several hundred thousand dollars per year. It is their belief that this operation could be expanded substantially if an All-Weather Road were put in place and transport costs were reduced by 80% to 90%.

6.6 Service Centre Development

The two broad economy sectors are the goods producing sector and the service sector. The goods producing sector includes primary (resource) industries, manufacturing, utilities, and construction. The broadly defined service sector includes transportation, trade, government, communications, and services including health, education, business, and personal services. An All-Weather Road may have a neutral overall impact on the services component of the regional economy.

An All-Weather Road has the effect of reducing transportation costs and making business less expensive. The same road, however, will give a broader part of the community easier access to shops and services in larger population centres. This drain of purchasing power is the common experience in all small communities. The local market, within Pukatawagan is not big enough to attract the type of retail and service business that occurs naturally in the larger centres. The expectation is, therefore, that the retail/service sector in Pukatawagan will shrink with an All-Weather Road. Compensating for this will be an expansion in local transportation services (e.g., local bus/taxi service) and a potential expansion in the accommodation industry to meet the needs of the new rubber tired travellers.

The regional beneficiaries of an All-Weather Road to the south will be the most accessible large centre at the south end of the study area. This will be either Flin Flon or The Pas, depending on the final road alignment. The Pas seems to have more extensive health services, but Flin Flon is closer.

While the study does not assign benefits to this sector, it is clearly another focal point for economic development planning. In particular, the potential for the creation of a limited or secondary level regional service centre needs to be further addressed. Within the context of this scoping study, we have not studied this issue. The development of such a regional centre, however, may be an important component of an overall strategy to retaining economic activity within study area communities.

6.7 Other Benefits

Other benefits of an All-Weather Road include community health and less tangible benefits related to reduced isolation. Community health benefits derive from reduced costs of foods that, in turn, should lead to improved diets. In all of the isolated communities, the cost of fresh fruit is so high as to make it beyond the ability of most families to include these items in the family diet on a regular basis.

The current transportation system of winter roads and air travel also imposes isolation. This isolation is not just from the outside world, but equally important, from one northern community to another. While Pukatawagan has air access and rail service, it is difficult and expensive to travel from any one community to a neighbouring community. Typically, this would require flying to a major centre and then back on a scheduled flight (the next day) to the final destination or by arranging a charter. In either case, this effectively cuts communication and social interaction between communities.

6.8 Summary of Spin-off Issues

The following table documents a summary of the spin-off issues:

Table 6.2: Summary of Spin-off Issues

	Loss of Rail Service	Loss of Rail/ New All-Weather Road	Maintain Rail/ New All-Weather Road
Mining/Exploration	HBMS/Ruttan Mine closes.	HBMS/Ruttan Mine close.	HBMS/Ruttan could operate. Increased exploration.
Forestry			
• Laurie River	Would close.	Might close.	Would continue.
• Charles Spur	Might close.	Would continue.	Would continue.
• Jungle Lake Spur	Would continue.	Would continue.	Would continue.
Commercial Fishing			
• North of Churchill River	Would decline.	Would decline.	Would continue.
• Churchill River	Would decline.	Would continue.	Would continue.
• Southern Study Area	Might continue.	Would continue.	Would continue.
Tourism			
• Existing Industry	Would continue.	Would continue.	Would continue.
• New Opportunities	Would not happen.	Would happen.	Would happen.
Wild Rice Harvesting	Would decline and possibly close.	Would grow.	Would grow.
Service Sector	Might grow.	Some losses, some gains.	Some losses, some gains.
Medical Services	Become more costly and less available.	Become less costly and more available.	Become less costly and more available.