



# AmericanCanals

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Dedicated to Historic Canal Research, Preservation, and Parks

Summer 2013

## From the President

By David G. Barber

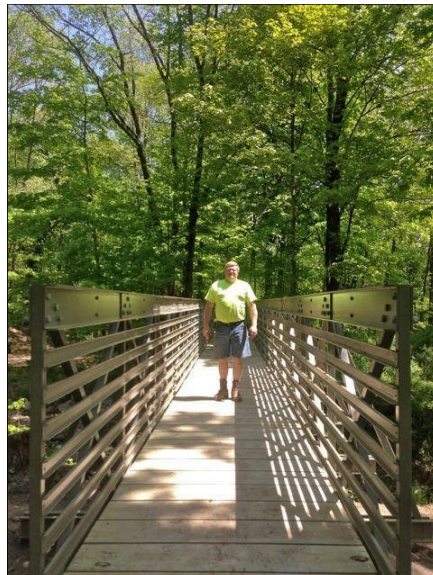
There is both good news and bad news on the canal front.

First, the bad news. Eastern upstate New York as well as Vermont have been receiving huge amounts of rain. As a result, flood conditions exist on the eastern Erie Canal, and the waterway is closed east of Syracuse. As of this writing, the extent of damage is unknown and won't be until the floods recede. This is the same area that was hit hard by Hurricane Irene two years ago. Vermont has also been badly impacted by rain, and Lake Champlain is at or near flood stage. That's unusual for this time of year. What the effect is on the Champlain Canal is unknown to me.

But, there is also good news. On the Delaware and Hudson Canal, Cliff Robinson has been leading a team of volunteers opening up the towpath between Cuddebackville and Westbrookville and beyond. Recently, they erected a 66-foot-long by 5-foot-wide fiberglass bridge over a towpath gap just north of Port Orange Road. Such bridges are custom designed and fabricated, but they can be assembled by volunteers with hand tools. The cost was about \$50,000 with engineering, surveying, footings, shipping, and the bridge pieces. An end view of the bridge is attached. I hope to get more photos when I travel through the area next. The group continues to work on the towpath and on a parking area at Westbrookville.



Nova Avanhandava, Brazil, two locks; picture from Google Earth. See Dave Barber's article on South American waterways, p. 7.



End view photo of the completed D&H bridge at Port Orange. Photo is by Wayne Decker.

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# American Canals

BULLETIN OF THE  
AMERICAN CANAL SOCIETY

Managing Editor: Linda J. Barth  
Contributing Editors: David G. Barber,  
Terry Woods, Bill Trout, Karen Gray  
[www.americancanals.org](http://www.americancanals.org)

For memberships, subscriptions, change  
of address, and other business matters:  
c/o Charles W. Derr, 117 Main Street,  
Freemansburg, Pennsylvania 18017;  
[deruls@aol.com](mailto:deruls@aol.com); 610-691-0956.

For CANAL CALENDAR items and  
for news of local, state, and regional  
canal societies: c/o Linda J. Barth, 214  
North Bridge Street, Somerville, NJ  
08876; 908-722-7428; [barths@att.net](mailto:barths@att.net)

The objectives of the American Canal  
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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  
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## Officers

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Ballou Road, Hopedale, MA 01747;  
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Committee, [dgarber@cs.com](mailto:dgarber@cs.com)

**Vice President:** William Gerber, 16  
Princess Ave., N. Chelmsford, MA  
01863; 978-251-4971(h) Director;  
[wegerber@gmail.com](mailto:wegerber@gmail.com)

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3R1, Canada; Canada; 416-285-  
7254; [rwsears88@gmail.com](mailto:rwsears88@gmail.com)

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Maintenance Comm, 610-691-0956;  
[deruls@aol.com](mailto:deruls@aol.com)

## Directors:

**Paul Bartczak**, 9954 New Oregon Rd,  
Eden, NY 14057; 716-992-9069;

[pjBartczak@earthlink.net](mailto:pjBartczak@earthlink.net)

**Linda J. Barth**, 214 N. Bridge St.,  
Somerville, NJ 08876; 908-722-  
7428; Editor, *American Canals*;  
[barths@att.net](mailto:barths@att.net)

**Robert H. Barth**, 214 N. Bridge St.,  
Somerville, NJ 08876; 908-722-  
7428; Chairman ACS Sales  
Committee; [barths@att.net](mailto:barths@att.net)

**Carroll Gantz**, 817 Treeloft Trace,  
Seabrook Island, SC 29455-6116;  
843-768-3780; Chairman, Canal Boat  
Committee; [carrgantz@bellsouth.net](mailto:carrgantz@bellsouth.net)

**George Hume**, #513 – 39 Parliament  
Street, Toronto, Ontario, Canada  
M5A 4R2; 416-214-9331;  
[george.hume@rogers.com](mailto:george.hume@rogers.com)

**Keith W. Kroon**, 2240 Ridgeway  
Ave., Rochester, NY 14626; 585-225-  
-0688; [crowns2@aol.com](mailto:crowns2@aol.com)

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Washington, DC 20016; 202-244-  
5355; [alich@aol.com](mailto:alich@aol.com); Member Canal  
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**Dan McCain**, 3198 North, 700 West,  
Delphi, IN 46923; 765-564-6297;  
[mccain@carlnet.org](mailto:mccain@carlnet.org)

**Lance Metz**, 37 West Street, Allentown,  
PA 18102; 610-434-8875

**Michael Riley**, 38 Green Street, Port  
Byron, NY 13140; 315-776-5116;  
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**Robert Schmidt**, 5908 Chase Creek  
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Maintenance & Operations Committee;  
[indcanal@aol.com](mailto:indcanal@aol.com)

**Roger Squires**, 46 Elephant Lane, Roth-  
erhithe, London SE16 4JD England; 020  
7232 0987; [rogersquires@btinternet.com](mailto:rogersquires@btinternet.com)

**Roberta Styran**, #509 - 35 Towering  
Heights Boulevard, St Catharines,  
Ontario L2T 3G8 Canada; 905-684-  
4882; [rstyran@becon.org](mailto:rstyran@becon.org)

**William Trout III**, 417 Phillips Street,  
Edenton NC 27932; 252-482-5946;

[Bill@vacanals.org](mailto:Bill@vacanals.org)

**Larry Turner**, 15091 Portage Street, Lot  
# 34, Doylestown, Oh 44230; 330-658-  
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**Terry K. Woods**, 6939 Eastham Circle,  
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Operations Committee;  
[woodscanalone@aol.com](mailto:woodscanalone@aol.com)

## Director Emeritus

**William J. McKelvey**, 103 Dogwood  
Drive, Berkeley Heights, NJ 07922;  
[wjmckelvey@hotmail.com](mailto:wjmckelvey@hotmail.com); 908-464-  
9335

**Arthur W. Sweeton III**, P.O. Box 158,  
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Below is the second part of a two-part story about the construction of the Chesapeake & Ohio Canal.

**Accompanied by the Past** by Karen Gray

*History is the witness that testifies to the passing of time; it illumines reality, vitalizes memory, provides guidance in daily life, and brings us tidings of antiquity.* **Marcus Tullius Cicero (106–43 BCE), Pro Publio Sestio**

**The Battle over the Eastern Terminus — Part II** (*continued from the spring issue*)

In the spring of 1828, the battle over the name of the new canal had been concluded, and in late June the Chesapeake and Ohio Canal Company was formally organized. The ceremonial beginning of construction took place in Maryland, at Little Falls, just outside the Federal District boundary, and the company immediately began preparing contracts on the first sections upstream from that location. What would happen below, in the District, was undetermined.

As one might suspect, the reason for beginning in Maryland was a complex mixture of regional politics and economic realities. Virginia Congressman Charles Fenton Mercer, the primary political force and visionary behind the canal, had been elected the canal company's first president. He realized it was essential to have as broad a base of committed investors as possible, and one way to do that was to leave the precise location of the eastern terminus open for as long as possible. That would keep all three Federal District cities (Washington, Georgetown, and Alexandria) *and* even Baltimore in the running for that coveted facility.

Of course, Baltimore understood that the official terminus would be somewhere on the Potomac, but — not withstanding support there for a railroad — many in that city keenly desired a cross-cut canal above the Federal District to the C&O. Such a branch canal would give them a water connection with the Potomac route west and very likely divert to their city much of the cargo coming down the canal, as well as allow them to ship their products to western Maryland and beyond by water.

But the leaders of the City of Washington were unhappy with leaving the terminus question hanging, and with a congressionally authorized \$1 million subscription for C&O Canal stock, the city was the company's largest investor to date except for the Federal Government itself, which also had a \$1 million subscription.

On July 31, the *National Intelligencer* reported that the Washington City Council had asked the canal company “to mark out with as little delay as possible the route of such of [sic] said Canal, as passes through this city to the Eastern Branch” (now known as the Anacostia). The C&O Canal Company responded that it “would be inexpedient to expend any part of the capital stock of the company on an extension of that canal below...the Little Falls of the Potomac before the line of canal leading thence to the mouth of the Shenandoah River has been put under contract.”

The Washington investors, however, demanded a prompt determination of the eastern terminus and Mercer, realizing the enormous struggle that was developing among the various localities and factions over the issue, demonstrated the political canniness that had helped to make him such a powerful politician. He did two things: First, he scheduled a special stockholders meeting for September 10, 1828, to deal with the matter; and second, he appointed a committee of three directors — one from each District city — to work with the engineers and arrive at a recommendation.

Mercer knew that the directors fully realized that it was essential that the eastern terminus of the canal be a success and that ultimately its design and location was an issue transcending each city's special interests. But in working with the engineers, the cities' representatives would have to confront the weaknesses and strengths of each location. And of course the engineers would focus on the fact that the terminus needed a spacious and protected harbor where transshipment to and from boats, ships, and wagons could readily take place.

For Washington, this meant confronting the reality that the Washington City Canal, built essentially at tidal and water table levels with inadequate wooden tide locks at each end, was doomed to suffer from siltation and damage by high tides. Realistically, a Washington terminus on the Eastern Branch would require a new canal built at a high level through Georgetown and Washington that would drop down near the Navy Yard on the east side of the Capitol.

But this Washington high-level canal option was costly and the Alexandrians objected to spending so much

money on any such plan unless an aqueduct across the Potomac to a branch canal to their harbor was included in the C&O's terminus plans. If that was not possible, then they supported a terminus at Locks Cove where the then-present Potomac Company's Little Falls canal dropped down to the river (the location today of Fletchers Boathouse).

Georgetown merchants wanted the canal to end near their wharves, although its port was no longer deep enough for transoceanic ships and could serve only vessels that plied the Atlantic coastal and Caribbean waters, as well as the tidal bays and rivers of the region. However, a Georgetown terminus was opposed by a group of wealthy Georgetown citizens headed by Francis Scott Key. They objected to having an unhealthy canal with its associated labor-intensive activities bisecting their charming town. Key also anticipated (rightly) that at least some of his personal property that ran down to the river and included his home would be condemned for the canal right-of-way.

The engineers preferred Washington's deep water port near the Navy Yard and even recognized the value of a branch canal from the Eastern Branch to the Patapsco and Chesapeake on the southwest side of Baltimore. That route was low and avoided the difficulties of crossing the ridges north of the District, although the latter was Baltimore's preferred route.

No record of the committee's deliberations exists, but its report was submitted to Mercer and the canal company board on September 3, 1828. It was a masterpiece of compromise, designed to give all three District cities a connection that left open the possibility of one or more of the three ultimately becoming a primary transshipment point.

Basically the compromise recommendation was this:

Instead of carrying a new, high level canal across Rock Creek and east to Capitol Hill and the Eastern Branch, a series of locks would drop the canal down to Rock Creek—a boundary shared by Georgetown and Washington. The current wide, tidal mouth of Rock Creek just below the last of the proposed Georgetown locks would be altered by building a long peninsula that would extend the Georgetown shore of Rock Creek 1,080 feet downriver, where the creek would then terminate at a 120-foot dam and tidelock. The dam would create a basin three feet above high tide and six feet deep, and excess water from Rock Creek would flow over the dam, into the river. The canal company could lease lots on the peninsula—termed a “mole” in French style—for warehouses, work shops, and stables. Both sides of the mole would be lined with wharfs, and a bridge over the tumbling dam would connect the Washington and Georgetown sides of the mole.

To further placate Washington, it was agreed that the C&O Canal Company would build a branch canal from the Rock Creek basin to the Tiber estuary near the Potomac terminus of the Washington City Canal. However, Mercer insisted that, as its part of the arrangement, Washington would build a basin at its end matching that at Georgetown (thus three feet above high tide and six feet deep). This would mean that the C&O branch would not need a lock at either end and would simply connect the two basins. Presumably, Washington would undertake to greatly improve their canal and find ways to overcome its limitations.

An aqueduct across the Potomac for a branch canal to Alexandria was a critical part of the recommendations. It kept alive the possibility of Alexandria having a major eastern terminus if it was successful in building a canal to the C&O. Not insignificantly, Alexandria's place in the terminus plans would assure that cargo from the C&O Canal could reach a deep water port with an additional journey of only a few miles.

To address the concern of Key and the other Georgetown “environmentalists” about potentially unhealthy conditions of the canal's water and banks, it was recommended that the canal through Georgetown be lined with stone.

The proposals were hotly debated at the September 10 meeting, without resolution, requiring the stockholders to return on September 17 to continue the discussions and to ultimately approve the proposals. The Georgetown “environmentalists” however, never accepted the plans for a dirty, noisy canal passing through their town, even if it had masonry walls.

In reality, what actually happened differed from the stockholder-approved plans:

- The C&O branch to the Washington City Canal (WCC) terminated at “Tidelock B at the mouth of Tyber Creek.” That would have placed it near or at the western terminus of the WCC. It is unclear how the two

canals actually connected, but maps of the era show a tidal basin at that location. In any case, the WCC was little used and by the 1870s was nothing more than an open sewer.

- The C&O ended up building, at its own expense, only the Georgetown abutment of the Potomac Aqueduct, but Alexandria did get the rest of the aqueduct and their canal constructed. Its terminus was important in the 1850s, but the canal was closed during the Civil War. It reopened in 1867 and functioned until September of 1886, but it appears its trade reflected the same decline seen on the C&O after 1875.

- The Rock Creek Basin terminus was largely a failure. Low bridges in Georgetown, the flight of four locks necessary to reach it, and its propensity for silting in all contributed to limit its usefulness. Trestles at the upper end of Georgetown from canalside wharfs to the riverfront, where they terminated above the holds of ships, and an inclined plane, served at times as alternatives to the Rock Creek Basin.

- Baltimore rejected the possibility of a low-level canal between the Eastern Branch to the Patuxent on the basis that, once having reached the District cities, cargos were unlikely to continue on to their port. Subsequent surveys in the 1830s tried again to find a way to water the summit level of a canal over Parrs Spring Ridge that lies between the C&O in Maryland and Baltimore—but without success.

*Sources:*

*This article draws heavily from William M. Franklin's "The Tidewater End of the Chesapeake and Ohio Canal," printed in the Maryland Historical Magazine, Winter 1986, Vol. 81, #4, 289–304. Dr. Franklin was the retired Director of the Historical Office, Department of State. Another important source is "The Alexandria Canal: Its History and Preservation" by Thomas Swiftwater Hahn and Emory L. Kemp, West Virginia University Press, Monograph Series for the Institute for the History of Technology & Industrial Archaeology, Volume I, Number 1, 1992. Basic documentation can often be found in Harlan D. Unrau's Chesapeake and Ohio Canal Historic Resource Study, 2007 version at: [www.nps.gov/history/history/online\\_books/choh/unrau\\_hrs.pdf](http://www.nps.gov/history/history/online_books/choh/unrau_hrs.pdf)*

The terminus issue aside, however, the canal's name needed to serve a much more ambitious vision than the "Potomac Canal" in Virginia's act, which necessarily had been limited to that state's boundary. Now the goal was to cross the mountains to "the head of the Steam Boat navigation of the Monongahela or Ohio river." Mercer and others wanted a name reflecting that vision.

Although canal supporters in Ohio were speaking informally of a "Potomac and Ohio" canal, the first geographic name put forward was "Chesapeake and Ohio." In proposing this name, Mercer stated:

Though the Ohio ultimately falls into the Gulf of Mexico, yet as it is the great stream to which we propose to go, there seems a propriety in retaining its name. In adopting the term Chesapeake we wished to avoid all local feelings, and assume a broad distinctive epithet, which would not interfere with the prejudices of any section of the country.<sup>5</sup>

James Forrest, a convention delegate from Maryland's St. Mary's County, promptly questioned the reason for the name change and expressed a concern that "Chesapeake and Ohio" might result in confusion with the Chesapeake and Delaware Canal. After Mr. McLean spoke for the Ohio interests, using their "Potomac and Ohio" terminology, Forrest proposed that "Potomac" be substituted for "Chesapeake."<sup>6</sup> To this John C. Herbert from Prince George's County responded:

There have already been given reasons for the name of the change. In this case the interests of Baltimore ought never to be lost sight of. We ought, as far as possible, to remove the prejudices and ignorance existing on this subject. They cannot be strangers to the provision which has been made for a lateral canal—the grand object of which is to afford an opportunity of a canal being cut from the Great Trunk to Baltimore. We wish that the intercourse between Baltimore and the West be retained by this means.<sup>7</sup>

At that point, Forrest withdrew his proposal, although not without emphasizing that: "I feel more inclined to consider that I was in the right" and that anyway, he preferred the "Union Canal" name.<sup>8</sup>

But resolving the politically sensitive name issue only brought to the forefront the issue of which city



would be the primary eastern anchor of the great waterway. Clearly, the District cities could not be left out, and the majority at the convention envisioned a canal terminating in the District. Branch canals, especially one to Baltimore, were expected outgrowths of the main canal, but they could come with potential problems. If, for example, water for all or part of them had to come from the main stem, the primary canal would need more water and might find it difficult to maintain its full depth in dry periods. In fact, this did become a major problem with the Alexandria Canal decades later.

But at this stage a major concern of many with an interest in a canal to the Ohio was getting and keeping as much of the business on the canal as possible. And it could not be denied that there was considerable foot-dragging on the part of many of the District delegates with regard to a Maryland crosscut canal.

In response to overt and implicit concerns over branch canals, Athanasius Fenwick of St. Mary's County urged the convention to approve a resolution that "this meeting and the friends of the Ohio and Chesapeake Canal [*sic*] generally, disclaim and disavow all opposition to any lateral Canal which it is practicable to make, leading to or from the said Canal, or to any future extension through any of the states adjacent thereto." Ultimately a clear provision for lateral canals was included in the final resolutions to come out of the convention.<sup>9</sup>

After the 1823 convention, the issue of Baltimore's connection to the proposed Chesapeake and Ohio Canal simmered on even as the surveys of 1825 and 1827 reinforced the understanding that the main stem of the canal would go down into the Federal District.

But nothing changed the fact that Washington wanted the canal to end at the Eastern Branch (Anacostia River). Alexandria wanted it to cross the Potomac and terminate there—or if a Potomac crossing was not possible, to end at the Potomac Company's Locks Cove terminus above Georgetown (the location of present-day Fletcher's Cove). Georgetown supporters were divided, with some wanting it to end on their waterfront, but others preferring that it terminate up the river at Locks Cove in order to keep what they believed would be an unhealthy canal with noisy traffic from coming into their town. Among the latter was Francis Scott Key, whose home and property on the bank of the Potomac would be in the path of any canal built through the town.

Georgetown's situation was problematic in another way: it was no longer a deep-water port due to siltation and it could serve only the more shallow draft ships that plied the Atlantic coast and the tidewater bays and rivers—not the larger transatlantic vessels. And at the east end of the town, the mouth of Rock Creek formed a wide tidal flat.

So the ceremony on July 4, 1828, made it glaringly obvious that neither Georgetown, Washington, nor Alexandria could presume the great canal would terminate on their shoreline or at a place favorable to them. Nor could they even see construction bringing the canal in their direction, and this was not acceptable.

#### Notes:

<sup>1</sup> This article draws heavily from William M. Franklin's "The Tidewater End of the Chesapeake and Ohio Canal," printed in the *Maryland Historical Magazine*, Winter 1986, Vol. 81, #4, 289–304. Dr. Franklin was the retired Director of the Historical Office, U.S. Department of State.

<sup>2</sup> *Ibid.*, p. 298.

<sup>3</sup> This description appears in multiple documents of the time concerning the convention.

<sup>4</sup> Proceedings of the Canal Convention are available on the Internet at: <http://archive.org/details/proceedingsatgen00ches>. p. 6

<sup>5</sup> *Ibid.*, p. 20.

<sup>6</sup> *Ibid.*, p. 20 and 21.

<sup>7</sup> *Ibid.*, p. 22.

<sup>8</sup> *Ibid.*, p. 23.

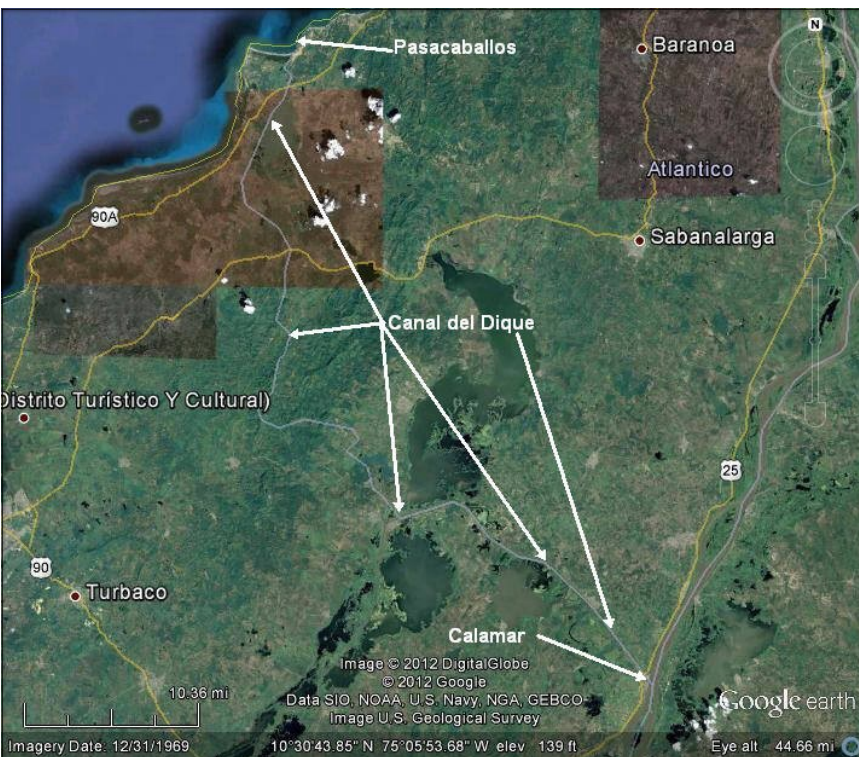
<sup>9</sup> *Ibid.*, p. 33.

## South American Navigations

Story by David G. Barber; photos from Google Earth

Despite South America being included in the original ACS logo, it's not a continent that we often consider or that many of us have visited. While there are many naturally navigable rivers such as the Amazon, these are generally outside the scope of ACS. But, we have carried a few waterways in our listings, and *World Canals* by Charles Hadfield, 1986, hints at more. Internet searching and especially Google Earth show that our southern neighbors have been busy in navigation improvements.

Beginning with Colombia, there is the mysterious Lost Canal of the Raspadura. This is also known as the Canal del Cure, the Priest's Canal, or the Altrato Canal. It is a small boat canal connecting the headwaters of the San Juan and Altrato rivers. As such, it crosses the divide between streams flowing to the Pacific Ocean and those flowing to the Caribbean Sea. It was considered an alternate location for what is now the Panama



Canal del Dique, Columbia

Canal, but its location was unclear for many years. Recently, the mysterious listing by ACS has inspired David and Stephen Howarth (British) to find it.

Also in Colombia is the Magdalena River, which flows north past the general area of the capital, Bogota, to the north Pacific coast. The head of navigation was at Neiva, whence boats could use the river for some 200 miles past Girardot, where it improves, to the Honda rapids. Lower down, at La Dorada, it is navigable for another 600 miles to the coast at Barranquilla. Quoting from *World Canals*, "Three cities near the Magdalena's mouth competed for its trade, Cartagena, Barranquilla and Santa Marta. Santa Marta, the oldest, had a good harbour, but a water connection with the river only though shallow and swampy channels. Barranquilla, the newest, was on a river mouth blocked by a sandbar. Cartagena had a good bay, and a tantalizing water connection with the Magdalena, the

Digue (see photo left), formerly one of its channels. From 1650 to our own times, efforts have been made to canalize it, and by doing so to make Cartagena Colombia's principal port, in spite of silting and blockage.

"From the American canal age, and linked with the coming of steamboats, such efforts became more ambitious. J. B. Elbers, who from 1823 put steamboats on the river, tried. Then came George Totten, later builder of the Panama Railroad, who by 1848 had cut some new channel and built two locks. In 1847 a steamboat company was formed at Cartagena to use it and the river, a year after another company to navigate the river had been formed at Santa Marta. But within a few years both Cartagena company and canal had failed. Then in late 1879 an American engineer, James J. Moore, reopened it for river craft drawing up to 5 ft. For ten years or so Cartagena's trade flourished, until again nature began to damage the canal. Barranquilla having in the 1890s linked itself to the sea by a railway, Cartagena built one to Calamar on the Magdalena. However, in the 1920s and 1930s, more efforts were made to cut a sizeable Digue to avoid transshipment from rail at Calamar, and by 1935 an 11½-ft-deep channel existed, which in 1946–51 carried an average 58,000 tonnage. Once more the Digue deteriorated, and once more in 1952 it was rebuilt—and so served Cartagena until the Atlantic Railway was opened. Today some cargoes from Cartagena still pass along it to be shipped at Calamar." The Canal del Dique is visible on Google Earth along with towboats and barges using it. In the above quote, Hadfield uses the spelling of *Digue*, but, using the spelling of *Dique* gives better results on the

internet.

Continuing eastward and south along the coast of Brazil we pass the mouth of the Amazon, which is naturally navigable for many miles inland, and arrive at the Tocantins River at Barcaren. The Tocantins River provides 2,000 km of navigation from Barra do Garcas northward to the Atlantic Ocean. Along the way, a 6-kilometer canal with two locks, 210 m long and 33 m wide, bypasses the Tucurui Dam. These locks and the canal were opened by the President of Brazil on November 30, 2010.

Farther south, the Rio Paraiba is navigable for hundreds of miles for barges as it flows to the sea. At Boa Esperanca near Guadalupe, there is a hydroelectric dam with a large reservoir to the west. Hadfield says that in 1986, two locks, each 164 feet x 39 feet with a 74-foot rise, were being built. However, while the dam, powerhouse, and spillway show on the current (2008) Google Earth aerial, only a rough canal under construction appears. The same area on Bing maps shows the locks in more detail. They do not appear to be used. There is a pier in the reservoir at the upstream end of the possible waterway. Wikipedia gives the dam height as 174 feet, which is close to Hadfield's listing for the two locks.

Also flowing into the Atlantic on the coast of Brazil, the São Francisco is naturally navigable all through the year between Pirapora (Minas Gerais) and the twin cities of Petrolina (Pernambuco) and Juazeiro (Bahia), a length of 1,371 kilometers (852 mi). However, there are large variations in depth depending on the rainfall. Because of the diversity of physical characteristics over the course of the navigable stretch, it may be divided into three substretches, as follows:

- 1) From Pirapora to Pilão Arcado (Bahia), a length of 1,015 kilometers (631 mi); differences in height up to 6 meters (20 ft) may occur due to rains and drought.
- 2) From Pilão Arcado to the Sobradinho dam; the latter's reservoir is 314 kilometers (195 mi) long, with a surface area of 4,214 square kilometers (1,627 sq mi) and a comfortable depth.
- 3) From the Sobradinho dam to Petrolina/Juazeiro, with a length of 42 kilometers (26 mi) and an average depth of 2 meters (6 ft 7 in), sustained by a flow of 1,500 m<sup>3</sup>/sec (about 53,000 cu.ft./sec).

Until recent years, the São Francisco was regularly navigated by a type of passenger boat called gaiola (Portuguese for *cage*). These were paddle-wheel steamboats, some of them having been Mississippi riverboats and dating from the time of the American Civil War. After the Sobradinho dam was built in Bahia, the conditions of navigability were altered considerably, since the reservoir's large size allowed for the formation of short waves of considerable height. Although the dam has a navigation lock, the waves and currents made traversing the lake difficult for the gaiolas. At the same time, deforestation and excessive agricultural use of the upper-course waters of the São Francisco and its tributaries greatly reduced the water flow in the middle course, creating sand banks and islands that hindered navigation.

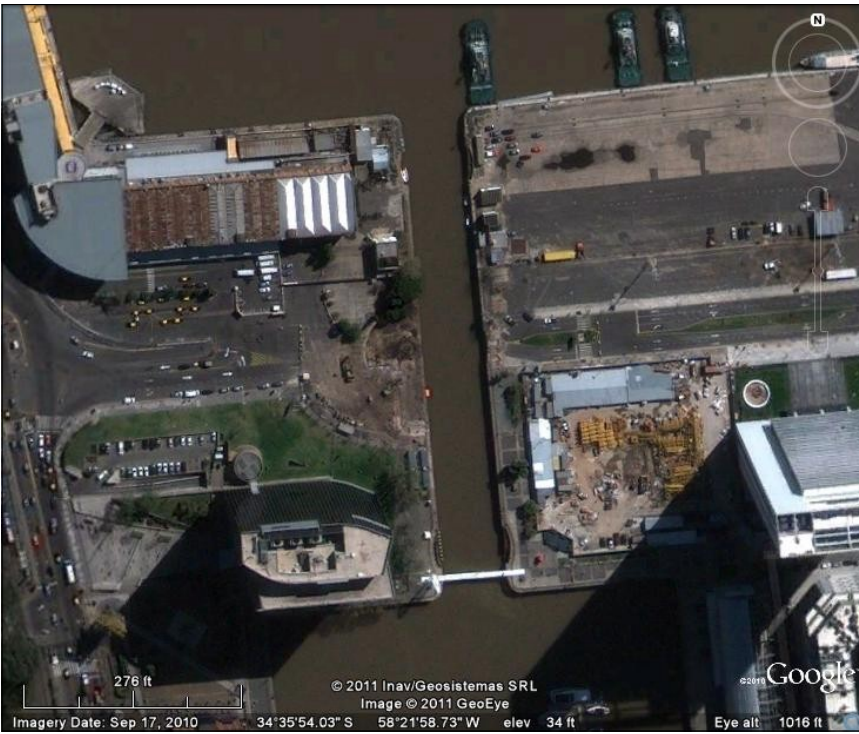
In a short time, conditions were such that navigation became impossible for the large gaiolas, although still possible for smaller boats. The shells of those old riverboats can still be seen on the river at Pirapora. As of 2009, a single boat, the *Benjamim Guimarães*, remains in activity, making short-distance tourist cruises from Pirapora to São Romão and back. The Sobradinho Lock is 394 ft. x 56 ft. x 110 ft. lift.

Moving south again, we reach the Rio de la Plata estuary near Buenos Aires. The estuary was the site of the scuttling of the German pocket battleship *Graf Spee* at the beginning of World War II. The estuary is fed by the Uruguay River and the Parana River. The Uruguay is navigable upstream for bigger seagoing ships to Conception del Uruguay. Smaller ships and barge tows can continue upriver to Salto, Uruguay (photo, p. 8). Just upriver of Salto is the Salto Grande hydroelectric dam, completed in 1979.



**Mystery structure at Salto Grande Dam, Uruguay**





**Buenos Aires Harbor, north lock**

Of note is the interesting structure in the west end of the dam that appears to be a lock, but with no channel to the south, downstream of the dam. Reportedly, rainfall has been insufficient to keep the reservoir full.

The Parana River flows into the estuary near Buenos Aires. The harbor at Buenos Aires has a large harbor lock at each end, which appear to be no longer used. Upstream of Buenos Aires, the Parana is naturally navigable through Argentina to the border of Paraguay. At that point, the Parana turns east while the Paraguay flows in from the north. The Paraguay is navigable northward all the way through Paraguay into Brazil and a tributary into Bolivia. The Paraguay is open to international commerce as a result of the Paraguayan War in the 1860s.

Moving upstream on the Parana, in the section where the Parana is flowing westward between Paraguay and Argentina, is Yacyreta Dam, which has a navigation lock 270 m x 27 m and a 72-foot lift. At the upstream end of the pool for the Yacyreta Dam is the site of the proposed Corpus Christi Dam. In the section between Paraguay and Brazil is Itaipu Dam with no lock, but according to Charles Hadfield a three-lock canal is proposed to bypass this dam. The pool upstream of the dam has barge traffic visible on Google Earth. Next upstream in Brazil is the proposed site of Ilha Grande Dam. Both of the unbuilt dams are controversial. Continuing upstream is Porto Primavera Dam and Jupia Dam each with a 689' x 56' lock of 66' lift. Ilha Grande to Jupia is 311 miles.

Just upstream of Jupia is the mouth of the Tiete River, which is navigable for 354 miles to Conchas, the head of navigation near Sao Paulo. Sao Paulo is only a short distance from the Atlantic coast with a mountain range between. Continuing upstream on the Parana, there is a dam at Ilha Solteria with no lock. But the river is navigable beyond to just below a dam at Sao Simao on the tributary Paranaiha River. Instead of a lock at Ilha Solteria, navigation proceeds up the Tiete through two locks and a short canal at the Tres Irmaos Dam. Above this, the Canal Pereira Barreto goes north to connect the pool above the Tres Irmaos Dam with the pool above the Ilha Solteria Dam with no locks.

On the Tiete River, navigation continues upstream through two locks and a short canal at Nova Avandava (see photo, p. 1) and four separate locks and dams at Promissao, Ibitinga, Barri, and BarraBonita. The Parana-Tiete navigation system is thus very extensive. More details of all of these South American systems are in the index pages of our web site, [www.americancanals.org](http://www.americancanals.org).



**Map of the Parana River and tributaries**

## Gunfight at the O’K Canal

(The way the West might have been won)

Wyatt Earp and Pancho Villa crouched, facing each other on the O’Kelly Canal towpath, ready to draw. It was a scene familiar to all Americans who romanticized the opening of the American west in movies and novels. They were full of Irish cowboys and Native Americans on dusty towpaths and in rowdy canalside saloons.

In another universe, the tyranny of the steam locomotive might have opened up the American west, but here, the Native Americans, rich from vast deposits of oil discovered in Oklahoma and Louisiana, established their own Native American States and invested in ever-advancing canal technology and the advantages of cheap bulk water transportation, hydropower, and hydroelectric power. From the Native American States, fleets of oil canalboats floated east to supply the energy needs of the United States of America, following half a dozen traditional routes. In the Northeast the boats bypassed the Alleghany Mountains, following the Great Lakes or the Erie Canal. In the Mideast the oil boats crossed the mountains on the Pennsylvania Portage Railway or through the C&O Canal’s tunnel or the James River & Kanawha Canal through Edward Lorraine’s Nine-mile Tunnel. In the southeast they went down the Mississippi or took the Hiwassee Canal along the Ocoee-Conasauga Portage developed by the Cherokees, and then the Cross-Florida Barge Canal.

Canal technology made it all possible. Excavation methods and locks had been greatly improved. Haulovers, developed in China, saved water and time. And now canal technology faced its greatest challenge—the Rocky Mountains, separating the Native American States from the United Mexican States on the Pacific Ocean. The technology was ready. De Lesseps & Co., always at the forefront of canal technology, had triumphed at Suez, at Panama, and at the Kra Peninsula. Now they were ready to tackle the Rockies, financed by the Native American States Authority (NASA) and manned by Irish canal technicians (formerly called Navvies), who had been following canal projects for centuries.

Now NASA was poised to create a canal tunnel through the Rockies. Everything was ready. A gigantic hydropowered high-energy laser beam was mounted at the end of the O’Kelly Canal, aimed west toward San Francisco, almost a thousand miles away. When it was turned on, it would take 6.77 seconds to dig the canal tunnel clear to the Pacific slope. NASA’s scientists insisted that it was safe, but global canal deniers in Mexico were still against it.

Earlier that day Special Agent Wyatt Earp of the Canal Intelligence Agency (CIA) stepped off the jet-propelled canal packet boat *Lance Metz* onto the dock at the end of the O’Kelly Canal. He had enjoyed a pleasant and luxurious voyage across the Native American States, and now he was eager to sit down in the Last Lock Saloon and order a double Irish whiskey.

Here he found his quarry, the global canal denier Pancho Villa. He had arrived by mule from San Francisco and was determined to destroy the laser. He had not particularly enjoyed his ride over the Rockies and now he was eager to stand up at the bar and order a double tequila.

But as is usual in Westerns, the two soon found themselves facing each other on the canal towpath, ready to draw. Back in the saloon the water organ played “I’ve been working on the towpath, all the livelong day.” Then a shot rang out.

Pancho fired at the laser. His bullet knocked it out of alignment and turned it on. That’s why, today, the west coast canal harbor is at San Luis Obispo instead of San Francisco. And because the earth is round, the beam left the earth and punched a hole in the moon’s eye, just missing a genetically modified free-range lunar chicken.



By Bill Trout, in memory of Harry Harrison’s Transatlantic Tunnel and other visions.



## Making History: Life aboard the Canal Schooner *Lois McClure*

By Art Cohn, Lake Champlain Maritime Museum

Since writing my first installment for *American Canals* recalling how a shipwreck discovery on the bottom of Lake Champlain led to a rediscovery of the Lake Champlain sailing-canal boat, I have been working every day to forward the next chapter of our program interpreting the Bicentennial of the War of 1812. Using an 1862-era replica canal boat to interpret an event which occurred fifty years earlier can get confusing and more than one visitor came on board last season and asked if the *Lois McClure* was an 1812 warship and where the cannon were. While planning last season's, "1812: Commemorate the War: Celebrate the Peace," I became aware of the interesting connection between the War of 1812 and the New York and Canadian canals that were built in the years that followed.

The best example of a War of 1812-inspired canal is the historic Rideau Canal that today connects the Canadian capital of Ottawa with Kingston on Lake Ontario. During the War of 1812, Kingston served as the British naval base on Lake Ontario. All the upper lakes were supplied via the St. Lawrence River route from Montreal, and it was the vulnerability of this route that gave rise to the plan to build a canal that could bypass the St. Lawrence. When the War of 1812 ended, the treaty signed on Christmas Eve, 1814, was believed by many to be just a pause in the conflict and that the US and British would soon find themselves at war again. The new Rideau Canal was to be designed by British Royal Engineers and would provide a secure alternative route for moving troops and supplies to the upper lakes. The canal was equipped with blockhouses and fortified lockkeepers' homes and was to be operated by the military. Lt. Colonel John By was the engineer selected to complete the canal in 1826, and this remarkable man overcame every obstacle endemic to a project as complex as this 124-mile artery cut through the dense north woods. One of By's great legacies was to enlarge the original lock design to permit navigation by steamboats, making it the first canal in the world to be directed to this emerging technology.



The Rideau Canal was completed in 1832 and operated for the next 20 years under military authority until it was judged that war with the US was no longer likely; at that time, the canal was turned over to civilian authorities. Utilized for commerce throughout the 19<sup>th</sup> century, the Rideau was able to adapt to changing time and by the late 19<sup>th</sup> century market itself for fishing and outdoor recreation. In the 1960s, the largely unchanged canal was turned over to Parcs Canada to be managed as a historic system, and in 2007 the Rideau Canal was designated a UNESCO World Heritage Site. Our 2012 tour provided the opportunity for the canal schooner *Lois McClure* to make her first passage through the canal from Ottawa to Kingston and the connection between the War of 1812 and the era of canals. So much of the original canal is still extant that to navigate the narrow twists and turns presented by the canal felt like stepping

through a portal into another era. This was made especially dramatic because of the historic low water during the summer of 2012.

While it was conceived in war and built in anticipation of continued war, the Rideau Canal is now a world and national treasure and provided the crew of the *Lois McClure* with one of our greatest travel adventures ever. With public stops at Ottawa, Merrickville, Smith Falls, and finally Kingston, the journey through the Rideau Canal proved to be the most compelling example of a canal conceived by the War of 1812.

Included in this postwar canal-building effort we learned that the Chambly Canal connecting Lake Champlain to the St. Lawrence system had just the opposite dynamics. Here, the 12-mile canal to bypass the rapids of the Richelieu had been strenuously resisted by the military because they saw the new canal, designed to enhance trade between Canada and the US, as instead providing an enhanced invasion route for the US when the inevitable next conflict broke out. The merchants won the debate and the Chambly Canal opened for business in 1843. New York's Erie and Champlain canals were also promoted, in part, for their military advantages. It was pointed out by New York canal promoters that in "the late war with England, [1812] pieces of ordinance were purchased at \$400 at the foundries...cost the government, in some instances, \$2000 when delivered on the frontiers." These arguments, when added to the other advantages, were effective and New York canals were approved in 1817.

By the time you read this article, we will know whether the "Sequester" and generally more difficult funding environment has been overcome to empower us to travel the *Lois McClure* through the Champlain and Erie canals from end to end and return home via Lake Ontario and the St. Lawrence and Richelieu Rivers. Please stand by.

## Final Report from Mars Station -- from Bill Trout

Sir –

I regret to inform you that we have been forced to suddenly abandon Mars Station after such a short time.

Only 200 earth years ago we established our base here and sent our agent Ogg down to Earth. He reported at once that he was on an island called Britain, where the dominant life forms were prolific two-legged beings with very short life spans, perhaps the result of an infectious disease.

Then his communication device failed, but he had the ingenuity to send us a message. Over the last 200 Earth years he had the natives build canals on the island, which spelled out “Danger! Abandon Mars!” in our language.

We sent him an acknowledgement, spelled out in canals on Mars.

We are now removing all evidence of our presence here. The canals have been erased. All that’s left are several pyramids and our observation post, disguised as a head with an eye in it.

By the time you read this we shall be gone, leaving Earth to her fate.

In Haste, Orx

## CANAL PARKS COMMITTEE – Summer 2013

This committee has been inactive for the past four years, but new activity is being initiated. When last active, the committee consisted of Terry Woods from Ohio and Kate Mulligan from Washington D.C.

The goal of this committee is to act as an information clearing house between the various National Canal Heritage Corridors and the public through the American Canal Society. Initial research indicates that there are seven National Canal Heritage Corridors or Areas in the country. These are

Illinois & Michigan National Heritage Corridor  
Blackstone River Valley National Heritage Corridor  
Augusta Canal National Heritage Corridor  
Ohio & Erie National Heritage Corridor  
Erie Canalway National Heritage Corridor  
Delaware and Lehigh National Heritage Corridor  
Schuylkill River National & State Heritage Area

If any additional canal heritage areas are known to ACS directors or members, please let the members of the committee know the name and contact information for the area.

E-mail queries were sent out in 2008 to representatives of each of the seven above-listed entities asking about the handling of historical publicity and preservation of the canal lands within their areas. This was to result in an information article concerning these areas for *American Canals*. Only two areas, the Augusta Canal National Heritage Corridor and the Blackstone River Valley National Heritage Corridor, replied. We plan to send out additional queries later this year in an attempt to provide information for a comprehensive article.

Future action of this committee may include working with members of the ACS Engineering Design, Operation and Maintenance Committee to supply Engineering Standards to National and State Canal Heritage Areas for possible structure preservation.

We would welcome additional members to this committee, as well as suggestions for current and future projects from the officers, directors and membership.

Terry K. Woods, Chairman; [woodscanalone@aol.com](mailto:woodscanalone@aol.com)

## CANAL COMMENTS: 1938 COUNTY CANAL PARK PROJECT, by T. K. Woods

One of my earlier memories is of fishing in the Ohio Canal with my grandfather at a roadside park along Erie Avenue (Cleveland-Massillon Road) between Massillon and Canal Fulton (Ohio) sometime during the early 1940s. There was an old canal lock there, a brick shelter house, a hand-operated pump that produced a cold, vile-tasting drink after a lot of effort, and the usual assortment of picnic tables, outdoor grills, swings, teeter-totters and a sliding board. It was a great area for a three- or four-year-old to spend a fun afternoon.



Another early memory is of a very beautiful, peaceful spot along the canal above Millport. There, an old brick stretch of abandoned road adjacent to the canal, just off the newer Erie Avenue, had been turned into a great area for picnics. It had been used for just such purposes during and since canal days and was known locally as Cutler's Grove.

A third memory of that area came a few years later, probably during the war. Dad and I headed up Erie Avenue, paralleling the canal, to go hunting. I don't remember exactly where we intended to go. The fact is, our car, a fairly nice '34 Ford, broke down someplace south of High Mill Road and we hunted in that area along the canal and river until we could call my Grandpa to come after work and pick us up in his '34 Ford. There were at least three '34 Fords in the family. Uncle Bob had parked his next to Grandpa's barn when he went into the Army Air Corps, so we had enough spare parts to keep the other two cars running all through the war. I was too young to carry a gun, and I don't remember Dad bagging any game, but we had a great time the rest of that day, tramping around the river and canal and making a fire to cook what we had brought for lunch when the time came.

It was common knowledge when I was growing up that the whole section of canal, more than ten miles long from the feeder above Canal Fulton to a new diversionary dam across the canal channel above Lake Avenue in Massillon, had been rejuvenated by the WPA and turned into a conservation and recreation area a few years before – some time in the late 1930s.

The war years turned into the prosperous fifties, and I became occupied with high school, cars, and girls, not necessarily in that order. During that period I lost contact with Stark County's wonderful canal park.

Then, after a stint at Ohio State, the Army in France, and a job with the E.W. Bliss Company in Salem Ohio, I came back to Stark County to live in 1968, bringing a wife and new baby along. I was shocked to find that the Canal Park I had loved was gone. Common knowledge was that it had never existed. In fact, a local politician from Navarre and a newspaper reporter from Canton had recently conceived the idea of turning the old abandoned canal lands in Stark County into a recreational area!

That started a forty-year off and on again research project on the "original" Stark County Canal Lands Park. Exhaustive searches at the excellent libraries of Massillon and Canal Fulton failed to turn up any WPA canal lands project, though there had been a goodly number of WPA projects in the region. I did find a few old timers who remembered the park. A gentleman who lived in a home on the west side of the canal just south of Towpath Court in Massillon told me of having to park on the east side of the watered canal and walk across a rickety bridge to his home. He didn't remember when that part of the canal was allowed to dry up and he was able to garage his car next to his home, for by the late 60s, the canal was pretty much dry from just below the High Mill bridge to the Diversion Dam. When I went to work for the Goodyear Tire & Rubber Company in Akron in 1971, one of my good friends was David Rousch, who had worked on a project refurbishing the canal lands at Cutler's Grove in 1939 as a 19-year-old fresh out of high school. He had helped install a new culvert that directed Mud Run under the old brick road leading to Cutler's Grove, into the Tuscarawas River.

Queries to the Ohio Department of Natural Resources failed to locate any conservation leases for the Stark County section of canal lands prior to 1953. But little tidbits of information concerning the Stark County Canal Park did crop up from time to time. The preface to a 1942 book, *Old Canal Days*, by Burton B. Porter, contained as a preface two columns by Grace Goulder from the *Cleveland Plain Dealer*. One of the columns mentioned the "restoration" of the canal in the area.

Early in 1990, I interviewed Paul Marks at his home in Plain Township. Paul had been foreman of the crew that maintained Stark County Canal Lands after they had been obtained from the state in the mid 1960s. He remembered a bit about the early canal restoration. He remembered that the brick shelter house at Lock Park had been designed and the construction supervised by 'Baldy' Houck of the Stark County Engineers from paving bricks salvaged from the near-by road when it was resurfaced and relocated. A small brick-supported shelter roof had been built over the new well and pump near the lock at that time.

Then, early in 2001, the then Historian of the Cuyahoga Valley National Park sent me a copy of an article from the *Ohio Conservation Bulletin* for September, 1938. The reference to a federal agency providing money for labor made me think then of the CCC, but I could find no record of any such CCC canal project.

While working with the canal history collection of the Massillon Museum, I uncovered several local

newspaper columns of the late 1930s that referred to the canal project then being undertaken, but there were no details.

A trustee of the Canal Fulton Heritage Society, learning of my involvement with the Massillon Museum records, and owing to the fact that I had been working as a docent at the society's Canal Museum for the past number of years, asked me if I would take a look at their collection of material that was unorganized and scattered over several locations. When a work session at Canal Fulton was going slow, I went upstairs at the museum (one of the collection's locations) and picked a cardboard box at random. Within fifteen minutes I found a copy of an article from a September 23, 1939 issue of the *Cleveland Plain Dealer* that gave me many answers to the origin and construction of that wonderful canal park of my youth! Subsequent research through back copies of the *Massillon Independent* turned up a great deal of additional information on Stark County's Ohio Canal Park.

The idea for this canal park originated even before the Ohio Canal was officially abandoned in 1929, but funding was impossible to obtain. Then the project became a pet of Ray D. Schario, president of the Stark County Farmers and Sportsmen's Protective Association of Massillon and members of the association. They finally obtained a \$25,000 grant from the Ohio State Conservation Department. Additionally, the development of the park was included in the list of projects for the Ohio WPA, who provided funds for manpower and oversaw the project from Akron. The entire canal project cost approximately \$300,000 and provided 500 local men with work for nearly a year. The project was begun October 6, 1938 and was completed in late August or early September the following year.

The banks and channel of the canal were repaired, where required, to achieve a depth of from 4 to 9 feet. A narrow strip of land on either side of the canal was cleared of all trees and brush and then leveled off for picnic and fishing access sites.

Road bridges over the canal were repaired or rebuilt and two antique Davenport Bow-String Truss Bridges were taken out of storage and installed over the canal, one at Cutler's Grove and one at Canal Fulton, so towpath hikers and village residents would have access to these two prime picnic spots.

The old lock was cleaned out and repaired and new gates built and installed. William McLaughlin, then 80, of the family from Canal Fulton who had maintained the local canal dry-dock for many years, supervised the refurbishment and authentic restoration of the lock, lock gates, and water control devices. An additional wasteway was installed midway between High Mill Road and the lock.

The entire ten-plus-mile-long stretch of canal was filled with water to provide for canoeing and swimming in the summer months and ice skating in the winter. The watered canal was also stocked with legal-size fish so fishing fun could be immediate.

Ray Schario was named superintendent of this new state canal park. His official duties began July 1, 1939. Funds to maintain the park were to come from the sale of state hunting and fishing licenses.

So what became of this prime state canal park? Why and how did it disappear? And why so quickly? And why so thoroughly that hardly a memory of it remains? Why was the record of this park being a WPA project so difficult to locate? Why is there no record of a formal conservation lease for this stretch of canal at the time the park was built? Obviously, additional research efforts are required.

Apparently the efforts to establish a state canal park here never "took." The lock park became a state "Roadside Park" until Stark County Commissioners took over all county canal lands in 1967. Maybe it was the war years that intervened. Millions of men were in the armed forces, and many women were working in defense plants. Perhaps there was just little interest or time for recreation during those years.

A canal park proposal in the late 1960s died with a change of administration in Columbus, but the interest in the history of the canal era and recreation that the effort sparked took hold in the western portion of the county. The legacy of Stark County's early canal park, a partially watered canal and a refurbished lock and water control system, resulted in the first canal boat replica in Ohio being built in Canal Fulton. Begun in 1967, it was launched in 1970. It was designed from a model of a Newark freighter, the *St. Helena*, built by William McLaughlin a few years before the canal park project. The replica was christened, appropriately enough, the *St. Helena II*. Its successor, the *St. Helena III*, a concrete-hulled craft, was christened in 1992 and is still going strong, operated by the Canal Fulton Heritage Society and the City of Canal Fulton ([www.discovercanalfulton.com](http://www.discovercanalfulton.com)).

The local politician mentioned above went on to Washington and was instrumental in designating the Ohio

Canal from Cleveland to New Philadelphia as a National Heritage Corridor in 1996.

Now there is a new canal park in Stark County. The canal is basically dry beyond lock 4. Cutler's Grove, that pristine picnic spot, is presently an asphalt parking lot trailhead for the bike path that follows much of the canal's towpath through the county.

The antique bridge is still used at Canal Fulton, though the one at Cutler's Grove was trashed 'accidentally' when the parking lot was constructed. The swings and teeter-totters, and even the old pump, are gone now from Lock Park. All-in-all, this canal park doesn't give me the thrill the old one did. There isn't as much wonder. It isn't as much fun. Or maybe I'm just not four years old anymore.

1 "This restoration was completed within the last several years at a total cost of more than \$200,000; a fishing and creditable memorial to the great Ohio Canal System, to which the Ohio Conservancy Commission, The County of Stark, and the Federal Government made substantial contributions. The historic waterway attracts many thousands of visitors during the summer months. The old canal has been stocked with fish and the Park at the Old Lock Mill one mile south of Canal Fulton is a popular picnic resort."

2 "The appropriation of \$25,000 for the conversion of ten miles of dormant Ohio canal property just outside of Massillon into fishing waters and recreational areas gives a note of promise of wide use of similar state-owned areas by the Ohio Conservation Division.

"The Massillon project will provide 20 miles of shore-line, and 25 foot parked banks along both sides for public enjoyment. Unpolluted water will be impounded in fish stocked pools by installation of small dams. Federal agencies will add \$55,000 in labor to complete the improvement."

3. "The State banned boating on the canal just prior to its official opening in 1939."

### **Union Canal Tunnel barge rides suspended -- PA Fish and Boat Commission says barges and pilots must be certified.** JOHN LATIMER, Staff Writer, Lebanon (PA) Daily News. July 2, 2013 (johnlatimer@ldnews.com)

The Pennsylvania Fish and Boat Commission is putting the barges at the Union Canal Tunnel Park in dry dock until they and the captains who pilot them are certified.

Barge rides were conducted as planned on July 4 from 4:30 to 9 p.m. at the historic North Lebanon Township park, but were discontinued afterwards until the eight volunteer captains complete physicals, drug testing, and several nautical skill exams, said Barbara Gaffney, president of the Lebanon County Historical Society, the parent organization under which the Friends of the Union Canal Tunnel Park operates. In addition to certifying the barge captains, the barges themselves will have to be certified for safety and occupancy limits.

The directive from the Fish and Boat Commission was made last week after agency officials paid a visit to the historical society to discuss the situation, said Gaffney. Barge rides into the Union Canal Tunnel - the nation's oldest transportation tunnel - have been offered for many years and are a primary fundraising source for the non-profit organization, which operates them at special events and on Sundays from June through October. Some representatives of the park group, like volunteer Paul Quinn, thought they were in compliance with state regulations after making changes, including adding life jackets to the boats, when they received a citation for noncompliance in 2006.

"We were not aware that we were in violation at the time (in 2006)," said Quinn. "So we immediately went to the Fish and Boat Commission and got everything we were told we needed to have so we could operate without any problem." That apparently was not the case.

The historical society was notified in writing this spring after a review of records indicated the barge operation was not in compliance and since then has been working to resolve the situation with Col. Corey Britcher, head of the Fish and Boat Commission's law enforcement division. "They are not in full compliance and we are working with them to get them there," Britcher said. "We have no intention to shut them down as



Friends of the Union Canal Tunnel Park volunteers Bruce Kreider, left, and Dave Ravegum, help position a barge as a crane lowers it onto a pair of wooden horses Tuesday to allow marine surveyor Robert Stefanowicz to inspect it on Tuesday. (LEBANON DAILY NEWS JOHN LATIMER)

long as they are willing to take the steps to get in compliance.”

Phil Feather, president of the Friends of the Union Canal Tunnel Park, said he and others were also surprised by the notification because they thought there was an unwritten agreement with the Fish and Boat Commission allowing the Union Canal Tunnel Park to operate the rides without full compliance, similar to the arrangement enjoyed by the operators of Penn’s Cave near State College in Centre County.

Britcher said he has found no evidence of a verbal agreement and noted that the allowance for Penn’s Cave and other cavern-ride operators is in the state’s codified law regulating pay-for-hire boat rides, and does not apply to the Union Canal Tunnel Park. “The law and regulations require certain things of operators of a pay-for-hire (ride),” he said. “It’s just like if you operate a taxi cab. There are certain things you have to do.”

Feather, a retired Annville attorney, failed to see the distinction between operating in a tunnel or cavern. If anyone should get an allowance it should be a nonprofit, he added. “If we run our boat into a cavern and out - we are exempt,” he said. “But if we run it into a tunnel and out, we are not.”

Having to comply with the regulations will have a significant economic impact on the Friends of the Union Canal Tunnel Park, Feather said. He estimated the cost for licensing a barge captain at between \$200 and \$250, and certifying the two barges at between \$475 to \$700 each.

Gaffney said she understood the Fish & Boat Commission’s directive was motivated by safety. Although the barges only operate in about four feet of water, they have never been graded for maximum occupancy, which could leave the historical society vulnerable should a mishap occur, she said. “The main concern of the Fish and Boat Commission is the safety of the boats - the balance and how many should be allowed on them,” she said. “Our main concern is safety, but also the big liability we might come under if we do not follow the regulations.” Gaffney said she hopes the barges can be floating again by August.

## CANALENDER

**August 18 & September 15** - 1:30. Free Heritage Walk, Hugh Moore Park. The Lehigh Navigation, led by Charles Derr, Park Ranger Retired. Meet at Emrick Technology Center. Questions? Call the National Canal Museum at 610-991-0503. Free.

**August 23-25** - C&O Canal Association paddle trip in Paw Paw Bends area. Reservations required. Contact Barbara Sheridan at 301-752-5436 or [canoemaster@candocanal.org](mailto:canoemaster@candocanal.org).

**August 24** - Wharton (NJ) Canal Day, 10-5. Hugh Force Park. Morris Canal boat rides; music; food; vendors. [www.canalday.org](http://www.canalday.org).

**August 24-25** - Williamsport C&O Canal Days. Events will be taking place in various areas of the town. Contact: Tom Perry, 301-223-7010.

**September 16--19** - World Canals Conference in Toulouse, France on the Canal du Midi, a World Heritage site, with accompanying excursions. See [www.wcc13.com/en/](http://www.wcc13.com/en/) for details.

**September 20-22** - The Canal Societies of Indiana and Ohio will sponsor a trip to Delphi, Indiana. HQ:

Comfort Inn; 765-447-3434. See the canal park, a battleground and a wolf park.

**October 16 - 2nd I&M Canal Alliance Congress.** 8:30-4 p.m. at Four Rivers Environmental Education Center in Channahon. The congress provides opportunities to learn how your organization can partner with the Canal Alliance. Build your network of partners and discover new opportunities and programs. If you or your organization has a project or program you would like to share at the Canal Alliance Congress please contact Heather Wickens at [hwickens@canalcor.org](mailto:hwickens@canalcor.org).

**October 18-20** - CSNYS Fall 2013 Tour: 3 Erie Canals the Lower Mohawk Valley: Montgomery, Schenectady and Saratoga Counties -The Noses to Clute’s Dry Dock. [www.newyorkcanals.org](http://www.newyorkcanals.org). HQ: Schenectady.

**October 18-20** - Pennsylvania Canal Society tour of the Union Canal from Middletown to Reading. Questions? Contact Bill at

[indnbll@yahoo.com](mailto:indnbll@yahoo.com) ; [www.pacanalociety.org](http://www.pacanalociety.org).

**December 14-15** - Old-Fashioned Christmas. Wabash & Erie Canal, Delphi, Indiana.

**March 1, 2014** - Canal Society of NY State Winter Symposium, Rochester, NY

**May 2-4, 2014** - Canal Society of NY State spring tour, C & O Canal, Hagerstown, MD.

**May 31-June 4, 2014** - Canal Society of Indiana Erie Canal cruise, June 2-4, with extra tours of Buffalo before the cruise. Contact: [indcanal@aol.com](mailto:indcanal@aol.com).

**September 1-3, 2014** - 2014 World Canals Conference, Navigli Lombardi, Milan, Italy

**September 21-23, 2014** - NY Canal Conference, Geneva, NY

**March 7, 2015** - Winter Canal Symposium, Rochester, NY

**Spring 2015:** - Canal Society of NY State fall tour: Genesee Valley Southern (no dates yet)



## Easton (PA) National Canal Museum Merges with Delaware & Lehigh National Heritage Corridor

The National Canal Museum and the Delaware & Lehigh National Heritage Corridor have merged, combining the assets of the federally mandated heritage corridor with the story-telling prowess of the museum.

“It’s a big deal,” said Tom Stoneback, executive director of the National Canal Museum. He said the merger adds the reach and scale of the heritage corridor—which manages a 165-mile trail—with the focused Industrial Revolution collection of the National Canal Museum.

Stoneback said the merger comes after 18 months of soul searching and deep talks at the museum after it moved from Two Rivers Landing in downtown Easton to the Emrick Technology Center in Hugh Moore Park, severing a long relationship with Crayola that helped keep the museum afloat financially. Stoneback will continue to run the museum.

Stoneback believes the merger blends the best of both organizations. The heritage corridor preserves the trails and canals along the route from the coal mines at the source of the Lehigh to the port of Philadelphia—mine to market—while the museum showcases the industrial heritage of the Lehigh Valley that gave rise to Bethlehem Steel.

“It’s simple and small,” Stoneback said of the merger. “But simple is often powerful.” Elissa Garofalo, president of the heritage corridor, said in a news release that the merger aligns the missions of both organizations to better tell the story of the region’s industrial history. The corridor has built 135 miles of the 165-mile trail that reaches from Wilkes-Barre in Luzerne County to Bristol in Bucks County.

The combination was first tried at the museum’s annual Immersion Days when the heritage corridor’s “Tales of the Towpath” curriculum was presented to hundreds of schoolchildren. The museum’s move from Two Rivers Landing to Hugh Moore Park dropped the museum directly into the heritage corridor’s turf, further solidifying the two.

The next two years will also bring a major restoration project to the park, funded by \$475,000 from the Pennsylvania Department of Conservation and Natural Resources and the Hugh Moore Trust. The Department of Conservation and Natural Resources awarded the park \$175,000, with the balance of the money coming from the trust, set up by Dixie Cup founder Hugh Moore to maintain his eponymous park. The park is owned and run by Easton.

Mayor Sal Panto Jr. announced last year that the city would begin efforts to better maintain the park, clear brush and clean trails and picnic areas. The city absorbed park workers and invested capital to repair the old Glendon Bridge and begin restoration efforts. The park is the former site of the Glendon Iron Works, one of the first industrial parks in America, and one of the first steel manufacturing plants in the Lehigh Valley.

“Our story is coal and coke, and steel and cement, and textiles,” Stoneback said, noting that the canal’s history is much deeper and important than a ribbon of water for transporting coal to Philadelphia. The museum’s collection will remain intact and warm-weather visitors can still expect to see mules Hank and George tugging the *Josiah White II* down the canal.

[www.canals.org](http://www.canals.org)



## Lehigh Canal (PA) volunteers tackling big project

by Bill White, *Morning Call*, Lehigh Valley

Gary Ritter is a pretty typical trail tender. For the last several years, the Verizon retiree has been joining a small group of volunteers in maintaining and enhancing the Lehigh Canal. Their work has included clearing invasive brush, preparing wildflower gardens, removing debris from Hurricane Sandy, maintaining the canal walks, preparing a shelter along the river, and all kinds of other construction and cleanup projects.

He says it's a good way to keep busy while doing something worthwhile. They're out working most Thursday and Saturday mornings. Last Thursday, he was helping a group of volunteers from Air Products—and me—as we overturned sod and hauled topsoil into two raised garden plots as part of preparations for the Freemansburg (PA) Canal Education Center, at Lock 44 just off Main Street, Freemansburg. Nearby, other trail tenders were beginning work on what will become 280 feet of split rail fence.

When I wrote a while back about a nature lover's concerns regarding cleanup and maintenance along the canal, I noted that volunteers known as trail tenders, organized in five geographical chapters, do a lot of that work. I also mentioned in that column in April that Dennis Scholl, Delaware & Lehigh National Heritage Corridor outreach coordinator, said they could use an assist from a landscape service and its equipment for some bigger projects. In response, Dave Lesak of Kasel Rocks Landscape Co. contacted me to offer his company's services. He was in Freemansburg last Saturday with his Bobcat, preparing an outdoor classroom site and excavating a trail along the river, and he plans to return. "It would have taken us weeks to get done what he did in three hours," Scholl said.

Meanwhile, Scholl invited me to see the trail tenders' efforts firsthand by joining them and Air Products volunteers at the Freemansburg site for a morning of work. This is one of the Delaware & Lehigh organization's most ambitious projects, undertaken in a partnership between the National Heritage Corridor—now merging with the National Canal Museum to better tell the story of the region's industrial history—Freemansburg Borough, and the Bethlehem Area School District. Scholl explained that workers have put in 1,500 hours here since last August, mostly removing vegetation. We had a nice view of the Lehigh River from where we were working Thursday, but Ritter told me that when they started, the area was so overgrown you couldn't see the water.

There's still a lot to be done before this field trip destination is ready for its September opening as a Bethlehem Area School District pilot program. The education center will be set up as a series of stations and classrooms where students will learn lessons prepared in conjunction with the school district's teachers. Whereas the focus of the Canal Museum's Hugh Moore Park headquarters is the science and technology of canal life, the focus of this satellite project will be the social and cultural aspects, based on a locktender's family. For example, this site features one of only two remaining locktenders' houses along the canal, built in 1828. It's a fixer-upper, to put it mildly, but it eventually will be restored to its original appearance. There's also an old grist mill where the kids will do some simple archaeology and a mule barn that will become a classroom and exhibit space. The gardens we were working on will be used to grow heirloom vegetables, herbs, and dye plants for student lessons. At one food station, they'll make apple butter, sauerkraut, and chow-chow.

This sense of life along the canal will be a living classroom extension of Scholl's terrific educational children's book, *Tales of the Towpath*, about the lives of an Irish boy named Finn Gorman and his family as Lehigh Canal boat operators. The kids this fall will read the book after their initial visit to this site.

Getting ready for classes in September won't be easy, so more volunteers, regular or once-and-done, will be much appreciated. For that matter, they're needed all along the canal. For more information, email Dennis Scholl at [dennis@delawareandlehigh.org](mailto:dennis@delawareandlehigh.org) or call 610-923-3548, ext. 225.

After we took a midmorning break, some of the Air Products volunteers joined the split rail crew, and I joined another group working on assembling and moving picnic tables. Led by trail tender and AT&T retiree Joe Felker, we assembled two heavy wooden tables, loaded them on pickups, and rode a short distance to a picnic area that the trail tenders cleared last spring. It's a beautiful spot along the Lehigh River, overlooking what Felker said is a great fishing hole and the island where Scholl's Finn Gorman met a Lenape girl. Once the tables were unloaded, we dug holes and poured concrete to anchor them in place. As we prepared to return, Scholl told me, "This is what the trail tenders do. We try to make the canal a more hospitable venue." Dennis Ritter had a different final message. "Tell them we need help," he said. *bill.white@mcall.com 610-820-6105*



# Big Plans

The abandoned Clinton-Kalamazoo Canal project could have changed the face of Michigan // By Steve Wilke  
// Illustration by Leslie Herman

**P**icture Mount Clemens as a thriving port city as large as Syracuse, N.Y. Or imagine a bustling metropolis where Yates Cider Mill now graces a bucolic setting near Rochester Hills.

It could have been, if the economy, cost overruns, mismanagement, and — what else? — politics had not brought the ambitious plans of Michigan's first governor to a grinding halt.

When Michigan was granted statehood in 1837, "boy governor" Stevens T. Mason (then 26) had a vision: develop a system of canals and railroads to boost the economy. The railroads eventually got built. The canals? Not so much.

Today, you can see remains of what could have been in stretches along Canal Road in Clinton Township, River Bends Park in Shelby Township, and near Yates Cider Mill in Rochester Hills.

The Clinton-Kalamazoo Canal routing was proposed to run from the mouth of the Clinton River near modern-day Mount Clemens, then west through Howell, Hastings, and beyond, connecting to the Kalamazoo River — 216 miles in all.

Why a canal? To avoid the cost and inherent dan-

ger of Great Lakes shipping — and to bypass the long route through the Straits of Mackinac. Think of it as a shortcut across the palm of the Mitten.

## IF NEW YORK CAN DO IT ...

What made Michigan politicians salivate at the thought of a canal? The success of the Erie Canal.

In the late 1700s, cities such as Rome, Syracuse, and Rochester sprang up along a wagon route West. But travel on this "highway" was costly and difficult.

In the early 1800s, New York Gov. DeWitt Clinton had a dream, dubbed "Clinton's Big Ditch," a canal to connect the Atlantic Ocean to the Great Lakes.

Some ditch! When completed in 1825, the 360-mile-plus Erie Canal altered the entire country's economic, political, and social development.

As settlers headed West, timber and farm output poured into the more populated East, all on barges or packet boats pulled by horse or mule.

It was a gold mine. Shipping prices from Buffalo to New York City went from \$100 a ton by road to \$10 or less by canal. In nine years, the tolls recouped construction costs — to the tune of nearly \$8 million. And within 15 years, New York City leapfrogged Boston, Baltimore, Philadelphia, and New Orleans to become the country's busiest seaport.

No wonder a fledgling state like Michigan would want to mimic such success.

## MICHIGAN'S GRAND PLAN

The Clinton-Kalamazoo Canal was part of an ambitious Michigan internal-improvements program announced in 1837. There was a little something for every settled part of the state, as Gov. Mason sought to develop wilderness areas and (sound familiar?) create jobs.

Mason proposed that the state subscribe to private companies that would build railroads and canals, and borrow money to pay for it. But the legislature, in an extraordinarily optimistic report, pushed the state to proceed on its own:

*The question for Michigan to decide is whether she will ... avail herself of these vast viaducts of wealth and prosperity ... or whether her timidity or apathy will allow them to pass her by to swell the power and abundance of her wiser neighbors.*

Boosters claimed the improvements would pay for themselves — and yield a \$3 million profit, to boot — within 20 years.

The bill authorized work on three railroads and two canals. One rail would run from Monroe to New Buffalo. Another would connect Detroit and St. Joseph. A third would link St. Clair to Grand Rapids.

Aside from the Clinton-Kalamazoo Canal, another "ditch" would connect the Saginaw and Grand rivers in the middle of the state. A survey was authorized for a third canal in the St. Mary's River at Sault Ste. Marie (one that eventually got built).

The populace initially favored the canal option over rail, according to historian Donald Green, president of the Clinton and Kalamazoo Canal Society.

"Railroads made noise, scared horses, and started fires," Green explains. Plus, they weren't economically sound. Steel for rails had to be imported from England. In fact, one line from Utica to Detroit traveled on wooden rails, with strips of iron nailed on top of the wood to save costs.

## LAND GRABS AND ECONOMIC UNCERTAINTY

The announcement of the improvements sent speculators scrambling. After all, those with property on or near staging points for the canal boats or rail lines stood to cash in.







One source cites the founding of the town of Vermontville in western Eaton County in 1836, based on the route of the proposed canal.

Gov. Mason was authorized to negotiate a loan of \$5 million. Then the national economy went bust during The Panic of 1837, caused in part by President Andrew Jackson's "Specie Circular," which only al-

#### MONEY WOES

As men labored with picks, shovels, and wheelbarrows digging the canal westward, Gov. Mason was experiencing problems with the financial end of things back East.

The Morris Canal and Banking Co. was recruited to sell the bonds on commission, with some degree

The project was pretty much dead in the water. Excavation reached what is now Bloomer State Park in 1843 when the money ran out. The canal stretched only 16 of the planned 216 miles.

The state sold water rights to private mill operators. With the popularity of the railroads, no further work was done on the canal. Title passed to the Utica Milling Co., who used it as a millrace. They used the water power for grinding farm produce.

## A canal would avoid the cost and inherent danger of Great Lakes shipping. Think of it as a shortcut across the palm of the Mitten.

lowed for gold and silver to be acceptable payment for public land. By mid-1837, the eastern part of the country suffered vast unemployment. The West was not as severely affected, so Michigan's grand plan moved forward.

#### THE BIG DIG BEGINS

According to the *Detroit Free Press* of July 19, 1838, a host of festivities marked the project's beginning — a 13-gun salute, music, speeches, and the governor turning the first shovelful of earth.

Work soon began at Frederick (a now-forgotten town near Mount Clemens), which was previously known as Casino. It was near where an almost unpronounceable settlement called New Gnadenhutzen was started by Moravian Missionaries around the 1780s. Macomb County boasts a litany of such "forgotten towns," such as Warsaw, Marcellus, Frankfort, Clifton, and Belvidere (there's a Belvidere Bay north of Mount Clemens).

of success. But as the national economic crisis started to affect Michigan, a wave of malaria swept the state, too. Mason was blamed for everything. He decided not to run for re-election. Two historic Detroit names squared off — Democratic candidate Elon Farnsworth versus William Woodbridge, the Whigs' choice.

Woodbridge won, and early in 1840, the Whig-led legislature passed an act to forbid commissioners of internal improvements from entering into construction contracts.

By April 1840, the Morris Canal and Banking Co. defaulted on payments to the state. Work continued when the federal government paid contractors and workers in "land scrip" rather than money.

Shantytowns had sprung up around the digging, and there were reports of drinking and rowdiness. Contractors and workers went unpaid, leading many to steal supplies — some began destroying portions of the canal.

#### REMAINS OF A DREAM

You can still see segments Gov. Mason's dashed dreams by driving Canal Road — along what appear to be ditches on steroids.

There are walking trails in River Bends Park. The canal crosses 22 Mile west of Shelby, and Ryan north of 22 Mile. A state marker notes a portion of the canal at Bloomer State Park at the end of John R. Remains of an aqueduct are still visible at Yates Cider Mill.

"It's sort of a sad thing the way it (the canal) never was finished," Green says. But the former owner of the ML Green & Sons chain of jewelry stores has been working to promote and preserve its history.

"People call me the frustrated professor," he says. His interest led to, among other things, finding an old canal lock grown over by shrubbery, serving on the Macomb County Historical Commission, and writing a book about the history of Clinton Township due out next year.

In Clinton Township, the Don Green Way connects Canal Park to Budd Park in Clinton Township. And there, too, you can walk the paths of what might have been. ■