

AMERICAN CANALS

BULLETIN OF
THE AMERICAN CANAL SOCIETY

BULLETIN NUMBER 47 Editorial Address — Box 310 Shepherdstown, W. Va. 25443 NOVEMBER 1983

PRESIDENT'S MESSAGE

I had the delightful experience of talking recently to a large group of enthusiastic river buffs who call themselves the Schuylkill Greenway Association. They had heard of our British Waterways movie "Waterways - Our Heritage" and wanted to borrow it. I offered to bring it to Reading (their headquarters) personally, as I was anxious to meet them and find out what their objectives were. For good measure I took along a magazine of slides that the Hahns and Shanks had made while traveling the English canals in 1975. To my surprise I found that many of them had also journeyed along the British canals in various "hire-boats".

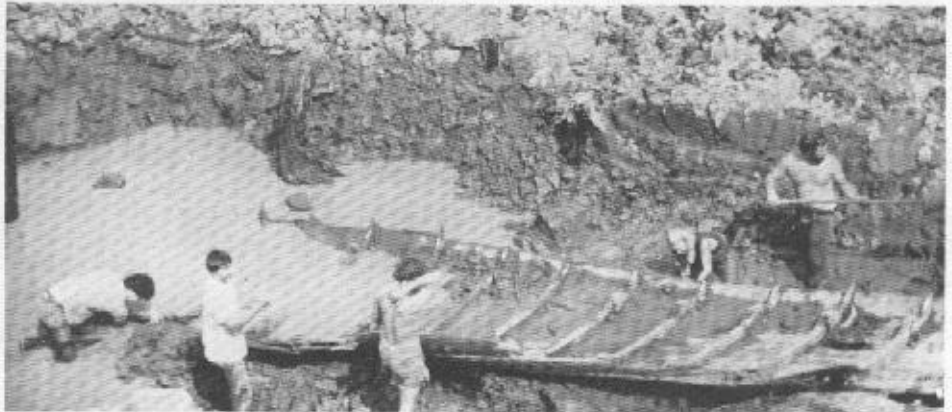
Apparently one of their interests is preserving and restoring as many sections as possible of the old Schuylkill Navigation System of the 1800's. They are presently involved in a restoration project on the Schuylkill Aqueduct crossing Allegheny Creek (shown elsewhere in this issue). They are looking for funding, and with their in-built enthusiasm I have no doubt they will get it! One of their divisional groups has already been successful in persuading Montgomery County (Pa.) to acquire and develop a canal park area several miles long, now known as the "Mont Clare Port Providence Reach". (See article elsewhere in this issue). We could use more organizations like the Schuylkill Greenway Association in the United States!

From Charles Hadfield in England comes the following comment on high-lift locks: "I hope someone has murmured to Sid Beyland (American Canals, August 1982, Page 1, Column 1) that the highest lift in North America is surely John Day lock on the Columbia River at 113 ft. maximum".

Our shifting dues structure for LIFE MEMBERSHIP in the American Canal Society brought an influx of new "Lifers" in ACS before our October 1st deadline. We now have a total of **forty-one** LIFE MEMBERS; names of recent members are listed elsewhere in this issue. The new rate — \$150 one-time payment — still remains a bargain for our younger members as we expect to be in business for a long time! We thank all of you who have shifted your membership to the LIFE category — as this has helped us greatly in our over-all financing. Here's wishing all of you a Happy Holiday Season and a very good New Year in 1984!

Bill Shank

RICHMOND CANAL BOATS RESCUED



Excavation work in the mud to free one of the canal boat hulls before lifting it out by cable. (Russ Harding photo).

RICHMOND (AP) Sept. 10, 1983 — Most of the lunchtime crowd that had ringed the construction pit was gone, but those remaining through mid-afternoon cheered and clapped when the 19th-century boat lurched free of the muck and was hoisted into the air.

The packet boat — a passenger craft — was one of three fragile, historic canal boats lifted from the bottom of the pit in downtown Richmond in a last-minute salvage operation Thursday.

Construction companies, some 200 volunteers and even the Army contributed equipment and manpower over the past few weeks as archaeologists labored to save the boats before excavation resumes Monday.

The hoisted boats and 10 others uncovered this summer traveled from the

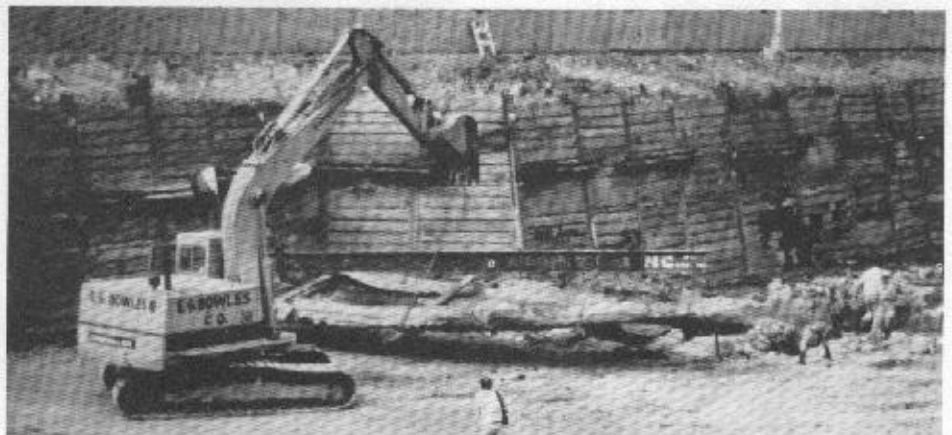
late 18th through the late 19th centuries on what's believed to be the first canal system in the nation. Their discovery represents a significant addition to historians' knowledge of the James River canal system, which began operation in the late 1780s, and the boats that ran through it.

"We've probably more than doubled the known number of canal boat remains — old canal boats," said Dr. William Anders, treasurer of the Archaeological Society of Virginia.

"We didn't have anything like this" before the boats were uncovered during the foundation digging in early July, said Dr. William Trout III, president of the Virginia Canals and Navigation Society.

Trout said much of the knowledge

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A huge back-hoe lifts one of the hulls clear of its watery bed preparatory to loading it on a truck. (Russ Harding photo.)

American Canals

BULLETIN OF THE AMERICAN CANAL SOCIETY

"DEDICATED TO HISTORIC CANAL RESEARCH, PRESERVATION AND PARKS"

AMERICAN CANALS is issued quarterly by the American Canal Society, Incorporated. Objectives of the Society are to encourage the preservation, restoration, interpretation and use of the historic navigational canals of the Americas; to save threatened canals; and to provide an exchange of canal information.

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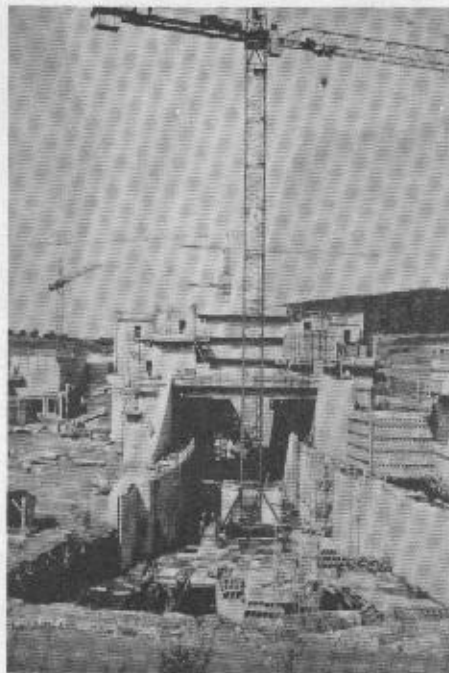
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"SWING BRIDGE" DEDICATED

On October 16, 1983, the Susquehanna Museum of Havre de Grace (Maryland) held a formal dedication ceremony of the reconstructed Pivot Bridge at the outlet lock of the Susquehanna and Tidewater Canal. Plans are now underway for the re-watering of the canal basin north of the lock, and further reconditioning of the lock itself. The old lock-keeper's house was rebuilt several years ago to house the canal memorabilia of the Museum.

RHEIN—MAIN—DONAU CANAL



Construction view of the Dietfurt Lock, September 1983, as taken by the Bonsons.

The following letter was received from Tony and Kate Bonson of Congleton, Cheshire, England:

We were most interested in the article in Bulletin 46 concerning the Rhein-Main-Donau Canal. As we spent our summer holiday exploring both the Ludwig Kanal and the new RMD Kanal, we can bring you up to date with progress on this project.

Construction is taking place from both ends of the canal. The 'track' of the canal south of Nurnberg is complete to just beyond Hilpoltstein but much further work is still required at Eckersmuhlen and Hilpoltstein locks. However, all the bridges have been constructed as far as Berching. From Kelheim work on the 'track' is approaching Reidensburg and both Kelheim and Reidensburg locks are complete but work is continuing on Dietfurt lock (see photograph).

The remaining work consists of the stretch of canal from Hilpoltstein to Reidensburg including finishing three locks, plus the construction of Berching and Bachhausen locks and the summit cutting. The current German Government's commitment to the project now means that work could be complete by about 1990/1992.

We would also like to correct a point in the article. The RMD Kanal is not a free waterway but is wholly German-built and German-owned. It was to avoid this ambiguity that the 'Europakanal' title was dropped in 1980. Consequently, traffic from Eastern Europe will be allowed only after suitable agreements have been reached concerning the equitable sharing of traffic.

CANAL BOATS RESCUED

(Continued from Page One)

about the heyday of the canal's barge traffic was drawn from sometimes vague and contradictory passenger accounts.

"Now that we've got the boats we can find out what these people are talking about," he said.

The boats were discovered in early July when members of Trout's canals society, knowing that the construction site in the banks of James was a turning basin for barges, asked workers if they found anything.

The workers had. Of the 13 boats found, five had been hauled out of the pit along with the dirt being removed and other construction debris.

Fortuitously, there was a scheduled one-month break in the foundation work on the office tower. This gave the archaeologists time to photograph the boats from the air (which allows precise measurement), number boat parts and pull some of them out of the pit, and prepare three of the vessels to be lifted out by crane.

The last boat hoisted out Friday — of a cargo-carrying type called bateaus — probably was built between 1789 and 1800, said Lyle Browning, with the Virginia Archeological Society.

"It's the oldest surviving bateau in the United States," he said as volunteers, standing waist-deep in mud, shoveled muck from under the bateau so lifting supports could be slung under its hull.

The other boats lifted out were the packet boat — a metal-hulled, luxury passenger barge that probably was built in the 1840s — and a coal barge, which also dated to the 1840s, Browning said.

The barges were part of an open river and canal system that connected points up to 200 miles upstream with Richmond, which was as far upriver as sea-going vessels could come.

Boats carrying tobacco, hides, wheat, corn and coal would come downriver from as far as Buchanan and Botetourt counties and Charlottesville, be unloaded in the turning basin, and then pulled back upriver.

It was that old turning basin that became the graveyard of the boats found this summer. Barge traffic peaked in the 1840s and 1850s, then slowly declined in the face of competition from the railroads.

The bateau and coal barge will be kept in a pair of restored locks near the construction site, with the bateau to be restored when funds become available and the coal barge to remain in its deteriorated state.

The metal-hulled passenger boat will be taken to a wood kiln for drying and eventual restoration.

The article "Europakanal Nears Completion" which appeared in the August 1983 issue of *American Canals* is copyrighted by The Society of American Military Engineers and was reprinted by permission of that society.

CANALS AND COMPUTERS

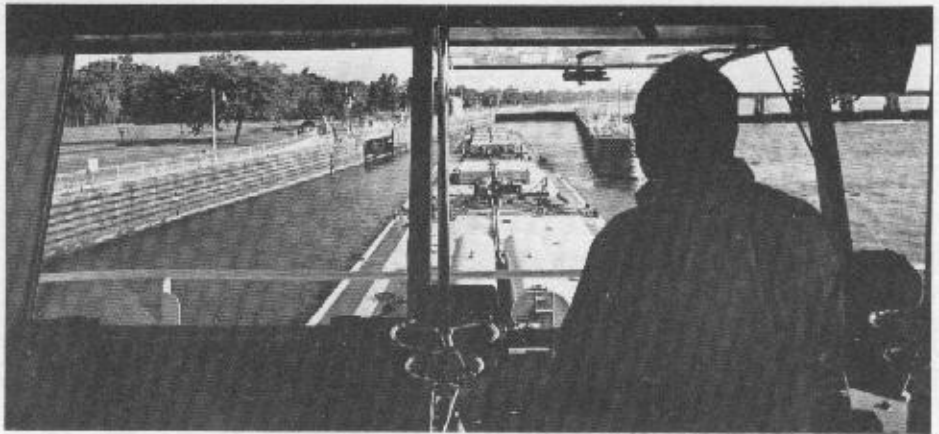
So that canals are not relegated to the distant past, and so that our computer-oriented society today becomes aware of modern technology applied to present-day "canaling", we publish the following article from "National Defense" Magazine, which was sent to us recently by ACS Life Member Bill Gerber, Chelmsford, Massachusetts.

Each year millions of tons of vital materials are transported on the nation's waterways. Efficient transport of many of the materials is significant not only to our economy, but in wartime could be critical to our national defense. During World War II, for example, it was necessary to transport large amounts of materials such as military supplies and equipment down the Illinois waterway from Chicago.

Since early in the last century, the Army Corps of Engineers has been charged with the responsibility of maintaining the navigability of our rivers. Today, this responsibility includes monitoring the movement not only of private vessels but of some high-security, military-related shipments as well. It also entails manning and maintaining a system of 250 locks and dams which permit navigation on rivers, many of which are affected by seasonal fluctuations in water levels.

Districts of the Army Corps of Engineers that oversee a large volume of traffic passing through a lock-and-dam system handle a commensurate volume of data communications: information such as registrations, navigation notices, and tonnage of vessels, as well as times entered and departed from the locks. The information generated is used to compute charges to the shippers by fuel tax rates. These charges defray the costs of use of the waterways. In addition, the information is used for long-term studies and planning to determine the necessity of constructing additional locks or modifying existing ones.

In particular, ships and tow boats on the Mississippi River and its tributaries carry



Three petroleum barges, in tandem, being manoeuvred into a lock on the Mississippi. (Courtesy "The Texaco Star")

petroleum and coal that supply a significant portion of the energy needs of industrial centers such as Chicago, St. Louis and St. Paul. The Rock Island (Illinois) District of the Army Corps of Engineers oversees movement of a large volume of cargo-bearing tow boats through a system of 22 locks and 18 dams from Guttenberg, Iowa to Hannibal, Missouri on the upper Mississippi and down the length of the Illinois River. In 1980, 2.6 million tons of petroleum and 4.2 million tons of coal were moved on the District's section of the Mississippi. In 1981, the Rock Island District supervised an estimated 12 million tons of petroleum and 13 million tons of coal along the Illinois. Energy products destined for Chicago are often loaded on barges in southern Illinois and can be transported via the waterway directly into the downtown area. In effect, a channel of the Illinois River terminates at the Chicago Loop.

On a recent typical day, 180 tow boats, each carrying about the same volume as a 100-car train, passed through the locks. To maintain accurate statistics as well as handle the record-keeping needs at each of the locks, the Rock Island Corps' Operation and Maintenance of Navigational Installations (OMNI) System re-

quires that more than 30 items of information be gathered for each vessel lockage. All told, this yielded 35,000 sheets of paper records per month. As a result, the information overflow and subsequent processing made an efficient system of data communications imperative.

In addition, the Rock Island District wanted to generate real-time data that would enable it to predict more accurately each day's traffic. This would help decrease transit time through the locks and utilize more effectively the 12-person staff at each installation.

The Rock Island District previously used a manual method for reporting such data. The information would be sent by mail to headquarters, keypunched, run through a computer, and returned to the source for correction of any errors. Such methods were time-consuming and cumbersome. But more importantly, they did not permit day-to-day monitoring capabilities.

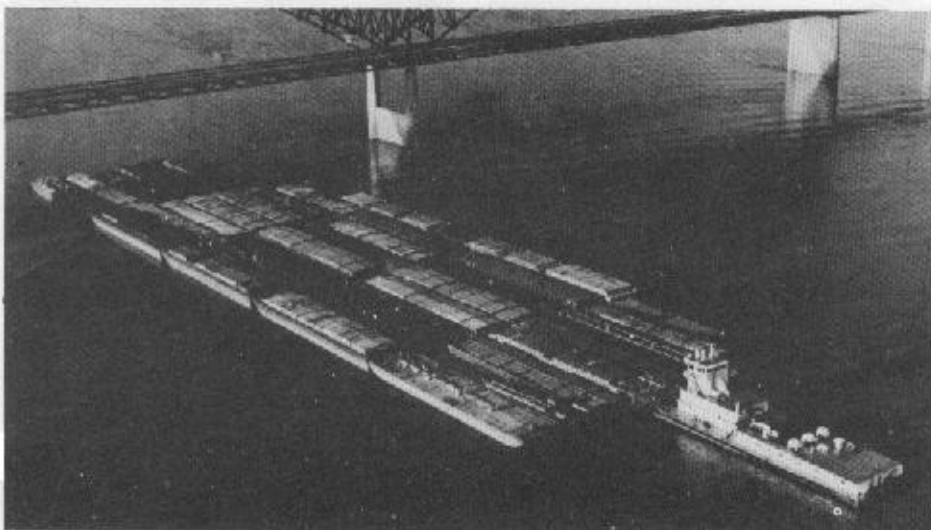
The Rock Island District recognized the need for an on-line, real-time data communications system. However, installation of such a system presented formidable obstacles. Many of the District's locks are located in remote or rural areas serviced by more than a dozen small, independent telephone companies which could provide only voice-grade lines. A two-year attempt at leasing three private line circuits proved unfeasible. If trouble developed, technicians could not pinpoint the source of the problem; whether in the terminal, the main-site computer, or on the telephone lines. Seven or eight possibilities existed in such a multipoint circuit.

As a result, each breakdown commonly required three days for repairs. This effectively destroyed efforts to keep real-time records.

In sum, the Rock Island District's chief problems were reliability of the communications lines and pinpointing of problems.

Today, however, the Rock Island District of the Army Corps of Engineers has obtained an effective, dynamic on-

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A typical "tow" being pushed along the Mississippi.

CANALS AND COMPUTERS



A snap made by our Canal Photographer, Bill Etchberger, at the American Locks on the St. Lawrence Seaway, September of 1983. A huge freighter, which fills the lock with inches to spare on each side, descends on its way down to the Atlantic.

(Continued from Page Three)

line, real-time data communications network. The solution was achieved with installation of the Bell Systems Dataphone II, a private line, analog, hierarchical, modular data transmission system that permits user control of maintenance and network management functions.

The Dataphone II service is built around private line, synchronous, micro-processor-based data sets and ancillary diagnostic control devices. Three types of data sets can transmit data at 2,400, 4,800, and 9,600 bps. Centrally located diagnostic control devices offer three service levels with varying degrees of sophistication to match user needs.

The Rock Island District utilizes data sets at each of the 22 lock installations to transmit data at 2,400 bps to a Burroughs computer and a Diagnostic Console located at the District headquarters. This system has proved to be extremely efficient providing for accurate, up-to-the-minute monitoring of vessel movements. Today, data is entered on a CRT screen, transmitted to the Burroughs computer, and immediately edited for errors — saving time and yielding more accurate results.

The system has resulted in improved coordination with the various lock installations and improved scheduling of each of the crews' activities. Equally important is the ability to locate quickly the source of trouble in any of the circuits and thus vastly improve the data system's uptime.

The system's security is assured, both locally and remotely, by three levels of diagnostic sophistication. The Rock Island facility uses a Level II system of numeric code security. Its use is restricted to only those persons who know the numeric code. Only then can access to the system be gained. At higher levels, password security is employed. In either case, it

is defined by the user. In addition, since the system utilizes private line services, it is generally as secure as the Nation's telephone network.

Any troubles on the dedicated communications lines are reported to a central Bell System office, which provides dependable 24-hour service. As a result, the system can quickly be brought back into full operation if, for example, a storm should knock out a circuit.

In addition, if the Rock Island District should choose to elect a higher level of service, it could utilize the system for preventive maintenance, such as the detection of circuit deterioration even before it caused a problem.

The new communications and District-developed software system provides other important benefits. Due to increased efficiency, the Corps is saving each shipper 10 hours of transit time per month, representing a savings of \$36,000 per year per shipper. In addition, shippers now can quickly locate and contact any of their vessels when necessary.

The Rock Island District estimates that its retrieval system supported by Dataphone II service saves it 18 man-years annually. Not only do the lock crews save time that can be used for other purposes such as maintenance, but collection of data is significantly facilitated. In addition, the system will improve office management functions such as automation of payroll and personnel records.

Moreover, the system can be applied to any operation that requires reliable data transmission, capability to monitor and control its own network, and efficient servicing, even in remote U.S. locations.

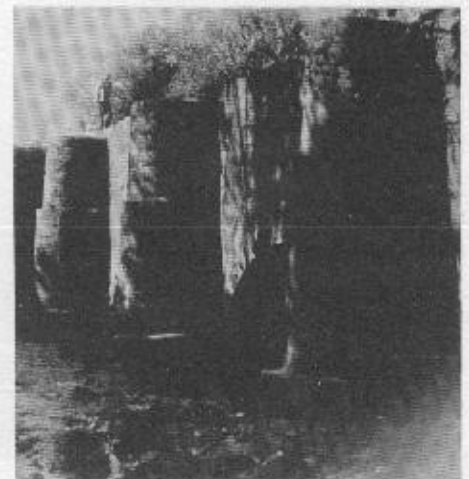
The data transmission system with diagnostic capability is squarely in the 20th century and is such an integral part of so many types of operations that the reliability and control of such a system is vital.

VIRGINIA PROGRAMS

George Washington stated before the Virginia General Assembly in November 1784, "If the falls of the great Kanawha can be made navigable . . . it will be found of equal importance to improve the navigation of both the James and the Potomac . . . Upon the whole, the object is, in my estimation, of vast commercial and political importance." For most of the 19th century the James River and Kanawha Canal was the main artery of commerce between Richmond and the valleys of western Virginia. The JR & KC contributed mightily to the lives of thousands before sliding into decline after the Civil War.

On November 12th, 1983, the Roanoke Transportation Museum and the Virginia Canals & Navigations Society hosted a series of programs at the Museum highlighting this history within the Commonwealth of Virginia. Russell Harding of Mineral, Va., presented his illustrated overview of the rise and fall of the system of canals in America. Dr. William Trout talked about the six canalboats unearthed this summer at Richmond in the canal basin. Dr. Trout is a respected canal historian and President of the VC & NS. "The Iron Horse Comes to America", was a second program given by Russell Harding. Mr. Harding is Publications Director of VC & NS and Editor of "The Tiller". Additional exhibits on display at the Museum included historic artifacts and photograph documentation on canals.

HISTORIC CANAL AQUEDUCT



The Allegheny Creek Aqueduct on the Schuylkill Navigation System, south of Reading, Pa. is being sponsored as a National Historic Landmark by the Schuylkill River Greenway Association and the Reading Branch of the American Society of Civil Engineers. The latter organization has done a thorough study of the Aqueduct's condition and made cost estimates of stabilization as well as complete restoration. The Greenway Association is seeking funding from local, state or federal organizations, which may involve re-watering a section of the canal where it crosses the Aqueduct.

PENNA. CANAL SOCIETY TOURS D. & H. CANAL

Sixty-two members of the Pennsylvania Canal Society convened September 30th and October 1st at Port Jervis, New York for a tour of a twenty-mile section of the Delaware and Hudson Canal between Port Jervis and Cuddebackville. The weather was a bit damp in spots but did not deter the enthusiasm of the crowd, who got off the bus at every historic site.

Friday evening Grace Elliott, Tour Chairwoman, gave a slide presentation on the New York section of the D. & H. Canal, and a local actor, dressed as a canalboat captain, regaled the attendees with "tales of life on the canal" delivered in an authentic, heavy dialect.

The accompanying photos show some of the points of interest visited during the Saturday bus tour. After a sumptuous banquet at the Holiday Inn in Port Jervis that evening, the group were entertained by Edwin D. LeRoy, artist, historian and author of "The Delaware and Hudson Canal" which he wrote and illustrated in 1980.

During the annual meeting of the Pennsylvania Canal Society, the following were elected for 1983-84: John P. Miller, President; Charles W. Derr, Vice President; Robert W. Keintz, Secretary; and Earl J. Heydinger, Treasurer.



Part of the Tour Group, composed of canal buffs from New York State, New Jersey, Pennsylvania and Maryland, assembles in front of the old First Presbyterian Church in downtown Port Jervis, built largely by income from the Delaware and Hudson Canal.



Ruth Shank (back to camera) talks with Elyse and Robert Keintz in front of the Decker Fort in Port Jervis. This was headquarters for John B. Jervis, Chief Engineer of the Delaware and Hudson Canal, during construction. Bob Keintz is the new Secretary of the Pennsylvania Canal Society.



Well preserved abutment of the Roebling Aqueduct at Cuddebackville, just across-river from the Neversink Valley Area Museum, one of the major stops on the PCS Tour.



Snubbing posts along the route of the Canal in Port Jervis, deeply indented with grooves worn by many tow-ropes over the years. The Delaware and Hudson Canal was an important link, in the 1800's, between the Anthracite coal region of Northeastern Pennsylvania and New York City. Port Jervis was "the hub" of activity.

OHIO CANALS "HISTORIC LANDMARK"

Due to the efforts of CSO member Ron Reid, the Board of Directors of the American Society of Civil Engineers has designated "... the Ohio Canal System, which opened the heartland of America to transportation from the East ... a National Historic Civil Engineering Landmark ..."

Ron reports, "This means that all one thousand miles of the 19th century canals in our state are duly recognized as being of great civil engineering significance, and as such, join such other works as the Erie Canal and the Brooklyn Bridge. This is the first time ever that an entire state's canal system was so designated."

A bronze plaque will be presented at an official ceremony, date to be announced.

(Newsletter of the Canal Society of Ohio, Oct. 1983)

THE PANAMA CANAL – ALIVE AND WELL!!

By LGen D.P. McAuliffe,
USA-Ret.

The Panama Canal is alive and well and by the end of this year, total traffic and tolls revenue will exceed last year's record-breaking performance.

Since the Panama Canal Treaty took effect on Oct. 1, 1979, the Panama Canal has gone through a period of remarkable challenge and innovation while continuing to provide uninterrupted transit to international shipping.

The provisions of the Panama Canal Treaty resulted in many significant changes for both the United States and the Republic of Panama. The terms of the treaty resulted in a massive reorganization of the old Panama Canal Company/ Canal Zone Government into a new, streamlined U.S. government agency called the Panama Canal Commission. The agency is headed by a U.S. citizen administrator and a Panamanian deputy administrator, functioning under the guidance of a nine-member binational Board of Directors. Through this agency, the United States government, in cooperation with the government of Panama, will operate and maintain the waterway until the year 2000.

Most of the prescribed changes occurred on the treaty implementation date and during the following 30-month transition period. The transition period was established to provide an orderly assimilation of the treaty's jurisdictional arrangements, most notably those affecting U.S. law enforcement and court functions. Midnight, March 31, 1982, marked the end of the period. Hindsight indicates that it fulfilled its purpose well. The phase-in period gave both governments the opportunity to prepare for important shifts in responsibilities effective on April 1, 1982. It also allowed employees, dependents and others to gradually become familiar with the changes.

The transition period was marked by cooperation and dedication on the part of individuals from both nations. Their work resulted in an almost flawless transition of legal jurisdiction from U.S. to Panamanian hands and minimized the impact of the changes on workforce morale and Canal efficiency.

Probably the most noteworthy indicator of the successful transition has been the Canal's ability to continue providing uninterrupted and, with few exceptions, consistently efficient transit service to international shipping. Since the treaty's implementation, the waterway has continued to operate around the clock, 365 days each year, moving increasing amounts of traffic and trade between the world's two greatest oceans.

In fiscal year 1981, a record 171 million long tons of cargo was moved through the Canal on nearly 14,000 oceangoing vessels. Their average size was the largest in the Canal's 67-year history. And, they paid tolls totaling a record \$303 million.



Newly installed, high-mast, high-intensity lighting at Miraflores Locks extends the hours during which large vessels can pass through.

Traffic during the first half of the current fiscal year has increased even further. In March, the last month of the transition period, the Canal averaged 42 oceangoing transits daily, the highest monthly average in 10 years. More importantly, the average size of these vessels surpassed all previous levels, and tonnage and tolls passing through the waterway reached new highs.

The continuing increase in the size of transiting vessels is an important factor affecting planning. The trend toward use of larger vessels began in the 1950s, and during the last 10 to 15 years ship size has been increasing at a surprising rate. In 1965, approximately 850 Canal transits were by vessels with beams of 80 feet or greater; last year, this figure jumped to more than 6,300 transits. Moreover, the growth in transits of the largest vessels that use the Canal — those of 100-foot beams and over — has been equally impressive. Since 1965, this segment of our traffic has grown from 115 transits to over 2,200.

A brief analogy illustrates the impact of the growth in ship size. In 1965, approximately 12,100 oceangoing vessels passed through the Canal, each measuring an average of about 6,350 Panama Canal tons. If today the average ship were the same size as in 1965, more than 29,900 of those vessels would have to transit to total the Panama Canal net tonnage which passed in 1981 in approximately 14,000 transits.

Looking to the future, the rate of increase in ship size is expected to slow. Experience shows that the shipping industry still considers the present Canal a useful passageway between the two oceans. Although ship sizes have increased, vessels have been deliberately tailored to meet the physical limitations of the Canal. The majority of vessels now on order or under construction are within Canal-size limitations.

As Canal traffic increases—particularly

in the area of large-ship transits—the Canal management must continue to maintain and improve the waterway if the facility is to remain an important link in the world transportation chain. Accordingly, the Commission has taken a number of steps to upgrade the waterway's operational procedures and increase its capital investments.

Operational changes include the hiring of additional Canal pilots, improved marine traffic control procedures for scheduling vessel transits, improved maintenance procedures, expanded training programs, the testing of a transit booking system offering advanced reservations for transit and the implementation of cost-reduction measures to keep operating costs down and minimize toll-rate increases.

As Administrator of the Panama Canal Commission, I consider training the Commission's second most important mission. We are spending more than \$5 million annually on employee training with a major emphasis on increasing participation by qualified Panamanian nationals at all levels of the organization. I am pleased by the progress achieved thus far.

The number of Panamanians in senior professional and supervisory positions has increased as they gain experience and become more qualified. At present, there are Panamanians heading our Electrical Division, the Dredging Division, the Canal Improvements Division and our Office of Public Affairs. There are also numerous Panamanians in middle management and first-line supervisory positions throughout the Commission.

At the occupational level, significant strides have been made. For example, Panamanians now account for some 70 percent of the skilled work force, and the number is increasing. Currently, five out of six vacancies in the Commission are filled by Panamanian citizens.

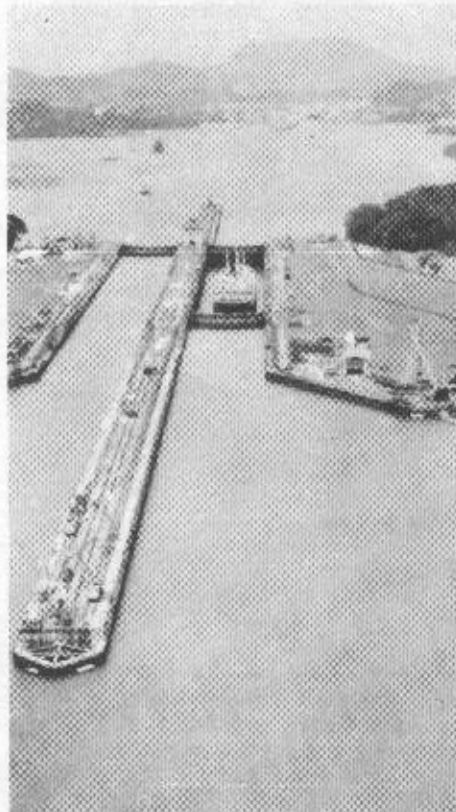
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The fact that the Commission has retained or trained the skilled people necessary to operate and maintain the waterway was amply demonstrated earlier this year when a major locks overhaul was performed. Between Jan. 16 and Feb. 13, forty huge cylindrical valves and 10 rising stem valves were overhauled or replaced at Gatun Locks. This major project cost approximately \$2.5 million and was completed one day ahead of schedule. A total of 423 employees of the Locks, Maintenance, Industrial, Dredging, Engineering, Community Services, Safety, and Occupational Health Divisions were involved in that extensive, highly coordinated project.

Last December the Board of Directors of the Panama Canal Commission unanimously approved a 120-day test of a transit booking system offering advanced reservations in the transit schedule. That test commenced in late January but shortly afterwards was discontinued because of the growing disparities between the waiting times of booked and unbooked vessels. Variations occurred because of the extreme congestion at that time, caused by high vessel arrivals when Canal capacity was limited by the scheduled Gatun Locks overhaul. The transit booking system resumed on March 15 and has been operating well ever since. Upon completion of the test in July, the results will be evaluated and presented to the Commission's Board of Directors for further action.

The Commission has also taken steps to reduce its operating costs that will positively impact on Canal users. For some time, we have been aware that the



The U.S.S. Tarawa enters Pedro Miguel Locks while transiting the Gaillard Cut.

completion of a trans-Panama oil pipeline late this year will shift the Alaska North Slope oil (ANS) trade away from the Canal, resulting in a loss of some 1,500 transits and more than \$50 million annually beginning in fiscal year 1983. Originally, it appeared that the loss of the ANS traffic, coupled with continued inflation, could require a toll-rate increase of more than 20 percent. Now, however, with the implementation of the cost-reduction measures and slightly higher growth in other traffic segments, it appears that a toll-rate increase of no more than 9.8 percent, effective Oct. 1, 1982, will be sufficient to allow the Commission to successfully meet its financial obligations while continuing to provide quality transit service. The proposed toll-rate increase is the first such hike at the Canal in three years and will help ensure that the waterway will continue to operate effectively at no cost to the U.S. taxpayer.

Besides the steps taken to improve the operating efficiency of the waterway, the Commission has embarked on an important capital program to enhance the Canal's capacity to transit more and larger vessels. In fiscal year 1981, \$31.6 million worth of capital projects were scheduled, of which \$26.4 million was concentrated in the transit area.

The improvement projects include the recent installation of special high mast, high intensity lights in both lanes of Miraflores and Gatun Locks. This lighting extends the number of hours of locks operation during which large-beam vessels — which for safety reasons have been restricted to daylight transit — can be moved through the Canal. Similar lighting will be installed at Pedro Miguel Locks in the near future.

Additionally, the locks' towing locomotive and tugboat fleets are being expanded and modernized by the acquisition and replacement of equipment. Last year the Commission acquired three new tugboats. A fourth is currently under construction and will be delivered later this year. Ten new towing locomotives were also ordered, seven of which are now in operation with the final three to arrive by midyear.

On the waterway, segments are being widened and curves straightened. Workmen involved in the multi-million dollar Mamei Curve-widening project now underway are removing millions of cubic yards of earth by blasting and dredging.

Work is progressing smoothly on the construction of a vessel tie-up station located just north of the Pedro Miguel Locks near the entrance to the narrow segment of the waterway known as the Gaillard Cut. The tie-up station is scheduled for completion by mid-1983, and will increase use of the Pacific locks by allowing vessels to move partially through the Canal before having to stop for large vessels moving southbound through the Cut.

Another long-range Canal improvement project, which is critical for meeting the increased levels of traffic, is the requirement for additional water for locks operations. Some 50 million gallons of water

NEW ACS LIFE MEMBERS

Since the listing of Life Members which appeared in the February 1983 Issue of AMERICAN CANALS, the following have been added:

William J. Ellenberger, P.E.	Dist. of Col.
Grace Elliot	New York State
William E. Gerber, Jr.	Massachusetts
Desmond Harris	British Columbia
Dr. Brian M. Kutner	New Jersey
Eugene I. Mejerowicz	California
Edward A. Mather	Delaware
Robert S. Mayo, P.E.	Pennsylvania
Richard C. Osterhout	Pennsylvania
Paul H. Reimer, Jr., P.E.	Pennsylvania
William A. Sigman	Indiana
Dr. Roger W. Squires	England

This brings to exactly forty-one our special LIFE MEMBERS, who now have a permanent place on our mailing list, and pay no further dues. We greatly appreciate the stability and financial support which their membership brings us. Henceforth, membership in this category will entail a one-time payment of \$150 — a real bargain for some of our younger members!

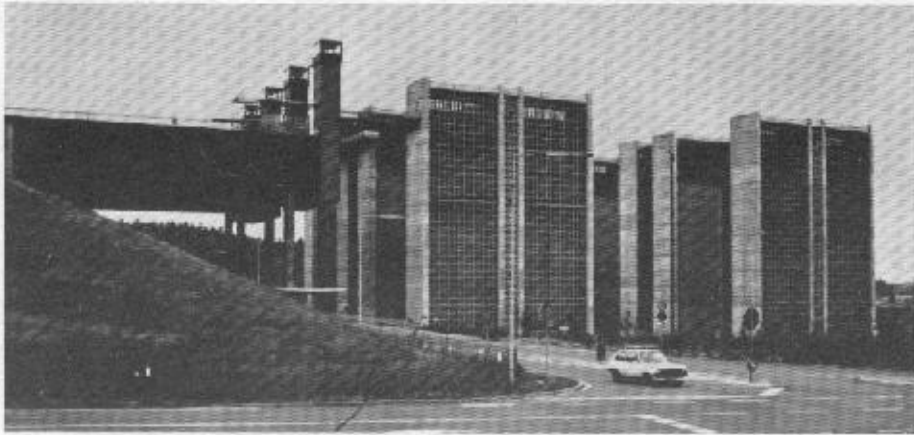
are needed for a single transit. As traffic levels increase, the water levels in Gatun Lake would eventually have to be lowered to a level too low for navigational purposes. To prevent this, a deepening project is underway that will lower the Canal channel an additional three feet below current levels, thus providing additional water necessary to meet future requirements without causing draft restrictions.

The high transit levels of recent months indicate the beneficial effects of many of the operational and capital improvements. When the remaining near-term projects are completed, the Canal's sustained capacity should be increased to as many as 44 vessels per day — a level sufficient to handle traffic demand through the current decade.

Although the successes achieved during the treaty transition period provide ample evidence that the waterway remains efficient and cost effective, so too does the increasing demand of the worldwide shipping industry emphasize the need to move ahead with programs which will further augment the Canal's ability to efficiently transit more and larger vessels. Last year the Commission spent over \$100 million improving and maintaining the waterway. We remain committed to continuing such efforts to ensure the long-term viability of the Panama Canal.

General McAuliffe was appointed Administrator of the Panama Canal Commission when the organization was first formed. During his 35-year Army career, he served in various command, general staff, and management and advisory positions throughout the world. As the Commander in Chief, U.S. Southern Command from 1975 to 1979, he was responsible for U.S. security interests in Latin America and for the defense of the Panama Canal. (Clipped from "The Retired Officer" magazine by Bob Mayo.)

GERMAN LIFTS AND LOCKS



The Scharnbeck Lift — upper canal level to the left; lower canal level to the right; double elevator shafts raise or lower the entire length of the water chamber with as many as three large barges transitted in each operation.

By Roger W. Squires

Dr. Roger Squires is an ACS Life Member and also ACS Director for the United Kingdom. He has written several books on the British canals. His latest, "The New Navies", is reviewed on page nine.

The Germans have always been recognized as a nation of skilled engineers. It is thus not surprising to see those skills utilized in the construction of canal lifts and locks.

Two of the most interesting lift locks now lie in East Germany and are not now so readily accessible as those in the West. However both of these are of significant interest to canal historians in that whilst they were built within 5 years of each other, both use different techniques for raising and lowering the caisson in which the boats float.

The earlier of the two lifts was opened in 1934 at Niederfinow on the busy Havel-Oder Canal, where it replaced a staircase of 4 locks which delayed craft some 2½ hours enroute for the Baltic Ports or Poland. Its interest lies in that it was built to lift craft of 1000 tons capacity through a vertical distance of 116 feet and was in consequence quite in advance in European Lift Lock construction. Prior to 1934 the largest Lifts in Europe were those in Belgium passing only 300 ton capacity barges over a lift of 60 feet. They were similar to the Peterborough Lift on the Trent-Severn Canal in Canada.

The Neiderfinow Lift has a single caisson weighing 4300 tons, which is supported by 256 steel cables running over pulleys and connected to solid counterweights. The Lift is powered by rack and pinion driveshafts which are normally driven by two coupled 75 hp electric motors housed in a Control Cabin mounted over the caisson itself. When the Lift was built it used 13,800 tons of steel and because the ground was not stable it was built on a huge concrete raft 367 feet long and 108 feet wide and 26 feet

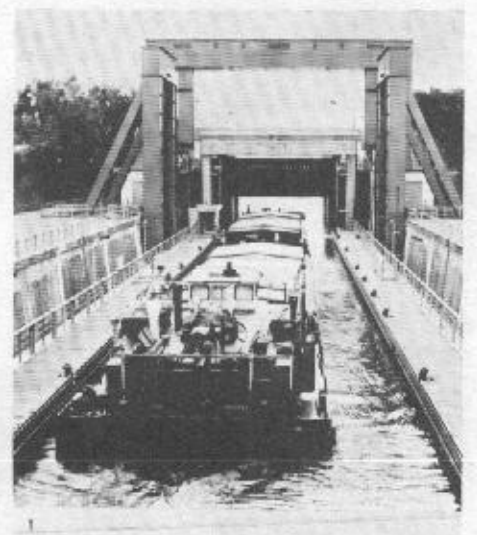
deep, with reinforcing rods 2 inches thick. The whole slab and the steel work were secured by a system of piers and piles that reached down some 70 feet into the subsoil. Since it was opened in 1934 the lift has been in regular daily use and currently passes some 40 craft a day - some of which are multiple Push-tows.

In contrast, the other East German Lift-lock at Rothensee was opened in 1939 to link the Mittelland Canal to the River Elbe near Madgeburg. This works on the principle of having two floats in deep shafts or walls to support the weight of the caisson. Once again the structure was designed to pass craft carrying up to 1000 tons over a vertical distance of about 49 feet, depending on river levels. Of special interest is the way the caisson is powered. Here four sets of synchronized electric drive motors act on screw threaded columns which are set alongside the caisson. The action of the mobile motors raising or lowering the caisson on the columns which also act as guides. At Rothensee the columns are mounted in steel girder supports which are secured into a U-shaped concrete raft. The two wells form an integral part of the foundation and secure the lift to the bedrock. Although the lift at Rothensee has a capacity of clearing some 90 craft a day, in 1983 only 30 boats a day were passing

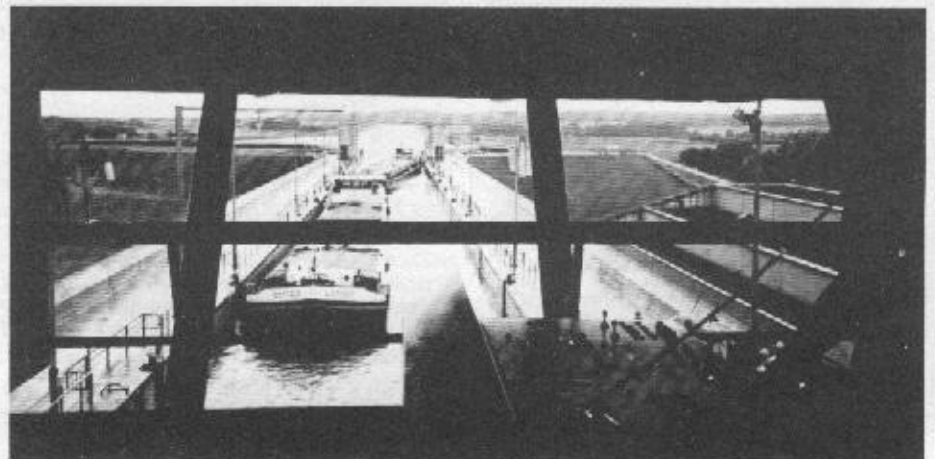
through the lock. These two Pre-War East German Lift locks offer an interesting contrast to the new West German locks on their new Elbe-Seiten Canal which was opened in 1976 to by-pass the unreliable River Elbe Navigation over its middle reaches. There are only two locks on the canal. At one site the West Germans used a Shaft lock to overcome a 74 foot lift and at the second they built a double Lift Lock to raise craft some 124 feet from Elbe valley floor.

The Shaft Lock is at Uelzen and is quite unique in that it was built above ground. The canal reaches it along an embankment. It uses a set of three huge tiered side ponds set at three levels beside the lock. These enable 60% of each lockful of water to be saved for subsequent fillings. Back pumping is provided to recover the balance of the water at times of shortage. The Uelzen Lock is designed to pass craft carrying 1350 tons, which is the Europa IV Standard. The whole structure is built from reinforced concrete, and it has metal gates. Its modern design makes it a significant landmark on the German Plain, looking like a piece of Modern Art. The whole locking

(Continued on Page Nine)



The Rothensee Lift in its "down" position.



Looking down through the Uelzen Lock framework from the upper level.

CANAL BOOK REVIEWS



The Neiderfinow Lift presents an imposing appearance from the lower level. It has a lift of 116 feet, handling 1000-ton vessels.

(Continued from Page Eight)

operation is controlled from a central Control Room over the entrance to the lock where just two men move the boats through on a 15 minute cycle.

The other Lift Lock on the Elbe-Seiten Canal is at Scharbeck. Here the vertical lift is 124 feet and craft are moved in two independent caissons each capable of accommodating a barge of Europa IV Standard (1350 tons). Although the Lift Lock is essentially similar to the one at Niederfinow in that it uses solid counterweights running over pulleys at the top of towers to support the 5700 ton caisson weight, the motive power is provided by four synchronized screw jacks which work on each caisson like those at Rothensee. However, at Scharbeck, the jacks also provide a safety net in case of power failure. Like the lock at Uelzen, the whole cycle for passing a laden craft through the lock only takes 15 minutes, which is a boon for this busy new canal.

The four locks mentioned above identify the way in which German canal engineering has evolved. The designs show a commitment to follow the tried and tested paths, unlike the French who go for the more novel or the unique. However, the very fact that new wide and deep modern canals have recently been built shows a longer term commitment to the use of inland waterways for the transit of bulk goods. This in itself is a pleasure to behold.

(The Locks were all included within a Tour organized by the British Inland Waterways Association in September 1983).

A CANALBOAT PRIMER — On the Canals of the State of New York — by the Staff of the Canal Museum. The Canalboat Primer is the culmination of the two year C.A.N.A.L.S. research project on 19th century canalboats found in New York State. This 37 page book is an introduction to the canalboats, their several types and how and where they were built. Detailed examples of two types are illustrated: a State repair scow based on the original blueprints and an early laker boat based upon underwater archaeological and historic photographic evidence. The C.A.N.A.L.S. project was funded with the assistance of a matching grant-in-aid from the National Trust for Historic Preservation.

Topics include: A brief history of the Erie Canal; the development of boat types; details of construction (with drawings); New York State Repair Scows; the "Laker", Launching, Bibliography. The book, a paperback, uses horizontal treatment (8" x 11") and sells for \$6.00. Copies may be ordered from Canal Museum, Weighlock Building, 318 Erie Boulevard East, Syracuse, New York 13202.

TRADE AND NAVIGATION ON THE CHAMBLY CANAL — A Historical Overview — Andre Sevigny, Parks Canada 1983. The Chamby Canal at St. Jean, Quebec, on the Richelieu Rivers, consists of nine locks along a canal of 19 km. It is the major river improvement which permits commercial navigation between the St. Lawrence River at Sorel and Lake Champlain. Via the Champlain Canal and the Hudson River, navigation may continue directly south from Canada to New York City. The other structure needed to provide direct water travel between Canada and the United States at this point is the single St. Ours Lock further upstream, which unfortunately is barely described in this study. In spite of the small locks (36.6 m. by 7.3 m.) of the Chamby a thriving commercial trade developed along this route, carrying lumber and paper from Quebec to New York. Seigny provides an interesting discussion of the shipping process which continued into the 1960's, using lumber rafts, sailing vessels, barges and steamboats. Copies available in French and English — \$7.20 in USA; checks payable to Receiver General for Canada, Canadian Government Publishing Centre, Supply and Services Canada, Hull, Quebec K1A 0S9, CANADA.

PORTAGE CANAL HISTORY — Frederica Hart Kleist, 1983, Portage Canal

HARTEL-McNALLY

We bid a sad "Farewell" to two stalwarts of the Canal Society of Ohio; Gale E. Hartel of Canal Fulton, late CSO President, and James H. McNally of Cleveland, late helmpate to the Editor of "Towpaths", the CSO periodical. Edith McNally continues to edit and distribute "Towpaths". Both Gale and Jim were dedicated canal buffs of long standing; they will be sorely missed!

Society Incorporated. In 1837, the "Portage Canal Company" was chartered for the purpose of building a canal to connect the Fox and Wisconsin Rivers, Territory of Michigan. Work continued under various private companies, until the Canal was finally completed by the Army Corps of Engineers in 1876. Commercial and pleasure boating continued to use the Canal until 1951, when the Fort Winnebago Lock was filled in and the Wisconsin Locks welded shut. The old canal was acquired by the State of Wisconsin in 1961, but little has since been done to maintain this historic site. A small, 28-page paperback, the booklet contains about 13 pages of historic photographs. No price is given. Inquiries may be sent to the Author: Mrs. Frederica Kleist, 528 West Cook Street, Portage, Wisconsin 53901.

THE MANCHESTER SHIP CANAL — David Owen, Manchester University Press. Opened in 1884, Britain's last and greatest canal was the "swan-song" of Victorian large-scale canal engineering. The Manchester Canal was entirely a local venture, undertaken without any governmental financial backing. This important canal transformed the inland city of Manchester into the country's third busiest port. Originally intended to free the cotton trade from the port of Liverpool and the railroad companies, the Manchester Canal became the culmination of attempts to improve all of the waterways in the area. Actual construction was beset with problems, all of which were overcome through the dogged tenacity of the builders. The saga of the Canal is related with concise accuracy by David Owen, former Director of the Manchester Museum, and President of the Manchester Branch of the Inland Waterways Association. The book is a 134-page hardback, well illustrated, selling for \$20.00. It may be purchased in the United States through the Manchester University Press, 51 Washington Street, Dover, New Hampshire 03820. Phone: (603) 742-4662.

THE NEW NAVIES — A History of the Modern Waterways Restoration Movement — by Dr. Roger W. Squires, Phillimore and Company, Ltd. Over the past three decades enthusiastic groups of volunteers in Great Britain have revived derelict local waterways, bringing the canals back to life by their own physical efforts. It is a story of the triumph of local initiative over bureaucracy, muddle and mud! After an examination of the historical background of the former vast network of inland waterways in Britain, the author provides a vivid and entertaining account, region by region, of the way in which the "lost" canals have been given a new lease on life, and are now an important part of the leisure life-style of many boat-owners throughout the country. A handsome, 190-page hardback, the book contains a wealth of maps and photographs, which make it a unique record for historians and canal buffs alike. Price \$16.00, from Phillimore & Co., Ltd., Shopwyke Hall, Chichester, Sussex, ENGLAND.

V. C. & N.S. BACKS LOCK REBUILDING



Lock No. 1 at Great Falls Park, Virginia on the Potomac Canal before it was cleared of vegetation and excavated for archaeological investigation (National Park Service Photo)

GREAT FALLS, VA — One of this Commonwealth's most innocuous organizations goes under the splendid name of Virginia Canals and Navigations Society.

This small but dedicated group of canal enthusiasts and historians was founded in 1978. It publishes a quarterly journal and meets periodically at locations of Virginia's erstwhile artificial waterways. It also lends support to restoration and maintenance projects of parks services and conservation groups.

The canal works it champions date back as far as two centuries ago.

The Virginia society and the American Canal Society are urging the government custodians of the nation's first canal locks at Great Falls to do more than simply stabilize the ruins.

Great Falls Park became the responsibility of the National Parks Service in 1950 and a modernistic Visitors Center was built there in 1969. But other than the 1981 reinforcing with steel beams of the masonry walls of some of the upper locks, then about to collapse into the empty chambers, nothing has been done to reconstruct the canal.

The canal societies would like to see reconstruction and rewatering of at least one lock at Great Falls to demonstrate to present generations, just how they worked.

Earlier this month, the parks service hosted public workshops to gather ideas on how best to proceed with the Patowmack Canal's protection and maintenance.

However, just as they presently exist in their brooding majesty, the locks are well worth a visit, as the Virginia group found on a late March visit.

What better surroundings than those to symbolize the birth and vigor of this great industrialized nation?

(The above article, by Alexander Crosby Brown, was published in the May 15th, 1983 issue of the DAILY PRESS, Newport News, Virginia.)

ENGLAND AFLOAT; SCOTLAND AFOOT

(July 27 thru Aug. 12, 1984)

Join Gerb' and the J's Pratt for a week of "canal'n" through the English Countryside. Enjoy a comfortably equipped houseboat, the congeniality of village pubs and inns, shared duties and meals. Then another week roaming the highlands and lowlands of Scotland. Estimated cost: under \$1500. For prospectus, send SASE to L. Bill Gerber, 16 Princess Ave., Chelmsford MA 01863 (617-251-4971) or CL. Jane Pratt, 14 Normandie Rd., Dover, MA 02030 (617-785-1620) (Calls before 10:30 P.M., please.)

NEW OFFICERS FOR C.S.N.J.

The following excerpt is taken from the "President's Message" of ON THE LEVEL (newsletter of the Canal Society of New Jersey) for September 1983:

We have had a few changes in the leadership of CSNJ, for the most part familiar names shifting into new roles. As most of you know, officers serve a two-year term and one-third of the directors are scheduled for re-election each year. As officers positions were open this year, a total of nine positions were filled at the election held at our annual meeting on June 5. Treasurer Emery Carlson is the only officer repeating from last term. Ed Barry replaced Bill Moss as President, Bill replaced Larry Pitt as Vice-president and Ruth Barr replaced Kay Griswold as Recording Secretary. Nancy Vroom is our new Corresponding Secretary, a position which was unfilled last term.

Of the four Directors positions, Johanna Lamson and John O'Toole have accepted another three year term, Larry Pitt replaced Ed Barry and Steve Mattes replaced Hank Hagedorn.

Ed Barry, President.

ALEXANDRIA CANAL PLAQUE ERECTED

On June 4, 1983, a dedication ceremony took place in Alexandria's City park on North Royal Street to mark the location of the third lock of the Alexandria Canal. The remains of this lock — the third in a series of four — lie beneath this park.

The ceremony occurred because of the cooperative efforts of many interested canal historians, in particular, three members of the Virginia Canals & Navigations Society — Effie Dunstan, President of Historic Alexandria Foundation; Vivienne Mitchell of the Alexandria Archaeological Commission; and Lee Struble, Curator of the C&O Canal National Historical Park.

The Alexandria Archaeological Commission has long had a special interest in the Alexandria Canal locks and would like to see the location of all four locks marked. The members of Historic Alexandria Foundation share this same interest, and earlier in the year, had voted to approve funding for a bronze memorial plaque to mark the third lock. Without this contribution the project could not have been possible. The VC & NS and the Archaeological Commission also made contributions. The C&O Canal National Historical Park donated an authentic lock stone on which to mount the plaque. And thanks go to the Parks Department of Alexandria for installing the stone on a landscaped mound of earth in the park and constructing a walkway from the sidewalk to the stone.

The ceremony began with a blast of a horn similar to one used by a barge captain to alert the lockkeeper. Vivienne Mitchell, in a short talk, traced the history of this seven-mile canal which ran from Georgetown to Alexandria during the years between 1843 and 1886. Alexandria's Mayor Charles E. Beatley Jr. then addressed the audience, and emphasized the importance of organizations working together on joint ventures such as this to ensure the preservation of our historical heritage.

A map of the canal route, a map of the four locks, canal photographs, a model of a canal lock, and a model of a typical canal barge were on display in the park during the ceremony. Wording on the plaque reads: Alexandria Canal (1843-1886) Buried beneath this canal stone lies lock #3 of the Alexandria Canal, which connected the harbor of Alexandria with the Chesapeake & Ohio Canal in Georgetown, D.C. between 1843 and 1886. After crossing the Potomac on an aqueduct bridge near the present Key Bridge, the canal ran along the western side of the river for seven miles before descending to the level of the Potomac by means of four locks in Alexandria. Coal was the most important product barged to Alexandria for shipment to foreign and domestic ports. (Erected by: City of Alexandria Archaeological Commission and the Historic Alexandria Foundation.)

(From THE TILLER, Virginia Canals and Navigations Society, Sept. 1983.)

THE ODYSSEY OF NELSON REED

This 60-day, 2000-mile round trip between Port Clinton, Ohio and Narragansett Bay, Rhode Island, made by Nelson Reed in the Summer of 1981 may give ACS members who want to try a similar voyage some idea of the interesting problems one has to overcome. For further information write: Nelson Reed, 610 East Vine Street, Mt. Vernon, Ohio 43050.

This after retirement sailboat trip from the western end of Lake Erie to Long Island Sound and return was made to join the "Operation Triton" 1981 Cruise to Narragansett Bay.

Favorable winds on Lake Erie and relatively short 7 hour sails took 6 days to Port Colborne, Canada. The down-bound transit of the 27 mile, 8 lock Welland Canal required 10 hours, but we heard reports that it sometimes takes twice that long. Our company in those large locks was a 40 foot catamaran. Downbound to Lake Ontario (lowering water level in lock) is considerably easier than the upbound trip to Lake Erie. The reason for this is the side water pressure against the keel of a sailboat when near the bottom of the lock and the resultant turbulence. After experiencing these forces in the smaller Erie Barge Canal locks, it was decided to take the Erie Canal all the way to North Tonawanda on our return westward.

After some 77 locks we still do not have a best technique to recommend.

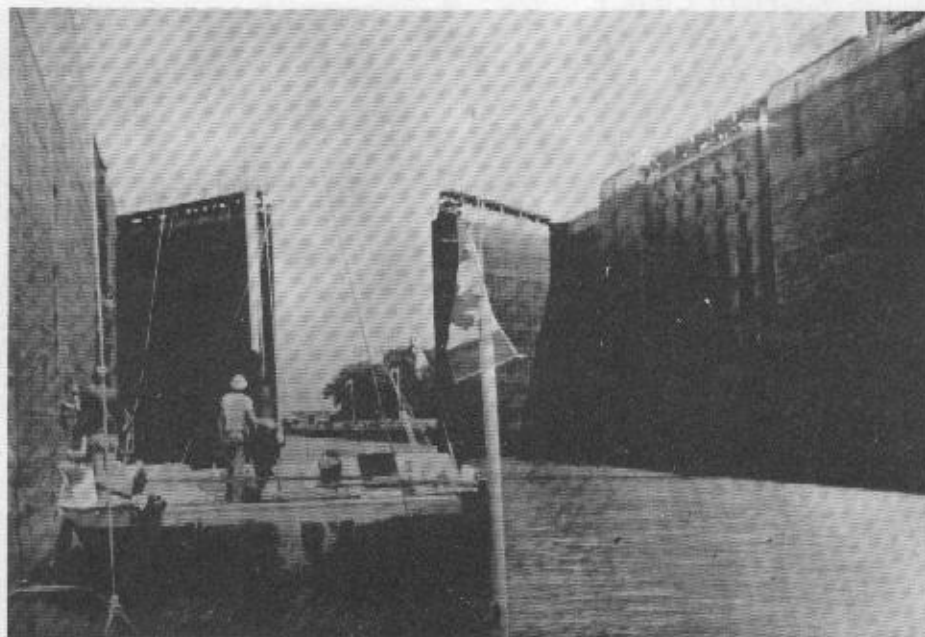
On the Welland, lines were furnished by the locktenders from the top of the lock wall and these were put through snatch blocks on the boat fore and aft each handled by one man on the boat. Had no chance to try this method rising in a lock but it can do little for side forces.

On the Erie Canal about 6 locks have vertical pipes next to the ladder. In this case fore and aft lines on the boat can be attached to slide on the pipe. Another version of this without the pipe is to attach the fore and aft lines to a boat hook held on the ladder.

The method we used most was the boat hook on the ladder, or holding by hand onto the ladder. Waterproof gloves help and by moving forward or aft we pushed off to keep the fenders from catching on the sometimes rough wall. Some locktenders prefer the use of lines.

Due to currents from gate leaks or valve leaks in the lock sometimes stopping and catching the ladder can be difficult. In one lock we had a commercial boat idling its propeller. In this case we missed the port side ladder and when trying for the starboard side ladder the boat became crossways in the lock in danger of hitting either end of the mast on a wall. Somehow we managed to avoid damage but the lockmaster must have been wondering how we got thru all the locks before his. Sightseers on the lock observation platform see more action when this happens.

One experience we were not prepared for was a rough day on Lake Oneida when going east. This required returning

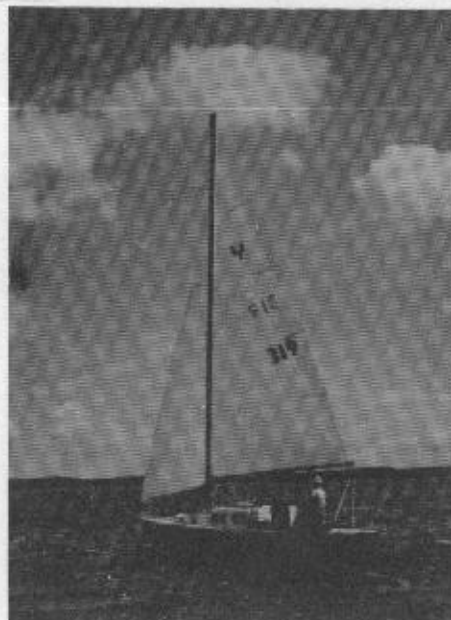


Passing down through one of the huge locks on the Welland Canal. Just ahead of Nelson Reed's "Triton" was the two-hull Catamaran (shown in this view) which led the Triton into a safe port on Lake Ontario that night.

to Brewerton to re-tie the mast and to stiffen the mast supports.

On the Erie Canal it is a challenge to locate the best stopping places for overnight, eating off the boat, groceries, gasoline and ice, but experience helps. Locktenders, bridge tenders and lock sightseers will assist if asked. Some locks have park areas and are reasonable close to towns and some lock seawalls allow the boat to be out of the way of night barge traffic. In one place floodlights at a canal maintenance area helped at night.

On the westward run on the Erie Canal



Nelson Reed's "Triton 319" on Lake Erie. The Tritons were the first fiberglass auxiliary sailboats in the USA, developed by Carl Alberg of Marblehead, Massachusetts for the Pearson Company in 1959.

we were surprised by the dozen lift bridges west of the Oswego Canal junction. These bridges involved some delay as one bridgetender operates more than one bridge. Delays for both locks and bridges were kept to a minimum by cooperative operators.

On the Welland, a 30 foot boat (toll \$4 per lock) is allowed to pass thru downbound with 2 persons aboard but upbound they require 3 persons aboard to help hold the boat. When stopping at a ladder in any canal lock one must know which direction reverse propeller torque swings the bow so that the bowman can reach the ladder without too much stretching. Some parts of the Erie Canal are very pretty, with well kept-up shore property. Other parts are too far from the towns or cities and are somewhat run down, or too near the railroad tracks. In general the Erie canal is more scenic west of Lake Oneida, and the towns have not grown away from the canal. The lift bridges which rise from 3 foot clearance to 15 foot clearance are hydraulic and are such that replacement with higher clearance bridges would in some cases block business properties close to the canal in the smaller towns.

My 19 year old Triton #319 performed well, averaging 6 mph on the canals and with a good wind and wave conditions 7 mph under sail.

The canals are too much motoring for any sailor, but we met numerous mast down sailboats in the canal which were heading for Florida, Bermuda and the Bahamas.

This trip was made a rewarding experience by joining for two weeks the Long Island and New England Tritons in "Operation '81". The fine planning of "Operation '81" and the friendly people we met made it all worthwhile.

TOWNSHIP LEASES SCHUYLKILL CANAL REACH

Charlie Derr, ACS Secretary, recently sent us a clipping from THE MERCURY, Pottstown, Pa. of an article by Staff Writer Rich Kirkner, which we reproduce here in part.

The old Schuylkill Navigation Canal, a fixture in Upper Providence Township since the 1820's, is about to remain a fixture into the next century.

The State Department of Environmental Resources (DER) has agreed to accept terms to a lease that would turn the upper end of the canal over to the township. Upper Providence is pursuing plans to continue development of a riverfront recreational park.

The agreement would give the township use of the state-owned canal access until 2007.

For nearly two years, the township has moved ahead with plans to develop the recreational area along the Schuylkill River from the Black Rock Dam north of Mont Clare to the village of Port Providence.

The township will have all the land it needs for the recreational area. It is known as the Mont Clare/Port Providence Reach. The area DER would lease to the township consists of the stretch of the canal from Bridge Street in Mont Clare north to lock 60, the opening to the canal.

Already the township, through the efforts of the Schuylkill Canal Advisory Committee, has access to the lower end of the canal. Canal Park was recently opened along Port Providence Road south of Mont Clare, and a hiking trail is opened from Mont Clare to south of Port Providence.

In addition, some \$12,500 has been appropriated to begin restoration of the lockkeepers' house near lock 60 at the northern end of the canal stretch.

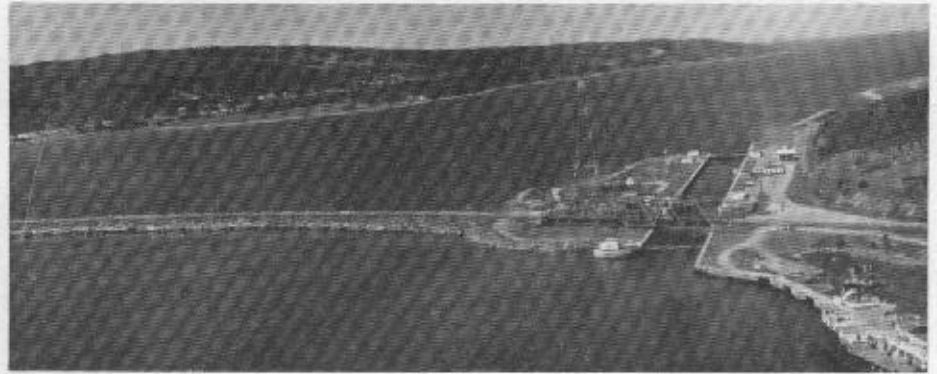
Upper Providence Township has now issued an attractive brochure entitled "Mont Clare, Port Providence Reach, Schuylkill Canal" which can be obtained by phoning the Township office (215) 933-9179 - which is also headquarters for the Schuylkill Canal Advisory Committee.

OHIO CANAL BOAT LOCATED

The LENITA, a canal pleasure boat, is located on the property of Mrs. Virginia Verdier in Sidney, Ohio. The LENITA was still "seaworthy" and on the Great Miami River near the Sidney Boat Club until a few years ago. This 20-foot boat has a tin exterior and a hardwood interior. The LENITA operated in the early 1900s as a pleasure boat on the Sidney Feeder Canal between Sidney and Port Jefferson. Local interests are trying to preserve the boat for posterity.

(The Great Miami River Corridor Committee Newsletter.)

NOVA SCOTIA'S CANSO CANAL



DE WITT CLINTON

(1902-1983)

A memorial service was held September 7 for DeWitt Clinton, a long-time Buffalo attorney and great-great-grandson of the former New York governor of the same name.

Mr. Clinton died Sept. 2, 1983, at Buffalo General Hospital. He was a Buffalo native and a partner in the law firm of Saperston, Day, Lusting, Gallick, Kirschner and Gaglione until retiring a few years ago.

Mr. Clinton graduated from Williams College in 1925 and Harvard Law School in 1928. After graduation, he returned to Buffalo and practiced there until retiring. He was for many years President of the Canal Society of New York State.

(Submitted by Mrs. J. Hayward Madden (ACS) from the BUFFALO NEWS.)

CCS FALL MEETING

The Canadian Canal Society's fall membership meeting on Saturday, October 22, took the form of a day-long tour of historic sites along the old Grand River Canal. Over ninety participants, traveling in two buses, examined the Welland Feeder Canal's remains, and visited dam, lock, and mill sites in Dunnville, Gypsum Mines, Cayuga, Indiana, York, Sims Lock, and Caledonia. A business meeting was held at the Church of St. John the Divine in Cayuga. Here the canal buffs also enjoyed an excellent lunch prepared by the ladies of the church's Evening Guild, and visited the historic Haldimand County Court House. The tour included Ruthven Park, the Greek Revival mansion of David Thompson, a canal promoter.

The vestiges of the Grand River Canal are some of Niagara's great hidden heritage treasures. Begun in the 1830s, the waterway flourished for only a short time, its economic viability extinguished by the railway boom of the 1850s. However, before the advent of the steam locomotive, the water link between Brantford, Dunnville, and the Welland Canal was sensible and practical. In fact, it was another brain-child of William Hamilton Merritt, St. Catharines entrepreneur and canal-builder.

(Submitted by Robert R. Taylor, Secretary, Canadian Canal Society.)

On a recent trip to Newfoundland, Walter L. Meseck stopped by to view the Canso Canal in Nova Scotia. Walter writes in a letter to the Editor:

"Had a nice talk with the Lock Superintendent, who gave me the enclosed photograph. As you may know the lock is really not a lock in the sense that it elevates or lowers a vessel. It is a tide lock like the one at Great Bridge, south of Norfolk. Before they built the causeway in 1955 all traffic, both vehicles and rail had to cross on ferries and since the difference in tides could vary from 3 to 7 feet the tides used to run through the Gut up to 6 1/4 knots. The causeway is built of heavy rock and now carries both the highway and the CN rail line. It is toll, \$1.50 east bound only.

"The photo is taken looking north and you can see the awkward approach to the lock from the near side. Ships and barges have to go in straight unlike the approach from the north. One ship missed and landed on the left hand wall, took out part of the corner and wrecked the Safety Wire. The gates work only one way and they are not double so you can never let a ship run right through when the tide level is equal on both ends."

(Walter L. Meseck, ACS, 2100 Linwood Avenue, Fort Lee, NJ 07024.)

EDMONDS CANAL AUTHOR

Just a note to tie together two articles in Bulletin #46 (August 1983). In "Items of Interest" the notice about Walter D. Edmonds neglects to mention that Edmonds wrote *Rome Haul* in 1929. In 1934, Marc Connelly turned *Rome Haul* into a play called "The Farmer Takes a Wife" with 104 performances at the 46th Street Theater. He then took the play to the movies and that is the 1935 movie reviewed on page 2. Edmonds also wrote *Chad Hanna*, which was made into a movie of the same name, again starring Henry Fonda, this time as an Erie Canaller who quits to join the circus. Curiously, the only other Edmonds story to become a movie, *Drums Along the Mohawk*, also starred Fonda.

(Submitted by Charles F. Hruska, ACS)