



## THE FLOODS OF THE RED RIVER VALLEY Self-Directed Drive & Stroll Tour

Welcome to a Routes on the Red self-directed tour of the Red River Valley. These itineraries guide you through the history and the geography of this beautiful and interesting landscape. Several different Routes on the Red, featuring driving, cycling, walking or canoeing/kayaking, lead you on an exploration of four historical and cultural themes: Fur Trading Routes on the Red; Settler Routes on the Red; Natural and First Nations Routes on the Red; and Art and Cultural Routes on the Red.

*The purpose of this route description is to provide information on a self-guided drive and walk. The walking described includes public lands and trails. While enjoying yourself, please drive and walk carefully as you are responsible to ensure your own safety and that any activity is within your ability.*

*Every effort has been made to ensure that the information is accurate and up-to-date.*

*However, we are unable to accept responsibility for any inconvenience, loss or injury sustained as a result of anyone relying upon this information.*

This tour explores the history of the Red River Valley's floods. The region is well known for its flooding – with the disaster of 1997 still fresh in most people's memories. As well, many residents can remember the devastation that occurred in 1950. However, this region has seen numerous floods over the centuries and this tour will explore that history and examine the methods people have utilized to adapt to living in a flood plain. Discover the stories behind the Winnipeg Floodway and the construction of Lower Fort Garry and the Brunkild Dyke. This tour will bring the Red River Valley's natural heritage to life.

*Today's drive takes you from Ste. Agathe, 25 km south of Winnipeg to The Forks in downtown Winnipeg.*

*For walks, you can enjoy a 5km walk around the St. Adolphe ring dyke (which can be made shorter in a number of locations), as well as numerous opportunities for un-scripted walks in: La Barrière Park, along the Brunkild Dyke, Kingston Crescent, Churchill Drive and the Assiniboine River Walk. There are restaurants to choose from in Ste. Agathe, St. Adolphe and Winnipeg.*

### On today's trip you will visit the following sites:

#### **The Red River Valley Floods Interpretive Centre – Ste. Agathe.**

Scheduled to open spring of 2004.

**phone:** (204) 882-2153 or (204) 822-2337

Summer hours: Every day, 1:00 pm – 9:00 pm

#### **La Barrière Park**

6 km south of the intersection of Waverley and the Perimeter Highway. Open all year round dawn to dusk.

#### **The Forks - One Forks Market Road, Winnipeg, Manitoba**

**phone:** (204) 957-7618

<http://www.theforks.com>

Forks Market open daily from 9:30 am –6:30 pm and Friday from 9:30 am – 9:00 pm.

The Red River Valley is one of the flattest places in the world. This flatness is the result of Lake Agassiz, which was formed by the melting of the glacial ice that covered much of Manitoba, and parts of northwestern Ontario, eastern Saskatchewan, eastern North Dakota, and northwestern Minnesota. This ancient lake well exceeded the total area of the five Great Lakes. At its largest, Lake Agassiz was about 1500 km long, over 1100 km wide with an area of approximately 285,000 square kilometres, and its watershed was 906,000 to 1,295,000 square kilometres. If the lake were in existence today, the surface would be more than 200 metres above your head (this is greater than the height of the Calgary Tower).

As the ice sheet slowly melted away and the front retreated, the whole of the region covered by Lake Agassiz was blanketed by glacial sediments that had been caught up in the ice. These materials ranged from deposits of fine silt, sand and gravel, to stones, rocks and even huge boulders. Swift-flowing glacial rivers, such as the Assiniboine and the Souris (at that time much different from their present incarnations), deposited a huge quantity of sedimentary material into the lake. The largest of these sediment basins became the Red River Valley. The surface of this basin was almost perfectly flat because it was so deep, and there were few forces to modify it, except for the occasional iceberg dragging along the lake bottom and creating tracelines. As a result, once the lake disappeared, the resulting land was also perfectly flat.

Underlying the soil is a deep bed of very fine clay material (the remains of the glacial sediment). It is this clay – also known as Red River Gumbo – that contributes to the flooding difficulty of the Red River Valley since it is essentially impervious to water. The gumbo prevents floodwaters, or any surface water, from having good drainage on these Red River flats. Before this area was put under cultivation, any kind of intense rainfall could result in standing water on the land for days and sometimes months. However, as the settlers moved in and began to farm the land, they built drainage ditches to alleviate this problem. By 1881 there were 320 kilometres of these ditches across the Red River Valley and today there are tens of thousands.

The northern half of Manitoba is still rebounding from the Ice Age, where it was weighed down by a sheet of ice three kilometres thick. As this process continues, the Red River, which flows north, will begin to flow more slowly and eventually will reverse direction. In the meantime, as the water drains more slowly into Lake Winnipeg, flooding will become more severe because water will spread farther and deeper.

This tour begins at the Red River Valley Floods Interpretive Centre in Ste. Agathe. This town was flooded during the 1997 flood. Like other towns in the Red River Valley, it was protected by a dyke but was flooded by water flowing over the CN mainline, which, it was assumed, would be a sufficient barrier to the rising waters.

The flood of 1997 is known as the Flood of the Century. It occurred in the spring after a winter when the Red River Valley received almost double its average snowfall. In February 1997, forecasters were already predicting serious flooding. Then, in early April a blizzard dumped more than 50 cm of snow just as the spring melt was about to occur. Forecasts then predicted record-level floods. On May 3, 1997, despite the full capacity use of the floodway, the Red River crested at 7.5 metres in Winnipeg. To make matters worse, gale force winds accompanied the high water levels. On May 7, the Red River (or the “Red Sea” as it became known) was 30 kilometres wide at Emerson. The entire flood area covered 2,000 square kilometres (the size of Prince Edward Island), including 200,000 hectares of farmland. More than 28,000 Manitobans were evacuated from their homes, 6,000 from the City of Winnipeg.

There was a massive effort by the people of Manitoba (including the largest deployment of Canadian troops since the Korean War) to save as much as possible. Within a few weeks (in many cases, days) dykes around all the towns as well as most farms and homes in the Red River Valley were reinforced, and over 2,000 cattle and 45,000 laying hens evacuated. Over 6.5 million sand bags were produced and distributed and thousands of volunteers turned out to build dykes around farms and houses.

km to next location	DIRECTIONS	Total km
0.0	With the Perimeter at your back, head south on Pembina Highway, PTH 75	0.0
24.9	Turn right onto PR 305, to head toward the Cartier Park Campground. Ste. Agathe will be behind you.	24.9
0.4	Turn right toward a beige building to enter the Cartier Park Campground.	25.3
0.2	Arrive at the front of the Interpretive Centre.	25.5

## Beginning of the Floods of the Red River Valley Driving Instructions

*Following your visit to the Red River Valley Floods Interpretive Centre, return to your car and head out of the driveway.*

km to next location	DIRECTIONS	Total km
0.0	Exit the Interpretive Centre parking lot.	0.0
0.1	Turn left onto PR 305.	0.1
0.4	Continue straight through two sets of stop signs to cross PTH 75, and enter the town of Ste. Agathe.	0.5
0.5	Cross over the Red River.	1.0

To enter the town of Ste. Agathe turn right just before the bridge onto Pembina Trail. This will also take you to a small greenspace beside the Red River. The 1997 flood damaged many individual properties and farms along the Red River Valley. Ste. Agathe was one of the few Manitoban communities

that were completely flooded. Although its temporary dikes did not fail, water flowed up and over the CN rail line, which was expected to protect the town's west side. Gale force winds from the southwest helped the water breach its barrier sometime after midnight on April 29, 1997.

<b>1.1</b>	Turn left at the stop sign onto PR 200, direction Niverville.	<b>2.1</b>
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As you drive along this section of road to St. Adolphe, note the different ways in which the homeowners of the area have adapted to the threat of floods. Look for houses that are surrounded by high dykes, or others that have been built on a raised hill. If you are particularly vigilant, you will notice

a few lots that have driveways that look as though they should lead to houses, but the houses are no longer there. Following the flood of 1997, many of these sites were bought out by the government and the families moved their homes to safer locations in the valley or to dyked communities.

<b>3.5</b>	Cross the Rat River.	<b>5.6</b>
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Note the very narrow band of river bottom forest along this section of the Rat River. Before the settlers arrived and the land was cleared for agriculture, forests flourished along all the rivers in the Red River Valley – the Seine, the Rat, the Roseau and the Red, to name a few. In some places, these forests extended for more than two kilometres on either side of the rivers.

Today, these lovely areas have been almost completely denuded and there are only narrow bands of forest along the riverbanks. This vegetation is important during times of flood, since it soaks up the water and slows the speed of the river flooding its banks.

<b>0.2</b>	Pass Mennonite Landing on your left.	<b>5.8</b>
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**Mennonite Landing Site:** This landing site marks the place where the first Mennonites arrived in Manitoba in 1874. It is located near Ste. Agathe at the junction of the Rat and Red Rivers. A monument commemorates the first Mennonite immigrants to settle in this part of Manitoba. This is also a popular fishing spot for local families.

*Want to know more about French and Mennonite Settlement in this part of the Red River Valley? Try Routes on the Red's French and Mennonite Settlement: self-directed cycling tour.*

<b>2.2</b>	Continue straight at intersection with PR 311	<b>8.0</b>
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<b>7.4</b>	Enter St. Adolphe.	<b>15.4</b>
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<b>0.2</b>	Pass through the southern extension of the town dyke.	<b>15.6</b>
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Many communities in southern Manitoba are protected by permanent earth dykes known as ring dykes. Many of these were constructed after the flooding of 1966.

To go for a walk along St. Adolphe's ring dyke, park on the street and walk back to the dyke. Turn right to climb onto the dyke, adjacent to Philip Bay. This walk will take you around the town

on the dyke, with three options for returning earlier to your vehicle. As you walk along the dyke, it is not difficult to imagine the scene in 1997, when everything outside of the dyke would have been covered in water, very near to the crest of the dyke. The dykes themselves raised by 1.22m (4ft.) with clay by the military as an added precaution against the rising waters.

**Use the following route instructions to guide you through your walk.**

<b>0.0</b>	Walk past a sign that reads: "Authorized vehicles only".	<b>0.0</b>
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<b>0.4</b>	Stay straight on the dyke to pass the Trans-Canada Trail (TCT) sign, indicating that the TCT is veering to the left.	<b>0.4</b>
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*If you would prefer to walk along the Trans-Canada Trail, follow the blue TCT signs. This will take you down by the river – outside of the flood protected area of St. Adolphe. Your route will re-join the dyke a little further along.*

<b>0.4</b>	Pass the town drain, which flows into the Red River.	<b>0.8</b>
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<b>0.1</b>	Continue straight along the dyke at its small break.	<b>0.9</b>
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*To return to your car at this point, turn right onto the road – following the blue Trans-Canada Trail signs. At the T-intersection, turn right to walk back through town on PR 200 to your car.*

<b>0.2</b>	Cross a driveway and continue on your ring dyke walk.	<b>0.0</b>
<b>0.3</b>	Continue straight along the dyke.	<b>0.4</b>

*This is the second point where you can return to your car. To do so, turn right onto the road. At the T-intersection, turn right to walk back through town to your car on PR 200.*

<b>0.2</b>	Cross PR 210.	<b>1.6</b>
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*To return to your car, turn right onto PR 210, and follow it to the intersection with PR 200. Turn right onto PR 200. You will have the opportunity to walk all the way through town to your car, which will be approximately 1.6 km..*

<b>0.4</b>	Cross PR 200 and pick up the dyke on the south side of Kosman Blvd.	<b>2.0</b>
<b>0.4</b>	Follow the dyke as it curves east and passes beyond the new housing development.	<b>2.4</b>
<b>0.6</b>	Cross PR 210 and veer left to the dyke, following the power lines for 2 poles, and then curve right with the dyke.	<b>3.0</b>
<b>0.8</b>	Turn left at the T-intersection onto the road, which serves as the dyke.	<b>3.8</b>
<b>0.3</b>	Pass the St. Adolphe Curling Rink.	<b>4.1</b>
<b>0.1</b>	Keep to the left to follow the dyke around the town at a parking lot.	<b>4.2</b>
<b>0.7</b>	Arrive back at the intersection with PR 200, and your starting point.	<b>4.9</b>

*Following your walk, return to your car and continue with your driving tour.*

<b>0.7</b>	Pass the St. Adolphe church on your right.	<b>16.3</b>
<b>0.7</b>	Continue straight at intersection with PR 210	<b>17.0</b>
<b>8.6</b>	See the diversion gate across the Red River for the floodway, in front of you.	<b>25.6</b>
<b>1.9</b>	Cross the Floodway	<b>27.5</b>

The Winnipeg Floodway, which protected Winnipeg during the flood of 1997, achieved exactly what was intended when it was built after the 1950 flood. The 1950 flood devastated the city and resulted in the largest civilian evacuation in Canada to that date.

The flood of 1950 was the result of conditions that were common to some of the floods that preceded it, notably those of 1852 and 1861, and probably that of 1826. There was a very wet fall, with precipitation well above normal all through the Red River Valley, leaving the soil saturated, and ponds, streams and swamps filled. Winter was extremely cold, though the snowfall was not exceptional. There was a brief warm spell in March, with heavy rainfall to the south, and then a return

to extreme cold. The heavy precipitation in the southern part of the watershed increased the amount of ice and snow on the ground. Then, in April 1950, there was a record-breaking snowfall, both in North Dakota and southern Manitoba. Although that April began as one of the coldest on record, temperatures began to rise, causing melting at the same time as there was heavy rainfall.

The flood began in North Dakota late in March, causing only minor inconvenience, until it reached Grand Forks where the Red Lake River enters the Red. By the beginning of April, the ice was moving north and the river was flooding its banks resulting in the evacuation of some residents of Grand Forks.

On April 14, aerial reconnaissance by the U.S. Army Corps of Engineers showed a solid sheet of ice and snow covering the Red River Valley north of Grand Forks. On that very day the weather warmed up suddenly. By the end of that day, the threat of flooding in Manitoba had escalated. The Red Cross, federal, provincial and municipal governments, and the army made plans to deal with the emergency. The waters advanced, inundating communities, and reached Winnipeg early in May. Dykes constructed during the minor flood of 1948 were reinforced and soldiers were brought in to assist. A sandbag brigade filled bags and dykes were constructed on streets along the river. Pumping stations were working at full capacity, though the equipment had not been designed for such volumes of water. The situation was critical but stable. Then, what everyone feared most happened: it began to rain. The dykes were overwhelmed and it became necessary to evacuate Wildwood, Riverview and Point Douglas. By May 8th, large areas of the city were under water, though the Lyndale Dyke in St. Boniface and the Glenwood Crescent dyke still held. Over 80,000 people were

evacuated. If the water had risen a mere two additional feet, the entire population of Winnipeg would have been ordered to leave. After May 13th, the water level had dropped. One tenth of the city had been flooded and more than 10,500 homes damaged.

The disaster, great as it was, could have been even worse, and to prevent a recurrence of and the damage caused by the flooding of the Red River and to prevent greater destruction, the Government of Canada and Province of Manitoba assessed the damages and recommended the construction of the floodway, which was opened in 1969. The plan was much ridiculed and became known as «Duff's Ditch», because it was built by the Duff Roblin administration. It has been used 19 (including 2004) times since construction was finished and has prevented damages estimated at over \$3 billion. It also did save the city of Winnipeg in 1997 from the terrible destruction suffered by other cities along the Red River, most notably Grand Forks, N.D.

<b>0.4</b>	Turn left onto Flood Control Gate Road (unsigned).	<b>27.9</b>
<b>0.8</b>	Cross the Courchaine Bridge over the Red River.	<b>28.7</b>

This is an interesting place to stop for a few minutes. The floodway is made up of several components. The inlet structure, which is in the Red River a little way downstream from the floodway inlet, has two huge gates, each of which is 34.3 metres wide. The gates remain at the bottom of the river and are raised when there is a flood, dividing the flow of the water and diverting part of it into the floodway channel that passes around Winnipeg on the east. The floodway is 47 km from St. Norbert to Lockport and has an average depth of 9.1 metres. Its average width at the bottom is 137.2 metres. The largest excavation project in Canada, it required removal of 76.5 million cubic metres of earth. There is an outlet structure, a concrete drop, downstream from Lockport.

The floodway outlet drops 4.2 metres to the Red River to dissipate energy in order to avoid erosion as the water re-enters the Red River. At the entrance to the floodway channel is a section known as the lip, which was designed to prevent ice from entering the floodway channel.

There are now plans to expand the floodway in order to increase its capacity from 1,700 to 3,960 cubic metres of water per second and vastly improve the level of flood protection for the City of Winnipeg. The project would widen and deepen the floodway channel and enlarge the outlet structure near Lockport. Construction of the expanded floodway is scheduled to begin in 2005.

<b>0.5</b>	Turn left onto Turnbull Drive at the T-intersection.	<b>29.2</b>
<b>2.9</b>	Turn right onto Marchand Road.	<b>32.1</b>
<b>0.8</b>	Turn left at the stop sign at the T-intersection.	<b>32.9</b>
<b>0.2</b>	Turn right to reach the stop sign at PTH 75, to stay on Marchand.	<b>33.1</b>
<b>2.6</b>	Turn right onto Waverley Street, towards La Barrière Park.	<b>35.7</b>

As you make this turn, in front of you is the Brunkild Dyke. This 40-kilometre dyke zigzagging south west of Winnipeg was built at record speed during the 1997 flood and prevented water from backing up from the floodway and entering the City of Winnipeg from the west through the LaSalle River channel. Without this dyke, the floodwater would have been able to enter the Red River where the LaSalle River flows into it behind the floodway, thereby flooding the City "through the back door" so to speak. Normally, water approaching from this direction would not be a problem but, in 1997, the abnormal snowfalls

and rain in both Manitoba and North Dakota meant that the runoff from the spring melt was abnormally high. The dyke was built in six days with equipment working 24 hours a day. Because of the haste necessary, there was not enough time to sufficiently compact the materials used and there was no guarantee that it would withstand the wave action of the approaching water. Derelict school buses and scrapped cars were lined up in front of the dyke to bear the brunt of the waves. Luckily the dyke held, despite the windy conditions that caused considerable anxiety.

<b>1.3</b>	Cross over the top of the Brunkild Dyke.	<b>37.0</b>
<b>0.1</b>	Pass the entrance to La Barrière Park - on the left.	<b>37.1</b>

*This is a lovely park to stop at for a nice walk in the woods or a picnic.*

If you would like to go for a walk along the top of the Brunkild Dyke, you can park your car at the entrance to La Barrière Park and walk back to the dyke.

<b>0.2</b>	Cross over the La Salle River.	<b>37.3</b>
<b>3.8</b>	Turn right at the first intersection. This is rue des Trappistes, which is only signed on the left side.	<b>41.1</b>
<b>2.2</b>	Turn left onto Pembina Highway at the lights.	<b>43.3</b>

You are now in St. Norbert. During the 1997 flood, this part of the City was evacuated in case the Brunkild Dyke and the sandbag dykes failed. As it turned out, only two houses were

flooded – both of these were on Lord Street, on the banks of the Red River.

<b>1.4</b>	Pass beneath the Perimeter Highway.	<b>44.7</b>
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During the 1997 flood, the Perimeter Highway was considered the last line of defence for the City of Winnipeg. If the Brunkild Dyke failed, the City was prepared to fill in this underpass with dirt to prevent floodwaters from entering

the city at this point. Although this was never required, they prepared themselves by piling dirt beside the Pembina underpass – just in case.

<b>4.9</b>	Continue straight along Pembina, crossing over Bishop Grandin Boulevard.	<b>49.6</b>
<b>1.4</b>	Turn right onto Crescent Drive.	<b>51.0</b>
<b>0.4</b>	Veer right with the road to stay on Crescent Drive.	<b>51.4</b>
<b>0.6</b>	Continue straight to drive through Crescent Park.	<b>52.0</b>
<b>1.4</b>	Turn right at the 4-way stop sign, onto South Drive.	<b>53.4</b>
<b>1.6</b>	Turn left at stop sign to stay on South Drive (and the bike path route).	<b>55.0</b>
<b>0.3</b>	Turn left at stop sign onto North Drive.	<b>55.3</b>
<b>0.7</b>	Turn left at intersection onto Oakenwald Avenue.	<b>56.0</b>

*Note on your right, a dyke which was built to protect the low lying Wildwood area.*

<b>0.7</b>	Turn right onto Netley Street.	<b>56.7</b>
<b>0.6</b>	Turn right onto Riverside Drive.	<b>57.3</b>
<b>0.5</b>	Turn right at T-intersection, to stay on Riverside Drive.	<b>57.8</b>
<b>0.3</b>	Turn right onto Jubilee Avenue.	<b>58.1</b>
<b>0.4</b>	Continue straight to pass the Elm Park foot bridge over to the Kingston Crescent area.	<b>58.5</b>

If you would like to take a short walk, park your car and walk over the Elm Park foot bridge to Kingston Crescent. This oxbow in the Red River has always been prone to flooding; however, the residential development of the area has increased the danger because some of the river banks have been lowered for aesthetic purposes and to create

basement walkouts. In 1950, Kingston Crescent was flooded and 60 homes had to be evacuated. The Elm Park bridge, which was still a vehicle bridge at the time, was closed to all but emergency traffic. This area was also flooded again in 1997 and residents had to leave their homes.

*After your walk, return to your car and continue along your drive.*

<b>0.1</b>	Turn right onto Cockburn Street South, and then immediately veer left with the road as its name changes to Churchill Drive.	<b>58.6</b>
<b>1.0</b>	Pass beneath the St. Vital Bridge.	<b>59.6</b>

This is a lovely area in which to walk. Park your car and explore the riverbanks along Churchill Drive Park.

Churchill Drive is actually built on top of one of Winnipeg's permanent dykes that were constructed in order to protect the neighbourhoods along the river. The initial dyke that had been built after the 1948 flood was not sufficient to hold back the rising floodwaters of the 1950's flood, and the entire neighbourhood, including hospitals had to be evacuated.

In 1951 the Winnipeg Dyking Board constructed a system of dykes and pumping stations, covering a large portion of the areas along the Red River, in Greater Winnipeg. At this point, the dyke, which has become Churchill Drive was improved. With the addition of the Red River Floodway, the neighbourhood has thus far been spared during subsequent floods.

As you drive along this section, note the riverbanks on the other side. You will notice that generally one bank is higher than the other and that one tends to be steeper than the other. This is due to the natural erosion and deposition that occurs as rivers flow along a winding course. The areas that are steeper and higher are being eroded while the other side receives deposits of the soils carried in the river. As erosion and deposition continue to occur, the course of a river may move slightly one direction or another. This activity normally occurs with the regular river current, however, during times of flood, the speed and depth of the river increases, thus increasing the rate of riverbank erosion.

Floods, although generally associated with disaster, also replenish the soil of flooded areas. One has only to think of the Nile and the seasonal flooding that regularly deposited a new layer of rich alluvial soil necessary for agriculture.

<b>3.1</b>	Continue straight at the stop sign, onto Brandon Avenue.	<b>62.7</b>
<b>0.3</b>	Turn right onto Osborne Street at lights.	<b>63.0</b>
<b>0.8</b>	Continue straight on Osborne Street through "Confusion Corner".	<b>63.8</b>
<b>0.9</b>	Cross the Assiniboine River.	<b>64.7</b>
<b>0.1</b>	Immediately over the bridge, turn right onto Assiniboine Avenue, to pass behind the Manitoba Legislative Building.	<b>64.8</b>
<b>1.1</b>	Turn left onto Fort Street.	<b>65.9</b>
<b>0.1</b>	Pass Upper Fort Garry Gate on your right.	<b>66.0</b>

All that's left of the once imposing Upper Fort Garry is the stone gate, which was constructed in 1850. Upper Fort Garry was the last of five forts that were built near the confluence of the Red and Assiniboine rivers. Following the flood of 1826, which precipitated the destruction of the previous fort, Upper Fort Garry was constructed near the original location in 1835. This fort was an impressive structure with thick, 15 foot high stone walls and four corner bastions. It housed barracks, officers' quarters, the Chief Factor's residence, a general store, a fur store and a pemmican store. The main entrance to the Fort was located approximately in the middle of what is now Main Street, just south of the junction with Assiniboine Avenue. Outside this entrance was the location of the liquor store.

The flood of 1826 was one of the worst known floods to hit the area. Given the area's tendency to flood, there would certainly have been floods prior to that. There was, in fact, one in 1776, though it is poorly documented. In the familiar pattern, a wet fall was followed by a winter with lots of snow and a sudden thaw with heavy rainfall at the end of April. Flooding began on May 2 and the river rose 2.7 metres in 24 hours. Fort Garry had to be abandoned and almost every building in town was destroyed by floating ice. The entire population had to flee to higher ground, from where, eyewitness accounts report, they watched everything -- from houses to barns, furniture to fences, to livestock and seed -- float away. Eight settlers were reported drowned and the rest faced

several difficult months. It took more than a month for the flood to subside and, when it did, the soil was too wet for planting. Many settlers left permanently.

Two more serious floods occurred during the nineteenth century: one in 1852 and another in 1861. There were also floods in 1882 and 1897 but they were far less severe.

<b>0.3</b>	Turn right onto York Avenue.	<b>66.3</b>
<b>0.1</b>	Continue straight on York to cross Main Street.	<b>66.4</b>
<b>0.3</b>	Turn right onto Waterfront Drive at the T-intersection.	<b>66.7</b>
<b>0.4</b>	Arrive at the Forks Market.	<b>67.1</b>

Take the opportunity to walk along the Assiniboine River Walk, which starts at The Forks. As you walk along this path, you will notice three coloured lines on the cement abutment of the bridges. The bottom blue line indicates the average flood level in the spring. As the line is far above the river walk upon which you are walking, you can correctly infer that the river walk is

usually not accessible during the spring as the water levels are too high. The next line, which is yellow, indicates a warning that a flood will occur if the water levels continue to rise above this point. As a cautionary measure, city workers start getting ready for a major flood by preparing sandbags. The red line at the top indicates a flood in the City of Winnipeg.

Following your walk along the River Walk, return to The Forks for a bite to eat or to head back home. This is the end of your Floods of the Red River Valley Tour. If you would like to visit more flood related sites in and around the City of Winnipeg, we suggest the following locations:

- Duff Roblin Provincial Park – located just off Winnipeg’s north Perimeter Highway, two kilometres east of PTH 59, where there are a number of informative displays and a walk that will take you down to the Floodway.
- The flood of 1950 forced Winnipeg’s City Council to build dykes and pumping stations, previously considered after the flood of 1948 but which it had not constructed because of the expense. The flood of 1950 forced the City to take action. One of the dykes built was along Glenwood Crescent in Elmwood. Glenwood is a short street running along the east side of Red River west of Henderson Highway and just off the Redwood Bridge. If you look at Glenwood, you can see that the centre of the street is quite high and that the houses on both sides of the street are quite a bit lower than the street. This was the dyke built in 1950 and it remains one of the permanent dykes in the City. It was also one of the dykes that held in 1950. During the 1997 flood, a sandbag dyke was built down the middle of the street

to augment the already existing permanent dyke and other dykes were built behind and between the houses on the river side of the street. For days, as in so many other neighbourhoods, this street was a hive of activity as volunteers and soldiers hauled and stacked sandbags and children lined up to climb aboard the tanks parked along the street.

- Many of the streets that run along the Red River are part of the dyking system. One place to get a view of the city’s dyking system is on Point Douglas along Rover Avenue, which runs along the river in North Point Douglas. There’s a very steep slope up to Rover from the side streets that lead to it. To reach Rover Avenue, head north on Main Street from The Forks. Pass under the railway tracks and turn right at the next intersection. This is Sutherland Avenue. Turn left from Sutherland at any street and follow it to the river.

On this trip you have had the opportunity to explore the history of flooding within the Red River Valley, its impact on the landscape, and the manner in which the people in the area have modified the landscape to protect themselves from flooding.



*Thank you for joining Routes on the Red's self-directed excursion exploring floods of the Red River Valley. We hope that you had an enjoyable trip, and we would love to have you discover more of the Red River Valley on our other self-directed itineraries.*

We greatly value your input and comments. If something was not clear, a road sign changed, or if you found a delightful picnic site or visit that you would like to share with future travellers, please let us know. The best way to communicate is to write the changes or new information directly onto the appropriate route description page, and mail or fax it to the Rivers West office. Thank you in advance for your contributions!

Rivers West, officially known as Red River Corridor Inc./L'Association du Corridor Rivière Rouge, is a not-for-profit organization, with the overall objective to develop the Red River Corridor as a destination. Our mandate is to create and implement a long-term tourism and conservation strategy focusing on the development, promotion and management of the natural, tourism, cultural and heritage, and recreational resources of the Red River from Emerson to Lake Winnipeg.

We are pleased to receive financial support from the federal and provincial governments and the participation of rural municipalities, towns and cities along the length of the river. A variety of projects are underway in the Red River region. These include the preservation of special lands for conservation, designation of the Red River as a heritage river, increasing opportunities for public access to the River, and the development and promotion of the river valley's natural, cultural, recreational and tourism resources.

Contact us for more information at:

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