



AmericanCanals

Bulletin of the American Canal Society
www.AmericanCanals.org

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Dedicated to Historic Canal Research, Preservation and Parks

Winter 2018

From the President

By David G. Barber

One of the interesting things about World Canals Conferences is that you never know what you will learn. In my prior letter, I discussed the support that canal tow-path trails can give to the disabled. Another interesting point that came up last fall was an announcement by the William G. Pomeroy Foundation that they were expanding their program of financing canal markers from New York to other states.

Some canal organizations have been very aggressive in providing markers along canal routes. The Morris Canal in New Jersey is a prime example. All along that route, you will find “Morris Canal Crossed Here” signs. Other areas haven’t done so for lack of funding. The foundation seeks to overcome this obstacle.

If your organization would like to mark a canal route, you will find information about the foundation and its grant program on page 6 in this issue.

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C&O Canal Monocacy Aqueduct in Winter – Steve Dean

American Canals

BULLETIN OF THE
AMERICAN CANAL SOCIETY

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For CANAL CALENDAR items and news of local, state, and regional canal societies: c/o Steve Dean, PO Box 132, Saint Leonard MD 20685; 301-904-9068; 184.5_miles@comcast.net

The objectives of the American Canal Society are to encourage the preservation, restoration, interpretation, and use of the historical navigational canals of the Americas; to save threatened canals; and to provide an exchange of canal information. Manuscripts and other correspondence consistent with these objectives are welcome.

An annual subscription to *American Canals* is automatic with ACS membership. Regular Single Membership, \$25; Dual Membership, \$35; Sustaining (no change) \$35; Patron, \$50; Life Membership \$500.00.

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Other Publications: *The Best from American Canals; American Canal Guides*, William E. Trout III, editor and publisher

DEADLINE: Material for our next issue must be on the editor's desk no later than April 1, 2018. Send to Steve Dean, PO Box 132, Saint Leonard MD 20685, Editor, American Canals; 301-904-9068; 184.5_miles@comcast.net

Material submitted to *AMERICAN CANALS* for publication should be typed and double-spaced or sent by email in WORD format. You may send actual photographs (which will be scanned and returned), or digital versions may be emailed or sent on a CD.

Editorials, articles expressing opinions, and book reviews reflect the opinion of the writer/reviewer and not necessarily those of the editor or ACS board.

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American Canals Indexes Updated

Thanks to some hard work by David Barber, the index for *American Canals* is now updated to reflect the full 45 year history, from 1972 to 2016. Separate indexes allow searching by article, author and photographs. The indexes are available at the following link: www.americancanals.org/AC%20Indexes/AC_Indexes.htm

Additionally, past issues of *American Canals* through 2014 are now available. They can be found at: www.americancanals.org/AC_Issues/American_Canals.htm

American Canal Society Sales

The Society has the following items for sale:

Best from American Canals #2	published 1984	\$4
Best from American Canals #5	published 1991	\$4
Best from American Canals #6	published 1993	\$5
Best from American Canals #7	published 1996	\$5
Best from American Canals #8	published 1998	\$6
American Canal Guide #1: West Coast	published 1974	\$1
American Canal Guide #2: South, NC to FL	published 1975	\$2
American Canal Guide #3: Lower MS & Gulf	published 1979	\$3
American Canal Guide #4: WV, KY, Ohio River (Photocopy)	published 1988	\$3
American Canal Guide #5: DE, MD, VA	published 1992	\$3
20 year American Canals Index 1972-1992	published 1992	\$3
Canal Boat Construction Index (12 pages)	published 1992	\$2
Picture-Journey Along the Penn. Main Line Canal	published 1993	\$10
ACS Burgee (blue on white cloth)		\$15
ACS cloth sew on patch (2" x 3" red, white & blue)		\$3

Special Offers – while stocks last

Back issues of American Canals - free to members – enquire for a list of available copies and mailing cost.

An ACS bumper sticker (“Support Your Local Canal” or “Restore Your Local Canal”) will be sent **free** with each order

Shipping and handling: Orders can also be sent by mail with a check payable to American Canal Society to 24 Northview Terrace, Cedar Grove, NJ 07009. **Include \$3 postage for first item and \$1 for each additional item** for Media Mail within USA. Enquire for other destinations and expedited delivery. Allow for your order to take up to 4 weeks to dispatch. Email Sales.AmericanCanals@gmail.com for further information.

Coming in the spring –

Canal Boat Rides in the U.S. and Canada



The American Canal Society publishes an annual guide to *Canal Boat Rides in the U.S. and Canada* that is distributed with the spring issue of *AmericanCanals*. This handy 8-page guide provides listings for canal-related boat rides in 10 states and two Canadian provinces.

Please help make the guide the best it can be –


We do our best to provide up-to-date information, but in many cases the boat rides and tours have changed or gone away. If you are aware of any changes or cancellations, or if you know of any new rides, please contact the editor. The editor can provide a copy of last year's guide or content related to the canal you support.

Preparation of the guide has already started, so if you have any updates please contact the editor, Steve Dean, at 184.5_miles@comcast.net. Thank you for your support of this project.

CANAL BOAT RIDES IN THE U.S. AND CANADA
If you will be traveling around the eastern half of North America, you may want to visit one of the many canal boat concessions. Here is a partial list.

<p>MICHIGAN</p> <p>See Locks Boat Tours and Dinner Cruises at Saugatuck State Park – See Locks Boat Tours is one of Michigan's top attractions. The 2-hour sightseeing cruise has many departure times available. Tours include views of all four U.S. Locks, St. Mary's Rapids, giant hydro-electric plants and Historic Canadian Lock. Visitors experience "locking through" from Lake Huron and Lake Superior. Dinner cruises are featured in the evenings, and themed dinner cruises are offered on selected dates. Fireworks Cruises and Fireworks Dinner Cruises fare offered for Canada Day on July 1 and Independence Day on July 4, plus many other Special Event Cruises.</p> <p>St. Mary's River Lighthouse Tour: Passengers explore a number of navigational markers and lighthouses, some of which are accessible only by boat. Although their powerful lights were dimmed by satellite-assisted navigation and other technology, these structures have unique architecture and historic importance that has not been forgotten.</p> <p>See Locks Boat Tours, P.O. Box 739, Saugatuck, MI 49783 Dock #1, 1157 East Portage Ave. Dock #2, 515 East Portage Avenue, 906-622-6301, sales@seelocks.com, www.seelocks.com, www.facebook.com/See-Locks-Boat-Tours-Dinner-Cruises-142998783746841/</p>  <p>See Locks Boat Tours – www.seelocks.com</p>	<p>ILLINOIS</p> <p>Wendella Boats, Wendell's Sightseeing Boats is Chicago's Original Architecture Tour®, offering a variety of distinctive narrated tours, all focusing on Chicago's rich architectural heritage and history. Whether you're looking for an in-depth tour or a brief overview of Chicago, Wendella has many tour options to choose from.</p> <p>Tours are offered seven days a week, March through November.</p> <p>Tours depart from the Wendella Dock at 400 N Michigan Avenue and from the Wendella Dock at Trump Tower, located West of the Wrigley Building at the lower level of Kinzie and Redwood.</p> <p>7:45pm on select Thursdays throughout the season. Wendella has carefully selected its local food and drink partners for these cruises, to ensure our guests are provided with a unique and unforgettable Chicago experience. Guests must be 21 years of age or older. Identification with proof of age required.</p> <p>400 North Michigan Avenue, Chicago, IL 60611, www.wendellaboats.com, 312-337-1446 Facebook @wendellaboats</p>  <p>Wendella Boats – www.wendellaboats.com</p> <p>The LaSalle canal boat <i>Holanter</i> is a mile-drawn, full-size replica of the 19th Century canal boats that once carried passengers on the Illinois & Michigan Canal, the hand-dug waterway that opened in 1848, extending from Chicago to LaSalle-Penn.</p>
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The 76-by-15-foot boat is docked in downtown LaSalle, only five miles from Starved Rock State Park. April 29, 2017 - October 29, 2017 Advance purchase recommended. Weekdays vary, so please call or check our website for a weekly schedule. Adults \$15, Seniors \$12, 16 and under \$8, under 3 free. Family Pack – 2 adults and 2 youth \$33. Operates April to October. Reservations are strongly encouraged. All tickets must be picked up in the Lock 16 Visitor Center. Please arrive at least 20 minutes before departure. 815-230-1848, 754 First Street, LaSalle, IL 61301, www.lasallecanalboat.org, Canal Corridor Association, www.lanidmcanal.org Facebook @lasallecanalboat



INDIANA

Holanter – www.lasallecanalboat.org

Come to Metamora, Indiana and take a half-hour excursion on the White-water Canal aboard the *New Franklin III*. The boat is 75' long, 12' wide, holds 80 passengers, design based on a typical line boat of the canal era. May 1-Oct. 31, Wednesday-Sunday, noon to 4:00 p.m. on the hour. Closed on Mondays and Tuesdays. Open on Memorial Day, Independence Day and Labor Day. One-mile ride with talk on canal history. Adults, \$6; seniors, \$5; children 3-12, \$3, under 3 or over 90, free. School groups are free \$1.50 for each planned activity. 765-647-6512, indianamuseum.org/whitewater-canal-state-historic-site

(Continued on page 2)

A Tour of the Clinton – Kalamazoo Canal

Have you ever wondered why Macomb County has a road named “Canal” running through its middle? Join us for a tour of Michigan’s first internal public works project—our answer to the Erie Canal. As you retrace its route from Mt. Clemens to Rochester, you will be able to walk along parts of the canal, where some portions still contain water, see remains of one of the locks, and learn the history of this man-made waterway that endured as a millrace long after its use for transportation ended. Come and celebrate the bicentennial of Macomb County!

Wear sturdy shoes and dress for the weather!

Saturday, April 14, 2018 9:00 a.m. - 4:00 p.m.

Carpooling Starts and Ends:

Rochester Hills Museum at Van Hoosen Farm
1005 Van Hoosen Road, Rochester Hills, MI 48306

For those who prefer, meet at 10:00 a.m. at the Township Hall in the Historic Village at Romeo Plank and Canal Road, just south of the Clinton-Macomb Library.

\$12 Museum members/\$18 nonmembers – Includes boxed lunch (Sandwich Choices: 1. Med Veg, 2. Turkey & Cheddar, 3. Ham & Swiss)

*Must Register by Wed., April 11 at:

www.rochesterhills.org/musprograms or 248.656.4663

Rochester Hills Museum



at Van Hoosen Farm



Historic Canal Marker Grants



Criteria:

- Marker must be installed near a canal or former canal.
- Currently placing markers in all 50 states.
- Marker must commemorate historical fact that occurred more than 50 years from year of application. Currently, that is 1968.

William G.
**Pomeroy
Foundation**

 For History.  For Life.

For more information:
www.wgpfoundation.org



Questions? Call Christy @ 315.913.4060 or email: info@wgpfoundation.org

Historic Canal Marker Grants

The William G. Pomeroy Foundation has launched our newest grant program to promote cultural tourism and commemorate the history of transportation canals in the United States.

Markers must be installed near a canal or former canal. The marker's text must commemorate a historical fact that occurred more than 50 years from the year of application. Currently, that is 1968.

ELIGIBILITY

Grants are available to 501(c)(3) organizations and municipalities within the United States of America.

GRANT TIMEFRAME: UP TO 50 YEARS PRIOR TO APPLICATION YEAR

Only submit proposals that have historic significance within this time frame. Proposals outside of this time frame will be automatically disqualified.

MARKER LETTER LIMITS

The title line allows 15 characters and the five body lines can have 27 characters each, including spaces and punctuation.

MARKER DESIGN

The colors of the roadside marker are blue with black highlighted lettering and border. A unique logo designed by the Foundation will allow the markers to be immediately recognizable as commemorating a historic canal. Markers are 18" x 32" cast aluminum with a 7' aluminum pole.

HISTORICAL ACCURACY

Primary source documentation is required to verify historical accuracy. The applying agency is responsible for supplying photocopies, scans or photos of the sources and specific statements used to verify historical facts. If selected, the strength of the supporting materials substantially lessens the time between acceptance and funding. If the The William G. Pomeroy Foundation cannot substantiate the historical accuracy of the proposed marker text based on the supporting documentation provided, the opportunity for approval is limited.

Historic Canal Marker Grants Application Procedure

Deadlines

- March 30, 2018 - Application period opens
- April 27, 2018 – Letter of Intent due
- May 18, 2018 – Applications due
- June 30, 2018 – Expected date grants will be awarded

Applications will be accepted online *only* at wgpfoundation.org.

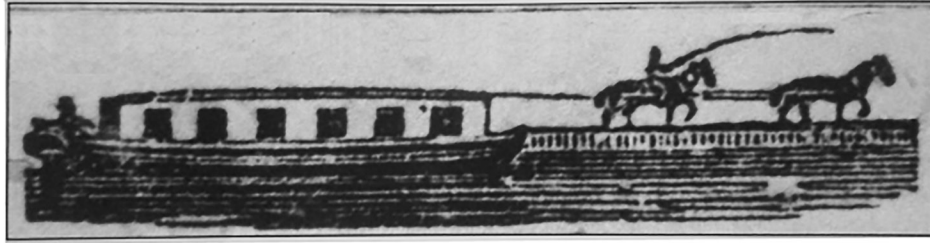
A Letter of Intent (LOI) including the proposed marker text and a list of *specific* primary source documents is required prior to the application. Once the LOI is reviewed and approved, you will receive a notification by email allowing you to move to the application stage.

Applications must include the applying agency's information, contact information for the person responsible for the application, the proposed installation location in specific detail (including GPS coordinates), a brief description and historical significance of the transportation canal being commemorated, and the proposed inscription.

Additional required documents are an IRS Determination Letter (for 501(c)(3) organizations), a letter from the landowner granting permission for the marker to be installed, and copies of the primary source documents supporting all the proposed text on the marker.

Continued on next page

WANTED!



I need your help in locating a ‘very old’ canal boat.

It can be in any shape. Maybe located behind an old barn, in a field or maybe in a swamp.

Let me explain. I wrote a book. The book is a rails-to-trails book that takes the bicyclist along all 86 miles of the New Haven and Northampton Canal Company’s route in New England. The name of the book is *New Haven and Northampton Canal Greenway* Bike and Rail Trails following the historic canal. Over the past year I’ve sold hundreds of books – mostly by word-of-mouth (all royalties go to the Southwick Historical Society to purchase canal crossing signs). One of the most asked questions is: “Are there any canal boats left?” The answer is no. Up to 100 different boats plied the canal between 1825 and 1847. It is believed they were all moved one way or another to other canal systems before the Civil War. Back then, they were advertised at low give-away prices. A new railroad along the route caused the canal company to disappear.

Years ago I was the Commodore of a Yacht Club in Massachusetts. The Commodore before me, an elderly gentleman, decided to get rid of the old wooden sailboats abandoned in the boat yard. He took a chain saw and cut them up and disposed of the wood. Today, people are looking for old ‘wine stem’ wooden sailboats to restore.

My goal is to locate an old weathered canal boat (donated?), have it crated and shipped to New England. I should be able to find a permanent home for it. After all, the canal passed through 16 towns from New Haven, Conn. to Northampton, Mass. and maybe a historical society along the route will find a permanent home for an old canal boat.

These packet (passenger) boats were 60’ to 65’ long and about 11’ wide. They were brightly painted with a long cabin deck. Freighters were more numerous and maybe 70’ long and 11’ wide and were designed to carry cargo.

Bob Madison

Author, *New Haven and Northampton Canal Greenway*

email: nhncanal@gmail.com

P.S. I’m also looking for a film producer to document this canal for public television.

Historic Canal Marker Grants – Continued from previous page

Our Historic Canal Marker Grants are fully-funded and include the marker, pole and shipping costs. If your application is approved, upon receipt of your signed Acceptance Letter, The William G. Pomeroy Foundation will mail a check for the total amount made payable to the applying agency. Instructions for ordering your marker will accompany the check. The applying agency is responsible for installation of the marker.

If you have questions please feel free to contact us at info@wgpfoundation.org or 315-913-4060 between 8:15 a.m. and 5:00 p.m. (Eastern Standard Time) Monday – Friday.

Canalway Grant Program Awards

\$1 Million for Capital Projects

Part of Governor Cuomo's Regional Economic Development Initiative

Grants Include Funding for Extensive Tour to Celebrate Erie Canal's Role in Corning Glass Moving Its Operations to the Finger Lakes 150 Years Ago

The New York State Canal Corporation announced \$1 million in canal-related grants for municipalities and non-profit organizations to enhance tourism and economic development along the Canal System as part of more than \$755 million awarded Dec. 13 by Governor Andrew M. Cuomo following recommendations from his Regional Economic Development Councils.

The Canalway Grant Program awards will help advance capital projects that continue the celebration of the Erie Canal bicentennial, which began this year, and provide funding for local efforts designed to attract even more visitors to the Erie Canal and Erie Canalway Trail.

The Canalway Grant Program awards will help advance capital projects that continue the celebration of the Erie Canal bicentennial, which began this year, and provide funding for local efforts designed to attract even more visitors to the Erie Canal and Erie Canalway Trail.

“The quality of the Canalway grant applications this year demonstrated that communities and nonprofits are excited to continue efforts to enhance and improve the canal experience,” said Brian U. Stratton, Canal Corporation director. “Backed by Governor Cuomo’s commitment to bolster economic development and tourism, we look forward to working with the grant recipients to help these worthy projects succeed.”

Canalway Grant Program funds will support the following:

- **Corning Museum of Glass** (\$148,000) to install a mobile glass-blowing studio on a barge to provide free demonstrations at waterfront locations across the state. The tour will celebrate the 150th anniversary of Corning Glass moving its operations from Brooklyn to the Finger Lakes region via the Hudson River and Erie Canal.
- **South Street Seaport Museum** (\$150,000), for improvements to the historic tugboat W.O. Decker, which will tow the Corning Museum glass-blowing barge on its tour across the state.
- **Town of Amherst** (\$65,000) for improvements on the Erie Canalway Trail on Tonawanda Creek Road from Sweet Home Road to New Road.
- **City of North Tonawanda** (\$100,000) for improvements to Gateway Harbor Park, including a building that will house public restrooms, a harbormaster office and storage space.
- **The College at Brockport** (\$57,000) to build a multi-use trail along the south side of the Erie Canal connecting the college to downtown.
- **Erie Canalway National Heritage Corridor Heritage Fund** (\$150,000) to support work at the former Matton Shipyard in Cohoes consistent with a feasibility and master plan which will support development of the shipyard into an interpretive historic park.
- **Village of Fonda** (\$30,000) to develop a parking area for campers, a bathroom facility, entertainment pavilion and other amenities for a planned park and community space along the Mohawk River.

Continued on next page

C&O Canal Lock 3 and 4 Repairs

By Nancy Benco

As part of the revitalization of the C&O Canal in Georgetown, the National Park Service is about 70 percent through its \$6.5 million rehabilitation of Locks 3 and 4 near Thomas Jefferson Street. The work started in November 2016.

Most of the effort has focused on Lock 3, a 186-year-old structure whose walls were leaning inward and whose wooden timber foundation was rotting. Dismantled by last summer, the lock's salvageable ashlar stones were carefully marked before being stored for reuse in NPS's nearby "mule yard." Stone rubble fill from the prism was also removed and stored upstream. In rebuilding Lock 3, workmen laid a concrete floor featuring a stamped and colored surface to resemble the original wooden bottom. They are rebuilding the lock

walls, using a small excavator with a lift attachment to hoist the heavy stones. When completed, the lock will be about 15 courses high. Workers will also rebuild the area behind the lock walls, reusing the rubble stone and tying it together with the rest of the structure with mortar to stabilize the lock. In addition, new wooden upper and lower lock gates will be installed before the project is completed in late spring 2018.

Work on Lock 4 is nearly complete. Workers have finished repointing (removing and replacing weathered mortar) the lock's predominantly sandstone walls. Before the project is completed, new wooden lock gates will be installed, repairs made to the breast wall, and flowable fill added to preserve the filling ports inside the lock walls.



Repointed south wall of Lock 4, view toward Thomas Jefferson Street



*View of Lock 3 toward Thomas Jefferson Street
– Photos by Nancy Benco*

Canalway Grant Program Awards - Continued from previous page

- **Niagara County Historical Society** (\$150,000) to expand and enhance exhibits at its Erie Canal Discovery Center in Lockport.
- **Wayne ARC** (\$150,000) to help renovate up to 10,500 square feet of space at its facilities on Van Buren Street in Newark serving visitors to the Port of Newark Canal Park on the Erie Canal.

The first six projects also received additional funding through grant programs administered by Market NY, the Department of State, the New York State Department of Parks, Recreation and Historic Preservation and the New York State Council of the Arts.

– New York State Canal Corporation

The Proposed Canal That Will Not Die

By Michael E. Morthorst, Cincinnati, Ohio

As most canallers know, the Panama Canal opened a third lane of larger locks in the summer of 2016. Discussions of Central American canals inevitably include the subject of Nicaragua. Nicaragua has always been a significant factor in determining what canal eventually gets built, even if nothing ever ends up there. Nicaragua, after all, was originally the preferred route of the U. S. Congress for a trans-isthmian canal. Separate members of Congress, one from the House and one from the Senate vied to earn the title “Father of the Nicaragua Canal.” When the final revised survey was released recommending the Panama route, there were demands for a congressional investigation into why the better (Nicaraguan) route was not chosen. However, when the final vote of Congress was taken, Nicaragua lost. What happened? The reality is that a Nicaragua Canal is a proposal that may never die, and ironically may never get built.

The Land

Nicaragua has had a special appeal to American engineers since the time it was first considered as a possible canal route. Although as many as six separate routes have been proposed at one time or another, only three alignments have ever been seriously considered. The southern, most historical route has been along the Rio San Juan, connecting Lake Nicaragua to the Atlantic Ocean along the border of Costa Rica. The big problem with the route has been that the mouth of the river is in Costa Rica, a country with historically poor relations with Nicaragua and which has not been interested in such a canal project. To finesse that Costa Rica problem and keep the canal in Nicaragua, a diversion down the Rio El Desendo to the town of San Juan del Norte has always been part of the plan. The San Juan and the Rio El Desendo would be connected by a canal or an artificial lake.

In the 1900s a northern route following the Rio Escondido was proposed, beginning near the town of Bluefields and following the river inland and connecting to Lake Nicaragua by a short canal. In 2013 a new route along the Rio Punta Gorda was proposed for the Chinese financed Nicaragua Grand Canal.

For all proposals, Lake Nicaragua, located in the western third of the country, would provide an endless supply of water for canal operations. The distance from the western shore of the lake to the Pacific Ocean is only

12 miles. A short canal with the requisite Pacific locks would complete the connection between lake and ocean. Every plan advanced to date featured three or four locks on each end of the canal. The total length of all the canal proposals has been between 170 to 180 miles. The section immediately east of the lake and extending to the locks on the Atlantic end would be situated at 120 feet above sea level. Many engineers consider this route easier to dig than the competing Panama route.

Early Proposals

The idea of a canal to connect the oceans in Central America dates back to the time of Spanish colonization. Originally, a canal was to be a method of efficient transport of gold and other valuables looted from Peru to the mother country. Crossings were considered in Mexico, the Columbian province of Panama, and Nicaragua. Technological problems and hostile local jungle climates doomed these plans.

When the Central American countries broke off from Spain in 1825 and merged into a “Federal Republic of Central America” a canal was regarded as a means to create prosperity for the region. Fatefully, the new government contacted the United States of America for expertise and funding. Feasibility studies were commissioned. At the time, the United States was experiencing its own canal era and the Secretary of State, Henry Clay, was a major proponent of canals. Clay embraced the idea. A route along the Rio San Juan was proposed, with a series of locks and tunnels to connect the two oceans. Congress declined to approve the plan. A complication at that time was that Great Britain had seized and occupied British Honduras (modern Belize) as well as part of the Caribbean coast in present day Honduras and Nicaragua (the Mosquito Coast). These activities of Britain were part of that country’s ambitions to build a canal in the area. The continuing foreign activity led the United States to promulgate the Monroe Doctrine. Since the question of control of the Caribbean end was in doubt both projects died.

The next initiative for a canal was in 1849 when the government of Nicaragua signed a contract with Commodore Vanderbilt (of the New York Central Railroad) granting him a twelve-year concession to build a canal in Nicaragua, again on the Rio San Juan route. A railroad

to aid those going to the California Gold Rush was constructed and proved to be very profitable. The canal construction part of the plan was disrupted when a civil war broke out in 1854. A U.S. citizen, William Walker, was recruited by one of the factions as a mercenary. Shortly after arriving in Nicaragua in 1855, Walker took over the country. He then invaded Costa Rica in order to secure the northern part of that country and its San Juan River for an inter-oceanic canal. Costa Rican troops supplemented by those from other Central American countries rose up and ousted the invader in 1856. Once Walker was defeated and executed in 1860, a U.S. sponsored canal in the area was no longer a very popular idea.

During his presidency (1869-1877) Ulysses S. Grant commissioned seven canal studies throughout Central America. He had become a strong believer in a Central American canal after his military unit made a painful crossing of the jungles of the Isthmus of Panama in 1852. Efforts to negotiate a lease with Columbia to build a canal through its province of Panama were not successful. Nothing further took place during President Grant's term.

The failed French attempt at a sea level canal in the Columbian province of Panama from 1880-1888, followed by its bankruptcy in 1889 finally motivated the Americans to begin getting serious about building their own canal in Central America. The Americans and British had resolved their problems over the Nicaragua coast in the Clayton Bulwer Treaty of 1850, in which join the two countries agreed to build a canal in Central America jointly. The hard feelings over the Walker affair had finally abated in Nicaragua and Central America. The privately-owned Nicaragua Canal Construction Company was granted a charter by the U. S. Congress in 1888 to be financed by J. P. Morgan. The company bought digging machines from the failed French project in Panama. Success was not to be had as Morgan had to cut his losses the next year, when the venture went bankrupt. It was immediately followed by the Maritime Canal Company of Nicaragua, which lasted until 1893 before also failing. The result of these two projects in different places was many miles of cleared brush, 12 miles of railroad, 1 mile of canal, and many sick people.

The United States Government Becomes Involved

In 1897 the U.S. Government finally became directly involved in the process of creating a trans-Isthmian canal. Those promoting a canal had realized that its construction was a task beyond the capabilities of a private

company. The renewed interest was also a result of the U.S. Navy deciding to deploy war ships on both oceans. In early 1898 when the Maine exploded in Havana Harbor, the Navy's newest battleship, Oregon, was docked at San Francisco. It was dispatched to Florida. The trip from San Francisco to Florida around Cape Horn took 66 days. The long trip opened eyes regarding the need for a shorter route. A transit through a Central American canal would have taken only 21 days. The need was further reinforced later in 1898 as the aftermath of the Spanish American War saw the United States acquire overseas possessions in both the Pacific and the Caribbean.

In 1899 most politicians in the United States favored the Nicaraguan route. It was close to the United States and thus "shorter." The fact that Lake Nicaragua was along the projected canal was considered an asset as it would provide a plentiful water supply. The depiction of the Panama option was that of a disease-ridden death-trap. The French enterprise had proven a canal could not be built there because of topography, landslides, disease and dense jungles.

The Nicaragua Canal's greatest proponent in the Senate was John Tyler Morgan. He was a Democrat from Alabama and saw a canal through Nicaragua as a way to restore prosperity to southern seaports. Morgan believed the only drawbacks to the route were that a sea level canal would not be possible due to the need to drain Lake Nicaragua, and the remote possibility of volcanic eruptions in the area. In late 1898 Senator Morgan introduced a bill in the Senate to authorize construction of a fortified Nicaragua Canal by the United States. It passed the Senate handily with the support of President McKinley. In the House it encountered Representative William Peters Hepburn; a Republican from Iowa. Rather than sign on as a co-sponsor of the Morgan Bill from the Senate and enact that piece of legislation as it was passed in the Senate, Hepburn chose to write and introduce his own bill with himself as the only sponsor for the Nicaragua route. Both legislators desired that they and their respective party get credit for passage of this legislation and be the "father" of the project. The introduction of the second Hepburn bill complicated matters immensely. When the House finally passed the measure in 1899, it included an amendment that required new studies of the feasibility of all relevant routes. This amendment effectively killed any pro-Nicaragua legislation, and created the Isthmian Commission. This proved to be the first crack in the position of Nicaragua Canal advocates.

The Canal Commission conducted hydrological surveys of Nicaragua, which recommended a canal be built there along the Rio San Juan route for an estimated cost of \$138 million. However, an additional provision was included authorizing building a canal in Panama if the assets and Colombian concession owned by the surviving French company could be purchased for no more than \$40 million. At the time the French company was asking \$ 109 million. Some of those in high places in America were beginning to realize that the assets of the French failure in Panama presented possible lucrative opportunities to a successor enterprise.

A Choice is Finally Made

Two individuals came on the scene at the turn of the 20th century who were to have a profound effect on the ultimate direction of where to build a canal. One was William Nelson Cromwell, a lawyer and Congressional lobbyist, who was hired to represent the interests of the successor French canal company. The other was Philippe Bunau-Varilla, the former Chief Engineer (briefly) of the French Canal, who had financially invested in the French project. Both men were passionately devoted to promoting a canal in Panama, although they could not stand each other and worked independently. Cromwell began a slow and deliberate process of wooing members of Congress in general and Marcus Hanna in particular. Hanna was the Senator from Ohio and confidant of President McKinley and was deemed the political heavyweight in America. Cromwell worked diligently through the passage of the Spooner Amendment in 1902. Bunau-Varilla concentrated in visiting movers and shakers of American industry, as well as members of Congress to espouse the merits of Panama. A series of meetings hosted by Buna-Varilla, which began in Cincinnati and then moved to Cleveland, Boston, New York, Chicago and other cities, were influential in changing the minds of many people as to the benefits of the Panama route.

Another significant event that affected the Panama bid occurred on Sept. 6, 1901 when Theodore Roosevelt became President. President McKinley had been fatally wounded while attending the Pan-American Exposition in Buffalo, New York. Roosevelt was a naval historian and former Assistant Secretary of the Navy. He was a friend of Albert Thayer Mahan, author of *The Influence of Sea Power on History*. Both Roosevelt and Mahan were firm believers that an Isthmian Canal was vital for military and strategic reasons. Over the next nine months Roosevelt was to conclude Panama was the preferable route.

A modification of the Clayton Bulwer Treaty was signed on Nov. 18, 1901 which allowed the United States to build a canal alone. In December 1901 Rep Hepburn again introduced a bill to authorize construction of a Nicaragua Canal. It sailed through committee that month and was passed by the full House by a near unanimous vote on Jan. 9, 1902 and was sent to the Senate.

A few days earlier, on Jan. 4, 1902, the surviving French company had finally agreed to reduce the price of its assets and the Colombian concession to the U.S. dictated price of \$40 million. At that point President Roosevelt publicly endorsed the Panama route, causing great consternation in the press. He then interviewed the members of the Isthmian Commission seeking to persuade them to endorse Panama. On Jan. 18 their revised report did endorse the Panama route, triggering demands for an investigation into what happened. An amendment, later known as the Spooner Amendment, was drafted authorizing the president to purchase the French Panama Canal Company and concessions for \$40 million. It was sponsored by John Coit Spooner, considered a master of Senate legislation at the time.

Four months later, while the various legislations were still under consideration in the Senate, a violent eruption of the Mount Pelee volcano (believed to be long dormant) took place on the Caribbean Island of Martinique. The eruption killed 30,000 people in a matter of minutes and rendered the northern half of the island uninhabitable. The news of this disaster electrified the American public. Volcanoes suddenly were on everyone's mind. On May 14 Mount Momotombo, located on the north shore of Lake Nicaragua, one hundred miles north of the proposed canal area, erupted briefly. The Nicaraguan government initially denied the eruption had taken place. When the truth came out the Nicaraguan cause was further damaged. A second eruption of Mount Pelee on May 20 raised emotions even higher. Nicaragua had 14 volcanoes, of which eight were active. The nearest active volcano was only 13 miles away from the proposed route of the waterway over Lake Nicaragua. The Panama forces stated there were no volcanoes within 180 miles of their route (although there was one 200 miles away on the Costa Rica border). Additionally, Nicaragua had 14 earthquakes since the arrival of the Spaniards in the 16th century; Panama on the other hand had only a few such minor events.

Returning to the Senate, an event took place on June 5 which was to influence the outcome. Senator Hanna spoke up in support of the Panama route and the Spooner

Amendment. He listed many reasons for that decision, including a shorter route, easier curves, better harbors, shorter transit, less locks, and the elimination of the threat of another power acquiring the French properties and building a competing canal in Panama, which would supersede an American Nicaragua Canal.

On June 6, Bunau-Varilla circulated to every member of Congress a Nicaraguan postage stamp from 1900 depicting an eruption of Mount Momotombo. This was offered not only as “proof” of volcanic activity there, but that the local government celebrated that fact. It was also pointed out that Nicaragua featured a volcano on its coat of arms.

The pro-Nicaraguan forces fought forcefully for their route throughout the legislative process, but the momentum continued to slowly shift against them. During the debate in Congress over the best route, a rumor originating with Colombia implicated Germany in a plan to secretly finish the French diggings in their Panama province. That rumor did help to change some minds regarding the final choice.

Six weeks later, on June 19, 1902, the Canal Bill as modified by the Spooner Amendment passed the Senate by eight votes. The house subsequently backed the legislation as well. It was then signed by President Roosevelt. Panama had won. Nicaragua had lost. The change of decision was apparently not the result of one momentous event, but rather due to an accumulation of many smaller ones.

After Panama

In the aftermath of the Nicaragua defeat, an infuriated President Jose Zelaya of Nicaragua tried to get Germany and Japan to finance a canal in his country. When the United States objected to the major powers approached, any interest in the proposal dissipated. However, once the Panama Canal was successfully built, American interest in a Nicaraguan Canal revived.

In 1916 the United States paid Nicaragua \$3 million for an option in perpetuity free of taxation to build a canal there. In 1929 a two year study of a ship canal was authorized. The Sultan Report, authored by U.S. Army Colonel Daniel Sultan, was the result. Three hundred men surveyed the route for a future canal along the Rio San Juan route, dubbed the Forty-Niners Route, in honor of those who used Commodore Vanderbilt’s railroad in the California Gold Rush. Sultan estimated the canal would be three times longer with locks twice as large at

double the cost of the Panama Canal. He saw the main problems as heavy rainfall and poisonous wildlife. Cartographic depictions of the Nicaragua Canal began to again appear on maps and atlases printed in America. In the aftermath of the Sultan Report, Costa Rica protested that its rights to the Rio San Juan had been infringed by the study. El Salvador protested to the United States building military bases in the area. Both complaints were upheld by the Central American Court of Justice, which the United States and Nicaragua then ignored.

In 1938 and 1939 another study was made for construction of either a barge or ship canal. Three variants were considered with different channel depths. The largest proposal featured canal locks slightly smaller than those of the fourth Welland Canal (the one still used today).

A canal dug with atomic weapons was advanced in the 1960s as part as Operation Plowshare. Due to the controversial nature of the digging method, the proposal went nowhere. The United States and Nicaragua ended the option in perpetuity July 14, 1970. After a lengthy hiatus due to political problems in Nicaragua between the Sandinista government and the United States, proposals began to be made again.

In the 1900s a more northerly route centering on the Rio Escondido was proposed. Possible beginning points were at four different locations near the town of Bluefields on the Caribbean coast. The route then would follow the river inland to the end of navigation and connect to Lake Nicaragua by a short canal. The proposal went nowhere.

In 1999 Nicaragua approved an exploration concession to build a shallow draft canal along the Rio San Juan to be known as the Eurocanal. This proposal would connect the Atlantic Ocean with Lake Nicaragua, but not the Pacific Ocean. The project was loosely based on the 1939-40 barge study. Nothing came of the concession.

In 2000 a concession was granted to a company headed by New York attorney Don Mario Bosco as head of Canal Interoceanico de Nicaragua SA to build a railway “dry” canal connecting the Atlantic and Pacific coasts. The proposal failed to get financing.

In 2004 the non-Sandinista Nicaraguan President Enrique Bolanos proposed a canal to handle ships up to 250,000 tons. The cost of the scheme was to be \$25 billion. The route was to follow the Rio San Juan. When foreign investors failed to materialize the United States

was proposed to buy the land for the investors. Environmental groups violently objected. There was no response from the United States. As a result of this proposal the Panama Canal authorities embarked on their expansion plans, which saw the much larger third set of locks open in 2016. The 2004 Nicaragua Canal proposal has continued to be raised repeatedly in the next decade, as different financing plans and routes were advanced.

In 2006 President Bolanos reiterated that Nicaragua would pursue a canal at a cost of \$18 billion over 12 years. At this point six routes were possibilities. The president stated there was enough demand for two canals in Central America, and justified the project as an economic boon for Nicaragua and Central America. Bolanos was subsequently defeated in the November 2006 election by Sandinista candidate Daniel Ortega.

In 2009 President Dmitri Medvedev of Russia stated his country would be interested in pursuing the waterway. That same year the United Arab Emirates expressed interest in sponsoring the project. The progress of the Panama Canal expansion dampened the interest of both these countries.

In 2010 Korean developers Dongmyeong Engineering and Architecture Consultants contracted with the Nicaraguan government to construct a deepwater port at Monkey Point on the Caribbean Coast.

In July 2012 a new feasibility study was conducted by Royal Haskoning DHV and Ecorys to evaluate the Rio San Juan route. It determined the route would be cheaper to build and would be less environmentally damaging than other routes. This plan would not require the construction of an artificial lake for water supply purposes.

In June 2013 Nicaragua's National assembly approved a 50 year concession to finance and manage a canal to the Hong Kong Nicaragua Canal Development Investment Company (HKND). HKND is controlled by Wang Jing, a Chinese billionaire. He claimed to have nearly unlimited financial resources available for the project. The waterway was named The Nicaragua Grand Canal. If the waterway is operational at the end of the first 50 year period, the concession will be extended another 50 years. The canal was claimed to be able to handle the largest ships afloat. The route was more centrally located, along the Rio Punta Gorda to Lake Nicaragua, then to the Pacific Ocean at Brito. It was to be 173 miles long and would cost \$40 billion. This route would eliminate any problems with Costa Rica. It was to feature two

lock complexes of three consecutive chambers located at either end of the canal. A 150 square mile artificial lake was to be constructed to supply water to the locks.

The Nicaraguan government announced that construction had begun on Dec. 29, 2014 at the town of Rivas. It was to be completed by 2019. The subsequent Chinese stock market crash of 2015-16 resulted in Wang losing 80 percent of his net worth. Reportedly Wang is welcome in Nicaragua only if he brings money—lots and lots of it. Despite reports that Russian interests might become involved; no construction was taking place in mid-2016. The Nicaraguan government has had no comment about the situation.

One upshot of the HKND project is that a competing Chinese company, China Harbor Engineering, made an offer to Panama in late 2014 to build a fourth set of locks on the Panama Canal to handle the largest ships at a cost of only \$10 billion. It may yet happen again that what begins as an idea in Nicaragua, may become a reality in Panama.

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C&O Canal Aqueducts

Canals rely on aqueducts and culverts to cross creeks, streams, runs, and rivers. Wider bodies of water required aqueducts to cross them.

The C&O Canal features 11 original towpath aqueducts. All are standing, and some of them have benefited from restoration projects. The first five are multi-arch aqueducts, including the magnificent seven-arch Monocacy River Aqueduct. The remaining six aqueducts are single arch aqueducts.

The 11 aqueducts are presented here, in sequence. A color presentation about the aqueducts can be viewed at deansm.myportfolio.com or downloaded in high resolution at bit.ly/2qZqckN

– Steve Dean



Catoctin Creek (mile 51.53) – Two of this aqueduct's three arches collapsed in 1973. A restoration project was completed in 2011 and used many of the original stones



Seneca Creek (mile 22.82) – This three-arch aqueduct is made from red Seneca stone. A local flood in 1971 washed out the upstream arch. It is combined with a lift lock.



Antietam Creek (mile 69.36) – Featuring elliptical arches, this aqueduct survived Civil War damage. The center arch is wider than the upstream and downstream arches.



Monocacy River (mile 42.19) – This seven-arch aqueduct is one of the signature features of the C&O Canal. A rehabilitation project, completed in 2005, saved it from possible collapse.



Conococheague Creek (mile 99.80) – A canal boat went through the side of this aqueduct in 1920. A restoration project is in progress and eventually boats will again cross it.

C&O Canal Aqueducts



Licking Creek (mile 116.30) – The first of the single-arch aqueducts is also the longest, with a 90-foot span. Weak stones required concrete repairs over the years.



Fifteen Mile Creek (mile 140.90) – This aqueduct is easily accessed and viewed in Little Orleans, Md. It is in excellent condition, with both the towpath and berm walls intact.



Tonoloway Creek (mile 122.96) – Located in the canal town of Hancock, this aqueduct features an irregular arch that rests on a rocky ledge on the downstream side.



Town Creek (mile 162.34) – Town Creek was an active area with many mills in the 18th and 19th centuries. Mill ruins are visible near this scenic creek.



Sideling Creek (mile 136.56) – This aqueduct is located in a quiet area at the foot of Sideling Hill. It features a 60-foot asymmetrical arch.



Evitts Creek (mile 180.66) – This is the uppermost aqueduct on the canal, and is four miles below Cumberland. It is stable, with support structures in place.

Tow Boy (excerpt from *A Rebel of '61*)

Tow Boy is an excerpt from Joseph R. Stonebraker's *A Rebel of '61*, the memoirs of a Confederate cavalryman originally published in 1899. This excerpt is the account of a war-time trip on the C&O Canal – Reprinted by the Washington County (Maryland) Historical Trust in 2016 with annotations.

Some time before the War, an uncle, Daniel S. Rentch, of Shepardstown, Virginia, had been operating several boats on the Chesapeake and Ohio Canal.

After Virginia seceded, to prevent the boats from being confiscated he transferred them to his brother-in-law, John Eckert Knode, who had always been a Whig, and was now considered a Union man.

Knode was married to father's sister, and in the following fall he and father put the boat "Ellen Rentch" in order, purchased wheat from the farmers, taking the first load from near the old Buchanan place, south of Downsville, and freighted it to Georgetown, District of Columbia.

It might as well be recorded here that Knode was a farmer, and resided on the old Michael Stonebraker's homestead, adjoining Bakersville, near the Potomac River.

Being a Whig, he may have been a "Union man," but he had married a Stonebraker, and all the world knew where they stood as long as their tongues could wag.

However, in the following winter, some of his enemies—and they were not Southerners, either—set fire to his barn, destroyed all his crops, many of his horses and cattle, and all his farming implements. It cost something in those days to be joined to a Southern woman in wedlock.

They employed Captain Wade to steer the boat. He was an industrious but a very stubborn man; this latter trait proved to be very unfortunate for them, as we shall hereafter see.

The farmers hauled the wheat to the landing in

wagons, and I helped to carry, weigh and empty it into the boat. When the boat was loaded, we started on our journey, I driving the team which consisted of three horses, and they pulled the loaded boat at the rate of two miles an hour. Fourteen to sixteen hours was a day's work; to accomplish this, we had to be up early in the morning and go late into the night.

I soon discovered it to be a very disagreeable occupation. The men that followed the canal for a living did not hesitate to steal anything they could get their hands on, and the one who could use the foulest language was considered the most accomplished boatman.

When near our destination the boat sprung a leak, but we kept her afloat by pumping until we reached the two-mile level, had the water drawn off and corked up the leak, the cargo being but little damaged.

It was Sunday when we reached Georgetown. As the dome of the Capitol looked as though it was but a short distance away, I hurried up the avenue only to find that it was miles instead of blocks before reaching that majestic pile of marble. While here I went to the theatre for the first time. They were playing the "Colleen Bawn." What a grand and imposing sight for a country boy.

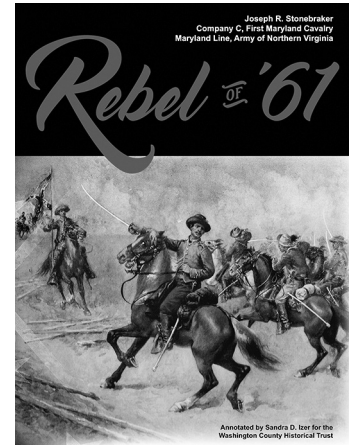
We made several trips from various points along the canal before cold weather closed navigation. The next spring we took the boat on the Virginia side, two miles above Dam Number 4, which was in big slack water. We received the farmer's wheat at Harrison's Landing, and took them on our return trips groceries, etc.

Father had been informed that some of the Unionists had threatened to give him trouble if he continued to trade with the people. We finished loading the boat about five o'clock, but father had left some time before to attend to some business, expecting to meet us the next morning further down the river. Before leaving he instructed Wade to take the boat over on the Maryland side of the river, as soon as she was loaded. This Wade failed to do for no other reason than to have his own way. Some time during the night a squad of

Yankee soldiers, led by a citizen, came and ordered us to get up and put on our clothes, go back into Maryland, and not come to Virginia until the War was over.

After we left they untied the boat, pushed her out into the current, when she floated down the river and over Dam Number 4 and broke in half. Part of the wreck drifted down the stream and lodged against an island, just opposite where father had agreed to meet us. I shall never forget his distress and the sight of the big tears that rolled down his cheeks when we explained to him how it occurred. The money loss to him was about \$4,500.00.

Excerpt from *Rebel of '61*: Joseph R. Stonebraker, Company C, First Maryland Cavalry, Maryland Line, Army of Northern Virginia, annotated and edited by Sandra D. Izer. Washington County Historical Trust, 2016. For more information about the book, or to order a copy, see washingtoncountyhistoricaltrust.org/publications/rebel-of-61/



The Ballard Locks

The U.S. Army Corps of Engineers completed construction of the Lake Washington Ship Canal and Hiram M. Chittenden Locks in 1917. The canal and its locks connect the waters of Lake Washington, Lake Union, and Salmon Bay to the tidal waters of Puget Sound. This canal allows both recreational and commercial vessels to travel to Seattle's harbor. In addition to supporting transportation needs, the locks prevent the mixing of sea water from Puget Sound with the fresh water in the lakes. The locks are known as the Ballard Locks because of their proximity to a neighborhood of the same name.

The centennial of the canal was celebrated in 2017, and the equipment and infrastructure of the locks are long past their projected lifespan. Failure of the locks would have a significant impact on the environment, transportation and economy of the area. With 50,000 boat passages each year, the condition of the canal and locks is a significant concern. Some facilities have failed, and an earthquake could cause significant damage to the canal and locks. Another concern is the impact on Chinook salmon, which must pass through the canal twice in their lives. Fish passage improvements are critically needed.

Visit www.govlink.org/watersheds/8/committees/1410/W8-BallardLocks-FactSheet.pdf for a fact sheet on the current issues of the Ballard Locks.



Ballard Locks - ©Jacob - stock.adobe.com



Drawbridge at Ballard Locks - ©Scott Bufkin - stock.adobe.com

CANALENDER

March 3, 2018: Canal Society of New York State 2018 Annual Winter Symposium. Monroe Community College in Rochester, N.Y. Information available at www.newyorkcanals.org/explore_events.htm

April 13-15, 2018: Canal Society of Indiana 2018 Spring Tour, Huntington, Ind. Hotel: Best Western, 5501 Coventry Lane Fort Wayne, Indiana 46804. Visit indcanal.org/canalander/ for further information.

April 14, 2018: A Tour of the Clinton – Kalamazoo Canal, Rochester Hills, Mich. 1005 Van Hoosen Road, Rochester Hills, Mich. 48306. Visit www.rochesterhills.org/musprogrms or 248.656.4663 for info.

April 20-22, 2018: Canal Society of Ohio Spring Tour, Coshocton, Ohio. Six Mile Dam and the Coshocton Area. The hotel is Coshocton Village Inn, 115 North Water Street, Coshocton, Ohio 43812. Contact M. Starbuck at starbucm@hotmail.com.

April 27-29, 2018: Pennsylvania Canal Society and Canal Society of New York State joint tour of the Delaware Canal. Bus tour of the Delaware Canal from New Hope, Penn. to its origin in Easton, Penn.

Headquarters: Wyndham Philadelphia-Bucks County in Feasterville-Trevoise, Penn. Visit www.newyorkcanals.org/explore_spring2018_program.htm.

Aug. 17-19, 2018: Canal Society of Indiana 2018 Fall Tour, Piqua, Ohio. Miami & Erie Canal. Visit indcanal.org/canalander/ for further information.

Sept. 10-12, 2018: World Canals Conference 2018, Athlone, Ireland. Journey to Athlone Co. Westmeath in the heart of Ireland and at the heart of the Irish Inland Waterways network. www.wccireland2018.com/

Oct. 14-16, 2018: New York State Canal Conference: Hilton Garden Inn, Staten Island, N.Y. Visit newyorkcanals.org for more information.

Sept., 2019: World Canals Conference 2019, Yangzhou, China: Dates and details to be determined.

Sept., 2020: World Canals Conference 2020, Leipzig, Germany: Dates and details to be determined.

2018 World Canals Conference

Every year, the World Canals Conference brings together hundreds of canal and waterway enthusiasts, professionals and academics from around the world. During the conference delegates exchange ideas about canal management and development including: the protection of historic features; technical developments; revitalization of canal systems and harbors; recreational opportunities; and the promotion and presentation of canal history. Ways of promoting tourism and invigorating rural economic development and urban renewal are explored.

Since its inception in 1988 the World Canals Conference has grown significantly and now welcomes waterway management agencies and professionals, users and enthusiasts from Asia, Africa, Europe and North America.

Conference delegates, official partners and sponsors will have a range of both formal and informal opportunities involving presentations, networking, exhibitions, educational tours and social programs to share and exchange experiences, technical solutions and learnings.

On September 10–12 2018, the World Canals Conference will take place in Athlone, Ireland. Themed ***Restore Regenerate Reimagine***, the conference will showcase Ireland’s many restoration and re-imagining projects in a three day event where delegates can update their knowledge of innovative waterways management experiences and techniques from all over the world.

Visit wccireland2018.com for conference information, including details about registration, events, accommodations, pre-conference tours and Athlone. Early registration ends on May 31.