Canadian Canal Society

Société des Canaux du Canada

CANALS CANADA/CANAUX DU CANADA

Newsletter of The Canadian Canal Society/Société des Canaux du Canada

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President's Message

Spring is here all right — April showers and all! It is pouring as I write this, but the daffodils are dancing in the wind, and the tulip trees and forsythia are brightening the streets. The Seaway is once again open for business, and the other day I watched as six ships passed through Lock 3 before 2 p.m. — reminiscent of the "good old days" when that would have been the norm.

What was I doing watching ships at Lock 3? Well, the group planning the World Canals Conference (of which more anon) received an HRDC grant to hire six people to help out with the Conference administration. Since trying to fit six more bodies into limited space in St. Catharines City Hall was out of the question, the empty space on the second floor of the St. Catharines Museum (which has housed two restaurants, at various times) has been turned into the planning headquarters. And a busy place it is, with phones ringing constantly, computers clicking merrily away, and people buzzing about, all under the capable direction of Jan Bechard, the Conference Co-ordinator.

Since I last addressed you, the C.C.S. Board has continued its practice of holding meetings at various locations in the Peninsula. Port Weller Dry Docks is always a favourite, including as it does an update on activities there. We have held two meetings at Dom's Restaurant in Thorold, both as preludes to Socials at the St. Catharines Museum. Board member Susan Noakes has hosted us at the Welland Historical Museum, and will again at our next meeting. We are grateful to **Bob Sears** for arranging these locales.

We have recently received news that long-time Board member and a former President, **Bob Sparks** has had to resign because of deteriorating health. Bob has been a staunch supporter of the C.C.S. for many years, and has given yeoman service over the years. We all wish him well in the future. It is also with great regret that we have learned that **Carol Gaspari** will have to resign her position as Treasurer. Pressure of work at the James A. Gibson Library at Brock has led her to this decision. We are grateful to her for her devoted watch over our finances. They will both be missed.

Carol's resignation prompts me to call for someone to take her place as Treasurer — any volunteers? Since this year's AGM will not take place until the fall, we have time to consider all offers. Please do let either Carol or me know if you are interested.

We have recently lost one of our overseas members — **Ron Oakley** died on 8 April. Not only had Ron been a Member of the C.C.S., but he had for years led tours of Inland Waterways Association members to various canal sites - including several visits to Canada. Those of you who knew him will long remember him, and his strong support for canals everywhere.

I hope to see many of you at the World Canals Conference in June! And I hope you all have a relaxing and enjoyable summer — with as much of it spent on the water as possible.

Bobbie Styran

New Members

Bill and Joan Salton
72 Royal Henley Blvd
St Catharines, ON L2N 4S1
will.salton@sympatico.ca

Patrick Little
11 Hillcrest Avenue
St Catharines, ON L2R 4X9
plittle@14churchstlawoffice.com

Archives of Ontario Library
77 Grenville Street 3d Floor
Toronto, ON M5S 1B3
frank.vanklamthout@archives.gov.on.ca

Norm and Mary Pomfret
35 West 4th Street
Hamilton, ON L9C 3M2
Mary.Pomfret@hwcn.org

Ron Oakley

As reported by CCS President, **Bobbie Styran**, the inland waterways world is saddened by the announcement of the death of **Ron Oakley**.

Ron's involvement in inland waterways went back to 1968 when he joined the Inland Waterways Association (UK) (IWA). He also became honorary Secretary of the South Western Branch of IWA. Four years later he was chairman of the Branch and a member of IWA's National Council. The following year he began organizing IWA tours to Europe, as well as China, USA and Canada. A number of CCS members had the opportunity to meet Ron during these tours and at various World Canals Conferences.

In 1990 he conceived the idea of form of international organization for inland waterways. A steering committee was formed and this was the genesis of what was to become Inland Waterways International. Ron was to be the first chairman of the new organization.

based on a tribute by David Edwards-May in World Wide Waterways n° 18, the magazine of Inland Waterways International

World Canals Conference, 2-4 June

As noted above, we now have a busy information and planning centre, located on the second floor of the St. Catharines Museum. The staff there will be happy to answer any questions you may have: 905-984-8882 will get them, or you can tap into our website at www.worldcanals2004.com

We now have our program confirmed (I say that with fingers crossed, of course!), and one of the temporary staff spends her days begging for donations, either in cash or in kind. Another is working with me on the afternoon tours, and the tour manuals for the guides. A third is taking care of registrations, and yet another is responsible for keeping the Website up to date.

The one-hour film, "Conquering Niagara," is proceeding on schedule, and The Welland Canals Corridor — Then and Now has gone to print. This new volume contains black and white photographs from the Styran and Taylor collection, and colour views (some taken especially for this volume) by Thies Bogner of Welland. Incidentally, admission to the gala premiere of the film, on the Tuesday evening, will be by invitation only (all delegates will receive invitations).

It is hoped that copies of the book for delegates will be sponsored, and both it and copies of the film will be on sale at the Conference. We also plan to have t-shirts with the Conference logo available for sale. Speaking of sales, we plan to have at least one sales table set up, in addition to what the area museums are offering. We will need volunteers to man all these tables, starting on the Tuesday afternoon (1 June), and during the mornings of Wednesday, Thursday and Friday. We may also need someone for late afternoon on these same days. Anyone interested can call Glen Russell at 905-984-8882, Ext. 247.

As you know we also need volunteer guides for the tours, both on-site and on-board, and in general around the Brock campus. Delegates will be staying either in the Lowenberger residence at Brock, or at nearby hotels. The actual location of the morning sessions has not yet been determined; it will depend on the numbers registered. Other volunteers for a miscellany of jobs will also be required, so if any of you feel you might be useful, and have not yet offered your services, please do so now!

And if you haven't yet registered, especially for the pre- and post-conference tours, please do that now, too. Space is limited for the tours, in particular for the Canal cruise, and applications will be accepted on a first-come basis.

This is the first World Canals Conference to have as its focus a major operating ship canal, although of course we are also featuring the earlier Welland Canals, and canals in the United States, in the United Kingdom, and In Europe. Do come and learn about canals world-wide, meet old friends, and make new ones!

Bobbie Styran

Making Ready for International Canalers

Last summer, Welland Historical Museum staff finally dismantled the text-heavy hardboard walls in our Historic Canal Gallery. Too many statistics, too many photos not from Welland made the exhibit a yawn for most visitors. So we asked "What makes Welland different from any other place?" and began to redesign the gallery.

Our main mission for creating new exhibits was to personalize the stories of Welland's settlers and workers during 5 major eras of canal building history. With the centre of the room opened up, larger groups of visitors can now view "history in the round". Canal improvements are summarized around the room in several ways. A timeline of world and Canadian events link local developments to outside influences. Major eras of canal development are defined graphically by coloured locks which show the increasing size of ships on the canal. After 1860, photographs recorded the construction of bridges and canals along with the growth of the City itself.

More artifacts from the Welland Collection are presented in scenarios capturing a moment in time. A Loyalist family's wagon has broken down, so belongings are scattered about. Peek into the towboy's house to see how his family lived on the edge of the village called Aqueduct. The full height of the rear wall is used for a faux painted stone aqueduct and mill race, showing how the earliest industries harnessed the falling water to power their mills. Becoming the County seat changed Welland by adding administrative activities along side the marine businesses. Then electrical power brilliantly changed everything, from settling major industries to winding up the single leaf lift bridges. Finally the opening of the Bypass canal silenced the horns, whistles and engines of ships passing through Welland's downtown.

The gallery opened in January 2004, featuring the reactivation of a freighter's radar antennae and its bridge equipment. Our handy man, Larry, has done many hours of wonderful work with the electronics, simplifying and adapting mechanisms to the equipment's new environment and function: exciting children and other visitors. The antennae stand was fabricated and donated by T.I.W. Plateworks Ltd of St. Catharines. Other recent donations on display include a survival suit, a lifeline and an aerial view of the entire canal in 1963. We hope our international visitors will enjoy learning how Welland is different from any other place in the world!

Susan Noakes, Director Curator

Future World Canals Conferences

Next year the World Canals Conference will be centred on the Gota Canal in Sweden. Their committee will issue an invitation to attend at this year's conference. Details will be published in the Fall edition of *Canals Canada*.

Also, we will publish additional information on the 2006 conference focused on the Lehigh and Delaware Canals in Pennsylvania. And announce the location of the 2007 conference.

CANALS – PART THREE

Ken Mackenzie, FCSCE

(This article originally appeared in History Notes of the Canadian Civil Engineer. a publication of the History Committee of the Canadian Society of Civil Engineers, and is reproduced here with the permission of the author)

The St. Lawrence Seaway

The second of the two canal megaprojects upgraded the combined navigation and power works between Lake Ontario and the port of Montréal. This brought the full extent of the waterway to its present uniform standard. The entire length of manmade waterway now constitutes the St. Lawrence Seaway.

Keefer's 1850 canal essay contained the following prescient passage (the italics are his): *"Our canals were not built for Canada, but for the valley of the St.Lawrence; we ought therefore to 'club together' with our neighbours, on the opposite side in order to place this noble outlet in the most efficient state, by giving it as large a support as possible."*

In 1895 the Deep Waterway Commission was established jointly by Canada and the United States to study all feasible routes from the Atlantic to the Great Lakes. Their 1897 recommendation was for the St. Lawrence route. The International Joint Commission was established in 1909, specifically to manage the proposed waterway in the interests of both countries. An enabling treaty was signed by the Prime Minister and the President in 1932, the year the fourth Welland Canal opened. The U.S. Congress, under intense lobbying pressure from many vested interests, refused to ratify the treaty, and it was only in 1954 that they did ratify. Canada had stated that it was prepared to proceed alone if necessary. Support for the venture had grown in the U.S., influenced at least in part by the huge iron ore discoveries in Québec.

When the way was cleared for action, the speed of construction was extraordinary. Work started in 1954 and this huge development was opened in 1959 by the Queen and the U.S. Vice-President, President Eisenhower being too ill to attend.

This stretch of the St. Lawrence River still presented a 14-foot bottleneck to navigation. Part of the international agreement was to now meet the lock dimensions of the Welland Canal, and to construct two of the navigation locks, the Snell and the Eisenhower, on the U.S. side of the river. Several large hydroelectric power plants had been built at the rapids on the St. Lawrence, and these had to be accommodated. An immense international power house a kilometre long would be constructed to take advantage of most of the 30 m head between Lakes Ontario and Francis. Its full rating was 2,400,000 horsepower. The final cost of the new power projects was $600 million, considerably more than the $470 million cost of the navigation work. At peak employment, twenty thousand people worked on the projects.

As in other parts of the Seaway there was much work off the actual anal line. About 20,000 hectares of land were inundated. Several communities, mostly on the Canadian side, were at least

partially flooded. Three new towns were built, with many new homes and about 500 houses relocated from the flooded areas. House moving trailers rated up to 200 tonnes were used to move these houses and many buildings of historic and cultural interest. Thirty kilometres of the very busy CN railroad had to be relocated. Four of the bridges across the St. Lawrence in Montréal had to be reconstructed for Seaway clearance.

This enormous project is notable not only for its sheer size and its demonstration of engineering expertise, but also for the unique cooperation of the two countries involved.

Other 20th Century Works

The two huge Seaway projects dwarf other canal works built in the same period, but those others are in themselves impressive. The Trent Canal, originally intended to encourage commerce, was built over a lengthy period, right into the 20th century. It included two lift locks and two inclined marine railways. Nowadays one can enjoy almost 400 km of relaxed travel from Trenton on Lake Ontario to the summit, 180 m higher, at Balsam Lake and from there to Georgian Bay at Port Severn.

Some of the 20th century construction was for the benefit of commerce. In 1910 the St. Andrew's lock was built to permit navigation on the Red River in Manitoba. The well used Canso Lock, finished in 1956, allows salt-water ships passage through the Cape Breton Causeway. In 1963 the most recent work on the Ottawa River was completed for the Carillon Canal to ascend Hydro Québec's power dam.

The Future

All of our canal works were built to last. Some provide us with small-boat access to some of the loveliest and most tranquil parts of the country, and they will continue to be enjoyed by more and more people. In the past two years large cruise ships have begun to appear on the Great Lakes after an absence of several decades, some of them from Europe.

Most of our canals handle a substantial amount of Canada's long distance freight and are an essential part of the national economy. It is possible that as environmental concerns become even stronger, more of this kind of traffic will be diverted to water transport.

Port Byron, Old Erie Canal Heritage Park Project

The Canal Society of New York State has broken new ground and will be allowed to have access from the eastbound New York State Thruway to the park being developed at old Enlarged Erie Canal Lock 52 at Port Byron. The key to success has been thoughtful planning by the Society and its designers/architects on how to control the access of people from a controlled access highway and from local access roads.

Bid documents will be out this summer with construction planned to begin in the fall. Mark your calendars now for the 4 July 2005 opening.

An Early Report on the Desjardins Canal

The Desjardins Canal at Dundas, Ontario was officially opened in 1837. It was evident soon afterwards that major improvements - greater depth, protection for the sides of the Canal against sliding, and a towpath for the full length - were needed. The Desjardins Canal Company retained C. S. Gzowski to prepare a report and cost estimate for this additional work.

Gzowski (later Sir C. S. Gzowski) was well qualified to make the report. He was educated at a famous preparatory school in Russia and arrived in the United States in 1833. Gzowski acquired on the job experience in American construction methods, working on canals and railroads in Ohio, Pennsylvania and Western New York. Through an acquaintance with Governor Sir Charles Bagot of the Province of Canada, in 1842 he accepted the position of superintendent of roads and waterways in the London District of the Board of Works, and moved his family to London. In the years 1842 - 1848 he supervised the construction of many roads, bridges, lighthouses and harbours in the western settled part of Ontario. He wrote his report on the Desjardins Canal in this period. He left the public works establishment in 1848 to examine mining properties on the north shore of Lake Huron.

Gzowski switched his talents to contracting, which is the field in which he is best known. He was knighted in 1890 and died in 1898. His biography is 7 pages long in the Dictionary of Canadian Biography and is fascinating reading. The final comment on his life is appropriate "The exile had found a home; the soldier became a knight; the engineer had become a gentleman."

The wording of Gzowski's 1846 report on the Desjardins Canal is given below:

REPORT
of
C. S. GZOWSKI, Esq.,
Relative to the Improvement of the Desjardins Canal

Engineer's Office,
Toronto, 28th September, 1846

To John Paterson, Esq.,
President, D. C. Co.

Sir, - In compliance with your request, I have examined the entire length of the Desjardins Canal, and, have the honor to submit the following Report and Estimate for improving it.

The peculiar locality of this Canal, admits of the suggestion of numerous plans for its improvement, and, accordingly, several modes have been proposed in which to improve the present Canal.

In addition to the several modes of improving the Canal through the marsh, a deviation from the present line has been proposed, by making a thorough cut through the high land for the purpose of saving a considerable distance in the length of the Canal.

I have carefully examined all the plans, estimates, and reports, for those different improvements and alterations from the present line, and though I find them all perfectly practicable, yet the means to which the Company are bound to confine themselves for the present, will not admit of adopting either of these plans proposed, or of undertaking anything beyond what is absolutely necessary to render the present line of Canal available for the use of all such craft as ply on the waters of Lake Ontario and the river St. Lawrence.

In making, therefore, my examinations, and trying to determine upon a plan for improving that work, I have assumed the following points as my general data:

First, - To make the present line of Canal (with but slight deviations) answer the purpose.

Second, -To secure the same depth of water in this, as in the Burlington Bay Canal.

Third, -To protect the sides of the Canal in such a manner as to prevent the mud and muck from lodging within its limits, and to form a towing path through the entire length of it.

When these three points are attained, I consider the work available for all the present purposes, and in a proper state, realize such a revenue as the business of the country, and an uninterrupted navigation, and the facilities for a direct shipment of all produce to the host, markets can secure.

The manner in which I propose to construct the different portions of the work, and which forms the data of the accompanying estimate, is as follows.

From the Warehouse, at the outlet of the Canal, in the Burlington Bay, to the point called Crooks's Point, (from W. to B. in the accompanying sketch,) I propose to straiten the present line of Canal in the manner marked in the sketch, in red.

The width of the Canal, between those points, to be 100 feet, depth 12 feet.

The towing path is to be on the south side of the Canal, and is to be constructed on piles driven close together.

Eight feet in the rear of them, and six feet apart, are to be driven anchor piles, which are to be tied to the front piles by ties eight feet long.

Longitudinal timbers are to be placed on the ties, and covered with plank three inches thick.

A protection railway, three feet high, is to be placed on the Canal side of the towing path. (See accompanying sketch, A.)

The north side of the Canal I propose to protect by driving piles close together, but at such points only as will be considered necessary to prevent the muck and mud from washing into the Canal. In many places it is of great depth, and quite clear from any deposit, and, at these points, no protection is required at present.

From Crook's Point to the basin at Dundas, I propose to follow the course of the present line, leaving the width of the Canal as it is at present, 66 feet, but increasing the depth to 12 feet.

The north bank of the Canal, between those points, being sufficiently firm and of very nearly the proper height for a towing path, I propose to change the towing path from the south to the north side of the Canal, and construct a change swing bridge at the Point.

At places where the present bank of the Canal will require to be raised to bring it to the proper height for a tow path, I propose to raise it with earth obtained from Crooks's Point, Maitland's Island, and from the material dredged out of the bottom of the Canal, which, on this portion of it, is well suited for that purpose.

To reduce the pressure on the sides of the Canal, from the earth forcing the towing path, I propose to leave a line of five feet between the edge of the Canal and the foot of the towing path. (See accompanying sketch, B.)

To prevent the wash of the banks, caused by the action of water on them during the passage of boats, and consequently causing a deposit on the bottom of the Canal and reducing its depth, I propose to drive piles 10 feet apart on both sides of the Canal, and to place timbers six inches thick and four feet in width, and at such height as to prevent any wave, during the passage of a boat, from reaching and washing the earth either above or below the timbers. (See accompanying sketch, B.)

The present swing bridges will require some alterations and improvements, the cost of which is embraced in the accompanying estimate.

Estimate for improving the Desjardins Canal

(Gzowski's report gives details of number of piles, quantities of timber, number of spikes, etc. The figures given here are a summary)

	£	s	d
Estimate cost of improving the Canal from the Warehouse, at the entrance into Burlington Bay, to Crook's Point, a distance of200 chains	11619	6	9
Cost of protecting North side of Canal	5088	3	6
Estimate cost of improving the Canal, between Crook's Point and the Basin at Dundas, a distance of 156 chains	2573	2	0
Cost of Bridge at Crook's Point	298	0	0
Repairing present swing Bridges	100	0	0

Estimate cost of dredging the Canal from the Ware-house, at the inlet into Burlington Bay, to the basin at Dundas, to 12 feet in depth, and forming tow path	4102	0	0
Contingencies of Superintendent, 5 per cent of the whole amount	1189	6	1
Total	24969	18	4

The above estimate embraces the cost of all the work that I consider necessary for the improvement of the Canal, and the prices put on the different materials are such as will ensure their delivery upon the work, and its completion.

The item of Dredging I have not entered in detail, not being able to ascertain the exact quantity of earth that it will be necessary to remove, but from the sounding that I have taken, I am of the opinion that the sum estimated, is quite sufficient to cover the cost of that portion of the work.

The manner which I propose to construct the towing path, below Crooks's Point, is such that at any future time, and when it will be desirable to construct the towing path in a permanent manner, and of imperishable materials, the whole of the work now proposed can be made use of as a foundation for the new one.

The towing path above Crooks's Point I look upon as permanent, for should it be found" necessary, at any time to increase the present width of that portion of the Canal, the proper side to be removed, in my opinion, is the south side; the banks on that side being of less height, and of softer materials, and consequently can be removed at much less expense.

I remain,
Sir,
Your Very Obed't Servant,
C. S. GZOWSKI
Engineer Board of Works

(copy of Gzowski report provided by C. Crozier, Dundas Historical Society Museum)

Thanks to **David Cramm** for passing this along

Carillon Canal

The Royal Engineers built the Carillon, Chute à Blondeau and Grenville Canals on the Ottawa River after the War of 1812. These canals, along with the Rideau Canal, enabled the movement of troops and stores along a more secure route than the St Lawrence River.

The Carillon Canal, a National Historic Site, includes the old canal, the toll collector's house and the superintendent's house. But, because there is no water in the canal there has been deterioration of the walls

Parks Canada is to fill in much of the canal because it doesn't have enough money to carry out repairs. It is estimated that it would take $2 million to repair the canal's stone walls. Instead the canal will be filled to half its depth with $200,000 of gravel to prevent the walls from collapsing.

The Auditor General, Sheila Fraser, in her November 2003 report, said heritage sites, documents of historic value and book collections under federal control will be lost to future generations unless the government takes action to protect them. "Once a piece of our history is lost, it's lost forever," said Ms Fraser. "And the situation is not improving. Our cultural heritage is continually growing, and what we've got is already threatened."

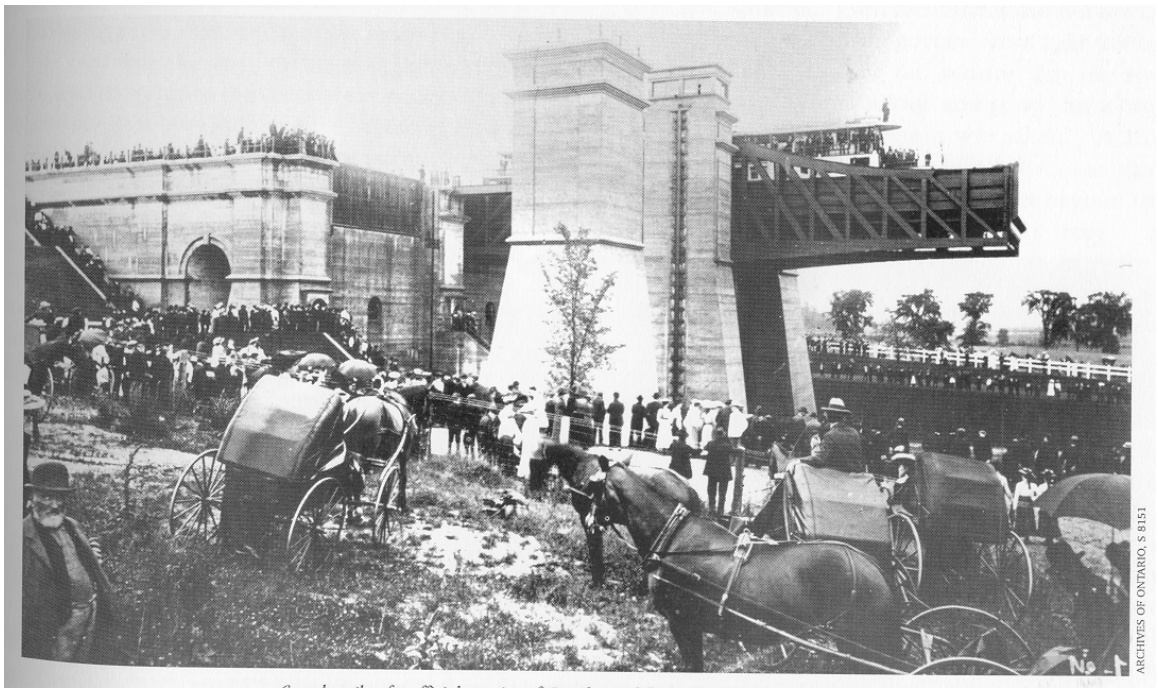
(Is filling a canal with gravel protection or destruction? Ed)

Calendar

29 May 2004		WCC 2004	Pre-conference events start
2 – 4 June 2004		WCC 2004	Brock University

Note: there will be no Spring Field Trip so that members may participate in WCC 2004 by attending the conference in full or for a day only, or taking one of the optional tours

3 July 2004		Wreath laying at Merritt statue – anniversary of birth	
3 July 2004		launch of canal-schooner Lois McClure – Burlington, Vermont	
9 July 2004		100th Anniversary Peterborough Hydraulic Lift Lock	
10 August 2004		50th Anniversary of the start of the St Lawrence Seaway	
date TBA		Fall Field Trip – Peterborough Hydraulic Lift Lock	
27 November 2004		Merritt Day	
28 November 2004		AGM / Fall Workshop (St Catharines Museum 2:00pm)	
Spring 2005	(tentative)	Field Trip	Ohio and Erie Canal Heritage Corridor



The Peterborough Hydraulic Lift Lock is opened on 9 July 1904.

The Canadian Canal Society

Executive Officers for 2002-2003

President:	Bobbie Styran
Vice-President:	Tom Whitelaw
Secretary:	Ken Mackenzie
Treasurer:	Carol Gaspari
Past President:	George Hume

Send correspondence to:
Secretary
Canadian Canal Society
PO Box 23016, Mid-Town Post Office
124 Welland Avenue
St. Catharines, Ontario
L2R 7P6

Contributions for Canals Canada to:

Bob Sears, Editor
Canals Canada
248 Tower Drive
Toronto, Ontario
M1R 3R1

Phone: 416-285-7254
Email: dawnofdestiny@sympatico.ca

Website: http://people.becon.org/~ccs/