The Rideau Route
Exploring the Pre-Canal Waterway
Ken W. Watson
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by
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Author’s Foreword

“What did the Rideau Route look like before the canal system was built?” This is a question that piqued my curiosity when I first moved to this area in 1995. During its construction from 1826 to 1831, a technique known as slackwater flooding was employed, building dams to flood rapids rather than digging canals around them. This dramatically changed the pre-canal landscape since virtually all of the Rideau Canal Waterway has experienced some flooding, drowning the original topography. What did this original landscape look like?

As I investigated the issue, I found that there was no easy answer; I couldn’t find any published research on this topic. So, I started my own research and found that the pre-canal Rideau waterway was a wild place of lakes, rivers, marshes, sinuous creeks, deep canyons, rushing rapids and waterfalls, spanning three watersheds. Much of this pre-canal geography still exists, lying hidden under the waters of the flooded lakes and rivers. I’ve attempted to create a picture in this book of that submerged landscape, to answer the question of what did the Rideau Route, the route connecting the Ottawa River with the St. Lawrence River and Lake Ontario, look like prior to the canal being built?

This book has its origins in 2003 when I started doing research into the topic. Initially I was simply trying to determine the exact amount of flooding that had occurred as a result of the building of the canal. That work expanded into reconstructing the pre-canal geography and eventually resulted in a book, published in 2006, titled “Engineered Landscapes: The Rideau Canal’s Transformation of a Wilderness Waterway.” However, as my wife can attest (having proofed that tome), since it’s a research document, Engineered Landscapes can be a bit of a heavy read.

This book is a re-working of Part 1 of Engineered Landscapes, in which I’ve developed more speculative interpretations. These interpretations include describing the original Rideau Route as a traveller along the route would have seen it in 1783 and the addition of new maps showing the pre- and post-canal outlines of several of the lakes. The transcriptions and maps of the first three Rideau Route surveys, which were first published in Engineered Landscapes, have also been included in this book, since it is interesting to read about those surveys in the words of the surveyors themselves. My goal for The Rideau Route has been to produce a book that will be attractive to a broad audience, allowing more people to discover this fascinating piece of Canadian history and geography.

This book emphasizes the navigational impediments (i.e. rapids) on the original Rideau Route, since it was these impediments that Colonel By had to overcome when designing a canal system. They are the reason for the exact placement and size of each lock and dam. This book does not describe the lock construction, except in places where it has significantly altered the geography. To learn those details, a good companion book for “The Rideau Route” is my “A History of the Rideau Lockstations” which provides a lock by lock description of the building of the Rideau Canal. The Rideau Route sets the stage for that tremendous feat of human effort and engineering accomplishment, and answers the question, what did the Rideau Route look like before the canal system was built?

Ken W. Watson
Elgin, Ontario
February, 2007
It’s not all research in musty archives!

While much of the research for this book involved reading reports, browsing archival material and examining hundreds of canal era maps and paintings, it also involved getting out and about on the Rideau. Many pre-flooding features can still be seen today and nothing substitutes for actually standing on or floating over the spot referred to in a map or research report. New information such as bathymetric measurements and the depths of drowned stumps greatly aided the reconstruction of the pre-flooding geography. Plus doing field research is more fun than reading old reports.

Clockwise from upper left: the ‘low tech’ way of measuring the depth of a drowned stump; Dr. Joe Boyce and Lisa Sonnenburg during Colonel By Lake survey; ‘Lily Paddling’ on Irish Creek; bathymetric profile of the drowned Cataraqui River Channel in Colonel By Lake; side scan sonar mounted on Watson’s boat; lowering plumb bob down the face of the Jones Falls dam; Jonathan Moore searching for old bridge remains in Jones Falls Bay; Katie helping to track down the old portage around Jones Falls; and bathymetric transducer on Watson’s boat (centre photo). Photos by Ken W. Watson.
Table of Contents

Author’s Foreword ....................................................................................................................................iii
Acknowledgements ....................................................................................................................................1
The Rideau Canal .......................................................................................................................................2
Introduction .................................................................................................................................................4
The Rideau Route in 1783 ........................................................................................................................13
  The Journey Begins .................................................................................................................................13
  The Journey South – Rideau Falls to White Fish Falls (Morton) .......................................................14
  The Journey North – Cataraqui River to Cranberry Marsh ..............................................................15
  The Cranberry Flood Plain .....................................................................................................................64
  The Journey North – continuing up the Cataraqui River .................................................................68
  The Journey South – continuing to Cataraqui (Kingston) ............................................................68
Lieutenant Gershom French’s 1783 Survey of the Rideau Route ..........................................................70
Lewis Grant’s 1795 Survey of the Upper Gananoque River .................................................................79
Lieutenant Joshua Jebb’s 1816 Survey of the Rideau Route ...............................................................83
Samuel Clowes’ 1823 and 1824 Surveys of the Rideau Route .............................................................96
APPENDICES ..........................................................................................................................................118
  Appendix 1 – The Research for this Book ...................................................................................... 119
  Appendix 2 – A Brief Chronological Synopsis – pre-1783 to 1832 .................................................124
  Appendix 3 – A History of the Rideau Route – 88,000 BC to 1832 AD ...........................................125
  Appendix 4 – The Main Rideau Route Surveys ..............................................................................133
  Appendix 5 – Rideau Geographic Place Names ............................................................................136
  Appendix 6 – Pre-1850 Townships Bordering the Rideau Canal ....................................................141
Image Citations .......................................................................................................................................142
Bibliography ............................................................................................................................................143
About the Author ....................................................................................................................................146

Front Cover – The background map is a section of Lt. Joshua Jebb’s 1816 map of the Rideau Route. The lower part of the map shows a portion of his preferred “Irish Creek Route” while the upper part shows some of the pre-canal Rideau lakes. Rough roads linked early communities such as “Furnace” (Lyndhurst) and “Stone Mills” (Delta). Taken from: “Plan of the Water Communication from Kingston to the Grand River” by Lt. J. Jebb, July 8, 1816, Library and Archives Canada, NMC 21941 2/3.

Back Cover – The painting is an 1830 watercolour by Thomas Burrowes showing voyageurs paddling a group of British surveyors on what is now McNallys Bay of Upper Rideau Lake. A settler’s cabin can be seen on the south shore of McBrides Point. “Upper Rideau Lake:– from the North side of the Isthmus” by Thomas Burrowes, 1830, Archives of Ontario, C 1-0-0-0-34.
Lower Brewers Lock Construction Camp in 1829 (looking south)

This 1829 painting shows a typical Rideau Canal construction camp as well as some of the geographic features of the area. The setting is the Cataraqui River at Lower Brewer's Rapids. The meandering nature of the Cataraqui River is clearly visible, as the area around it, the planned navigation channel, has been cleared of trees. Further downstream, in the areas now occupied by Colonel By Lake and River Styx, the forests on either side of this cleared area were left standing and were drowned when the canal dam at Kingston Mills was completed in 1831. The portion of the Cataraqui River visible in this painting is now under 7 feet (2.1 m) of water.

A short bypass canal was constructed in this area in order to leave the original sawmill intact. This mill was erected by John Brewer in the early 1820s (it was called Brewer’s “new mills” by Samuel Clowes in 1823). The sawmill is the large building shown in the centre background.

A lime kiln is visible on the left side of the painting. The excavation for the canal cut has just started, two men with pickaxes are excavating the lock pit and four men are removing material using wheelbarrows, pushing them up a “barrow run.” Some of the log cabins are the workers’ accommodations. On the right, three men are visible, surrounded by cut stones. At least one is a mason (the one in the middle is swinging a mallet), shaping a stone to exact specifications.

The entire construction area has been cleared of trees. This was on orders from Colonel By, hoping to reduce the incidents of malaria, which was thought at the time to be caused by “bad air.”

Acknowledgements

The idea to determine the actual amount of flooding and to reconstruct the pre-flooding landscape originated from discussions between the author and Jonathan Moore, Marine Archaeologist, Underwater Archaeological Services, Parks Canada Agency, in early 2003. Jonathan participated in, and wrote the report on, the Rideau Canal National Historic Site of Canada Submerged Cultural Resource Inventory (RCSCRI) project, an examination of the underwater and near-water archaeological sites related to the Rideau Canal. Discussions with Jonathan about the RCSCRI project led to the idea of determining the amount of flooding brought about by the building of the Rideau Canal. In support of the project, Jonathan provided a draft copy of the RCSCRI database and an extensive digital image collection of pre- and post-canal era maps and illustrations. He was also instrumental in obtaining copies of archival material relating to the Rideau Canal.

Research for this document was conducted on a volunteer basis. This has been greatly assisted by the published works of the professional research community. The names of these researchers can be found in the bibliography.

In terms of resource material, the Manuscript Report Series produced by Parks Canada is an extremely valuable Rideau historical resource. Parks Canada has been very co-operative in providing access to these and allowing copies to be made for my own use. Special mention goes to Kevin Fox who allowed me full access to the southern depot (Elgin) library and photocopier; Kim Shepherd, for providing the same help and access to the library in the Rideau Canal Office at Smiths Falls; Mary Ann Stienberg, for always providing answers to my many questions or directing me to where those answers could be found, and Ellen Manchee for being very helpful with my “does Parks Canada have a copy of this?” questions.

Special thanks must be extended to my wife, Pat Watson, for expertly recording echosounder readings on several boating expeditions and for the many hours she spent proofing various revisions of this manuscript. The final result has greatly benefited from her keen eyes.
The Rideau Canal

In concept, design, and engineering, the Rideau Canal is the most outstanding surviving example of an early 19th century slackwater canal system in the world, and one of the first canals designed specifically for steam-powered vessels. It is an exceptional example of the transfer of European transportation technology and its ingenious advancement in the North American environment. A rare instance of a canal built primarily for strategic military purposes, the Rideau Canal, together with its ensemble of military fortifications, illustrates the significant stage in human history when Great Britain and the United States of America vied for the control of the northern portion of the North American continent."


The Rideau Canal is a waterway located in Ontario, Canada, that extends from the City of Kingston in the south to the City of Ottawa in the north, a distance of 202 km (125 miles). From Lake Ontario at Kingston the canal rises 50.6 metres (166.2 feet) to the summit of Upper Rideau Lake and then descends 83.8 metres (275 feet) to the Ottawa River at Ottawa (see Figure 1). Built in 1826-1831, it presently uses 45 locks at 23 lockstations (see Figure 2) to allow vessels drafting up to 5 feet (1.5 m) to navigate the route. In the late 1880s, two additional locks were built to connect the Town of Perth, via the Tay River, to the Rideau Canal.

Canal structures such as locks and canal cuts represent less than 10 percent of the waterway. These connect a series of lakes and rivers to form the navigation network. Some of the lakes along the route pre-date the canal construction, others were formed by flooding when river sections were dammed.

The Rideau Canal route crosses a major watershed divide, with the Rideau River watershed to the north, flowing to the Ottawa River and the Cataraqui River and Gananoque River watersheds to the south, flowing to Lake Ontario and to the St. Lawrence River.

In 1926, the Rideau Canal was designated as a National Historic Site of Canada; in 2000, it was designated a Canadian Heritage River; and, in 2006, it was nominated as a World Heritage Site.

In the pre-canal era, the land where the lock is located was a dry gully. A small stream flowed through the area now occupied by the basin. Photo by Ken W. Watson, 2006.
"The Rideau Canal, when constructed, will be perfectly different from any other in the known world, since it is not ditched or cut out by the hand of man. Natural rivers and lakes are made use of for this Canal, and all that science or art has to do in the matter, is in the lockage of the rapids or waterfalls, which exist either between extensive sheets of still river water, or expansive lakes. To surmount this difficulty, dams are proposed, and, in many instances, already raised, at the bottom of the rapids, or sometimes at their head, or even, as the case may be, in their middle, by which means the rapids and waterfalls are converted into still-water."

- John MacTaggart, *Three Years In Canada*, 1829, Vol. 1, p. 162

The above quote sums up what the Rideau Canal is all about, natural water features linked by man-made structures. Sufficient water depths for navigation were achieved, for the most part, by the flooding of rapids. This brought about immense landscape changes; the landscape of the pre-canal Rideau looked very different than the Rideau does today.

This book takes a look at the pre-flooding landscape. To do this, we will travel back in time to 1783, prior to any European settlement along the route of the present day canal. This was a year before the first mill dam, erected at Kingston Mills in 1784, started to forever change the landscape of the Rideau Route. The year 1783 also marks the first European survey of the Rideau Route, that of Lt. Gershom French. We'll follow Lt. French on his route, starting where the Rideau River meets the Ottawa River and heading south. We'll also follow a group of native paddlers heading north, up the Cataraqui River, and explain why this group and Lt. French’s survey party never crossed paths. Although Lt. French ended up in Cataracaui (Kingston), he didn’t get there by going down the Cataraqui River.

Background information about the Rideau Route, including a brief history of the Rideau Canal and a summary of present day research into the pre-flooding geography, has been included in the appendices. Those who like being well grounded in factual information may wish to peruse these appendices before beginning the journey along the 1783 Rideau Route.

A brief delay before we begin our journey is warranted to explain how the description of the 1783 Rideau Route was created. It is not simply French’s concise description of the route (which you can read word for word later in this book) – rather it is an assemblage of information from various sources: the first three Rideau Route surveys (French, Jebb and Clowes), the 1827 canal surveys (Burrows and MacTaggart), descriptions from various canal era reports, hundreds of canal era maps, and present day bathymetric research. Combined, these form a view of what the route would have looked like prior to the building of the mill dams and later, the canal dams, which would forever change the landscape.

Each survey had a different goal and this determined the type of detail that they recorded. French in 1783 was examining the route in view of future settlement. He, and subsequent pre-canal surveyors, were travelling in light birch bark canoes which could be (and were) pulled up less severe rapids. Jebb, in 1816, was looking for a navigation route requiring less than 3 feet (0.9 m) of water depth; he noted more rapids that French. Clowes, in 1823 and 1824, was looking for a navigation route to accommodate navigation channel depths up to 7 feet (2.1 m) so he noted more navigation impediments than Jebb. Surveys and reports during the canal building phase of 1826 to 1831 provided increased detail on specific rapids. The downside of the later surveys is that many areas were already inundated, due to flooding from mill dams, so we have to rely on earlier, less detailed, pre-flood descriptions of those regions. A listing of the main Rideau Route surveys can be found in Appendix 4. Present day research, detailed in Appendix 1, includes the use of bathymetry to "view" the drowned landscapes. This information has greatly aided the reconstruction.

The map (Figure 2) preceding this page shows the entire Rideau Canal Waterway as it looks today. The six illustrative maps that follow this section (see the Index Map on the next page), show the Rideau Route as it would have looked in 1783 and as it looks today. It is recommended that they be referenced as the route descriptions are read, in order to fully understand the geography of the route. Although these “before and after” maps of the Rideau Route and detailed maps of several of the lakes have been included, those wishing the greatest geographic detail may wish to consult the 1:20,000 scale hydrographic charts (Charts 1512 and 1513). Maps of that detail haven’t been included in this book due to size constraints (placed end to end these maps extend 31.4 feet (9.5 m) in length).
Northern Rideau Route Region 1783

Notes: Map compiled by Ken W. Watson based on Lt. Gershom French’s 1783 route description; William Chewitt’s 1794 map compiled from French’s survey sketches; Lt. Joshua Jebb’s 1816 survey maps & description; Samuel Clowes’ 1823/24 survey descriptions and map; John Burrows’ and John MacTaggart’s 1827 survey descriptions; Rideau Canal flooding depth estimates (K. Watson) and current hydrographic charts 1512 and 1513. Base geography from NTS Maps 31B & 31G.

Map 1a
Central Rideau Route Region 1783

Notes: Map compiled by Ken W. Watson based on Lt. Gershon French’s 1783 route description; William Chewitt’s 1794 map compiled from French’s survey sketches; Lt. Joshua Jebb’s 1818 survey description and maps; Samuel Clowes’ 1823/24 survey descriptions and maps; John Burrows’ and John MacTaggart’s 1827 survey descriptions; Rideau Canal flooding depth estimates (K. Watson) and current hydrographic charts 1512 and 1513. Base geography from NTS Maps 31B & 31C.

Ken W. Watson, 2007

Map 2a
Central Rideau Canal Waterway 2007

Map 2b
Map 3a

Notes: Map compiled by Ken W. Watson based on Lt. Gershom French’s 1783 route description; William Chewitt’s 1794 map compiled from French’s survey sketches; Lewis Grant’s 1795 “Sketch of the Gananoque”, Lt. Joshua Jebb’s 1816 survey description and maps; Samuel Clowes’ 1823/24 survey descriptions and map; John Burrows’ and John MacTaggart’s 1827 survey descriptions; Rideau Canal flooding depth estimates (K. Watson) and current hydrographic charts 1512 and 1513. Base geography from NTS Map 31C.

Ken W. Watson, 2007
An Engineered Landscape

The inundated landscape that we see all along the Rideau Canal Waterway today is the result of the 47 masonry locks and 52 dams erected during the building of the Rideau Canal between 1826 and 1831. The largest of these dams was the “Great Dam” at Jones Falls, designed by Lt. Colonel John By and constructed by crews working for contractor John Redpath. The stonework of this dam is 57 feet (17.4 m) high, the highest dam of its time in North America. It was placed in the old White Fish River channel, about 1,400 feet (425 m) upstream from the foot of the original Jones Falls Rapids (which extended for over a mile (1.6 km) in length). The dam created 45 feet (13.7 m) of flooding at its head, drowning the rapids upstream of the dam and raising the level of Sand Lake (at the head of the rapids) by 8 feet (2.4 m).

In this 1841 painting, the beautiful arch shape of the dam is visible, abutting against the solid bedrock walls of the White Fish River canyon. The houses overlooking the dam are what remain of the original dam construction camp, known during the construction period as “Esthertown,” assumed to be named for John By’s wife, Esther.

The tranquil beauty of the area today is in contrast to the difficult working conditions during construction, particularly the annual scourge of malaria. Redpath’s construction crew of Scots and French Canadians were laid low each year during the “sickly season” (August to mid-September). Redpath, in a letter written from Jones Falls on December 3, 1831, referenced malaria, stating: “the exceeding unhealthiness of the place from which cause all engaged in it suffered much from lake fever and fever & ague, and it has also retarded the work for about three months each year. I caught the disease both the first [1828] and second year missed the third but this year had a severe attack of Lake Fever - which kept me to bed for two months and nearly two months more before I was fit for active service as nothing can compensate for the worse of health so no inducement whatever would stimulate one to a similar undertaking.” Ironically, in 1834 Redpath brought his family to his sister’s house at Jones Falls, in order to escape the deadly cholera epidemic (which killed his wife) that was raging at that time in Montreal.

When this painting was done in 1841, Jones Falls was a lovely idyllic spot, the hardships of its construction a fading memory. Today it is one of the most beautiful lockstations on the Rideau Canal.

Credit: “The Great Dam at Jones’ Falls; from the West end” by Thomas Burrowes, 1841, Archives of Ontario, C 1-0-0-0-53.
The Rideau Route in 1783

Our voyage along the Rideau Route is going to be made in two main sections, one heading south and one heading north. We'll first follow Lt. French, heading south from Rideau Falls (Ottawa) to White Fish Falls (Morton), now all part of the Rideau Canal. Then we'll jump to Cataraqui (Kingston) and follow a group of native paddlers heading north, up the Cataraqui River to Cranberry Marsh (Cranberry Lake), also now part of the Rideau Canal. Between these two routes was the Cranberry Flood Plain (see Map 3a), which was not navigable by canoe in 1783, so a separate description of that area will be provided. That will complete the description of what the present day route of the Rideau Canal looked like in 1783.

However, so as not to leave our two intrepid groups of paddlers in the middle of their journeys, we will rejoin our native group on the Cataraqui River to see how they continue up the Cataraqui River to connect with the Rideau Route and then we will rejoin Lt. French, to see how he ends up in Cataraqui (Kingston).

The Journey Begins

It is late September 1783, a year prior to the first known European settlement on the Rideau Route. Lieutenant Gershom French, an Assistant Engineer with the Corps of Loyal Rangers (also known as “Jessup’s Corps”) is in Montreal, preparing to conduct the first European survey of the Rideau Route. The Second Treaty of Paris, a peace treaty between the British Government and the American Revolutionary Government, has been signed and Sir Frederick Haldimand, the governor of British North America, has ordered that this potential route between the Ottawa River and Lake Ontario be investigated.

At the same time, a group of natives is gathering at the mouth of the Cataraqui River, at the fledgling community of Cataraqui, later to be called Kingston. They are planning a trip up the Cataraqui River to the Ottawa River. However, for reasons of timing and geography, this group is destined not to meet Lt. French and his party, their paths will not cross. Natives travelling up the Cataraqui River in 1783 are used in this book simply as a vehicle to illustrate the 1783 geography. Joseph Brant, one of the main chiefs of the Six Nations, was in Cataraqui in 1783. He and a group of loyalist Mohawks explored the land around Cataraqui Falls in June 1783. This was unknown country for those Mohawks since most were from the U.S. Brant and his followers ended up settling on the Grand River in southwestern Ontario. There was some native use of the Cataraqui route in that general time period, most likely by Mississauga natives who claimed ownership of much of that region. However, we don’t have any specific documentation for a trip up the Cataraqui River in 1783.

This is a milestone year for Cataraqui. The French had established a small post on the western side of the mouth of the Cataraqui River in 1673. Later known as Fort Frontenac, it was part of the French defence/trading post system along the St. Lawrence River and Lake Ontario. It was captured by the British in 1758, but not occupied. Now, in 1783, with peace between Britain and the newly created United States of America, this strategic location is being investigated as a site for a new military and naval base. The
treaty placed several British outposts, including those at Carleton Island and Oswego, in U.S. territory. Governor Haldimand ordered Major John Ross, the commander of Fort Oswego, to investigate the area around Cataraqui. As part of his investigations, Ross travelled up the Cataraqui River and discovered a good source of water power at Cataraqui Falls, recommending that a sawmill be constructed in that location. That's as much as any European knew about the southern portion of the Rideau Route at that time.

In the meantime, back in Montreal, Lt. French was preparing for his journey. He had two native built birch bark canoes and was arranging for provisions for his journey, items such as salt pork, flour, rum, and tobacco. He had hired a native familiar with the aboriginal route connecting the Ottawa River to the St. Lawrence River, via the Rideau River, to act as his guide for this journey. The rest of his party was to consist of seven men from the Provincial Corps of the British Army and two French Canadian voyageurs. Their survey was to start at the Carillon Rapids on the Ottawa River. On September 29, 1783 they headed off from Carillon, arriving at Rideau Falls on the afternoon of October 2.

**The Journey South – Rideau Falls to White Fish Falls (Morton)**

In the first part of this section, from Rideau Falls to Hogs Back, the 1783 geography of the Rideau River can still be seen today, altered only by a dam at Rideau Falls, some shoreline alteration, and extensive urban development. When the Rideau Canal was constructed, Colonel By decided to bypass this entire section of the river. To do this, he had an artificial canal channel excavated from Entrance Valley (the Ottawa Locks) to Hogs Back. He built a large dam at Hogs Back, raising the level of the Rideau River 41 feet (12.5 m) at that location and putting a navigation depth of water into the canal cut. Most of the flow of today’s Rideau River passes through a waste water weir in the Hogs Back dam and into the original river channel. Only a very small percentage of that flow is used in the canal cut from Hogs Back Locks to Ottawa Locks.

**Rideau Falls**

It’s October 2, 1783. After exploring both sides of the Ottawa River, French and his party have paddled up the Ottawa River to arrive at Rideau Falls. They were greeted by the same twin falls we can see today. Here the Rideau River falls about 30 feet (9.1 metres) into the Ottawa River. The word “rideau” is French for “curtain,” which was the appearance of these falls to Samuel de Champlain, who travelled up the Ottawa River in 1613. It was in about 1694 when the name “Rivière du Rideau” first appeared on maps. French used a mile-long (1.6 km) native portage to bypass the falls. It is assumed, based on the location of a future (1815) road, that the portage may have been from Governor Bay to a point perhaps near Porter Island. After portaging both canoes and all the gear to the top, French and his party made camp and stayed there overnight. They would get an early start the next day on exploring the Rideau River.

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*Eastern Rideau Falls in 2006 and 1830*

A distinctive feature of Rideau Falls is the extremely flat bedrock surface that the Rideau River flows across, before it plunges into the Ottawa River. These are limestone rocks (Lindsay Formation of the Ottawa Group) that form flat bedrock “pavements” in several parts of the Ottawa area. They are more resistant than the underlying rocks in this area, the softer limestones and shales of the Verulam Formation. This produced an erosion-resistant overhang (creating the falls) when the Ottawa River cut its channel across the mouth of the Rideau River.

**Cascade Rapids**

The portage from the Ottawa River would have bypassed the worst part of Cascade Rapids, which are today mostly drowned by a dam at the top of Rideau Falls. Based on surveyor Samuel Clowes’ figures, these rapids had a fall of about 23 feet (7.0 m) over a distance of 1 mile (1.6 km). An 1827 map based on Clowes’ 1824 survey (RI-0145 - see Image Citations) shows these as “Cascade Rapids” at the head of Rideau Falls. In Clowes’ description, he stated: “At the head of the Cascades we are compelled to forsake the River altogether there being nothing but a succession of Rapids from thence to the Ottawa River.” On Jebb’s 1816 detailed Rideau River map (RI-0148a) he doesn’t appear to show the lower Cascade rapids, but does have two sets of rapids in this location, labelled as his “No. I” and “No. II” rapids, which would have likely been part of Clowes’ “Cascades.”

Voyageur protocol would have French and his party up at dawn, fresh and rested, putting in a few hours of paddling prior to stopping for breakfast (with stops every hour to enjoy a pipe of tobacco). But French was leading a survey party, so the first thing he did on the morning of October 3, 1783 (perhaps after breakfast) was to send a survey party into the forest to the southeast of his campsite. They reported good deep soil with the forest cover consisting of maple, elm and butternut trees.

On their return, the survey party split up with four men manning the two canoes and the remaining seven, in two parties, walking along both shorelines of the Rideau River. French noted maple, elm, birch and butternut trees as the main forest cover, with cedar and pine trees lining the banks of the Rideau River. Upstream of Cascade Rapids it was easy paddling up to Billings Rapids.

The appearance of the lands surrounding the river was obviously very different back in 1783 than it is today. The change started long before the founding of Bytown in 1826. The large pines that lined the river during French’s survey were among the first targets of early timbermen. These tall trees were coveted for a number of reasons. The best ones could be used as masts and spars for ships, the rest, with their straight grain and ease of cutting, were ideal for early sawmills. By 1826 there was a thriving timber trade in the region – mostly conducted during the winter when trees could more easily be hauled out of the bush to the river and then formed into rafts. It wasn’t an uncommon sight to see these rafts of timber being floated down the Rideau River on their way to the Ottawa River and from there, downstream to market in Montreal and Québec City. Much of this timber was loaded onto timber ships and sent to England.

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**Timber Rafts**

The small crude timber raft on the left would have been similar of those going down the pre-canal Rideau River on their way to a sawmill. A larger raft of sawn timber is shown on the Ottawa River, passing in front of McKay’s mills at Rideau Falls in 1851. Left: section from: “Lumberman’s Raft Descending a Rapid” [St. Maurice River] by Henry James Warre, 1842, Library and Archives Canada, Acc. No. 1965-76-64. Right: section from: “No. 1. Rideau Falls from the River 1 mile from Bytown. Octr 1851” by Alice Mary Fulford, Library and Archives Canada, Acc. No. 1970-188-2150, W.H. Coverdale Collection of Canadiana.
Billings’ Rapids

These are a small set of rapids located upstream of present day Billings Bridge. They are about 800 feet (250 m) in length with a drop of just a few feet (~1 m). They were named for Braddish Billings, the first settler in that area, who built a house (cabin) on the east side of the river. Billings moved to this area in about 1810. Billings’ cabin, shown on Jebb’s 1816 map, was built in the summer of 1813, just prior to Billings’ marriage to Lamira Dow in October of that year. On Jebb’s 1816 map (RI-0148a) these rapids are labelled as “No. III” rapids.

These shallow gentle rapids, still visible today, would have been easy to navigate for French and his party. In this section of his survey, French noted that “where the water is Rapid, the Shores are lined with Lime Stones.” Most of the “Lime Stones” at the location of rapids in the Ottawa area are exposures of Lindsay Formation (Ottawa Group) limestones, which are resistant to erosion. Rapids often develop based on the underlying geology, such as resistant rock units or fault zones that have tilted rock units. In both cases an erosion barrier is formed, creating rapids. In the case of Billings Rapids, the geological reason may be its location at the contact zone between more resistant Ottawa
Group limestones and softer limy shales of the Billings Formation.

**Stegman’s Rapids**

These are a set of rapids, about 1,500 feet (450 m) in length, located near the present day railway bridge over the Rideau River at Carleton University. The fall of these rapids is in the order of 4 feet (1.2 m). They were named after John Stegman, who had been granted land on the northwest side of the river in this area (part of the area now occupied by Carleton University). They show up on Jebb’s 1816 map (RI-0148a) as “Stegmans Rapid” and labelled as his “No. IV” rapids. They also show up on the unlabelled 1815 map (see page 82) as “Stegmans Fall – 4 feet.” No portage existed, the rapids were navigable by canoes, either by paddling or pulling them downstream and by pulling them upstream.

The rapids are formed by tilted units of Ottawa Group limestone that mark the trace of the Gloucester fault where it crosses the Rideau River.

**Hogs Back (Three Rock Rapids)**

French's party encountered a very different looking Hogs Back than we see today. The present falls (Prince of Wales Falls), are the result of water rushing through a man-made waste water channel, excavated during canal construction in the eastern bedrock bank of the original Rideau River. In 1783, the large head of water at Hogs Back and these falls didn’t exist, rather there was a relatively gentle set of rapids known in the pre-flooding era as Three Rock Rapids. These rapids were about 2,000 feet (600 m) in length with a fall of about 6 feet (1.8 m). No portage was noted in the early surveys indicating that the rapids were navigable by canoe. The Hogs Back dam is located on top of the head of the original Three Rock Rapids.

MacTaggart in 1827 described “a noted ridge of rocks, called the Hog’s Back, from the circumstances of raftsmen with their wares sticking on it in coming down the stream” (Welch, p. 13). These rapids show up on the unlabelled 1815 map (see page 82) as “3 Rock Rapid – 6 feet.” They show up on Jebb’s 1816 map (RI-0148a) as “Three Rock Rapid” and labelled as his “No. V” rapids. Jebb shows the fall from the head of Three Island Rapids (see description below) to the foot of Three Rock Rapids to be 14 feet. The unlabelled 1815 map (p. 82) shows a total of 16 feet for the same section.
Today the upper portions of the original rapids are not visible since they are covered by the Hogs Back dam. This point marks the spot where the Rideau Canal channel leading to the Ottawa Locks leaves the Rideau River (the Hogs Back Locks are the entrance to this channel). The canal dam raised the water 41 feet (12.5 metres) at this location, flooding a large stretch of the Rideau River, and putting a navigation depth of water into the man-made channel leading to the Ottawa Locks. The original rapids were much wider, with much less velocity and drop than the present day waste water channel flow. French’s only alludes to the presence of the original rapids in this section by stating that there was a “Rapid Current.”

The original rapids at this location were the result of the intersection of three major faults. This produced the jumble of tilted rock units we can see today at Prince of Wales Falls. They are a mixture of Ottawa Group and Rockcliffe Formation limestones, sandstones and shales.

At some point in this section of his survey, French sent survey parties inland on both side of the river to investigate the character of the land. These inland traverses show as straight lines on his map, each extending about 3 miles (5 km) perpendicular to the river. This is probably a reasonable representation; the survey parties would have headed directly away from the river, blazing a line as they traversed inland. They would have returned to their starting point following their route marked by the blazed trees.

Three Island Rapids

A short distance upstream from Three Rock Rapids, French would have encountered the more extensive Three Island Rapids. These rapids were about 3,300 feet (1,000 m) in length with a drop of 8 to 10 feet (2.4
to 3.0 m). They were named for the three small islands located near the foot of the rapids. That location is now the head of Mooneys Bay, the dam at Hogs Back has completely drowned these rapids. Similar to the Three Rock Rapids, no portage was noted in the early surveys, indicating that the rapids were navigable by canoe.

On an 1815 map (see page 82) they are shown as “3 Island Rapid – 10 feet.” They also show up on Jebb’s 1816 map (RI-0148a) as “Three Island Rapid” and labelled as his “No. VI” rapids. Jebb stated that the fall from the head of Three Island Rapids to the foot of Three Rock Rapids was 14 feet.

**Wilson’s Still Water and Shoals**

Above Three Island Rapids, French’s canoes entered a deeper water section interrupted by a few shoals. One set of these shoals show up on Jebb’s 1816 map (RI-0148a) labelled as his “No. VII” rapids. In the 1827 surveys, this area was referred to as Captain Wilson’s Stillwater. Captain Andrew Wilson was granted land downstream of this location and built a log cabin, which he called Ossian Hall. John MacTaggart referenced this section in 1827 as “Mr. Clowes here proposes, as will be seen in his Report, to run a dam of seven feet across the Rideau, so as to deepen the still-water; and I perfectly agree with my brother surveyor, that a dam at this place to deepen the still-water is requisite, as it is full of little shoals, over which a canoe can with difficulty be passed” (Welch, p. 14).

**Black Rapids**

At Black Rapids, French found a “Small Rapid River [Black Rapids Creek] from the North West forming a Convenient Mill place.” He made camp that evening at the mouth of this creek – the location of today’s Black Rapids Lock. Black Rapids were a set of shallow rapids approximately 3,000 feet (900 metres) long with a drop of about 4.5 feet (1.4 m).

Colonel By in his 1831 report stated that the original Black Rapids were 2,945 feet in length, descending in that distance 4 feet 6 inches, with a mean width of 275 feet (Price, p. 136). They are shown on Jebb’s 1816 map as his “No. 8” rapids. They appear to be much shorter on Jebb’s map than the length that By indicated. Jebb stated that the drop from the head of his “No. IX” rapids (Goodwood Rapids) to the foot of Black Rapids was 7 feet.

Colonel By built a lock and dam near the foot of these rapids. The flooding from the dam at Hogs Back, 4.1 miles (6.6 km) downstream, has raised the water about 1.5 feet (0.4 m) at the foot of the Black Rapids Lock. The Black Rapids Lock and dam have raised the water 8 to 10 feet (2.4 to 3.0 m), drowning the original rapids and flooding up to the foot of the locks at Long Island, 5.2 miles (8.3 km) upstream.

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**Log Cabins at Long Island, 1830**

An early log cabin was a “shanty,” a log cabin with a flat sloping roof made of split logs. Sawmills provided planks and shingles to build a more sophisticated log cabin with a peaked roof. “Settlement on Long Island on the Rideau River, Upper Canada” by James Pattison Cockburn, August 30, 1830, Library and Archives Canada, C-040048.

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Black Rapids: Joshua Jebb’s 1816 sketch (left) and John Burrows’ 1827 sketch (right)

Jebb’s sketch is a section from: “Plan of the Rideau River from its Mouth to the Head of Long Island” by Lt. J. Jebb, July 8, 1816, National Archives of Canada, NMC 59324 2/2. Burrows’ sketch is from the John Burrows’ Survey Diary, 1827, City of Ottawa Archives, C52887.
The Rideau Route in 1783

On October 4, 1783, French and his party continued upstream in deep, slow moving water to Goodwood Rapids, located just a bit downstream from the confluence with the Jock River. French again sent surveys parties inland to investigate the character of the land “and found the Lands the Same” as on the previous day.

Goodwood Rapids

French had no trouble navigating the Goodwood Rapids, which appear to have been a small set of shallows or rapids, about 300 feet (90 m) long, with a drop of about 2 feet (0.6 m). They are named for the “River Goodwood,” an early name of the Jock River. These rapids show up on Jebb’s 1816 map as his “No. IX” rapids. They are also shown on an 1827 copy of Clowes’ 1824 map, as “rapids” at his proposed lock 38. According to Clowes these were located 103 chains 61 links (6,800 feet/2,072 m) from the foot of Long Island.

Based on Clowes’ estimate of the total fall from these rapids to the foot of Black Rapids (7 feet/2.1 m), and Colonel By’s number for the fall of Black Rapids (4.5 feet/1.4 m)), these couldn’t have had more than about a 2 foot (0.6 m) drop.

French’s party passed by the mouth of the Jock River, which is noted as a small squiggle on his map, and a statement in his journal that “the Rideau receives another small river from the North West from thence we had a Rapid Current for five miles in the same direction.”

Wicked Rapids (Jock Rapids)

Paddling past the confluence of the Jock River with the Rideau River, French’s party would have encountered a small set of rapids, easily navigable by canoe. These rapids were about 300 feet (90 m) in length. The drop of the rapids is unknown, but it was likely in the order of a few feet (~1 m).

They show up on Jebb’s 1816 map as his “No. X” rapids with a current flow of 6 miles per hour.

These appear to be the rapids referenced by John Burrows as “About dark the canoe arrived and took us up to the foot of the Jock Rapids about 10 o’clock. Encamped for the night. The military officers encamped at the foot of Long Island” (Welch, p. 44).

The name Wicked Rapids is referenced in Colonel By’s 1830 report as “Clearing out Wicked Rapids - These rapids are situated between Black Rapids and Long Island, it was necessary to remove some Boulders and large Masses of Rock out of the Same” (Price, p. 145). It is assumed that these are the rapids that By was referring to and not Goodwood Rapids, although this is not certain.

Clowes referred to these rapids in proposing a dam at the head of Goodwood Rapids to raise the water by 7 feet 6 inches in order to “avoid cutting some rocky shoals in the bed of the River.” Those rocky shoals would have been located between Goodwood Rapids and the foot of Long Island.
Long Island

One of the geographic mysteries of French’s 1783 trip is that he makes no note of Long Island. At that time it was a prominent island, the geography of the northern end of the island quite different than what is seen today (see “Long Island - 1783 to 2007 Schematic” map). Paddling south, French would have first passed the outlet of Mud Creek, which formed Nicolls Island. This island was much larger in the pre-flooding era than it is today. It was formed by Mud Creek, which had its source at that time in the west channel of the Rideau River, taking part of the flow of that channel. Continuing south he would have come to the spot where the east and west channels of the Rideau River joined together, just above the location of the present day locks. There were three sets of rapids at Long Island, two in the west channel (Long Island Rapids and Little Falls Rapids) and one in the east channel (East Channel Rapids). It is presumed that French headed up the east channel, easily navigating the East Channel Rapids. He does note that, after passing by the Jock River, he had five miles of rapid current, which would have taken him through the Wicked Rapids and the East Channel Rapids. If he had gone by way of the west channel he would likely have had to portage twice around the two sets of rapids in that channel.

The geography has been altered due to the building of the dam and weir at Long Island. The weir, which in 1832 diverted water into a channel cut through Nicolls Island to Mud Creek, failed early on. Reconstruction in 1858 extended the tip of Long Island north to meet a new weir, diverting the entire flow of the west channel into Mud Creek. The portion of Mud Creek south of the weir has been re-routed and sections filled in. Today’s Nicolls Island is only the northern remnant of the original island.

The locks and dam at Long Island have flooded the Rideau River by 25 to 27 feet (7.6 to 8.2 m) at the head of the dam, completely inundating the East Channel Rapids and, together with Watson’s Mill dam (located in the west channel at Manotick), also drowning the Little Falls Rapids (White Horse Falls) located at the head of the west channel.
The Rideau Route in 1783

Long Island Rapids

French didn’t travel the west channel, but if he had he would have first encountered the Long Island Rapids located near the foot of Long Island. These appeared to have been about 3,300 feet (1,000 m) long, based on Jebb’s 1816 map where they are labelled as his “No. XI” rapids. Jebb stated that the fall of these rapids was 12 feet (3.7 m).

These rapids are shown on the unlabelled 1815 map (see page 82) as “Foot of Long Island, 8 feet.”

In Colonel By’s 1831 report, he stated that the rapids extending from the head to the foot of Long Island were 4,266 yards in length and dropped 23 feet, 11 inches over that distance (Price, p. 146). These figures
would have included Little Falls and Long Island rapids and the water in between. MacTaggart in his 1827 survey wrote “the rapids continue the whole length of the island, and from the still-water at the head to that at bottom, the difference is nearly twenty-four feet” (Welch, p. 30).

In Burrows’ May 1827 survey, he wrote, “Came up the north [east] channel. One canoe came up the south [west] channel, but lost about half an hour by taking that channel, in which they had to carry [portage] twice” (Welch, p. 18).

**Little Falls Rapids (White Horse Falls)**

These were the rapids/falls in the west channel at the head of Long Island. On Jebb’s map they show as being about 2,300 feet (700 m) long. The drop of these rapids was likely about 6 to 8 feet (1.8 to 2.4 m).

They are shown on Jebb’s 1816 map as his “No. XII” rapids, and described by Burrows in 1827, “The little falls half a mile below the head of the Island seems very swift – say eight miles an hour” (Welch, p. 18). These show up on the unlabelled 1815 map (see page 82) as “Little Falls, 6 feet.” MacTaggart in 1827 appears to refer to these as “White Horse Falls” (Welch, p. 30).

Burrows also said in 1827 that these falls required a portage. Burrows in his second 1827 survey stated “On the south [west] side of the island is two rapids and one shute” [chute = waterfalls] (Welch, p. 45).

**East Channel Rapids**

French proceeded up the east channel where he would have encountered the East Channel Rapids. These rapids were about 2,300 feet (700 metres) long, located about one-third the way up the east channel from the foot of Long Island. The drop of the rapids is unknown but was likely not very much. The aggregate drop of the entire East Channel would have been the same as the West Channel, about 18 to 20 feet (5.5 to 6.0 m), accounting for French’s journal note that he was paddling in a “rapid current.” Jebb shows these rapids on his 1816 map but didn’t label them with a rapids number. Clowes described these rapids as simply a few small shoals: “Thence we descend the East branch which by removing a few small shoals will be navigable a mile and a half further down; after which the water gradually descends upon a regular inclined plane composed of a smooth bed of Limestone rock to the foot of the Island.”

**Long Reach**

The 25 mile (40 km) long section between the foot of Long Island and Burritts Rapids is today known as the Long Reach, the longest stretch of the Rideau Canal Waterway uninterrupted by locks. The reason that there are no locks is because there were no rapids between the head of Long Island and the foot of Burritts Rapids. This section of the Rideau River was slow and wide with several shallow sections. These shallows were later drowned by the 25 to 27 feet (7.6 to 8.2 m) of flooding from the dam at the Long Island Locks.

It appears that French camped on or near the head of Long Island on the evening of October 4, 1783, proceeding the next morning “in still deep water.” Over 40 years later, on July 24, 1827, a survey party that included surveyor John Burrows also camped at the head of Long Island. Burrows wrote: “On our arrival, from cold, wet and hunger, found ourselves very uncomfortable.”
The Rideau Route in 1783

After changing clothes found a keen appetite and cooks tardy. Half an hour. Pork, biscuit, etc, and good fire made all right. Reposed under canvas for the night. Wednesday, [July 25, 1827] 6 o’clock found us cheerily singing on the silver stream” (Welch, p.45).

MacTaggart in 1827 stated “as in many places of the above sheet [the Long Reach] the natural water in the river, from bank to bank, will not average more in summer flood than two and three feet in depth” (Welch, p. 30). MacTaggart also observed that there were several places with fords (shallow water crossings) between Long Island and Hurd’s Shallows (below Burritts Rapids).

Burrows, in writing about this section in 1827, noted that “the width and beauty of the stream calls for wonder and commendation of each in the [survey] party” (Welch, p. 18). Clowes in describing this section stated “the River with the exception of a few small shoals forms a most beautiful and natural Canal.”

French described that the river as very broad and surrounded by low floodlands. He also made note of Kempville Creek as a “Considerable River” that entered from the east. He said that it connected to the South Nation River (via a portage) and that the Indians could travel from there to “Oswegatchie” [Ogdensburg]. It is presumed that his native guide told him this information. Excursions inland by members of his survey party showed the land to the south to have good soil while the land to the north had rich soil and timber, but was not very level.

Hurd’s Shallows

Near the location of Burritts Rapids Lock, French and his party paddled over a shallow section of the Rideau River, about 3 feet (0.9 m) deep. As he paddled by, he may have noticed the foot of a gully located in the east bank of the river. Later known as Oxford Snie (snie was a term used in the 1820s for a flood channel or gully), this was to be the location of the Burritts Rapids bypass canal and lock.

Colonel By took advantage of these cut-off river channels, many of which carried excess water during spring flooding, but were above normal water levels for most of the year. These snies provided locations where locks could be built “in the dry” (above water level), greatly facilitating their construction, since building a coffer dam and constantly pumping water out was slow and expensive. Once the locks were completed, dams raised the water levels to fill the snie to navigation level. A relatively undisturbed snie can be seen today at Davis Lock.

French didn’t take notice of Hurd’s Shallows, which were likely named after Ashael Hurd who owned Lot 21 in Concessions I and II of Marlborough Township. The shallows are referenced by MacTaggart in 1827 as “[the dam will create a] long sheet of still-water extending from the head of Long Island over Hurd’s Shallows to the bottom of Burrett’s [sic] Rapids” (Welch, p. 30). The location ties in with another reference that MacTaggart made, when he stated “[Burritts Rapids canal cut] commencing, as is usual, with snies at the head of the rapids [Burritts Rapids] and terminating at the still-water at the head of Hurd’s Shallows” (Welch, p. 31).

This likely is the start of the section that French refers when he states that they travelled in “about 5 miles in Rapid shallow water.” That would describe the area up to Cox’s and perhaps Nicholson’s rapids.

Burritt’s Rapids (also Suter’s Rapids and Docherty’s Ripple)

A canal cut bypasses this section of the original Rideau River, and so the two sets of rapids still exist, each set extending for about 1,200 feet (365 m) in length, with a total drop of about 5 feet (1.5 m). One set extends from a point about 1,000 feet (305 m) upstream of the present day bridge (County Rd. 3) to a
A couple of hundred feet (few dozen metres) below the bridge. A second set of rapids extends downstream from the present day weir, which was placed at the head of the rapids. Neither would have been a challenge for French and his party – there were no portages in this section.

MacTaggart in his 1827 survey diary wrote that: “By this means [a dam at the head of Burritt’s Rapids and a canal cut in Oxford Snie] Burrett’s [sic] Rapids are overcome, which are 2 feet 7½ inches; as well as Suter’s Rapids, 1 foot 7 ½ inches; and Docherty’s Ripple, of 8 inches; while Cox’s Still-Water is deepened, and also Cox’s Rapids of 3 feet 6 inches, sending back 5 feet 6 inches in depth of water of the dam proposed at Nicholson’s Rapid” (Welch, p. 31). It appears that MacTaggart named the rapids right at Burritts as different rapids (i.e. Burritt’s, Suter’s and Docherty’s). Cox’s Rapids were just below Nicholson’s Rapids. The names Suter and Docherty have not been located on any period maps so their exact geographic location is unknown, but they are thought to be part of the Burritts set of rapids.

The rapids were named after Colonel Stephen Burritt who settled here with his wife in 1793.

This air photo shows the island formed by the original channel of the Rideau River (top) and the flooding of “Oxford Snie,” which, with the aid of several embankments, forms the present day navigation channel (bottom). The lock is located at the foot of Oxford Snie on the far right in the photo. The canal dam, on the left in the photo and located near the head of the original Burritt’s Rapids, put a navigational depth of water into Oxford Snie. National Air Photo Library, Photo A24621-60, April 16, 1977.

**Cox’s Rapids**

French would have next paddled over Cox’s Rapids, which were the set of rapids shown in a John Burrows’ survey sketch near “Mr. Coxes’ New Home.” The location is a little ways upstream of the outflow of Cox’s Creek (now called Rideau Creek), which is near the boundary between the townships of Montague and Marlborough. Cox’s Rapids fell about 3.5 feet (1.1 m).

Cox’s Rapids were close to the location where the first known settler on the Rideau River built his home. Roger Stevens arrived here in 1789 and in 1790 he built a cabin and cleared land on Lot 1 of Montague Township and the adjoining Lot 30 of Marlborough Township on the north shore of the Rideau River. This is also where Stephen Burritt first came to the Rideau in about 1793: “Stephen went out to the Rideau on an exploring expedition,”

“Near Nicholson’s Rapids” by James Pattison Cockburn, August 16, 1830, Library and Archives Canada, C-012513.
striking the river at Cox’ Bay, where he constructed a raft, and floated down to Burritt’s Rapids, where he chose a spot for settlement, in the Township of Marlborough” (Leavitt, p. 96).

The 7 to 9 feet (2.1 to 2.7 m) of flooding from the dam located at the head of Burritts Rapids has drowned these rapids.

Nicholson’s Rapids

It is uncertain from French’s report, but Nicholson’s Rapids may have been his “a Fall sufficient for a Mill” (a case could also be made for this referring to Clowes’ Quarry Rapids). Nicholson’s Rapids were an extensive set of rapids, almost 3,000 feet (915 m) in length with a drop of almost 14.5 feet (4.4 m). They were named after James Nicholson, a loyalist who had served with Jessup’s Rangers in the American Revolution, and who was one of the early settlers into this area.

Colonel By, in his 1831 report, stated that Nicholson’s Rapids were 990 yards in length, with a drop of 14 feet 4⅜ inches over that distance (Price, p. 162).

Canal construction altered the geography of this area. The two locks are located in a 3,360 foot (1,024 m) long canal cut dug into the east bank of the Rideau River. The dam at Burritts Rapids raised the water at the foot of Lower Nicholsons Lock by about 6.5 to 7.5 feet (2.0 to 2.3 m).

French camped here for the night on the east side of the river, perhaps at the head of the rapids (near where the upstream end of the canal cut into Nicholsons is now located). If this is French’s suggested mill location, then his thoughts about the water power in this location came true in about 1860. That was when Silas and Rufus Andrews built a sawmill and shingle mill, with associated mill dam, in this location. They added a grist (flour) mill in 1861. The grist mill was demolished in 1917. The saw mill, out of use by 1925, was destroyed by spring flooding in 1930. All that remains now are foundations of the old dam and mills and a small community of a few houses that still carries the name of Andrewsville.

Clowes’ Quarry Rapids (Rapid Plat)

On the morning of October 6, 1783, French and his party headed out again, going upstream “in Rapid Water,” which is likely a reference to the Clowes’ Quarry...
The Rideau Route in 1783

Rapids. These were 3,330 feet (1,015 m) in length, dropping 11 feet, 5 ¼ inches (3.5 m) over that distance (Price, p. 170).

Just prior to the canal being built, James Clowes had built a cabin in this location and opened up a limestone quarry. The original name for the site was “Clowes’ Quarry.” James Clowes’ origins are uncertain but it is possible that he was surveyor Samuel Clowes’ son, who had accompanied Samuel on his 1823/24 surveys of the Rideau.

Jebb’s 1816 maps (RI-0147b, RI-0154b-1) show one set of rapids in this area, the “Rapid Plat.” An undated early canal map (c. 1827 – RI-0146b) also shows this as “Rapid plat” and it is labelled as lock number 18, which was the Clowes’ Quarry lock in the original plan of the canal.

Merrick’s Rapids

French was about to encounter the second portage on his route (the first being at Rideau Falls), a 400 yard (364 m) portage around Great Falls, as the 14 foot (4.3 m) waterfall portion of Merrick’s Rapids was known. The rapids extended over a distance of 3,900 feet (1,190 m), with a cumulative drop of 26 to 28 feet (7.9 to 8.5 m). In describing this section French stated: “meeting with a considerable Fall and a Carrying Place of 400 yards.”

In his 1827 survey, MacTaggart referred to “Merrick’s Falls,” stating that “we have to contend with a fall of twenty-seven feet ten inches; that is; from Macrea’s still-water to the still-water below Merrick’s Falls.”

MacTaggart further observed that the fall from the head of Merrick’s mill pond to the still water below was 24 feet 10 inches, and that the drop from Macrea’s Still Water to the mill pond was 3 feet six inches. According to John Burrows, McCrea lived about three-quarters of a mile above Merrick’s Mills. This is likely Lot 3, Concession I of Montague Township, which had been granted to Thomas McCray [sic].

In Colonel By’s 1831 report, he stated “Merricks Rapids … are 1300 yards in length, descend in that distance 25.5 feet, and depth of water over the site where it was proposed to construct a Dam 1 1/6 feet” (Price, p. 177-178).

The falls are named after William Merrick. Although the first mill built on the site of Great Falls was most likely built by Roger Stevens, it was Merrick who first settled at this location sometime after 1793. The historical records regarding specific settlement dates are conflicting. As noted in the Cox’s Rapids section, Roger Stevens built a cabin downstream from this location in 1790. At some point after that he built a sawmill at Great Falls, possibly

Nicholsons and Clowes 1831

A map showing the two canal dams (Clowes and Nicholsons) and the relationship of the Nicholsons’ canal cut with the Rideau River. “Survey of Nicholsons Rapids and Clows Quarry” by John By, January 22, 1831, Library and Archives Canada, NMC 19503.

Merrick’s Mills in 1827

John Burrows’ Survey Diary, 1827, City of Ottawa Archives, Image 21320.
in partnership with William Merrick and Solomon Jones. Roger Stevens drowned in the fall of 1793, apparently having sold his sawmill and property (or his percentage interest in them) to William Merrick prior to his death. Merrick was still a resident of Elizabethtown in 1793 and his family moved to the Merrickville area sometime after that. Merrick’s claim that he had purchased Stevens’ sawmill in the summer of 1793 (prior to Stevens’ death) was disputed in the courts, and it was not until 1810 that William Merrick received full title to the lands that underlie present day Merrickville.

French said that water above Merrick’s Rapids was “still for 5 miles in the same direction with Drowned Swamp about 50 Rods Broad on each side the River.” This is the area referred to in later surveys as McCrea’s Still Water. MacTaggart said that between McCrea’s Still Water and Maitland’s Rapids the river was deep, but filled with grassy sedgy islands and that other sections of the river, north of Maitland’s Rapids, had “various floating marshets ... which must be shoved out, and the banks and bottom freed from rotten trees, and other dissolving vegetable matter” (Welch, p. 33).

By the time later surveys were conducted, a portion of this area had been flooded by Merrick’s mill dam (see map “Merrickville - 1783 to 2007 Schematic”). The canal dam was originally built across the river at the upstream end of the canal cut (near the head of the rapids). In 1912 the dam was relocated downstream, across from the upper lock, close to where Merrick had his original mill dam. The canal dam has raised the water at Merrickville by 4.5 to 8 feet (1.4 to 2.4 m). This has put about 3.5 feet of water (1.1 m) into the foot of Kilmarnock Lock (Maitland’s Rapids).

**Irish Creek**

French continued his journey upstream, passing, without note, one of the more interesting stories in the history of the Rideau Canal, that of Irish Creek. When Jebb did his survey in 1816, he took a great interest in Irish Creek. He saw it as a way to shorten the length of the navigation route connecting the Rideau River with Kingston, by bypassing the Rideau lakes. His plan was to make Irish Creek navigable up to Irish Lake and then continue navigation down Plum Hollow Creek to White Fish Lake [Lower Beverley Lake] and then up White Fish Creek [Morton Creek] to connect back with the Rideau Route [Morton
Bay and Whitefish Lake], and from there, south to Kingston. He planned to overcome the problem that Irish Creek and Plum Hollow Creek were not connected by water (the route crosses a watershed divide), by recommending a 5 mile (8 km) long overland rail system to connect them. In his 1823/24 surveys, Clowes shot down the Irish Creek proposal, noting that it was no lower in elevation than the Rideau Lakes route (in fact it was a bit higher), so there was no saving in the number of required locks, and it would have required a 10 mile (16 km) long feeder canal from Rideau Lake to supply sufficient water for navigation. By the time Colonel By arrived on the scene, the case for an Irish Creek route was dead; it doesn’t appear that By ever considered it as a serious option.

**Maitland’s Rapids (Dow’s Rapids, Kilmarnock)**

As French continued his journey he found the river to be very crooked and rapid. This would describe his approach to and through Maitland’s Rapids. The rapids at this location, later known as Kilmarnock, were short, about 550 feet (170 m) long, with a drop of only a few feet (~ 1 m).

Colonel By stated in his 1831 report that “Maitlands Rapids … are 186 yards in length, descend in that distance 2 ft. 2-1/2 in., and depth of water over the site where it was proposed to construct at Dam 1 foot” (Price, p. 289).

These show up on Jebb’s 1816 map as “Dows Rapid” (RI-0147b). This may be in reference to Samuel Dow, the first blacksmith in the area, who had settled on the Rideau River about five miles (8 km) above

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**Beaver Dam on Irish Creek**

Beaver dams create a navigation hazard on Irish Creek today. It’s entirely possible that Lt. Jebb had to “hump” his canoes over such dams in 1816. Photo by Ken W. Watson, 2006.

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**Maitland’s Rapids in 1829 and 1977 (looking northeast)**

This drawing on the left shows Maitland’s Rapids and the planned canal cut to bypass them. The air photo shows the bypass canal, lock and dam as they now appear. The lock ended up with the lowest lift of any lock on the Rideau (2 feet, 3 inches / 0.7 m) due to problems trying to excavate the cut in boulder-strewn soft mud. By also did away with a breastwork (upper foundation), which speeded up construction. Sketch: “Maitlands Rapids, Rideau Canal” by E.C. Frome & John By, 1828, National Archives of Canada, NMC 12892 42/80. Air Photo: National Air Photo Collection, A24620-10, 1977.
Merrick’s Mills (Turner, p. 18). This would have placed him near Kilmarnock. Samuel Dow died in 1805, but perhaps the rapids were still known by that name when Jebb passed through in 1816. James Maitland, a former sergeant in the 90th Regiment, was granted land in the area of the rapids (Lot 22, Conc. A, Montague Township) and settled there, likely in about 1817.

The name Kilmarnock didn’t come into use until the latter half of the nineteenth century. It appears by that name on a circa 1880 county atlas map.

French camped for the night near this location. The next morning (October 7, 1783), after sending survey parties inland and discovering the land and timber to be “of equal Goodness to any seen before,” they continued upstream.

The canal dam at Kilmarnock has flooded the Rideau River by about 5 to 6 feet (1.5 to 1.8 m) in that location, placing about 2 feet (0.6 m) of water at the foot of Edmonds Lock.

**Edmonds’ Rapids (Edmunds’ Rapids)**

French doesn’t appear to make mention of Edmonds’ Rapids, which were a set of gentle rapids, extending about two miles (3 km) with an overall drop of about 12 feet (3.7 m). The reported distance of these rapids varies; MacTaggart stated that they were about three miles in length (5,280 yards), while Colonel By stated that they were 823 yards in length.

In his 1831 report, Colonel By stated “Edmund’s Rapids … are 823 yards in length, descent in that distance 12-1/4 feet, and depth of water over the site where it was proposed to construct a Dam one foot” (Price, p. 198).

MacTaggart described them as “consisting of a chain of small ripples, not worthy the name of rapids, for about three miles in length; yet small as they are, their aggregate amount is considerable (being 12 feet); and as the banks are extremely low, two dams and two locks are required” (Welch, p. 34).

John Burrows wrote that “the first two miles from

**Edmonds’ Rapids in 1835 (left) and 1830 (right)**

The map on the right shows the proposed lock, canal cut, weir and overflow dam. The area above this is Edmond’s Rapids, the original channel of the Rideau River is on the left side. The low land to the right of the river was flooded by the dam. This is evident in the 1835 painting which shows a large sheet of “slackwater” above the lock and dam. Painting: “No. 12, Edmunds Rapids & Lock” by John Burrows, c.1835, Library and Archives Canada, C-092890. Map: “Copy Survey of the Works of the Rideau Canal and adjacent Ground Edmonds Rapids” by John By, January 11, 1830, Library and Archives Canada, NMC 12892 44/80.
Edmond's is a succession of rapids and swift water with a few places of still water” (Welch, p. 49).

The canal dam at Edmonds has flooded the Rideau River by 5.5 to 10 feet (1.7 to 3.0 m) at the head of the dam, creating about 2.5 to 5.0 feet (0.8 to 1.5 m) of flooding at the foot of Old Sly's Locks.

Sly's Rapids (Old Sly's Rapids)

As French continued his journey he would have encountered Sly's Rapids which were 2,160 feet (658 m) in length with a drop of 15 feet (4.6 m). He doesn't appear to make mention of them, unless he is including them in his reference to Smiths Falls (see below). No portage was required.

In Colonel By's 1831 report, he stated: “Slys Rapids ... are 720 yards in length, descent in that distance 15-1/2 feet, and 1-1/2 foot depth of water over the site where it was proposed to construct a Dam” (Price, p. 205).

The canal dam at Old Sly’s has flooded the Rideau River in that location by 5 feet (1.5 m) and flooded about 4.5 feet (1.4 m) at the foot of the Smiths Falls Combined Lock.

Smith's Falls

French does make specific mention of Smith's Falls stating "we met with Eight Falls in the Distance of a mile, from 4 to 10 Feet each, and the River Divided by several Rocks and Islands forming very convenient places for Mills.” The falls and rapids in this location extended over a distance of 3,600 feet (1,100 m) with a combined drop of about 34 feet (10.4 m). Neither French nor Jebb mention the need of a portage although later surveyors do make this note. In 1827 John Burrows wrote

"My canoe, portage, Smiths Falls, Rideau” by James Pattison Cockburn, c. 1830, Library and Archives Canada, C-012603.
“at these falls we carried the baggage and canoes three quarters of a mile” (Welch, p. 21). It’s possible that mill dams created the need for a portage. The first such mill dam was built in 1823 by Thomas Smyth (hence the original “Smyth’s Falls”). He lost control in 1825 (mortgage default) and it eventually ended up in the hands of Abel Russell Ward, who had a mill in operation by the time of the 1827 surveys (which mention a portage).

MacTaggart stated “to the minds of people accustomed to canalling business, these Falls become as appalling an object as any that is to be met with: they fall over beds of hard bastard marble rock, 36 feet in less than one quarter of a mile. At this place, there are numbers of islands formed by snies winding round the falls” (Welch p. 35). In Colonel By’s 1830 report, he stated “On taking fresh levels … the total rise of 33-1/2 feet …” (Price, p. 216).

The geography at this location has changed quite a bit since French passed through in 1783 (see “Smiths Falls - 1783 to 2007 Schematic”). Both the Detached Lock and the Combined Locks were built in
The Rideau Route in 1783

canal cuts. The original Rideau River flowed around what is now Lock Island (adjacent to Detached Lock) and then around some islands to where the canal dam is located today, mostly buried, in the parking lot by the Smiths Falls water tower (which stands above a filled-in section of the original Rideau River). The river then swung around to meet the current water that rushes past the Rideau Canal Museum and Parks Canada offices (the Wood’s Mill Complex). The current water flow is though a waste water weir,

Burying the Past

Geographic changes to the Rideau continue today, mostly due to urban development. Both the Smiths Falls and Old Slys dams have been almost completely buried, the areas around them backfilled. In the top photo, the curved arch below the water tower is the top of the Smiths Falls dam. The lower photo was taken facing the water tower, showing that only the top few feet of the 23 foot (7 m) high dam remain above ground.

The dam at Smiths Falls was not one of the Rideau’s shining examples. In the lower photo, the small vertically stacked stones can be seen. A traveller in 1830 wrote: “The Dam is of very inferior workmanship, both as to the form and qualities of the materials. The stones are far too light for such a work, and very indifferently put together. It may stand but the fact is questionable.” The dam did it’s job until 1959 when a retaining wall was constructed in front of the dam, and the area filled in. Today, the area in the shadow of the water tower in the upper photo is a parking lot, the top of the dam simply a retaining wall.

the channel of this flow being an old flood channel known as “Hornet’s Snie.” This snie was the original proposed location for the locks, but due to broken ground and flooding levels, plans were changed and the locks were placed in a canal cut to the south of Hornet’s Snie. In the early 1970s, a new Combined Lock, designed in conjunction with a new fixed level bridge to accommodate increased road traffic, was constructed to the north of the original Smiths Falls Combined Locks, which are no longer in use.

The dam at Smiths Falls Combined Locks has flooded the Rideau River between it and the Smiths Falls Detached Lock by about 5.5 feet (1.7 metres). The dam at Lock Island, near Smiths Falls Detached Lock, has flooded the Rideau River by 4 to 5 feet (1.2 to 1.5 m), putting an additional 3 to 4 feet (0.9 to 1.2 m) of water at the foot of the lock at Poonamalie.

First Rapids (Poonamalie)

French doesn’t make note of the rapids located near the head of the Rideau River. Originally known as First Rapids, these were a short set of shallow rapids, about 700 feet (210 m) long, with a drop of about 8.5 feet (2.6 m). The waste water weir at Poonamalie is built on the head of these rapids.

The rapids were described by Burrows as: “The last rapid was very shallow, on a medium one foot deep. The passage for canoes and line of canal is on the right hand of the island” (Welch, p. 22).

MacTaggart described these as: “These are a chain of small rapids, where the river banks are low and swampy, where the bed of the river is the above mentioned rock, and where, in short, we can neither dam, deepen, nor yet cut through the country. … The Rideau here is 260 feet wide, running shallow over a smooth bed of limestone, to the depth of six inches” (Welch, p. 36).

In Colonel By’s 1831 report, he stated “First Rapids … are 240 yards in length, descent in that distance 8 feet, 5 inches, and depth of water over the site where it was proposed to construct a Dam 1 foot 3 inches” (Price, p. 229).

Today the lock, located in an artificial canal cut on the south side of the original Rideau River, is known as Poonamalie, a name dating back to when the lock was constructed. Poonamalie (originally spelled “Poonamallee”) comes from Poovirundavalli, a town near Chennai (Madras) in India, which became Poonthamalli and was anglicized to Poonamallee. It was a garrison town for the British army and speculation (Legget) is that the cedar-lined banks of the Rideau River reminded one of the British military men of a previous posting in India. One of the earliest references to that name was by Reverend William Bell, who wrote in February, 1830, “The road in the woods was narrow, and much encumbered both with horse and ox teams drawing stones for the locks on the canal. Both at Poona Mallee and Smith’s Falls, I saw great quantities of
cut stones prepared for building the locks, and numerous mechanics and labourers employed (Skelton, p. 292). It is also referenced in a diary, written in February 1830, as “From the place [Newboro] we proceeded by an excellent road to Poonamallee” (in “Yankies and Loyalists” by Edwin Welch, p. 21).

Another three miles (5 km) of paddling, with the river slowly getting wider, brought French into view of Rideau Lake (now Lower Rideau Lake). This portion of French’s journey is now completely flooded but today’s canal navigation way marks the route of the drowned river channel. The area just north of Sand Island marks the entry into the original Rideau Lake (see Lower Rideau Lake, Pre-Flooding & Present Day Lake Outline map). On the evening of October 7, 1783, French made camp on the north shore, perhaps near the confluence of the Tay River (which he didn’t note) with Rideau Lake.

Tay River (Pike River) – Fishing Falls, M’Vittie’s Rapids, Upper Rapids

Leaving Lt. French camped near the mouth of the Tay River, we’ll take a quick 1783 journey up the Tay. This river, originally called the Pike River, is almost 70 miles (113 km) long. It was renamed the Tay after the settlement of Perth was established in 1816, 10 miles (16 km) upstream on the river. There were several sets of rapids on the Tay between Perth and its confluence with the foot (northern end) of Rideau Lake [Lower Rideau Lake].

The first set of rapids, called Fishing Falls, was about one and half miles in length (2,400 m), with a vertical descent of 19 feet (5.8 m). Less than a mile above Fishing Falls were M’Vittie’s Rapids that extended for almost a mile (1,600 m), with a drop of 7 feet (2.1 m) over that distance, to the foot of M’Vittie’s Still Water. At the head of M’Vittie’s Still Water, located just above the confluence with Jebb Creek, were the Upper Rapids, a few hundred feet in length (~100 m) with a drop of about 1.5 feet (0.4 m). The Tay, downstream of Perth and outside of the rapids, averaged about 3 feet (0.9 m) in depth. The banks were swampy and the river was choked with sedge-grass, bulrushes, and wild rice. The river near Perth flowed over flat ledges of limestone.

“Plan of part of the Rideau Lake and River from Oliver’s Ferry to the first Rapids and of the River Tay from Perth” by Capt. J. Victor, R.E., March 23, 1831, National Archives of Canada, NMC 21969.
John MacTaggart described the Tay as follows: “Having now climbed up by a great succession of dams and locks to the noble summit pond of the Rideau Lake, I digress a little, and give an account of a survey made of the Perth River. About five miles from Oliver's Ferry, the mouth of the Tay opens into the Rideau: for two miles up, it may be easily made navigable, requiring only a little mud scraping, and rushy matters taken out of the way. After this distance we come to the Fishing Falls, so named by the inhabitants from the fishing-nets placed there. These rapids are about a mile and a half in length, with limestone horizontal rock, but shelving, and fall about 19 feet throughout the rapids. The banks of the river are generally low. At one place, however, about 200 yards below, where the waters make a sudden fall of 4 feet at once, a dam of 12 feet and lock may be obtained; the dam 140 feet long, sufficient to lull the rapids above. The remainder of the rapids below can only be overcome either by deepening the channel, or quitting the river, and digging about half a mile through loamy wilderness. These rapids or Fishing Falls surmounted, we come to M’Vittie’s still-water, of three feet in depth, for two miles, and passing it to the Upper Rapids, these are only 550 yards in length, with a fall of four feet to overcome, when the river must be left again, and the country cut through for the above distance, putting in the lock where it falls into the still-waters below. We next gained the Perth stillwater, a sheet of about five miles long, average depth three feet, banks swampy, and river choked with sedge-grass, bulrush, and wild rice, which being cleared away, a navigation of three feet in depth is open to Perth; to go one foot deeper would require much money and labour” (MacTaggart, pp. 140-142).

A private canal, with five wooden locks, was built on the Tay River between 1830 and 1834, linking Perth with the Rideau Canal. This first Tay Canal fell into disrepair and was shut down in 1865. A canal cut from Beveridges Bay of Lower Rideau Lake to M’Vittie’s Still Water on the Tay River, together with two locks with the same specifications as the Rideau locks, were built between 1885 and 1887. Some dredging of the Tay River and improvements to the basin in Perth completed this second Tay Canal in 1891.

Rideau Lake (Big Rideau Lake, Lower Rideau Lake, Upper Rideau Lake)

French and his party started off on the morning of October 8, 1783 into Rideau Lake, which at that time was one lake stretching from the foot of Lower Rideau Lake to Westport. It was an open lake except for the very narrow and shallow section at Upper Narrows (now Narrows Lockstation). Archaeological studies indicate continuous human use of the lake dating back at least 8,000 years. Two radiocarbon dates of about 6,000 BC from the Wyght archaeological site, located on the shoreline of Lower Rideau Lake, provide the earliest confirmed evidence.

Since Big and Lower Rideau lakes were only flooded by about 6 feet (1.8 m) they look today much as the original Rideau Lake did in the pre-flooding era, except at the outlet, which was shallow in the pre-flooding era, and thus sustained extensive shoreline alteration with the flooding caused by the dam and lock
at Poonamalie (see map). The area above Upper Narrows, now Upper Rideau Lake, was flooded by about 8.4 feet (2.6 m) with the building of Narrows Lock. This caused some shoreline alteration, particularly on the topographically low south side of the lake.

Pre-flooding and present day maps have been constructed for Upper Rideau Lake and Lower Rideau Lake (and are included in this book) since these lakes show the greatest changes from canal dam flooding. Such a map for Big Rideau Lake has not been included since the shoreline alterations are not as great and at the scale of presentation possible in this book, would be next to invisible. With the exception of shallow back bays, the outline of Big Rideau Lake would have looked similar in 1783 to what it is today.

Burrows’ 1827 description of the entrance into Rideau Lake was: “The entrance into the lake is indescribably beautiful. Its surface as smooth as a mirror. The banks delightfully dispersed with opening buds of spring reflected on the surface of the river. In front on a projected point a beautiful appearance of a dwelling house. The whole enlivened and softened by the rising sun” (Welch, p. 22).

French says he paddled about three miles into the lake and then made a land survey to the southeast. From his maps it appears he traversed from present day Miller’s Bay where he found the “soil and timber good.”

**First Narrows (Oliver’s Ferry, Rideau Ferry)**

French’s journal and map make no note of First Narrows. Historic descriptions indicate that the channel in this area was about 450 feet (137 m) wide, which is close to the present day width of 500 feet (152 m).

Burrows wrote “This is called the first narrows. Six and a half chains wide [430 feet]. The water is sixteen feet deep” (Welch, p. 23).

MacTaggart described it as “Rideau Lake at this place, is 464 feet wide and 35 deep, and rises in spring 3 ½ feet” (Welch, p. 38).

Colonel By observed that “The obstructions at Oliver’s Ferry are in the form of large boulders and rock in the channel” (Price, p. 237).

![First Narrows (looking south) /Oliver’s Ferry (looking east)](image)

Two views of First Narrows, today known as Rideau Ferry. In 1816, John Oliver established a ferry service, connecting the paths leading from Brockville and the newly formed community of Perth. The ferry operated under various owners until a swing bridge was erected in 1874. This was replaced by the present day concrete bridge in 1968. Left: “Oliver’s Ferry” dated May 5, 1828, Scottish Records Office. Right: “Oliver’s Ferry, Rideau Lake” by Thomas Burrowes, 1834, Archives of Ontario, C 1-0-0-0-25.

**Second Narrows (Rocky Narrows)**

It appears from his map that just past today’s Rocky Narrows, perhaps near the entrance to Hoggs Bay, French sent a survey party inland to the west. They found “that the lands were good and clear of stones and timbered as usual.” This section of the lake would have looked much the same in 1783 as it does today, a narrow deep water (depths over 130 feet / 40 m) channel with prominent rock outcrops on either
The Rideau Route in 1783

It is at this point on his route that French crossed into the geological terrane of the Frontenac Axis, with exposures of old Precambrian rocks on both sides of the lake. The rock exposures on the northwestern shore of Second Narrows are metamorphosed granitic rocks, those forming the cliffs on the southeastern shore are exposures of crystalline limestone. As he continued up the lake, he would have noticed a contrast between the flat lying younger sedimentary rocks that still made up portions of the southeastern side of the lake and the more extreme topography on the western side of the lake, particularly as he approached Upper Narrows, where large granitic (monzonite) plutons form high topographic relief.

The northwestern shore of Big and Upper Rideau lakes marks the trace of the Rideau Lake Fault.

Upper Narrows (Narrows, The Narrows)

Arriving at Upper Narrows, French made camp on the south shore and made an inland traverse to the south, finding the land the same as before. Upper Narrows was a narrow spit of land extending from the north shore to within 100 to 150 feet (30 to 46 m) of the south shore. The water depth was less than 2 feet (0.6 m) and it was used as a ford on a trail to Perth.

Clowes described this as a spot “where the navigation is obstructed by a bed of rock 5 ½ chains [360 ft.] in breadth.”

MacTaggart described the Narrows as “Here the lake contracts to about 100 feet in width and becomes very shallow” (Welch, p. 38).

Burrows described it as, “At the upper narrows there is only 1 foot of water, and probably these narrows will be nearly dry in the Fall. It does not appear more than 150 feet wide, though Mr. Clows’ report states it at 363 feet. The bottom is rock and the distances necessary to excavated about 1000 feet” (Welch, pp. 49-50).


French wasn’t specifically looking for a canal route, but even if he was, he couldn’t have imagined that a creative engineer, some 45 years in the future, would come up with a plan to build a lock in the middle of a lake.
as a solution to a major problem involving money, disease, and geology. Colonel By found this spit of land ready made as the foundation for a lock and dam, excavating the lock into the bedrock of the spit and placing the waste weir in the original channel. Why he did this is explained in the next section. This created Upper Rideau Lake, which, in 1832 was 5 feet (1.5 m) higher than the already 3 to 5 foot (0.9 to 1.5 m) raised waters of Rideau Lake (from the dam at Poonamalie). The most extensive shoreline alteration from this flooding was in the area of McNallys Bay, and this was exactly Colonel By’s intention. Since 1832, Big Rideau has risen another couple of feet (from rebuilding the dam at Poonamalie) and Upper Rideau has remained essentially unchanged.

Back in 1783, on the morning of October 9, French and his party proceeded up the lake to the portage at the Isthmus.
The Isthmus in the pre-flooding era was the watershed divide between the Rideau River drainage basin and the Gananoque River drainage basin (see Map 3a). It was about 5,200 feet (1,582 m) wide in a straight line between the shoreline of Rideau Lake and that of Mud Lake [Newboro Lake]. The highest elevation on the Isthmus was about 44 feet (13.4 m) above the level of Rideau Lake. The pre-flooding level of Rideau Lake was about 5 to 7 feet (1.5 to 2.1 m) higher in elevation than Mud Lake. The Rideau Lake side of the Isthmus was swampy ground up to the ridge divide. The Mud Lake side was a “beaver meadow.” A portage, approximately 8,000 feet (2,439 m) in length, led from Rideau Lake to Mud Lake.

There was no pre-canal settlement at present day Newboro, although individual settlers had cleared land for small farms along the shores of Rideau Lake. The settlement that did grow after the start of canal construction was called New Borough. In 1836, when a post office was built there, the name was shortened to Newboro’ (the trailing apostrophe was later dropped).

On his first 1827 survey, Burrows stated “Our route [from Upper Narrows] turns to the left. The direct line by the right of Little Island leads to the longest extent of the Rideau Lake. Here is several clearings on

The Canal Cut at the Isthmus - in 1925 and 1830 (looking east)
The top photo, taken in 1925, has been scaled to match the 1830 drawing of the Isthmus canal cut and construction camp. The buildings on the knoll to the west of the loop in the cut were the main camp, containing offices, the cookhouse, carpenters shop, and both military and civilian barracks. The buildings strung out along the east side include married quarters for Sappers and Miners. The building on the far left (close to the shore of Rideau Lake) was the residence of Captain Pennel Cole, the Royal Engineer placed in charge of the works at the Isthmus after the contractors quit in 1828. In 1830 there were 2 Royal Engineers, 1 clerk, 59 Royal Sappers and Miners (7th Company) and 250 workers (tradesmen and labourers) on the site. This area was one of the hardest hit by malaria and the Royal Sappers and Miners were one of the most affected groups. Of the 162 Sappers and Miners, 16 died of malaria and 6 from other causes. Likely more than half that number died at the Isthmus. They are buried in the “Old Presbyterian Cemetery” at Newboro, their original wood and field stone marked graves now lost to time. Photo: National Air Photo Library, 1925, HA66-31. Drawing: “Plan of the Isthmus Between Rideau and Mud-Lakes” by P. Cole & John By, dated January 22, 1830 and March 18, 1830, National Archives of Canada, NMC 12892 54/80.
the banks and, by the curling smoke, dwelling houses. We turn to the left, opposite a small clearing and house, to the Portage. Landed half past one o'clock; arrived on the banks of Mud Lake half past two o'clock. The portage is about two miles in length. The length of cutting on the line laid out by Mr. Clowes is 1 Mile, 22 chains” (Welch, p. 24).

MacTaggart described it as: “Between Mud Lake and Rideau Lake, there is an isthmus of one mile and a quarter; a swamp runs from the north landing-place: half-way across, where it terminates, it is about 30 feet above level. This swamp, which is an inclined plane, will have an average cutting of 2 feet. A small ridge, 130 yards wide, requires 2 feet cutting; the line then falls into a beaver meadow, where there will be 14 feet cutting, and then into Mud Lake.” (Welch, p. 38).

In Colonel By’s 1831 report, he stated “Isthmus Rideau Lake ... is 1,760 yards in width, in a direct Line from the Entrance into the Canal from the Rideau Lake to the Entrance into Mud Lake,” (Price, p. 250).

When the Rideau Canal was constructed, the flooding of Upper Rideau and Newboro lakes decreased the distance across the Isthmus by about 1,200 feet (365 m) on the Upper Rideau Lake side and by about 100 feet (30 m) on the Newboro Lake side, reducing the direct line width of the Isthmus to about 3,900 feet (1,189 m).

The creation of a separate Upper Rideau Lake by the construction of a dam and lock at Upper Narrows has its roots in the geology of the Isthmus. In Colonel By’s original canal design, he was simply going to put a canal cut through the Isthmus, joining Rideau Lake with Mud (Newboro) Lake. Two locks and dams at Chaffeys (see map in Chaffey’s Rapids section), and one lock and a dam at Poonamalie would contain these waters. This would have created a very large summit reservoir, able to supply water to both the Rideau and the Cataraqui sections of the canal. But early on, By found that he couldn’t raise as much water as he wanted to at Chaffeys, so he moved one of those locks to Newboro.

As excavation started for Newboro Lock and the canal cut, they ran into unexpected bedrock. Surveys in 1827 had indicated that the cut would mostly be gravel excavation, but now, in 1828, extremely hard bedrock was encountered. Not only that, the rock was fractured and the cut kept filling with water. The labourers excavating the cut had hit a rock unit known as migmatite (see “Simplified Geology of the Westport Map Area” map). Migmatite is a cross between an igneous rock and a metamorphic rock, the product of high temperature melting. It is often tightly folded, and can be, as is the case at the Isthmus, very hard. This was 50 years before dynamite was invented; to get through this rock required lots of pickaxe and crowbar work and the setting of black powder charges; both were slow and inefficient methods. Water flooding into the works had to be pumped out by hand, also a laborious job.

To compound the problem, in August of 1828 malaria struck many of the canal construction camps, with the Isthmus being struck particularly hard. Those who contracted the disease couldn’t work, others fled the work site for fear of contracting the disease, and work slowed to a crawl. The first contractor quit, followed shortly after by the second contractor. Colonel By put Captain Cole, R.E., in charge of the works, but it was soon evident that the plan to cut a channel deep enough to allow navigation to the post-canal planned water
The Rideau Route in 1783

level of Rideau Lake wasn’t going to work. So, as he did at several other locations, By found it “indispensably necessary to deviate from the original plan” (Price p.248). If he couldn’t achieve navigation depth by deepening the cut, he would raise the water. He had the shoreline of Upper Rideau Lake surveyed in 1829 – this told him he could raise at least another 4 feet (1.2 m) of water in that section of the lake. This would save him 4 feet of bedrock excavation and also reduce the length of the required canal cut. Accordingly, a dam and lock were built at Upper Narrows, raising the water level of the western end of Rideau Lake (Upper Rideau Lake), resulting in the geography that we see today.

Of interest is the fact that Colonel By never intended his deviation from the original plan to be a permanent solution. He built the locks at Narrows and Newboro without breastworks (upper foundations), fully expecting that in the future the Newboro cut would be deepened, eliminating the need for these two locks. In his 1830 progress report he wrote “should it be found advisable at any further period, on the Country becoming more healthy, to deepen the said Excavation, as originally proposed, it can be done, and there being no Breast Works to the Two Locks above mentioned they will then serve as Guard Locks.” (Price p.249). Given that this is unlikely ever to happen, the geography that we see today will exist far into the future.

Mud Lake (Newboro Lake)

After portaging their canoes across the Isthmus, French’s party put their “canoes into the River Gananoncoui.” French was quite correct in that statement, since at that time the Isthmus marked the divide between the Rideau River watershed and the Gananoque River watershed. Today it marks the watershed divide between the Rideau River and the Cataraqui River. However, Newboro (Mud) Lake at that time was the western head of the Gananoque River. French and his party made camp on the evening of October 9, 1783, at the Newboro Lake end of the portage.
Newboro Lake also marked a visible topographical change that reflects the underlying geology of the region. It was previously mentioned that French would have seen his first outcrops of the Canadian Shield at Second Narrows (Rocky Narrows) of Rideau Lake. He didn’t note any topographic changes in that area, but he did clearly see the change when he arrived at Newboro Lake, which presented a view entirely of Canadian Shield topography. In his journal he states; “The points setting into the Lake are Rocks and Stones, Timbered with Hemlock.” He was now entering the heart of the Frontenac Axis, a narrow section of exposed Precambrian rocks that connects the Laurentian Plateau shield rocks of Canada with those of the Adirondack Mountains of New York. French would describe the next part of his route as “Entirely too rocky to Cultivate, the Timber is Pine, Cedar and Mountain Oak, the whole bad of its kind.”

Newboro Lake was known as Mud Lake up to the late-1800s. According to John Burrows in 1827, the name Mud Lake was “so called from the depth of mud on the bottom, which is supposed from seven to ten feet. Water not very good comparatively to Rideau or Clear Lake” (Welch, p. 24).

In the pre-flooding era, this lake looked quite a bit different than today (see the Newboro, Loon, Mosquito, Benson, Clear & Indian Lakes: Pre-Flooding & Present Day Lake Outlines map). In fact, as we will see, French may have thought that it was two lakes. The estimated depth of present day flooding is still somewhat unclear, but measurements of drowned stumps indicate something on the order of 6.5 feet (2.0 m). The swampy back ends of many bays would have been dry land.

On the morning of October 10, 1783, French continued his journey. French’s voyage from this point is a bit uncertain depending on whether you believe his stated compass direction or his journal and map descriptions. According to the compass directions French provides, he followed a route that Jebb would take some years later, into Clear Lake and then, via a short portage, into Indian Lake. However his journal entry states that they paddled from Newboro Lake “to a small lake, and by a River to a second, and a
The Rideau Route in 1783

Legend
- **1783 Water**
- **2006 Water**
- **Name** 1820s Name
- **Name** Present Name (if different)

Carrying Place to a 3rd Lake, and again by a River to the 4th Lake, from whence we had a Carrying place of a Mile & half.” His map, which shows a large westward loop, and his journal description indicate that he in fact travelled to the western end of Newboro Lake, which would have appeared to be a separate lake at that time. His river would have been Mosquito Creek (no lake existed there in the pre-flooding era), and this would have taken him into Indian Lake. This route may have been used while going downstream to avoid the portage at the Isthmus of Clear Lake. There was a long portage from Indian Lake to Opicon Lake (French’s 3rd lake) to bypass Chaffey’s Rapids, then the route went through Davis’ Rapids (French’s river), into Sand Lake (French’s 4th lake), and then there was a long portage to bypass Jones Falls. But we’re getting ahead of ourselves, let’s go back to Newboro Lake.

If French had travelled south he would have passed through a narrow opening between Newboro and Clear lakes, called Elbow Channel.

**Elbow Channel (Devil’s Elbow)**

The present day connection between Newboro Lake and Clear Lake existed in the pre-canal era. It was navigable by canoe.

Clowes stated that canal navigation could be achieved by “opening the Strait between Clear and Mud Lakes.”

MacTaggart said that it would require some deepening and clearing to make it navigable for the canal. He stated in his 1827 survey: “Deepening and clearing out will be required between Mud Lake and Clear Lake, 2 feet for 300 yards, and the banks to be dressed” (Welch p. 38).

**Clear Lake**

Clear Lake was raised by about 6.5 feet (2.0 m) with the building of the dam and locks at Chaffey’s. It looks much the same today as it did in the pre-canal era.

Burrows in 1827 noted “Crossed Clear Lake, which is beautiful clear water” (Welch, pp. 24-25).

**Isthmus of Clear Lake (Isthmus of Indian Lake, Little Isthmus)**

This narrow isthmus was about 140 feet (43 m) in width, separating Clear Lake from Indian Lake. In the pre-canal era, and prior to the building of Chaffey’s mill dam in the 1820s, Clear Lake was a bit above the level of Indian Lake.

Jebb’s 1816 map shows a portage of 40 yards (36 m).

Although Clowes took his canal route by way of Mosquito Creek, he discussed the alternative of cutting across the Isthmus of Clear Lake, noting that “a saving of 4 miles in distance may be effected at an inconsiderable expense by cutting through the Isthmus between Indian and Clear Lakes.”

MacTaggart stated “This isthmus is 143 feet wide;
cutting about 4 feet, ... As 3 ½ feet are backed up from the dam at Chaffey’s Mills, Clear Lake and Indian Lake are on a level” (Welch, p. 38).

**Mosquito Creek (Mosquito Lake)**

Mosquito Lake did not exist in the pre-flooding era, it was created by the flooding of the canal. Today’s shallow lake was originally a creek flowing through this area, draining Mud Lake into Indian Lake. The difference in elevation between Mud and Indian lakes is not certain, likely between 1 to 3.5 feet (0.4 to 1.1 m), which would have generated a modest current flow.

The construction of Chaffey’s mill dam in about 1820 backed up about 3.5 feet (1.1 m) of water, forming Mosquito Lake. The building of the canal brought the total flooding level to about 7.5 feet (2.3 m), resulting in the lake we see today.

Jebb’s 1816 map simply shows Mosquito Creek as a meandering line between Newboro Lake and Indian Lake. There is no indication of Benson Lake. A copy made of Clowes’ 1823 map (RI-0145) shows some initial development of Mosquito Lake since Chaffey’s dam was in place at that time.

**Benson Lake**

Benson Lake existed in the pre-flooding era, but it doesn’t show on early survey maps, most likely because it was off the main travel route. Even those travelling up or down Mosquito Creek may not have noticed it existed, simply paddling past. The approximate 7.5 feet (2.3 m) of present day flooding of Indian Lake flooded the back bays of Benson Lake and widened the entrance into the lake.

**Indian Lake**

Indian Lake looked much the same in the pre-flooding era as it does today. With its generally steep drop-offs near the shoreline, the approximate 7.5 feet (2.3 m) of flooding from the dam at Chaffey’s Lock did not greatly alter the overall appearance. The back ends of several bays were flooded.

The level of Indian Lake before the construction of Chaffey’s mill dam in the 1820s is uncertain. According to MacTaggart, Indian Lake was about 3.5 feet (1.1 m) lower than Newboro and Clear lakes. In 1827, he stated; “As 3 1/2 feet is backed from the dam at Chaffey’s Mills, Clear Lake and Indian Lake are on a level” (Welch, p. 38).
Clowes appears to have considered the levels in Indian and Mud lakes to be the same. It is likely he was referencing the dam-raised level of Indian Lake, which put it to the same level as Mud Lake.

Best estimates, based on the bedrock elevation at the head of Chaffey’s Rapids, put the pre-flooded Indian Lake about 7.5 feet (2.3 m) lower than today. This produces only about a 1 foot (0.3 m) difference between the pre-flooded Indian Lake and the pre-flooded Newboro Lake. However, water levels would have fluctuated with the season, so greater or lesser difference may have been observed depending on the water levels at the time of each survey.

**Chaffey’s Rapids**

After paddling through Indian Lake, French and his party now encountered a 1,500 yard (1,370 m) long portage to bypass Chaffey’s Rapids. The distance of this portage was noted on Jebb’s 1816 map. The central part of the rapids was about 1,000 feet (305 m) long, but the “river” between Indian Lake and Opinicon Lake was about 4,000 feet (1,200 m) long, with an overall drop of 13 feet (3.9 m). The central feature of the rapids was a flat bedrock shelf that ended in a 6 foot (1.8 m) waterfall drop, this was likely one of the main reasons for the portage. This waterfall was also the location that Samuel Chaffey chose in 1820 to build his dam and mills.

**Two locks become one at Chaffey’s Rapids (looking northwest)**

The top image is an idealized sketch of Chaffey’s Rapids done in 1827, which shows the original proposal for two locks and a canal cut to bypass Chaffey’s mills. This sketch also shows Chaffey’s mill dam, bridge and various mills. A canal dam was to be placed in the main channel of the rapids, adjacent to the head of the proposed canal cut, with a second dam next to the lower lock. The bottom sketch was done in 1831 and shows the final placement of a single lock, located just to the left of where the 1827 upper lock was to be located. The 1831 image also shows a waste water bypass channel (bywash). Chaffey’s mills and dam have been removed. The numbers in the lower image are Colonel By’s flooding depth estimates. Top: “Locks and Dams at Chaffer’s(mic) Mills, Section 15,” October 10, 1827, National Archives of Canada, NMC 21879. Bottom: “Survey of Chaffey’s Mills & the Works there forming Part of the Rideau Canal” by John By, January 22, 1831, Library and Archives Canada, NMC 21984.
It’s a little unclear why the original portage was so long. It left the south shore of Indian Lake about 200 metres west of the head of the rapids. A portage from there of about 750 yards (685 m) would have followed reasonable portage topography and bypassed the main part of the rapids. A 1,500 yard (1,370 m) portage would have extended down to the unnamed island (then dry land) north of Rabbit Island in Opinicon Lake. So the reason for this length of portage remains a bit of a mystery. This portage ceased to be used by about 1820, when flooding from Davis’ mill dam and from Chaffey’s mill dam allowed for a much shorter portage.

In 1823, Clowes stated that the drop of Chaffey’s Rapids was 14.45 feet.

In Colonel By’s 1831 report, he stated, “Chaffey’s Rapids … being 333 yards in length, descent in that distance 12 feet 11 inches, and depth of water where it was proposed to place the Locks 5-3/4 feet.” (Price, p. 260).

MacTaggart in 1827 stated “Nine and a quarter feet was found to be the fall of Chaffey’s mill-dam, and the remainder of Rapid, 3 feet 9-3/4 inches, beneath the mill-dam – where this Rapid began below it, was 1,135 feet from the mill-bridge, length of the bridge 91 feet” (Welch, p. 39).

Samuel Chaffey built his first mill at the rapids in about 1820. This soon expanded into a complex that included a sawmill, gristmill, woollen mill and distillery.

Opinicon Lake (Davis Lake, Potato Lake, Mosquito Lake)

Opinicon Lake was quite a bit smaller in the pre-flooding era than it is today. The depth of present day flooding is about 9 to 11 feet (2.8 to 3.4 m) at the head of Davis Lock and 4 feet (1.2 m) at the foot of Chaffey’s Lock. The flooding levels mean that much of present day Murphys Bay would have been dry land or marshland. A copy made of Clowes’ 1823 map (RI-0145) appears to show part of this area as marshland. The back ends of most of the bays of the lake were also either dry land or marshland. At the time of Clowes survey in 1823, the mill dam built by Walter Davis Jr. in 1818-1820 flooded Opinicon Lake by about 2 feet (0.6 m).

Davis’ Rapids

It is unclear from the surveys whether the reported drop of the rapids took Davis’ mill dam, which raised Opinicon Lake by about 2 feet (0.6 m), into account. The drop of the original rapids was either about 7 feet (2.1 m) or, if the surveys measured from the height of the mill pond, 5 feet (1.5 m). The rapids were about 360 feet (110 m) in length. There was no portage in this area, indicating that the rapids could be run by canoe. They were noted by French as being “a River” between the two lakes.

Clowes stated in his 1823 survey that the fall of the
The Rideau Route in 1783

The rapids was 7.29 feet (2.2 m). In his 1831 report, Colonel By stated “The Rapids situated between Opinicon and Davis or Sand Lakes which communicate naturally with each other, the fall being from the former to the latter … are 121 yards in length, descent in that distance 7-1/4 feet, and depth of water where it was proposed to construct a Dam 1/2 foot” (Price, pp. 267-268).

Mention was made in the Burritt’s Rapids section of the use of a dry flood channel (‘snie’), as a convenient place to build a lock above water level (“in the dry”). Many of these flood channels were used for lock or weir construction. A good present day view of an ‘unused’ snie is available, adjacent to Fox Run Road, near Davis Lock. This was a flood channel that went around the northeast side of Davis’ Rapids.

The snie at Davis’ Rapids was never used for the canal, as it was too far off the channel and at a poor orientation for navigation. It still exists, essentially as it would have looked in the pre-flooding era (except for the road). A canal-era berm protects the head of the snie from the water of Opinicon Lake, which was raised by the dam at Davis Lock. It is easy to imagine how a lock could have been constructed “in the dry” at this location.

Davis’ Rapids c.1829

This diagram shows the placement of the lock and canal dam at Davis’ Rapids. The original river channel connecting Opinicon Lake with Sand Lake is shown. Walter Davis Jr. built his sawmill on this spot in about 1818-1820. The diagram shows some of Colonel By’s adaptive engineering. Davis’ mill dam was used as a coffer dam with the canal dam built behind it. The lock was excavated into the west bank of the rapids, allowing its construction “in the dry.” Flooding from the dam at Jones Falls (8 feet in this area) put a navigation depth of water over the lower sill, with the new Davis Lock canal dam flooding Opinicon Lake and providing navigation depth over the upper sill of the lock. “Rough Plan of the Lock, Dam &c. at Davis ‘Mill’” by Thomas Burrowes, n.d., Library and Archives Canada, NMC 130287.
Sand Lake (Davis Lake, Davies Lake, West Lake)

Sand Lake was flooded about 8 feet (2.4 m) due to the building of the dam and locks at Jones Falls. The back ends of most of the bays of the lake were either dry land or marshland prior to the building of the canal. Walnut Island was part of Walnut Point and Birch Island was Birch Point.

In John Burrows’ first survey of the Rideau in May 1827, he wrote, “The view of Davies Lake [Sand Lake] is very pleasing. The many islands, as if floating on a transparent mirror which mellowed and reflected by the tint of the morning, strikes the contemplative mind with a sensation of pleasure not easily forgotten” (Welch, p. 25).

Jones Falls Rapids (Long Falls, Jones’ Falls, Jones’ Rapids)

Leaving Sand Lake, French and his party were now faced with another long portage – to quote his journal “to the 4th Lake [Sand Lake], from whence we had a Carrying place of a Mile & half.” Paddling into the foot of Eel Bay of Sand Lake, their canoes would have glided over the shallow upper section of the Jones Falls Rapids, and then slipped into a quiet pond located just upstream of the spot where the rapids started their long plunge down a gorge. This pond was the head of a 1,500 yard (1,370 m) portage that extended around the east side of the rapids, ending up just about where the Hotel Kenney sits today.
Jones Falls 1829 map). This portage bypassed the rapids that marked the head of the White Fish River, dropping about 62 feet (18.9 m) over the distance of 1 mile (1.6 km). By the time Jebb made his survey in 1816, the drop of the rapids had been reduced to about 59 feet (18 m) with the flooding caused by mill dams at White Fish Falls (Morton), and Round Tail.

Despite the name, there do not appear to have been any significant waterfalls at Jones Falls, the greatest single drop was less than 5 feet (1.5 m). The first part of the main rapids wound through a deep rocky gorge. This opened up into an area, just south of the present day fixed bridge (County Rd. 11 - Jones Falls Road), in which the channel continued with high, steep rocky hillsides on the east side, and an open area, with a couple of low hills, on the west side. Macdonald’s Gully, a dry flood channel, and future site of the locks and turning basin, was also located on the west side (see map on page 52).

There were no mills at this location at the time of canal construction. It is unclear from the historical record why this is so. Charles Jones owned the land at the head of the rapids. Nancy Knapp owned the land that covered the main part of the rapids. Both were absentee landlords.

A copy of Clowes’ 1823 map (RI-0145) labels this area as “Jones’ Rapids.” Clowes stated that the fall of the rapids was 60 feet 91 ½ decimals. It was described as: “The 29th mile, connects the drowned lands with Davis’ or West Lake, and embraces Jones’ rapids where the Gananoque descends 60 feet 91 1-2 decimals over a narrow rocky channel confined within precipitous banks of great elevation which retire at intervals more or less from the bed of the stream.” (Macaulay, p. 13).

John Burrows stated in his May 1827 survey “Landed at the head of Jones Rapids: walked down its east bank. The view of the Falls is awfully grand: the banks being very high and close. Some places are only chasms of 200 and 300 feet deep. It may be possible to make locks only by building piers and hanging gates. Some places it is only 50 feet wide; in the middle of which rushed down the foaming river. … The fall of water in Jones Falls is 61 feet: the distance one mile” (Welch, p. 25).

John MacTaggart’s August 1827 survey stated “Jones’s Falls. These are the greatest in the least distance that are met with in the whole route, rolling down a narrow ravine scarcely a mile in length, and having a 60-feet fall. The banks of this narrow and crooked ravine are lofty, averaging 90 feet in height; and on their west side are deep bogs, surrounded by high land” (Welch, p. 40). MacTaggart also described Macdonald’s Gully, stating; “The dimensions of this strange gully are as follows: 677 yards in length; 1,009 feet from its upper mouth to summit height, and from thence 1,012 feet to the still-water below. Never was there a better place than this gully to build the locks” (Welch, p. 40).

John Burrows in his July 1827 survey stated “Jones Rapids … Proceeded to explore the banks of the rapids and found them much diversified with hill and hollow on the west side of the rapids. On the
The Rideau Route in 1783

Oblique Longsection
(vertical scale exaggerated)

2005 Level of Whitefish Lake
(323.66 feet - 98.65 m)

2005 Level of Sand Lake
(380.57 feet - 116.0 m)

Historic (pre-1831) Sand Lake

Historic (pre-1806) White Fish River

Sand Lake
(Eel Bay)

Jones Falls 1829

Ken W. Watson, 2005
other side Nature has been bold and favourable for dam and locking. The mind, on contemplating the peculiar and winding rapids, find itself at a loss to determine if one dam at the foot of the falls with a cluster of locks behind it [would] be the most advantageous to surmount the falls, or rather to divide the distance into two sections of equal fall and so surmount the same line, and the level will no doubt make this plain. It is stated that falls is 61 feet – the appearance does not bespeak so much. There are many gullies which calls for particular rummaging and exploring” (Welch, pp. 50-51).

In Colonel By’s 1831 report, he stated that “Jones Falls or Rapids … being 1,833 yards in length, descent in that distance 59-3/4 feet, and depth of water over the site where it was proposed to construct a Dam 1-1/2 foot are situated between Davis or Sand Lake, and Cranberry Marsh, the fall being from the former to the latter” (Price, p. 278).

The falls at Jones Falls that are visible today are man made, a result of water discharging from the waste weir that was blasted into the rock ridge that formed the eastern side of Macdonald’s Gully.

French camped that night at the foot of the portage, likely near the spot the Hotel Kenney sits on today.

White Fish River (Whitefish Lake and Morton Bay)

On the morning of October 11, 1783, French and his party started off down the White Fish River. The area between Jones Falls and Upper Brewers lockstations has undergone significant change with the building of the Rideau Canal. Prior to the building of the canal, and prior to the flooding caused by mill dams, the water from the Jones Falls Rapids flowed via the White Fish River (or White Fish Creek), over White Fish Falls (location of the present day dam at Morton) and into what is today Lower Beverley Lake and from there to the Gananoque River. It’s uncertain if there was an actual waterfall at White Fish Falls or whether it was simply a set of rapids, similar to several other “falls,” along the route. The flow of the White Fish River was to the Gananoque River. It was only during times of flood that any water would have flowed

These illustrative sketches show the landscape changes at the foot of the Jones Falls Rapids. The 1783 sketch shows the pre-canal landscape. Colonel By found Macdonald’s Gully tailor-made to allow his locks to be constructed “in the dry.” The water ahead of the dam was raised in stages, the final sluiceway in the dam was sealed up in the summer of 1831, raising the water 45 feet (13.7 m) in front of the dam. Sketches by Dorothea Koppler under the direction of Jonathan Moore, Parks Canada Agency, 2004.
over the Cranberry Flood Plain and into the Cataraqui River.

As French’s party canoed along the White Fish River in the area today known as Whitefish Lake, they would have been travelling through a deciduous forest with ash trees and swampy regions. French and his party passed this way oblivious to the fact that in the future boats would be able to travel directly from this point to the Cataraqui River. However, in 1783 this could not be done.

French canoed through the narrow, high outcrop entrance to Morton Bay (see page 69) and into what was, at the time, a long deep canyon. The water level of the White Fish River was over 22 feet (6.7 m) lower than the waters of Morton Bay today. It would have appeared spectacular. The water flow would have been fairly slow since the river only dropped a couple of feet (~0.6 m) over the entire length (1.7 miles / 2.7 km) of Morton Bay. French noted Rock Dunder as a “Mountain on the West” (even though it’s on the east side) and ledges of rock on the east (west). French was noting the topographic expression of the underlying geology. The canyon marked the contact between fractured crystalline limestone to the west and the Lyndhurst Granitic Pluton on the east, seen in the beautiful rock exposures of Mount Dunder and Dunders Mate.

All maps subsequent to 1806 show the flooding impact of Lemuel Haskins’ dam, built circa 1803-05 at White Fish Falls. His mill dam at this location eventually led to a water connection between the White Fish River and the Cataraqui River. The details of this change of water flow from the Gananoque River to the Cataraqui River and the creation of a navigation way between this location and the Cataraqui River are described in the “Cranberry Flood Plain” section of this book.

When the canal dams were erected at Upper Brewers and Morton, they flooded the foot of the Jones Falls Rapids (present day location of the foot of the lower locks) to a depth of about 11.5 feet (3.5 m) above the original, pre-dam level of White Fish River. Since 1832, the level has been raised another 1.5 feet, for a total of 13 feet (4.0 m) of flooding above the level of historic White Fish River at the foot of Jones Falls. This has obliterated the creek except for the underwater trace of the original channel. The flooding resulted in Whitefish Lake and Morton Bay as we see them today.

Although French doesn’t note a portage around White Fish Falls, surveyor Lewis Grant’s 1795 map shows a carrying place (portage) at the site of White Fish Falls. It’s presumed that French simply didn’t make a journal entry for it, or that because he was heading downstream (with brave canoeists), he shot the rapids.

French had now left the Rideau Route, heading down the White Fish River on what is today known as Morton Creek. He camped that night on the shores of Lower Beverley Lake. We’ll leave him there for the moment and jump back to Cataraqui (Kingston). We’ll catch up with Lt. French at the end of the next section.
The Rideau Route in 1783

The Journey North – Cataraqui River to Cranberry Marsh

Cataraqui River (Cataraqui Creek, Kingston Creek, Kingston Mill Stream)

Prior to mill development and the building of the Rideau Canal, the Cataraqui River was a very sinuous creek, interrupted by several rapids, some of which were later developed as mill sites. Its headwaters were Loughborough Lake and Dog Lake (the northern deeper section of Dog Lake only; the southern portion of Dog Lake did not exist prior to the construction of the Rideau Canal). There was no contribution, except perhaps for some spring flood waters, from the southern Rideau lakes, which drained to the Gananoque River.

Most commonly known in the pre-canal era as Cataraqui Creek, it was also shown on some maps as “Kingston Mill Stream” (e.g. Jebb’s 1816 survey map). In the Macaulay Commission’s 1823 report (Clowes’ survey), it is referenced as the “Grand River Cataraquay.” It generally became referenced as the Cataraqui River after the building of the canal.

Kingston Bay

Our native group has taken to their canoes and are paddling up Kingston Bay, the mouth of the Cataraqui River. The Cataraqui River wound its way through marshland up to Cataraqui Falls, today’s Kingston Mills. This section remains relatively unaltered from its pre-canal state except for some dredging. The water level in this section is the same as that of Lake Ontario. Lake Ontario in the 1820s had a 2 foot (according to John MacTaggart) to a 4 foot (according to Samuel Clowes) fluctuation in level. A look at the level of Lake Ontario since 1918 shows that the yearly mean has fluctuated from a low of 242.8 feet to a high of 247.4 feet, a variation of 4.6 feet (1.4 m).

In 1827, John MacTaggart wrote that “Getting into this creek [Cataraqui Creek below Kingston Mills] we have plenty of deep water all the way to Kingston Bay, where the Canal terminates, excepting at a small ford opposite Gancox’s Farm, where there was only 4 ½ feet for about 100 feet. This may be deepened, say 3 feet, and that is allowing 2 feet for the fluctuations of Lake Ontario” (Welch, p. 42).

Cataraqui Falls (Kingston Mills)

At Kingston Mills, the Cataraqui River fell about 20 feet (6.1 m) over three rocky falls in a distance of about 160 feet (49 m). High rocky cliffs bounded the Cataraqui River just below Kingston Mills, as the river descended to the level of Lake Ontario.

The first known map of the falls is one circa 1783 (Patterson, p.7) that shows three falls, an upper falls of 4 feet, a middle falls of 10 feet and a lower falls of 16 feet. The lower falls are still visible today although with a much restricted water flow since much of the water passes through the generating station. This apparent drop of 30 feet (9.4 m) is contradicted by later information.

In 1784, the British Government built a saw mill and a grist mill at this location, the first fall of water up the Cataraqui River, in order to help the new settlers in the fledgling Loyalist settlement of Cataraqui (Kingston). Settlement into this region immediately followed the building of the mill. By the time of Clowes’...
The Rideau Route in 1783

Note: the northern part of the aboriginal route follows the Rideau Waterway as shown on Maps 1a and 2a.
1823 survey a sawmill (the third) was in operation, however the grist mill (the second) was likely out of use. The mill dam backed up water to a point about halfway to Jack’s Rifts. Clowes’ measured the water level above the mills to be 28 feet 28 decimals above the level of Kingston Bay.

MacTaggart stated that Kingston Mills rapids had a fall of 26 feet (Welch, p. 42). This number also shows up on an 1827 map of Kingston Mills that shows “fall from the mill pond 26 feet” (RI-0132d). The historical estimates of the depth of the mill pond range from 5 to 8 feet, which would make the falls 18 to 21 feet. Although the historical figures do not agree on an original drop for these falls, present day bathymetric evidence supports a number in the 17.5 to 22.1 foot (5.3 to 6.7 m) range.

There would have been a portage around these falls with canoes putting into a meandering river in the area now occupied by Colonel By Lake.

Cataraqui River
(Colonel By Lake)

The Cataraqui River in the area known today as Colonel By Lake was a meandering creek in the pre-flooding era. In the southern portion, between present day Caseys Island and Kingston Mills, the creek valley opened up into a wider flood plain with forest, marshy areas and rocky outcrops. A bathymetric survey, conducted in 2005, provides a clear view of the meandering creek channel (see image on page 58).

Kingston Mills

The map shows the originally proposed three locks at Kingston Mills. Although an idealized sketch, it’s a reasonable representation of the pre-canal geography. The Montreal to Kingston Road is shown crossing Cataraqui Creek above the sawmill. The arch above the bridge is the proposed site for the canal dam. At the falls themselves, the sawmill is on the right with the timber slide on the left.

The plans for the locks changed. Colonel By decided to do away with locks at Jack’s and Billidore’s rifts, and instead placed four locks at this location. The lower photo shows this configuration, three lower locks in flight, a turning basin and an upper lock. The outer arch shape is the original canal dam. The basin behind it is formed by the power dam. Top: “Sketch of the Dam & 3 Locks at Kingston Mills Cataraquie Creek. Sectn. No. 23” by ?, October 25, 1827, Library and Archives Canada, NMC 21877. Bottom: Kingston Mills, 1977, National Air Photo Library, A24621-05.
The bathymetry of Colonel By Lake clearly shows the drowned channel of the Cataraqui River, now under 26 feet (7.9 m) of water. The actual trace of the creek compares well to John Burrows’ 1828 map of the creek. The outer line on the map is the present day outline of Colonel By Lake. The bathymetry is from an M.Sc. thesis completed by Lisa Sonnenburg in 2006 (see Appendix 1). Burrows’ map is a section from: “Plan of the Cataraqui Creek from Brewers Lower Mill To Kingston Mills Scaled and Laid Down by Order and under the Command of Lt. Coln. By Commanding Royal Engineer Rideau Canal” by John Burrows, n.d. [1828?], National Archives of Canada, NMC 13203.
When the first mill dam was constructed in 1784, it flooded the creek up to a point between present day Esther Head and Caseys Island. This mill pond area would have seen repeated fluctuating water levels as the water was drawn down for use by the mill.

When Colonel By arrived on the scene in 1827, this repeated flooding had been taking place for over 40 years. In his description of this area, he stated that “a Large portion of the Country on each side of the Cataract Creek is either Marsh or flood for several months during the Summer Season, and when the Water is evaporated the heat of the Sun acting upon decaying Vegetable Matter, slimy depositions Creates Miasmata of so malignant a description, that only those seasoned by long residence can possibly escape its effects” (Price, p. 313).

The building of the locks, dam and embankments at Kingston Mills flooded the area by about 26 feet (7.9 m) – creating Colonel By Lake and River Styx, and putting about 6 feet (1.8 m) of water into the foot of Lower Brewers Lock.

Jack’s Rifts

The next obstacle our paddlers would have encountered was Jack’s Rifts, a gentle series of small rapids, about 500 feet (152 m) long and 1 foot 6 inches (0.5 m) deep, located between present day Colonel By Lake and the River Styx. These were most likely navigable by canoe.

John Burrows described this area as: “At Jack’s Rift walked across the rapids which is but short – about 500 feet. About 1 ½ feet of water at this place. Mr Clows proposes a 4 feet lock. There appears but little rock excavation or rock until we arrived at Jack’s Rift, where there is high almost perpendicular rocks, especially on the left side of the river. From this place to Kingston Mills the land is generally low and marshy” (Welch, pp. 52-53).

Cataracti River (River Styx)

The section of the Cataracti River between Jack’s Rifts and Billidore’s Rifts is known today as the River Styx. In the pre-canal era, it was a meandering creek winding its way through a mature forest.

Burrows described this section in his July 1827 survey as “… the kindness of Divine Nature, who has formed the canal, with but few exceptions for the whole of that distance [Kingston Mills to Lower Brewers Mills], in gentle curves, as Hogarth has it ‘lines of beauty’” (Welch p. 52).
Billidore’s Rifts

About 6.5 miles (10.5 km) above Kingston Mills and about a mile and half (2.4 km) below Brewer’s Lower Mills were Billidore’s Rifts (now the upper end of River Styx). These “rifts” were a set of small rapids, dropping 4 feet (1.2 m) over the course of a mile (1.6 km). Much of the Cataraqui River, outside of the rifts, was about 4 feet (1.2 m) deep.

MacTaggart in his 1827 survey described “Billidore’s Rifts. These rifts, as they are called, otherwise small ripples, continue about a mile. Their fall is about four feet, but from the rough state of this country, we found it impracticable to take the levels accurately until it be cleared” (Welch, p. 42).

The Drowned Lands

Originally a description for the area now occupied by Whitefish Lake (just south of Jones Falls), after flooding from mill dams killed the trees in that area, the description was expanded to include River Styx and the upper part of Colonel By Lake, where entire forests were drowned by canal dams. Only the navigation channel was cleared. Seton’s 1844 painting of the Drowned Lands, assumed to be part of River Styx, shows that it provided great habitat for Great Blue Herons and Pileated Woodpeckers. “The drowned land - Rideau Canal 4 Augt 44” by George Seton. 1844, Library and Archives Canada, 1950-63-1.18R.
Lower Brewer’s Rapids (Brewer’s Lower Mill, New Mills)

Paddling north up the Cataraqui River, the next obstacle was Lower Brewer’s Rapids, a gentle set of rapids with a drop of about 11 feet (3.4 m). The length of these rapids hasn’t been determined. Sometime after 1819, John Brewer constructed a dam and mill at this location. In 1823 Samuel Clowes referred to these as “New Mills.” The Cataraqui River shows the same character as before, sinuous with many meanders.

John Burrows in his July 1827 survey noted “Brewer’s Lower Mill is 11 feet fall” (Welch, p. 51). The same year, MacTaggart wrote: “Brewer’s Lower Mill. This is about three miles and half farther down the stream than the former [Brewer’s Upper Mill], 11 feet being the fall of the Mill-dam, and a small rapid between the Mills, of 2 feet 6 ¾ inches” (Welch, p. 41).

The small community that later developed in this area became known as Washburn. The name Washburn was coined by the first postmaster, Lockmaster John McGillivray, in about 1873.

Middle Brewer’s Rapids

These were a set of small rapids, with a drop of 2.5 feet (0.8 m), located between Brewer’s Upper Mill and Brewer’s Lower Mill. Their exact location is unknown, as these rapids are not marked on any of the early survey maps. In his 1827 survey, MacTaggart stated that a small set of rapids between Brewer’s Upper Mill and Brewer’s Lower Mill had a drop of 2 feet, 6 ¾ inches (Welch, p. 41).

Upper Brewer’s Rapids (Brewer’s Mills, Upper Brewer’s Mills)

The next set of significant rapids the paddlers would have encountered was at Upper Brewer’s Rapids, where the Cataraqui River dropped about 11 feet (3.4 m).

MacTaggart stated in his 1827 survey: “About a mile beneath the Round Tail is this place, an extensive mill establishment, built on a rapid, whose declivity is 10 feet 9 inches” (Welch, p. 41).
Upper Brewers Rapids in 1828 (looking southeast)

This map shows the location of John Brewer’s mill dam near the head of the rapids and the proposal to bypass his mill and the rapids with an artificial canal cut and two locks. “Brewer’s Upper Mills,” May 5, 1828, Scottish Records Office.

They are named for John Brewer who obtained water rights to the rapids at Upper and Lower Brewer’s in about 1819. By 1826 he had a sawmill, gristmill and distillery operating at Upper Brewer’s Rapids.

Upper Brewers Rapids in 1830 (looking northeast)

This painting shows the upper wooden sill of the lock being put in place. It also shows the extent of the construction camp and John Brewer’s milling facilities. Brewer was bought out and awarded the lock construction contract. However, by 1831 he had run into financial troubles, and he fled to the U.S. Robert Drummond, the contractor for Kingston Mills, took over the job. “Brewers’ Upper Mills: Upper Lock partly built, Excavations; Embankments &c in progress” by Thomas Burrowes, May 1830, Archives of Ontario, C 1-0-0-0-65.
Round Tail (The Round Tail)

Paddling north from Upper Brewers Rapids it wouldn’t be long before our paddlers encountered a narrow rocky constriction of the Cataraqui River, about 45 feet (13.7 m) in width, known as the Round Tail. It is suspected that there may have been shallows in this location, but there is no documented evidence for this. To follow the Cataraqui River, our paddlers would have turned 90 degrees and paddled west, towards the headwaters of the Cataraqui River in Loughborough and Dog lakes.

The land directly to the north of them at this location was known as the Cranberry Marsh, the southern end of the floodplain between the Cataraqui River to the south and the White Fish River to the north.

When Jebb arrived here in 1816, he did so by paddling his canoe south from the White Fish River through drowned forests and flooded marsh of the Cranberry Flood Plain. A water connection from the White Fish River to the Cataraqui River existed by then due to flooding caused by mill dams at White Fish Falls and at the Round Tail. He stated that "The Cranberry Marsh is rendered passable by a dam at the entrance or head of Kingston mill stream [The Round Tail] which throws the water coming from the Loughbro Lake on to it, and overflowing it to the depth of 6 feet.”

The Round Tail dam spanned the original channel. During canal construction, a new channel was excavated to the east of it. The dam was drowned when the water was raised by 17 feet (5.2 m) at Brewers Upper Mills in 1831 (today the flooding level is 18.5 feet / 5.6 m).

John MacTaggart in his 1827 survey described it as “Round Tail. This is rather a remarkable spot on the line, being a break in a ledge of rocks that the Cataroque, or Kingston River, may burst from its source, the lake – 45 feet is its width” (Welch, p. 41).

Our paddlers likely found the Round Tail a good place to camp – so we’ll leave them there for the moment and take a quick trip north, over the floodplain, up to the White Fish River.
The Cranberry Flood Plain

The Cranberry Flood Plain refers to the area between Round Tail (south end) and the White Fish River (today’s Whitefish Lake in the area of Deans Island) See the maps below. A detailed pre-flooding to present day map of the Cranberry Flood Plain has not been constructed since there is no bathymetry available for this area. A detailed map for the southern margin of this section in the area of the Round Tail is shown above.

The Cranberry Flood Plain

Bathymetric measurements done by the author in 2004 show the outline of the Cataraqui River channel under what is now Cranberry Lake. The Cranberry Flood Plain lies to the north of this channel, which has its origins in Dog and Loughborough lakes.
The elevation of the land in the marsh at the Round Tail end (now underwater, forming the base of Cranberry Lake) is about 308 feet ASL (94 m), the same as the forest/marsh at the White Fish River end (now the bottom of Whitefish Lake), some 8.5 miles (14 km) to the north. A sporadically flooded area, made up of forest, ponds, streams, marshes and a small lake (the original Cranberry Lake), it wasn’t navigable by canoe in 1783 and it is very unlikely that it was used as a travel route other than perhaps for hunting or berry picking expeditions.

The major geographic/water flow change in this area took place after Lemuel Haskins built his first mill dam at White Fish Falls (Morton) in 1803-05. During Reuben Sherwood’s April 1806 survey of South Crosby Township, he states that Haskins’ sawmill at White Fish Falls had flooded large flats of ash trees behind it (Warren, p. 7). In 1807, Reuben Sherwood was surveying Pittsburgh Township when he stated; “I find that the flats of land along the Kingston Mill stream [Cataraqui River] thro’ this township all flowed [overflowed] owing to the abundance of water which has changed its course from the Gannanockway River to this [Cataraqui River] since Steven’s [Haskins] built his mill in South Crosby ...” (Cataraqui Region Conservation Authority report, 1967, history section, page 65).

At some point after he had put up his dam at White Fish Falls in 1803-05, Haskins realized that he couldn’t get more than about 7 feet (2.1 m) of head on his dam, the water simply wouldn’t rise any further. A trip up the White Fish River would have revealed that his dam had caused the river to overflow in the area now occupied by Whitefish Lake and that the water was escaping south (down the Cranberry Flood Plain). After a lengthy bit of hiking, following his escaping water, Haskins would have arrived at the Round Tail. Accordingly, at some point prior to 1816, he constructed a mill dam at the Round Tail to block this escaping water, creating an extremely large mill pond. It became known in the pre-canal era as the Drowned Lands, acres of dead standing trees, killed by the flooding caused by the mill dams. Haskins’ dams also, for the first time, allowed travel by canoe between Jones Falls and the Round Tail, and thus from the Ottawa River all the way to Lake Ontario.

On Jebb’s 1816 map (RI-0154b), he marked part of the area occupied by present day Whitefish Lake as “Land Overflowed,” the result of flooding by the mill dams at White Fish Falls and the Round Tail. In referencing the Round Tail dam (see Jebb’s quote in the Round Tail section) he said that the land (Cranberry Flood Plain) was overflowed to a depth of 6 feet (1.8 m).

Clowes’ 1823 survey and maps (RI-0143 and RI-0145) provide a more detailed and accurate representation of the area. His map shows the turn of the White Fish River around what became Deans Island and into today’s Morton Bay. He shows mill dam flooded land and marshland all the way to a properly positioned pre-canal Cranberry Lake.

Jebb’s 1816 map shows a rather compressed version of the Cranberry Flood Plain. Haskins’ mill dam at the Round Tail, together with his mill dam at White Fish Falls, flooded this area to a water depth of about 6 feet (1.8 m). From “Plan of the Water Communication from Kingston to the Grand River” by Lt. J. Jebb, July 8, 1816, National Archives of Canada, NMC 21941 1/3.
It is conceivable that the mill flooding of the Cranberry Flood Plain may have been the root of Colonel By’s decision to make the entire Rideau Canal a slackwater navigation system. It was Samuel Clowes, who, although for the most part designing a conventional canal system of canal cuts to bypass rapids, also saw the advantage of using dams to achieve navigation depth by flooding. In his 1823 report (see the section: Samuel Clowes’ 1823 and 1824 Surveys), he compared the expense of cutting a canal channel in this area to the building of dams and flooding it instead. “The whole expense [cutting a channel] is therefore estimated in the aggregate for the nine miles and a half at £25,650. By the latter plan [flooding] the water would be raised to a depth of seven feet over the whole surface of the flats to the foot of Jones’s Rapids. The expense of forming waste weirs at the Round tail and Whitefish falls, clearing the timber from the direct line of the canal on the flats, would amount to £725 — and as the difference between the two plans amounts to £24,925, the advantage of inundating the tract instead of cutting through it, obtains a decided superiority.” Clowes also advocated using dams at the outlets of several lakes to achieve navigation by simply raising the water level.

Colonel By had Clowes’ plan in hand when designing the Rideau Canal, and on his first trips along the Rideau, the canoe he was in would have floated over the Cranberry Flood Plain, flooded by the two mill dams. This was a working example of slackwater navigation. As this idea was put into practice, two new factors started to play a role, steamboats and malaria. The modified approval for By’s request for larger locks to accommodate steamboat navigation came in the summer of 1828, just as the first major malaria outbreak on the Rideau took hold. In this area he noted “the necessity of deepening Cranberry Marsh and Lake in places, to provide for a Steam Boat navigation” and that an additional depth of flooding was the best way to do this “from the consideration that it [raising the height of the dams at Upper Brewers and at White Fish Falls] was the most judicious mode that could be adopted to lessen as much as possible the expense which must unavoidably be incurred in obtaining the necessary depth of water” (Price p. 292). It also helped solve part of his problem with malaria “as Cranberry Marsh and Lake are amongst the most unhealthy spots on the Line of the Canal” (Price p.292), since flooding reduced the amount of excavation required in this unhealthy spot.

With the building of the canal, a water control dam was installed at the foot of Morton Bay (near the location of Haskins’ old dam), the dam at the Round Tail was drowned, and a new dam was placed at Upper Brewers Mills. The 18.5 feet (5.6 m) of flooding at the head of the Upper Brewer’s dam has put 16 to 17 feet (5 m) of water over the Cranberry Flood Plain, changing the landscape into the lakes that we see today.

Cranberry Marsh

This is the area between the original Cranberry Lake and the Round Tail, the area surrounding present
The rise of water level in this marsh, caused by the mill dam at the Round Tail, was about 5 to 6 feet (1.5 to 1.8 m), and that made the marsh navigable by canoe. In 1816, Jebb stated that the dam at the Round Tail overflowed Cranberry Marsh to a depth of 6 feet. John MacTaggart noted in 1827; “lift of the dam being 4 feet, 8 inches, and depth below dam-cill 7 feet” (Welch, p. 41). John Burrows in his 1827 survey wrote “It appears that the dam line is the cause of the run of water over the drowned land. The rise seems to be about 5 feet, but this is not the positive rise as there is a rise of water below the Round Tail caused by the mill dam at Brewer’s Upper mill, which dammed water at the mill is 10.6 feet above the water in the river below” (Welch, p. 51).

Cranberry Lake

The original Cranberry Lake was a small lake located between present day Beaupre Island and Little Cranberry Lake. It is evident on the hydrographic charts as the deeper water area between Big Island and Brass Point Bridge. Although very much out of scale, Jebb’s 1816 map does depict this lake, showing that the area around Beaupre Island was marshland in 1816.

A copy of Clowes’ 1823 map (see left) shows with some accuracy the location of this lake. Although the area was flooded at this time by the dam at the Round Tail, Clowes still only shows marshland on either side of Cranberry Lake. This map appears to indicate that Cranberry Lake was a stand-alone lake, a depressed area in the middle of marshland. The flow of water from the Loughborough/Dog Lake drainage is shown as going straight to the Round Tail on Clowes’ map.

MacTaggart in his 1827 survey stated “The dam at White Fish Falls, on the River Gananoque, and that at Round Tail, on the River Cataroque, must both be removed, and some dead timber taken out of Cranberry Lake, which has been drowned by the raising of these dams. Cranberry Marsh is about nine miles in length, and its lake about the same” (Welch, p. 41).

Cranberry Flood Marsh

This is the area between the original White Fish River (near the south end of present day Deans Island) and the original Cranberry Lake. Today it is covered by Little Cranberry Lake and the south end of Whitefish Lake. Prior to the canal and prior to any mill dams, this area was forest, streams, ponds and flood marsh. The term “flood marsh” is perhaps a bit of a misnomer, it references the fact that this area would only have been inundated in times of flood. It was likely more forest (with damp-footed trees such as ash) than actual marsh.

Bathymetric surveys, done by the author in 2004, indicate only a 3 to 4 foot (0.9 to 1.2 m) elevation difference between the base of the original White Fish River channel and the level of Cranberry Flood Marsh, so it would not have taken much of a rise of water in this area to start sending the flow towards the Catarqui River, and spring flooding likely swept through the area. Detailed bathymetric surveys in 2005 over the head and the foot of the marsh did not reveal any channel development within the marsh. It became navigable by canoe sometime between 1805 and 1816 with Haskins’ construction of mill dams at White Fish Falls [Morton] and at the Round Tail.

John Burrows in his May 1827 survey observed, “The views from this downward [Morton Bay to the
Round Tail are nothing equally to what we passed. The first ten miles was over sunken land. Our canoes sailing through the openings of the trees, and, from the innumerable windings and curves, the route is very difficult to find” (Welch, p. 25).

Clowes’ 1823 description of this area was “From the round tail to Jones’ rapids there is a wide extent of low marshy ground naturally inundated every spring. On one part of the western or white fish branch by the Gananoque, and on another by the superfluous waters of the Loughborough Lake, Dog Lake, &c. the inundation of this tract is rendered permanent to a greater depth by means of dams placed at the round tail and the white fish falls by the proprietors of mills at those places” (Macaulay, p. 13).

The Journey North – continuing up the Cataraqui River

Dog Lake

We return to our paddlers who have been camped on the Cataraqui River at the Round Tail. They are about to set off to the headwaters of the Cataraqui River. This river had its headwaters in both Loughborough and Dog lakes. Prior to the building of the Rideau Canal, Dog Lake only existed as the smaller northern portion of the present day Dog Lake. A meandering creek drained this Dog Lake to the Round Tail and into the Cataraqui River. The creek outlet of Dog Lake was joined by the drainage from Loughborough Lake. These formed the headwaters of the Cataraqui River.

The building of the canal dam at Upper Brewers created about 18 feet (5.5 m) of flooding at the head of the dam. This resulted in about 10 feet (3.0 m) of flooding in the Dog Lake area, creating the southern (shallow) section of Dog Lake as well as a much more expansive Cranberry Lake.

End of the Cataraqui Route

The native route was likely to Loughborough Lake, via a portage past the rapids/falls at present day Battersea. From there they would have traveled to Opinicon Lake and then followed the Rideau Route north to the Ottawa River. Grant’s 1795 map (see map in Grant’s section) indicates this aboriginal canoe route in very crude sketch form. On the map it shows as a blob labelled “Kingston Cr & Lake” and a carrying place connecting it with the west end of Opinicon Lake. On the map Grant states “Half a days journey from Kingston to the Gananoque [Opinicon Lake] in canoes – a great number of rapids and Carrying Places on this Creek.” With the Cranberry Flood Plain being impassable, the travel way would have been to Loughborough Lake, the head of the Cataraqui River, and from there, either down Loughborough Creek to Hart Lake and from there to Opinicon Lake, or by a portage from Loughborough Lake to Lower Rock Lake and from there to Opinicon Lake.

Jebb’s 1816 map shows a roughly sketched end of a lake with a portage linking it to Opinicon Lake. However it’s difficult to say with any certainty whether it is showing a link to Hart Lake or to Lower Rock Lake.

The Journey South – continuing to Cataraqui (Kingston)

We left Lt. French and his survey party camped on the shores of Lower Beverley Lake. On the morning of October 12, 1783, French continued his journey towards the St. Lawrence River at Gananoque. The details of this part of the route can be read in the transcription of his survey journal. In a nutshell, he continued downstream, meeting up with the Gananoque River, and ending up in the St. Lawrence River at present day Gananoque. From that point he paddled up the St. Lawrence to Cataraqui (Kingston), arriving there on the morning of October 14, 1783.

French gave a brief report on his survey to Major John Ross. The next day, French, in the company of Captain Justus Sherwood, another surveyor who had arrived at Cataraqui on October 2, 1783, to conduct surveys of that area, headed back by canoe to Montreal.
The End?

Although this ends our 1783 journey along the Rideau Route, it can be the beginning of your own exploration of the Rideau Canal Waterway. The Rideau is accessible by land or water, you can easily get there by car, boat, bicycle or even by foot. Stand at a lockstation and visualize the changes to the pre-canal geography brought about by the locks and dams that you see around you. Rent a boat or bring your own and get out on the water. Although much of the original topography has been drowned by the flooding brought about by canal dams, if you squint your eyes and use a bit of imagination, it’s not that hard to visualize what Lt. French and his survey party might have seen.

Entrance to Morton Bay - 96 Years Apart

Today, some areas of the Rideau remain similar to the vistas presented almost 100 years ago. The top photo was taken in 1910, the bottom in 2006. About the only change, apart from bigger trees and the style of the boats, is the spalling of some rock from the cliff face. However, when French travelled through here in 1783, it would have looked much different, since the water in this location was over 22 feet (6.7 m) lower than it is today. Those cliffs would have towered over French’s canoes. Top: Entrance from Rideau to Morton waters by Marsden Kemp, August 1910, Archives of Ontario, C 130-2-0-0-87. Bottom photo by Ken W. Watson, 2006.
Copy of Lt. French's Journal

Lieutenant Gershom French’s 1783 Survey of the Rideau Route

Transcription by: Ken W. Watson, 2004

Interpretation Notes: Interpretation of French’s survey was aided by the following publications:

The first full survey of the Rideau Route was conducted in the fall of 1783 by Lieutenant Gershom French, an Assistant Engineer with the Corps of Loyal Rangers (also known as “Jessup’s Corps”). The governor of British North America, Sir Frederick Haldimand, initiated the survey after the signing of a peace treaty between the British Government and the American Revolutionary Government in 1783 (Second Treaty of Paris). French’s survey was done prior to any settlement on the Rideau.

Gershom French was born in 1753 in Southbury, Connecticut. Just before the American Revolution he started up a mercantile business with his older brother Benjamin in Lansingburgh, New York. With his brother Benjamin he was a signer to the Lansingburgh Declaration of Independence in May of 1775. He advocated peaceful change and when it became evident that the revolutionaries advocated violent means, he became a Loyalist. He held an officer’s commission (Lieutenant) in the Prince of Wales American Volunteers in 1776, and by October 1777 had joined the Queen’s York Rangers, commanded by Lieut. Col. John Peters, as Lieutenant and Adjutant. This unit was amalgamated in 1781 with the King’s Loyal Americans under Major Edward Jessup and was called the Corps of Loyal Rangers (also known as “Jessup’s Corps”). Sometime in 1783 (either prior to or just after his Rideau survey) he took up residence in Québec City. He moved to Coteau du Lac, Soulanges Co., Québec in 1806. He married for the second time in 1809 (no date for the first marriage) and had 6 children. He passed away in Coteau du Lac in 1831.

French’s 1783 survey starts at Carillon on the Ottawa River. He embarked in two birch bark canoes with “seven men of the Provincials, Two Canadians and an Indian as Guide.” The Provincials were men of the Provincial Corps of the British Army and the Canadians were French Canadians. The aboriginal guide was key since they were going to be following the aboriginal canoe travel route between the Ottawa and St. Lawrence rivers, which followed the Rideau River to the Rideau lakes and then down the Gananoque River to the St. Lawrence River, a route not previously surveyed by Europeans.

The survey consisted of canoeing the route, stopping every so often to send a survey party out to scout the surrounding area. French’s map shows these scouting surveys as perpendicular lines extending about a league (3 miles / 5 km) in distance from the shore. The survey began on September 29, 1783, at Carillon Rapids on the Ottawa River and they arrived at Gananoque Falls on October 13, paddling from there to Cataraqui [Kingston] on the morning of October 14, 1783.

Some brief interpretations of French’s journal are provided for the Rideau portion of his route. “The Rideau Route in 1783” description at the beginning of this book provides more detail. A map, compiled in 1794 from French’s survey sketches, is also included.
Note: the northern part of French's survey follows the Rideau Waterway as shown on Maps 1a and 2a.

Lt. Gershom French's survey of 1783 started at Carillon on the Ottawa River, proceeded to Rideau Falls and then up the Rideau River to Rideau Lake. This map picks up from that point, following the route south to Kingston.

Ken W. Watson, 2007

Map 5
Lieutenant Gershom French's 1783 Survey

"Communication with the St. Lawrence & Ottawa Rivers, by the Rivers Petite Nation and Rideau" copied from sketches by Lt. Gershom French 1783, by William Chewitt, August 26, 1794, Archives of Ontario, AO1336 (left panel).
Transcription of French's Report:

A Journal of Lieut French's

Proceedings in Exploring the Lands on the Ottawa River from Carillon to the Rideau, and from the mouth of the River to its Source, from thence to the River Gananoucoui and down the same to the Fall into the St. Lawrence about five Leagues North East from Cataraqui

1783 – Sept 29th – Departed from Carillon with seven men of the Provincials, Two Canadians and an Indian as Guide with two Bark Canoes to the Head of the Long Saut about Twelve Miles Distance steering West 45 Degrees North in the General Course, Myself with a party Travelled on the North side over a tract of land laying between the River and mountain at about Two Leagues Distance, a Great part of which we found to be a Good Soil well watered with small streams. Timbered principally with Beech, Maple and Birch sufficiently level & in every respect fit for agriculture the other parts are Rocky and uneven but not to that degree as to prevent a good road being made without any uncommon difficulty.

The mountains on the North joins the River at the Head of the Long Saut.

[September] 30th – Proceeding up the Ottawa steering West 5 Degrees South about 12 miles, sending out a Party on the South shore who Reported they have been a League and that the lands were bad consisting of stone ridges, timbered with Evergreen and low swamps. From thence we continued in the same direction about ten miles further where I made an excursion of a League South finding the Lands Stony, a Bad Soil and Timbered with Hemlock, Cedar, etc. The mountain in this day’s journey continues with the River on the North and the South shore is drowned in times of high water.

1st October – Proceed West-20 Degrees South to a Point called the Barrier at 18 miles Distance, the Ottawa here is nearly a League in Breath including several Islands of considerable Extent which as well as the south shore are annually overflowed and but a small portion of these are high enough for Meadow Lands.

A party sent out at the Barrier South Reported they had been Two Miles and found no land fit for tillage.

The mountain leaves the North shore about ten miles before we arrive at the Barrier from thence we continued steering West 15 Degrees South 5 miles,

Encamping on the North shore on a piece of land which raises above the high water mark. Laying between the River and a Deep Marsh about [?] miles back and by tracing it a considerable distance each way found it Intirely level of the best soil, and timbered chiefly with Birch and Hickory.

From behind the Marsh, the Land has an easy ascent towards the Mountains which appear to be at 7 or 8 Miles Distance.

A party sent at the same time on the South Shore reported they had been more than a League that after leaving the River half a mile they raised on to high Lands of an excellent soil timbered with Beech, Maple, etc., clear of rocks or stones and that the further they penetrated the more even and fertile the land appeared.

October 2nd – Steered West 15 Degrees South 10 miles from whence I sent a party to the Distance of League on the South Side who Reported they found the land rocky for a quarter
of a Mile & thence it was good and equal to what had been seen the day before.

In the same time I made an Excursion to the North found a Marsh behind at the distance of a Mile & half and the land between that and the River to be of the best sort - from thence we continued about 8 miles in the same direction to the River du Rideau and by a Carrying Place of a Mile entered our canoes into the Rideau

**Interpretation:** They camped on the night of October 2, 1783, at the head of the portage above Rideau Falls. Based on the location of a future (1815) road, the portage may have been from Governor Bay to a point perhaps near Porter Island.

[October] 3rd A Party sent South East from the Carrying Place Reported they had been a league and found the soil everywhere good and deep, timbered with Maple, Elm and Butternut but did not discover any Springs or Water in their Route.

From the Carrying Place we steered up the Rideau South 15 degrees west, five miles in deep still water and then for about 7 miles further in a Rapid Current. In this days journey the canoes were navigated by two men each, a party travelled on each side [of] the River, myself always being one, changing sides occasionally and frequently leaving the River at half a mile distance.

The banks of the River in general raise about twelve feet above the high water from thence the land continues very Level, it is a Dark Soil from 7 to 10 Inches Deep, with a Sandy Loam below, clear of Rocks and Stones, Timbered with Maple, Beech, Birch, Elm, Butternutt &c. with an Edging of Cedar and Pine always covering the Banks of the River and wherever the water is Rapid, the Shores are Lined with Lime-Stones, in the Route there were two excursions made one each side [of] the River to the distance of a league in which myself and party found the land Everywhere good.

We Encamped at the Entrance of a Small Rapid River from the North West forming a Convenient Mill place.

**Interpretation:** On October 3 they investigated the area of present day Ottawa. The canoes would have been paddled/pulled up several rapids on this portion of the journey; Billings Rapids, Stegmans Rapids, Three Rock Rapids (Hogs Back) and Three Island Rapids (the head of present day Mooneys Bay). The statement made by French that he continued “for about 7 miles further in a Rapid Current” is a bit conflicting with later data (Jebb’s 1816 survey) that showed slower flowing, deep water above Three Island Rapids (later known as “Wilson’s Still Waters”). There was only one small set of rapids between that point and Black Rapids Creek, which is where French and his party camped on the evening of October 3, 1783.

4th October – Continued South 15 Degrees West for about Ten Miles in still deep water where the Rideau receives another small river from the North West from thence we had a Rapid Current for five miles in the same direction.

In this days Route we Proceeded as on the 3rd and found the Lands the Same as well in our Excursions as on the shores of the River.

**Interpretation:** The journey “in still deep water” for a distance of “about Ten Miles” would have taken French past Long Island, most likely using the east channel which just had one set of small rapids (which he didn’t note other than his reference to “Rapid Current”). They camped near the head of Long Island on the evening of October 4, 1783.

[October] 5th – Proceeded steering South 45 Degrees West about 16 Miles in still deep water, the River is here from 100 to 150 yards broad. The shores are low and overflowed in the time of High Water to about 80 Rods back where the land rises high and is equally good at that discovered the two preceding days.

A Considerable River Enters here from the East which leads to a Branch of the River de la Petite Nation from whence the Indians have a Communication to Oswegatchie.

A Party sent out from hence one League NorthWest reported they found the soil rich & timber the same as hitherto but the surface not so level. At the same time I made an
Excursion SouthEast and found the soil good with a few Pine and Hemlock Trees mixed with the timber.

We continued steering South 60 Degrees West about 5 miles in Rapid shallow water, meeting with a Fall sufficient for Mills, the High Lands again join on the River, and is strong and uneven for near half a mile back, where they are level."

**Interpretation:** The “Considerable River” was Kemptville Creek, the “River de la Petite Nation” is today’s South Nation River and “Oswegatchie” is today’s Ogdensburg. The Rideau Valley Conservation Report notes that Kemptville Creek had a much greater flow back then than it does today, so it would have appeared quite impressive to French.

In the area just north of the confluence with Kemptville Creek, a notation on French’s map shows the Rideau River to be 150 yards broad with “Stillwater Swamps” on the west side.

The “Fall sufficient for Mills” is most likely Nicholson’s Rapids (although a case could also be made for these being either Burritt’s Rapids or Clowes’ Quarry Rapids). The party camped that night on the east shore above the head of Nicholson’s rapids.

October 6th, “… We proceeded South 25 Degrees West about four miles in Rapid Water, meeting with a considerable Fall and a Carrying Place of 400 yards, from thence the water is still for 5 miles in the same direction with Drowned Swamp about 50 Rods Broad on each side the River, behind which the land raises high, with a gravelly soil. Timbered principally with Beech, and Stony, but not to that Degree as to render it unfit for Cultivation.

A party sent out on each side to the distance of two miles, Reported they had found no Stones, more than half a mile back, and that the Soil was good. From thence we continued South 45 Degrees West about 4 miles, the River is here very Crooked and Rapid, the lands continuing stony on the Shores with a little gravel in the Soil, and Timbered with Beech and Maple.

**Interpretation:** The “considerable Fall and a Carrying Place [portage] of 400 yards” was Merrickville where Great Falls dropped 14 feet (4.3 m). They camped on the night of October 6, 1783 near Kilmarnock.

[October] 7th A party sent from our Encampment on each side, Reported they had been a League, and found no Stones at any Considerable distance back, and that the Soil and Timber was equal in Goodness to any seen before.

From thence we proceeded South 45 Degrees West about 5 miles, where we met with Eight Falls in the Distance of a mile, from 4 to 10 Feet each, and the River Divided by several Rocks and Islands forming very convenient places for Mills.

Continuing in the same Direction for 6 miles further we entered into a Lake – The Land in this days journey in general are stony and uneven near the River, but level and good a little back.

**Interpretation:** The “Eight Falls in the Distance of a mile” is the location of Smiths Falls. The lake they entered into was Rideau Lake, which would have been about six feet (1.8 m) lower than it is today. That evening they camped near the mouth of the Tay River.

October 8th – Proceeded South 40 Degrees West about 3 miles in the Lake from Whence I made an Excursion South East of 2 miles, finding the Soil and Timber Good.

Proceeded 8 miles further south 45 degrees West. I sent a party on the West shore [? Who] reported they had been three miles back and that the lands were good and clear of stones and timbered as usual – from thence we continued South 45 Degrees East to a Narrows at 5 Miles Distance. I here made an excursion to the East discovering no other alteration than few stones in the south.

**Interpretation:** The party continued up Rideau Lake to the Narrows where they camped for the night on the southeast shore.

[October] 9th – We proceeded South 30 Degrees West 5 miles to the S.E. Point of the Lake, from whence by a Carrying Place of a Mile and Quarter we entered our canoes into the River.
The Lake is from one to three miles Broad, and the good Lands join on the Water at the
Bottoms of all the Bays. The points setting into the Lake are Rocks and Stones, Timbered
with Hemlock.

Interpretation: The party proceeded from the Narrows to the Carrying Place (portage) at Newboro, the
watershed divide between the Rideau River and, at that time, the Gananoque River watershed. The lake he
describes is Newboro Lake. They camped that evening at the foot of portage, near present day Newboro.

[October] 10th - Proceeded down the Gananoncui, steering in a general course South 30
Degrees East to a small lake, and by a River to a second, and a Carrying Place to a 3rd Lake,
and again by a River to the 4th Lake, from whence we had a Carrying place of a Mile & half,
reckoning the whole distance about 16 Miles. The Lands laying in the Route is Entirely too
rocky to Cultivate, the Timber is Pine, Cedar and Mountain Oak, the whole bad of its kind. At
the Carrying Places mentioned are good Mill places.

Interpretation: There are two interpretations of French’s route. These have been detailed in the Mud
Lake (Newboro Lake) section of the Rideau Route description. His compass bearing would have sent him
to Clear Lake, but his map and description indicate that he went by way of the western end of Newboro
Lake. It’s possible his compass bearing might have been in error if he took his reading near the large iron
(magnetite) deposits in Iron Mine Bay of Newboro Lake. Assuming his map and description are the correct
interpretation, his first “small lake” would be the western end of Newboro Lake. From there he travelled
down Mosquito Creek (his “River”), to Indian Lake (his “second” lake), over a carrying place (portage
around Chaffey’s Rapids) to Opinicon Lake (his “3rd Lake”), then down Davis’ Rapids (his “River”) to Sand
Lake (his “4th Lake”) and then he portaged around the Jones Falls Rapids (his “Carrying Place of a mile &
half”). He camped for the night at the foot of the Jones Falls Rapids’ portage (near where the Hotel Kenney
sits today).

Oct 11th – We proceeded South 20 Degrees East 8 Miles, with a Mountain on the West,
and very high ledges of Rocks on the East, from whence I sent out a Party on each side to the
distance of five miles. Who Reported that they had not discovered any Land fit for Tillage,
the whole being either very Rocky or Drowned Swamps.

Interpretation: Starting on the 11th from the foot of the portage around Jones Falls, French’s party would
have headed down the White Fish River, following it as it looped almost 180 degrees into today’s Morton
Bay and then continued to Lower Beverley Lake. Eight miles would have put them approximately into
Oak Bay of Lower Beverley Lake. Lockwood interprets the “Mountain on the West” to be Rock Dunder.
Rock Dunder would have been on the east side of French’s travel route, however it is located just after the
route turns almost 180 degrees, so French could have easily mixed east with west. It remains the most
distinctive, mountainous looking exposure in the area and would have been clearly visible from the water.
John MacTaggart made a comment about the problems with directions during an 1827 survey stating; “This
is on the east side of the river: I say on the east side, though, perhaps, more strictly it may be called south
side; yet, as the Rideau River, taken upon the whole, runs north and south, for the sake of brief distinction I
say always that one of its sides is east and the other west, although perhaps a bend or wimple may at times
not accord with the rhomb of the compass” (Welch, p. 31).

Interestingly, French does not mention what should have been a portage around White Fish Falls (near
present day Morton). This portage is shown on Lewis Grant’s 1795 map. It is assumed this is just an
oversight, since there are not any alternative canoe routes in this area. Perhaps because they were going
downstream (with presumably brave paddlers), they shot the rapids. They camped that night on the shores
of Lower Beverley Lake.

[October] 12th. – Steered South 12 Degrees, E. about 4 miles where the Gananoncui
received a River from the East. We continued in the same direction 8 miles further in Dead
Water with large Marshes on each side, and Ledges of Rocks behind, from whence I sent out
a Party on the East and went myself on the West, but did not Discover any good Lands.

From there we continued about Ten Miles in the same course nearly meeting with nothing
but Swamps, Rocks and Stagnated Water.
Lieutenant Gershom French’s 1783 Survey

**Interpretation:** The location of the “River from the East” is likely that of present day Delta. The “Dead Water” would have been Lower Beverley Lake.

[October] 13th – A Party sent out on Each side of the River to penetrate 2 miles Reported they found no land that was good. From thence we proceeded steering S. in a Strong Current about ten miles Discovering a few small tracts of Good Land near the River but scarcely sufficient in a place for a Farm, to a Fall of 10 feet, where the Gananoucoui discharges itself into the St. Lawrence about five Leagues N.E. from Cataraqui where we arrived on the morning of the 14th.

**Interpretation:** Although there are several rapids on the Gananoque, French fails to mention any of them except for the large fall of water right at Gananoque. On completion of his survey, he paddled up the St. Lawrence River to the mouth of the Cataraqui River, the site of Kingston.

**From the Whole**

*The tract of country from Carillon to the Head of the Long falls on the North shore extending back to the mountain may contain about 20,000 acres of arable land, which is sufficiently well watered by small streams & tho’ heavy Timbered with Beech, Maple, Birch etc. is not so Difficult to clear as the Lands timbered with Evergreen.*

*On the South side of the Ottawa from a little above Point Barrier a Tract of good land begins at half a mile back from the River and continues up to the Rideau about 20 miles.*

*On the North side there is a considerable quantity of land bordering on the Ottawa for the same distances of a Soil sufficiently rich to produce grain, flax or hops, Timbered with Birch and Hickory.*

*From the Mouth of the Rideau to its Head a distance of at least Eighty Miles the Lands are good on both sides of the River and may be all cultivated Except a few Swamps, & Stony Ridges which in the whole will not amount to more than five miles on a side. However there is not many Streams of Water to be found back from the River and the Lands fit for Meadows hardly bears proportion to the Plow Land which latter is of the best Soil and will produce Winter as well as all other sorts of Grain, and to the greatest perfection with proper tillage.*

*The Timber is neither too heavy or too light and in general is very Tall and Straight without any underbrush and I should suppose that a man will be able to clear in the American method an Acre fit for seeding in Eight days.*

*From our Entrance into the River Gananoncoui to its fall into the St. Lawrence, I did not discover as much good land conveniently situated as would serve one Farmer.*

_Signed G. French Lt. & Asst. Engineer_

_Quebec 29th October 1783_

_Copy of A Journal of Lieut Frenchs’ Proceedings in Exploring the Lands on the Ottawa, Rideau and Gananoncoui River,_

_Quebec 29th October 1783_

_For Governor Haldimand No. 21 of 6th Nov 1783._
Lewis Grant’s 1795 Survey of the Upper Gananoque River

Citation Note: All references in this section to, and quotes from, Lewis Grant’s 1795 survey of the Gananoque are taken from Glenn J Lockwood’s “The Rear of Leeds & Lansdowne, the Making of Community on the Gananoque River Frontier, 1796-1996,” 1996.

In 1793, Abel Stevens, after being granted land in Scarborough Township, but failing to find a suitable site for a mill, headed east towards the Rideau, the region where his brother Roger had found a good site for his own mill (Merrickville). In December 1793, Abel Stevens petitioned the government for a survey over an ideal site for a mill, the area of present day Delta. He then proceeded to Vermont, returned with six families and squatted on the land, forming the fledgling Stevenstown.

The government, realizing that settlement was going to increase, felt the pressure to have the land properly surveyed. Accordingly, in February 1795, Lewis Grant, a deputy surveyor, received instructions to “lay out a Township on the west side of the River and Lake Gananoque.”

Grant produced a map of this survey, although only the portion involving the lower Gananoque to Sand Lake was investigated in person by Grant. His survey was slowed down after making an error “In going up the Gananoque I mistook the East branch of the river for the West and proceeded up on to the head of the first Lake [Charleston] by that means.” The section of his map upstream of Sand Lake “was taken from an Indian Plan of the River Gananoque and the adjacent country.”

The map has several interesting features. It shows the portage between Rideau Lake and Newboro Lake. Similar to French’s survey, it may be showing a route from Newboro Lake through Mosquito Creek, past Benson Lake and into Indian Lake rather than the route from Newboro Lake through Clear Lake and into Indian Lake. The portage between Indian Lake and Opinicon Lake isn’t noted. It does show a Carrying Place of one mile at the outlet of Sand Lake (bypassing the Jones Falls Rapids) and also shows rapids in the river below that point.

Interestingly, it shows a “Cranberry Marsh and Lake,” connected to the Gananoque River, between Jones Falls and Morton. No outlet is shown for this marsh and lake, only a notation on the map stating “This Marsh Impassable in Summer.” This geography is similar to what would be shown in the more detailed survey by Jebb in 1816, which also located a Cranberry Marsh and Lake, although Jebb shows an inlet to this marsh from the Dog/Loughborough Lake drainage and an outlet to the Cataraqui River. It appears likely that this marsh and lake formed a flood connection from the Gananoque watershed to the Cataraqui River, prior to the construction of the first mill dam at Morton that turned the flow from the southern Rideau lakes towards the Cataraqui River. On both Jebb’s and Grant’s maps, the scale of this marsh is highly compressed (not to scale).

Downstream from Jones Falls Rapids, the map shows the portage around White Fish Falls (Morton). Grant stated that these falls could not be made navigable for boats or canoes without locks (Grant also made this comment for the falls at Lyndhurst and at Gananoque).

The land on the west side of the southern Rideau lakes is shown as “Rocky Mountainous Country” while that on the east side is shown as “Good Land.”

Grant also shows the aboriginal canoe route, from the Cataraqui River to the Rideau lakes, likely via Loughborough Lake. The map shows a blob labelled “Kingston Cr & Lake” and a carrying place connecting it with the west end of Opinicon Lake. On the map Grant states “Half a days journey from Kingston to the Gananoque [Opinicon Lake] in canoes – a great number of rapids and Carrying Places on this Creek.” This section of Grant’s map was taken from the “Indian Plan” and likely shows the route up to Loughborough Lake, and from there down Loughborough Creek to Hart Lake, and into Opinicon Lake, or possibly from Loughborough Lake, across to Lower Rock Lake, and from there to Opinicon Lake.
Lewis Grant's survey of 1795 proceeded up the Gananoque River and into Charleston Lake. He then backtracked and proceeded up the Gananoque River to the White Fish River and from there to Sand Lake.

Ken W. Watson, 2007

Map 6
Lewis Grant’s 1795 Survey

“Sketch of the Ganonoque” by Lewis Grant, 1795, Archives of Ontario, AO1532.
This unlabelled map is believed to date to about 1815, so Jebb may well have had this in his possession before he embarked on his 1816 exploration of the Rideau Route. It may have been compiled from township surveys, most of which had been completed in this area by 1815. It contains a partial list of rapids, with a few notable exceptions (i.e. Smiths Falls). Several other rapids are shown on the map (i.e. P, Q, R and S on the Cataraqui River) but not identified in the legend. The outlines of the lakes and rivers are quite rough which indicates that these may have been drawn from township surveys. The early surveys simply marked features such as shorelines where they intersected lot and concession lines and then interpolated between them. This generally resulted in inaccurate representations. “No. 37 [Trent] & Rideau Communications” by ?, [1815], National Archives of Canada, NMC 44765.
In 1815, Lieutenant General Sir Gordon Drummond received instructions from London to obtain “estimates of expense of the Lachine Canal, and of the Ottawa and Rideau being made navigable.” In April 1816, he dispatched a young Lieutenant in the Royal Engineers, Joshua Jebb, to conduct an exploration of the route and form the estimate of expense.

Joshua Jebb was born on May 8, 1793, at Chesterfield, Derby, England. He graduated from the Royal Military Academy at Woolwich and was commissioned as a 2nd Lieutenant of the Royal Engineers in 1812. He went on to have a long and distinguished career, eventually becoming Sir Joshua Jebb, Knight Surveyor General of Convict Prisons, and achieving the rank of Major General in 1860. He died in 1863.

In 1816, the young Lieutenant was in his early 20s and full of ideas about how to make the Rideau navigable. Jebb was looking for a route that could be made navigable for vessels that drafted up to three feet (0.9 m) of water and were up to twelve feet (3.7 m) in width. To this end he proposed a series of locks, rail ways and wings (partial dams). The following is a transcript of some of his reports to the commander of the Royal Engineers in Canada, firstly Lt. Colonel Nicolls, and then Lt. Colonel Durnford (who assumed the post in mid-June 1816).

Jebb’s reports are listed in 10 papers. Only those relevant to the pre-flooding landscape of the Rideau are included here. Interpretation has not been provided since the descriptions are fairly straightforward. Jebb’s plans for making the Rideau navigable have also not been included since they are not within the scope of this document.
Note: the northern part of the Jebb’s survey follows the Rideau Waterway as shown on Map 1a.
Lieutenant Joshua Jebb’s 1816 Survey

Map 8

Notes
Joshua Jebb started his survey at the Ottawa River, proceeding up the Rideau River. He investigated both the Irish Creek route and the Rideau lakes route. Mill dams at White Fish Falls and the Round Tail made the Cranberry Flood Plain navigable by canoe.

Ken W. Watson  The Rideau Route 85
Transcription of Jebb’s Reports:

Paper 2

Kingston, June 8th 1816

To Lieutenant Colonel Nicolls
Commdr Royal Engineers

Sir

I have the honor to transmit a plan of the mouth of the Rideau River, showing the obstacles to be overcome in rendering the proposed communication feasible.

The fall is 30 feet perpendicular and as the banks rise, it makes the difference of Level between the Ottawa and the top of the rock about 35 feet.

To render the water communication perfectly a Canal must be made in the direction of the line fg / side plan / and locks must be constructed to obviate the natural difficulty occasioned by the falls. It is evident that many Plans may be resorted to in order to render the Communication in some degree practicable one of which (and that which I consider as affording the most advantages) I have expressed in the Plan. It is by means of a Ramp cut with a slope of one fourth on which I should propose to put a [?] or other contrivance on small Trucks which might be worked by means of a windlass or any Mechanical Instrument of that nature and in the same manner the stores might be transported to the wharf /c’/ embarking them again in other boats constructed so as to meet the difficulties attending the navigation of the Rideau waters and differing in some respect from those in general use. Though the cutting a canal through solid Rock would / it is needless to add / be attended with considerable expense; yet the ultimate good as affecting the comfort and convenience of the population inhabiting the fine tract of land bordering on the Rideau, should in my opinion be a strong consideration in favour of the Plan. It would greatly enhance the value of property to individuals settled there by Government, be a lasting benefit to the Infant Colony as affording them a ready means of conveyance for all kinds of produce and of course the good effects cannot fail of being ultimately felt by the country.

The wharfs, I have marked will be necessary for the security of boats; for on the Ottawa the wind occasions a heavy swell, and Lee shore; and in the Rideau is a strong and swift current leading to the falls and the effects of both must be foreseen and guarded against.

I shall lose no time in making out the Estimates which shall accompany the next plan.

I have the honor to be

Sir,

Your most obedient
Humble servant,

Signed J. Jebb,
Lt. Royal Engineers
Lieutenant Joshua Jebb’s 1816 Survey

Paper 3

Kingston, June 22nd 1816

To Lieutenant Colonel Durnford
Commdr Royal Engineers

Sir,

I have the honor to transmit a plan of the Rideau River from its mouth to the head of Long Island in which the Rapids and all other obstacles are expressed.

The Idea which has hitherto prevailed that this place cannot be rendered navigable for batteaux is quite erroneous, since but few difficulties present themselves which cannot be easily surmounted, the expense of remedying these, may appear exorbitant; but it arises for a variety of Local disadvantages which occur.- The water in the Rapids is extremely shallow seldom exceeding in the summer months the depth of 10 or 15 inches, but the fall in most of them is so gradual that were there sufficient water, a batteaux might in their present state be brought up with but little trouble.

To obviate these interruptions various methods may be resorted to, two of which as appearing the most efficacious and feasible. I shall submit for your consideration—

The first is by means of Locks and the partial use of Dams, or Wings, placed so as to Contract the channel in those situations where they may be required. The second is the exclusive use of wings.—

The former proposes many advantages which the latter does not, much time and trouble would undoubtedly be saved in getting up, but on the other hand, as several Locks must be constructed much inconvenience must be sustained in keeping up and establishment in each for working them and it was this consideration which led me to turn my thoughts to the second method, which is a speculative idea of my own, and the effort of which I never had an opportunity of observing in practice.

It would add in a certain degree to the depth though it would increase the velocity of the current; but in many situations I feel convinced it would answer every purpose however I should be cautious how I asserted an opinion as to its general efficacy. — A plan and sections are enclosed; the windlass described will afford very material assistance to boats in getting up.— If it appears to you that the object in question can be attained by these means I beg leave to recommend that a Dam and Lock be placed about the middle of Long Island for the purpose of retaining a head of water which will be of essential service in dry seasons; by furnishing at any time a supply to boats coming up or going down.

The situations best adopted for Locks are marked in the plan and I shall only add the requisite dimensions as the general principles will be adhered to.

The accompanying estimates will convey a general idea of the probably Expense attending both methods and which I have endeavoured to ascertain as correctly as possible.

Above Long Island the breadth of the river averages about 100 yards and is uniformly devoid of Current and very deep for about 20 Miles from thence to Merricks Mills, the water is swift and with the exception of one slight rapid is perfectly practicable for about a distance of 10 Miles.

The roads to Kingston and Brockville branch off on the left and cross the river by means of a wooden bridge near Chester’s Tavern and from thence to the Grand River but as the greatest part was only cut in the winter of 1815 it is not yet practicable for waggons. I learn from the information of the inhabitants that it passes through the finest tract of land in the Province.—

As the fall at the Mills is great, and will require a Lock, I shall make a separate plan of it, and then proceed to lay down the Irish Creek which joins the Rideau about seven miles above, which when finished I shall immediately forward

I have the honor to be

Sir, Your most obedient Humble Servant, Signed J. Jebb, Lt. Royal Engineers

Ken W. Watson
The Rideau Route
87
Lieutenant Joshua Jebb’s 1816 Survey

“Plan of the Rideau River from its Mouth to the Head of Long Island” by Lt. J. Jebb, July 8, 1816, National Archives of Canada, NMC 59324.
Lieutenant Joshua Jebb's 1816 Survey

Paper 7

Report on the Rideau Communication

Kingston
July 14th 1816

To Lieut. Colonel Durnford
Commanding Royal Engineers

Sir

I did myself the honor to forward to you a plan and report of the Rideau river from its mouth to the head of Long Island. I now enclose one comprising the whole communication from the Ottawa to Kingston, shewing that formed by the Irish Creek, and a branch of the Gananoqui River as well as that through a Chain of Lakes to the north west of the Kingston mill Stream. A separate sketch which I also transmit will, from being on a larger scale give some idea of the obstructions.

Previous to offering any remarks as to the general efficacy of either, it may not be deemed improper to give those which are explanatory of the local interruptions that are met with, and the best means of remedying them; for which purpose I will commence at Long Island, and make a detailed account of the whole.

On leaving the Island the breadth of the Channel averages about one hundred yards, is devoid of Current, and of sufficient depth to allow Boats of any size to navigate as far as the Rapid plat a distance of 20 miles. The banks are in general very low and each side of the river is partially overflowed, beyond that the land is excellent, said to be the finest tract in the country. The rapid is very shallow but does not extend more than a few hundred yards, and may be rendered navigable either by excavating a Channel sufficiently large for boats, or by contracting so as to afford a depth of water thro' the means proposed in a former report. Three miles above it, is the bridge over which the roads from Kingston and Brockville cross the river and continue through the settlement on its left bank to the Ottawa, Merricks Mill is one mile further, situated on a very strong rapid of the same name, for the means of obviating this impediment, I beg to refer you to the sketch. Stones, Timber and all materials of that description are in abundance with the advantage of a saw mill, for cutting any scantling Plank or Boards that may be required.

From thence to the mouth of the Irish Creek, a distance of 7 miles is dead water, deep and perfectly navigable. The Creek averages about 60 feet in breadth and the depth ascertained by sounding every hundred yards varied from [?] to 10 feet. A mill is situated about [?] miles from its mouth, which has a dam across of 9 feet high, and a lock will be required as shewn in the sketch.

This dam retains an immense head of water, the ground on each side of the Channel being so low as to be overflowed by it to a depth of three feet, the trees standing [?] of vegetation on either side, this continues until the Irish Lake opens (a distance of 7 miles) This Lake being very shallow and muddy was probably previous to the construction of the dam below it, nothing more than a large swamp, or marsh, it is about three miles long and one Broad. At the south west extremity is the opening of the Creek which supplies it with a small quantity of water, its mouth is much obscured, by a species of floating bog, but which can easily be removed, and one mile above is Koyles Bridge over which the new road laid out from Perth to Brockville passes; thus far the Creek is navigable for boats, it now becomes shallow and heads in a swamp two miles beyond.

The principal magazines and storehouses should be established at this point, for land Carriage will now become absolutely necessary, as the very small quantity of water precludes the possibility of completing the communication in that way, by any artificial means.

Keeping a South west direction, I found the Gananoqui Stream distant from the last mentioned point about three miles, but it is then so very inconsiderable that I cannot recommend its being attended to, as the Channel does not exceed the breadth of 5 or 6 feet, and is only a few inches
deep in water, following its course about two miles down, through a remarkably fertile and highly cultivated valley, the breadth of which varies from 800 to 1200 yards on a dead level, it gradually becomes larger, and at parishes is navigable; the dam at the stone mills setting back the stream to that place. I do not deny the practicality of obtaining a water communication for the two miles, though at best it would be but a precarious one, yet doubtless by sacrificing the valley in the construction of a dam head across it for the purpose of retaining an immense body of water to supply a Canal Cut from thence to parishes Bridge it might be effected, but I do not conceive that the advantage resulting from such a measure would compensate for the trouble and expense attending it.

A Road cut from Coyles to Parishes in a direct line, would not exceed 5 miles and for this distance I would construct a rail way using a particular description of low cart for transporting stores to where the water communications again commence. I have had frequent opportunities to seeing this contrivance applied with wonderful effect, it is usually made of cast iron, which would be easily obtained and brought by water, if Government would again Occupy and work the furnace on the Gananoqui Stream. The finest ore is in abundance on the spot, and I need not advert to the advantages in an economical point of view that would result from such an establishment in every article of Iron work. Many things might be made here, for less than the Transport comes to from Quebec to Kingston, but if this plan is not carried into effect, it might still be made of Timber which though not so durable would be found of equal service. A receiving store will also be necessary at Parishes, from thence the navigation is perfect to the stone mills lying principally through a small lake, and on the sketch are expressed the dimensions of a canal and lock for passing the fall at that place which may be excavated at a trifling expense from thence to the white fish or Gananoqui Lake, the channel is good and passing that the navigation perfect by means of another stream up to Haskins Mill requiring a Lock as laid down on the sketch. The dam at this mill secures the communication with Cranberry Lake by overflowing what would otherwise be an extensive swamp to the depth of 7 or 8 feet and water is furnished by an ample stream which comes from the Chain of Lakes forming the other communication I alluded to and may be properly considered the main branch of the Gananoqui river.

The Cranberry Marsh is rendered passable by a dam at the entrance or head of Kingston mill stream which throws the water coming from the Loughbro Lake on to it, and overflowing it to the depth of 6 feet.

A Lock will be required to pass it and excepting two small rapids which a little labour will obviate the navigation is perfect to Kingston mills.

The breadth of the Creek – about 50 feet, and the breadth [depth] varies from 5 to 10 feet – through it would average 8 ½ as it rarely occurred that it was so shallow as the first number.

I apprehend that it is not so deep in the summer months and it will be therefore doubly advisable to retain all the water than can be possibly be collected from the Cranberry Marsh to serve as a reservoir in case of necessity.

At Kingston Mills there is a considerable fall, and as it will require a separate plan and various sections which as yet I have not had leisure to take, I shall defer making any remarks until a future opportunity and proceed to give you a slight sketch of the line of other communication.

Leaving the mouth of Irish Creek and proceeding up several rapids intervene between it and the Rideau Lake.

The principal one is Smiths Fall about 3 miles long and in one part very strong having a fall of 15 or 20 feet in 100 yards – a Lock would remedy this, and as there seems to be sufficient water in the other, a path for towing Boats up is all that would be required. Twenty three miles from the mouth of the Tay which is near the northern extremity of the Lake, is a portage of one mile into mud lake, on the opposite side of which a small passage of a few hundred yards leads into a Lake from which there appears no outlet. Forty yards of Land Carriage is all that intervenes between this and a Third Lake which Communicates by a rapid stream with Sand Lake, and the same stream passes through it and is retained in the overflowed land by the dam at Haskins mills. here the two communications join and proceed to Kingston.

On looking at the former in a military point of view, it will be evident that in case of any future war with the United States, it is much exposed to the incursions of an enterprising enemy, who
profiting by the experience gained in the late contest, will doubtless see the policy they ought to have adopted in the first instance, of retaining an imposing force on the line of the St. Lawrence, especially in that part of it lying opposite the frontier, from Cornwall to Brockville, knowing that the safety of the upper province, depends in a great measure on a free communication with our resources below.

Suppose this force therefore so stationed, the St. Lawrence as a means of Transport given up, and the Rideau exclusively used for that purpose, yet it must be remembered that from merricks to the stone mills is perfectly open, there being excellent roads in every direction.

And the distance not exceeding from 25 to 30 miles – Defensive measures are therefore necessary to cover the stores and secure even this communication.

Fort Wellington will have its due weight in effecting this point, being situated as it were at the vertex of a triangle, the base of which is to be defended, but from its size a small force would keep it in check and it therefore cannot be expected to afford sufficient protection.

A small work must be constructed in the vicinity of the principal depot to cover it and one or two Blockhouses to defend those points which are more remote, and these would probably have the effect of deterring even an attempt to molest; for an enemy failing in a Coup de main, would be placed in a very awkward situation, there being a numerous population through out the whole of that part of the Country, who by rising En masse in their rear would occasion them some trouble to retreat.

I have no spot in particular to point out for the site of a work though in my opinion near the main roads in front of the principal depot would leave more extensive advantages than any other situation but this matter will probably become the object of future discussion engaging the opinions of other more competent to decide than I am and my only motive for bringing the subject forward is the conviction I feel of its necessity.

I have the honor to be

Sir,
Your most obedient
Humble servant

Signed – J. Jebb
Lieut Royal Engrs
Lieutenant Joshua Jebb’s 1816 Survey

Jebb’s 1816 Rideau Map – North Section

Lieutenant Joshua Jebb’s 1816 Survey

Lieutenant Joshua Jebb’s 1816 Survey

Jebb’s 1816 Rideau Map – South Section

As settlement of the Rideau Route progressed, roads were created to move people and supplies. The evolution of a road often went from a blazed trail, to a bridle path (horses could be led along the path), to a stump road (trees chopped down but stumps left), to an open dirt road (stumps removed) and eventually to a macadamized (compacted broken stone) road. Many of the early roads were essentially impassible during wet seasons (mud holes).

This section taken from an 1828 map shows the results of a survey of area roads conducted in late 1827 and early 1828. The base geography of the Rideau Route appears to have been taken from Clowes’ survey map. The roads ranged from those “merely marked out” (blazed) to the well established roads near the shore of the St. Lawrence River over which it was noted “waggons heavily loaded pass through them in the wet season.”

Road development on the Rideau Route accelerated with the building of the Rideau Canal. New roads were built and old roads were improved in order to move supplies to the work sites. For example, the “quarry” shown at the centre of this map is Halladay’s Quarry, just east of present day Elgin, from which the stones for the nearby Rideau Canal locks and dams (Chaffey’s, Davis & Jones Falls) were quarried. Roads extend from this quarry to Davis’ Rapids (and, although only partially sketched, a road also ran from Davis’ Rapids to Chaffey’s Rapids) and to Jones Falls. Colonel By in 1828 referred to this latter road as the “new road” - it was built in 1827. The road to Davis’ Rapids was likely an improvement of an existing road (or path) that serviced Davis’ mill. Many of today’s roads, including Highway 15 and County Roads 32, 33 and 42, follow portions of the roads shown on this map.

“Outline of the Country from Kingston to Oliver’s ferry along the route of the Rideau Canal, and from Kingston to Brockville, with the roads leading upon the canal from the St. Lawrence; accompanying a report of a reconnaissance made in pursuance of the orders of the Commissioners of Whom Lt. Gen’l, Sir James Kempt, K.C.B. etc. etc. etc. is President” by J. Walpole, R.E., 22 June 1828, Library and Archives Canada, NMC 11230.
Samuel Clowes’ 1823 and 1824 Surveys of the Rideau Route

Source:

1823 survey (Report of 20 December 1823)
– Handwritten original - NAC, RG5, A1, Vol.63, Reel C-4612, pp. 33631-33647

Combined 1823 and 1824 surveys (Report of 5 February 1825)

Transcription by: Ken W. Watson, 2005

The Macaulay Commission was set up under an Act of the Provincial Legislature to investigate internal navigation in the province of Upper Canada. They hired Civil Engineer Samuel Clowes to conduct a survey of the Rideau Route and prepare cost estimates for making the route useable for a navigation depth of 7 feet (2.1 m). In 1824, the requirements were altered and Clowes was asked to prepare three estimates, for 4, 5 and 7 foot (1.2, 1.5 and 1.7 m) navigation depths.

Little is known of Samuel Clowes. In 1822, he and his son James did a survey of the proposed Welland Canal for the Macaulay Commission. At the start of the Rideau Project in 1826, he accompanied Lt. Colonel John By on some of his first trips along the Rideau. Clowes obtained the contract for constructing the lock at Lower Brewers but died of malaria in 1828. It is not known if the James Clowes who opened the quarry at Clowes’ Quarry in about 1826, was Samuel’s son James, or another Clowes.

Samuel Clowes, in the company of his son James, Provincial Land Surveyor Reuben Sherwood (acting as a guide), and one of the commissioners (unnamed), embarked on the survey in the spring of 1823. Clowes had been asked to investigate several possible routes, including the Irish Creek route that Lt. Joshua Jebb had recommended in 1816. The investigation of these alternate routes, and time spent on other investigations, such as looking for a route around Jones Falls, meant that Clowes was unable to complete his survey in 1823. His detailed survey ended at Rideau Lake and then he carried levels (surveyed elevation differences) down to the Ottawa River. He apparently re-surveyed the length of the route along the lakes that winter; something he noted was impossible to do accurately in the summer. He returned to the main route in May 1824, possibly re-measuring his original route from Kingston to Rideau Lake (that portion may have been re-done in the winter) and then continued the detailed survey to the Ottawa River.

Two reports were issued. The first, in December 1823, detailed the 1823 survey, which went from Kingston Bay to Rideau Lake. The second, on February 5, 1825, detailed the entire route from Kingston Bay to the Ottawa River.

Clowes proposed a more conventional canal system than Colonel By was to later build. When encountering difficult sections, such as Smith’s Falls, Clowes proposed that a canal cut be dug around those navigational obstructions. His plan also included a towing path along the entire length of the canal, similar to British canals of that era. Self-powered steamboat navigation was not contemplated in Clowes’ design. Clowes did advocate the use of dams in several sections, such as the Cranberry Flood Plain, to raise the water level to navigation depth rather than cutting channels through these areas. This was a precursor to John By’s slackwater design. The minimum fixed bridge height of 22 feet (6.7 m), used by Clowes, is still in effect today.

One of Clowes most significant recommendations was the rejection of the Irish Creek route, which Lt. Joshua Jebb had recommended in 1816, and the recommendation instead of the Rideau lakes route.
Transcription Notes:

The following is a partial transcription that combines portions of both the 1823 and 1825 reports. The estimates are omitted since they are not germane to the investigation of the pre-flooding geography (the reason for this transcription) and would have greatly extended the transcription time (large tables of data). Parts of the 1823 report are included since they provide some discussions about alternate routes, which were not included in the 1825 report.

Geographic locations are used as section titles for reference and to improve readability.

Clarification Notes:

Clowes was asked to prepare estimates for navigation depths of 4, 5 and 7 feet (1.2, 1.5 and 1.7 m), hence the references in the report to a 4, 5 or 7 “feet” Canal. The references to “Minor Canals” are for the 4 and 5 foot deep canal estimates.

When the report states “will be required in each Canal, the situation being alike in all” it is referencing three canal estimates for the same section, not three separate canals, “each Canal” being a 4, 5 or 7 foot deep canal cut.

Distances:

In his survey, Clowes was using what is known as a Gunter’s Chain, which is 66 feet long. Each chain is divided into 100 links. There are 80 Gunter’s chains in a mile.
Samuel Clowes’ 1823 and 1824 Surveys

Central Rideau Route Region

Clowes’ Surveys of 1823 & 1824

Note: the northern part of the Clowes’ survey follows the Rideau Waterway as shown on Map 1a

Notes
Samuel Clowes conducted surveys in 1823 and 1824. He conducted a detailed survey of the route though the Rideau lakes and investigated an alternate route by way of Irish Creek. Mill dams at White Fish Falls and the Round Tail made the Cranberry Flood Plain navigable.
Samuel Clowes conducted surveys in 1823 and 1824. He made a detailed survey of the route through the Rideau lakes and investigated an alternate route by way of Irish Creek. Mill dams at White Fish Falls and The Round Tail made the Cranberry Flood Plain navigable by canoe.

Ken W. Watson, 2007
“Sketch of the Water Communication from Kingston to the Grand River” by Samuel Clowes, 1823-24, Library and Archives Canada, NMC 11962.
Clowes’ Map of the Rideau Route 1823-24 (section 2 of 5)

“Sketch of the Water Communication from Kingston to the Grand River” by Samuel Clowes, 1823-24, Library and Archives Canada, NMC 11962.
Samuel Clowes’ 1823 and 1824 Surveys

Clowes’ Map of the Rideau Route 1823-24 (section 3 of 5)

“Sketch of the Water Communication from Kingston to the Grand River” by Samuel Clowes, 1823-24, Library and Archives Canada, NMC 11962
Clowes' Map of the Rideau Route 1823-24 (section 4 of 5)

“Sketch of the Water Communication from Kingston to the Grand River” by Samuel Clowes, 1823-24, Library and Archives Canada, NMC 11962.
Clowes' Map of the Rideau Route 1823-24 (section 5 of 5)

"Sketch of the Water Communication from Kingston to the Grand River" by Samuel Clowes, 1823-24, Library and Archives Canada, NMC 11962
Transcription of Clowes’ 1823 and 1824 reports:

[First part of 1823 report]

To His Excellency Sir Peregrine Maitland, Knight Commander of the most Honourable Military Order of the Bath, Lieutenant Governor of the Province of Upper Canada, Major General commanding His Majesty’s Forces therein &c. &c. &c

The Commissioners appointed by your Excellency in conformity to the provisions of an act passed in the second year of His Majesty’s Reign, entitled “An Act to make provision for the improvement of the internal navigation of this Province.”

Most respectfully Report.

That in prosecution of the Plans stated in the first Report, submitted at the late Session of the Legislature, the Commissioners this season applied their attentions to the route from Lake Ontario by the interior Lakes and streams to the River Ottawa: and because no positive direction could be assigned to this survey without more general knowledge of the interior than was at that time in their position, they found it necessary that the Engineer should traverse the Country from Kingston to the confluence of the Rideau and Ottawa Rivers, and personally acquire the requisite information respecting its leading features.

Mr. Clowes the Engineer, accompanied by one of the Commissioners and by Mr. Sherwood the Land Surveyor, who acted as guide on the occasion, embarked in canoes early in the Spring and proceeded from Kingston up the Grand River Cataracquay and through Cranberry Lake, to the Gananoque River, which are all connected by means of dams erected at the White fish falls in the Township of South Crosby, and at the Round tail in Pittsburgh. The exploring party then passed up Jones’s falls or Rapids, and following up the White fish branch of the Gananoque through several small Lakes, to the Carrying Place from Mud into Rideau Lake, transported their Canoes and Baggage from the lower end of the latter into the River Mississippi by the main road leading from Perth to Lanark – from thence they descended to the Ottawa, and returned to Kingston by the Rideau River, Irish Creek and the Gananoque.

The Commissioners had been led to suppose that the Mississippi would afford great facilities for their proposed survey — It is in truth a fine and copious stream taking its rise somewhere in the neighbourhood of Crow River, one of the tributary Streams of the Trent, and running in a northerly direction a course of about two hundred miles — on observing however its numerous rapids and cascades, as well as the falls at the Chats and Chaudieres on the Ottawa, it was evident that the bed of the Mississippi was far too elevated, and that as the lockage to attain and descend from the summit point would be enormously expensive, no Canal would be practicable in that direction.

The Rideau River seemed to oppose fewer obstacles and it also presented a shorter course from Kingston to the still water of the Ottawa below the Chaudieres falls, the examination of the Petit Nation River, which was more distant and less promising, though also in contemplation, was postponed until the localities of the Rideau had been fully explored.

The Engineer was therefore instructed to commence his surveys near Kingston and to gain the Rideau (if possible, below the Lake of that name) by the most direct line and the lowest summit he might discover. — It was at the same times suggested that he would probably meet with the lowest summit at a place in the Township of Kitley, call Plum Hollow, where the waters of the Rideau and Gananoque very closely approach each other.

With these general views for his guidance the Engineer began to explore the Level on the 12th day of June and continued incessantly engaged with it until the 15th day of November, when the severity of the weather and the necessity of reporting on the progress of the survey, put a period on his operations — The results, so far as there was time to proceed this Season, is detailed in the
following statement furnished by the Engineer, and will be further elucidated by the accompanying Maps and plans.

[First part of 1825 report]

Third General Report

To His Excellency, Major General Sir Peregrine Maitland, Knight Commander of the most Honourable Military Order of the Bath, Lieutenant Governor of the Province of Upper Canada, Major General commanding His Majesty’s Forces in Upper and Lower Canada &c. &c. &c;

The Commissioners appointed by your Excellency in conformity to the Second Section of an Act passed in the second year of His Majesty’s Reign, entitled “An Act to make provision for the Improvement of the internal Navigation of this Province,”

Most respectfully Report:

Than as early in the month of May last [1824] as circumstances would permit, they directed their Engineer to resume the examination of the route for a Canal from Kingston to the River Ottawa at the point where he had closed his operations in the preceding year [1823]. Mr. Clowes, having in pursuance of those orders repaired to the Rideau, completed his work in the Month of September; and the Commissioners now beg leave to submit the result of the Survey in the following estimates:

Three Estimates of the expense of constructing a Canal from Kingston to the Ottawa or Grand River of the following dimensions viz. The first, seven feet in depth, forty feet in width at the bottom and sixty one feet in width at the surface of the water; the banks to slope one foot and a half to one foot perpendicular, the Locks to be one hundred feet in length by twenty two in width with turning bridges twenty-two feet in the clear and ten feet wide: The second, five feet in depth, twenty eight feet in width at the bottom, … [The rest of this paragraph is blanked out on the document copy. The 5 foot depth system was to have locks 80 feet long by 15 feet wide and the 4 foot depth system was to have locks 75 feet long by 10 feet wide].

From the foot of Bells Island to Bower’s Island, the proposed place of departure out of Kingston Bay, a distance of one mile 65 chains, it will be necessary to clear the Channel, several shoals crossing the River,

At the above Island we commence with Lock No. 1 of 4 feet lift (being a Guard Lock). Allowing a depth of 8 feet water at the lowest ebb, the 4 feet lift guards the Canal against a fluctuation of 4 feet in Lake Ontario, giving three feet cutting through black mud lying upon a strong blue clay a distance of 42 chains across the marsh; thence 38 chains up a small ravine, composed of soil and clay excellent for a Canal. In the last distance of 38 chains there is a rise of 15 feet 13 decimals and it contains Lock No. 2 of 7 feet lift and Lock No. 3 of 8 feet lift – bottom level of the Canal 15 feet. This mile crossing the main road from Kingston to Montreal, it will be necessary to have a Turning Bridge. In constructing either a 5 or 4 feet canal no Guard Lock will be necessary. Locks No. 1 & 2, each a 7 feet lift, will be required. No. 1 will stand at the end of the first 47 chains & No. 2 at the end of 72 chains. The situation of these Locks being alike in both.

2nd Mile is composed of a light soil upon a strong clay. Near the commencement of this mile stands Lock No. 4, an 8 feet lift – bottom level 23 feet. In this mile a great quantity of extra cutting in unavoidable. The River Cataracquay above the Mills lying 28 feet 28 decimals higher than Kingston Bay, prevents our placing another Lock here; it will therefore be necessary to have an extra Waste Weir 60 feet wide at the end of 1722 yards to let off the surplus water to Kingston Mills. Locks No. 3 & 4, each a 7 feet lift, will be required in the 5 & 4 feet Canals. No. 3 will stand at the commencement of this mile and No. 4 at the end of the first 10 chains, the situation of the
Locks being the same in both. The extra Waste Weir above described will also be necessary in these.

[Kingston Mills, Colonel By Lake, River Styx and Lower Brewers]

3<sup>rd</sup> mile commences in Kingston Mill pond, the River forming a natural Canal with little alteration except such as straightening the sudden curves &c. The excavation consists of black mud and clay. It is proposed to follow the natural stream from Kingston mill pond to the Round Tail.

In this mile nothing will be required from the minor Canals except a little cutting at the curves, sufficient to form a Towing Path.

4<sup>th</sup> Mile consists of a strong clay, - excavation favourable, the natural Bed of the River requiring little alteration.

The minor Canals will require very little except the formation of a Towing Path.

5<sup>th</sup> mile resemble the preceding. It is a little above the level, and the extra cutting lies very conveniently for raising the banks &c. In this mile is Lock No. 5 of 7 feet lift, bottom 30 feet.

In the Minor Canals Lock No. 5 will be a 4 feet lift.

6<sup>th</sup> mile runs near the level, all the excavation necessary is in raising the bank on the East side, a high hill nearly the whole distance on the West, the same description of earth continues as in the last mile.

7<sup>th</sup> mile still preserves very nearly the level. It will be necessary to straighten the natural course of the River. The earth excavated is very convenient for raising the bank.

8<sup>th</sup> mile running rather above the level is of the same description as the last, and little extra cutting will be necessary.

9<sup>th</sup> mile continues through the same clay excavation and is nearer the level, the cutting is favourable.

10<sup>th</sup> mile runs a little above the level, is will be necessary to deepen the bed of the River. The excavation will answer for raising the East bank. In the minor Canals the River will not require deepening.

11<sup>th</sup> mile – the River taking a serpentine course through the whole of this mile it is necessary to straighten several curves the excavation of which consists a strong blue clay.

12<sup>th</sup> mile consists of the same strong clay and runs some distance above the level. The river will require to be deepened, the banks dressed and sloped, and a Towing Path formed along the same. Near the end of this mile stands lock No. 6, of 10 feet lift: bottom level of the Canal 40 feet. In the minor Canals, Lock No. 6 (being an 8 foot lift) will stand at the end of the first 15 chains. No extra cutting in these.

13<sup>th</sup> mile. The River running very straight and near the level, little alteration is necessary, the nature of the excavation favourable.

14<sup>th</sup> mile. There is a little extra cutting required; the earth answers to the description of the last mile being easy to excavate. In this mile stands Lock No. 7 of 9 feet lift – bottom level of the Canal, 49 feet. Locks No. 7 & 8 will be required in the minor Canals. No. 7 of 10 feet lift will stand at the end of the first 30 chains and No. 8 of 3 feet lift near the termination of this mile – The situation of the Locks is the same in both Canals. 15<sup>th</sup> mile, for the first 20 chains runs near the level, and from thence to the end rises above it. At the end of this mile stands Lock No. 8, an 8 feet lift – bottom level 57 feet, the same uniformity of earth continues. No Locks in the minor Canals in this mile.

[Upper Brewers]

16<sup>th</sup> & 17<sup>th</sup> miles. For the first 33 ½ chains the River will require deepening, the banks dressing, &c. At the end of 34 chains stands Lock No. 9 of 7 feet lift, bottom level 64 feet. It will be necessary to remove Brewer’s Mill, there being high banks east and west of it – from thence we have a natural Canal to the Round Tail, a distance of 80 chains, requiring only to remove the dead timber out of the River and to form a Towing path on one side of it. In the minor Canals, Lock No. 9 of 10 feet lift will stand at the end of the first 32 chains.
[The Round Tail]

From 17 miles 34 chains to 27 miles, 34 chains – It is proposed to raise the water at the Round Tail as well as in the Cranberry Lake and the drowned lands, 7 feet perpendicular by constructing a Lock and waste weir at the head of the Round Tail, and a Waste Weir at the White fish falls. These Waste Weirs, being designed to let off the surplus water and to guard the canal from the injurious effects of a sudden rise, should be composed of substantial masonry. Lock number 10 being a lift of 7 feet 45 decimals: stands at the head of the Round Tail, bottom level 71 feet 45 dcls.

In the 5 feet Canal Lock No. 10 is a lift of 7 feet 21 decimals & in the 4 feet Canal of 8 feet 21 decimals, the situation being alike in all.

Very formidable difficulties would be encountered in attempting to cut through the marshy land, it is now proposed to drown, and it would be necessary in many places to fill and plank each side of the canal: The additional expense which would thus be incurred, is calculated not to fall short of £24,925. – On the east side of the Lock should stand a Turn Bridge, so that the walls forming the Lock may serve as its abutments, and thus save nearly half the expense of the bridge if placed on any other part of the canal.

[Jones Falls]

27 miles 34 chains brings the line of Canal to Jones’ Falls or rapids and connects the drowned lands with Davis’ Lake. In this mile there is a rise of 60 feet 91 ½ decimals, requiring 6 Locks, viz - 4 of 10 feet lift each, one of 10 feet 50 dcls, and one of 10 feet 41 ½  dcls. The bottom level of the canal at the head of the falls is 132 feet 36 ½ dcls. The situation of each Lock is so managed that double Locks are avoided while a pound is reserved between each, sufficiently wide for vessels to pass each other. It is proposed from the head of the rapids across all the Lakes as well as their inlets and outlets, to allow 8 feet water in order to guard against evaporation &c, to the extent of one foot perpendicular. The natural position of the rapids being very favourable, no extra cutting will be necessary.

The 5 & 4 feet Canals will require 7 Locks each, viz. 3 of 10 feet lift each, 3 of 8 feet each and one of 9 feet, the situation of the Locks is the same in both. Nothing will be required at the opening into Davis’ Lake for the minor Canals, the channel being sufficiently deep in its natural state to admit vessels not drawing more than 5 feet water to pass.

[Davis]

To 30 Miles 46 chains, 22 links. The line of the Canal crossed Davis’ Lake and enters Opinicon Lake; at Davis’ Mill there is a rise of 7 feet 29 dcls, requiring one Lock of that lift – bottom level 139 feet 65 ½ dcls. a bridge to be constructed across the lock as at the Round tail. Davis’ Lake will be raised 4 feet for the 7 feet Canal, 2 feet 28 decimals for the 5 feet Canal and 1 foot 29 decimals for the 4 feet Canal. One Lock of 8 feet lift will be required in each of the minor canals.

[Chaffeys]

32 Miles 59 chains 82 links. The line of the Canal crossed Opinicon Lake & enters Indian Lake, a distance of 2 miles 13 chains 60 links. At Chaffey’s Mill there is a rise of 14 feet 45 dcls, requiring two Locks each with a lift of 7 feet 22 ½ dcls and a Bridge as at the Round tail. The water will be raised 4 feet in Opinicon Lake and 5 feet in Indian and Mud lakes for the 7 feet Canal, and for the minor Canals the former will be raised 1 foot 50 dcls, and the two latter 2 feet each.

The summit Pound commences at Chaffeys Mill, bottom level of the Canal 154 feet 10 ½ dcls. The minor Canals also require two Locks – one of 9 feet lift and one of 6 feet 55 dcls. The lifts and situation are alike in both.

[Indian Lake]

43 miles, 38 chains, 45 links. The line of the Canal passes through Indian Lake up the outlet of Mud Lake and through that Lake to the place of departure into the Rideau, a distance of 10 miles 58 chains 63 links. In the 5 & 4 feet Canals, a saving of 4 miles in distance may be effected at an inconsiderable expense by cutting through the Isthmus between Indian and Clear Lakes and opening the Strait between Clear and Mud Lakes. It is proposed to raise the water 5 feet
perpendicular, thereby acquiring at a trifling expense a good and safe navigation, besides placing all these Lakes on the level with Rideau Lake, and forming an extensive Summit Pound.

The Neck of land separating Mud from Rideau Lake occasions some extra excavation, as the line of the Canal passed through a summit of 38 feet 32 dcls for a short space, and then falls near the level. The nature of the excavation through ridge being rock, it is proposed to make the cut in that part 24 feet wide at the bottom, sloping 6 inches to the yard perpendicular, and in the clay excavation to make the cut 22 feet wide at the bottom sloping 1 ½ feet to 1 foot perpendicular. The 5 & 4 feet Canals also to be proportionally less in passing through the ridge. A Bridge will be necessary for which the sides of the rock excavation will form abutments.

[Upper Rideau Lake]

47 miles 2 chains, 45 links. The course of the canal is down the Rideau Lake to the first or upper narrows, a distance of 3 Miles 44 chains, where the navigation is obstructed by a bed of rock 5 ½ chains in breadth; the excavation will be 24 feet wide at bottom, in the centre, and 40 feet at each end, for the 7 feet Canal. The two minor Canals will also be made less in the same proportion at this place. A bridge will be necessary as the intended road from Perth to Kingston is to cross at this spot.

[Big Rideau Lake]

65 miles, 78 chains, 45 links – The Canal continues down the Rideau Lake and requires no expense. The total length of the Summit Pond in the line of the Canal is 33 miles, 18 chains, 63 links exclusive of that part of the Lake which lies to the Westward of the Route and which is estimated at Seven Miles in length.

From the East end of the Rideau Lake to the first or upper Rapids, a distance of 3 miles 65 chains, all that will be required is the formation of a Towing Path and clearing the Channel of the River

[Poonamalie]

At the head of the first rapids it is proposed to raise the water 2 feet perpendicular by constructing a Waste Weir, which will require to be 151 feet wide. The design in raising the water is to preserve a depth of 7 feet upon the Shoals where the River in its natural state is not sufficiently deep at all times to be navigable. At this place we are compelled to forsake the River to the still water at the foot of the rapid; the distance is 732 yards, the greater part of which is rock excavation. At the head of the Canal, Guard Gates will be necessary which are of the utmost utility to protect the Canal against the Spring and Fall floods, that would otherwise have a tendency to obstruct the navigation thereof. At the head of the Rapid we are likewise compelled to cross with the Towing Path; one bridge will be necessary for that purpose. A Lock of 7 feet lift, descending, will be required to connect the Canal with the River below. The lift and situation are alike in all the Canals.

[Smiths Falls]

We continue our line of Canal in the natural stream to the head of Smiths Falls, a distance of 2 miles 42 chains 60 links. Some rock excavation will be necessary in the bed of the River for a distance of 12 chains in the 7 feet Canal only; in doing which the expense of another Lock will be avoided, which must otherwise necessarily occur. Having a small Island, Cockburn Creek and two small streams to encounter, 4 Bridges will be necessary in the formation of the Towing Path.

At the head of Smith’s falls it is proposed to raise the water 2 feet perpendicularly by a Waste Weir 858 feet wide; the extreme width of this Weir is occasioned by a small flat Island that divides the river at this place. Some rock excavation will be necessary in the bed of the river at the head of the Waste Weir. Here we are again compelled to abandon the River. Guard Gates will therefore be necessary. The first mile is rather unfavourable; our cutting is from 4 to 7 feet, the first 20 chains of which is composed of a solid bed of Limestone rock very difficult to excavate; the remainder of this mile is mostly composed of loam and loose stone. Two embankments will be necessary; the first is 3 chains long and 8 feet below level; this we propose to cross with one bank only, the banks of the ravine being so steep and the descent so rapid that one bank will be
The Rideau Route

Ken W. Watson

sufficient, whereby a great saving will be made and an excellent reservoir formed without injuring any land of importance. The cutting here is sufficiently deep to form the bank. The second is more difficult, being 11 chains in length 3 feet below level and the ground so flat that two banks will be unavoidable. This embankment crosses a small stream of water, which will require a Culvert 3 feet by 4.

Second mile from Smiths Falls is more favourable than the first; the cutting runs very near the level, the nature of the earth being Loam mixed with loose stone. 4 Locks will be necessary in each of the canals in this mile. The situation and lifts are alike in all.

[Edmonds]

Third mile and 5 Chains connects the line of Canal with the River at Mr. Ja Es Edmonds’; the cutting continues very near the level, the soil in this answers the same description as in the last; some rock excavation will be necessary where the line enters the River. Three Locks will be necessary in each, descending 28 feet, the lifts and situations being the same in all. In this mile the line crosses a road, one Bridge will be required.

From Mr. James Edmonds’ we continue in the natural stream to the head of the Island above Maitland’s Rapids; the distance is 3 miles 62 chains. All that will be necessary in this distance is the formation of a Towing Path and clearing the Channel of the River.

Distance from Kingston 71 Miles, 46 chains, 5 links

[Kilmarnock]

At the head of Maitland’s Rapids it is proposed to raise the water 2 feet perpendicular by a Waste Weir 165 feet wide and forsake the River to the Stillwater below. Guard Gates and one road Bridge will be required, and, as we propose crossing both at the head & foot of the rapids with the Towing Path, 2 Bridges will be necessary for that purpose. The distance of cutting is 23 chains; the line runs very near the level, and the excavation is principally Limestone rock. One Lock of 7 feet lift, will be required in each Canal; this Lock will connect the Canals with the River at the end of 23 chains.

The reason for crossing again to the North bank at the foot of the rapids is to facilitate the formation of the Towing Path, the bank being in general higher, and to avoid Irish Creek and a number of smaller streams that would require Bridging and be attended with an extra expense, and after all, we shall be obliged to cross to the North bank at Edward McCrea’s, the Canals being there on the North side of the River.

From Maitland’s Rapids it is proposed to follow the River, which forms an excellent natural Canal for a distance of 7 miles, and all that is required is the formation of a Towing Path.

[Merrickville]

At Edward McCrea’s we again quit the River. It is proposed to raise the water 1 ½ feet perpendicularly at this place by a Waste Weir 376 feet wide; Guard Gates will be necessary. There will be some extra cutting, 31 chains of which is through Limestone rock: this we propose to slope one foot to one foot perpendicular, with 30 feet bottom in the 7 feet Canal, 21 feet bottom in the 5 feet Canal, and 15 feet bottom in the 4 feet Canal. The remaining part of the mile is composed of loam and loose stone. There is also a little rock excavation in the bed of the river at the head of the Waste Weir for the 7 feet Canal only. At the end of the first 32 chains, the sudden rise of the ground forces us so near the edge of the river that a stone wall will be required for a distance of about 3 chains. One Road bridge will be required. Distance 81 chains 15 links from E. McCrea’s.

Distance from Kingston 82 Miles 51 chains 5 links.

Second Mile and two chains is a continuation of the same soil & runs very near the level. At the end of the first 31 chains, our line crosses a small ravine one chain wide and 5 feet below level, requiring one bank only.

3d Mile 1 chain 23 links, respecting soil and cutting, answers to the same description as the last in every respect. At the end of 23 chains, the line crosses a small ravine one chain wide and 8 feet 10 decimals below level, requiring only one bank. One Road Bridge will be necessary.

4th Mile will be attended to with some extra expenses; the soil and cutting however continue
much the same as in the last; the ground is a little more uneven. At the end of this mile, our line crosses a valley 12 ½ chains wide and 8 feet below level; the embankment will be expensive on account of the ground being so much below level and no extra cutting. This embankment crosses a Creek which will require a Culvert 8 feet by 5. Three Locks of 10 feet lift each will be required in each of the Canals.

5th Mile, the cutting continues very near the level; the soil is much the same as in the last; excepting for a distance of 15 chains through a Cedar Swamp, the top earth of which is black mud 3 feet deep, lying on a bed of clay. At the end of the first 20 chains there will be small embankment 4 chains in length, for which the earth lies very convenient.

[Burritts Rapids]

6th Mile and 25 chains takes our line of Canals into the River on G. Burrett’s Farm in Marlboro’. In the first 42 chains, the cutting continues near the level and the soil much the same, at the end of which the line crosses the Creek 3 feet 33 decimals below level. The embankment will be two chains in length, and a Culvert 8 feet by 5 will be necessary at this place. Thence the cutting runs very near the level for the space of 12 chains; after which we commence with some extra cutting and continue for a distance of 20 chains passing thro’ a summit of 14 feet. The soil, being sandy, is easy to excavate. Thence the ground descends to the level, and continues the same thro’ the remaining part of this distance. Two Locks of 8 feet lift each one of 10 feet will be required in each Canal, the situation being alike in all.

One Road Bridge will also be necessary.

Distance from Kingston 89 miles 8 chains 5 links.

[Long Reach]

From George Burrett’s, it is proposed to follow the natural stream to the head of Long Island, a distance of 22 miles 30 chains. The River with the exception of a few small shoals forms a most beautiful and natural Canal, the whole of this distance. Having removed the shoals, all that will be necessary is the formation of a Towing Path, for which the situation is a little unfavourable on account of a number of small streams, swales &c. that obstruct the way and will require bridging. In the two minor Canals, nothing will be required in the bed of the River.

[Long Island]

At the head of Long Island, it is proposed to raise the water 2 ½ feet perpendicular by constructing a Waste Weir across the West branch of the River, 165 feet wide at this place. Thence we descend the East branch which by removing a few small shoals will be navigable a mile and a half further down; after which the water gradually descends upon a regular inclined plane composed of a smooth bed of Limestone rock to the foot of the Island, admitting Locks to be placed at convenient distances to avoid all rock excavation except for the foundation of the Locks. 3 Locks of 7 ½ feet lift each, will be required for each

Of the Canals in this distance, the lifts & situation being alike to all. A Waste Weir will be necessary at each Lock to discharge the surplus water in time of floods. Being obliged to cross the west branch of the River to the head of the Island and again to cross from the foot of the same with the Towing Path, 2 Bridges will be necessary

Distance 3 miles 2 chains 65 links.

[Jock River]

From the foot of Long Island to Lock No. 38 in Estimate No. 1, a distance of 103 chains 61 links, all that is required is the formation of a Towing Path and clearing the bed of the River. One Bridge will be necessary to cross the River Goodwood with the Towing Path. At the Rapids we are compelled to leave the River for a distance of 10 chains, 61 links; Guard Gates will therefore be necessary. It is proposed to raise the water 7 feet 6 inches perpendicularly by a Waste Weir 297 feet wide. The design in raising the water so much is to avoid cutting some rocky shoals in the bed of the River. One Lock of 2 feet lift will stand at the termination, to connect the Canal with the River at the foot of the Rapids.
Distance from Kingston, 115 Miles, 64 chains, 29 links to Lock No. 38.

From thence to the head of Black rapids a distance of 3 miles and 10 chains, nothing will be required except the formation of a Towing Path and clearing the bed of the River.

Distance from Kingston 118 Miles 74 chains 29 links

[Black Rapids]

At the Black rapids it is proposed to raise the water 7 feet by a Waste Weir 330 feet wide; there we are obliged to forsake the River for a distance of 18 chains: Guard Gates will be necessary. We commence at this place with 11 feet cutting; the extra cutting continues 5 chains; thence it descends to our level, and continues the same through the remaining distance. The soil is loam and favourable for excavation. At the termination of this distance stands a Lock of 8 feet lift. A little rock excavation will occur in placing the foundation of the Lock in Estimate No. 1 [7 foot depth].

From the foot of the black rapids to the head of the rapids, commonly called the Three rock rapids, is a distance of 2 miles 55 chains. The River being a good natural Canal, nothing will be necessary except the formation of a Towing Path.

[Hogs Back]

At the Three rock rapids, we are obliged to forsake the river again on account of the abrupt descent of the rapids. Here it is proposed to raise the water 7 feet by a Waste Weir 297 feet wide. At this place we are also compelled to cross with the Towing Path to meet the Canal on the South side, the North being wholly impracticable from the frequent deep ravines and the extreme height of the land adjacent to the river. One Bridge will therefore be necessary. Guard Gates will also be required at the place of departure. The first mile commences with 7 feet cutting and runs a little above the level for 20 chains; thence it descends to the level and runs nearly the same through the remaining part of the is mile. No rock excavation will occur; the nature of the earth is loam and favourable for excavation. At the end of the first 21 chains the sudden rise of the ground forces us so near the River that a Stone wall will be required for the support for the Bank on the lower side of the Canal, 2 chains long and 18 feet high.

In the 5 and 4 feet Canal no side wall will be necessary.

Second Mile commences with 3 feet 78 decimals cutting and runs near the level 15 chains. Thence it rises very abruptly and continues above the level 34 chains, passing through a summit 21 ½ feet; thence it gradually declines until it again meets the level; thence it runs nearly level through the remaining part of this mile; the nature of the earth answers the same description as the last. In passing through the above Summit, a considerable rock excavation will occur, and will be extremely difficult and expensive in consequence of the great depth it lies below the surface. Having removed the top earth, it is proposed to slope the rock one foot to one foot perpendicular with 24 feet bottom for the 7 feet, 17 feet bottom for the 5 feet, and 12 feet bottom for the 4 feet Canal – Two Locks, each of 9 feet lift, will be required in each of the said Canals. Near the termination of this mile, our line crosses a road where a Bridge will be necessary.

36 Chains will connect the line of Canals with the River on Doxy’s Farm in Gloucester. The cutting still continues near the level. The nature of the earth is the same as in the last mile. The descent being so great, five locks will be required in each, 3 of 9 feet lift

and 2 of 7 feet lift each, the lifts and situations being the same in all. No rock excavation will occur except in placing the foundation of the Locks. At the end of the first 12 chains, our line crosses a ravine one chain wide, 6 feet 66 decimals below level; the earth lies convenient for the embankment. A Culvert 4 feet by 4 will be necessary to pass the water under the Canal.

From Lock No. 46 in Estimate No. 1 we again take our line of Canal in the natural stream to the head of the rapids called the Cascades. The distance is 3 miles 17 chains. The formation of a Towing Path & a little rock excavation in the bed of the river in two or three places is all that will be necessary.

Distance 127 miles, 40 chains 36 links
[Between Cummings Island and Porter Island]

At the head of the Cascades we are compelled to forsake the River altogether there being nothing but a succession of Rapids from thence to the Ottawa River. At this Place it is proposed to raise the water 4 feet perpendicular by a Waste Weir, which will require to be 462 feet wide. Guard Gates will once more be necessary. The cutting in the first mile is extremely favourable; it runs very near the level. The nature of the earth is a light loam. A great proportion of this mile runs through a black ash swale; near its termination our line crosses a Creek, where a small embankment and a Culvert of 4 feet by 4 will be necessary.

One Road Bridge will also be required in this distance.

One Mile and 17 chains completes the whole Route and take our line of Canal to 9 feet 66 ½ decimals deep water in the Ottawa River making a total distance from the Government wharf in Kingston to the Ottawa of 132 miles. We commence with 5 feet cutting and run a little above the level 62 chains, principally through a Cedar Swamp, the top earth of which is black mud about 3 feet deep on a bed of clay. Thence the ground rises very abruptly to a summit of 32 feet 14 decimals. The extra cutting is here 18 chains long. Thence it descends almost perpendicular to the level but continues only 3 ½ chains, after which in a distance of 11 chains 51 links the ground falls 46 feet 83 ½ decimals to the water level in the Ottawa River (on the 1st Sept' 1824). In passing through the above Summit, some rock excavation will occur in the bottom which will be somewhat difficult and expensive on account of the great depth it lies below the surface. The top earth here is generally loam mixed with some loose stone. At the end of the first 21 ½ chains, the line crosses a little Creek which will require a broken backed Culvert 4 feet by 3. Having passed through the Summit, it is proposed from where we again meet the level at the foot of the hill to carry the bottom 60 feet wide for the 7 feet Canal, 45 for the 5 and 36 for the 4 feet Canal, whereby an excellent Reservoir will be formed 2 ½ chains long, for which the situation is favourable.

The fall from thence is so extremely rapid that 6 locks will be required for each Canal in a distance of 11 chains 51 links, which will form an entire piece of solid masonry from top to bottom. Estimate No. 1 will require 5 locks of 9 ½ and 1 of 10 feet lift making the Bottom level 283 feet below the Rideau Lake. In Estimates No. 2 & 3, the lifts and situations are the same as above.

[Ottawa River]

Where the Canal are designed to enter the Ottawa River it is proposed to take the 7 feet Canal into 9 feet 66 decimals of water in order to guard against the fluctuations to which this River is so subject, and in doing which it is also proposed to cut the mouth of the Canal 50 yards wide from the water’s edge to the foregoing depth in Clowes’ Bay on the Ottawa River. To prevent it from filling up, two Piers made of Piles backed with Stone and well planted will be necessary. The 5 & 4 feet Canals will not require to go beyond 7 feet water in the Ottawa and therefore no Piers will be required for them.

In making the preceding Estimates due regard has been paid to the value of the Material and Labour which are required for constructing the Locks, Waste Weirs, Guard Gates, Bridges &c. and which have been estimated according to the present prices of such material and labour. The Locks and Guard Gates in the 7 and 5 feet Canal to be built of Stone, those of the 4 feet Canal of Wood. The Waste Weirs and Bridges to be constructed of Wood in all.

It will be seen that estimates are here framed for Canals according to three different scales; the first, or largest, being calculated to cost £230,785/14/½; the second £145,802/7/8½; and the third £62,258/8/10.

[discussions of other survey routes omitted]

Signed
JOHN MACAULAY
JAMES GORDON
CHARLES JONES

YORK, 5th February, 1825.
Thus it appears that a good and easy navigation 65 miles in length [Kingston to Rideau Lake] for vessels drawing six feet of water, carrying 120 tones, and capable of braving the weather on Lake Ontario might be acquired at an expense not exceeding £70,000, a sum absolutely insignificant when compared with the magnitude of the object, for attaining which it would be applied.

In making the foregoing estimate, the Engineer has bored the ground wherever excavation would occur to the depth of the bottom level of the Canal, and has thus accurately ascertained the nature of the various strata of earth and rock along the whole line — As the bed of the River Cataraquay, at Kingston Mills is used for the canal, it will be necessary at the back part of each Lock to construct a Waste weir 40 feet in width, to protect the work against the dangers of floods — from Kingston Millpond as far as the Round tail the excavation is so favourable for raising the banks and is beside so easy, that the expense of the canal between these points is very moderate.

In the 18th mile stand Brewer’s Mill, which should be removed, as a lock would unavoidably occupy its site. The position of every lock as far as Jones’s rapids; is so judiciously selected, that no rock excavation occurs from Kingston Harbour until the line of the Canal reaches the foot of Jones’s rapids; a distance of 28 miles.

A bed of clay throughout separates the limestone rock on the west from a species of Rock resembling granite which runs along the eastern bank; to which fortunate circumstance is to be ascribed the facility and cheapness with which this part of the work may be effected.

From the Round tail to Jones’s rapids there is a wide extent of low marshy ground naturally inundated every spring; on one part of the western or White fish branch of the Gananoque, and on another by the superfluous waters of the Loughborough Lake, Dog Lake &c. The inundation of this tract is rendered permanent to a greater depth by means of dams placed at the Round tail and the White fish falls by the Proprietors of Mills at those places.

In connecting the Canal at the Round tail with the Gananoque River, the Engineer might either make a cut across the intervening flats, or by Dams at the outlets he might convert them into one extensive Lake, comprising Cranberry Lake, and another smaller one in its vicinity. The difficulties attending the former plan are numerous and important. In many places it would be necessary to drive piles and secure the banks of the Canal by planking them, and the excavation would be very troublesome in consequence of having to contend with water and a soft mud extending several yards in depth. At a moderate calculation it is supposed that the cost of a Cut at this place would not be less than £3,175 per mile – The distance is about nine miles and a half, of which one mile and a half would be rather favourable — The whole expense is therefore estimated in the aggregate for the nine miles and a half at £25,650. By the latter plan the water would be raised to a depth of seven feet over the whole surface of the flats to the foot of Jones’s Rapids. The expense of forming waste weirs at the Round tail and Whitefish falls, clearing the timber from the direct line of the canal on the flats, would amount to £725 — and as the difference between the two plans amounts to £24,925, the advantage of inundating the tract instead of cutting through it, obtains a decided superiority. The owners of the land would no doubt require compensation for the loss of their Property, but its total value in its present state cannot by any mode be estimated to exceed £1500, including the reservations for the Crown and Clergy, which sum may be added to the Estimate.

The 29th mile, connects the drowned lands with Davis’s or West Lake and embraces Jones’s rapids where the Gananoque River descends 60 feet 91 ½ decimals over a narrow rocky channel, confined within precipitous banks of great elevation which retire at intervals more or less from the bed of the stream. Although the expense of this will be great, it is far less than any other route to the East or West of it. A certain rise in the line of the Canal was inevitably to be encountered; and no place could be discovered for this purpose presenting fewer obstructions than that in question. In fixing the situation of the six locks which are here required, occasion is taken to provide a reservoir between each, varying from one to four chains in width and forming a pound sufficiently spacious for vessels coming in opposite directions to pass each other.

By dams at the outlets of the several Lakes between Jones’s rapids and the Rideau, the water
is raised to the required depth of the canal without inundating much land of any value. From the peculiar formation of the Country, all the good land lies high, and marshy lands principally are covered by means of the proposed dams. The difficulties attending rock excavation are exhibited by the estimate for the cut between Mud and Rideau Lakes, where a ridge of rock occurs for a short space, and hence a fair conjecture may be formed of the expense which would be incurred in deepening the bed of the Lakes by removing not merely sand bars, but shoals of rock remarkably solid and difficult to be blasted. — Such an enterprise would indeed be nearly impracticable and if attempted would occasion an incalculable waste of money – By means of dams every obstacle is overcome, and the water is raised to a proper depth at a trifling expense.

The rock at the Indian carrying place has alone prevented the Rideau and Mud Lakes from uniting without the aid of art. In cutting through this rock, Indian, Mud, Rideau and Clear Lakes are placed on the same level, and this constitutes a magnificent summit pound 31 miles in length on the course of the Canal, at an elevation of 154 feet 10 ½ decimals above Lake Ontario. In addition, there are several extensive lakes lying west of the line on the same level or above it; besides an arm of Rideau Lake itself which stretches off in a south westerly direction. There can therefore be no cause to dread a want of water, for with the most extensive trade which can be anticipated, the summit pound would still remain an inexhaustible reservoir during the most arid Seasons.

In the proposed cut between Mud and Rideau Lakes the width of the canal is reduced, where rock excavation occurs, to 24 feet at the bottom and 43 feet at the top water line, which produces a saving of expense without the risk of any inconvenience to trade at a future day.

By the plan of the Bridges, of which, owing to the nature of the Country, six only would for a length of time, be required, the Engineer has ingeniously effected additional savings, for he makes the side walls of the locks supply the place of abutments. — The form of the bridges, which are intended to admit vessels with mast and standing rigging,— perhaps, renders the plan more feasible on the proposed Canal than on such as do not afford similar advantages to the Craft which ply on their waters.

A circumstance which may not be unworthy of remark is that on the whole route so far as the survey has been completed, i.e. on the line of 65 miles, neither embankment or culvert is required, and it is questionable whether this fact has a parallel in canal surveying. Though the plain reason of this singularity is, that the natural course of the waters has been studiously adhered to, it nevertheless illustrates the uncommon facilities of the route more amply than the most laboured arguments, or abstract calculations.

It will be observed that the original ideal of passing through Plum Hollow, founded on a presumption that the lowest summit would be found in that quarter, & adopted also on account of that place lying nearly in a direct line from Kingston to the mouth of the Rideau, was abandoned on its being ascertained that Plum Hollow, which appears low to the eyes from its position in the neighbourhood of elevated ridges, was actually 156 feet 49 ½ decimals higher than Lake Ontario, and consequently 2 feet 39 decimals above the bottom level of the present summit Pound. There were other difficulties to be surmounted on this route – To supply the summit level a feeder would have been required ten miles in length from the Big Bay in Rideau Lake, the construction of which, would have been an expensive affair, as an intervening summit of Limestone, 36 feet above the level, would have occasioned a heavy expenditure of money – The summit Pound itself would not have extended beyond a few hundred yards, while the cost incurred for supplying it with water, would have tripled that of the route by Jones’s Rapids and the Lakes. Besides these objections to the route by Plum Hollow, two summits would have been required on that line. The flats between the Round tail and the White fish falls would have become the first summits, from which there would have been a descent by two locks at White fish falls into one of the Gananoque lakes, called Henderson’s or East lake. — From thence the route would have led through the Bastard Lakes to the second summit at Plum Hollow, and have reached the River Rideau by way of Irish Lake and Creek.

The line of the canal is undoubtedly lengthened about 20 miles by abandoning this course and assuming the more circuitous one by the Lakes, but the great saving of expense in the latter, and the benefit which would be derived from it by the rising settlements near the Rideau Lake, added to various other considerations, more than outweigh the disadvantages of increased length.
From the rugged and broken nature of these parts of Pittsburgh and South Crosby, through which the various levels were conducted – from the numberless rocky eminences, marshes, bogs &c. everywhere encountered, and from the scanty information to be gained in any other way than by personal examination of a tract of country, which still remains almost in its primitive state, there unavoidably resulted much delay and occasional perplexity. — It was desirable to select the nearest, most advantageous and easiest course for the contemplated Canal, and for attaining this end, every lake, ravine and marsh required to be minutely explored. The Field books of the Engineer will more clearly exhibit the difficulties against which he was obliged to contend in executing this part of his duty, as well as the numerous routes which, after being pursued for some time with ardent hope, led only to disappointment.

On giving up the route by Plum Hollow, the Engineer endeavoured to avoid the expensive work at Jones’s rapids, by discovering, if possible, an easier way of encountering the rise to the summit at some point westward of those rapids – With this view Loughborough, August and September Lakes were examined, on the suppositions that they might be connected with the Opinicon, which lies above Davis’s Lake; but Loughborough Lake was found to be elevated 177 feet 37 ½ decimals about the level of Lake Ontario and 23 feet 27 decimals higher than the summit Pound. — Another level, through Dog, Troy and Traverse lakes to Davis’s Lake failed, as a rocky summit of 70 feet above the level, presented an impassable barrier between the two latter lakes. Various other attempts of a similar description proved equally abortive, and it became eventually necessary to return to the western branch of the River Gananoque and devise the best means of surmounting the impediments at Jones’s rapids. Much time was thus unavoidably consumed in examining Routes which proved to be impracticable, and as no part of the country could be left unexplored, which afforded the slightest hope of a lower summit and greater facilities, the unremitting labours of the Engineer and his Party, during a season unusually favourable were insufficient to determine the whole line of the canal from Kingston to its junction with the Ottawa.

The distance from the Point of departure in Kingston Harbour, to Chafey’s Mill at the Outlet from Indian Lake, is about 34 miles. In addition to which there is a navigation created by means of the cuts at the Rideau carrying place, and the upper narrows, of 31 miles, forming a total of 65 miles of navigation surveyed and estimated. The distances here computed, it may be remarked, are not perfectly correct, as several of the lakes which were never accurately surveyed could not be conveniently measured during summer. This operation was therefore deferred until the ice should afford an opportunity of accomplishing it with greater facility, accuracy and dispatch, and the Land Surveyor is now engaged in its execution.

From the lower end of Rideau Lake, where the summit pound terminates, to the foot of the Chaudières falls in the Township of Nepean, the distance by following the windings of the Rideau River is about 60 miles, which will probably make the total length of the canal, from Lake Ontario to the River Ottawa, about 125 miles.

Owing to the causes already adverted to, the line of the canal, through the last 60 miles, could not be established this year. By dint of exertion, however, the Engineer carried a level down to the Ottawa River, at the village of Sherwood, below the Chaudières, and ascertained the descent from the summit level to be two hundred and sixty eight feet 33 ½ decimals, the rise from Lake Ontario to the summit level, makes an aggregate of 422 feet 44 decimals for which not fewer than 45 locks will be required.

The difficulties which may occur in that part of the line of the canal which remains to be laid down, are not supposed to be important, and will probably not occupy more than three months of next season. The expense of locks for the descent is certain and inevitable, and the chief care of the Engineer will be required in selecting favourable ground and avoiding Rock excavation. It is hoped that about 20 miles of the Rideau River, which for that distance is still and sufficiently deep, may be taken into the line of the Canal, and should this be found practicably, a material reduction may this be effected in the general estimates.

On a review of the summer’s operations, the Commissioners have every reason to be gratified with their result, and they respectfully beg leave to bring under notice the benefit which has been derived from the long experience and professional ability of their Chief Engineer, Mr. Samuel Clowes, aided as he was by the zeal and assiduity of his assistant, Mr. James Clowes, and of the land surveyor, Mr. Reuben Sherwood.
The accounts herewith submitted will explain the amount of Disbursements during the year, which have been directed by the most rigid economy, consistent with the objects of the Commission.

Should the duration of the Statute under which the Commissioners have acted, be extended, an additional grant will be required for the purpose of completing the interior survey now in progress, as the arduous nature of the operations prevented its entire completion this season, according to the original expectations of the Board.

It would also be proper to carry into effect the plan for exploring the River Saint Lawrence below Prescott, adverted to in the first Report, in the event of the Determinations made by the Arbitrators last summer, on this important subject, not being sanctioned by the Legislatures of the two Provinces.

It is therefore hoped that the same enlightened Patriotism which originally suggested the canal surveys, will watch over them until they shall be perfected, and until the capabilities of the Country for internal improvements, vast and noble as they are, shall have been fully investigated and made known.

The commissioners before concluding conceive it incumbent on them to state their regret, that his report was not presented at an earlier period of the present session of Parliament. No exertion was spared for that purpose, but the Calculation necessary in framing the Estimates, demanded considerable time, and the Engineer could not be suddenly withdrawn from his levels without great inconvenience.

All which is humbly submitted

Signed  
JOHN MACAULAY
CHARLES JONES
JAMES GORDON
ROBERT NICHOL

YORK, 20th December, 1823.
APPENDICES

Appendix 1 – The Research for this Book

Appendix 2 – A Brief Chronological Synopsis – pre-1783 to 1832

Appendix 3 – A History of the Rideau Route – 88,000 BC to 1832 AD

Appendix 4 – The Main Rideau Route Surveys

Appendix 5 – Rideau Geographic Place Names

Appendix 6 – Pre-1850 Townships Bordering the Rideau Canal

“The view of Davies Lake [Sand Lake] is very pleasing. The many islands, as if floating on a transparent mirror which mellowed and reflected by the tint of the morning, strikes the contemplative mind with a sensation of pleasure not easily forgotten” Surveyor John Burrows 1827 (Welch p. 25). Photo of Sand Lake by Ken W. Watson, 2005.
Appendix 1 – The Research for this Book

The questions posed during the initial research for my book *Engineered Landscapes*, which led to the creation of this book, were, 1) exactly how much flooding occurred in each section of the Rideau as a result of canal lock and dam construction? and 2) what did the pre-flooding geography look like?

The Flooding Question

This question can be subdivided into: what was the level of flooding in 1832? and what is the level of flooding today? In several areas, canal dams have been rebuilt, sometimes to a higher level than in 1832, so the amount of flooding has increased. The problem is compounded by the fact that Colonel By didn’t record the exact flooding numbers and his plans underwent many changes during the construction of the canal.

To determine the 1832 flooding depths, many of the available canal construction reports and maps were reviewed to try to calculate the exact level of flooding. This produced estimations of 1832 flooding depths that have about a 2-foot (0.6 m) margin of error.

The determination of the present day flooding depth is more accurate. It involved locating and measuring the depth of fixed objects that could be related back to pre-1832 flooding. Such objects include the bedrock highs at the heads of rapids, and drowned stumps. The latter are prevalent along the length of the Rideau. Trees in this area grow above the waterline. A stump underwater, with roots still in place, indicates that this land was above water in the pre-flooding era. It may have been right at the waterline, or at some level above – so a measurement of its depth provides a minimum depth of flooding. The problem with this method is that it only provides a minimum value, a deeper stump may yet be waiting to be found. The presence of stumps is a bit hit and miss in a given area, since their existence today depends on the type of tree, the type of soil they were rooted in, and the amount of current/wave action the area has been subjected to.

The process of locating and measuring the depth of these pre-1832 fixed objects is on-going. However, by early 2006, it was felt that there was enough data to make reasonable conclusions, so I completed and published *Engineered Landscapes* with a full list of 1832 and present day flooding determinations. Those numbers have also been used in this book.

The “Rosetta Stump” in Ransier Bay of Sand Lake

Left panel is a view of stump with a base 7.75 feet (2.4 m) underwater. Right panel is Jonathan Moore standing on top of the stump. Photos by Ken W. Watson, 2005.
Appendix 1 - The Research for this Book

Water Levels

Ancillary to “the flooding question” is how flooding depths can be related to water levels that are constantly fluctuating. All the present day depth measurements listed in this book are based on Parks Canada 2004 Rule Curves. The rule curves are the managed water levels of the Rideau Canal. The datum level chosen is the rule curve low operating range based on spring levels. These numbers are available from Parks Canada and were fully documented in Engineered Landscapes. For example, that number for Sand Lake is 116.00 metres above mean sea level. When depth measurements were done, they were corrected back to this rule curve datum. If bathymetry in Sand Lake was done on a day when the water level was recorded to be 116.10 metres, those readings were corrected to the datum of 116.00 metres. So, if Sand Lake was flooded by 8 feet (2.44 m), then the pre-flooding level (based on the same criteria) would have been 113.56 m (116.00 m - 2.44 m).

Boaters may be familiar with hydrographic charts and the term Chart Datum. That number should be the same as the rule curve low operating range, but it isn’t in all cases, partly due to the slight difference in definition. Chart datum is the value that “the actual water level will be above 95% of the time during navigation season.” In Sand Lake it happens to be almost the same as the rule curve number, 380.6 feet (116.01 m). So a depth of 8 feet on the chart means that the bottom of the lake in that location is at 372.6 feet (113.57 metres) above mean sea level.

There was no water level datum information available back when the first surveys of the Rideau were done. This created many problems in trying to relate those reported survey numbers to present day geography. Levels measured in spring would be higher than those of late summer. Levels measured in a dry year would be lower than those in a wet year. In many cases levels were measured from mill dam raised waters (and that fact not always noted). Because of these and other problems, historic numbers have many built-in inaccuracies and they cannot be used directly as stated in the original reports. This was one reason why some of the present day research concentrated on finding fixed objects such as drowned stumps or bedrock at the head of rapids. These can be directly related back to pre-flooding elevations, and pre-flooding water levels deduced from that present day information.

The Pre-Flooding Geography Question

The determination of flooding depth is just the starting point for synthesizing the pre-flooding geography. We have very little historical evidence of the pre-flooding geography. The building of the canal pre-dated photography, so all we have in terms of landscape views are a few sketches and paintings that show what some portions of the Rideau looked like prior to the canal being built. In many cases, these areas were already flooded by mill dams, so these views don’t show the pre-flooded landscape. The early survey maps (included in this book) were not the highly accurate surveys we are used to today. This created a problem in trying to georeference these to today’s topography. Initial attempts to do this as part of the Rideau Canal Underwater Archaeology project proved to be very frustrating. What was needed was to precisely locate the old river channels.

During my initial research in the winter of 2003/2004, the question arose whether evidence of any of the pre-canal rapids or drowned river channels would still exist today? or would they be buried under 175 years of silt? Within days of the ice breaking up in 2004 I had my boat in the water. My first area of investigation was the Jones Falls Rapids. The historical documentation showed these to extend for a mile (1.6 km) in length, dropping 60 feet (18 m) over that distance. Would the little fishfinder echosounder on my boat be able to “see” these drowned rapids? It turned out that the answer was yes. By running echosounder lines perpendicular to the old channel, it stood out beautifully and I was able to map it right up to the apron of the dam (see my “Jones Fall 1829” map in the Jones Falls Rapids section).
That summer, my wife and I went out and mapped other drowned channels including the original White Fish River channel from Jones Falls to Morton and the original Cataraqui River channel in the area of the Round Tail (above the locks at Upper Brewers).

In early spring 2005, I was contacted by Lisa Sonnenburg of McMaster University who was proposing M.Sc. research on the Rideau, reconstructing paleogeographic environments using techniques developed by her thesis advisor, Dr. Joe Boyce. Lisa had contacted Jonathan Moore about potential projects, and Jonathan suggested that the Rideau would be an ideal thesis project. I volunteered my time and boat to this project. In early May 2005, we piled many thousands of dollars worth of equipment into my little boat, including 3 computers, a GPS unit, a large echosounder, a side scan sonar unit and a magnetometer – and headed out onto Colonel By Lake in search of the drowned channel of the Cataraqui River. It was wonderful to see the clear profile of the channel as we made our first run – even with a bit of sediment infill, the old river channel was still clearly evident. Colonel By Lake was gridded with bathymetry, side scan sonar and magnetometer survey lines. The same was done for the area of Cranberry Lake in the vicinity of the Round Tail; Whitefish Lake between Jones Falls and Morton; and Sand Lake over the drowned Jones Falls Rapids. Planned work on River Styx could not be done due to excessive aquatic vegetation growth (which interfered with the bathymetry).

In August 2005, Lisa Sonnenburg, Joe Boyce, and Eduard Reinhardt, with assistance from Jonathan Moore and Bruce Bennett, collected several sediment cores which were logged to determine the type of environment (i.e. lake, swamp, field, forest) going back in time.

Additional fill-in bathymetric/side scan surveys were done in the fall of 2005 and one additional run was done in Colonel By Lake in May 2006. Lisa focussed her thesis on Colonel By Lake and it was completed in the fall of 2006. Although not processed as part of her thesis, the raw data collected from the other areas (Round Tail, Whitefish Lake, Sand Lake) confirmed the results of my 2004 echosounder surveys. Results of those surveys were published in *Engineered Landscapes*. Since that time I’ve also echosounder mapped Chaffeys Rapids (fall 2006).

For this book, the pre-flooding outlines of several of the lakes have been reconstructed. This wasn’t done for *Engineered Landscapes* because it involves combining two somewhat inaccurate datasets, the flooding depth calculations and the hydrographic charts, which were never designed to be used in this way. But the pre-flooding outlines of the lakes are of interest to many, so I’ve done my best in this book to show what several of these lakes would have looked like in the pre-flooding era.

**More Mysteries**

The work isn’t finished – there are more stumps to be found and drowned river channels to be mapped. This will help to refine the depth of flooding. The sophisticated underwater mapping techniques employed as part of Lisa Sonnenburg’s thesis could also be used in other areas of the Rideau to improve our understanding of the pre-flooding geography.
A Summary of The Main Datasets

The following is a summary of the key geographic datasets used during the research for this book, with an indication of their strengths and weaknesses.

Gershom French’s map and 1783 report of the Rideau Route – the map was drawn in 1794 by William Chewitt from French’s survey sketches. It provides a first view of the Rideau Route though not to scale and with little or no shoreline detail. A reduced size copy of this map and a transcription of French’s report can be found in this book.

Lewis Grant’s 1795 map of the western Gananoque watershed – this is the first map view of the central Rideau lakes. It is not to scale but does show the general positions of lakes and rivers. A reduced size copy of this map can be found in this book.

Joshua Jebb’s 1816 map and report of the Rideau Route – this is the first full depiction of the northern and central Rideau lakes. It includes a very detailed map of the lower Rideau River (Ottawa River to Long Island). Scale and shorelines are not very accurate, but are the best of the period. Reduced size copies of Jebb’s maps and a transcription of Jebb’s report can be found in this book.

Samuel Clowes’ 1823-1824 map and reports of the Rideau Route – this is the most accurate period depiction of the northern and central Rideau lakes (up until maps of the mid-1800s). This is the first survey that took levels along the route. A reduced size copy of this map and transcriptions of Clowes’ reports can be found in this book.

Land Surveyors’ diaries – most of the townships bordering the Rideau Canal were surveyed prior to 1826. Other than references in secondary sources, these have not been investigated in detail.

John By – 1826-1832 Rideau Route maps – By and his Royal Engineers appear to have used both Jebb’s map and Clowes’ map as base maps to mark the positions of locks and dams. All of their Rideau Route maps appear to have been based on Jebb’s and/or Clowes’ surveys.

John By – 1828 lockstation sketches – these are a series of detailed sketches of each lockstation, showing the original (smaller size) locks. These are only generally accurate in terms of geography. Horizontal scaling is problematic. Held by the Scottish Records Office.

By, Burrows, Frome, etc., 1828-1831 – the Royal Engineers and By’s surveyors produced hundreds of lockstation maps and sketches during the period of canal construction. These tend to show much more accurate detail than By’s 1828 sketches although horizontal scaling is often problematic. Most of these are held in the National Map Collection of the National Archives of Canada.

Canal era paintings – the construction of the Rideau pre-dated photography, so period sketches and paintings are very helpful in determining pre- and post-canal geographic features. Some of the most notable of these are the paintings and sketches by Thomas Burrowes (Archives of Ontario), John Burrows (National Archives of Canada and Archives of Ontario), J.P. Cockburn (National Archives of Canada and Royal Ontario Museum), Lt. E.C. Frome (National Archives of Canada) and William T. Clegg (National Archives of Canada and Archives of Ontario). Scaling/perspective is often problematic since artistic liberties were taken to show more features, but they show immense detail.

1851 index plans of the Rideau Canal – these are full system maps showing the lands owned by the Rideau Canal. The base geography appears to be that of Jebb’s 1816 map. Lake outlines on these maps are generalized. They are held by the Rideau Canal Office of Parks Canada.

1861-62 Leeds and Grenville maps by H.F. Walling – these maps are part of Walling’s County Atlas series and provide the first good depiction of the lakes and rivers of much of the Rideau Canal. These atlases were expanded through to the 1880s to include most of the townships in Ontario (including all the townships bounding the Rideau Canal). They are available as digital images online on the McGill University website (County Atlas project).

1907-1930 – navigation charts – the first detailed navigation chart of the Rideau may be that of Dr. Elmer J. Lake, published in 1907 as “Dr. Lake’s Chart of The Rideau Lakes Route.” This is the first reasonably accurate shoreline depiction of the Rideau Canal. The first government chart may have been the 1929 Department of Railways and Canal’s “Blue Chart – Aid to Yachtsmen – Rideau River
Appendix 1 - The Research for this Book

It outlines shorelines more accurately than Dr. Lake's chart. A reproduction of Dr. Lakes Chart is still in print. The Blue Chart is available on-line from the National Archives of Canada.

**Hydrographic charts** – official navigation charts from the Canadian Hydrographic Service at a scale of 1:20,000. The current charts are Chart 1512 (Ottawa to Smiths Falls), 2002 (first printed in 1973) and Chart 1513 (Smiths Falls to Kingston), 2007 (first printed in 1971). These charts show generalized water depths at approximately 1,500 foot (500 m) horizontal intervals. Lockstation insets at 1:4,800 scale are included. Charts are designed for navigation and do not show detailed bottom topography. They are available from the Canadian Hydrographic Service and many map retailers.

**NTS series topographic maps** – the official topographic maps of Canada, most commonly at scales of 1:250,000 (Maps 31C, 31B and 31G) and 1:50,000 (Maps 31C/8, 31C/9, 31C/16, 31B/13, 31G/4 and 31G/5). These maps are available from the Canada Map Office and any map retailer.

**OBM series topographic maps** – the official Ontario Base Map series at a scale of 1:20,000. These are the most detailed topographic maps of Ontario although boundary matches (between maps) can be problematic in places. They are available from the Ontario Ministry of Natural Resources.

**Air photos** – although not extensively used in this investigation, air photos can provide some information on the location of near surface drowned channels and stumps. Full air photo coverage of the Rideau Canal at a scale of approximately 1:20,000 is available through the Ontario Ministry of Natural Resources. Air photos specific to the Rideau Canal are available at the Rideau Canal Office of Parks Canada.

**Satellite imaging** – although not extensively used for this book, most of the Rideau now has detailed satellite coverage available from free on-line services such as Google Maps and Google Earth. These can be used to see today’s entire Rideau and surrounding geography.

**Other data** – although not used in this book, previous research for *Engineered Landscapes* used additional datasets such as the lock lifts, rule curves (Parks Canada’s managed water levels for the Rideau Canal), sill elevations (which haven’t appreciably changed since 1832) and sill depths (comparing 1832 depths to today’s depths). These are detailed in *Engineered Landscapes*.

Parks Canada manages the Rideau Canal Waterway. Operated as a recreational waterway in the summer, the management of water levels and the maintenance of the heritage values of the canal are year-round jobs. The locks are operated today much as they were when first opened in 1832. For the visitor, the clank-clank of the hand operated winches is a distinctive sound that they will always associate with the Rideau Canal. Photo by Ken W. Watson, 2006.
Appendix 2 – A Brief Chronological Synopsis – pre-1783 to 1832

The following is an outline of the stages of development of the pre-canal Rideau Route.

Pre-1783 – no European settlements, no dams. The Rideau Route encompassed three watersheds, the Gananoque River watershed, the Cataraqui River watershed and the Rideau River watershed (see Maps 1a, 2a and 3a). It was used as an aboriginal travel route between the St. Lawrence and Ottawa rivers. It was also an aboriginal hunting and fishing ground. No permanent aboriginal settlements are known. Two separate canoe routes were used, merging at Opinicon Lake. One route was from present day Gananoque following up the west branch of that watershed, to present day Lower Beverley Lake and up the White Fish River, through present day Morton and into Sand Lake. From there it followed the present day route of the canal to the Ottawa River. The second route was from present day Kingston, up the Cataraqui River to Loughborough Lake and from there to Opinicon Lake, merging with the first route (see Map 4 – “Aboriginal Waterway Routes”). The area between the Cataraqui River and the White Fish River was an impassable flood plain consisting of forest, ponds and marshes.

1783 – Lt. Gershom French completed the first European survey of the Rideau Route on behalf of the British Government.

1784 – the first mill and dam on the Rideau Route were built at Cataraqui Falls (present day Kingston Mills), on the Cataraqui River. This government mill was known as the King's Mill.

1790 – Roger Stevens built the first mill on the Rideau River at Great Falls (present day Merrickville).

1803-1805 – Lemuel Haskins erected a mill and dam at White Fish Falls (present day Morton). His dam backed up water into the Cranberry Flood Marsh and directed some of the flow to the Cataraqui River.

Pre-1816 – Lemuel Haskins built a second dam at the Round Tail. This overflowed Cranberry Marsh and Cranberry Flood Marsh to a depth of about 6 feet (1.8 m), making navigation possible between the Round Tail and the White Fish River at the south end of present day Deans Island.

1816 – survey of the Rideau Route conducted by Lt. Joshua Jebb. Jebb produced the first detailed map of the entire route. He also recommended taking the navigation route by way of Irish Creek rather than the Rideau lakes.

1818-1826 – mills were built at many of the rapids along the Rideau Route.

1823-1824 – civil engineer Samuel Clowes completed a detailed survey of the Rideau Route on behalf of the Macaulay Commission. Clowes recommended the route via the central Rideau lakes.

1826 – construction of the Rideau Canal started in the fall of 1826 with preliminary work on the Ottawa locks. Construction on the rest of the route started in 1827.

1831 – construction of the Rideau Canal was essentially completed by November 1831. The dams were all raised to their final heights in 1831, creating the flooded landscape we see today (see Maps 1b, 2b, 3b). The companies of Sappers and Miners were disbanded in December 1831.

1832 – The canal officially opened for navigation on May 29, 1832 with the arrival of Colonel By at the Ottawa locks, aboard Robert Drummond’s steamboat Pumper (renamed Rideau for the occasion). Colonel By, his family, Robert Drummond and several of the Royal Engineers had boarded the Rideau/Pumper in Kingston on May 24, 1832 for this first official transit of the canal.

The first commercial navigation of the canal is also credited to the Pumper when it left from Kingston on July 12, 1832 on its way to Bytown with a load of 200 barrels of flour, 60 barrels of pork and several passengers (Bush, p. 7).
Appendix 3 – A History of the Rideau Route – 88,000 BC to 1832 AD

The Shaping of the Rideau

Climate and geology are the main contributing factors to the geography of the Rideau Route - the Rideau River, the Gananoque River, the Cataraquies River, and the Rideau Lakes. The southern part of the Rideau Route (Rideau Lakes region) contains exposures of very old rocks of the Canadian Shield, known as the Frontenac Axis. To the north and south of this area are younger sedimentary rocks. Although the underlying geology that has helped to shape the Rideau goes back over 1 billion years, to the ‘Grenville Province’ rocks of the Frontenac Axis, it was the most recent ice age that significantly shaped the surficial features of the Rideau region that we see today.

The southern part of the Rideau Route area, it first took hold about 90,000 years ago, and ended about 13,000 years ago. At its height, about 20,000 years ago, the Rideau Corridor was buried under more than a kilometre of ice. Within the Frontenac Axis, glaciers gouged out rock units of slightly softer crystalline limestone, leaving behind depressions that filled with water to become some of the Rideau lakes. As the ice retreated, the landscape underwent progressive changes. The retreating glaciers left behind deposits of glacial till, boulders, gravel, sand, silt and clay. For instance, Bacchus Island in Lower Rideau Lake is actually a glacial drumlin, a ridge of glacial till, elongated in the direction of glacial movement.

The bedrock of the entire region was depressed from the weight of the glaciers. As the glaciers retreated, glacial Lake Iroquois (ancestral Lake Ontario) expanded into this depressed area, abutting against the retreating glaciers. This glacial lake extended as far north as Perth and Smiths Falls. However, the bedrock, now released from the weight of glaciers, was starting to rise, a process known as isostatic rebound. This caused Lake Iroquois to retreat to the boundaries of today’s Lake Ontario.

In the northern section of the Rideau Corridor, the glaciers depressed the bedrock to below sea level. As the glaciers retreated, salt water from the Atlantic Ocean flooded in to create the brackish Champlain Sea. The documented southern limit of the Champlain Sea on the Rideau Route is in the vicinity of Rideau Ferry, although a portion may have extended as far south as Nobles Bay of Big Rideau Lake. The bones of beluga whales that swam in the Champlain Sea have been discovered as far south as Smiths Falls. The retreat of the Champlain Sea from the Smiths Falls area occurred 11,100 years ago.

Within the southern Rideau region, the earlier retreat of the glaciers, and direction of that retreat, has resulted in more mature development of the rivers in that area. The Gananoque and Cataraqui river systems both have more mature development than the Rideau River, where isostatic rebound slowed the development of the river.

The Rideau River is underlain by soft silt and clay sediments, deposited by the Champlain Sea on top of glacial till, which in turn lies on top of relatively flat-lying sedimentary rocks. This gives the Rideau River section a very different appearance than the central and southern Rideau Route, most particularly the almost complete absence of lake development, a poorly developed stream drainage system, and many swamps.

The central and southern portions of the Rideau Route are characterized by an increase in topographic expression and extensive lake development. This extends south on the Rideau Route to Kingston Mills, which marks the southernmost exposure of the Canadian Shield on the Rideau Route. Tectonics helped shape some of the lakes, with the trace of the aptly named Rideau Lake Fault defining the north shore of Big Rideau and Upper Rideau lakes. As less resistant rock units were eroded, the more resistant ones became rapids and falls; for example the head of the original Jones Falls Rapids flowed over a very resistant quartzite unit.

Kingston Bay and the City of Kingston are underlain by flat lying younger sedimentary rocks. The central portion of the Rideau Route lies close to the eastern boundary of the Frontenac Axis and many of the stones used to build the dams and locks, such as those as Jones Falls, were taken from flat lying Paleozoic sediments (sandstone) located just to the east of the central Rideau Route lakes (in this case, near Elgin). These flat lying sedimentary rocks also provided ideal farmland that helped to shape the cultural history of the area.
The Rideau Route in the pre-flooding era spanned three watersheds, the Rideau River watershed, the Gananoque River watershed and the Cataraqui River watershed (see Maps 1a, 2a and 3a). The main dividing line then, as now, was the height of land running through Newboro. Water to the north of this height of land flowed north, to join the Ottawa River, water to the south flowed south, to the St. Lawrence River and Lake Ontario. The main difference in the pre-flooding era was that the central Rideau lakes (Newboro, Clear, Indian, Opinicon and Sand) drained not to the Cataraqui River, but to the Gananoque River, via the White Fish River. This is detailed in “The Rideau Route in 1783” section of this book.

Prior to European settlement, the Rideau Route region was heavily forested. When surveyor John Stegman surveyed Montague Township (located on the north shore of the Rideau River between Smiths Falls and Burritts Rapids) in 1797 he noted the types of trees he encountered on his survey. Glenn Lockwood in *Montague, A Social History*, 1980, produced a table showing the frequency of these trees. The top 5 were elm (18.2%), maple (15.8%), basswood (12.6%), cedar swamp (9.9%) and tamarack swamp (6.4%). There was only 2.2% referred to as “meadow,” the rest of the land was either heavily forested or swamp. Lt. French, referring to the area just north of Hogs Back in 1783, commented that the land was “Timbered with Maple, Beech, Birch, Elm, Butternutt &c. with an Edging of Cedar and Pine always covering the Banks of the River and where the water is Rapid, the Shores are Lined with Lime-Stones.”

In the section south of Merrickville, French observed: “Drowned Swamp about 50 Rods Broad on each side of the River, behind which the land raises high, with a gravyly soil. Timbered principally with Beech, and Stony, but not to that Degree as to render it unfit for Cultivation. A party sent out on each side to the distance of two miles, Reported they had found no Stones, more than half a mile back, and that the Soil was good.” At Newboro Lake he saw: “The points setting into the Lake are Rocks and Stones, Timbered with Hemlock” and as he proceeded south through Indian, Opinicon and Sand lakes he found “The Lands laying in the Route is Intirely too rocky to Cultivate, the Timber is Pine, Cedar and Mountain Oak, the whole bad of its kind.”

The heavy forest cover meant that water retention in the surrounding lands was far greater at the time of canal construction than it is today. As forests were cut down for merchantable timber and/or to create farmland, the water retention of the land decreased. When the canal was built in 1826-1831, there was sufficient watershed capacity that reservoir lakes were not required. As the forests were removed and water retention decreased, mill dams on watershed lakes played a role in maintaining reservoir capacity. But, by 1865, more water retention capacity was needed and the first government dam was erected at the outlet of Eagle Lake (Osborne, p. 36). Other government dams, leading to the reservoir system that is in place today, soon followed. Present day reservoir lakes include Canoe, Kingsford, Devil, Buck, Loughborough, Bobs, and Wolfe lakes.

**Human Use and Occupation**

Documented human presence in the Rideau area dates back to 6,000 BC, but is was not until the first mill dams were built that human engineering began to significantly change the landscape. The first mill was built on the southern Rideau Route in 1784, at the site of present day Kingston Mills. On the northern Rideau Route, Roger Stevens built a sawmill in about 1790, at the site of present day Merrickville. Various other early industrial buildings that made use of waterpower soon followed these mills: saw mills, grist mills, carding mills and distilleries. To obtain waterpower, a dam was usually erected near the head of a set of rapid or falls, creating a reservoir known as a “mill pond.” This in turn flooded the land, changing the pre-settlement landscape.

Prior the first European settlement of the Rideau Route in about 1784, Native Americans used the region for summer hunting and fishing, and travelled through the area by way of the rivers and lakes. The earliest human presence is speculated to date from about 10,000 years ago, shortly after the retreat of the glaciers that covered the region and the formation of the Champlain Sea. The earliest confirmed evidence has been provided by two radiocarbon dates of about 6,000 BC from the Wyght archaeological site, located on the shoreline of Lower Rideau Lake. The Rideau Route saw continued use as an aboriginal travel way, between the St. Lawrence and Ottawa rivers, until the late 1800s.

Only portions of the waterway route as we know it today were used by Native Americans prior to
European settlement (see Map 4 – Aboriginal Waterway Routes). As detailed in “The Rideau Route in 1783 – The Cranberry Flood Plain” section of this book, the area now occupied by Whitefish and Cranberry Lakes was impassable by boat. It was the flooding from mill dams, and later, canal dams, that made this section of the Rideau Route navigable by water.

The earliest European visitor to the Rideau Corridor might have been Samuel de Champlain. Champlain passed by the mouth of the Rideau River on his trip up the Ottawa River in 1613. It doesn’t appear that he went inland on the Rideau River during that trip. However, in 1615 he travelled to “the end of the Lake [Ontario] from the Island [possibly Wolfe]. . . [and] up a river about twelve leagues; then they [the Huron Indians] carried their canoes by half a league, and the end of which we entered a lake some ten or twelve leagues in circumference where there was a great quantity of game” and then “From there we went to a certain place ten leagues off . . . fishing for such fish as trout and pike of immense size” (Department of Energy and Resources Management, 1967 Cataraqui Region Conservation Report, History, p. 7). The authors of the 1967 Cataraqui Region Conservation Report speculate that the best fit for Champlain’s journey was up the Cataraqui River to Dog Lake, portaging from there to Loughborough Lake. They further speculate that the “certain place ten leagues off” might be Newboro Lake (based on the description of his wanderings in the vicinity), although based on the location of trout lakes (Newboro Lake is too shallow for trout), it would more likely be Rideau Lake. There is absolutely no confirming evidence of this and alternate speculations exist regarding Champlain’s route, but it interesting to think that he might have travelled part of the Rideau Route.

While Native Americans used the Rideau Route as a travel way between the St. Lawrence and Ottawa rivers, there is no evidence of permanent year-round settlements. Rather, the Rideau Corridor was a hunting and fishing area. From a Native American perspective, this was part of their homelands, much of their time during summer and fall was spent hunting, fishing or travelling in the Rideau region. Camps would have been set up at various prime locations for pursuing these activities.

On October 9, 1783, much of the land bordering the eastern and southern portions of the Rideau Corridor was purchased from the Mississauga natives (the “Crawford Purchases”). On March 9, 1819, a treaty (the “Rideau Purchase”) was signed with the Mississauga to purchase the remaining portions of the Rideau Corridor, including most of Lanark County and the eastern half of Carleton County.

The first settlers in the southern portion of the Rideau Route started to clear land and farm areas near the lower Cataraqui River after the King’s Mill at Cataraqui Falls (Kingston Mills) was completed in 1784. On the Rideau River, the first known settler, Roger Stevens, was also the first mill builder, constructing a mill at the site of Great Falls (Merrickville) in 1790. By the time construction started on the Rideau Canal in 1826, much of the Rideau Route had experienced sparse settlement and the waterpower of many of the rapids had been harnessed for various types of mills. The established communities of Kingston and Wright’s Town (Hull) were located at either end of the Rideau Corridor. Within the corridor, the largest community was the military settlement of Perth, established in 1816. Small, but growing communities were located at a few mill sites such as Merrickville, Smith’s Falls and Beverley (Delta). Other mill sites such as Chaffey’s Mills, Davis’ Mill and Brewer’s Mills were essentially family operations, a more diverse community was not present. A rudimentary road system connected many of these communities.

The influx of United Empire Loyalists drove much of the initial settlement and township surveying along the Rideau Corridor. Many people who had stayed loyal to the British government during the American Revolution were forced to leave the newly created United States. Sir Frederick Haldimand, the Governor of Québec (1777-1786), was very astute in recognizing there would be a flood of new immigrants northward and was instrumental in launching Loyalist settlement initiatives. One such initiative was to make land available along the north shore of the St. Lawrence River. Lands were granted based on service to the Crown, ranging from a grant of 1,000 acres for a field officer to 50 acres for any member of a loyalist (combatant or non-combatant) family. Loyalist land grants within the Rideau Corridor started in 1784.

The loyalist immigration had significant impacts on the Rideau Corridor. It initially hastened development of the region since it was settlement pressure that drove the need to land survey the Rideau Corridor. The bulk of the corridor was divided into surveyed townships (see Appendix 6), with marked concession and lot lines, between 1783 and 1807. Once surveyed, much of the land bounding the actual waterway was granted to loyalists and their families. There was no requirement to settle the land, and many were absentee landlords, which then hindered the settlement of the Rideau Corridor. Changes by 1819 in
taxation of the land, and regulations regarding the sale of land, started to speed up settlement. Significant settlement did not occur until the completion of the Rideau Canal opened up the area to commercial navigation, and provided easy access to major markets such as the United States, Montreal and Québec City.

**History of the Rideau Project**

“In the event of your entertaining apprehensions of the Enemy’s interrupting the existing line of Communication from Montreal to Kingston, you will lose no time in giving effect to as much of Lt. Col. McDonnell’s project as you shall consider practicable for the purpose of establishing a second route of transport by the Rideau.”

- Sir George Prevost, December 1814

The Rideau Project was conceived primarily for the defence of Canada, sparked by the war with the United States in 1812. In 1814, when it seemed the war might drag on for years, Sir George Prevost, commander of the military forces in Canada, directed Lt. Colonel George McDonnell (or Macdonnel) to improve the rapids and roads from Cornwall to Prescott and beyond and “to explore the Rideau communication.” There was a perceived need to provide a safe military vessel and supply route between Montreal and Kingston, out of range of American guns on the St. Lawrence River. Kingston, at that time, was Upper Canada’s main naval base and shipyard, but it was vulnerable if it couldn’t be safely supplied.

The “Rideau communication” was already known from the 1783 survey of Lieutenant Gershom French, an officer in the Loyal Rangers (also known as “Jessup’s Corps”). McDonnell reported to Prevost that a batteau route could be established along the Rideau with the aid of several canal cuts, temporary locks, dams, and some portages.

In 1815, General Drummond received instructions from London to obtain “estimates of expense of the Lachine Canal, and of the Ottawa and Rideau being made navigable.” So in April 1816, Drummond dispatched a young Lieutenant in the Royal Engineers, Joshua Jebb, to explore the route and prepare an estimate. At the time, two options were being considered. One, the present route of the Rideau Canal, and a second, by way of Irish Creek (located between Merrickville and Kilmarnock), which would cut off the portion of the route through Smiths Falls and the northern and central Rideau lakes. Jebb preferred the Irish Creek route, as the “distance is much less, the interruptions by water not so frequent, and the route lies through a more fertile and much better line of country and numerous other advantages might be adduced.” In his plan for the Irish Creek route, Jebb said that “land carriage” would be required for about a five-mile (8 km) stretch over the summit to the head of the Gananoque River. It would not have been a fully connected waterway. Jebb made his report in July 1816 to the new commander of the Royal Engineers in Canada, Lieutenant-Colonel Dumford.

In February 1817, an advertisement was issued from the Lieutenant-Governor of Upper Canada’s office in York (Toronto) and published in several papers. It asked for tenders to render the whole or any part of a water communication between “La Chine” (Montreal) and Kingston by the course of the River Rideau, navigable for boats drafting up to three feet (0.9 m) of water and twelve feet (3.7 m) in width. The ad asked for tenders for both the Irish Creek route and for “opening the communication in the direction of the Rideau Lake, and the waters communicating from thence to Mud Lake [Newboro Lake], and from thence to Kingston.” The Lieutenant-Governor’s office was underwhelmed with the response. There was no interest in this project. Threats of war seemed to have ended and thoughts had turned strictly to commerce. For commerce purposes, the St. Lawrence River was much more attractive, and efforts were being made to render it more navigable. However, the Royal Engineers, concerned with matters of defence rather than commerce, continued to investigate various military routes, including the Rideau.

George Ramsey, the 9th Earl of Dalhousie, became Governor of British North America in late 1820. His mentor, the Duke of Wellington (who defeated Napoleon at the Battle of Waterloo in 1815, and who later became the Prime Minister of England), was at that time head of the Board of Ordnance. Wellington was keen on the Rideau Route as a line of military communication and defence, and had been instrumental in establishing the settlements of Richmond and Perth, made up of retired military personnel.
Dalhousie made a trip up the Ottawa River after the ice broke in 1821. In Richmond, he expounded on the importance of the Richmond Landing area (on the south side of the Ottawa River near the foot of the Chaudière Falls) as an essential debarkation point for settlers arriving in this area. He commanded the Superintendent of Settlers in Richmond to “take steps to affect the purchase, and to watch any advertisement of the sale of it, but to report to me before he concluded” [the purchase]. Captain LeBreton, a retired officer who had been present at the dinner where Dalhousie had stressed the importance of the Richmond Landing area, bought 400 acres of that area when it was offered at a public sale a few months later. He then offered to sell this land to Dalhousie at a price five to eight times greater than what he had paid. It was later said that this influenced Dalhousie on where not to place the entrance to the Rideau Canal.

Dalhousie also asked his Lieutenant-Governor of Upper Canada, Sir Peregrine Maitland, to advise on ways the government might obtain parcels of land fronting the Ottawa River. In June 1823, Dalhousie arranged the purchase of 150 acres of land from Hugh Fraser, occupying what is now known as Entrance Valley, the start of the Rideau Canal.

In 1821, the Provincial Legislature had initiated a commission to look into the building of canal routes in Upper Canada. Captain John Macaulay of Kingston headed this commission. It was principally concerned with the St. Lawrence and Welland routes. Samuel Clowes, the commission’s civil engineer, later told Colonel By that the commissioners sometimes made him feel that for the Rideau, he should simply be going through the motions.

Samuel Clowes made a detailed survey of the Rideau Route and in his 1823 report to the Macaulay Commission he recommended the Rideau lakes route over the Irish Creek route, which had been recommended in 1816 by Lt. Jebb. One reason was the lack of sufficient reservoir water to maintain a canal system on the Irish Creek route. To get sufficient water, a ten mile (16 km) long feeder canal would have to be cut, at great expense, from Rideau Lake. Another reason was the discovery that the summit point on the Irish Creek route was actually 2.4 feet (0.7 m) higher than Rideau Lake, not lower as previously assumed.

In 1824 he continued his survey of the Rideau and made estimates for three sizes of canal systems. The first was for a canal with a 7 foot (2.1 m) navigation depth. It was to have masonry locks 100 feet (30 m) long by 22 feet (6.7 m) wide. The second was for a canal with a 5 foot (1.5 m) navigation depth. It was to have masonry locks 80 feet long by 15 feet (4.6 m) wide. The third was for a canal with a 4 foot (1.2 m) navigation depth. It was to have timber locks 75 feet (23 m) long by 10 feet (3 m) wide. His cost estimates ranged from £62,000 for the smallest lock size to £230,000 for the largest size.

Clowes’ report was examined in London, and was eventually tabled as part of the Macaulay Commission’s final report on “inland navigation,” in the Upper Canada Legislature, in April 1825. The British Government offered the Provincial Legislature a loan of £70,000 to advance the Rideau project. The Legislature refused, citing prior commitments to the St. Lawrence route. Rebuffed, the British Government instructed an existing commission under the direction of General Sir James Carmichael Smyth, which was investigating Canada’s military defences, to investigate the Rideau Route and make recommendations.

Smyth recommended that Clowes’ second estimate be adopted, with the modification that the locks be increased in size to 108 feet (33 m) long by 20 feet (6 m) wide with a depth of 5 feet (1.5 m). To compensate for the increase in lock size he added £500 per lock, increasing Clowes’ estimate of £145,000 to £169,000. It seems that Smyth knew that Clowes’ estimates had been low to encourage the project, but he didn’t want to ruffle too many provincial feathers, and mollified them by essentially adopting the provincial commission’s (Clowes’) recommendations.

The Rideau Project was placed under the control of the British Board of Ordnance, which was responsible for fortifications and canals. The Inspector-General of Fortifications was Gother Mann. It was likely Mann who recommended Lieutenant Colonel John By, a retired officer of the Royal Engineers, to take charge of the project. By had worked under Mann, in Canada, earlier in the century. By was retired on half pay in 1821, at the young age of 38. In March 1826, he was placed back on active duty and appointed Superintending Engineer of the Rideau Canal.

Shortly after Lt. Colonel John By was appointed Superintending Engineer, he stated that, based on the costs of building the Lachine Canal, the estimate given by Smyth for building the Rideau Canal was too low.
by a factor of four or five. Cost overruns, based on initial low construction cost estimates, would later become a major problem for By.

In March 1826, Major General Sir James Carmichael Smyth wrote a memorandum to General Mann (Inspector-General of Fortifications) which read in part, “I am of the opinion that it will be found more economical and more expeditious to execute the greatest part, if not the whole, of the proposed Rideau Canal by contract.” This presumably had some influence on the fact that most of the Rideau Canal was eventually built by contractors, although the engineering was performed by officers of the Royal Engineers, since By did not believe that civilian engineers were as reliable as those trained at the Royal Military Academy.

By landed in Québec on May 30, 1826. He headed up to Montreal a few days later and started preparations. In July 1826, he wrote to General Mann in England. In the letter, he stressed the need to make the Rideau Route suitable for steamboat navigation, that such boats would become increasingly important from a military standpoint. This meant that the locks should be built to accommodate boats up to 130 feet (40 m) in length and 50 feet (15 m) in width.

By fell sick in Montreal, as did his assistant Captain Daniel Bolton of the Royal Engineers, and it was not until September that By could travel up the Ottawa. During that time, John MacTaggart, who had been appointed by the Board of Ordnance in London to act as By’s Clerk of Works, arrived in Montreal.

On September 7, 1826, the Commanding Royal Engineer in Canada, Colonel Durnford, received specific instructions from the Board of Ordnance in London for By to proceed with the building of the Rideau Canal.

In mid-September 1826, By and a young Royal Engineer, Lieutenant Henry Pooley, together with several other assistants, including John MacTaggart, travelled to Wright’s Town (present-day Hull), arriving there on September 21. By and Pooley spent several days on a “minute inspection of the various bays” near the mouth of the Rideau River and “decided on the upper as best.” By’s choice was Sleigh Bay, later known as Entrance Bay. This also happened to be Dalhousie’s choice. The valley above Sleigh Bay was land he had purchased on behalf of the government from Hugh Fraser three years previously. On September 26, Dalhousie and Durnford arrived at Wright’s Town and went over the ground with By, approving of what he had done.

Colonel By again proposed that consideration be given to larger locks, 150 feet (46 m) long by 50 feet (15 m) wide by 10 feet (3 m) deep (he later reduced his depth request to 5 feet (1.5 m)). Before he returned to Montreal in November, By initiated the building of a bridge across the Ottawa River to Wright’s Town (contracted to Thomas McKay) and the clearing of trees in Entrance Valley, and journeyed to Kingston to review the planned route of the canal with Samuel Clowes.

Colonel By selected the final route for the canal in the fall of 1826. Tenders were placed in the papers in Canada and the U.S. in December 1826. By insisted that no contractor be given more work than he was capable of completing in a two year period. So the canal was divided into 23 sections, ranging in length from 1 ¾ miles to 29 ¼ miles (3 km to 47 km), each with its own contractor.

In January 1827, Colonel By made a quick tour of the route with several potential contractors. It was not until April 1827 that By made his first extensive survey tour of the Rideau Route. He completed designs for all the works at that time and made a new estimate of costs, £474,844. He sent his report to England in the care of Lt. Pooley, who travelled to London to present By’s plans and estimates. Pooley also took with him By’s formal request for larger locks. By’s plans were reviewed by a board of senior officers, headed by Major General Alex Bryce. They were generally approved, with some minor modifications. His request for a larger lock size was sent to a committee for further study.

Although some work had started in the fall of 1826, most of the contracts were awarded in 1827 and the main construction work started that year. The contractors hired their own workforces. Some of the contractors such as Philemon Wright and John Redpath already had available workers, Wright using his primarily French-Canadian timber camp workers and Redpath his Scottish and French-Canadian stone masons and labourers. Other contractors made use of readily available immigrant workers, mostly Irish,
many of whom were flocking to the fledgling Bytown as word of this major construction project spread.

Colonel By requested four companies of Sappers and Miners, soldiers of the Royal Engineers experienced in excavations (saps are trenches) and construction. He was given two, the 7th and 15th companies, totalling 162 men. They initially settled into barracks built on the hill overlooking the Entrance Bay. Named Barrack Hill, it is known today as Parliament Hill.

All the work was done by hand with the aid of a few draft animals. Men carried out most of the excavations with the use of shovels, pickaxes and wheelbarrows. Rock was laboriously hand drilled and blasted with merchant powder (a somewhat unstable mix of nitre, sulphur and charcoal) and black powder. Trees were cut down with felling axes. The large stones that made up the locks were set in place using simple hand cranes. Much of the skilled stone work was done by British/Scottish stonemasons and French Canadians who had experience on other lock projects. The unskilled labour was made up mostly of Irish immigrants and French Canadians. It is estimated that about 2,000 to 4,000 men per year worked to make the Rideau Canal a reality. These are rough estimates since the numbers fluctuated month by month and no exact count is available.

It is difficult to fully appreciate today the difficulties that were faced, not only by the men working on the job, but in many cases by their families as well. Several of the Sappers and Miners had their families stationed with them. Some of the Irish labourers brought their families to the work sites, building rough shanty cabins. Others left their families in the newly created Bytown (Ottawa) or the more established town of Kingston. Colonel By’s reports, which listed the number of people working at each lockstation, also listed deaths, and these lists had columns for men, women and children. For instance, in 1830, during the “sickly season” which spanned from August to mid-September, in the southern Rideau (from Newboro to Kingston Mills), the area hardest hit by malaria, there were 1,327 men employed on the job of which 787 took sick with malaria. Deaths in that period were 27 men, 13 women and 15 children.

About half of the overall deaths can be attributed to malaria. Malaria was prevalent in North America at that time, going back in Ontario to at least the 1700s. The construction of the canal put hundreds of people in close proximity to each other, aiding in the transmission of the disease. It was not known at that time that mosquitoes transmitted the disease, it was believed to be the result of bad air (from which the name “malaria” is derived). Colonel By had large sections of trees cut down at each workstation to improve airflow, in order (he thought) to lessen the chances of malaria.

Of the four species of malaria, the type that was present in Ontario at that time was the temperate form, *Plasmodium Vivax*, which has essentially a 0% mortality rate. Unlike its more virulent tropical cousins, people get sick from *P. Vivax*, but they don’t die. The mystery on the Rideau isn’t that malaria existed, since it was already well established in Ontario, but that people died from it. When the Erie Canal in New York State was built, several years prior to the Rideau, it is estimated that upwards of 1,000 men died of malaria. During the building of the Rideau Canal, the surviving factual records indicate that about 500 men (and an equal number of women and children) may have died of malaria. Either there were other factors at play (i.e. complications from other diseases) or perhaps a more virulent form of malaria such as *P. falciparum* was also present.

The total number of deaths during the construction of the Rideau Canal is not known. It has been estimated that upwards of 1,000 men (no estimates available for women and children), may have died from all causes during the main construction period of 1827-1831. About half of those died from malaria, the other half from other diseases (i.e. dysentery, small pox) and work related accidents such as blasting accidents, drownings and rock falls.
At the start of the first full construction season in 1827, the size of the locks was still an issue and Colonel By was still lobbying hard for a larger lock size to accommodate steamboat navigation. A committee, headed by Lieutenant General Sir James Kempt, Lieutenant-Governor of Nova Scotia, was set up to review the size of the locks. The Kempt Committee toured the route with By in the spring of 1828, completing their report in Kingston by the end of June of that year. The Committee approved of locks 134 feet (40.8 m) long, by 33 feet (10.1 m) wide, with 5 feet (1.5 m) of water over the sills. They also approved the dismantling of any existing masonry works in order to accommodate the larger size of lock. The revised estimate for the work was £576,757. John By's actions were also approved by the commission, stating in their official report, "Economy has not been lost sight of by Colonel By and he had, in accordance with what he believed to be the spirit of his instructions, pushed forward the work and excited a degree of exertion through the whole Department which few individuals could have accomplished."

The canal construction was essentially completed by the fall of 1831. In December of that year, the two companies of Sappers and Miners were disbanded in Bytown. Several of those men were appointed as the first lockmasters. On May 24, 1832, Colonel By, his family and some fellow officers boarded the vessel Pumper, temporarily renamed Rideau, in Kingston for the grand opening voyage. It was on May 29, 1832, after stops at all the small communities along the way, when the Rideau/Pumper sailed into Bytown. The canal was officially open for navigation.

Despite By's economy, the final cost for the canal of £822,000 was far above the Kempt Committee's estimate. A few months after the Rideau was opened to the public in 1832, By was recalled to London by the British Government to answer charges of financial mismanagement. A parliamentary committee was established and an inquiry was held. It should be remembered that this was a time of parliamentary reform in Britain. Parliament was not so much upset at the cost overrun, as they were at the Board of Ordnance's defiance of parliamentary authority in authorizing By to complete the project regardless of the actual amount of the parliamentary grants. By was caught in the middle of a political battle. Once all the evidence was reviewed the parliamentary inquiry exonerated By of all wrongdoing. However, a victim of the politics of the day, By never received a formal commendation in recognition of the tremendous feat he had accomplished. John By died in 1836 at the age of 53, his achievements, the building of the Rideau Canal and the founding of Bytown (Ottawa), not publicly recognized.
**Appendix 4 – The Main Rideau Route Surveys**

The best information we have regarding what the Rideau Route looked like prior to the building of the Rideau Canal comes from the early surveys of the route. The main surveys of the Rideau Route are listed below. Note that this list does not include the regional township surveys of the area or the various detailed site surveys done during the construction of the canal.

<table>
<thead>
<tr>
<th>Surveyor</th>
<th>Date</th>
<th>Details</th>
</tr>
</thead>
</table>
| Lt. Gershom French        | 1783 | • Notable for being the first survey of most of the Rideau Route (French’s survey did **not** include Cranberry Marsh or the Cataraqui River)  
• Survey went from Carillon (Ottawa River) to Gananoque, via the Rideau River and the Rideau lakes  
• Map reference: “Communication with the St. Lawrence & Ottawa Rivers, by the Rivers Petite Nation & Rideau,” Archives of Ontario, AO1336  
• Original: National Archives of Canada, Reel C-11893, MG 11, “Q” Series, Vol. 23, pp. 10-22  
| Lewis Grant               | 1795 | • Notable for being the first detailed map of the original west Gananoque watershed  
• Surveyed from Gananoque to Sand Lake, plus compiled information from aboriginal maps to Rideau Lake  
• Map Reference: “Sketch of the Ganonoque,” Archives of Ontario, AO1532 |
| Lt. Joshua Jebb           | 1816 | • Notable for being the first survey from Ottawa to Kingston, the present day Rideau navigation route, plus the Irish Creek route (Irish Creek to Morton)  
• First known detailed map of the Rideau Route  
• Original: National Archives of Canada, RG8, 1B, “C” Series, Vol. 1915  
• Map: “Plan of the Water Communication from Kingston to the Grand River” by Lt. J. Jebb, July 8, 1816, National Archives of Canada. Two versions, NMC 16814 (earlier copy) NMC 21941 (later copy)  
• Map: “Plan of the Rideau River from its Mouth to the Head of Long Island” by Lt. J. Jebb, July 8, 1816, National Archives of Canada, NMC 59324 |
## Appendix 4 - The Main Rideau Route Surveys

### Samuel Clowes
**Provincial Civil Engineer**  
**1823-1824**
- Notable for being the first detailed survey of the Rideau Route with surveyed levels
- Recommended Rideau lakes route in preference to Irish Creek route to the Macaulay Commission
- Original 1823 survey report: NAC, RG5, A1, Vol.63, Reel C-4612, pp. 33631-33647
- Map: “Plan of the Proposed Canal from Kingston on Lake Ontario to the Ottawa River,” National Archives of Canada, NMC 11962 (undated) or NMC 11306 (1827 copy) or James Chewitt’s 1825 compilation (NMC 11233 or NMC 38518)

### John Burrows
(aka John Burrows Honey)  
**Provincial Land Surveyor**  
**Overseer of the Works**  
**1827**
- Notable for keeping a detailed diary of two surveys of the Rideau (May and July 1827) with descriptions of the Rideau Route
- Original: City of Ottawa Archives
- Transcription: “Sights & Surveys,” Welch, 1979

### John MacTaggart
**Civil Engineer**  
**Clerk of the Works**  
**(1826-1828)**
- Notable for publishing his 1827 survey reports made to Colonel By with descriptions of the Rideau Route
- Original: “Three Years in Canada,” MacTaggart, 1829
- Transcription: “Sights & Surveys,” Welch, 1979

These were not surveys as we think of them today, with detailed measurements and maps drawn to scale. Rather most were maps based on sketches with generalized scaling. This makes interpretation and direct comparison to present day geography difficult. As John Burrows observed in 1827, while lost in the Drowned Lands (present day Whitefish Lake) “the plans of Mr. Sherwood’s survey as laid down in the Plan received by the Surveyor General at York, and the plan of the line of Lakes, etc. as delineated by Lieut. Jebb – and in the light of each of these helps we found ourselves in an error and shut into a long narrow bay having much the appearance of an outlet from the drowned lands into Cranberry Lake, but this appearance proved erroneous. By studying the two plans in our possession the differences between them was more calculated to mislead than direct” (Welch, p. 51). Full interpretation can only be done by taking all the available pre-canal information and comparing it to present day topography, to come up with a composite view of what the Rideau looked like prior to being flooded by the building of the dams and locks. Maps 1a, 2a and 3a, located at the beginning of this book, are such interpretations.

The intent of each survey must be considered before interpreting these early documented surveys of the Rideau. Lt. Gershom French, in 1783, simply investigated the route for use by smaller “batteaux” and noted the character of the surrounding land. He travelled by birch bark canoe, which floated in just a few inches of water and could be pulled up less severe rapids. John Burrows in a July 1827 survey wrote “over shoals and rapids the canoes were to be lifted, while the passenger waded – at times dropping off large stones up to the armpits in water” (Welch, p. 49). Only the most severe rapids/falls had “carrying places” (portages). Frenchoptimistically stated that “The Rivers du Rideau and Gannanocui, will be Navigable for
Batteaux in the time of high Water at all places except the Falls and Carrying Places.” Batteaux (or bateau) were keelless, flat bottom boats, 40 to 60 feet (12 to 18 m) long, 6 to 8 feet (1.8 to 2.4 m) wide, about 2 feet (0.6 m) deep, drafting 3 to 5 inches (10 cm) when empty and 12 to 14 inches (35 cm) when fully loaded. They were steered by sweep oars at bow and stern, which could also be used to propel the boat in flat water (some batteaux were also equipped with rowing oars), but the main form of propulsion was the use of long poles. They were designed to run shallow rapids – a crew of 3 could manage the boat while going downstream, while a crew of 4 to 6 was needed going upstream.

When Lt. Joshua Jebb surveyed the route in 1816, his method of travel was the same as French’s (birch bark canoes), but Jebb was looking for a route that could be navigated by vessels that drafted up to three feet (0.9 m) of water and were up to twelve feet (3.7 m) in width. To this end, he made note of rapids that wouldn’t be navigable for this type of vessel and recommended the placement of dams, wings and locks to make the route navigable.

Samuel Clowes, in 1823-24, surveyed the route for a navigation channel up to 7 feet (2.1 m) in depth, with proposed locks of 100 feet (30 m) in length by 22 feet (6.7 m) in width. Hence he proposed many more locks and dams than Lt. Jebb. Rapids that Jebb didn’t note for a 4 foot (1.2 m) navigation depth became more significant to Clowes who was looking for a deeper navigation channel.

The 1827 survey descriptions by John Burrows and John MacTaggart provide even more detail. Burrows and MacTaggart describe shoals and rapids not mentioned in any previous survey as obstacles to be overcome by flooding or channel clearing.

Loons

The Rideau Canal Waterway is home to a healthy population of loons. Many of the lakes on the Rideau pre-date the canal and the loons were here long before the canal was built. The haunting calls of these beautiful birds greeted the early surveyors, just as they do today’s visitors. Photo by Ken W. Watson, 2005.
Appendix 5 – Rideau Geographic Place Names

The following are present and historic geographic place names, sorted geographically, south to north. Dates, where known, have been added. Overlap of dates indicates multiple name usage.

Present day place names of Ontario are governed by the Ontario Geographic Names Board. These are listed in the Ontario Geographic Names Database. This board, and the Geographic Names Board of Canada, has depreciated the use of the apostrophe in place names. Their policy is that “In English, hyphenation and the genitive apostrophe should be approved only when well established and in current use” (Principles and Procedures for Geographical Naming, 1990). Many of the original place names along the Rideau included the apostrophe (i.e. Hog’s Back, Burritt’s Rapids) but do not today. There is some local controversy regarding the loss of the apostrophe, the most notable being “Chaffeys Locks” which local residents disagree with and use “Chaffey’s Lock” in preference to the official name. This listing shows the names as officially listed in the Ontario Geographic Names Database.

<table>
<thead>
<tr>
<th>Present Day Name</th>
<th>Historic / Alternate Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kingston (community)</td>
<td>Fort Frontenac [1673-1760]</td>
</tr>
<tr>
<td></td>
<td>Cataracouy [1700s]</td>
</tr>
<tr>
<td></td>
<td>Cataraqui [c.1760 – early 1800s]</td>
</tr>
<tr>
<td></td>
<td>Kingston [1788]</td>
</tr>
<tr>
<td>Cataraqui River</td>
<td>several variants on spelling of Cataraqui (i.e. Cataraque, Cataroqui, Cataraquay, etc.)</td>
</tr>
<tr>
<td></td>
<td>also called a stream and creek</td>
</tr>
<tr>
<td></td>
<td>Kingston Mill Steam</td>
</tr>
<tr>
<td></td>
<td>Great Cataraqui River</td>
</tr>
<tr>
<td></td>
<td>Grand River Cataraquay [Clowes 1823]</td>
</tr>
<tr>
<td>Kingston Mills Lockstation</td>
<td>Cataraqui Falls</td>
</tr>
<tr>
<td></td>
<td>King’s Mills [c.1784]</td>
</tr>
<tr>
<td></td>
<td>Kingston Mills [1791]</td>
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<tr>
<td>Colonel By Lake</td>
<td>(lake created in 1832 by canal dams)</td>
</tr>
<tr>
<td></td>
<td>drowned land (generic)</td>
</tr>
<tr>
<td></td>
<td>no name other than “Drowned Land” on early maps [to 1930s]</td>
</tr>
<tr>
<td></td>
<td>shown on the 1971 chart 1513 as Colonel By Lake</td>
</tr>
<tr>
<td>River Styx (lake)</td>
<td>(lake created in 1832 by canal dams)</td>
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<tr>
<td></td>
<td>drowned land (generic)</td>
</tr>
<tr>
<td></td>
<td>earliest reference as River Styx on Dr. Lake’s Chart [c.1907]</td>
</tr>
<tr>
<td>Lower Brewers Lockstation</td>
<td>New Mills [Clowes 1823]</td>
</tr>
<tr>
<td></td>
<td>Brewer’s Lower Mills</td>
</tr>
<tr>
<td></td>
<td>Lower Brewer’s Rapids</td>
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<tr>
<td></td>
<td>Washburn [1873] – name of local community</td>
</tr>
<tr>
<td>Upper Brewers Lockstation</td>
<td>Brewer’s Upper Mills</td>
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<tr>
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<td>Upper Brewer’s Rapids</td>
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<td>Brewer Lake</td>
<td>Bass Lake</td>
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<tr>
<td>The Round Tail</td>
<td>Round Tail</td>
</tr>
<tr>
<td>Cranberry Lake</td>
<td>(originally much smaller – present size due to canal dams)</td>
</tr>
<tr>
<td></td>
<td>Cranberry Marsh and Lake [Grant 1795]</td>
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<tr>
<td></td>
<td>Cranberry Lake [Jebb 1816 – referencing original small lake]</td>
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<td></td>
<td>Craneberry Marsh</td>
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<td>Present Day Name</td>
<td>Historic/Alternate Name</td>
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<tr>
<td>--------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Dog Lake</td>
<td>(lake enlarged in 1832 by canal dams) Dog Lake</td>
</tr>
<tr>
<td>Little Cranberry Lake</td>
<td>(lake created in 1832 by canal dams) Cranberry Marsh</td>
</tr>
<tr>
<td></td>
<td>name of Little Cranberry first appears on Dr. Lake’s Chart [c.1907]</td>
</tr>
<tr>
<td>Whitefish Lake</td>
<td>(lake created in 1832 by canal dams) River Gananoque (or Gananocui)</td>
</tr>
<tr>
<td></td>
<td>West Branch of the Gananoque River</td>
</tr>
<tr>
<td></td>
<td>Land Overflowed [Jebb 1816]</td>
</tr>
<tr>
<td></td>
<td>White Fish River, Drowned Land or Drowned Lands [c.1826-1831]</td>
</tr>
<tr>
<td></td>
<td>White Fish Lake [Lake c.1907]</td>
</tr>
<tr>
<td>Morton Creek</td>
<td>Gananqui Waters [Jebb 1816]</td>
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<tr>
<td></td>
<td>Gananoque River [Clowes 1823]</td>
</tr>
<tr>
<td></td>
<td>White Fish River</td>
</tr>
<tr>
<td>Lower Beverley Lake</td>
<td>White Fish Lake [Jebb 1816]</td>
</tr>
<tr>
<td></td>
<td>Henderson Lake [Clowes 1823]</td>
</tr>
<tr>
<td></td>
<td>East Lake [Clowes 1823]</td>
</tr>
<tr>
<td>Delta (community)</td>
<td>Stevenstown [c.1796]</td>
</tr>
<tr>
<td></td>
<td>Stone Mills [1810-1821]</td>
</tr>
<tr>
<td></td>
<td>Beverley [1821-1866]</td>
</tr>
<tr>
<td></td>
<td>Delta [1886]</td>
</tr>
<tr>
<td>Jones Falls (geographic)</td>
<td>Long Falls</td>
</tr>
<tr>
<td></td>
<td>Jones’ Rapids</td>
</tr>
<tr>
<td></td>
<td>Jones’ Falls</td>
</tr>
<tr>
<td>Jones Falls Lockstation</td>
<td>Jones’ Falls</td>
</tr>
<tr>
<td>Sand Lake</td>
<td>Sand Lake [earliest name – Jebb 1816]</td>
</tr>
<tr>
<td></td>
<td>Davis Lake [or Davis’ Lake]</td>
</tr>
<tr>
<td></td>
<td>Davies Lake</td>
</tr>
<tr>
<td></td>
<td>West Lake</td>
</tr>
<tr>
<td></td>
<td>Davil's Lake</td>
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<tr>
<td>Davis Lockstation</td>
<td>Davis’ Rapids [c.1820]</td>
</tr>
<tr>
<td></td>
<td>Davis’ Mills [c.1820]</td>
</tr>
<tr>
<td></td>
<td>Fosters [sic] Lock [late 1800s to mid-20th century] – local name after lockmaster Albert Forster</td>
</tr>
<tr>
<td>Opinicon Lake</td>
<td>most common early usage as Opinicon variations: Openicon, Openacon, Opinicue</td>
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<tr>
<td></td>
<td>Davis Lake</td>
</tr>
<tr>
<td></td>
<td>Mosquito Lake</td>
</tr>
<tr>
<td></td>
<td>Potatoe Lake</td>
</tr>
<tr>
<td>Lake Opinicon (community)</td>
<td>small community at northwest end of lake – now mostly a ghost town [mid-1800s to early 1900s]</td>
</tr>
<tr>
<td>Chaffeys Lockstation</td>
<td>Chaffey’s Rapids [c.1820]</td>
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<tr>
<td>Chaffeys Mills [c.1820]</td>
<td></td>
</tr>
<tr>
<td>Chaffeys Locks (community)</td>
<td>Chaffey’s Rapids [c.1820]</td>
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<tr>
<td></td>
<td>Chaffey’s Mills [c.1820]</td>
</tr>
<tr>
<td></td>
<td>Chaffey’s Lock (locally preferred name for community)</td>
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<tr>
<td>Indian Lake</td>
<td>Indian Lake</td>
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<tr>
<td>Clear Lake</td>
<td>Clear Lake</td>
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<td>Historic/Alternate Name</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
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<tr>
<td>Newboro Lake</td>
<td>Mud Lake (original name, in common use to late 1800s)</td>
</tr>
<tr>
<td>Newboro Lockstation</td>
<td>Isthmus [c.1826]</td>
</tr>
<tr>
<td></td>
<td>Isthmus of Rideau Lake [c. 1826]</td>
</tr>
<tr>
<td></td>
<td>Newborough or Newboro [c.1832]</td>
</tr>
<tr>
<td>Newboro (community)</td>
<td>Isthmus [c.1826]</td>
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<tr>
<td></td>
<td>Isthmus of Rideau Lake [c.1826]</td>
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<tr>
<td></td>
<td>New Borough or Newborough [c.1832]</td>
</tr>
<tr>
<td></td>
<td>Newboro' [1836]</td>
</tr>
<tr>
<td></td>
<td>incorporated as a village in 1876</td>
</tr>
<tr>
<td>Upper Rideau Lake</td>
<td>Upper Rideau Lake [c.1815]</td>
</tr>
<tr>
<td></td>
<td>Rideau Lake</td>
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<tr>
<td></td>
<td>Little Rideau Lake</td>
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<tr>
<td>Westport (community)</td>
<td>Head of the Lake [c.1820]</td>
</tr>
<tr>
<td></td>
<td>Manhard’s Mills [1829]</td>
</tr>
<tr>
<td></td>
<td>Westport [1841]</td>
</tr>
<tr>
<td></td>
<td>incorporated as a village in 1904</td>
</tr>
<tr>
<td>Wolf Lake</td>
<td>Wolfe Lake</td>
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<td></td>
<td>West Rideau Lake</td>
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<tr>
<td>Narrows Lockstation</td>
<td>Upper Narrows</td>
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<tr>
<td>Big Rideau Lake</td>
<td>Rideau Lake (original name)</td>
</tr>
<tr>
<td>Rideau Ferry (community)</td>
<td>First Narrows</td>
</tr>
<tr>
<td></td>
<td>Oliver’s Ferry [c.1816]</td>
</tr>
<tr>
<td></td>
<td>Rideau Centre [1889]</td>
</tr>
<tr>
<td></td>
<td>Rideau Ferry [1899]</td>
</tr>
<tr>
<td>Lower Rideau Lake</td>
<td>Rideau Lake (original name)</td>
</tr>
<tr>
<td>Beveridges Lockstation</td>
<td>Named after Beveridge Bay of Lower Rideau Lake, the start of the Tay Canal</td>
</tr>
<tr>
<td>Tay River</td>
<td>Pike River [pre-1816]</td>
</tr>
<tr>
<td></td>
<td>Tay River [1816]</td>
</tr>
<tr>
<td>Perth</td>
<td>Perth-on-Tay [1816]</td>
</tr>
<tr>
<td></td>
<td>Perth [1820]</td>
</tr>
<tr>
<td></td>
<td>incorporated as a town in 1853</td>
</tr>
<tr>
<td>Port Elmsley (community)</td>
<td>Barbados</td>
</tr>
<tr>
<td></td>
<td>Pike’s Falls</td>
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<tr>
<td></td>
<td>Port Elmsley [Post Office name 1852]</td>
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<tr>
<td>Rideau River</td>
<td>Rivière du Rideau [c.1694]</td>
</tr>
<tr>
<td></td>
<td>River du Rideau [French 1783]</td>
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<tr>
<td></td>
<td>Rideau River [c.1800]</td>
</tr>
<tr>
<td>Poonamalie Lockstation</td>
<td>First Rapids [c.1823]</td>
</tr>
<tr>
<td></td>
<td>Poonamallee [c.1830]</td>
</tr>
<tr>
<td></td>
<td>Poonamalie</td>
</tr>
<tr>
<td></td>
<td>First Rapids &amp; Poonamallee/Poonamalie used interchangeably until 1880s when Poonamalie became more common</td>
</tr>
<tr>
<td>Black Creek</td>
<td>possibly Owl River [Jebb 1816]</td>
</tr>
<tr>
<td></td>
<td>Cockburn Creek</td>
</tr>
<tr>
<td>Smiths Falls Detached Lockstation</td>
<td>Smith’s Falls Detached</td>
</tr>
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<td>Smiths Falls Detached</td>
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<tr>
<td>Present Day Name</td>
<td>Historic/Alternate Name</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
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</tbody>
</table>
| **Smiths Falls Combined Lockstation** | Smiths Falls Combined Locks [1832-1974]  
                                        Smiths Falls Combined Lock [1974]                                                      |
| **Smiths Falls (community)**      | Smyth’s Falls [c.1823]  
                                        Smith’s Falls [variant in use since 1823]  
                                        Wardsville [c.1832]  
                                        Smith’s Falls (incorporated as town in 1883)  
                                        Smiths Falls (name correction in 1968)                                                        |
| **Old Slys Lockstation**          | Sly’s Rapids  
                                        Old Sly’s Rapids  
                                        McCreary's Lock [Lake 1920]                                                                   |
| **Edmonds Lockstation**           | Edmunds’ Rapids  
                                        Mills Lock [Lake 1920]                                                                         |
| **Kilmarnock Lockstation**        | Dow’s Rapids [Jebb 1816]  
                                        Maitland’s Rapids [c.1823]  
                                        Kilmarnock [c.1880s]                                                                           |
| **Merrickville Lockstation**      | Great Falls [c.1790]  
                                        Mirrick’s/Merrick’s Mills [c.1793]                                                             |
| **Merrickville (community)**      | Great Falls [c.1790]  
                                        Mirrick’s/Merrick’s Mills [c.1793]  
                                        Merrickville (incorporated as a town in 1860)                                                  |
| **Clowes Lockstation**            | Rapid Plat [Jebb 1816]  
                                        Clowes’ Quarry Rapids [c.1826]                                                                 |
| **Andrewsville (community)**      | Andrewsville [1850s to mid-1900s]                                                     |
| **Nicholson Lockstation**         | Nicholson’s Rapids                                                                      |
| **Rideau Creek**                  | Cox Creek / Cox’s Creek                                                                   |
| **Burritts Rapids Lockstation**   | Burritt’s Rapids                                                                         |
| **Burritts Rapids (community)**   | Burritt’s Rapids [c.1823]  
                                        Burritt’s Rapids [Post Office name 1839]                                                       |
| **Kemptville Creek**              | South Branch of the Rideau River [c.1823]  
                                        Kemptville Creek [c.1908]                                                                     |
| **Kemptville (community)**        | The Branch [c.1816]  
                                        Clothier’s Mills [c.1820]  
                                        Kemptville [1828]  
                                        incorporated as a village in 1857                                                             |
| **Kars (community)**              | Wellington [c.1830s]  
                                        Kars [1856]                                                                                   |
| **Manotick (community)**          | Manotick [1864]                                                                           |
| **Long Island Lockstation**       | Long Island [Jebb 1816]  
                                        Long Island Rapids [Jebb 1816]                                                                  |
| **Jock River**                    | River Jacques [Jebb 1816]  
                                        Goodwood River [Clowes 1823]  
                                        Jock River [c.1830]                                                                            |
| **Black Rapids Lockstation**      | Black Rapids [Jebb 1816]                                                                  |
| **Hogs Back Lockstation**         | Three Rock Rapids [Jebb 1816]  
                                        Hog’s Back [c.1826]                                                                           |
<table>
<thead>
<tr>
<th>Present Day Name</th>
<th>Historic/Alternate Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prince of Wales Falls</td>
<td>Hogs Back Falls Man made falls created by dam and excavated waste water channel in 1831 (the lower section of the rapids is part of the original Three Rock Rapids)</td>
</tr>
<tr>
<td>Hartwells Lockstation</td>
<td>Hartwells [c.1828]</td>
</tr>
<tr>
<td>Ottawa Lockstation</td>
<td>Ottawa [1826]</td>
</tr>
<tr>
<td>Colonel By Valley</td>
<td>Entrance Valley</td>
</tr>
<tr>
<td>Entrance Bay</td>
<td>Sleigh Bay [pre-canal] Rafting Bay [pre-canal]</td>
</tr>
<tr>
<td>Ottawa River</td>
<td>La Grande Rivièrè La Grande Rivièrè du Nord La Rivièrè des Algonquins Rivière des Outaouais (alt. Outaouak, Outauas) Grand River Ottawa River</td>
</tr>
</tbody>
</table>

**Old Stone Mill in Delta**

The initial flooding along the Rideau Route was caused by mill dams. These were built to provide a head of water that allowed a water wheel to power the mill. The first mills were built of wood, but as owners became successful they replaced their wooden mills with magnificent stone structures. The stone mill in Delta, built in 1810, is one of the earliest surviving grist mills in Ontario.

This mill is located on Lt. Joshua Jebb’s Irish Creek Route (Delta was called “Stone Mills” when Jebb did his survey in 1816 - see the map on the cover of this book). If the Rideau Canal had followed this route the mill might not have survived. But this area never saw any canal development and the mill flourished into the 20th century.

The building has been lovingly restored by The Delta Mill Society. It is open to the public with many interpretive displays.

Photo by Ken W. Watson, 2005.
Appendix 6 – Pre-1850 Townships Bordering the Rideau Canal

Pre-1850 Townships Bordering the Rideau Canal
Ontario, Canada

BASTARD = Pre-1850 Township
• = Community
≈ = Rideau Canal Waterway
≈≈ = Other Water

Ken W. Watson
The Rideau Route
141
## Image Citations

The following are references to digital images cited in this document. They are part of the Rideau Canal National Historic Site of Canada Submerged Cultural Inventory Image Database.

<table>
<thead>
<tr>
<th>Image No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>RI-0007</td>
<td>“Narrow’s Rideau Lake,” dated May 5, 1828, Scottish Records Office.</td>
</tr>
<tr>
<td>RI-0020</td>
<td>“Smith’s Falls,” dated May 5, 1828, Scottish Records Office.</td>
</tr>
<tr>
<td>RI-0132d</td>
<td>“Sketch of the Dam &amp; 3 Locks at Kingston Mills Cataroqui Creek. Sectn. No. 23” by ?, dated October 25, 1827, National Archives of Canada, NMC 21877.</td>
</tr>
<tr>
<td>RI-0145</td>
<td>“Plan of the Proposed Canal from Kingston on Lake Ontario to the Ottawa River,” dated 1827, National Archives of Canada, NMC 11306.</td>
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<tr>
<td>RI-0146b</td>
<td>“General Plan of the Rideau Canal from Kingston Bay to the Ottawa,” n.d., (c.1827), National Archives of Canada, NMC 16826 (2/2).</td>
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<td>RI-0147a</td>
<td>“Plan of the Water Communication from Kingston to the Grand River” by Lt. J. Jebb, July 8, 1816, National Archives of Canada, NMC 16814 1/2.</td>
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<tr>
<td>RI-0147b</td>
<td>“Plan of the Water Communication from Kingston to the Grand River” by Lt. J. Jebb, July 8, 1816, National Archives of Canada, NMC 16814 2/2.</td>
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<tr>
<td>RI-0148a</td>
<td>“Plan of the Rideau River from its Mouth to the Head of Long Island” by Lt. J. Jebb, July 8, 1816, National Archives of Canada, NMC 59324 1/2.</td>
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<td>RI-0148b</td>
<td>“Plan of the Rideau River from its Mouth to the Head of Long Island” by Lt. J. Jebb, July 8, 1816, National Archives of Canada, NMC 59324 2/2.</td>
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<tr>
<td>RI-0154b-1</td>
<td>“Plan of the Water Communication from Kingston to the Grand River” by Lt. J. Jebb, July 8, 1816, National Archives of Canada, NMC 21941 1/3.</td>
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<tr>
<td>RI-0871</td>
<td>“No. 3” [part of] “Plans No. 1. to 4. Shewing the Waters by which the intended Route of the Rideau Canal is to pass” by Thomas Ridout, John By; E.W. Durnford, 1828 (signed Ridout 1828, Durnford 1829 and By 1830), National Archives of Canada, NMC 40574.</td>
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<tr>
<td>RI-0888</td>
<td>“No. 37 [Trent] &amp; Rideau Communications” by ?, [1815], National Archives of Canada, NMC 44765.</td>
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<tr>
<td>RI-0994</td>
<td>“Plan of the Works in progress at Merricks Mills Rideau Canal April 1829” by E.C. Frome, April 1829, National Archives of Canada, NMC 130251.</td>
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</tbody>
</table>
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---------- - *Preliminary Study, The Jones Falls Site & Lock Station, No. 0, 1973*.


Frome, Lieutenant Edward C., “*Account of the Causes which led to the Construction of the Rideau Canal, connecting the Waters of Lake Ontario and the Ottawa; the Nature of the Communication prior to 1827; and a Description of the Works by means of which it is converted into a Steam-boat Navigation,*” in “Papers on Subjects Connected with the Duties of the Corps of Royal Engineers,” London, Vol. 1, 1837, pp. 73-102.


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About the Author

Ken Watson, a website developer, lives on the shores of the Rideau Canal Waterway with his wife Pat, and dog Tika. Ken worked as a geologist in the Yukon and northern Ontario before moving to the Rideau area in 1995. Taking an interest in both the Rideau Canal and the development of Internet websites, Ken decided to learn how to build websites by creating one about the Rideau Canal. This led to the development of www.rideau-info.com in 1996, a non-commercial (hobby gone wild) website, now the largest canal-related website in the world.


While not writing books, Ken enjoys photography, genealogy and boating (power, canoe and kayak). Ken also actively participates in his local lake association as well as with various local heritage organizations. A director with Friends of the Rideau since 1997, Ken currently serves that organization in several roles including that of Newsletter Editor and “Webmaster.” Ken also volunteers his time and website creation skills for several other organizations including the Rideau Canal Museum, Delta Mill Society, Merrickville and District Historical Society, Kingston Historical Society, Rideau Heritage Network, Chaffey’s Lock and Area Heritage Society, and the Canadian Canal Society.

The Tranquil Beauty of the Rideau

Research can unearth a few surprises, in this case a watercolour painting of the Rideau River done in 1922 by my great-grandfather, Robert J. Wickenden. The painting (which looks much nicer in colour), shows the peaceful nature of the river. “Summer Afternoon, Rideau River,” by Robert J. Wickenden, 1922, National Gallery of Canada, No. 6070.