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Impacts of Rail Abandonment  
On Rural Communities: An Alberta Example

by

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for the

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a) Introduction

Rail abandonment in the past has been viewed primarily from an engineering perspective. Very little has been written about the communities and people that are abandoned. Without the railway, there is no need for elevators and other right-of-way developments. Therefore, the employees are either out of work or follow the grain elevator to another town. With the depopulation of a town, the multiplier effect takes over. Less population, less support for local merchants, less tax assessment and less money is returned to the community.

This paper adds a planning perspective to the traditional engineering approach by reviewing the social, economic and land use issues as well as the transportation implications. This paper will look back at communities that have been abandoned and what happened to them. It is not the intention of this paper to provide judgments or to decide whether or not lines should be abandoned. Obviously, if a rail line is functioning at a loss, abandonment must be considered. But very little attempt is made to accommodate the community. The people involved are usually considered in terms of wear and tear on the roads and extra truck volumes. Specific examples are studied here and this historical perspective will give some insight into how to handle future proposed abandonments. Suggestions are made as to how we can handle this problem and plan for it and who could help coordinate this planning. It is also recognized that while some communities will suffer economically by an abandonment, neighbouring communities may benefit from population shifts and shopping pattern shifts as well as grain redistribution.

b) Alberta Perspective

In Alberta, as in all the western provinces, the relationship between the railway and settlement patterns is very closely related. Since the rail network largely preceded the settlement of an area, the location of settlements, their organizations, institutions, land use and economics, were greatly influenced and dependant on the railways. Railway links made Alberta's grain accessible to the rest of Canada. In many rural communities, the only major structure is the grain elevator. Many of these rural communities function as service areas for the farming population. Rural residents come to deliver grain, service machinery and shop. Although there may be a lack of buildings or permanent structures, these may be generally thriving economic communities. For many, the abandonment of the railroad is the severing of a life line. It means the relocation of the elevators, economic decline and ultimately shifts the population's focus to another community, and the community that was, is no longer. In many cases, the examples are not this dramatic as we will see.

c) Trends

The Prairie Rail Action Committee report identified several trends in grain production and related services in their 1978 report, as follows:

- despite rail, most grain delivery points experienced significant decreases in population between 1966 and 1976. This is most likely due to the increased technology and automation in the handling of grain and the overall trend to urbanization.
- the average farm size has increased and the number of producers has decreased. These two points are directly proportional to each other and again can be related to improvements in machinery.
- total delivery figures are up.
- there are fewer implement dealers. This is probably due to the economies of scale, in that the smaller dealers cannot compete with the larger dealers.
- the number of elevators is decreasing. This is also directly proportional to the fact that elevators are increasing in size and that many delivery points are being abandoned.

- the emergence of high throughput elevation units, competitive price and grade considerations has stimulated a trend toward longer road hauls.
- custom trucking rates are beginning to be more competitive.

Other trends include such items as the advancement of fertilizers and machinery to provide higher yields, larger trucks (from single to triple axels), upgrading of the road system (since most of the system is already built, more money is channeled into the upgrading and paving of the existing roads), and demands by residents for more sophisticated services (ie: schools, health care etc.).

## 2. IMPACTS OF RAIL LINE ABANDONMENT

a) Tax Assessment

The Hall Commission studied the impact of rail abandonment on tax assessment and generally found that the impacts varied depending on the type of local government structure. For example, a rural municipality or school district may not feel the impacts as greatly as may a small incorporated village. It was shown in the Commission reports that some incorporated communities derive up to 50% of their total tax assessment from rail and right-of-way properties. Whereas, a larger rural municipality may have less than 5% of their total tax assessment dependant on right-of-way properties and have it dispersed over a larger land area.

The Hall Commission made four assumptions regarding abandonment and assessment:

1. When a rail line is abandoned, all tax assessment of the right-of-way would be lost including non-rail assessment (grain elevators, bulk fuel etc.).
2. The assessed value of the right-of-way properties would be zero since improvements would be removed or torn down and the right-of-way would have no alternate use.
3. There would be no increase or reduction in expenditures by either levels of government (ie: no new expenditures on roads which may be required because of grain haul).
4. No assistance from any higher level of government to compensate for loss of tax revenues would be forthcoming.

Another impact of rail abandonment is on the assessment of farm land due to increased distance for grain haul. Assessment of arable land for tax purposes recognizes the distance to the market as a determinant of land productivity. This then reduces the farmers assessment, reducing the municipalities taxes. However, it is questionable whether this reduction in taxes off-sets the increased transportation costs to the producer.

b) Truck Haul Costs

One of the major costs to a grain producer is the transportation of the grain from the farm to the elevator. In 1974, the Hall Commission conducted a study on hauling costs. The sample was 417 farms in the three western Canadian provinces. It was determined the average western farm produces 11,100 bushels per year, owns 1 truck and that the cost of hauling grain from farm to elevator was 0.592 cents per bushel mile. The Hall Commission also determined that the average haul distance to the elevator was 10 miles.

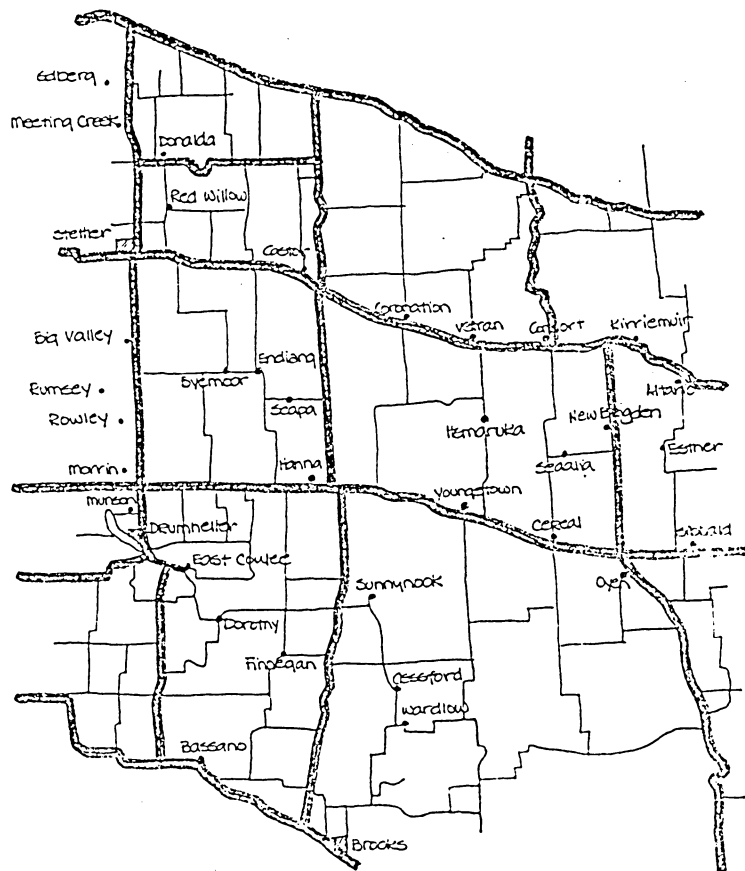
In 1976, Agriculture Alberta conducted a similar study using a sample of 300 Alberta farms. These findings have been factored up to 1982 figures using western Canadian farm indices. These figures indicate the average farm in Alberta produces 7,400 bushels per year, still owns 1 truck and it costs 0.8 cents per bushel mile to transport the farmers grain to the elevator. This paper assumes that with the closure of elevators throughout the province due to rail abandonment, the average 1982 distance to the elevator has increased, although no real figures are available.

This increase in haul costs is to be expected since this price reflects increases in operating costs such as, license and insurance costs, tires, batteries and repairs and general upkeep costs.

If we look at a comparative example we see in 1974, at 0.592 cents per bushel mile to transport 7,400 bushels, 10 miles would have cost \$43,800 per year (one way).



FIGURE 1  
XI-19

## ROAD NETWORK AND URBAN PLACES



Scale 1:500,000 Approximately

LEGEND:

-  Primary Highways
-  Secondary Roads

Whereas, in 1982 at 0.8 cents per bushel mile to transport the same 7,400 bushels 20 miles, to the next elevator, would cost \$118,400 per year (one way). This is an incredible increase of 270% in 8 years. At 33.5% per year, this is a significant increase to a producer (reflecting both the increased costs and distance).

### c) Transportation Implications

One of the best studied aspects of rail abandonment is the impacts of additional truck haul on the roads. For this reason I will not dwell on this in detail but will review some of the more pertinent points.

If an elevator is abandoned, farmers must haul grain to the next available elevator. This means the use of local and secondary roads and primary highways for this extra mileage. Generally, the primary highways are constructed such that they can take the extra volumes and weights without added deterioration to the road surface. However, the local and secondary roads are not constructed to such standards and are generally gravel surface. In Alberta, the rural municipalities are responsible for the maintenance of both local and secondary roads (the province is responsible for the construction of secondary roads). The major concerns when extra truck traffic is added to the roads are; the general deterioration and shortening of life of the road surface and dust control. Figure 1 indicates the road network in the study area.

However, in many cases, the truck volumes are not significant. For example, Sedalia had a total of 5.1 thousand tonnes delivered in the 1978-79 crop year. A study of Alberta Wheat Pool tickets indicates that in this area the average truck size is 280 bushels and there are 243 delivery days per year. Therefore, the closure of Sedalia added an average of approximately 3 trucks per delivery day to the road system. June is the peak delivery month in this area, so more than three trucks per day would be expected in June.

### d) Depopulation

The trend in Canada over the past half century is towards urbanization. People are choosing to reside in urban rather than rural centres for a myriad of reasons. This has been evident in the fast growth of urban centres and the decline or non-growth of rural areas. This trend in rural areas may also be attributable to the increase in farm size, increases in technology and advances in machinery etc. Figure 2 indicates the historical population trends for several Alberta communities. It can be seen that some communities were on the decline in the early 1960's, which cannot be attributed to rail abandonment. Some communities remained fairly stable until such time as the rail line was abandoned. Stettler is the only larger community in the study and it can be seen that it has continued to grow. This is probably due to the broader economic base and Stettler is not dependant on any one particular industry. Communities that exist primarily to service a rural hinterland and grain elevators, suffer the most from rail abandonment as can be seen with Dorothy, Finnegan, Hemaruka, Esther etc.

### e) Retail Trade

Retail trade is greatly affected by rail abandonment. Since many of these communities serve a rural hinterland, the retail establishments lose business when producers are not delivering their grain to the elevators. Most farmers optimize their trips so that when they deliver grain, they also shop and fuel their equipment. With grain delivery being diverted to another town or village the retail businesses in the abandoned community will decline, while those in the towns receiving the extra grain also receive the extra retail sales. This reduction in retail receipts, in many cases is enough to require the merchant to close down his operation and relocate. The remaining population in the community is sometimes not enough to maintain the business. And as we will see, the population of these abandoned communities declines leaving an even smaller market for the retailers. As we will see in the discussion of the multiplier effect, the loss of a retail

establishment, again reduces tax assessment which again generates a reduction in services.

FIGURE 2 - Population Trends

Location	Yr. Aband.	Status	Population					
			1956	1961	1966	1971	1976	1980
East Coulee	1977	Uninc.	1003	683	387	312	261	N/A
Dorothy	1977	Uninc.	25	25	12	5	24	N/A
Finnegan	1977	Uninc.	3	8	6	3	2	N/A
Hemaruka	1977	Uninc.	26	20	25	22	9	N/A
Sedalia	1979	Uninc.	20	12	17	18	22	N/A
New Brigden	1979	Uninc.	N/A	N/A	33	31	20	N/A
Esther	1979	Uninc.	14	14	12	15	11	N/A
Edberg		Inc.	N/A	N/A	N/A	145	138	140
Meeting Creek		Uninc.	105	71	75	43	37	N/A
Donalda		Inc.	N/A	N/A	N/A	232	192	278
Red Willow		Uninc.	84	95	63	40	37	N/A
Stettler	(1985)	Inc.	N/A	N/A	N/A	4168	4124	5035
Big Valley		Inc.	N/A	N/A	N/A	306	341	344
Rumsey		Inc.	N/A	118	108	95	83	97
Rowley		Uninc.	63	65	45	26	18	N/A
Morrin		Inc.	N/A	285	272	197	230	245
Munson		Inc.	N/A	N/A	39	54	100	125

f) Grain Redistribution

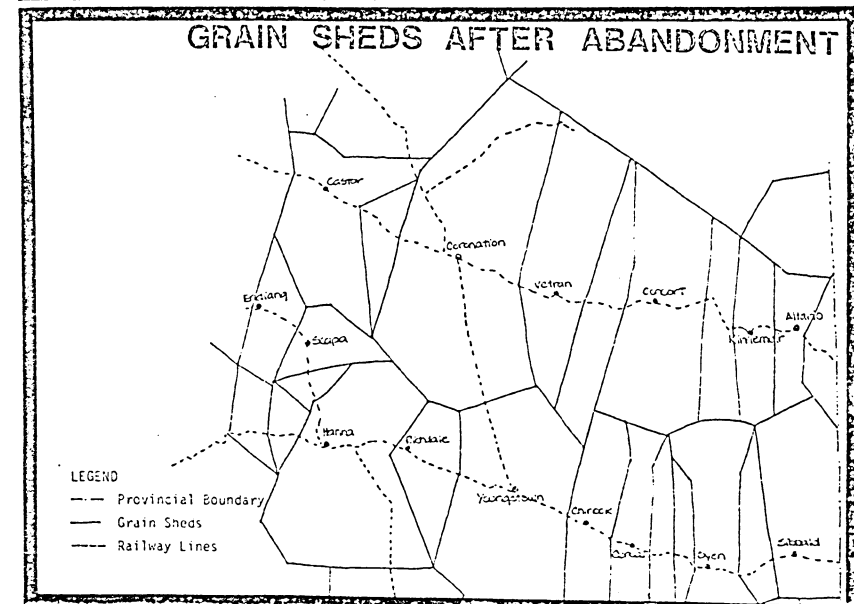
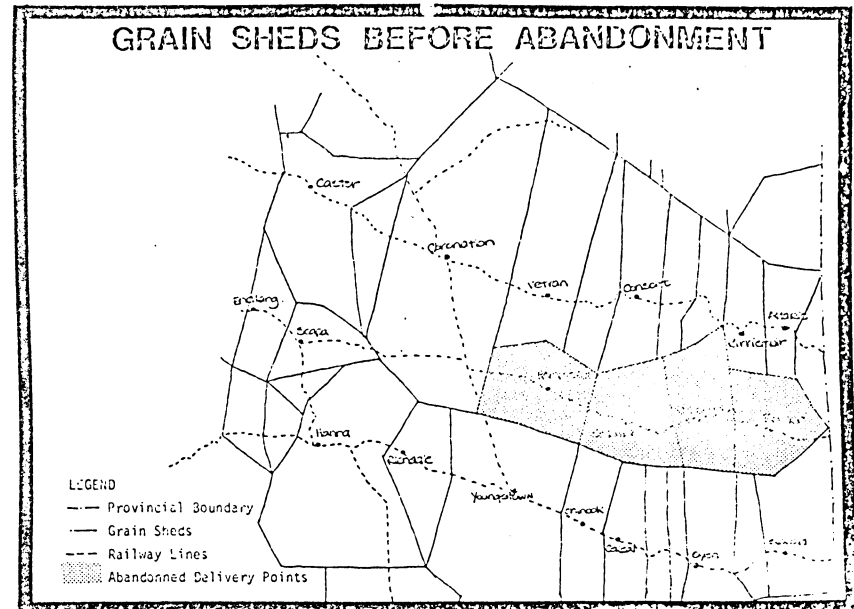
When a rail line and grain delivery point are abandoned, the grain must be trucked to another delivery point. Each delivery point has a threshold market area or a grain shed. When abandoned, this grain must be redistributed to neighbouring grain delivery points. This pattern of redistribution depends on several factors: existing road network, natural barricades and capacity at neighbouring elevators. Very often it seems that the road network is adequate but one of the major short-comings is bridges to cross natural barricades. Another short-coming is often that eventhough an existing grain delivery point may have capacity at the elevators, the rail service is not increased to accommodate the extra delivery. Figure 3 indicates grain sheds before abandonment along the Dodsland Subdivision and how that delivery is redistributed after abandonment. This indicates that the major shift will be north/south as the roadway network is most efficient. In this case also, the existing secondary road system adequately handles the increase in truck volumes but it can be seen that the abandonment has required that many farmers haul their grain an extra 10 miles to a delivery point. Figure 4 illustrates the trends in grain delivery since 1974.

g) Multiplier Effect

After discussing the above impacts of rail abandonment, it is pertinent now to look at the multiplier effect that all these impacts have on a community. Thomas Humphrey, recognized the impact of the multiplier effect his article had when he said,

"Local firms supplying materials or services to a plant that curtails operations or shuts down as the result of a railroad abandonment will be affected according to the proportion of their total business derived from the defunct firm. If such suppliers suffer a significant loss in business, they too, may be forced to reduce the size of their work force.

If the workers displaced from the jobs with rail dependant firms or their local



suppliers are unable to find comparable employment without changing their residences, further effects will be felt by local retailers. To measure these effects, it is necessary to estimate the proportion of sales of the retailers attributable to the displaced workers."

This looks at the economic effects, but the social impacts are also significant. If an employee is forced to move out of the community, he will move his entire family. This not only reduces the municipal tax assessment but also the number of children in the school, his wife's participation in the work force and all his economic needs relating to his job and his personal expenditures. The social organization of the community could be affected. For example, the employee may coach a little league baseball team.

Mr. Humphrey summarizes the impacts of rail abandonment as:

- Increased transportation costs
- Forced curtailment of production and/or sales
- Forced relocation of places of business
- Increased costs for consumer goods
- Loss of jobs from curtailment of industry
- Loss of revenue by business, firms serving rail dependant industries and their employees
- Reduction of attractiveness to potential new businesses
- Increased revenue to truck operators
- Increased congestion on highways

Mr. W. Wong of the Planning Secretariate in Edmonton, indicated that negative multipliers cannot be standardly applied for communities under a population of 2000, primarily because communities of this size may have no other major industry or employer other than the rail related industries. The elevators and other right-of-way businesses are the prime reason for the existence of some communities. A community such as Taber (5,708 in 1980) would not feel the same impacts of a rail line abandonment as the Alberta Sugar Company has its factory located in the town. However, a community such as Big Valley (344 in 1980) has two elevators and associated right-of-way businesses which are the major source of employment and tax assessment. A small abandoned community may survive as a minor service centre if its proximity to a major service centre (central place) is such that increased grain haul costs (and reduction of tax assessment) is not significant and the residents and producers can utilize this central place and its juxtaposition for major services.

FIGURE 4 - Grain Delivery Trends

Location	Line	No. * Elevators	Crop Year (in Thousand Tonnes)					
			1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
East Coulee	CP	1 (0)	3.2	3.5	3.5	2.4	-	-
Dorothy		1 (0)	1.5	1.9	-	-	-	-
Finnegan		1 (0)	.5	-	-	-	-	-
Hemaruka	CN	1 (0)	2.5	-	-	-	-	-
Sedalia		2 (0)	6.3	6.0	6.1	5.2	5.1	-
New Brigden		1 (0)	7.5	8.6	7.2	7.0	4.7	-
Esther		1 (0)	8.4	8.5	8.9	7.1	5.0	-
Edberg	CN	3 (3)	7.9	11.5	25.8	12.7	9.5	18.8
Meeting Creek		2(1)	3.5	5.4	6.7	8.0	4.3	8.6
Donalda		4 (2)	10.7	13.3	15.5	17.7	10.7	19.2
Red Willow		3 (3)	3.8	6.2	8.1	9.2	7.9	11.1
Stettler		2 (2)	8.8	13.9	15.3	14.6	15.6	18.9
Big Valley		2 (2)	8.0	11.7	9.7	9.1	10.0	15.4
Rumsey		2 (2)	7.3	10.1	9.3	8.7	8.1	11.3
Rowley		3 (2)	7.3	8.7	8.2	8.1	6.0	12.3
Morrin		5 (4)	21.5	25.5	21.1	23.3	21.8	32.4
Munson		4 (4)	17.9	22.7	19.7	21.7	21.3	28.7

## 3. HISTORICAL EXAMPLES

a) Doddsland Subdivision

The first portion of the Doddsland Subdivision, from Hemaruka to Sedalia, was abandoned in December 1977. The rest of the subdivision from Sedalia to the Saskatchewan boarder (including Sedalia, New Brigden and Esther) was abandoned in February 1979. There were a total of 5 elevators abandoned. This abandonment then required the redistribution of approximately 24.7 thousand tonnes of grain.

All of the communities affected were unincorporated and all were very small hamlets (all had populations under 50 in 1976). Although these communities were small, they all served a rural hinterland.

When these communities were abandoned, there was a loss of tax assessment. Although these communities were all unincorporated, the impact of the tax assessment was felt greatly. The rail line abandonment crosses two Special Areas. Special Areas are unique municipal areas that were created during the 1930's. The depression and several years of drought brought many farmers to financial ruin. At that time, the provincial government acquired most of the land, consolidated counties and leased back the land to farmers. Subsequently, the provincial government administers these areas with a Citizens' Advisory Council. The Special Areas are not high yield areas and most of the land is not irrigated. The loss of tax assessment was significant to the Special Areas.

This area has no natural resources and very few other developments so that other sources of tax assessment are few.

In general, population has been declining in this area both in the unincorporated hamlets and the rural hinterland they serve. During the years 1966 to 1976, the population of Special Area 2 declined 43%, Special Area 3 declined 30% and Special Area 4 declined 46%.

It appears from the grain sheds after abandonment (Figure 3) that the redistribution of grain delivery had a devastating effect on the farmers truck haul costs. Farmers are now required to truck their grain to delivery points either north on Highway 12 or south on Highway 9. On average this requires an extra 5 miles of truck haul to the closest elevator, making the average truck haul from farm to elevator of approximately 10 miles. Retail activity in these communities was always low. The communities served a rural hinterland and producers utilized the services in these communities when delivering grain. Without grain delivery, there was not enough support for the retail businesses. Hence, there are no retail establishments remaining in any of the abandoned communities. Now the grain deliveries go to other larger communities such as Coronation, Youngstown and Oyen, and the monies previously spent on retail goods in Hemaruka, Sedalia, New Brigden and Esther, are spent in these larger communities.

The costs of delivering goods to these communities has increased with rail abandonment as everything that was previously brought in by rail now has to be trucked in. This increase in the cost of living was directly proportional to the decrease in the standard of living, employment and services. The infrastructure in these communities was never significant so that there was never a large capital investment. But the real impact of this abandonment was to the rural hinterland it served. The rural populous now has to travel farther for services, grain delivery, goods, bulk fuel etc. This increase in cost has a significant impact without any counter balancing benefits.

The extra truck haul is manifest in 24.7 thousand tonnes of grain. This area (according to a study of Alberta Wheat Pool tickets) has an average truck size of 280 bushels, with 243 delivery days per year with June being the peak month. This redistribution generates almost one million bushels of grain or 3,485 trucks per year from these abandoned delivery points. This is approximately 14.5 trucks per day during the delivery season (with more expected in June). These trucks will primarily travel on gravel secondary and local roads (any impacts to paved primary highways will be minimal). Because Special Areas have low tax assessment and are

administered by the province, the burden of road improvements will fall on the provincial government.

Eventhough, these were small communities, they have declined greatly since the abandonment of the Doddsland Subdivision.

b) Rosemary Subdivision

The Rosemary Subdivision was abandoned between Dorothy and Finnegan in 1975, between Dorothy and East Coulee in 1976 and to East Coulee in 1977. All three abandoned communities were unincorporated. Finnegan was a small declining community before the rail abandonment and had a very low grain delivery (Figure 4). Dorothy was also a small community but has actually experienced an increase in population in the past few years. East Coulee is the largest community on this subdivision but its population has declined steadily since 1956. This has obviously not been due solely to rail abandonment. This was a major coal producing area but coal mining declined in the 1960's as the mines became less productive, seams ran out and it became more expensive to operate.

It appears that Finnegan was never a thriving community and it appears the major source of employment is operating the ferry across the Red Deer River. Regardless of rail line abandonment, Finnegan was a declining community and was never a major grain delivery point. There was no retail activity here nor any major developments.

Dorothy is in a similar situation, in that it is small and was never a major grain delivery point. There are no retail establishments in Dorothy. Dorothy's added problem is poor road access. Dorothy is located in the valley of the Red Deer River and access is very steep with back slide problems in the spring. It appears that Dorothy also would have continued to decline regardless of the rail abandonment.

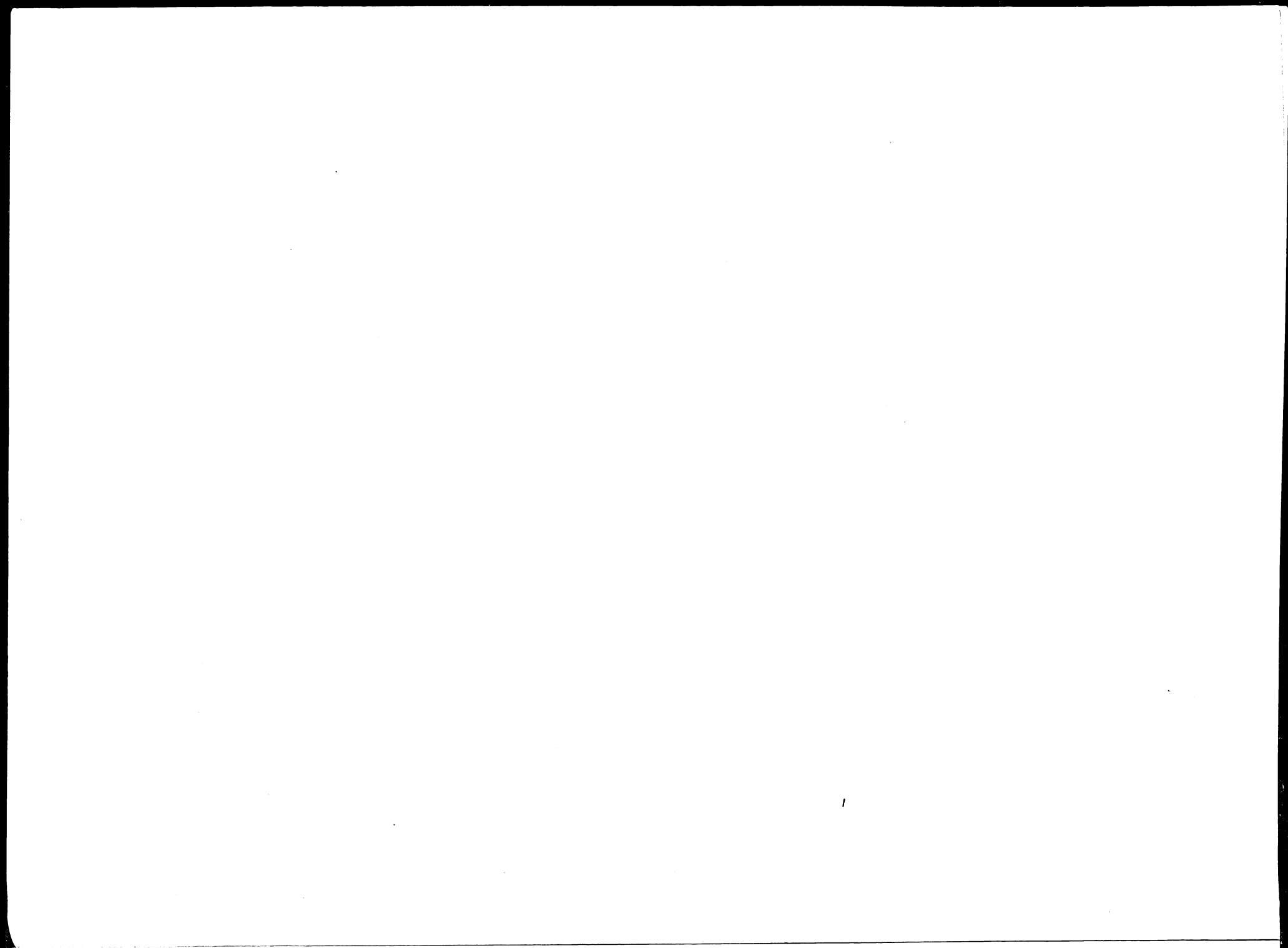
East Coulee is a different case. Grain delivery was moderate here. East Coulee's population today is over 200 and in 1956 was over 1,000. East Coulee was the centre of the coal mining industry in this area. There was a retail community and a large social infrastructure. Two events started the decline of this hamlet: the coal industry declined and the rail line was abandoned. The population declined and the community's proximity to Drumheller (the major area trade centre) all added to the general deterioration of the community. East Coulee is connected to Drumheller by a high standard primary highway and presently functions as a dormitory town for Drumheller.

The communities are located in Improvement District 7. Improvement Districts are similar to Special Areas in that they are usually financially unable to maintain all the services required by its residents and so are administered by the Province. Therefore, the loss in tax assessment is significant and again the entire burden is placed on the province. This area has lower class soils, unique topography and is bounded by the Red Deer River.

As noted, grain delivery here was moderate. When these communities were abandoned, 3 elevators were closed. A total of 5.2 thousand tonnes of grain had to be redistributed to alternate grain delivery points. This area of Alberta (based on Alberta Wheat Pool tickets) has an average truck size of 295 bushels with 237 delivery days in a year with July being the peak month. Therefore, this redistribution created approximately 3 trucks per day (with higher volumes expected in July). This truck volume will not create significant impacts on the roads. However, the additional miles of truck haul to the farmer is significant. Grain from these communities would be delivered to Hussar, Drumheller, Craigmyle, Delia or Michichi. This could then mean addition haul of up to 13 miles to a delivery point making total haul from farm to elevator of 23 miles for some farmers.

From this we can see that Finnegan and Dorothy may not have been suitable for special development encouragement. But East Coulee has a stable population, is in close proximity to a major service centre and has potential for development of the tourism industry. This is a unique area with topographical formations that are being





developed as tourist attractions along with the recreational potential for the Red Deer River Valley.

#### 4. PROPOSED ABANDONMENT

The Prairie Rail Action Committee recommended that the CNR Stettler Subdivision be abandoned between 1979 and 1985. Hearings on this abandonment have been held and a decision by the Canadian Transport Commission is pending. This subdivision extends from Donaldia in the north, to Munson in the south, in central Alberta impacting on ten communities ranging in size from a population of 20 (Rowley) to 5,035 (Stettler).

##### a) Impacts

Some communities along this subdivision will be affected more than others. For example, Stettler not only retains the CPR line, but is a larger town with an economic base that can support either a reduction of grain delivery or a temporary slow down while the elevators are moved from the CN line to the CP line. Munson will receive the same benefit of retaining an alternate CP line, although it does not have the size or diversity of economic base that Stettler does. Meeting Creek and Red Willow are both very small unincorporated hamlets and although they will lose the elevators, they will not lose their tax base in the same way as an incorporated community. The larger rural municipalities will be able to absorb much of the loss and a redistribution of taxes will be dispersed more evenly. Also, these communities are not service centres for the hinterland, and residents now already have to travel to make most of their purchases so that these communities will not in all probability feel great impact of the abandonment. This leaves 6 communities which will feel significant impacts of rail line abandonment.

The most immediate impact is the redistribution of grain haul. This will be felt predominantly by farmers who will bear costs of additional truck haul miles. For example, approximately 80% of the farmers presently delivering to Meeting Creek will have to deliver to Bashaw which will mean an average of 19km (12 mi) of extra truck haul. As we saw in section 2b of this paper, this will dramatically increase the farmers annual operating costs.

The next impact felt will be largely to the incorporated municipalities in terms of lost tax assessment. This impact varies depending on the municipalities dependency on the elevators and railway. A community such as Morrin, which functions as a trade centre with a fairly large hinterland only receives 18% of its total tax assessment from the elevators and right-of-way properties. Rumsey on the other hand, receives 40% of its total tax assessment from these properties and a community such as Rowley is greatly dependant on the elevators and rail right-of-way properties (69% of the total tax assessment). By losing this amount of tax assessment municipalities may have to significantly increase residential and commercial mill rates to compensate, which may unintentionally force residents and businesses to leave the community.

Although many rural communities have experienced population decrease over the past 20 years, many of the communities on the Stettler subdivision have stabilized. However, school enrollments have been dropping. Should residents be forced to relocate, school enrollment will decrease drastically leading to funding and programming problems as well as generally underutilization of school structures.

Many communities in this area have recently received heavy public investment on infrastructure items. In 1979 Morrin received \$500,000 for construction of a new sewage lagoon. In 1979/80 Rumsey received \$300,000 for a new agriplex. In 1977 Rowley received \$7,500 for an addition to the community hall. If the community declines, due to rail abandonment, these funds will have been misallocated and wasted monies rather than truly improving the standard of living as was originally intended.

Retail services will be impacted upon greatly in two ways. First, a decline in retail receipts and ultimately the entire community will be accelerated by reducing grain truck traffic to these communities which would normally have been delivering

to the elevators, undermining support for local goods and services. Reinforcing this trend, farmers will want to make more efficient use of higher cost truck transport (due to longer hauls) by purchasing their farm (and other) goods in the main line centres to avoid empty hauls back. A community such as Rumsey, which has two grocery stores, 1 garage/hardware store and a hotel, will feel the impact greatly as farmers will not be coming into the hamlet to deliver their grain and subsequently not purchase groceries, and socialize.

Many communities provide recreational facilities to service both the residents of the community and the hinterland. Again, without use, funding will be reduced and those remaining residents will have a resulting reduction in their standard of living.

If we assume that Stettler and Munson will be able to maintain their present levels of grain delivery by moving elevators to the CPR lines, there would be a total of 126.9 thousand tonnes (over 5 million bushels, based on the 1979-80 crop year) of grain redistributed from the 8 communities. With an average truck size in this region of 295 bushels and 237 delivery days per year, this would generate an average of 72 trucks per delivery day hauling an average of 10 extra miles to the nearest elevator. July is the peak month for grain delivery in this area so that daily truck volumes are anticipated to be much higher then. This truck traffic will be dispersed throughout a large portion of the road network and will be directed to several grain delivery points. This area is also well serviced with primary highways which are generally constructed to a high standard paved surface. The greatest impacts will be felt on the secondary road system. As noted earlier, these roads are initially constructed with provincial funds. Once constructed, they are turned over to the municipality for maintenance. There are special programs whereby provincial funds can be provided to assist municipalities to upgrade roads (i.e. Roads to Resources), but these do not generally deal with roads carrying high volumes or heavy weights of agricultural related traffic. As with everything else, costs for road construction and upgrading have increased dramatically over the years. For example, the 1982 estimated costs used by Alberta Transportation include: \$120,000/km to regrade a poor road (37' grade), \$10,000/km to add oil only, and \$151,300/km for base course and paving (30' top). If a municipality is experiencing an economic decline and loss of tax base due to rail abandonment, they are not going to be financially able to upgrade the roads deteriorated by extra truck haul. For example, with the removal of the elevators in Rumsey, approximately 80% of Rumsey's grain will be redirected for delivery to Trochu. Much of this truck haul (an average of 5 extra miles or 8km) will utilize Secondary Road 535. This road has been recently paved and is considered to be in excellent condition. Eighty per cent of Rumsey's grain delivery translates to an average of 5 trucks per day during the delivery season. This will decrease the life expectancy of the pavement from 20 years to 19 years at a cost of \$62,000. This may not seem a grand amount over such a time period, but if similar roadway life reductions are taking place all along the abandoned line the financial implications to a municipality will be significant.

In general, consumers and residents will be faced with an increase in the cost of goods, and thus a higher cost of living, while living in an economically declining area, facing a decrease in the standard of living.

##### b) Alternatives

It appears evident that the impacts on some communities are more than significant, they can be devastating. Other communities can be aided or feel no impact by abandonment. The problem is: how can we deal with the decline of a community? On whom the onus should be placed to attempt to stabilize these communities? I am suggesting that some communities have no potential and that they would have declined naturally regardless of the rail abandonment. But I am also suggesting that those communities that are stable, economic centres prior to abandonment, be encouraged to survive. Unfortunately, the economic and social stimulation, as would be needed here, is very often achieved through public intervention.

The Palliser Regional Planning Commission in their draft regional profile,

suggests that there should be some moral conscience on the part of railways to assist communities:

'We feel that the public sector can be justified and effectively used as a stimulus for social and economic development. We note that at CN, running a railway is - to turn a phrase - a responsibility as well as a business. Accordingly, we feel that retention of (rail lines) will help to achieve an appropriate balance between the high costs of services and the right of people to a fair level of services.'

The fact remains that some lines must be abandoned and this paper does not suggest that it is the sole responsibility of the railway to directly compensate the affected communities. However, the following are some suggestions as to how appropriate communities could be assisted.

When a community is slated for abandonment, in the ensuing years before the actual abandonment, the public sector could begin an economic development program by encouraging private development to relocate or develop in these communities. Many of these communities have locational benefits that would be desirable for many industries, such as inexpensive land, good road access, water supply, proximity to major market centres, natural resources and willing labour. The Palliser Regional Plan (Draft) suggested that the plan recommend 'Provincial assistance to selected communities to help attract development to replace economic functions lost due to branch line abandonment.'

Municipalities could provide tax assessment incentives for new industries to encourage relocation.

The public sector could try to assist the community to develop industries themselves by providing research aid, professional advice and consulting services. This could help develop industries such as tourism and other internally generated industries (ie: development of cottage industries).

Farmers could be compensated for extra long truck haul above the average haul distance. This practice has been in operation for some time in industries such as sugar beet haul in Southern Alberta. If the farmer has to travel extra distance to deliver sugar beets to sugar beet dumps or the sugar factory in Taber; they are compensated by the tonne mile by the Alberta Sugar Co. In the same fashion, the farmer could be compensated by the federal government either in added crop value at the time of delivery, or in a form of income tax incentive.

Social services should receive some form of additional subsidization to ensure the level of service is maintained for residents in such areas. These services include schools, libraries etc.

The railways must ensure that extra hopper cars are supplied to the elevator where the grain delivery has been shifted. It has been the general comment by elevator managers and farmers alike, that when a line is abandoned, the neighbour elevator could usually handle all of the grain delivery but very often do not get the extra rail service required to move the grain.

The use of abandoned right-of-way should be made available to the community involved, if they want it, before any other use agreement is concluded. Very often this right-of-way can be utilized for municipal services, industrial development or development of tourism facilities.

Finally, the railways may be encouraged to promote developments or create job markets to assist these communities in dealing with their new status.

In general, there are many things that can be done to arrest the economic and social decline most often brought about by rail line abandonment. None of the above alternatives are easily achievable and non guarantee the continued economic viability of the community. However, with planning and public sector assistance a community may have the opportunity to stabilize and grow.

Let us apply these suggestions to a community such as Morrin. This community had a 1981 population of 245. It is located at the intersection of two primary highways. Morrin is located 22 km north of Drumheller and 140 km northeast of Calgary. This community is located near the Red Deer River where there is an

existing campsite. Immediately south of Morrin are gravel pits. This community is also located approximately 18km north of Midland Provincial Park and the Palaeontological Museum and Research Institute being developed there. The community has many social and recreational facilities including schools, a library, community hall and hockey arena. Businesses include a hotel, a bank, a grocery store, garage and a real estate/insurance office. If the railway is abandoned and the elevators removed, the community would lose 18% of its total tax assessment and local businesses will start to feel the pinch. But the services and infrastructure already exist. Some suggestions for economic encouragement here include:

- Provincial expansion and development of the campsite immediately west of town on the Red Deer River to encourage visitation, over night camping and river activities. Visitors to the park would utilize the services in Morrin generating receipts for local merchants.
- Farmers could get some compensation because of extra truck haul miles to the nearest elevator. This will help compensate the increased production costs.
- Schools and libraries would require subsidization to maintain the level of service.
- The public sector would begin promotion of the area for economic development for small industries and businesses to settle in Morrin as well as Municipalities offering assessment incentives.
- The railway would provide the necessary hopper cars to the elevators still operating to ensure fast and efficient movement of grain.

The key to economic stabilization is to start this process before the rail is abandoned so that time lags are considered and relocation and development can take place.

## 5. CONCLUSIONS

This paper has shown that rail abandonment has significant impacts on most communities. We have also seen that some communities would have declined regardless of rail line abandonment. Hamlets with populations under 100 are generally totally dependant on rail and do not have commercial/social structures but rather, depend on the central place or area trade centre for their services. Conversely, some communities benefit from the abandonment of a rail line in a neighbouring community, as they will receive the grain delivery, increased retail activity and population growth. These communities do not require assistance.

It is the proposal of this paper that communities that are stable before abandonment, would decline with abandonment, and should be assisted in any ways to ensure economic and social stability and continuation. These communities are characterized by: stable population (approximately between 200 and 1,000); a tax assessment that is less than 30% dependant on rail and right-of-way properties; a business community; a municipal infrastructure; a social infrastructure (ie: schools); is fairly close to the next grain delivery point (so that producers do not haul more than 10 extra miles to deliver grain); and there is good road access.

This paper proposes several ways to facilitate this economic stability. By considering historical examples of rail line abandonment and applying that knowledge to a proposed abandonment we can foresee the impacts and can minimize them through planning.

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INTERVIEWS

- Mr. E. Irvine, Industrial Development Representative, Canadian National Railway.
- Mr. Mann, Canadian Transport Commission, Calgary.
- Mr. W. Wong, Planning Secretariate, Department of Advanced Education, Government of Alberta, Edmonton.
- Mr. G.N. Chaudhary, Economics Branch, Department of Agriculture, Government of Alberta, Edmonton.
- Mr. R.D. Rawlusk, Planning Staff, Palliser Regional Planning Commission, Hanna, Alberta.