6.4 Land Drainage & Ground Water

Poor drainage has always been a major problem in the study region. It confronted and defeated some of the first settlers during the 1870s, and for many years prevented widespread settlement of the Red River Valley, despite the richness of its soil and the ease in which the open prairie grasslands could be broken and cultivated. The long-standing problem of land drainage existed for several reasons.

The many creeks and rivers flowing from the highlands in the eastern part of the region regularly spilled their banks during the annual spring melt, flooding the farmland on the 'flats' in the western part of the study region. Due to the extreme flatness of the land in the Red River Valley, and the impervious nature of the clay subsoil, this water tended to remain on the surface, and only very slowly drained away or evaporated. Such waterways, which flowed into semi-permanent marshes, without outlets, were known as ‘blind creeks’ and there were a number of them in the study region. Drainage ditches and canals were constructed in the valley by the early 1880s, and these initially succeeded in draining off much of the excess surface water. The Manning Canal, in particular, constructed in 1906-08 in the area south of the Seine River, facilitated the draining of several large permanent marshes in that area. Some of the earliest drainage projects involved the Seine River and Mosquito Creek near St. Malo, and the 'flats' south of Dominion City.

However, as new farms were cleared and roads constructed in the hitherto undrained territory of the eastern highland regions, more and more runoff was directed into the upstream drainage canals, overloading them and choking them with silt and vegetation. Eventually, even a heavy rainfall could cause flooding and serious crop damage for farmers living in the valley. Frustrated farmers sometimes banded together to dam some of the canals, which caused even more flooding upstream. Court cases, claims, counter claims, and some "bad blood" between neighbours and municipalities resulted from the region’s drainage problems.

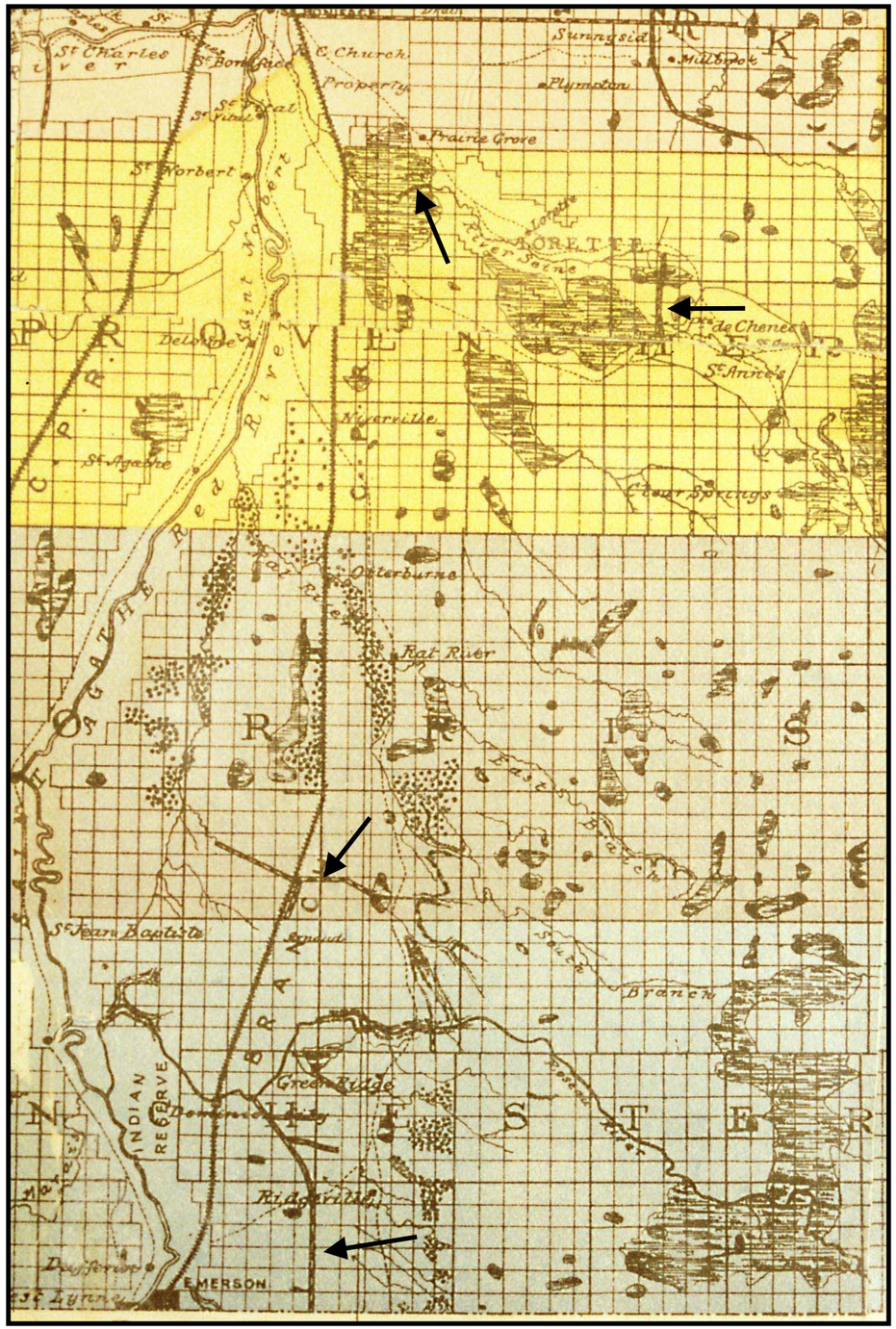
Beginning in the late 1950s, the provincial government became heavily involved with the issue and commenced work on several cost-shared drainage projects in three separate drainage districts in the study region. These included the Manning and Tourond canals, and the Youville and Jenson Drain in the northern part of the Study Region. In 1958 the Seine River Diversion was dug and this alleviated some of the problems associated with springtime flooding along the Seine River. During this period a new type of drainage ditch was instituted; instead of building deep ditches with steep sides, the new ditches were built shallower, wider, and with gently sloping sides. This prevented rapid silting and allowed the edges to be cut for hay, keeping the channels clear of undergrowth. Currently, an intricate matrix of canals, ditches and shallow run-off channels, constructed and maintained by provincial and municipal levels of government and individual farmers, keeps the land well drained and crop damage due to flooding at a minimum.

Groundwater

In addition to drainage problems, the entire Red River valley also suffers from poor ground water resources. Early settlers put down crib wells up to 15-18 metrs (50-60 feet) depth without striking water, and when ground water was reached, it was invariably alkaline and unfit for domestic use. Many of the early settlers were forced to haul water from the creeks flowing off the highland areas. Mosquito Creek, in the southern portion of the study region, was a common source of drinking water for many years. Another significant source of drinking water was the Springbank Well, located 4 km (2 1/12 miles) south of Ridgeville. Spring-fed, it was discovered accidently on the public road allowance by an early settler, Hamilton Stewart. As the lands west of the well became more settled, the demand for water from this source became more acute, and it was enlarged and improved several times over the years. It was said that every farmer west of the well had to haul water from it for their stock during the winter months. Some days there would be half a dozen sleds with tanks waiting their turn at the well. The Springbank Well is still in use, though it is now housed and protected within a municipal structure, and the water is easily obtained by use of an electric pump and overhead hose. However, in recent years, with the increased use of farm dugouts to collect and store rainwater, it is no longer a critical source of drinking water. Similar situations occurred throughout the study region. The Clearsprings Settlement, located just north of Steinbach, was established during the mid 1870s, and is so named because of the existence of another all-important flowing spring. While the eastern highland is blessed with excellent well water, the Red River flats is equally hindered by a lack of it. Thus water, both surface and groundwater have long played an important role in the history and development of the study region.

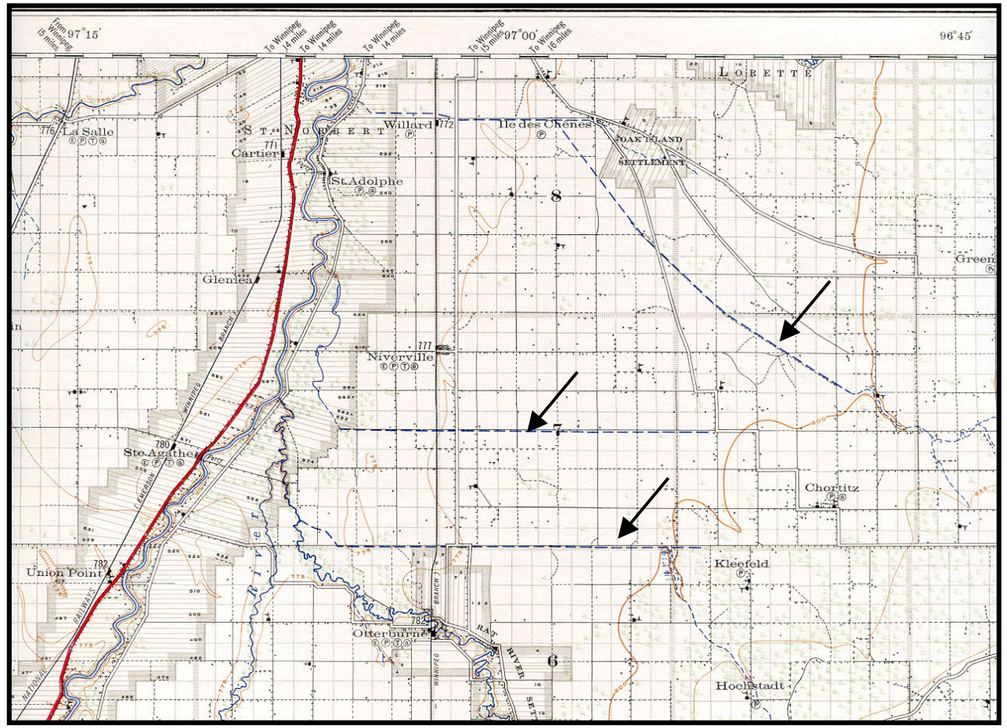
Sites noteworthy for their portrayal of water resource themes include:

1. The Manning Canal
2. Seine River Diversion
3. Dominion City area drains

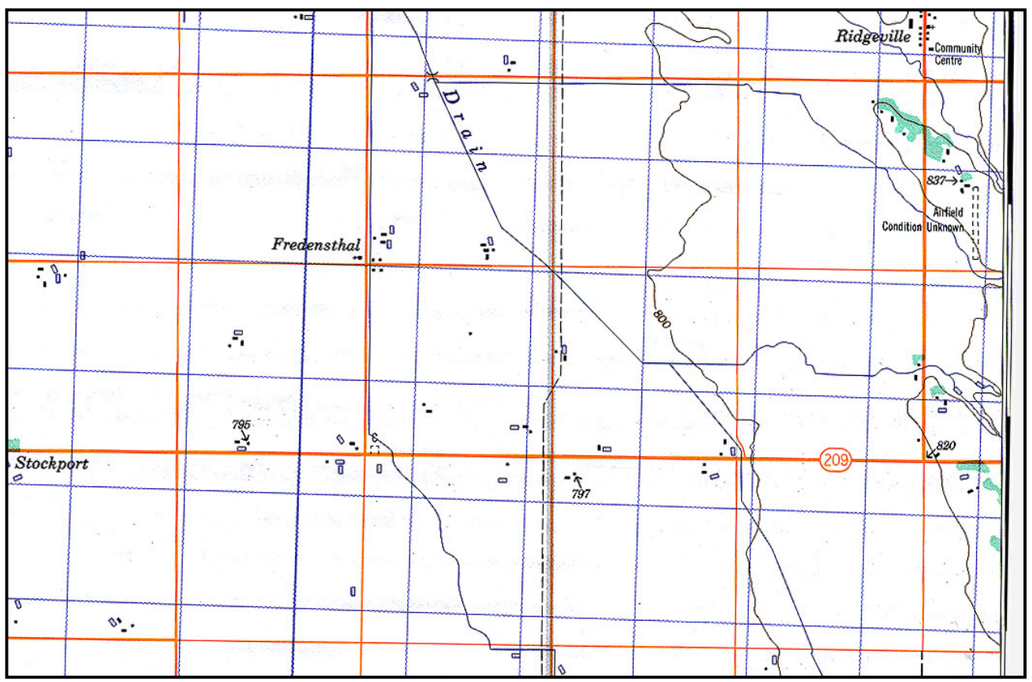


6.4.1 Above: Early Drain
Detail of a map dated January 1, 1882, showing some of the first drainage projects in the study region, involving the Roseau River, Mosquito Creek and the Seine River. *(Map Title: Map of the Province of Manitoba, Canada Complied from Government Surveys to Jan 1, 1882 Source: PAM # H3 614.2 fbo 1882R c.1. HRB Map #009.)*

6.4.2 Above: The Manning Canal
While most of the major drainage canals and drains are significant to the history and development of the region as a whole, one stands out above the others. The Manning Canal made possible the draining of two of the three large marshes formerly located in the Seine River area, as well as providing an outlet for the 'blind creek' northwest of Steinbach. A short 5-km (3-mile) long ditch, connecting the Seine River channels between Ste. Anne and Dufresne, helped to drain the "Great Marsh', the third largest wetland in the area. Interestingly, the routing and configuration of the Manning Canal appears to retrace the route of the former 'Oak River' portrayed on some early maps of the area. The Seine River Diversion connects with the Manning Canal near Ile des Chênes, near the site where the old Ste. Anne Trail crosses the Manning Canal. This strategically located site possesses several elements related to land drainage and provides an excellent potential roadside stop where drainage could be interpreted as a major landscape element. *(Photo: Historic Resources Branch.)*

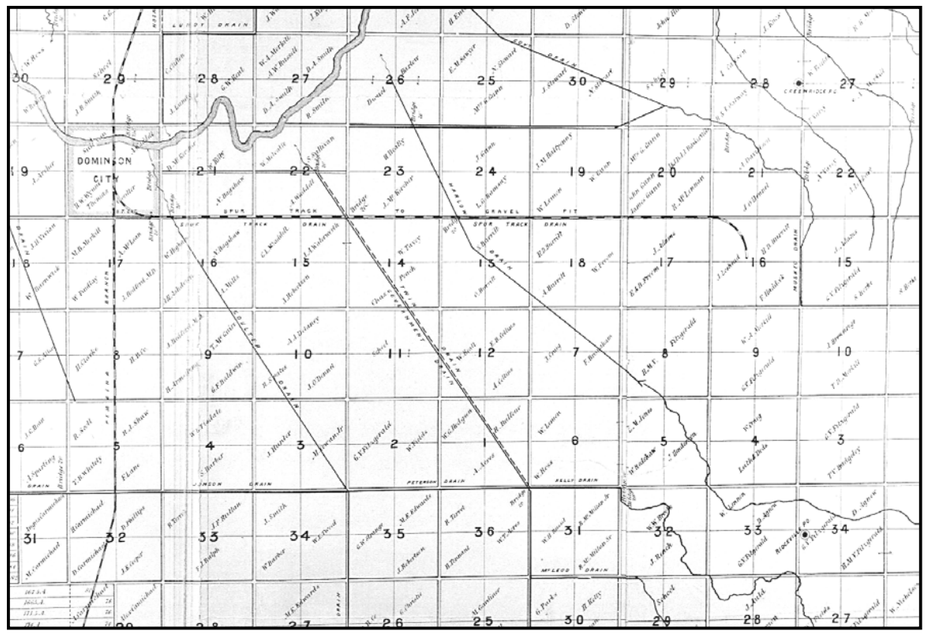


6.4.3 Above: Drainage Canals in the Niverville area
Detail of a 1922 Sectional map showing some of the early major drainage canals in the Niverville area. Note how the Manning Canal follows the natural NE/SW slope of the land while the two canals to the south of it follow the E/W road allowances. *(Map Title: Sectional Map No. 23, Emerson Sheet, March 1922 Source: Maps & Surveys Branch files. HRB Map #035d.)*



6.4.4 Right: Drainage Ditches in the Emerson 'Flats' Area
Detail of a map, printed in 1883, showing a large number of government and farmer built drains in the 'flats' area between Dominion City and Ridgeville. Note also the railway spur line, which existed at this time, connecting the siding at Dominion City with the temporary gravel pits developed in section 16. *(Map Title: Map of Part of Franklin Municipality Shewing Drains Etc, January 1883. Source: PAM#: H9 614.21 Fr gbbd 1883. HRB Map #025.)*

6.4.5 Left: Drainages and Dugouts
Detail from the Emerson topographic map sheet showing some of the drainages and the many farmyard dugouts in the Fredensthal area. Note the only areas of surviving woodland are on the ridge just south of Ridgeville. *(MapTitle: Emerson 62H/3 1:50,000 topographic map, 1991 edition).*



7.0 AGRICULTURE

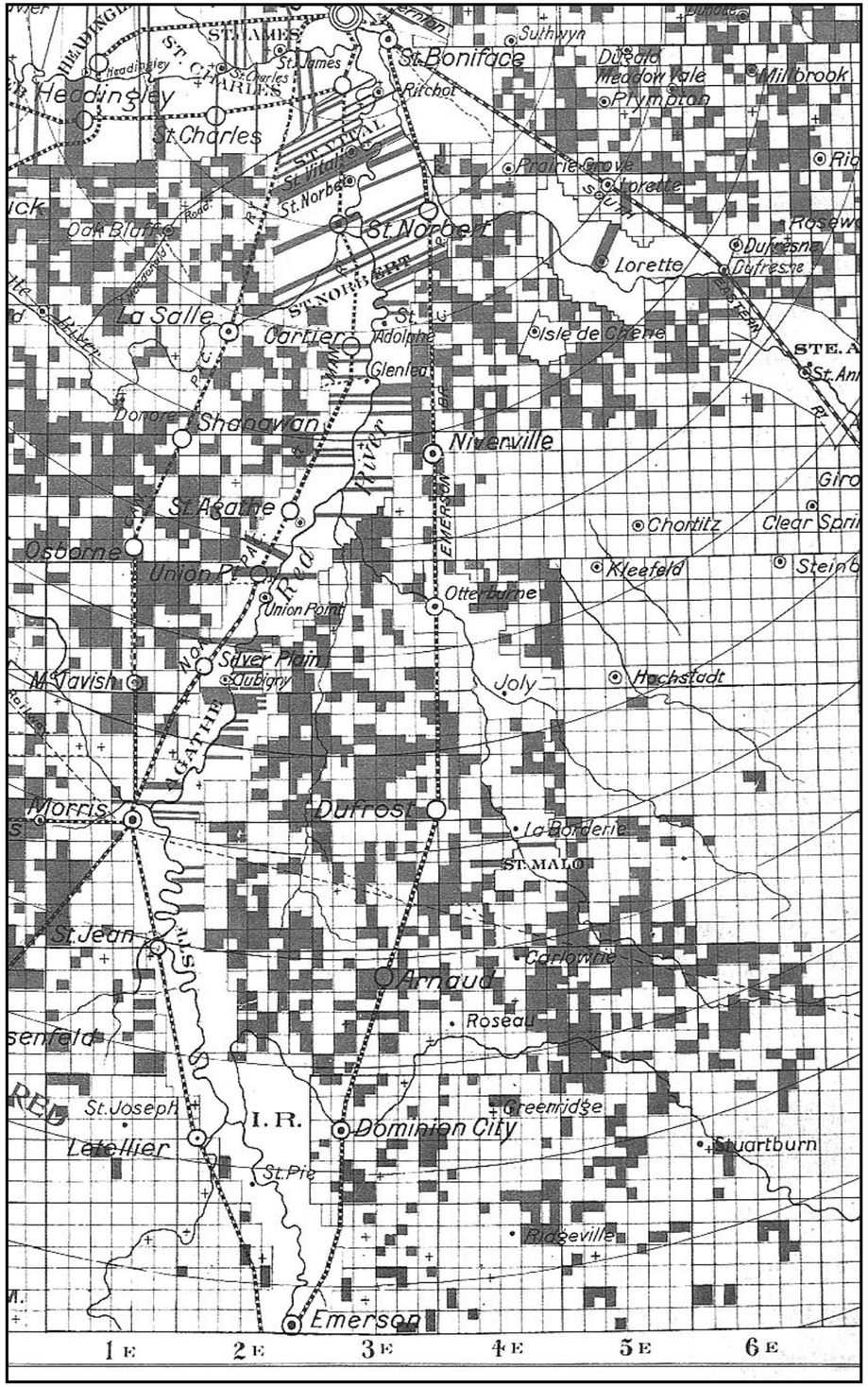
Given the nature of the region's natural resource base, the history of resource use in the Crow Wing Study Region is primarily that of agriculture. During the early decades after settlement there also was a fairly active, if short-lived, wood and lumber trade centred in the Emerson and Dominion City areas. Dominion City also possessed a brick-making plant during the early 1880s. In more recent years, the mining and transportion of gravel resources has become an important industry in selected areas of the upland district. Despite these other types of resource use, agriculture always has been the region's main economic activity. There has been great diversity within the region's agricultural history, including a variety of crop and livestock production. Cereal crops such as wheat, oats, and barley; specialty crops, such as sugar beets, sunflowers, and potatoes; dairy products, such as milk, butter, and cheese; intensive poultry and hog production; and more recently, several exotic livestock species such as bison, ostrich, and emu are all part of this diversified agricultural economy.

Agricultural land use in the study region has always been influenced by two basic geographic factors: firstly, land quality and soil type, and secondly, its proximity to the Winnipeg urban market. Farmland located on the flats of the Red River valley traditionally has been used for cereal grain production, while the poorer quality land in the eastern highlands always has had a livestock emphasis, with beef production dominating the southeastern areas, and dairy production dominating the northeastern areas. Changes in agricultural production have largely been determined by technological advances in farming practices and equipment. This resulted in larger and larger-sized farm holdings in the western 'crop production' half of the study region, and increasingly more numerous and mechanized feed-lot-style dairy, poultry, hog, and beef operations in the eastern 'livestock' half of the study region.

The southern districts of the study region, particularly in the vicinity of Emerson and Dominion City, were among the earliest areas of Manitoba, outside of the confines of the Red River Settlement, to be settled. By 1873 the surveying of the land in the Red River valley had been completed, and settlers (primarily from southern Ontario) were beginning to arrive via steamboat on the Red River, or by the more grueling Dawson Route from Lake Superior. Mixed farming initially predominated, but by 1900 advances in farm equipment design permitted the cultivation of larger acreages, and cash crop production soon began to take hold. This was reinforced by the establishment of many communities in the region where supplies and foodstuff could increasingly be purchased, rather than having to be raised or produced on the farm. Thus by the early 1900s, agricultural specialization was becoming commonplace.

In 1874 the Mennonite East Reserve was established in the study region. With their experience of settling and farming the open steppes of southern Russia, the Mennonites did not hesitate to establish villages and farm the open prairie. As in the areas of early Anglo-Ontarian settlement, mixed farming initially predominated in the East Reserve. Before long, however, cash-crop production developed in the area below the ridge, and dairy production prevailed in the poorer quality land above the ridge. The close proximity of Winnipeg permitted daily transport of milk and cheese products to the rapidly growing Winnipeg market, and permitted intensive agricultural production on land which would not have supported this level of development had it not been located so close to Winnipeg. After the turn of the century, rapid population growth in the study region led to farm diversification; particularly in the Mennonite-settled areas. Rather than relocating to the few remaining sparsely settled areas of the province where land intensive cash crop production could be carried out the new generation of Mennonite farmers instead shifted to more building-intensive operations; such as poultry and hog production, and thus were able to remain in their home region. As a result of this early shift to specialized, intensive, agricultural operations, this region of Manitoba came to possess the highest density of rural population in the province.

There are very few agricultural sites in the region currently being preserved, conserved, or commemorated because of their portrayal of the region's rich agricultural heritage, despite the importance of the agricultural sector in the development of the study region. Additionally, and unfortunately, there appears to be only a small number of known surviving sites which could be developed as heritage landmarks, commemorating and celebrating is component of the region's heritage.

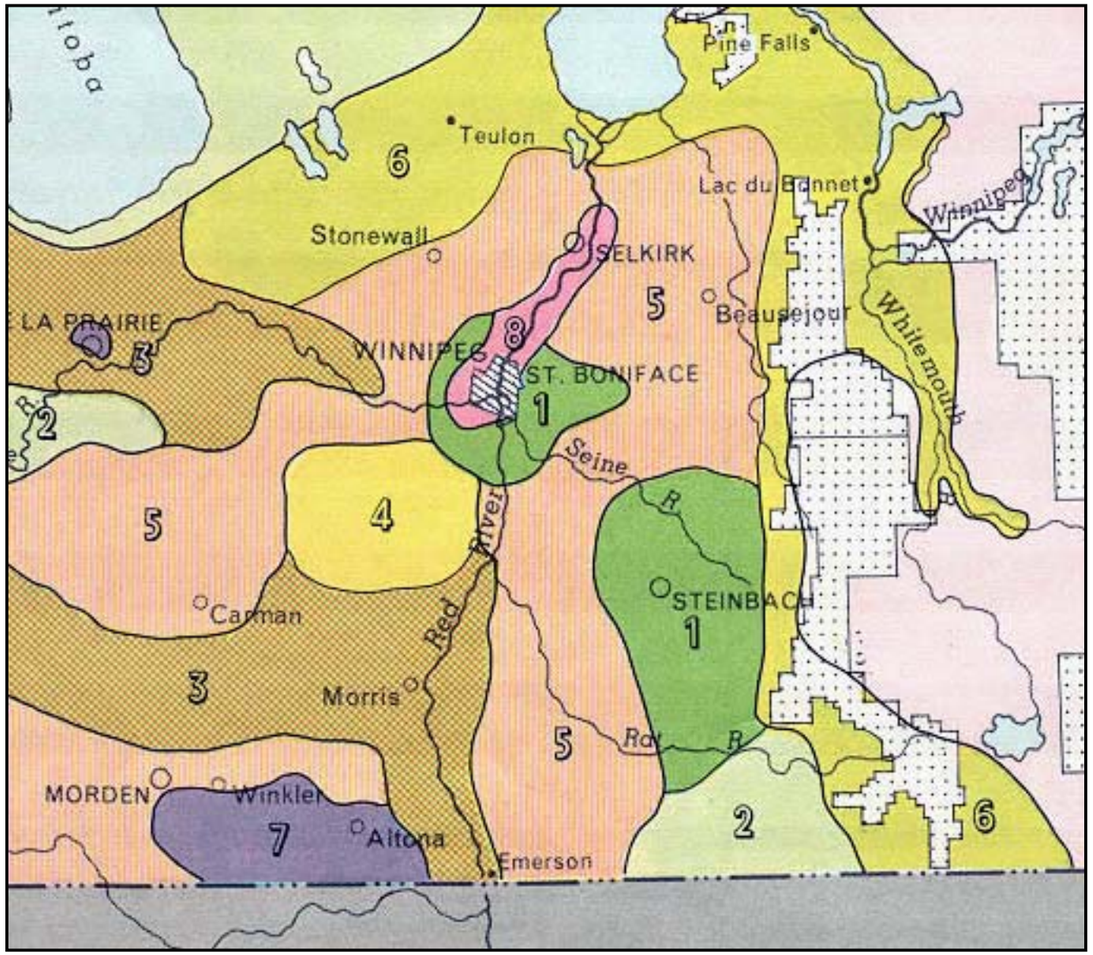


7.0.1 Right: Farmland For Sale, 1899
This map detail shows land for sale in the Red River valley in 1899, before many of the larger drainage projects were undertaken. It shows a tremendous amount of land for sale, including both quarter sections and river lots. Schools are shown on this map, (+), which is helpful, since their presence indicates whether an area was truly settled, and the land not just alienated from the Crown and lying unused. By the time this map was produced, in 1899, some of the province's earliest drainages had been constructed in the area south of Dominion City. This fact is reflected on this map by the small amount of land for sale and the presence of several schools in this district. Also of interest is the lack of any land for sale in the Mennonite East Reserve district.
(Map Title: Map Showing Lands For Sale in the Winnipeg District and the Far Famed Red River Valley of Manitoba. Source: The Historical Atlas of Manitoba, by Warkentin and Ruggles for the Manitoba Historical Society, 1970, page 496. HRB Map #079.)

7.1 Mixed Farming

Initially, small scale mixed-farming operations predominated throughout the study region; even in the Red River valley. Homesteaders kept a quantity of hogs, cows, and chickens, etc. for their own use, and for barter in the local grocery stores. The introduction of steam tractors and mechanized field work, during the 1890s, permitted the cultivation of larger acreages by individual farmers, and a greater emphasis on cash crop production soon took hold. Some farm livestock continued to be raised, particularly in areas nearer to the railway lines, and the daily shipment of milk, cream, eggs, and poultry to nearby Winnipeg continued for years, providing a welcome source of extra income. Mixed farming in the Red River valley completely disappeared during the rapid mechanization and expansion of farm operations of the 1950s and 1960s.

In the eastern highlands, where the soils were of inferior quality and much of the land was strewn with stones and boulders, crop production was limited and difficult, hence, mixed farms and horsepower prevailed into the early 1950s. In this mixed-farming zone, beef production was predominant in the more southerly areas, while, because of its proximity to Winnipeg, mixed farming with a dairy emphasis developed in the northeastern areas. Currently few farms include a wide variety of crop and livestock production types. Today's mixed farmers are generally involved in one type of livestock and only one or perhaps two crop types. Long gone are the truly mixed farms where one would find cows, horses, chickens, hogs, and poultry, along with a mix of pasturelands and cereal crops. Also long gone are the 'old-style' prairie farmsteads featuring the classic red hip-roof barn, a variety of little wooden outbuildings, and an attractive old-style farmhouse.



7.0.2 Above: Agricultural districts of southern Manitoba, 1970

Map legend:

1: Livestock Specialty - Dairying	5: Mixed Farming - Cash Crop Emphasis
2: Livestock Specialty - Beef Raising	6: Mixed Farming - Livestock Emphasis
3: Grain Specialty - Mixed Grain	7: Specialty Crops - Sugar Beets, Sunflower, etc
4: Grain Specialty - Wheat	8: Specialty Crops - Market Gardening

Detail of a map produced by Thomas Weir in 1960, showing the distribution of agricultural types in southern Manitoba. Note that in the Red River valley cereal-grain production dominates (zone 5), while in the more marginal 'highlands' east of the valley, the emphasis is on livestock production. Within this eastern livestock zone, dairying predominates in the northern half (zone 1) while beef production is emphasized in the southern half (zone 2). The land quality in this northeastern district is much the same as in the southeastern portion. However, the proximity of the district to the Winnipeg urban market makes dairy production, with daily delivery of fresh milk, possible. At greater distances, the increased cost and time factors makes dairy production less profitable. *(Map Title: Manitoba Types of Farming, Economic Atlas of Manitoba, Province of Manitoba Department of Industry and Commerce, page 41. HRB Map #077.)*

7.1.1 Left and below: Mixed farming
Early scenes of domestic livestock on farms in the study region. Until the late 1940s most farm families raised a variety of farmyard animals and poultry for personal use and cash sale. Currently, such a variety of farmyard animals only can be found on the district's hobby farms. (*Source: Penner, Lydia. Hanover: One Hundred Years, Published by the R.M. of Hanover, Derksen Printers, Steinbach, MB, 1982.)*

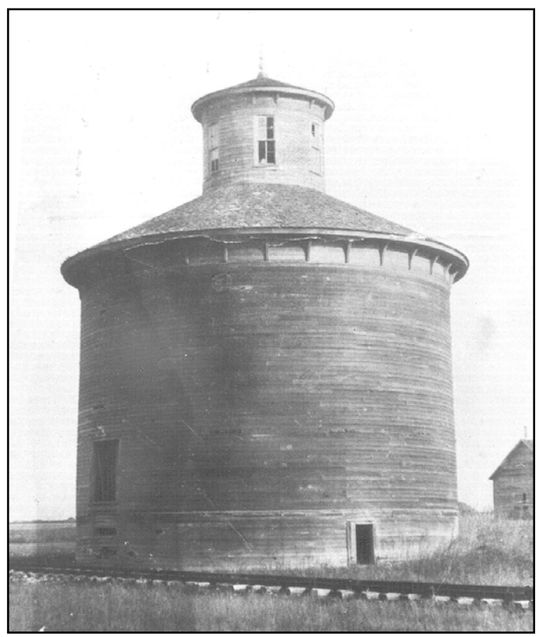
7.2 Cereal Crop Production

During the early 1870s the areas to the east and southeast of Winnipeg were quickly filled with settlers, mostly of Anglo-Ontario, British and Scottish origins. French-speaking settlers didn't begin to arrive in large numbers until the late 1870s, and they tended to select areas near the Seine and Rat rivers. Despite some wet years and crop failures, cereal grain production soon flourished in these areas, and land prices rose continuously, reaching $60.00 an acre in some locales by 1881. As in the poorer, highland areas of the region, settlers in the Red River Valley initially established mixed farms, where most of the food could be produced on the farm. As communities were established and grew, commercial supplies of foodstuffs led to fewer mixed operations and more specialization in cereal corps.

However, commercial crop production, however, soon fell on hard times in many areas of the study region. After the 'Bust of 1882', many settlers and farmers in the study region lost their farms when outrageously high land prices suddenly crashed, and taxes and debt payments proved unaffordable. Vast amounts of land in the valley were taken over by the municipalities, and sold in tax sales. Much of this land was purchased by foreign investors and held in speculation, resulting in huge amounts of farmland left unbroken and uncultivated for many years. Additionally, as land in the poorly drained valley flats and in the eastern highlands continued to be drained and cleared, the problem of flooding and poor surface drainage was compounded, as existing rivers and newly-dug ditches soon became overburdened causing additional flooding in some areas. Most of Township 7 Range 4 East, southeast of Niverville, remained unsettled for over 30 years, until 1906, when major drainage works in the region, including the Manning Canal, finally permitted the establishment of grain farms in the area. As the problem of surface drainage was reduced after the turn-of-the-century, grain production increased substantially and soon wooden grain elevators were erected at almost every rail siding in the Red River valley. Once commonplace, these early-style wooden grain elevators are virtually all gone, except for two operational elevators at New Fredensthal and Dufresne, and an abandoned structure located in Ridgeville. Grain is now hauled to inland terminals, such as those at Letellier, St. Jean-Baptiste, and Morris, located along railway lines west of the Red.

7.2.2 Left: End of an Era
Photo of the demolition of Dominion City's last grain elevator in 1999. As with most of the railway communities located along the Pembina branch line, Dominion City at one time possessed a line of several 'standard plan' wooden grain elevators. *(Photo: John Lehr.)*

7.2.3 Right: Ridgeville Elevator
This abandoned grain elevator in Ridgeville is the last of the early 'standard plan' wooden grain elevators still in existence in the study region. *(Photo: Historic Resources Branch)*



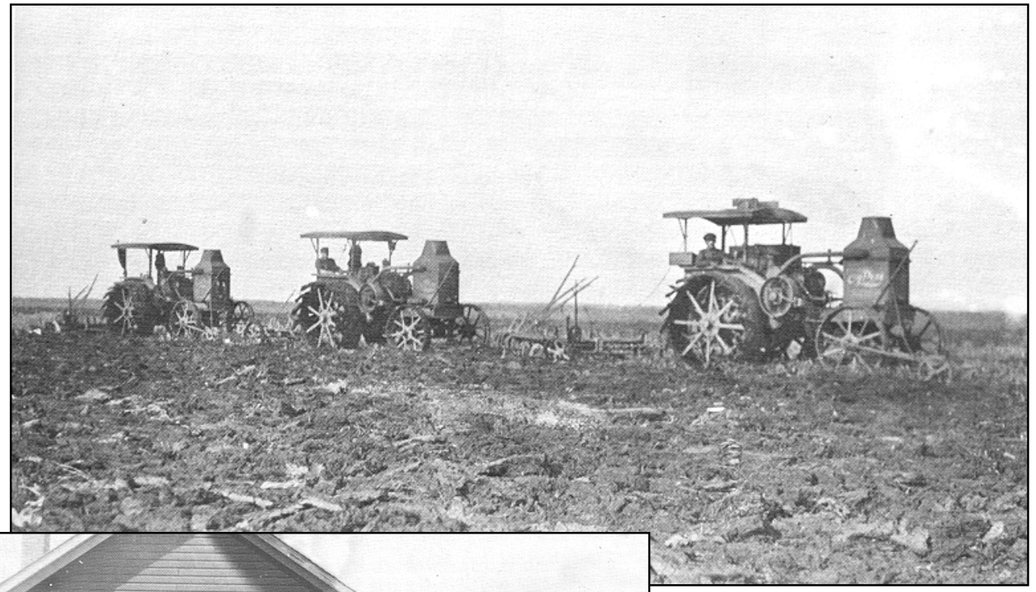
7.2.1 Below left: Western Canada's First Grain Elevator
Constructed in 1879 in Niverville by William Hespeler, this unusual round structure was western Canada's first commercial grain elevator. In operation until 1924, it had a capacity of 25,000 bushels and featured horse-powered grain-handling equipment. It was constructed from timbers brought by riverboat from Moorhead, Minnesota. Niverville was laid out by Mr. Hespeler as a railway town and was intended to be a service centre for the entire Mennonite East Reserve. However, because Niverville was separated from much of the East Reserve by extensive sloughs, Hespeler's vision did not become a reality, and by 1900 Steinbach had established itself as the leading business and service centre for the East Reserve. *(Photo: Provincial Archives of Manitoba.)*

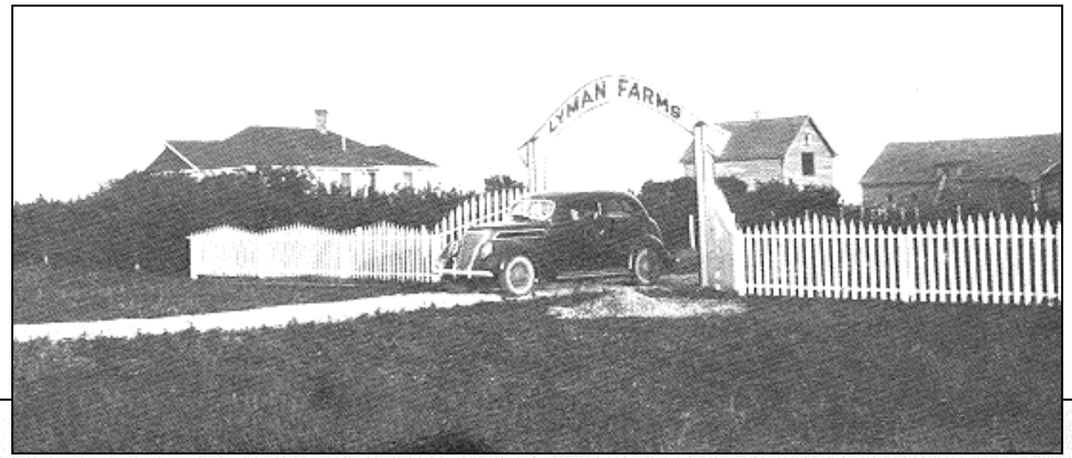
7.2.4. Right: Harvest time
Combines are hard at work taking in wheat crop during the 2002 fall harvest near St. Pierre-Jolys. *(Photo: Historic Resources Branch.)*

7.2.5. Left: Dufresne Elevator
Although of relatively recent construction, the Dufresne grain elevator is significant since it is the first elevator visible to westbound travelers on the Trans Canada Highway. *(Photo: Historic Resources Branch.)*

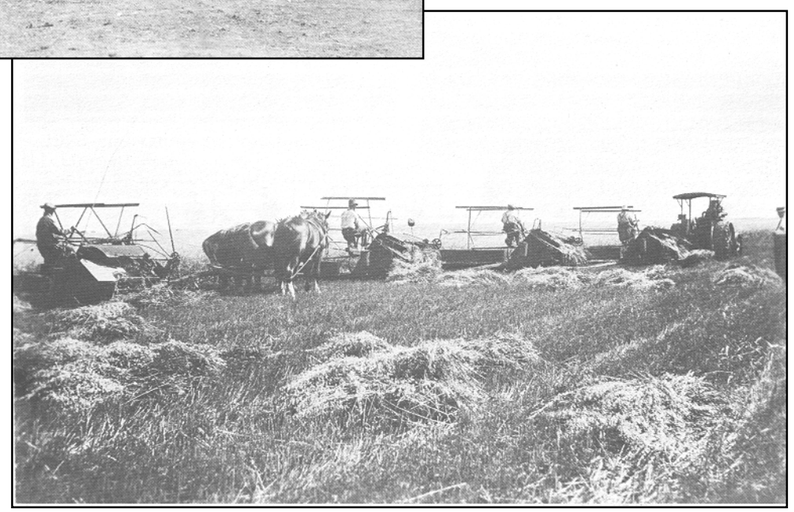
7.3 Bonanza Farms

Around 1910, a group of Americans, mostly from Illinois, bought large amounts of the uncultivated farmland west of Arnaud and north of Dominion City. Some of the prominent names who financed these "bonanza farm" projects were Henry H. Lyman with 12,000 acres (5,000 ha); and H.L. Emmert with 35,000 acres (15,000 ha). Others included Messrs Fisher, Guthrie, Saunders, and Young, each with farms in the 6,000-acre (2,500 ha) range. The Lyman operation consisted of five separate ranches, each with a hired foremane. Each ranch had its own complex of buildings consisting of a large 8-10 room house for the foreman, bunk houses for the hired men, horse, cattle and hog barns, machine storage buildings, and repair and blacksmith shops. In 1920 the Lyman Bonanza Farm equipment inventory consisted of 27 tractors, 4 threshers, 35 binders, seed-drills, and other equipment in proportion. Each ranch also had ample storage bins for grains, and at least one boasted a full-sized grain elevator. The land on the Lyman Farm was broken using 'Big-4' gas tractors. Many people visited the ranches simply to get a glimpse of these giant machines. Such equipment was too expensive for the average homesteader to purchase. After farming the land for a number of years these bonanza farm operations were gradually broken up in the mid 1920s. Much of the land in these ranches was sold to the Mennonite Board of Land Settlement who were seeking settlement areas for Mennonites newly arrived from Russia, and for the younger farmers from the older settled areas where land was no longer available. With continued diligence concerning the drainage networks in the Red River valley, crop production continues to dominate on the Red River valley flats. Unfortunately, there are no preserved sites associated with the region's former bonanza farms currently preserved or commemorated by historic markers. The existence of these farms is preserved only in short passages in one or two local history books.





7.3.1 H.H. Lyman Bonanza Farm
A selection of archival photographs showing some of the structures and scenes from the huge Lyman Farms operation which existed in the Arnaud district during the first two decades of the twentieth century. Virtually all traces of this, and several other, even larger, bonanza farm operations in the study region, have disappeared from the landscape. *(Photos: from Arnaud Through The Years, published by the Arnaud Historical Society 1974.)*



7.0 Agriculture

7.4 Dairying

The dairy industry established itself in both the French settlements along the Seine River, and in the villages of the Mennonite East Reserve. The lush natural grasslands in the area of the lower Seine River provided rich grazing lands for cattle herds. Similar physical conditions in the area along the Rat River, particularly the St. Pierre-Jolys, La Rochelle, and St. Malo areas, also prompted the establishment of several early dairy and cattle operations.

Cheese was the main dairy product produced during the 1880s. Due to an under-developed transportation system, daily milk delivery to Winnipeg was not possible at the time, and cheese could be more easily stored and transported. By 1900, there were cheese plants in at least eight locations occupying a broad band from Giroux to Grunthal. Grunthal also possessed one of the only creameries in the region.

Winnipeg at this time was growing rapidly, and the demand for butter, cream, and milk increased with the population. In 1898, the Canadian Northern Railway constructed a line southeast from Winnipeg, crossing the Seine River at Ste. Anne and continuing to the American border near Piney. This development prompted increased herd sizes and a move to producing bulk milk by area farmers. The new railway line, and Winnipeg's milk requirements, prompted a rapid rise in local land prices as well.

With the local supply of milk increasingly being diverted to Winnipeg, the region's cheese plants began to close due to a lack of milk. By 1914 they all had ceased operations. Other factors leading to their closure included increased demand for beef products after 1900. Alsol, the European market for Canadian cheese was being increasingly met by the dairy farmers of Québec and Ontario, who were closer and therefore could provide a cheaper product.

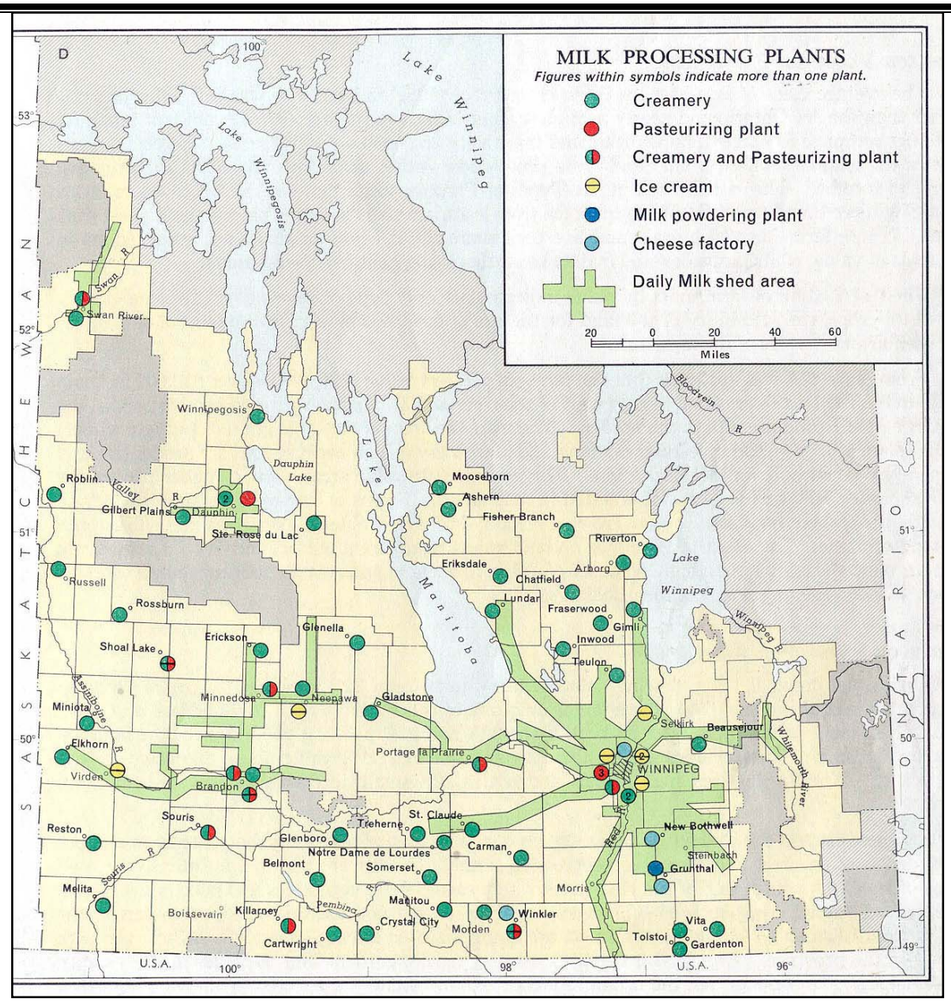
Around 1914, Blumenort developed as a collection point for the daily shipment of milk from Mennonite areas to Winnipeg via the railway connection at nearby Giroux. Giroux was a major a major staging area for the shipment of dairy products from 1898 until the trucking of milk began in 1927. Butter and sweet cream began to be produced in Grunthal in 1927 and in Steinbach in 1929. Soon after, the milk-receiving station at Giroux was moved to Seinbach, and the delivery of dairy products thereafter was increasingly handled by trucks.

During the 'Dirty Thirties' cheese production resumed. Cereal crop production was no longer economical, or even possible in most areas of the prairies. In order to survive, several means of alternate production were tried by the region's farmers; including cheese production. The move proved to be very successful and by 1936, cheese again was 'King' in the region. Of Manitoba's 21 producing cheese plants at the time, 17 were located in the study region. The importance of dairying continued in the region, peaking in 1950, when it produced the bulk of Manitoba's cheese and half of Winnipeg's milk and sweet cream. Soon after, and for a second time, the bubble burst for the region's cheese producers. During the early 1950s, the growing baby boom in Winnipeg and throughout Canada prompted a switch to fluid milk production, and without a constant and secure supply of milk, the cheese plants began to close. By 1958 only Grunthal and New Bothwell were producing cheese. While no new cheese plants have been established since that time, these two plants continue to operate, and carry on the region's proud tradition of cheese making. The remainder of the region's dairy producers now are involved in bulk milk production, which by the early 1960s became fully mechanized.

Dairy production in the study region developed because of the rich grazing lands of the region, but it survived because of the close proximity of Winnipeg. This was particularly so in the Mennonite areas. With fairly rapid population growth after the turn of the century, the area's farmers turned to intensive farm diversification in the home region, rather than moving to new, sparsely settled areas of the province. There was a trend to more building-intensive operations such as dairying, poultry, and more recently, hog production. Because of this shift to smaller farm unit sizes, with highly mechanized, building-intensive operations, this region now possesses the highest density of rural population in all of Manitoba. The close proximity of Winnipeg permitted daily transport of dairy and livestock products to the rapidly growing Winnipeg market, and thereby permitted intensive agricultural production on land which would not have supported this level of development had it not been so close to Winnipeg.

Sites relating to dairying:

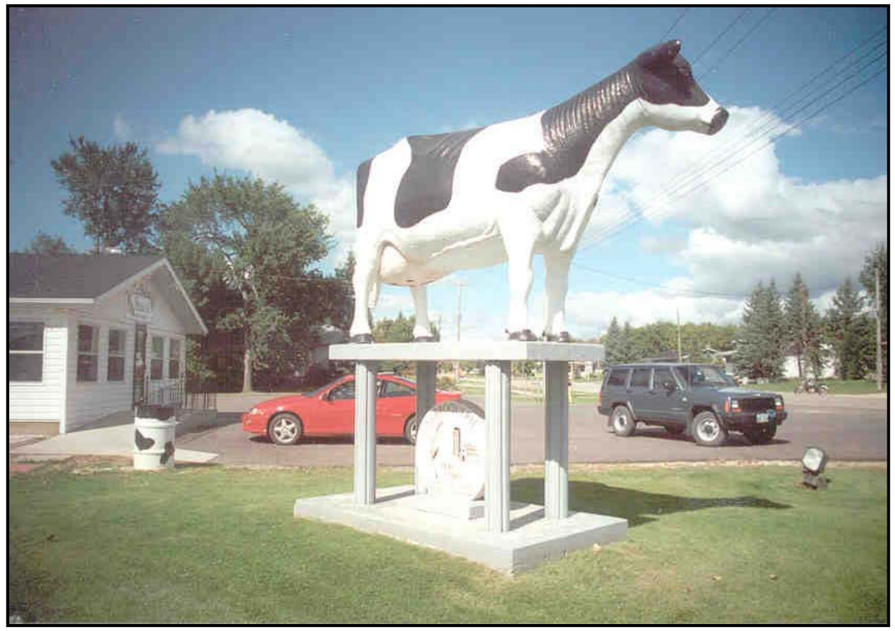
- Wooden silo at St.Pierre-Jolys
- Holstein cow mascot at La Broquerie
- Surviving example of early dairy barns



7.4.1 Daily Delivery Milk Sheds
A map showing the dairy milk shed and milk-processing plants in southern Manitoba around 1960. The green areas denote sources of daily bulk milk delivery. Note that the entire northern half of the study region is included in the Winnipeg milk shed. *(Map Title: Milk Processing Plants. The Economic Atlas of Manitoba by T.R. Weir, 1960. Plate 21, page 47. HRB Map #076.)*

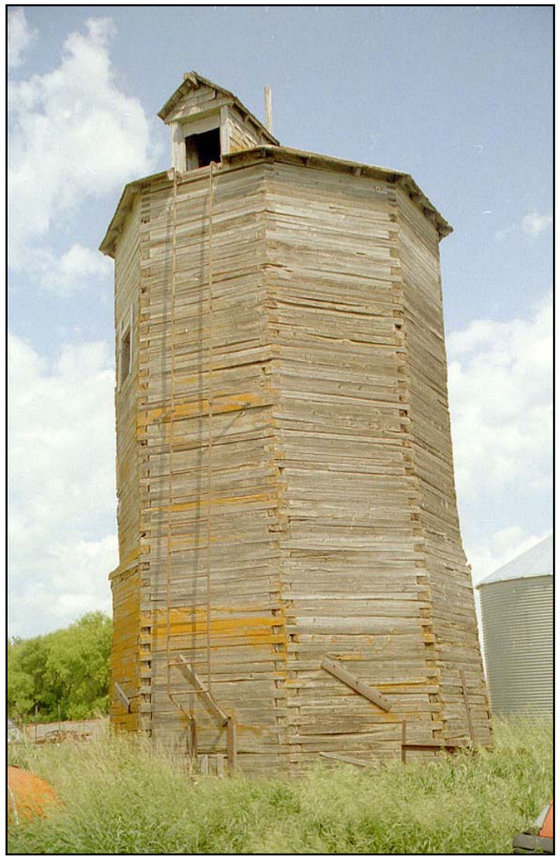
7.4.2 The Dairy Landscape
The continued importance of the dairy industry in the study region is shown by the presence of feed silos on the skyline throughout the northern portion of the region. *(Photo: Historic Resources Branch.)*

7.4.4 Above: Dairy Industry Signposts – Barns
View of a large, 1940s-era, dairy barn near La Broquerie, with cattle grazing along the banks of the Seine River; a sight common to the daily delivery 'milk shed' areas of the study region. *(Photo: Historic Resources Branch.)*



7.4.6 Above: Dairy Industry Signposts – Holstein Statue
La Broquerie's 'town mascot', a larger-than-life Holstein dairy cow. Such community statues are fairly common in Manitoba communities. La Broquerie is the only community to commemorate its dairying heritage in such a manner. *(Photo: Historic Resources Branch.)*

7.4.3 Below: Dairy Industry Signposts - Silos
This timber silo in St. Pierre-Jolys area is likely the oldest in the study region. Unfortunately it is in rapidly deteriorating condition. *(Photo: Historic Resources Branch.)*



7.4.5 Above: Dairy Industry Signosts – Barns
A 1960s-era dairy barn complex located on the southern outskirts of Ile des Chênes. While it is clear that this dairy farm no longer functions, the structure continues to be maintained in good physical condition. *(Photo: Historic Resources Branch.)*

7.4.7 Above: Metal and Concrete – A Sign of the Times
A large modern dairy operation located near Blumenort featuring a connected complex of metal buildings and silos. Such 'feedlot' dairy operations, where the cattle are housed almost year-round within such large structures, are quickly replacing the more traditional dairy barn and grazing pasture type of operations. *(Photo: Historic Resources Branch.)*

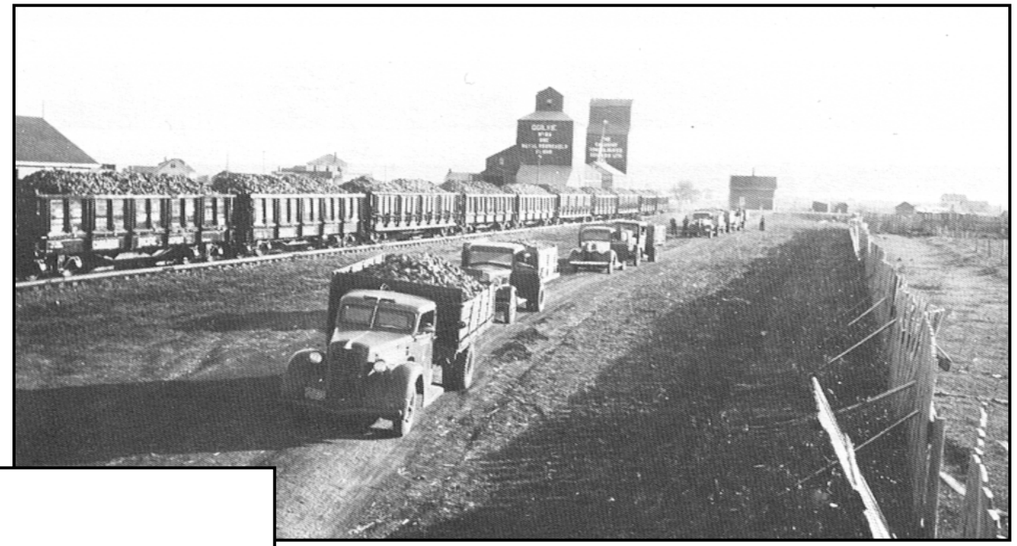
7.5 Sugar Beets

The production of specialty crops in the Red River Valley began during the great depression of the 1930s. Farmers engaged primarily in grain production had an especially hard time contending with drought, grasshoppers, and low prices. To save the family farm, a wide variety of different crops were tried, including corn, beans, potatoes, strawberries, and raspberries. Some farmers tried specializing in hogs and poultry, but with prices at only three to five cents a pound, returns were too low to meet production costs. Many farmers simply gave up farming entirely.

With the onset of World War II and rationing, sugar became an increasingly scarce commodity. In 1940, a group of 15 Steinbach-Giroux farmers tried growing sugar beets. Soil and moisture conditions in that area proved well suited to the crop, and it soon was shown to be a profitable cash crop. Many different areas of the province were then tested to establish where sugar beets could be grown most advantageously. The eastern part of the Red River valley was found to be one of the best areas, and before long, beet loaders were installed at almost every railway station along the C.P.R. track between Emerson and Winnipeg, and a large processing plant was constructed in Winnipeg. Because of the highly labour intensive nature of the crop, first acreages were small, averaging only 2 to 5 ha (5-10 acres). However, as more mechanized production techniques were developed, average field sizes increased to 16 ha (40 acres) by the 1960s, and 40 ha (100 acres) by the 1970s. The Manitoba Sugar refinery was purchased by Rogers Sugar during the early 1990s, and in 1996 the company consolidated operations around its plant in southern Alberta. The Manitoba plant was closed, and after almost 50 years of operation, the entire Manitoba sugar beet industry came to an abrupt end.

Since beet growing in the early years required substantial manual labour, it was welcomed by those who were interested in maintaining the family farm, since it provided work for the children, and helped to slow the exodus of rural youth to urban centres. During the early years most of the work had to be done by hand: hoeing, thinning, wind-rowing, topping, and even loading using the locally-famous "beet fork". Also, during the late 1940s and early 1950s, anyone who had a beet contract could apply to the Department of Immigration for labourers from the war-torn areas of Europe. Thousands of immigrants were able to find new homes in Canada as a result. Their contract required that they would stay on the farm for at least one year or the length of the beet season.

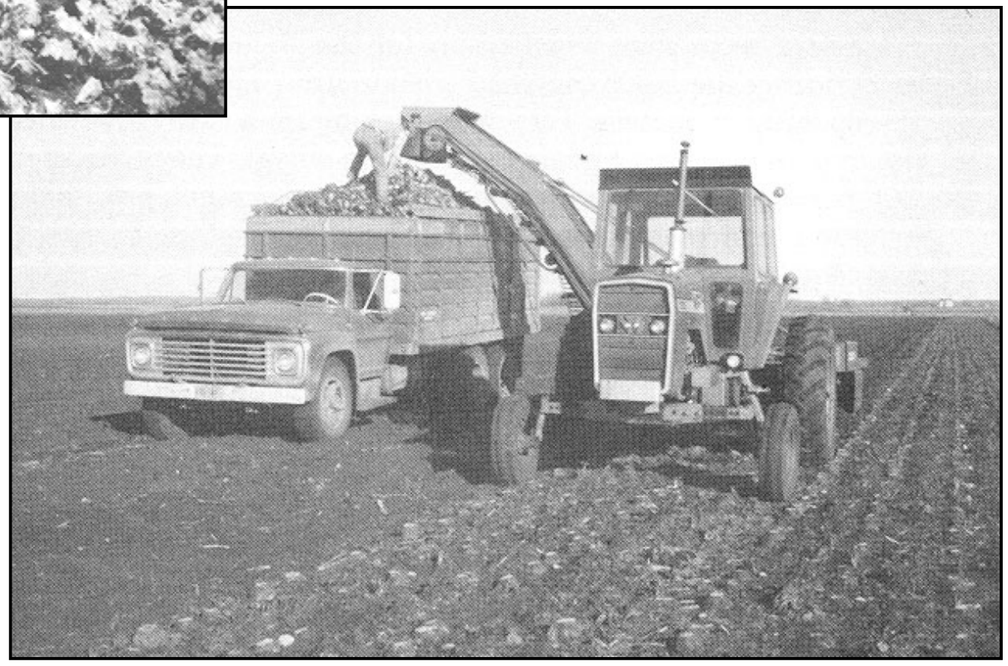
As with the former bonanza farm operations in the study region, the existence and importance of cash crop sugar beet production in the study region is now but a memory, and as yet, has not been commemorated or interpreted, except for brief passages in local community histories.



7.5.1 Below: Sugar Beet Production
Selected views from the four-decade period during which sugar beet production provided a valuable cash crop alternative for many of the cereal crop growers of the Red River Valley. These photos were first published in the Arnaud community history book. The scene below shows John Janzen on a pony tractor cultivating a sugar beet crop on his father's farm. *(Photo: Arnaud Through The Years, published by the Arnaud Historical Society, 1974.)*

7.5.2 Above: Sugar Beet Trains
Loaded trucks waiting for their turn to unload beets onto the waiting rail cars in Arnaud; early-1950s. Sugar beet loaders were located in both Arnaud and Dufrost as early as 1946. *(Photo: Arnaud Through The Years, published by the Arnaud Historical Society, 1974.)*

7.5.3 Left: Hoeing and thinning sugar beets, c.1955
Initially, sugar beet production was highly labour intensive and beet hoeing was an opportunity for local youth to earn some cash. By the mid-1970s, herbicides and mechanical thinners made hand labour largely unnecessary. . *(Photo: Arnaud Through The Years, published by the Arnaud Historical Society, 1974.)*



7.5.4 Right: Sugar beet harvesting in the 1970s
(Photo: Arnaud Through The Years, published by the Arnaud Historical Society, 1974.)

7.6 Potatoes

The history of potato cultivation, in what is now southern Manitoba, stretches back 200 years to the early days of the fur trade. Similar to several other types of local agricultural produce such as wheat, cheese, and sugar beets, the Manitoba potato has experienced periods of both “boom” and “bust”.

During the French period of exploration and fur trade, which began in 1735 and lasted until the fall of New France in 1759, there is no record of potato cultivation in the Red River region. However, when the interior fur trade was re-established during the last decade of the 18th century, the importance and potential of the potato and other garden crops as a food source was soon noted. By 1809 the Hudson’s Bay Company had issued directives that post employees were to cultivate “potatoes, Indian corn, and grain” to reduce both the quantity of imported flour and the reliance on pemmican and wild rice as the staple provisions fueling the fur-trade. Almost immediately, crops such as turnips, peas, barley, oats, wheat, and potatoes, in particular, began to be successfully cultivated in garden plots located adjacent to many of the trading posts. These crops soon became important locally-produced provisions in the Red River region. Retired servants, ‘free Canadians’ living with their Native wives along the Red River, and even Native bands as far east as Lake-of-the-Woods reportedly cultivated potatoes and other garden crops for domestic use and for sale to the gentlemen of the NWCo. and the HBC. So successful were these garden plots, that the HBC favourably supported the proposed Selkirk agricultural settlement, established in 1812, as a means of securing cheaper provisions for the fur trade and also as a weapon in their fight against the Northwesters for control of the fur industry.[1]

Of all the garden crops cultivated in these early gardens, the potato was acclaimed in historical records, above all other vegetables. H.Y. Hind, who headed the Canadian Red River Exploring Expedition of 1857, wrote in respect to the garden of Oliver Growler, of Headingley, “his potato crop far surpassed in quantity, quality, and size (any crop) I have ever seen before.” In respect to the garden in the Indian Mission Village seven miles below Lower Fort Garry, he records “the potato crop is here truly magnificent…all perfectly clean and sound and of very unusual size and weight – a practical experiment proved them to be an excellent table variety.” In 1873, when representatives of the Mennonites of southern Russia investigated Manitoba for possible Mennonite settlement, it was recorded after a visit to the farm of Mr. Grant near Portage la Prairie, that “his potatoes also were of very large size and superior quality, such as I have never seen surpassed.” Many other references indicated the high quality of vegetables grown in Manitoba during these early years. Soon after initial settlement of the Mennonite East Reserve in the late 1870s, potatoes became a source of cash for farmers in the northern section of the region. Most farmers grew some potatoes for domestic use and sale, but by the 1890s, vegetables from the Steinbach area regularly were sold in Winnipeg, or to agents in Niverville or Otterburne.[2]

Manitoba’s reputation as a producer of high-quality potatoes came to an abrupt end during the 1920s. This reduction in quality was a result of the introduction of numerous unsuitable varieties by various immigrant groups from Europe, Eastern Canada and the United States. Unlike garden seeds which were imported by commercial seed houses, and distributed through mail order firms, potatoes were commonly grown from stocks, (diseased or otherwise) left from previous crops. Through a lack of good husbandry, Manitoba potatoes succumbed to a variety of disease problems. The 1928-29 annual report of the Manitoba Department of Agriculture noted that the Winnipeg Market was not favourably disposed to Manitoba potatoes, due to the fact that they are not well graded, too many varieties are offered for sale and many varieties were not sufficiently matured. Moreover, potato diseases had become so much of a problem that in 1939 practically all potatoes grown for seed in Manitoba were rejected because of wilt. In 1940, the newly appointed Provincial Horticulturist, C.R. Ure established the Provincial Potato Committee, comprised of representatives from the University of Manitoba, the Morden Experimental Station, and the Dominion Certification Service. They set about to develop high-grade foundation seed to be distributed through the horticultural extension service. Initial trials were largely unsuccessful and in 1944 only 57% of the potatoes received in Winnipeg were Manitoba grown.[3]

Great strides in the improvement and marketing of potatoes in Manitoba began in 1950-51, with the production of a new variety designated as “Manota”. By 1950-51 some 5,000 bushels of Manota certified seed were produced and distributed to Manitoba vegetable growers. In 1953-54, a national ‘Potatoes for Polio’ fund-raising campaign resulted in favourable publicity for Manitoba produced potatoes and in the years following, through displays at the Red River Exhibition, and the Canadian National Exhibition in Toronto, Manitoba’s potato reputation was improved. Enforcement of grading regulations under the Manitoba Vegetable Sales Act led to steady improvements in marketed potatoes, and by 1957-58 90% of Manitoba-gown potatoes on the Winnipeg market were Canada No. 1 grade.

Local newspapers in the Crow Wing Study Region during the 1950s noted that there was a heavy concentration of potato growers in the Steinbach area, with plots of 15 to 20 acres (6-8 ha), and some as large as 100 acres (40 ha) in size. It was reported at the time that there were 23 farms with potato plots located along a single half-mile section of road on the quarter section adjoining Steinbach. The bulk of these potatoes were grown on the ‘higher and dryer’ land in the Steinbach area, and as fresh potatoes for the table market. During the 1950s with the establishment of Naleway Foods in Winnipeg (ethnic food), and Old Dutch Foods (potato chips), the importance and value of processed potato products began to rise. Acreages expanded substantially with the establishment of Midwest Food Products in Carberry in 1962 (fast food French fries), and McCain Foods in Portage la Prairie in 1977 (retail French fries). In 2001, Manitoba was the second largest potato producer in Canada, behind Prince Edward Island, with 78,000 acres (32,000 ha) in production. In 2002 that total increased to 85,000 acres (35,000 ha). The proposed construction of a new $120 million processing plant near Portage la Prairie, by J.R. Simplot, likely will result in Manitoba becoming Canada's largest potato producer. With the recent expansion of the industry, the main production areas have shifted from the Lockport and Steinbach areas to the Portage, Morden-Winkler, Carberry, and Holland-Treherne areas. However, potatoes are still an important cash crop within the northern areas of the study area and will likely remain so for the foreseeable future.

1.Ellis, J.H., The Ministry of Agriculture in Manitoba 1870-1970, page. 19.
2. Ibid, page 125.
3. Ibid, page 169.

7.6.1 Harvesting potatoes by hand in 1952. *(Source: Penned, Lydia. Hanover: One Hundred Years, Published by the R.M. of Hanover, Deerskin Printers, Steinbach, MB, 1982)*

7.6.2 Irrigated Potato Fields. View of an irrigated potato crop located on the outskirts of Steinbach during the summer of 2002. Potato production has long been an important specialty crop in the Steinbach area, and has increased in importance since the establishment of a McCain's french-fried potato plant in Manitoba in 1977. *(Photo: Historic Resources Branch.)*

7.7 Poultry

Poultry production, like vegetable growing, was first attempted in what is now Manitoba, during the first years of the 19th century by employees of the fur trade in an attempt to produce more 'country provisions' to reduce the reliance on costly imported food staples. While stationed at the North West Company's post at Pembina from 1800 to 1806, Alexander Henry, the Younger, experienced great success as a gardener and pioneer farmer. His journal records that he brought "a cock and two hens from Fort William" and that "out of 12 eggs my hen hatched 11 chickens."[1] While many of the traders at the inland posts raised a few chickens, and occasionally turkeys, poultry in general remained a minor agricultural sideline.

Throughout Manitoba's settlement period, which lasted from approximately 1880 to 1930, most farm families used eggs and dressed poultry, along with dairy butter, to barter for goods in town and village stores. Some kept a limited number of birds for use at Christmas, New Year's and other celebrations. Although a Manitoba Poultry Association had been established as early as 1894, as an offshoot of the very popular Agricultural Society movement of the time, and despite government grants and interest in promoting poultry production, commercial poultry production appears to have been quite limited. The 1894 annual report of the Minister of Agriculture records that "the interests which this (Poultry) Association represents have a direct bearing on one of our industries that has been too much neglected in the past. The Province has commenced to market large quantities of poultry, but is met with a superior article; mature and well developed birds, well-fattened and specially dressed from the Eastern Provinces. The efforts of the Poultry Association are in the right direction."[2] Despite Department of Agriculture efforts to encourage and stimulate the development of commercial-sized flocks, through the establishment of poultry associations and the offering of cash prizes for dressed poultry shows, the number of such shows never became numerous in Manitoba, and production tended to remain at domestic use levels. This situation prevailed right up to the drought years of the Great Depression when turkeys were allowed to roam the fields, feeding on grasshoppers, generally fending for themselves and proving to be a valuable source of farm family subsistence in many drought affected areas.

With the return of more prosperous years, poultry as a sideline became less and less important on prairie farms, except in some areas, such as the study region, where a highly-organized system of production and marketing was introduced as poultry became more and more a specialized commercial venture involving hatcheries, egg producers, feed dealers, eviscerating plants, packers, retailers, and chainstores. Agricultural specialization in the study area began as a result of local attempts to find other sources of agricultural income when traditional agriculture fell on extremely hard times during the 1930s. As well, the rapidly growing population, particularly in the Mennonite areas, prompted a move to more compact dairy, poultry and hog production units, which were building-intensive rather than land-intensive. In this manner, people born in the region could continue to live in their home district, even though land was in short supply and expensive. During this period, the 4-H movement, with the help of the Manitoba Department of Agriculture, actively promoted the scientific approach to poultry production. These included using carefully blended feeds and providing flocks with artificial light. Such new approaches made egg and chick production possible throughout the year.

In 1936, the province's first commercial hatchery was established in Steinbach. Farmers always had raised a few chickens and turkeys for personal use and for bartering in district stores. However, by the 1940s some area farmers were raising flocks of up to 150 birds, which were considered large at the time. During the 1960s, farmers across Manitoba and throughout the region wholly adopted single product specialization. Large operator broiler farms and turkey ranches became commonplace, particularly on the poorer land in the area southwest of Steinbach. By 1976, the RM of Hanover was the leader in Manitoba poultry production, with 13% of the 500 farms in the municipality producing hens, pullets, broilers or turkeys. By the 1980s, half of the province's broilers and turkeys were produced in Hanover Municipality, with some flocks containing as many as 30,000 birds. The poultry industry in turn spawned the establishment of egg-grading stations, processing plants, feed mills, and cold storage lockers. Granny's Poultry Co-operative processing plant, located in Blumenort, processes virtually all of Manitoba's broilers, and 60% of the turkeys. The Dunn-Rite Food Products plant in Winnipeg processes the remaining 40% of turkeys produced in Manitoba.

Currently, the region continues to be a leader in poultry production, with broilers largely raised indoors in huge industrialsized barns. Turkeys tend to be raised indoors as chicks, but outdoors as young and adult birds. Most of the early poultry barns in the region have been replaced by larger modern steel structures. However, a few of the early 1960s style wooden barns remain on the landscape, testifying to the long history of poultry production in the region.

1.Ellis, J.H., The Ministry of Agriculture in Manitoba 1870-1970, page. 19.
2. Ibid, page 122.

7.7.1 Above: Poultry Specialization
Poultry farmer Bernhard Falk, Niverville, 1957. *(Source: Penner, Lydia. Hanover: One Hundred Years, Published by the R.M. of Hanover, Derksen Printers, Steinbach MB, 1982)*

7.7.2 Above: Poultry Barns
A large open-walled turkey shelter in the Randolph area. *(Photo: Historic Resources Branch.)*

7.8 Hog Production

The raising of swine, like vegetable and poultry production, was first introduced by the Hudson's Bay Company as a way of decreasing the amount of imported provisions needed to sustain the employees of the company in Western Canada. As early as 1680, the Governor of the Company recorded that swine were being raised at Moose Fort on Hayes Island. During the 'free-trade' period of the interior fur-trade, from 1765 to the merger of the HBC and NWCo. in 1821, the ability to obtain locally produced provisions was an important aspect in maintaining a positive profit margin. During this time, employees of many of the HBC and NWCo posts raised, or attempted to raise, a few swine as a money-saving alternative to purchasing pemmican and wild game from the local Natives, or cattle and hogs from the growing number of small farms being established in the Red River valley by retired traders and voyageurs. Even before the establishment of the Selkirk Settlement in 1812, the HBC had established a company owned experimental farm, in the area of 'The Forks' of the Red and Assiniboine rivers, to ascertain the potential for raising crops and livestock as post provisions. However, hogs are largely a 'grain-fed' animal, and the lack of feed grain in the Red River Valley limited the number of hogs which could be raised.

By 1830 there were almost 3,000 people living in and around the Red River Settlement, and almost 3,500 acres of cropland. As the population grew, the amount of feed grain slowly rose, as did the number of swine being raised, and problems associated with swine production. Free ranging hogs soon became a major nuisance and problem. A resolution passed in 1832 by the Council of Assiniboina, (established by the HBC to administer the settlement's domestic affairs) decreed that "the running at large of pigs on land other than that of their owner"[1] would be prohibited. This apparently did not curb the problem, since in April 1835 another resolution was passed "giving all persons the liberty to seize and to hold any pigs trespassing on their enclosed lands, until the owners pay a fine of five shillings, or in eight days (after giving public notice at the church door) to sell the pigs thus seized."[2] Six years later, another resolution decrees pigs over five weeks old which were not "ringed and/or yoked", and caught damaging neighbour's crops would be subject to an additional fine, and if not redeemed by the owner in ten days the pigs could be held forfeit.[3] (Yokes were wooden frames fastened around an animal's neck to prevent it from squeezing through rail fences. Rings were put through the noses of farm animals so that the animal could be easily led using a rope or chain.) A 1862 resolution went on to define the required size of yoke that a pig should wear and further decreed that "if the owners (sic) of the pigs was warned to take the pigs away and he neglected to do so within six hours, the pigs could be shot."[4]

With Manitoba's entry into Confederation in 1870, and the subsequent arrival of thousands of settlers, the number of hogs being raised in Manitoba rose proportionally. However, the average number of hogs per farm remained relatively small, since hogs continued to be kept generally for domestic use, rather than as market livestock. Such modest 'per-farm' production levels continued well into the 1960s, except for the war years, when production numbers 'spiked' as a result of vigorous campaigns initiated by both the Dominion and Provincial governments to improve both the quantity and quality of hogs produced, and to supply pork and bacon to the armed forces and civil population in Britain and later the war-stricken areas of Europe. In 1943, during World War II, hog production in Manitoba reached a peak of 877,000 head before declining to pre-war levels and largely domestic consumption.

Beginning in the late 1960s, swine production trends in Manitoba began to change. The cattle slaughter industry was being lost to operations located in Alberta. To compensate, the province turned to hogs to take advantage of the feed grains being produced, and to create jobs in production and other value-added support industries. In the Mennonite areas of the study region, there was a long tradition of hog production. In most regions, individual farm families, with a lack of refrigeration for safe storage, would butcher a hog for personal consumption perhaps once or twice a year. The Mennonites, on the other hand, tended to live in villages of 15 to 30 families, and by sharing, a slaughtered hog could be consumed in a short time. Thus, hog production and butchering became a commonplace fact of life in the Mennonite areas. Meat processing, such as the making and smoking of hams, sausages, patties, and various other meat products was a Mennonite tradition. With this traditional involvement in hog production, and with building-intensive agricultural operations being adopted, first during the depression years of the 1930s and later as a way of staying on the farm when land prices increased in the 1960s, it is understandable that the study region would become a centre for hog production.

Large corporate hog farm operations began to be established in many areas of the province during the early 1980s, and this was particularly true in the study region. With increasingly automated feeders and environmental controls, there no longer was as much labour required on hog farms as in earlier decades. As well, one of the more distasteful jobs, shoveling manure, was eliminated by automated liquid manure systems. Separating pigs and hogs of different ages and providing the correct conditions for each group was found to drastically reduce disease hazards. Thus, science and technology have made hog production a largely mechanized affair. By 2001 Manitoba had become the third largest hog-producing province in Canada, after Ontario and Quebec, when 1,700 producers raised 6.4 million hogs, and accounted for 24% of the national production, adding $860 million to the provincial economy. The industry is currently expanding at a rate of 5-6% a year. With the new world-class $120 million dollar hog processing plant constructed in Brandon by Maple Leaf Pork in 1999, hog production is likely to continue to be a major industry in Manitoba.

As in the days of the Red River Settlement, some 150 years earlier, hog production in Manitoba is not without controversy with both detractors and supporters. Its supporters point to the $413 million of feed used in 2001, new construction of $172 million, and 33 processing plants of various sizes. Detractors point to the odour, the potential pollution of groundwater aquifers, and the relatively few jobs created due to the industry's highly mechanized nature. Despite the long standing prominence of the hog industry in the study area and Red River Valley in general, currently there is no commemoration of this historical and economic enterprise anywhere in the region. While this theme may not be the most interesting or pleasant of historical subjects, the hog industry has long been an integral part of the cultural landscape of the study region, and therefore worthy of note and recognition.

1.Ellis, J.H., The Ministry of Agriculture in Manitoba, Manitoba, Department of Agriculture, Winnipeg, Manitoba, 1970, page 37.
2. Ibid, page 38.
3. Ibid, page 39.
4. Ibid, page 40.

7.8.1 Above: Modern Hog Production Barns
View of a series of 5,000-head hog barns located just southeast of Steinbach. *(Photo: Historic Resources Branch.)*

7.8.**2 Above: Modern Hog Production Problems**
Hog barns near St. Pierre-Jolys. Note the newly constructed sewage lagoon in the foreground. *(Photo: Historic Resources Branch.)*

PART III CONCLUSION

1.0 Resource Inventory and Site Maps

The cartographic and textual sources consulted, and field trips undertaken, revealed a number of noteworthy sites and areas of varying degrees of historic significance. The majority of these are listed below. While some sites were previously known, others, particularly some of the natural areas and sightlines, had not been previously identified or included in the provincial inventory of heritage sites database, maintained by the provincial Historic Resources Branch. The sites and areas listed are significant in that they are illustrative of major historical themes relating to the study region. Most are not necessarily of sufficient heritage significance to merit legal protection as designated heritage sites, under *The Heritage Resources Act.* Nevertheless, they are landmarks illustrative of major themes and events relating to the history and development of the region, and therefore worthy of recognition and possible preservation by means other than site designation. Also, as this project was intended to be but an overview study, resources did not permit a systematic intensive site survey to be undertaken. Therefore, the sites listing should be considered only as an initial inventory of heritage resources, and site types, located in the study region. There are undoubtedly many additional themes and sites which could and should be added as they are identified. With this in mind, the format of the report was specifically formulated to permit additions to the discussion and the resource inventory, by other government departments, heritage organizations, knowledgeable individuals, etc. In its digital format, additions to the master document can relatively easily and inexpensively made. As well, updated copies of the report can be relatively easily and inexpensively produced and made available in CD ROM form. Indeed, suggestions for additions to the resource inventory have already been made by the report reviewers. These include the locations of the former Mennonite East Reserve villages, former rural school houses, and the 'Stations of the Cross' sites built for the religious pilgrimages of the 1930s in the Lorrette area. Readers are invited to contact the Historic Resources Branch of Manitoba Culture, Heritage & Tourism to relay comments and additions concerning this report and heritage resource inventory.

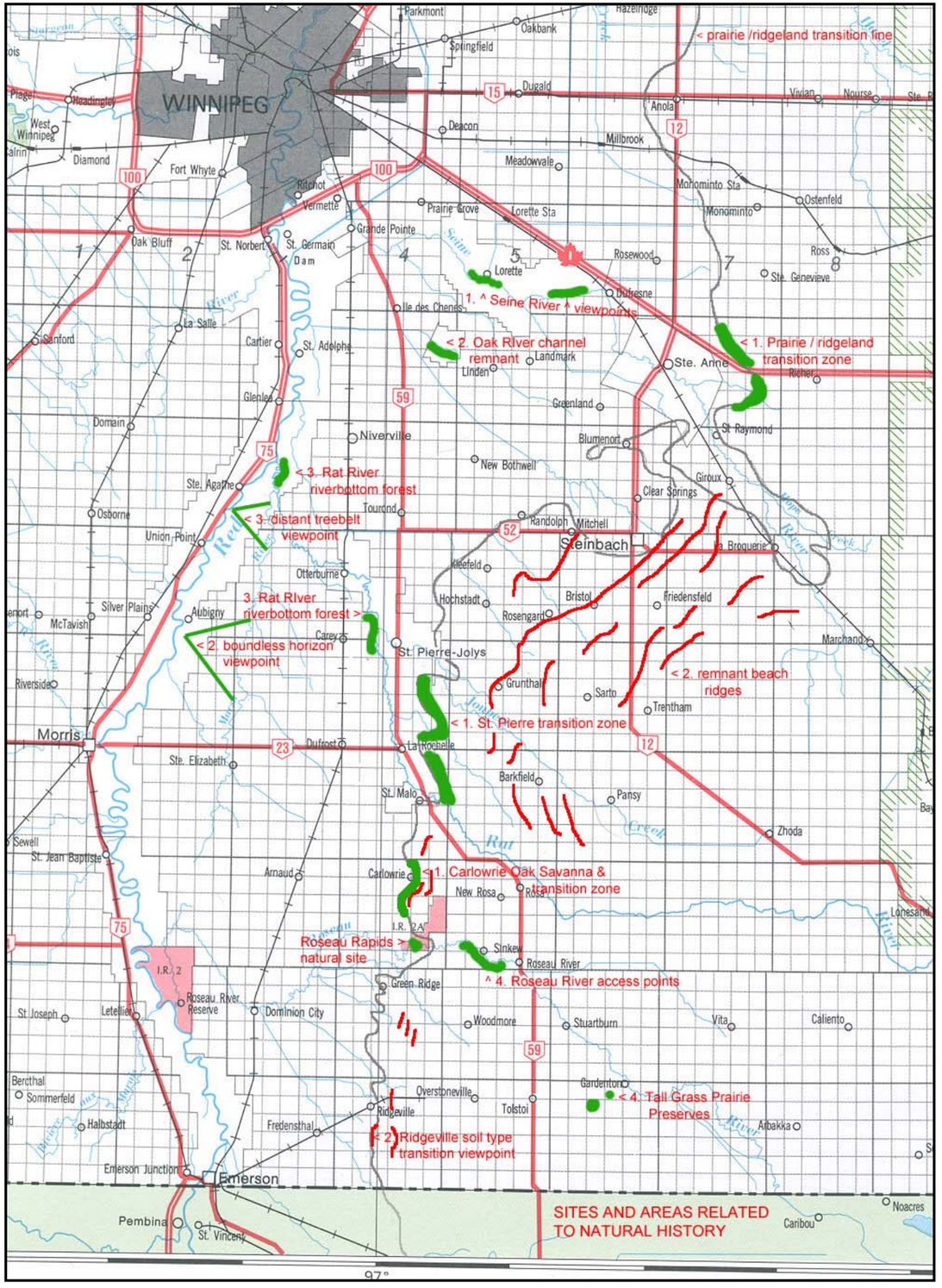
1. SITES SIGNIFICANT FOR THEIR PORTRAYAL OF NATURAL HISTORY THEMES:

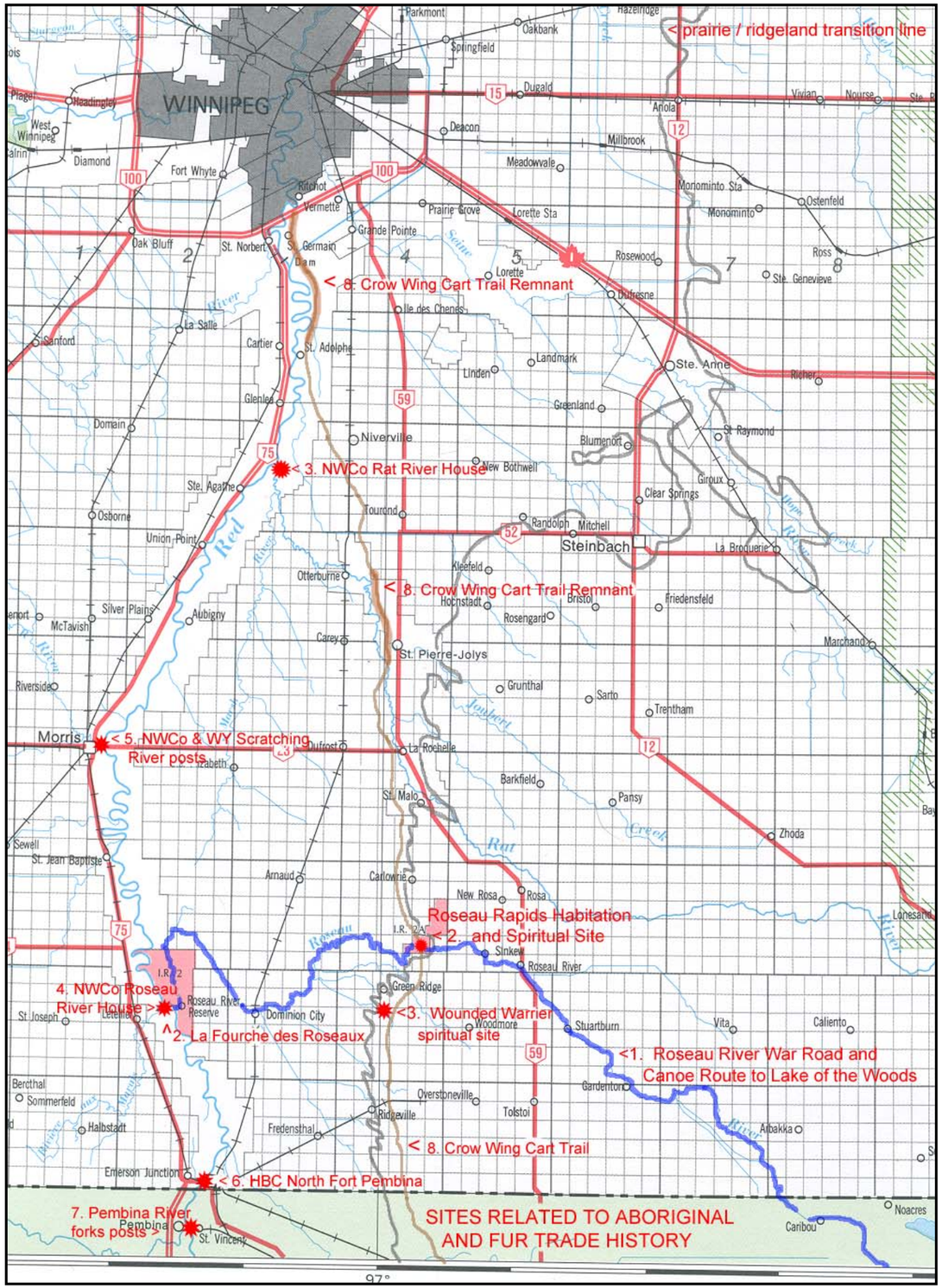
SURFACE RELIEF FEATURES:
1. Prairie / Ridgeland transition zone Ste. Anne area
2. Boundless horizon sightline near Aubigny

GLACIAL DEPOSITS:
1. St. Pierre transition area
2. Remaining gravel ridges south of Steinbach

SOILS & VEGETATION
1. Carlowrie Oak Savanna and transition area
2. Ridgeville area soil type transition zone
3. Marsh River 'treebelt' sightline north of Aubigny
4. Tall Grass Prairie preserves near Gardenton

NATURAL WATERWAYS:
1. Seine River public access points
2. Oak River channel remnant at Ile des Chênes
3. Rat River 'river bottom' forest zones, Ste. Agathe and St. Pierre-Jolys areas.
4. Roseau River access points near Senkiw
5. Roseau River Rapids natural site





2. SITES SIGNIFICANT FOR THEIR PORTRAYAL OF ABORIGINAL HERITAGE THEMES:

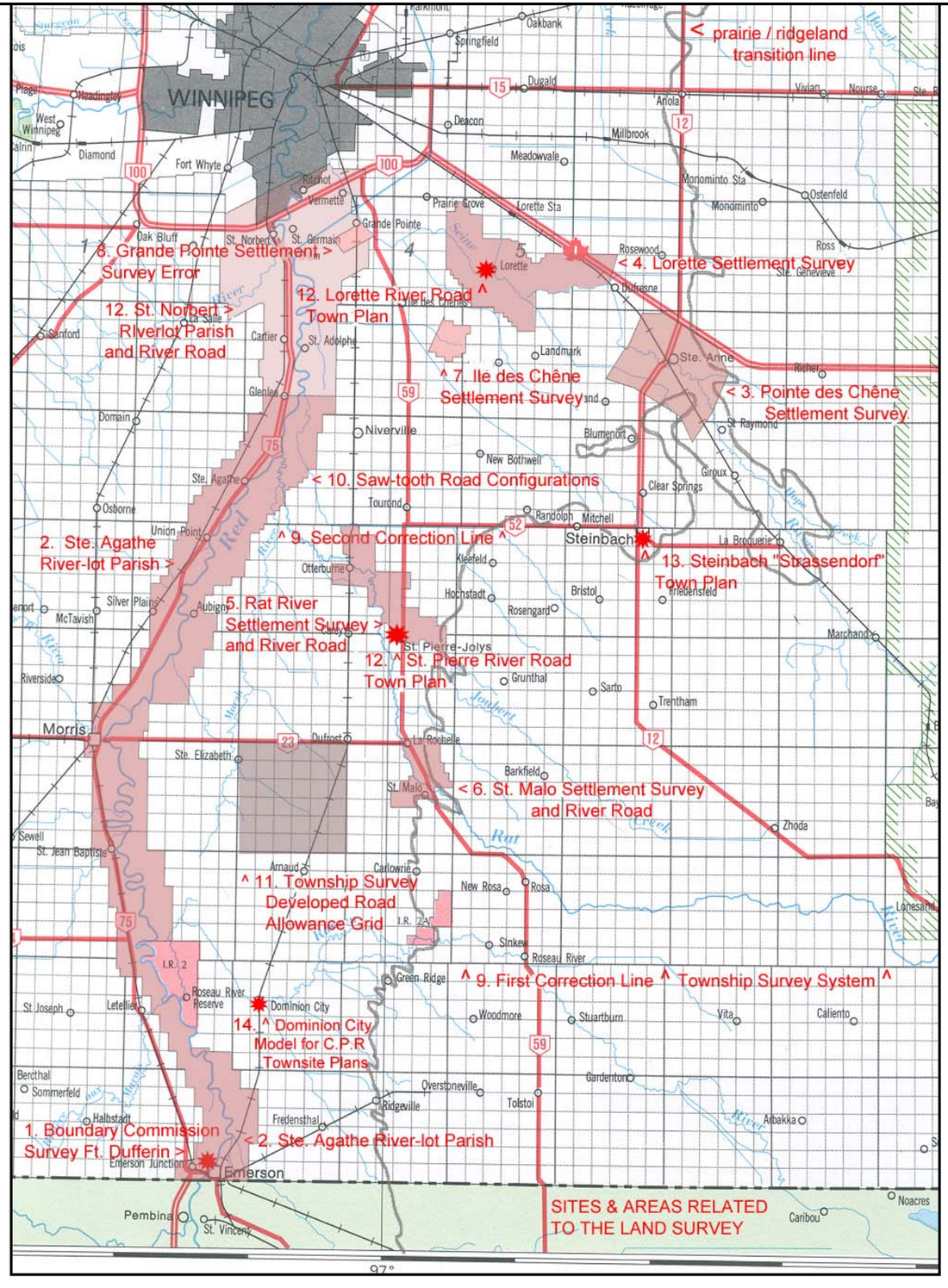
1. Roseau River Canoe route and Sioux 'War Road'
2. Roseau Rapids Habitation and Spiritual Site
3. Wounded Warrior Spiritual Site

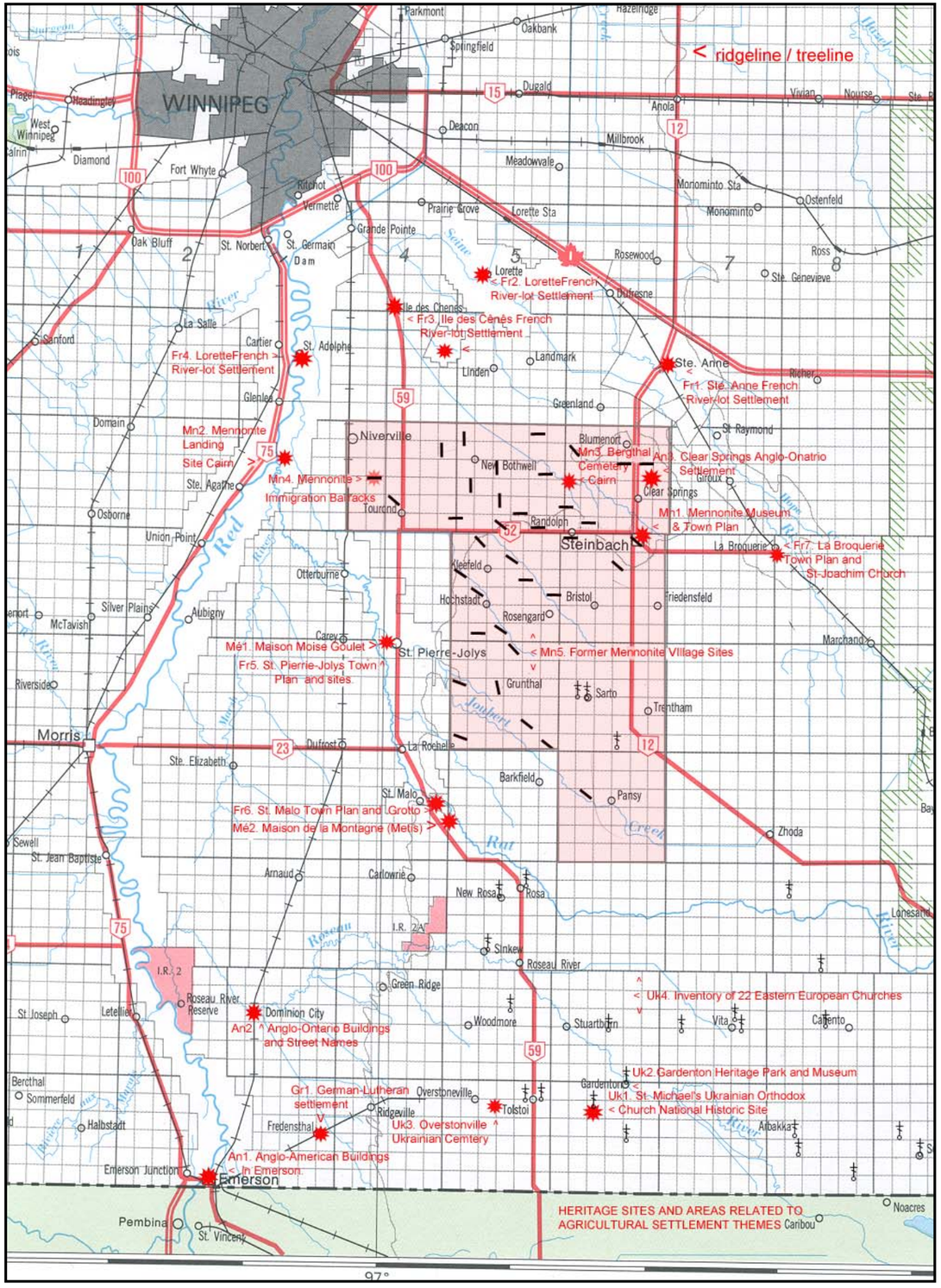
3. SITES SIGNIFICANT FOR THEIR PORTRAYAL OF FUR TRADE THEMES

1. Roseau River Canoe Route
2. La Fourche des Roseaux
3. NWCo Rat River House
4. NWCo Roseau River House
5. NWCo Scratching River House
6. HBC North Fort Pembina
7. Pembina mouth forts
8. HBC Crow Wing Cart Trail

4. **SITES SIGNIFICANT FOR THEIR PORTRAYAL OF LAND SURVEY THEMES:**

1. Boundary Commission Survey Fort Dufferin
2. Ste. Agathe River-lot Parish Survey
3. Pointe des Chêne Settlement Survey
4. Lorette Settlement Survey
5. Rat River Settlement Survey
6. St. Malo Settlement Survey
7. Ile des Chêne Settlement Survey
8. Grande Pointe River-lot Settlement Survey Error
9. Dominion Survey Correction Line 'Offset Intersections'
10. Saw-tooth Road Allowance sites, Ste. Agathe area
11. Township Survey, 100% Developed Road Allowance Gird
12. 'River Road' Linear Town Plans in French River-lot Settlements
13. Steinbach "Strassendorf" Town Plan
14. Dominion City – Model for CPR "Standard Town Plan"





5. **SITES SIGNIFICANT FOR THEIR PORTRAYAL OF AGRICULTURAL SETTLEMENT THEMES:**

Métis Settlement Areas

Mé1. Maison Möise Goulet, St. Pierre-Jolys
Mé2. Maison de la Montagne, St. Malo

Anglo Settlement Areas

An1. Town of Emerson sites
- Emerson Town Hall and Court House provincial heritage site
- Former Masonic Lodge municipal heritage site
- Former Creighton Terrace municipal heritage site
- Former Presbyterian Church Manse municipal heritage site
- Former Fairbanks Residence
- Town Plan and Street Names

An2. Dominion City
- Town Plan and Street Names
- Former Episcopal Methodist Church

An3. Clear Springs

French Riverlot Settlements

Fr1. Village of Ste. Anne
- Ste. Anne des Chêne Roman Catholic Church
- Main Street Boulevard, Street Names, Linear Development

Fr2. Lorette
- Lorette Roman Catholic Church
- Main Street Boulevard, Street Names, Linear Development

Fr3. Ile des Chêne
- Ile des Chêne Roman Catholic Church
- Main Street Boulevard, Street Names, Linear Development

Fr4. St. Adolphe
- Ile des Chêne Roman Catholic Church
- Main Street Boulevard, Street Names, Linear Development
- Magazin géneral

Fr5. St. Pierre-Jolys
- Former St. Pierre-Jolys Convent provincial heritage site
- Main Street Boulevard, Street Names, River Road Development

Fr6. St. Malo
- St. Malo Roman Catholic Church
- Main Street Boulevard, Street Names
- St. Malo Grotto

Fr7. La Broquerie
- St-Joachim Roman Catholic Church

Mennonite Settlement Areas

Mn1. City of Steinbach
- Street pattern, orientation, and names
- Mennonite Village Museum

Mn2. Mennonite Landing Site and Cairn, Rat River Mouth
Mn3. Bergthal Cemetery Cairn
Mn4. Site or former Immigration Barracks, and cemetery
Mn5. Original Mennonite Village Sites, unmarked

Ukrainian Settlement Areas

Uk1. St. Michael's Ukrainian Orthodox Church National Historic Site
Uk2. Gardenton Heritage Park and Museum
Uk3. Overstoneville Ukrainian Cemetery municipal heritages site
Uk4. Inventory of 22 Eastern European churches, RM of Stuartburn

German-Lutheran Settlement

Gr1. Fredensthal Church, Cemetery and Cairn

6. SITES SIGNIFICANT FOR THEIR PORTRAYAL OF INFRASTRUCTURE DEVELOPMENT THEMES

Settlement Trails

T1. Dawson Trail remnants

T2. Dawson Trail cairn in Ste. Anne

T3. Mennonite East Reserve Trail remnants

T4. Ste. Anne Trail remnants

T5. Ste. Agathe Parish Trail / St. Mary's Road

Railways

R1. C.P.R. Pembina Branch Line, first railway on the prairies

R2. Half-mile Road Adjustments along Pembina Branch Line

Bridge and Former Ferry sites

B1. Former Letellier ferry site

B2. Former St Jean Batiste ferry site

B3. Former Aubigny ferry site

B4. Former Union Point ferry site

B5. Former Ste. Agathe ferry site

B6. Former St. Adolph ferry site and vessel

B7. Former St. Norbert ferry site

B8. Gardenton Howe timber truss bridge, municipal heritage site

B9. Dominion City timber truss bridge, municipal heritage site

B10. Ste. Anne Concrete Arch bridge, municipal heritage site

B11. Senkiw School Suspension Bridge, municipal heritage site

B12. Jordan River Concrete Box Bridge, municipal heritage site

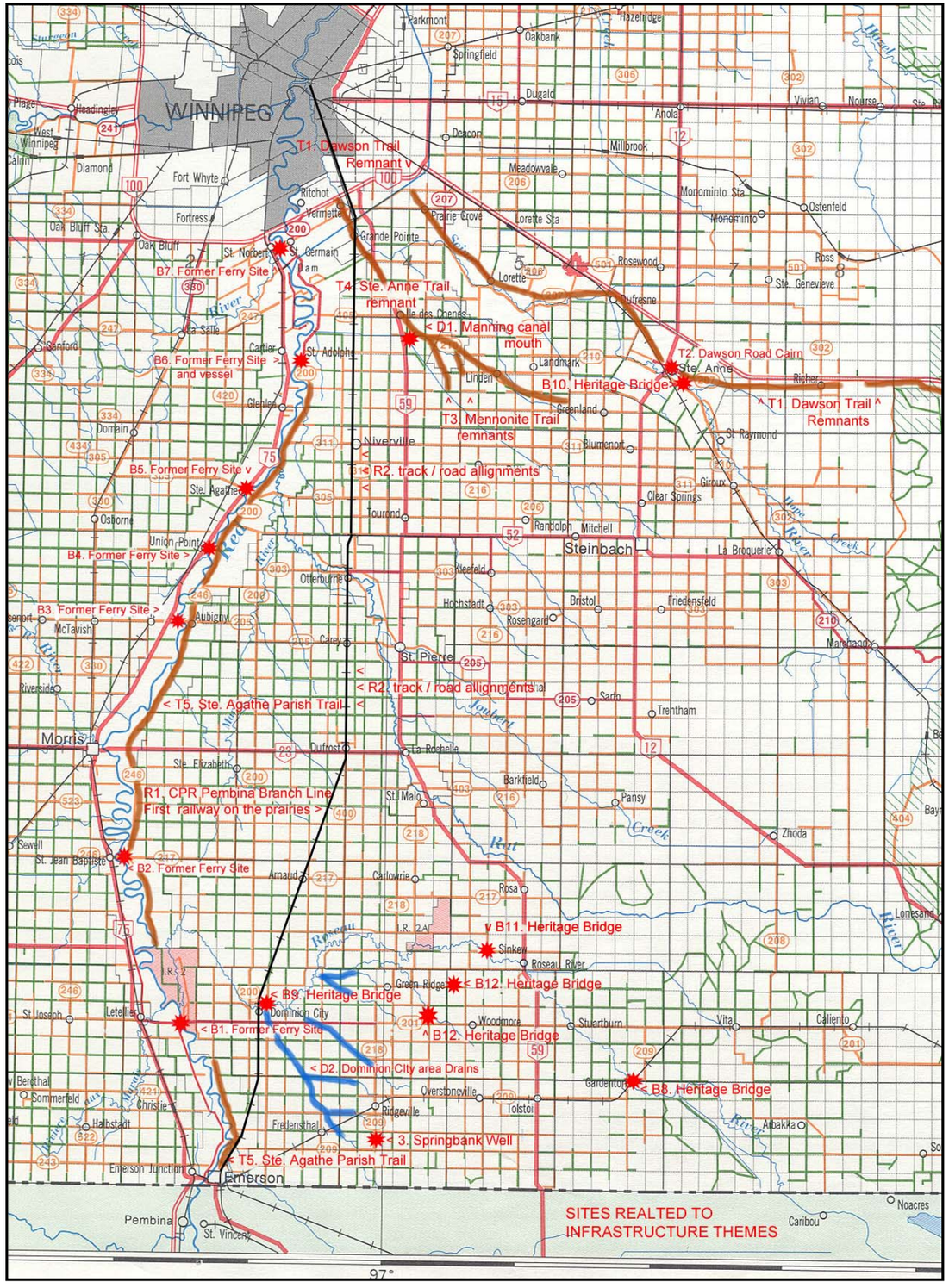
B13. North Jordan River Concrete Box Bridge municipal heritage site

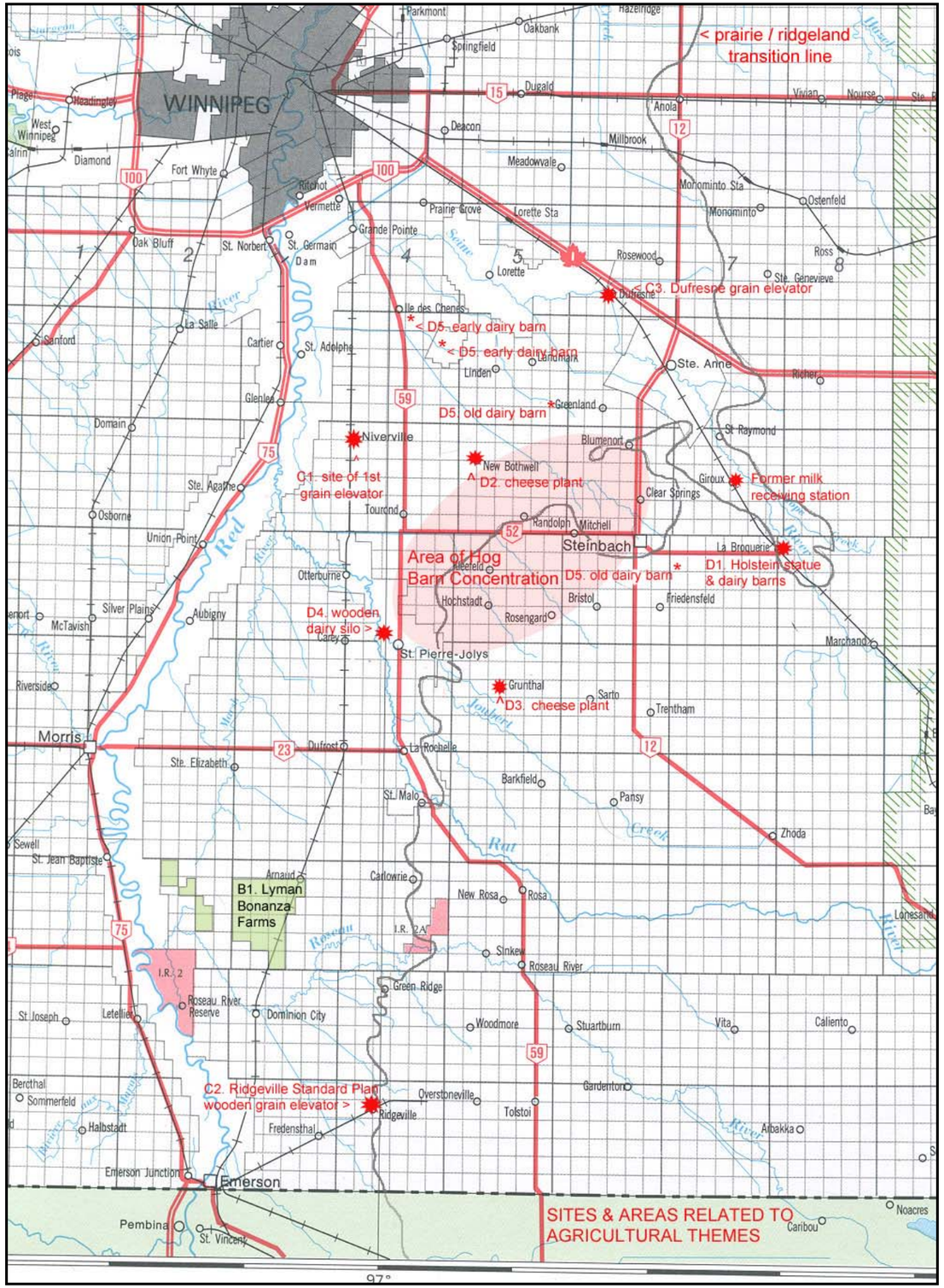
Land Drainage & Groundwater

D1. Manning Canal

D2. Dominion City Drains, earliest drainage works in Manitoba

D3. Springbank Well, Ridgeville area





7. SITES SIGNIFICANT FOR THEIR PORTRAYAL OF AGRICULTURAL THEMES

Mixed Farming

- no identified mixed-use barn sites

Cereal Crops

C1. Niverville, site of first commercial grain elevator
C2. Ridgeville standard grain elevator, abandoned
C3. Dufresne grain elevator, eastern-most elevator

Bonanza Farms

B1. Lyman Bonanza farm, Arnaud area
B2. Other Bonanza farm locations unidentified.

Dairy Production

D1. Holstein Cow town mascot statue
D2. Cheese Plant, New Bothwell
D3. Cheese Plant, Grunthal
D4. Wooden silo, St. Pierre-Jolys
D5. Sites of surviving early dairy barns.

Sugar Beets

- no identified sites

Potatoes

- no identified sites

Poultry

- no surviving early poultry barns identified

Hogs

- Hog barn concentration zone

2.0 Conclusions

The principal aim of this pilot study was to provide a regional perspective on rural heritage resource issues for a selected study region in Manitoba, in contrast to the more common 'site-specific' focus on such issues. As noted in the Introduction, the focus of much of the activity within the Historic Resources Branch since the proclamation of *The Heritage Resources Act, (1986)* has largely been building or site-oriented, with core activities involving developing museums, restoring significant early structures, and erecting commemorative plaques. The activities of most private, community, and family-based initiatives in Manitoba have similarly been site-oriented. The Manitoba Heritage Council was concerned that, with such emphasis on individual 'site-specific' heritage resources, other, perhaps equally significant and valuable types of heritage resources, were not receiving proper attention, and as a result are being destroyed, remain as unprotected heritage gems, or even undeveloped economic and recreational opportunities.

As well, can and should rural areas and communities be viewed from the broader 'area' perspective which many cities have adopted (often with great success); Winnipeg's Exchange District being one example. Are there other provincial statutes and government departments, which can or should play a greater role in managing these potential district and region-based heritage resources? And finally, how can the public at large become more involved in the preservation and development of Manitoba's rural cultural landscapes? To begin to address these concerns and related issues, this pilot project was initiated as an investigation into the nature of regional heritage resources in Manitoba. To guide the research and final project report, three primary objectives were formulated. These are restated below followed by observations as to how well these objectives were attained.

OBJECTIVE #1:
"*To document the nature and evolution of the cultural heritage landscape for a selected region of Manitoba, with particular emphasis on the relationships between the physical natural landscape and the effect of human activities and settlement on that landscape."*

The project report does succeed in providing a fairly comprehensive overview of the development of the natural landscape of the study area and the subsequent human occupation and development of that landscape. The inter-relationships between certain aspects of the physical and human environment also are identified and documented, such as the correlation between the early transportation arteries and the natural environment (i.e.: early trails following the river courses and the 'ridgeline' along the eastern edge of the Red River Valley). Similarly, the correlation between settlement patterns and land use and surface geography also is clearly shown. By these and other observations, the report does succeed in showing the initial strong relationship between the physical landscape and the human landscape. The report shows, as well, how this relationship has decreased in recent decades with modern technology increasingly overcoming the effects and constraints of the natural environment, (i.e.: the network of drainage canals on the Red River Valley 'flats' permitting intensive agricultural production, or the clearing of the wooded eastern uplands with mechanized removal of the boulders and stones from the surface, thereby permitting forage crops to be grown on what had long been considered largely unusable land.

The report also succeeds in illustrating how agricultural development has radically altered the natural vegetation zones in the study region, as a result of clearing the original 'river-bottom' tree-belts, particularly along the Red River, the clearing of the upland woodlands, and with the planting of field and farmyard shelter-belts in the open prairie areas. Clearly, over time, the human landscape has come to dominate the natural landscape in the region, to such an extent that mere vestiges of the former natural environment remains. Such vestiges should be viewed as important natural heritage sites and areas. Discussions such as the effect of human occupation on the natural environment succeeds in documenting the nature and evolution of the physical landscape of the study area, at least from a broad regional perspective.

OBJECTIVE #2:
"To document the cultural heritage landscape, in such as manner that might help to stimulate interest and public awareness as to the importance of cultural heritage landscapes in Manitoba, with the results of the research being readily adaptable to various types of media, such as pamphlets and publications, internet sites and CD-ROM's, and portable exhibits."

This objective was largely attained by the highly illustrative and 'modular' format used to document and present the results of the project research. The entire report, including all text, maps and images, was prepared using common PC computer equipment and software, resulting in a highly adaptive, fully digital package which can easily be stored or viewed using standard PC equipment in the home, office, or classroom. Similarly, the highly illustrative nature of the report lends itself to use by a wide range of audience types and age groups, from school-age children to government employees. The 'summary overviews' or 'capsulated histories', prepared for each of the many historical themes used in the report, are intended to provide the reader with an understanding of the important aspects of each theme, as it relates to the study region, without being burdened by long passages and minute details. These overviews also are largely self-contained and easily converted for use as one-page, double-sided handouts for tourist, school or other purposes. Also, the liberal use of archival images help to provide a highly visible portrayal of the region and the lifestyles of its residents, and help to reduce the amount of textual material required. Images are more easily retained in memory than textual passages, thereby increasing information retention in the reader. The intensive use of cartographic materials in particular succeeds in creating an unusual and interesting final product. The manuscript reviewers invariably found themselves closely inspecting many of the maps used in the report, discovering and noting various items of interest that were ancillary or unrelated to the main discussion themes, and, as a result, generating additional interest in the subject matter and the region. Finally, the 'modular' format used in organizing and presenting the information succeeds in allowing for rapid and easy navigation and information retrieval, particularly in digital-based presentations, such as PowerPoint presentations, CD-ROM, or Internet site use. This modular format also will permit additions to be made easily by simply inserting sections in the appropriate location, headed with a next consecutive number in the organizational system utilized. As a result of the modular and highly illustrative format, the report successfully meets the project's public-awareness and multi-media objectives.

OBJECTIVE #3:
To involve the collaboration of various government departments during the research stage of the project, as well as information sharing at the conclusion of the project, in order to help integrate cultural heritage landscape preservation issues into active policy and daily activities within these departments, particularly those involving planning and tourism. The use of digital technology, particularly GIS plotting of significant sites and elements, would help to facilitate the integration of results and concerns with these agencies.

Several government departments were consulted during the research stage to ascertain the types of materials that might be useful to the project. All departments readily agreed to provide access to information in their files. These included Agriculture, Highways & Government Services, Maps & Surveys, and the Provincial Archives. The main difficulty in working with these agencies was not knowing in advance what materials each possessed. As a result, initial consultations usually consisted of a "show me what you have, and I'll decide if I can use it" situation. This tended to be a time consuming process. Also, determining the best way of copying the materials, particularly the maps, involved trial-and-error attempts until a suitable process was developed. This involved digitally scanning those maps that were in good condition and/or of small to moderate size. Larger, and older, fragile maps had to be photographed in sections and the negatives then scanned and, on occasion, the images digitally 'stitched together' to obtain copies of sufficient resolution and detail to be useful. The Provincial Archives of Manitoba (PAM) was the best source of early maps, and despite the fragile nature of many of them, PAM staff was cooperative and enthusiastic about the project. Without their assistance, only a fraction of the maps used in the final report would have been available for use. With these consultations and processes now in place, subsequent studies, if undertaken, would avoid these initial difficulties and bottlenecks. Also, because of the brief nature of the final overview summaries, staff in these branches were interested and willing to review the appropriate sections of the report to check for accuracy, completeness, etc. Overall, collaboration and interest on the part of other government departments was excellent, and staff in these departments expressed a high degree of enthusiasm in regards to receiving copies of the final report, or PowerPoint presentations, in order to better ascertain where and how their departments could play a role in helping to retain, preserve, and possibly develop some of the identified sites and resources of the Crow Wing Study Region.

Final Pilot Project Observations

Initially, it had been intended that this report would consist largely of 'cut and paste' quoted passages from existing published sources of information in order to reduce the amount of research required, and to reduce the overall project time frame. Unfortunately, it was found that appropriate 'summary discussions,' did not exist for a majority of themes relating to the study region. Secondary – and occasionally – primary source material had to be reviewed, and the summary discussions specially prepared for this report.

Another item related to source materials concerned the difficulty in locating historical information relating to the history of the region's Francophone communities in the English language. Most of the communities possessed the now-familiar 'local history' publications produced in recognition of either the province's or the community's centennial anniversary. These publications were written invariably in the French language. Resources did not permit translation of these volumes, and, compounding the problem, most such publications are comprised of individual family history write-ups, with few discussions involving district or regional themes and perspectives. Site or family specific discussions dominate such volumes. This lack of readily available information further complicated the research phase of the project. It is hoped that, with this report completed, some of these informational gaps have been filled.

Another issue, which resulted in some difficulty, and increased the project timeline, involved the software program used to layout the manuscript. It was intended that the final report would be 'user-friendly' and viewable on any standard home or office computer. For this reason, Microsoft Word, one of the most common word-processing programs available, was used to prepare the final report. However, to be legible, most of the maps used in the report had to be scanned at a fairly high resolution. The resultant large file sizes for each map, and the liberal use of maps in the report, created havoc during the report layout stage. Layout programs which do not import the full-file image, such as Quark Express, which uses a temporary low-resolution copy of the image until the document is 'collected' for printing, would have been much more appropriate for a report such as this. As well, without the benefit of a proper software program, the report layout was undertaken free-hand, and as a result items such as image, text box, and title alignments, etc. are not entirely consistent.

Heritage Landscapes and Resource Management

Traditional heritage resource issues are managed under a legislative and policy framework, which is implemented in Manitoba via a number of provincial level coordinating bodies for the review and monitoring of projects, activities and alterations to existing developments. Heritage Landscape preservation and management initiatives could and should make use of a variety of tools currently available in Manitoba's legislative and policy framework. The main components of this integrated approach are:

The Heritage Resources Act **(1986)**
- Provincial and municipal heritage site designation;
- Heritage resource impact assessment;
- Heritage covenants; and
- Municipal heritage advisory committees.

The Environment Act **(1988)**
- Environmental licensing;
- Departmental referral process with screening by HRB to identify potential adverse effects to heritage resources;
- Environmental Impact Assessment (EIA) of major projects, such as hydro-electric developments, forestry operations and roadways, which include heritage resources, traditional land uses.

The Sustainable Development Act (1998)
- Framework for implementation of sustainable development in public sector and promotion of its use in private industry and society in general;
- Principles and Guidelines for Sustainable Development;
- "Full-cost accounting" including "… social and heritage costs and benefits of specific decisions or actions, including externalized costs…";
- Provincial Code of Practice, applicable to Crown corporations; and
- Sustainable development indicators.

Sustainable Development Strategies with policy statements concerning the identification, protection and interpretation of heritage resources include:
- Natural Lands and Special Places Strategy;
- Minerals Strategy;
- Water Strategy;
- Forestry Strategy;
- Capitol Region Strategy.

Consultation on Sustainable Development Implementation (COSDI)
- Requirement for municipal review and adoption of development plans that reflect sustainable development;
- Inclusion of all sustainability factors, such as environment, economic, social, cultural and human health effects, in the concept of effects assessment;
- Integrated large area planning to identify main issues, including heritage, for the long term (more than 5 years), to set targets and to ensure those priorities are implemented;
- Effects assessment, including assessment and review of cultural and heritage values;
- Land and resource use decisions, including cultural/heritage values;
- Commitment of Manitoba to "recognize and respect the distinctive cultures, histories and traditions of the First Nations peoples of Manitoba";
- Recognition that "The traditional knowledge of First Nations is integral to land and resource use planning, significant resource allocation, environmental licensing and regulatory mechanisms such as effects assessment";
- Commitment of Manitoba "That sustainable development processes recognize the importance of the culture, knowledge, traditions, cultural and spiritual values of Aboriginal peoples."; and
- Commitment of Manitoba "That local knowledge (Traditional Environmental Knowledge or TEK), special naturalized, and community-based knowledge be recognized and considered in sustainable development processes."

***The Parklands Act* (1993)**

- Conservation of representative examples of diverse natural and cultural heritage;
- Preservation of unique and representative natural, cultural and heritage resources;
- Inclusion of a heritage park classification in Manitoba's Parks system plan, e.g., St. Norbert Heritage Park;
- Inclusion of heritage zones in Park land use categories, e.g., Tie Creek Basin;
- Inclusion of heritage zones and land use categories to address resource protection, use, development in Park management plans; and
- Ministerial regulations respecting the protection of cultural, historical and archaeological resources.

***The Planning Act* (1999)**

- Provision for creation of Municipal Heritage Conservation Zones*;
- Definition of the parameters of control and statement of development standards;
- Provincial Land Use Policies as a Regulation under *The Act*;
- Establishment of the planning framework for local government.

*In Manitoba, the powers to create heritage conservation districts (zones) rest at the municipal level. These powers are expressed as zoning initiatives contained in *The Planning Act* and *The City of Winnipeg Act.* In 1998, Historic Resources Branch worked with the Department of Rural Development to introduce the municipal powers for creating heritage conservation zones into *The Planning Act.*

Provincial Land Use Policies (Manitoba Regulation 184/94)

- The Provincial Land Use Policies guide Provincial and municipal review of land use plans and the development of individual projects that could have environmental impacts;

- Provincial use of the policies as a benchmark in the review of subdivisions or other development in areas where a development plan has not been adopted; local plans replace these policies, but are evaluated in relation to the policies;

- Application of the policies to all land in Manitoba excepting the City of Winnipeg;

- Policy #6 - Natural Features and Heritage Resources states that "Significant natural features and heritage resources, and areas required to sustain threatened or endangered plants and animals, shall be protected";

- In addition, reference in Policies #1, 4 and 5 and the Subdivision Policies to the protection of heritage resources (There are 9 Policies, plus the Subdivision Policies.)

Local Land Use Plans (Development Plans and Zoning)

- Local land use plans take direction from Provincial Land Use Policies and supercede them when the plan is implemented;
- HRB provision of a "Basic Policy Statement Relative to Heritage Resources"" to planning authorities when plans are being prepared or reviewed; staff review of draft plans before approval.
- Initiation or implementation of development plans by all but 12 municipalities in Manitoba.

OPPORTUNITIES AND CHALLENGES

- Environmentalists have garnered widespread public support and action. Heritage supporters have not attained the same level of public acceptance and action.

- Legislative and policy frameworks exist and public processes are available for individuals, organizations and governments to identify, preserve and protect heritage resources. However, except for federal, provincial and some municipal governments which use the system, most individuals or organizations espousing heritage interests do not participate in the public processes or use the opportunities that are available, e.g., hearings on forest management plans, park management plans, major projects, the Environment Act project registry.

- The focus of concern should be expanded from protecting individual sites to the development of heritage plans, including the "broader" cultural landscape, e.g. Winnipeg's Exchange District, as opposed to individual buildings within the city's core area.

- The concept of cultural landscape is not new, having been successfully implemented under the UNESCO World Heritage Convention and by Parks Canada and the United States Parks Service, although varying definitions of cultural landscape are employed.

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