

OPUNTIA

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ISSN 1183-2703

The Great Flood of 2013

[Editor's note: You can jump ahead to the bottom of page 9 for the exciting bits, but the flood report makes more sense if you read the Transit Fanning article first.]

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TRANSIT FANNING IN CALGARY: PART 4. THE CALGARY STAMPEDE by Dale Speirs

Beginning in 2012, I decided not to write up the Calgary Stampede rodeo in full each year but concentrate on a different aspect of the event each time. The Calgary Stampede is the world's largest rodeo, with 1.4 million paid admissions over ten days in the middle of every July. That's just the rodeo itself. There are thousands of events throughout the city beginning the week prior, from pancake breakfasts to company barbecues to tavern parties. All bands in the city become western bands during the rodeo, regardless of their normal repertoire. Calgary Transit goes to full alert during the Stampede, with all staff on duty and extra temps, and every available bus and train to handle the traffic. In addition to the regular bus routes, direct express routes are run from the distant suburbs to the rodeo grounds and extra trains are put into service on the LRT lines. Normally the LRT stations are unmanned but during the rodeo each stop will have inspectors on duty, partly for crowd control but also to advise passengers, many of whom are tourists unfamiliar with the system.

The Stampede grounds are on the southeast corner of the downtown core, on the opposite side of the transcontinental railroad line. The western boundary of the grounds is Macleod Trail, the eight-lane main drag through south Calgary into

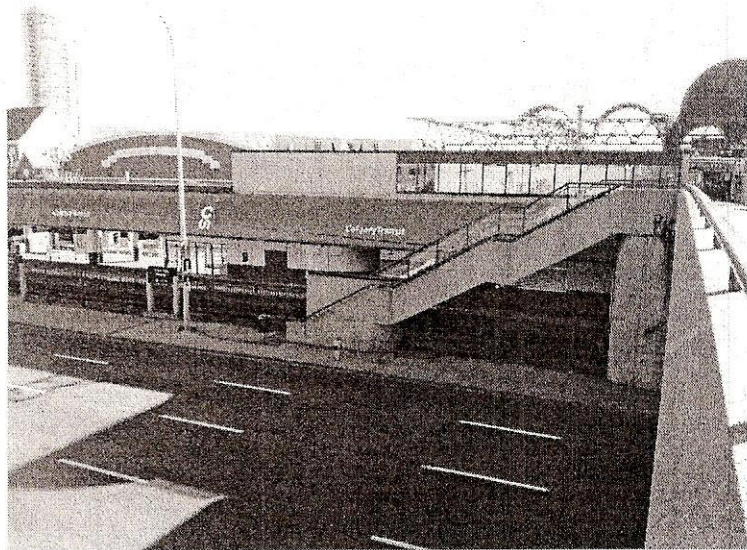
downtown. Sandwiched in between the road and the grounds is the south LRT line. The south and east boundaries of the grounds are formed by a bend in the Elbow River. The north boundary was the now-extinct community of Victoria Park. Over the years, the grounds have expanded north towards the railroad, the only direction they can grow, and by now all but a fraction of the community has been bought out by the Stampede organization.

There are two LRT stations on the south line serving the Stampede grounds. At the northwest corner of the grounds is the Stampede Victoria Park station, and the southwest corner has Stampede Erlton station. The latter is named after the Erlton community on the opposite side of Macleod Trail, which is still extant and overrun by yuppies living in over-priced condos.

Figure 1 shows the Stampede Victoria Park station, looking east from a pedestrian overpass crossing northbound Macleod Trail. Notice the livestock brand on the centre of the awning. This is the Stampede's own livestock brand, pronounced "see lazy ess". The Stampede has several ranches in southern Alberta where they breed broncos and bulls, and this is the brand applied to them.

Figure 2 on the next page is the Erlton station, looking east across Macleod Trail from the Erlton side, with a southbound train stopped alongside it. Supposedly the arched roofs are in the style of chuckwagons, but the effect is marred by the ramps and

Figure 1



staircases to the platform. Figure 3 on page 4 shows a southbound single-car LRT train crossing the Elbow River. The Stampede grounds are to the right outside the photo. Passenger-carrying trains are three cars long, so this single unit was a training car for a new driver. The view is looking west-northwest from a private bridge that forms the south entrance to the Stampede grounds.



Figure 2.

Figure 3.



There are also two bus terminals, one at the north side for coach parties in private buses and one adjacent to the Erlton station for Calgary Transit buses. On a hot sunny rodeo day, all these are packed. I normally go in the morning well before the main events start but even so it is a slow shuffle down the sidewalk to the

gates. As for approaching the grounds just before an evening concert or the rodeo events, the word “sardine” comes to mind. Fortunately there are no hockey games in July because the city’s two major hockey arenas are on the grounds. One shudders to think what would happen if the rodeo and both hockey teams (the NHL’s Calgary Flames and the juniors’ Hitmen) were all on simultaneously.

During the event, a large proportion of Cowtowners dress western, as do many bus drivers, not to mention the passengers. It has never been a stretch for me to do so, since I wear western gear (cowboy boots, black denim pants) year-round. Having grown up on a cattle ranch in west-central Alberta, I always appreciated the convenience of cowboy boots, taking after my father. Neither of us owned shoes. I write of working cowboy boots, not the dude boots with filigree and metal-capped pointy toes, which no real cowboy would wear out on the range.

Riding the bus on rodeo days puts passengers and bus drivers in a jollier mood. Strangers in western gear will actually talk to each other, instead of staring down at their smartphones and texting. Traffic jams are taken less seriously, as we shrug our shoulders at the Stampede crowds because we know we’re part of it.

Figure 4 is a stubbie bus (same style as regular buses but half the length) in the downtown core, with a Happy Stampeding message on its electronic message sign. All city buses carry this message during the event, with the display alternating between the message and the route number. The same thing is done for other holidays, such as Happy Thanksgiving during the first week of October, Lest We Forget for Remembrance Day, or Merry Christmas.

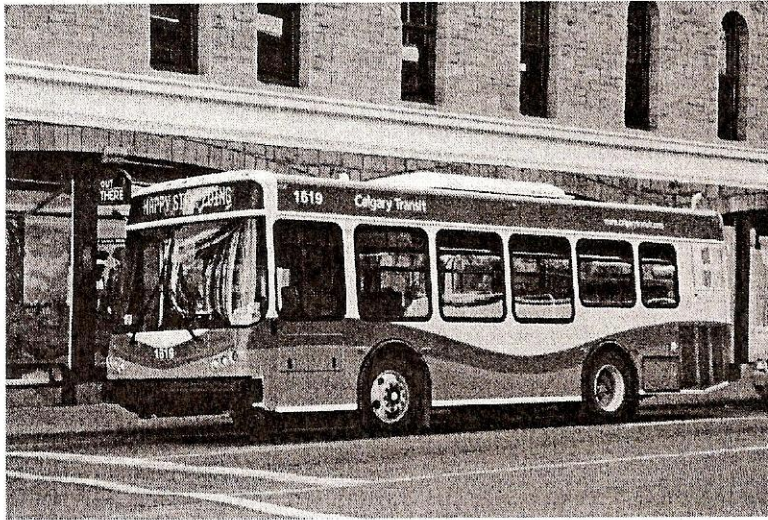
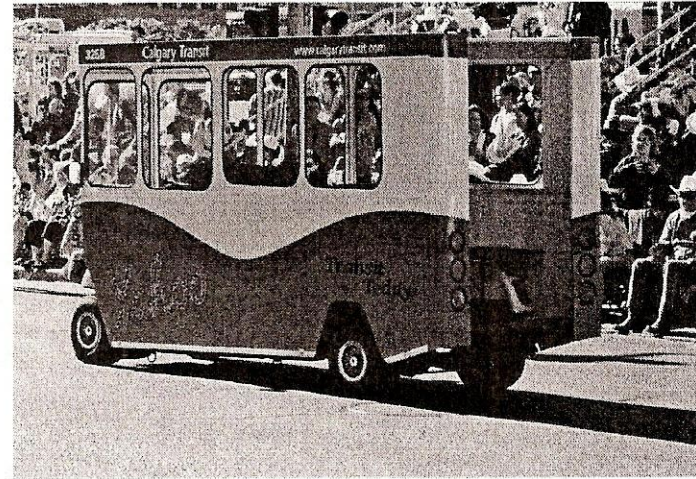


Figure 4.

Figure 5.



The Stampede begins on a Friday morning with a parade looping around the downtown core. About 200,000 spectators watch from the sidewalks. Other than first responders and Calgary Transit, all traffic is excluded from the core at 06h00. Most businesses close for the morning and no Cowtownner expects to get any work done that day. There are the usual keeners who camp out on the sidewalks overnight. Figure 5 is the Calgary Transit entry in the parade, a golf cart done up as a bus.

HUMAN EVOLUTION: PART 6.
WE LEARN TO USE TOOLS.

by Dale Speirs

Tool use by hominids dates back millions of years. The basic sort of tools, such as a stick to probe the ground for food, is obvious enough, and even some apes use it. However, refined tools specifically manufactured for a purpose date back about 2.5 to 1.5 megayears ago [24, 80]. The ape-man *Australopithicus robustus* used bone tools to dig out termites [45]; even today some primitive tribes find the grubs tasty, and if you are starving in the desert any finicky palates will be selected out of the gene pool in favour of those who take their protein as they find it. A study on a fossil locality on the Red Sea coast of Eritrea shows modern-like humans using tools in that area about 125,000 years ago [15].

An example is the use of bifacially-shaped handaxes for woodworking, the evidence for which is based on wood residues on the fossil axes. This requires planning and foresight to manufacture an axe, as opposed to scrabbling about for a stick and poking it around. One can therefore tell when intellectual capabilities of hominids developed to the advanced stage by looking for deliberately-shaped tools used for a particular type of task.

Deliberate use of fire is a tool, for cooking or making tools [87].

Surprisingly, the use of fire for warmth does not appear to have been an immediate factor in using it. It wasn't until 300,000 to 400,000 years ago that deliberate fire making became prevalent in humans that had earlier spread into Europe. The fossil evidence is for hardening wood or preparing tools.

The manufacture of new and more advanced types of tools, beyond poking things with a stick, required evolution of the hominid brain. This means scenario visualization, the ability to think beyond the present situation and wonder what if a tool could be modified or created to do something else, that something else being a situation not evident from just looking at the current status [44]. Apes poke a long stick into a bee hive to get honey without being stung, but do not think of using the stick to plough the ground and plant seeds for next spring. There is also the matter of having hands better adapted to making and using tools. While this is not of over-riding importance by itself, when combined with bigger brains it allows a suite of advantages to build up. As an example, one of the reasons humans predominated over Neanderthals is that the former had better hands [71].

We Learn To Talk.

The most significant aspect of human evolution is the development of a spoken syntactic language, which sets us apart

from all other animals. There are a few chimpanzees or gorillas in highly artificial laboratory environments who have been taught to make very simple sentences out of basic words but they cannot advance past this and cannot speak. They certainly do not use complex syntactic language in the wild. There are no qualitative differences between advanced vertebrate species in learning and memory processes, but humans alone have the ability to acquire language [28]. Language appears to have originated by exaptation, the use of pre-existing features for a different purpose [39]. There is no relation between the evolution of human anatomy and the development of language.

Fossil and behavioural evidence also shows that tool making and language developed together [81]. As the human brain evolved, it did not add new abilities in sequence but rather together as a set of skills that expanded and improved by feeding back on each other. The over-riding theme of human brain evolution was a trend to greater capacity for complex goal-directed action. Language enabled humans to communicate skills to others faster, and writing enabled communication with those in far distant space and time. Apes can teach their children and grandchildren, but not their descendants a century hence as we do by reading old books. Apes can communicate with their neighbours in the next patch of forest, but cannot communicate with other apes on the far side of the continent as we do by mailing a letter.

Animal language is non-syntactic, where each signal (such as a sound or 'word') refers to an entire situation or event. Humans have a syntactic language, where signals are built up from discrete units (words). This allows new combinations of words to make an infinite number of sentences. Syntactic communicators only have to learn the sum of the number of actions, places, events, and individuals represented by words. Non-syntactic language requires learning a separate word for each possible combination of action x place x event x individual, which is multiplicative [11]. The distinction is thus made between animal communication which uses a limited number of signals in context, and human languages, which can generate unlimited ideas in sentences we have never heard before.

Syntax only evolves if the number of required signals needed in habitat exceeds a threshold value, since non-syntactic language is faster for limited situations. Humans passed this threshold due to the number of social interactions and new events in their changing habitat [11]. There are two steps needed for the transition from a limited language to an unlimited system. Firstly, a small number of phonemes are used to generate a large number of words. Secondly, a large number of words are used to generate an unlimited number of sentences. Increasing the number of phonemes does not increase language ability due to increased number of errors.

While the human languages today range from 11 to 141 phonemes, 70% of them are in the 20 to 37 range. The reliability of a language can be increased by using phonemes combined into words, which reduces the number of errors [12]. The human brain stores thousands of words, then links them together to form sentences. Interestingly, the average number of links between any two words is only two or three [36]. This also explains some speech disabilities in humans, where a defect has disconnected some of the most commonly used vertices. The network of neurons in the brain can be compared to the Internet, where disabling a few key nodes can bring down the network [37].

Language appears to have developed about 100,000 years ago in *Homo sapiens sapiens*. Those hominids who had it displaced speechless tribes due to better co-ordination in hunting, herding, tribal organization, and warfare [13]. It may have evolved from gestural language, which does not alert prey or predator, and which is still a large part of human language today. Sign languages develop spontaneously in groups of deaf people, and the congenitally blind are known to use gestures. Certain sounds would become associated with certain gestures. From there, speech could develop because it does not require line-of-sight [14].

It has long been believed that humans had the advantage of speech because they were the only species with a descended larynx,

which allows fine control of air to produce speech.

In 2001 it was reported that two species of deer (red and fallow) also had descended larynxes [25]. This does not mean that a descended larynx is no longer responsible for the development of speech in humans, but rather that it was one of many improvements in the human body that allowed language to evolve. Speech and language require a concatenation of genes and developmental timing. It has been shown that the gene FOXP2 on chromosome 7 is involved in the development of humans that produces spoken words [31]. When a defect occurs in this gene, it produces severe speech disorders.

[to be continued]

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WORLD WIDE PARTY #20 AND THE GREAT FLOOD by Dale Speirs

I observed the 20th annual World Wide Party on June 21st but did not celebrate it. I toasted zinedom around the world at 21h00 but did so with a heavy heart. Calgary was experiencing the worst flood in its history. My neighbourhood is up on the plateau of the first prairie steppe, so we were not

evacuated as was about 20% of the city. My house is an old one and during heavy long-duration rainfall there is water seeping through the basement floor and the sump pump runs steadily. This I can live with once or twice a year during the rainy season. But this time was different.

In June 2005 we had record rainfall and flooding, and certain neighbourhoods directly on the banks of the Elbow River were evacuated. My house had seepage then but nothing to make my stomach clench. The Great Flood of '05 was presumed by all us Cowtowners to be a once-in-a-generation event. We were wrong.

On June 19, a massive low-pressure system moved in from British Columbia into the Alberta foothills and mountains and then came to a dead stop. Over the next two days, Calgary got a record 190 mm of rain, but that was nothing compared to the foothills and mountains, where 250 mm of rain fell. The problem was that all the rivers and streams in southwestern Alberta arise from the mountains and flow east. Calgary was founded in 1875 at the junction of the Bow River, Elbow River, and Nose Creek. The initial settlement is today the downtown core, sitting on the floor of the valley. Older residential neighbourhoods, still extant, spread up the valley on the floodplain.

My neighbourhood is high up on the plateau, safe from rivers. On June 20, the usual Elbow River floodplain neighbourhoods were

evacuated by mandatory order, which is easily enforced -10- by shutting off all the electricity, natural gas, and water. What was ominous was the evacuation of other floodplain neighbourhoods on the Bow River floodplain that were supposedly protected by levees and had never been evacuated since the dikes were built eighty years ago. On June 21, a Friday, the downtown core was closed, a thing never before done because of flooding. (Once in November 2011 because of a windstorm.)

The water across my basement floor went from seeping to flowing. A couple of weeks previous I had the sewer drain augered out because of tree roots, and this fortunate timing ensured that while the floor was wet, it was draining away as fast as it flowed. The bottom of my furnace was dripping, something I'd never seen in 2005. By midday of June 21, most of the main drags throughout Calgary had sections closed to traffic because of flooding. Vehicle traffic was worse than during a blizzard, because snow doesn't close the freeways, it just slows traffic.

All the rivers and creeks burst their banks in southwestern Alberta. 100,000 Calgarians spent the night away from their homes. The entire city of High River (pop. 12,000) was evacuated. Villages along the foothills went through the same thing. The Trans-Canada Highway through the mountains was closed in Banff National Park. People in Canmore who lived a block away and five metres above Cougar Creek suddenly had waterfront homes.

My bedroom is in the basement because it is cool in summer and warm in winter. But the night of June 20/21 and the following night I slept on the living room couch on the main floor. I didn't want to wake up in the morning, swing my feet out of bed, and put them down into water. Fortunately it never transpired but it might have, had the sewer drain backed up, not from tree roots but from all the drainage through the neighbourhood.

The Stampede grounds were flooded, just two weeks before the big rodeo. The Saddledome hockey arena, where many rodeo events are held, was flooded up to row 10 in the bleachers. The downtown core is bordered by the transcontinental railroad on the south side, the Bow River on the north side, and the Elbow River on the east side. All the bridges over the rivers were closed because the waters came up to their decks. All but one access on the south side is by underpasses under the railroad, all of which filled up, leaving 350,000 office workers to evacuate through a single level crossing. Bus routes everywhere were truncated or cancelled. All the LRT lines run through the core, and had to be truncated out in the suburbs.

This is why I have no photos to show you. Normally I would have been out recording the floods, but I wasn't going to sit in two-hour traffic jams to find a high spot to take photos with a telephoto lens from a kilometre away. (No close-ups, as the police had cordoned off all flooded zones.)

But happy World Wide Party anyway. I've no right to complain considering how many people lost their houses, not only in Calgary but throughout southwestern Alberta. Some of the rivers further south came up so fast that fair warning couldn't be given to everyone. Several drowning deaths occurred. The Canadian Forces were mobilized to rescue about 150 High River residents who spent all day Friday sitting in the rain on their house roofs waiting for help.

So at 21h00, as my sump pump gurgled in the basement, I stood in my kitchen with a bottle of Coke-Cola. I raised it to the east and toasted those in zinedom who had already celebrated WWP #20 in their time zone. Next I faced south, then north, and toasted those in the Mountain Daylight time zone. Finally I faced west and saluted Vancouver fandom. Hopefully someone out there was celebrating. To conclude the event, I went downstairs to check on the flow of water across the basement floor.

Apres Le Deluge, Moi

2013-06-22

Calgary Police Service announced that the downtown core would be closed until Tuesday at least. No electrical power means no elevators in those skyscrapers and no restaurants with working refrigerators. Enmax shut down all its electrical substations in the core as the flood approached, and the transformers now have to be blow-dried and inspected before restarting.

The rivers are no longer rising, but they aren't dropping either, because they continue to be fed by runoff from the mountains. Only one route exists between south and north Calgary as all the other bridges over the Bow River remain closed. Prime Minister Stephen Harper and Alberta Premier Alison Redford, both of whom represent Calgary ridings, flew over the flood-ravaged areas of southwestern Alberta to have a look.

One of the flooded towns southwest of Calgary is Turner Valley, where the Prime Minister's wife Laureen was born. Today is her 50th birthday. It so happens that she was born during a flood and she and her mother stayed in the maternity ward longer than they otherwise would have because their house was underwater and there was no place for them to go. Her father still lives in Turner Valley, where he was running his electrical generator to power his and his neighbours' sump pumps.

The Calgary Zoo is mainly on St. George's Island just downstream from the core. The island is several metres above normal water level and has some levees, but this time was different. The animals were evacuated to other facilities, and the Zoo will be closed for a fortnight after the waters recede.

OPUNTIA is prepared from a template with blank pages and standing text already set up. Each article is an individual document that I copy and paste into the template to make up an

issue. There are separate documents for zine reviews and letters of comment, which allow me to add individual items in small increments and from there cut and paste to the template. I usually start assembling issues two or three in advance with only a few last-minute additions for the final lockup. -12-

I told you that story so I could tell you this one. This issue of OPUNTIA was begun in early June, starting off with the Stampede transit fanning article. On June 21st, the Stampede grounds and two LRT stations flooded as the Elbow River overflowed to its highest level since records were first kept. The LRT tracks alongside the Stampede grounds were washed off the trackbed. Go back to page 4 and look at the photo again; that bridge was submerged during the flood, as was the spot from where I took the photo. Calgary Transit has a major bus barn nearby in Victoria Park. The waters rose so fast that some of the parked buses could not be removed to higher ground in time. The downtown core evacuation order was expanded south across the railroad tracks into the Beltline area. Lots of condo towers in that area, which above ground level are safe but which now have no electricity as the flood laps at electrical substations.

2013-06-24

Today is Monday. Downtown core still closed, as are all the small businesses on the floodplains. But lots of people live in one suburb and work in another, so they are going to work. But what

a commute! Normally the morning rush is over by 09h30. My neighbourhood only sees a bit of rush traffic from nearby high schools. All schools city-wide are closed until Thursday, but the street a block from me that connects to Crowchild Trail freeway is gridlocked. With so many bridges and freeway sections still closed, commuters are short-cutting through neighbourhoods in a desperate attempt to get to work. Not to get to work on time, but to get to work at all. No buses running downtown, and many bike paths flooded. The traffic jams lasted all day.

2013-06-25

Tuesday. Since the post office where I get my mail will be closed for a few more days, my normal schedule is thrown off. I had to courier some tax documents for my company to my accountant in Lacombe, so I went by bus to a retail postal outlet in the Beltline. The driver told me some of the routes are running through the dried parts of the downtown core. Afterwards I went walking through the Beltline but large areas are still closed. I met up with a former Parks Dept. co-worker who retired not long after me and who lives in the flooded Erlton area along the Elbow River. He has a fourth-floor apartment and so did not lose anything, but he was living in his car until the power and natural gas could be restored. I offered him help but he declined. He had worked in many bush camps in his life and was used to living rough. As he put it, "I'm retired; it's not as if I had anything urgent to do or places to be."

Crowchild Trail is still backed up all day long. A few more bridges and freeway sections are open but the most critical choke points are still flooded so the traffic has to find its way elsewhere, such as Crowchild Trail. The rivers have crested but they are not going down very fast because of the continued runoff from the mountains. If you want to see what happened in the mountains, Google "Cougar Creek", "Canmore", and "2013 flood".

On the next page is a screenshot from the www.calgarytransit.com front page for June 25, showing that someone at CT was able to keep a sense of humour. The photo shows what was left of the LRT tracks alongside the Stampede grounds. On page 4 of this zine I mentioned a parking lot for coach parties at the Erlton LRT station; it is now a gigantic crater three metres deep and a half city block in area. Stampede volunteers are working hard to clean the grounds, and it has been announced that the show will go on. The revised slogan is "Hell or High Water", and t-shirts with the slogan are instant bestsellers.

2013-06-26

Wednesday. My basement is mostly dried out, although the sump pump continues to run. I went downtown on the chance that Central Post Office might be open, but it wasn't. Canada Post had a notice that boxholders could pick up their mail at the South Post Office way down yonder on Macleod Trail near Chinook Mall. Normally this would be an easy



trip on the LRT South Leg but since a third of it is floating down the river towards Saskatchewan, emergency bus service has been brought in. Articulated buses are now routing around the damage to Chinook on emergency route B201. I rode it and got my mail from the South Post Office without any problem.



Canada Post transferred the Central P.O. staff to the South P.O., so I didn't have to show identification when I asked for mail from Box 6830; they knew me on sight. The postal system is the original distributed network, long before the Internet, so they know how to work around disasters and keep the mail flowing. Calgary has three post offices and eighty postal outlets, most of which were not affected by flooding, so they have been able to reroute without too much trouble.

2013-06-27

Thursday. I went to the South P.O. to get my mail but was told that the Central P.O. had re-opened. I took the B201 bus downtown, which passed the damaged Erlton station en route. Go back to page 3 and look at the photo of the Erlton station. That whole area (roadway, grass area, tracks alongside station) is now a giant crater carved out by the Elbow River. As the bus went past, I managed to get a few smartphone photos of the construction equipment racing to repair the damage in time for the Stampede, one of which is seen on the next page. Notice the equipment in the bottom of the crater. Look at the right side of the photo and you can see how deep the area was excavated by the Elbow River. A river that during Stampede you can wade across without getting your knees wet. The river, although still in flood, had subsided back to its normal banks and is now out of sight at left of photo. The bridge is the opposite side of the view on page 4.

