JOHN BURTNIAK
NEW ACS DIRECTOR
FOR CANADA

The Canal meeting of the century is about to happen on June 26-28. There is still time to sign up. It's the first World Canals Conference, our 9th Annual International (originally National) Conference on Historic Canals gone intercontinental to Birmingham, England, which has more canal mileage than Venice. A Canal Society of New Jersey tour will be there, and the Canadian Canal Society, and so will you if you sign up quick with the International Convention Centre, Broad Street, Birmingham, B1 2EA, England, phone +44 (0)121 212 4488; fax +44 (0)121 212 4488.

The theme of the conference is "Canals and Regeneration: New uses for old waterways" and it will celebrate the 50th anniversary of the Inland Waterways Association, Britain's canal society, which was formed just in time after WW II to prevent Britain's historic canal system from going down the drain. Because of this volunteer action, Britain has one of the most exciting national parks in the world, a navigable canal system over 2000 miles long, and swarms of volunteer "navies" are restoring even more miles of canal as you read this.

The British idea is spreading around the world, that a country's old sinking ditches are extraordinarily valuable recreation corridors and can even bring jobs and tourist dollars and revive city centers. There are now canals in Europe and North America which have survived only because of tourism. We need to take the idea to other countries such as India, whose historic navigation canals are in decline, as Britain's canals were 50 years ago. India badly needs the jobs and economic benefits which canal revitalization could bring. So it's only appropriate at this intercontinental meeting, as we celebrate the Golden Jubilee of Britain's IWA, that we propose an IWA for India.

At the Birmingham meeting we will see and hear at first hand how the canal network has been used to revitalize the city. We'll tour other canal sites and museums and learn about "canals as a catalyst in regeneration" and how it's done. We'll meet Peter White, Britain's famous canal park planner, meet the Lord Mayor, see a canal play called "Still Carrying" by the famous Miktron Theater Group, go to Coventry (to see the rejuvenated canal basin), and learn how to spell "center." And we'll have a great time with the Brits. See you there!

On the domestic front, the C&O Canal Association, P.O. Box 366, Glen Echo, MD 20810-0366, just issued a special newsletter on "The Great Flood of '96" which caused tens of millions of dollars worth of damage and forced parts of the park to close. Secretary of the Interior Bruce Babbitt was the kick-off speaker at a rally to restore the canal. You can help with a check (marked "Flood Repair" in the corner) to the C&O Canal Association and volunteer for cleanup. Call the Association's telephone mailbox at 301-955-0825.

A 24-page "Downtown & Waterfront Walking Tour" brochure is available from the Portage Area Chamber of Commerce, 301 West Wisconsin Street, Portage, WI 53901. It features the Portage Canal complete with a fold-out map, and it is dedicated to our own ACS Director Frederica Kleist, founder of the Portage Canal Society. She recently deeded her strategic canalside land to the society, which has worked for years to save the canal. Said an anonymous author: "seldom have there been so many dedicated, hard working people gathered for so many years in the common purpose of protecting something that does not belong to them, but because it belongs to us all."

Bill Trout

NEW CANAL MAP AVAILABLE

A Plan and Profile map of the Pennsylvania Main Line Canal Western Division (1828-1864) from Pittsburgh to Johnstown, delineated by William Dzontab, is now available. The map is 22 x 35 inches on heavy paper (65 lb. cover stock) suitable for framing, with canal and rivers highlighted in blue.

Insets included: Location and list of every lock. Maps of canal works at the two terminals (Pittsburgh and Johnstown), 1828 timetables (David Lack's Western Transportation Company), Map of Pennsylvania, locating the five divisions of the Main Line Canal. Cross-sectional view of canal, with dimensions, and Panels of informative text.

The retail price is $4.00/single copy, not folded, sold over the counter. Mail order: $7.00/single copy, rolled (price includes mailing tube and postage). Wholesale price: 1/3 off the single copy price. Minimum order: 12 maps, sold in increments of one dozen, at $32/dozen. Price includes shipping. Terms: 30 days.

Make check/money order payable to Blairsville Area Historical Society. Address orders to: Canal Map, Blairsville Area Historical Society, 116 E. Campbell St., Blairsville, PA 15717-1310.
WE CAN REBUILD THE CANAL

By Bruce Bablit

The C&O Canal is a wreck. All along the 185 miles from Washington to Cumberland in the Appalachians, the recent floodwaters have washed away sections of the towpath, flooded lockhouses, and blown out locks and levees.

In the upstream reaches, the graceful aqueducts of hand-cut stone that carry the canal across Antietam Creek, Monocacy River and other tributaries are still threatened by high water and huge rafts of driftwood and ice.

The flood of 1996 comes at a very bad time in the history of the National Park Service.

One congressional committee is threatening to close down and sell off units of the system: "C&O Canal National Historic Park" is on the hit list of House closure bill ER 260. Still other committees are holding the Park Service hostage, threatening mayhem on all parks unless President Clinton agrees to more clear-cutting of old-growth forests in the Pacific Northwest and in Alaska.

At this rate, it could be that the ruins of the historic C&O Canal will simply remain there as a symbol of how Congress has abandoned our National Park System.

There could, however, be a brighter outcome.

It is just possible that the friends of the C&O can rally support for the restoration of the canal and in the process awaken grassroots support for the National Park Service in its time of greatest need.

Every citizen who has ever spent a spring morning on the towpath above Georgetown, or lingered on a summer day at Great Falls, or visited the boat basin at Williamsport is a voice for the canal. It is the only canal in the country that is a public place from start to finish—an entire system from the grassroots of canal construction, a watercourse that helped move America over the Appalachians into the Ohio Valley and beyond to create a continental nation.

And some 3 million to 4 million Americans still experience that journey each year, walking, biking or simply paying a toll at the towpath that hugs the Potomac River. On the same path, miles of towed canal boats loaded with coal, cement, flour and barrels of whiskey through the Piedmont farm country, past the hollowed ground of Antietam, along the Blue Ridge to join the Shenandoah at Harpers Ferry, where John Brown met his fate.

To restore the canal in this time of fiscal austerity will require a vital partnership between Congress, the corporate sector and individual citizens, all pulling their share of the weight of restoration. Congress last week authorized $2 million in emergency restoration funds—a hopeful sign. But it must follow up by releasing the full Park Service budget from its crude attempts at extortion. It then can energize a new restoration partnership with two additional steps: Authorize the use of visitor fees for repair and pass meaningful concession reform.

Under existing law, the admission fees paid by park visitors do not stay in the National Park System; they flow straight to the Treasury. But Congress can and should change that law so park visitors can help restore our parks by allowing the Park Service to keep all or a portion of the fee income in the park to finance restoration. In the case of the C&O, a $1 increase in the existing $4 per-car-fee for admission to Great Falls and other entry points would generate $1 million each year for maintenance and restoration.

Second, it is an enduring scandal that Congress has forced the National Park Service to hand over park concessions for as little as 2 or 3 percent of gross revenue. Meaningful concession reform would enable the Park Service to raise real revenue for park restoration. There are dozens of historic buildings, lock houses and old mill buildings that could be leased out for bed and breakfast houses and other services to the benefit of visitors and historic preservation alike.

The private sector must also help. Out West, Yosemite National Park receives nearly $1 million per year from corporate and business supporters. There should be a similar level of support from the many businesses in Washington and on both sides of the Potomac in Maryland, Virginia and West Virginia.

In coming weeks, the National Parks Foundation, a private support group chartered by Congress will mount a corporate support campaign designed to match congressional restoration appropriations dollar for dollar.

We can also help as individuals with both contributions and volunteer work in the restoration effort. The National Park Foundation accepts individual, tax-deductible donations for a C&O restoration effort. NPF will assign 1101 17th St. NW, Suite 1102, Washington, D.C. 20036; the phone number is (202) 785-4500.

Once the damage assessment is complete and emergency stabilization is set, the long process of restoration will begin, and there will be plenty of opportunity for volunteers to make a real contribution by cleaning and helping to repair stretches of the canal. The National Parks and Conservation Association, the Potomac Conservancy, the National Trust for Historic Preservation and the C&O Canal Association are all working with the Park Service to coordinate volunteer efforts, which should be underway by early March.

I plan to be the first volunteer when the call goes out.
THE PANAMA CANAL - AFTER EIGHTY YEARS

By Bill Shank

Our ship approaches Pedro Miguel Lock. In the distance can be seen the Culebra Hills.

One of my major goals in life has always been a trip through the Panama Canal. This year I was offered this opportunity as a result of activities by my sister — Betty Post of Houston — and the same group with whom I had toured the lower Mississippi on the “Mississippi Queen” in 1992. We were scheduled to leave Acapulco on January 24th on the CROWN DYNASTY, a British Luxury Liner, for a ten-day cruise down the west coast of Mexico, through the Canal and north to Fort Lauderdale.

I flew to Houston, via Denver (through a heavy snow-storm) and spent several days with my sister before joining her group to fly to Acapulco, where the CROWN DYNASTY was waiting for us. Rev. Harry Adamson, a retired minister from Houston, was the leader of our group to make sure no one got lost or separated from his baggage en route. He did a good job, and also arranged for me to make a brief talk on board to tell how I became interested in the American Canal Society, and canals in general.

The CROWN DYNASTY, built just two years ago, is an 800-passenger ship with a 200-member crew, who arranged shore trips at our various ports of call and had excellent entertainment every night.

(Continued on Page Four)

The Cunard CROWN DYNASTY, docked at Costa Rica.

The harbor at Acapulco, where we boarded our ship CROWN DYNASTY for our trip through the Panama Canal.

AMERICAN CANALS, NO. 96 FEBRUARY 1996

Page Three
COSTA RICA

The M.S. Cunard Dynasty docked January 27, 1996 at Puerto Caldera, Costa Rica. Many of the passengers took a bus tour to the capital, San Jose.

The country of Costa Rica is located on the Central American isthmus between Panama and Nicaragua. It is crossed by mountain ranges of volcanic origin which constitute a prolongation of the Andes, with elevations up to 11,400 ft. The capital, San Jose, is at an altitude of 3,600 ft., with an average temperature of 74°F (23°C) and a population of 1.1 million inhabitants, including suburban areas.

Christopher Columbus actually named Costa Rica (rich coast) in 1502 under the assumption that the land was filled with precious metals. The earth never yielded gold or silver, however, the name was perfect for the wealth of natural beauty and flawless climate. After Columbus, the Spaniards colonized Costa Rica and discovered the richness of the farmlands.

The country rests just ten degrees north of the Equator. At its narrowest point from east to west, there are just 76 miles which separate the Caribbean Sea from the Pacific; the widest span is only 180 miles. From north to south, Costa Rica stretches 275 miles. With a population of 2.7 million "ticos" (the local name for the inhabitants) and a land mass of 20,000 square miles, Costa Rica is about as large as West Virginia in the United States.

Costa Ricans have reason to be proud of their political system. One of the oldest democracies in the Americas, Costa Rica is a free, independent Republic. Costa Ricans enjoy a special and complete political tranquility - their commitment to democratic freedoms has earned Costa Rica its reputation as "the Switzerland of the Americas."

The peace is born of brave beliefs, so much so, that the country has no standing army - in fact, the Constitution forbids it. Costa Rica has been nominated twice (as a country) for the Nobel Prize for Peace and residents swelled with pride when, in October 1987, Costa Rica's President Dr. Oscar Arias Sanchez was awarded the Nobel Prize — well-deserved world recognition of the Costa Rican way of life.

The social effects of Costa Rica's democratic traditions are also clearly visible. As early as 1848 a free and compulsory educational system was established. The government has been able to create generous budgets for medical services and educational programs, resulting in a literacy rate of over 95%, an extremely low infant mortality rate and an average life expectancy of well over 70 years.

(Credit: "The Chronicle", daily log of the M.S. Crown Dynasty.)

We pass through the Culebra Cut, where the most difficult excavation work took place on the Canal. Cave-ins and slides developed here, both during construction and afterward. Today there is still a continuing operation to widen and improve the banks of the "cut".

Route of our voyage.
(Continued from Page Three)
on board, not to mention wonderful food! We put
ashore at Costa Rica, Jamaica and Key West,
before arriving at our final port in Fort Lauderdale,
Florida.
Our trip through the Panama Canal was
uneventful and the weather was good. As a
passenger liner, we were given priority over the
freight boats and entered the Canal immediately
upon arrival, passing through in about seven
hours. (Concluded on Page Seven)

Downtown San Jose, the capital of Costa
Rica, showing the Post Office building.
THE PANAMA CANAL TODAY

On January 29, 1996, the M.S. Crown Dynasty passed under the International Bridge to transit the Panama Canal from the Pacific to the Atlantic.

Among the great peaceful endeavours of mankind that have contributed significantly to progress in the world, the construction of the Panama Canal stands as an awe-inspiring achievement.

The unparalleled engineering triumph was made possible by an international work force under the leadership of American visionaries, that made the centuries-old dream of uniting the two great oceans a reality.

In 1534, Charles I of Spain ordered the first survey of a proposed canal route through the Isthmus of Panama. More than three centuries passed before the first construction was started. The French labored 26 years, beginning in 1880, but disease and financial problems defeated them. (1889)

In 1903, Panama and the United States signed a treaty by which the United States undertook to construct an interoceanic ship canal across the Isthmus of Panama. The following year, the United States purchased from the French Canal Company its rights and properties for $40 million and began construction. The monumental project was completed in ten years at a cost of about $387 million. Since 1903 the United States has invested about $3 billion in the Canal enterprise, approximately two-thirds of which has been recovered.

The building of the Panama Canal involved three main problems—engineering, sanitation, and organization. Its successful completion was due principally to the engineering and administrative skills of such men as John F. Stevens and Col. George W. Goethals, and to the solution of extensive health problems by Col. William C. Gorgas.

The engineering problems involved digging through the Continental Divide; constructing the largest earth dam ever built up to that time; designing and building the most massive canal locks ever previously envisioned; constructing the largest gates ever swung; and solving environmental and health problems of enormous proportions.

Now, more than 80 years after the first official ocean-to-ocean transit of the waterway, (August 15, 1914) the United States and Panama have embarked on a partnership for the management, operation and defense of the Panama Canal. Under two new treaties signed in a ceremony at OAS headquarters in Washington, D.C., on September 7, 1977, the canal will be operated until the turn of the century under arrangements designed to strengthen the bonds of friendship and cooperation between the two countries.

(Credit: "The Chronicle", daily log of the M.S. Crown Dynasty.)
Looking backward as we leave the upper lock at Gatún, with the Lake in the distance. Note the double lock gates closing behind us, a safety feature to assure the level of the lake water.

JAMAICA

The M.S. Crown Dynasty docked in Montego Bay, Jamaica on January 31, 1996. Most of the passengers rode the left-hand drive buses along the north side of the island as far east as the "Greenwood Great House"—on a 19th century restored plantation.

This large island, just south of Cuba, holds a strategic spot in the Caribbean Ocean, 550 miles north of the Panama Canal. Because of its location, the United States in 1940 obtained from Great Britain, who conquered the island in 1655, a 99-year lease of an area south of Kingston for a naval and aviation base.

Its high mountains and luxuriant lowland plantations have made it the breadbasket of the West Indies. Its chief exports are sugar, bananas, rum, tobacco, cocoa, pimentos and coffee. In recent years a significant deposit of Bauxite has been discovered in Northern Jamaica—the principal ore used in producing aluminum. Regular shipments of Bauxite now flow to such USA ports as Richmond, Virginia, the home of Reynolds Metals.

The island is 144 miles long, 40 miles wide with an area of 4450 square miles, about the size of Connecticut. Great Britain granted the Jamaicans their independence about 20 years ago. The natives have since made a particular effort to attract the American tourist trade.

A special party for all the passengers is held on board on one of the last nights of the trip.

KEY WEST

The M.S. Crown Dynasty docked in Key West on February 2, 1996. The passengers rode the miniature trains and trackless trolleys around this colorful little city.

Curving westward from below Miami, the 100-mile scattering of islands called the Keys (from the Spanish word cayo) are stitched together by the world's longest ocean-going road. The Overseas Highway soars and leaps like a ridge to the remote old naval town of Key West, located halfway between the Florida mainland and Havana, Cuba.

Tradition has it that Key West was named Cayo Hueso by the discoverer of Florida, Ponce de Leon, who knew the island to be the most westerly of (Conclusion on Page Seven)

The heart of the Panama Canal is the man-made Gatún Lake, which feeds the Gatún Locks. Water from the lake flows 32.5 miles into the Pedro Miguel Locks. Miraflores Lake connects the Pedro Miguel and Miraflores Locks. In the distance, Madden Lake collects water to help the canal through the dry season, December to April.
A view of downtown Key West from the upper deck of the DYNASTY, southernmost harbor in the United States, just 90 miles north of Havana, Cuba.

KEY WEST
(Concluded from Page Six)

the chain. But for many years it was called Cayo Hueso, Bone Key, perhaps because a fierce battle with the Indians in the 18th century left the island littered with corpses. But for all its violent past, Key West remains one of the friendliest towns in Florida.

This 1-by-3½ mile sub-tropical island is populated by a balance of retired military personnel and their families, Cuban exiles, and young people into health-foods and crafts.

The residents are known as conchs (pronounced “konks”), after the king conches which inhabit the waters offshore. These molluscs cling tenaciously to the underwater rocks. In the same stubborn manner, before the railway or highway were built, residents of Key West lived through several hurricanes, determined not to budge despite the poor communications and isolated life.

Key West is truly America’s southern most city, a city of the past and a city of the future. Key West has more character, history and live characters per square mile than any city in the world. Discovered by Ponce de Leon in 1513, the island was claimed by Spain. The name Key West is the English translation of the Spanish Cayo Hueso meaning Bone Key. The bones Ponce de Leon found were from the war with the Indian groups of Indians who found dead due to the Spaniards’ jokes and Spanish limestones.

Having just traveled through the tremendous liftlocks of the Columbia and Snake Rivers several months earlier, it seemed a bit of a “letdown” to pass through the Panama Locks with lift of only 30 feet or less, as opposed to 100 feet or more per lock in Oregon and Washington. However, we must remember that at the time it was built, there was nothing to exceed the importance of the Panama Canal any where else in the world. Still, it is important to note that we took this engineering marvel over to the unstable government of Panama in a few more years! I hope this decision can be reversed when the year 2000 arrives!

Upon docking in Fort Lauderdale and separating my baggage from that of the Houston group, I phoned home to find that the Washington and Baltimore airports were socked in by heavy snow storm. However, a few hours later my daughter in Ann Arbor dug out and made it to the Baltimore Airport to pick me up. In spite of the snow, it was good to be home again.

One thing I did not realize is how far east the Panama Canal is located. If you draw a line due south of Pittsburgh, it intersects the Panama isthmus at the Canal. Starting in Acapulco, we passed through three different time zones: Mountain, Central and Eastern, before transting the Canal. We passed from the Pacific to the Atlantic by traveling from the southeast to the northwest, just the opposite of what you would expect!

FINAL IMPRESSIONS
(Concluded from Page Four)

When you consider that the Panama Canal has been in continuous operation for over eighty years since its completion in 1914, it appears to be in remarkably good condition. All its double-locks and all its electric "mules" and other accessories seem to be operating well. The maintenance work, which must be done alternately, on one or other of the various pairs of double locks, is apparently well organized. There is very little evidence of "wear and tear" of the lock walls or the pinion tracks of the locomotives, or the lock gates, - a situation you can often find on such other canals as the Erie, or various waterways maintained by the Corps of Engineers in continental USA.

Upon traveling through the numerous liftlocks of the Columbia and Snake Rivers several months earlier, it seemed a bit of a "letdown" to pass through the Panama Locks with lift of only 30 feet or less, as opposed to 100 feet or more per lock in Oregon and Washington. However, we must remember that at the time it was built, there was nothing to exceed the importance of the Panama Canal any where else in the world.

TOWPATHS TO TRAILS

The national organization that helped America realize the enormous trail potential of abandoned railroad corridors has begun to look at canals. The Rails-To-Trails Conservancy, in cooperation with the Rivers, Trails and Conservation program of the National Park Service (RTCA) has begun researching historic canal corridors through a "Toewpath-To-Trails" initiative launched earlier this year.

"Abandoned railroad corridors, riverways, and waterfront areas have served as traditional routes for trail and greenway development. Historic canal corridors and their adjacent towpaths provide additional resources that have, for the most part, been overlooked," stated Kristina Oka, Special Projects Assistant for RTC. This cooperative initiative is a first-of-its-kind effort to inventory historic canal systems east of the Mississippi and determine the recreational potential of what remains.

Nearly 5,000 miles of canals were constructed in America from the late-1700s to the mid-1800s. These canals were the major transportation arteries of the nation, along which many cities and towns grew and flourished. "Adaptive reuse of canal corridors as trails will not only give the public access to historical relics, but also serve as transportation and recreation facilities for walkers, joggers, bicyclists and others," said Rory Robinson, RTCA spokesperson.

The results of the "Toewpath-To-Trails" study have recently been published and they reveal some interesting findings. There are at least 35 canals in the northeast and midwest which have towpath-trails along some portion of their length. These trails total over 1,000 miles. In addition, there are 767 miles of canal towpath that, due to their condition, have the potential to become trails, and towpath-trail conversion efforts are now underway along 31 canals.

RTCA and RTC presented the results of this study at the 1995 International Conference on Historic Canals in August. For more information or a copy of the 22-page report, Toewpath-To-Trails, contact Kristina Oka at the Rails-To-Trails Conservancy, 1400 16th St., N.W., Washington, D.C. 20036, (202) 797-5400.
TAINTER GATES

By Bill Shank

Control Stand

Floating bulkhead slot

Gate trunnion

Gate Opening Direction

Navigation Lock Chamber (Empty)

In a way, the principle of the “Tainter” operation is similar to that of the “Drop Gate” invented by Josiah White on the Lehigh Canal. White’s device is a nearly vertical gate across the upper lock chamber, rotating on a horizontal axis across the upper lock bed. It simply falls of its own weight into the lock bed when the water pressure is equalized both sides. Once the boats bound upstream or down have passed over it, the “Drop Gate” is cranked up again into a nearly vertical position, where it remains while operations on the lower chamber are taking place.

Thanks to phone conversations and correspondence with James E. Bluhm, P.E., Mechanical Engineer, Operations Division, Technical Support Branch of the U.S. Army Corps of Engineers, Walla Walla District, Washington, I now have a much clearer understanding of the operation of the Tainter Gates used in the locks of the Columbia and Snake Rivers navigation system.

Essentially the Tainter Gate is a partial cylinder, lying on its side across the upper lock chamber and rotating on two trunnions, one on each side of the lock. When rotated upward and locked in a closed position, the convex surface of the Tainter holds back a channel of water approximately twenty feet deep. The Tainter Gate always remains closed while the lower lock chamber is being drained or filled. When the Tainter Gate is rotated downward into its open position, it permits full-draft vessels to pass over it, either upstream or downstream, to enter or leave the lower chamber of the lock.

A committee from the Middlesex Canal Association is shown presenting a copy of their commemorative poster (in full color) to Governor William Weld of Massachusetts. Left to right: Frances Ver Planck, Burtver Planck (both past presidents of the Middlesex Canal Association); Jay Griffin, Medford Historical Society; Governor Weld; Dr. Joseph Valeriani, president of the Medford Historical Society; and Dr. Carl Seaburg, coordinator of the Association Poster Publication committee.
The Emita II, a former ferry boat, which has been reconstructed by the Mid Lakes Navigation Company to lower its superstructure to allow passage under the extremely low bridges of the western Erie Canal.

The Emita II inside the chamber of Lock #33 on the western section of the Canal May 21, 1995. This trip marked the completion of the three-day Spring Field trip sponsored by the Canal Society of New York State.

The final day of the May 19-21, 1995, CANAL SOCIETY of NEW YORK'S spring weekend consisted of an excursion on the NY STATE BARGE CANAL from Fairport to Spencerport aboard the vessel EMITA II, a former Maine ferryboat converted for use on the waterway by the Peter Wiles family of Skaneateles, New York. After spending two days examining the remains of abandoned canals it was felt that participants should have the experience of navigating on a genuine "working" waterway. New York State is fortunate in having a functioning canal system which consists of four distinct branches. During the last years of the 19th Century when other states such as Pennsylvania, New Jersey and Ohio were contemplating abandonment of towpath canals because of railroad competition New York had other ideas. Thanks to the vision of men such as Theodore "Teddy" Roosevelt who was governor at the time it was decided to retain a means of transporting freight by water from the Hudson River near Albany to Lake Erie near Buffalo and from Albany north to Lake Champlain. Although the magnificent ENLARGED ERIE with its graceful aqueducts and stone lock chambers would be closed its replacement would be a modern canal with concrete used in place of natural rock. Its chambers would be 300 feet long and much of it would utilize existing rivers rather than man made cuttings. Begun in 1905 and completed in 1918 the NEW YORK STATE BARGE CANAL roughly parallels the ENLARGED ERIE and from Rochester west to Lake Erie uses exactly the same alignment except in a few minor spots where it deviates slightly. Along this latter stretch excavation for the BARGE CANAL simply involved making the existing prism of the 1850 vintage ENLARGED ERIE wider and deeper. Furthermore because the original 1925 CLINTON'S DITCH follows very closely the right of way of the ENLARGED ERIE it's accurate to say that from west of Rochester to Lake Erie all three waterways are in the same alignment. This is not the situation east of Rochester where three distinct canals exist or formerly existed. Therefore our Sunday journey would be along an original stretch, the same as that traveled by pocket boat passengers 150 years ago. The cry "low bridge, everybody down" would have as much meaning for the members of our group as it did for those aboard the SENACA CHEF as it made its initial voyage from Buffalo to Albany in 1825.

The NY STATE BARGE CANAL represents the final upgrading and enlargement of the ERIE CANAL and because men of vision decided to spend money creating it at a time when railroads had eclipsed canals as carriers of passengers and freight it's here today. Pennsylvania in the early years of the present century could have also rebuilt portions of its MAIN LINE CANAL into a larger and more modern waterway in order to carry bulk products such as coal, iron ore, and grain but instead chose to allow the canal era to completely pass from the scene. Thus the Keystone State has nothing comparable to New York's approximately 600 miles of functioning canals. Likewise New Jersey and Ohio decided against upgrading their 19th Century waterways into modern canals with lock chambers in the 300 foot range. Some historians feel that Governor Roosevelt's motivation in building a waterway across his state so late in the canal age was for use as leverage against the powerful Vanderbilts who controlled the New York Central Railroad. With the option of sending their products to market by barge the state's manufacturers were not totally at the mercy of the "robber barons" controlling the railroad industry who might otherwise be in a position to levy whatever tariffs they so desired.

Construction of the NEW YORK STATE BARGE CANAL was by 20th Century machinery rather than by 19th Century pick and shovel. The same equipment employed to build the Panama Canal saw use in New York as the project moved forward from 1905. The new waterway had a depth of from ten to twelve feet versus seven for the ENLARGED ERIE and four for CLINTON'S DITCH, enabling it to accommodate barges with four times the carrying capacity of its predecessor. The lock chambers were likewise designed with a 300 foot length and modern machinery operated by current generated on site using turbines. (These have recently been phased out in favor of commercially acquired electricity. However the apparatus has been retained in full working order for use in emergencies.) The BARGE CANAL was never intended to be used by mule hauled boats and therefore lacks a towpath. From its inception only self propelled vessels were supposed to navigate over it. From the time it opened in 1918 until after World War II these were steam powered with the fuel often being coal. Thus at various points along its route coaling stations existed. Beginning in the late 1940s diesel propulsion became the norm. Both self propelled barges as well as those pulled or pushed by tugs have been used on the BARGE CANAL.

During the years that the BARGE CANAL was being constructed the ENLARGED ERIE remained in use. However once the parallel new waterway was completed within a particular section its predecessor was shut down and its water
drained. This was a gradual process spread out over a decade. Certain portions of the older canal were retained as feeders to the BARGE CANAL but navigation was eliminated. This meant welding permanently shut movable bridges and ceasing dredging operations. To supply water to the BARGE CANAL'S summit level near Rome, N.Y., an artificial lake called DELTA LAKE was created by damming several streams. The portion from Buffalo to Syracuse is supplied directly by Lake Erie. As part of the 1965-1918 BARGE CANAL project a number of warehouses and terminals were built in several "on line" cities including Rochester. Likewise maintenance yards were installed to handle the upkeep and repair of the many dredges and tugboats used to keep things in full working order. Some of this original equipment survives and is used on a regular basis today, now in its eighth decade.

The NY STATE BARGE CANAL was an important carrier of bulk freight from 1918 until the early 1960s. In 1959 the St. Lawrence Seaway captured the grain traffic which was formerly shipped by canal boat from Tonawanda to Albany and thence down the Hudson River to New York City. Oil pipelines likewise cut transporting of petroleum products although a few oil tankers still travel both the Champlain and the Erie Canals. A small amount of residual commercial traffic lingered into the 1970s and 80s. One of the last vessels was a motorized barge called the DAY PECKINPAH which quit in 1994. It transported bulk cement from Oswego to Utica. Although some people have argued that New York State should shut down the BARGE CANAL on the grounds that it's a waste of taxpayer money more intelligent voices have prevailed. These people view the waterway as something truly unique and see a bright future for it. What other state in the nation has anything comparable? Recently the waterway's operation has been turned over to the NY STATE THRUWAY AUTHORITY. By combining the canal with the highway funding is assured for regular maintenance and upkeep and to pay the employees. The BARGE CANAL is now 80 years old and while in good condition repair work must be done. Many lock chambers are showing deterioration of their concrete walls and several miter gates are in need of replacement. Fortunately the BARGE CANAL has a number of workshops where any kind of part or structure can be fabricated by its skilled craftsmen. According to a recent NEW YORK TIMES article the BARGE CANAL costs about $15 million dollars a year to keep open - a small price compared to the billions spent on roads. Furthermore tolls have now been levied on pleasure boaters. This was done to show the general public that people who benefit from the waterway are paying their fair share. Recreational boating on the BARGE CANAL is rapidly growing and each year additional marinas are built along its banks.

Owners of yachts use the BARGE CANAL to travel from the Great Lakes to New York City and then down the Intra-Coastal Waterway to Florida and the Gulf of Mexico. Beginning in late April a steady procession of them can be seen moving east toward Waterford where they lock down into the Hudson River. During the busy summer months these locks are very busy.

For those not affluent enough to own a private boat it's still possible to travel the length of the entire BARGE CANAL. A number of companies presently operate day excursions - over segments of the waterway and these trips normally include passage through several locks. At least two firms feature multi-day itineraries covering major divisions of the canal. For instance MID-LAKES NAVIGATION COMPANY takes passengers from Albany to Syracuse on three day voyages and from Syracuse to Tonawanda near Buffalo also in three days. It's possible to take both trips back to back in order to experience the BARGE CANAL's full length. Another firm, AMERICAN CANADIAN & CARIBBEAN CRUISE LINES based in Warren, Rhode Island offers trips from New York City up the Hudson River to Waterford and through the BARGE CANAL to Syracuse. They then head north via the OSGEGO CANAL into Lake Ontario where they proceed to Buffalo or down the Seaway to Montreal and Quebec. These are truly luxury trips costing a lot of money. The company is presently building a boat which will cover the entire BARGE CANAL from Waterford to Tonawanda. Their present vessel must use the Eastram route because from Syracuse to Tonawanda the depth of the waterway is only 10 feet. The new luxury boat upon which passengers will sleep is being designed for use in shallower waters. It will compete directly with MID-LAKES NAVIGATION COMPANY which operates the EMITA II over the entire length of the BARGE CANAL.

Our group of 60 "canalers" boarded the EMITA II at Fairport, a town located east of Rochester. The plan was to navigate approximately 18 miles...
west to Spencerport where two charter buses would be waiting to carry us back to the Depot Inn at Pittsford. The EMIT II was chosen since she was available for charter on that day and also because the CANAL SOCIETY OF NEW YORK has an excellent relationship with her owner CAPTAIN DAN WILES. The EMIT II has been running trips on the BARGE CANAL for about 20 years. Constructed as a ferryboat in the 1950s by the BLOUNT SHIPYARD in Warren, Rhode Island she was subsequently modified for the canals. One of the changes was a pilothouse set inside the upper structure to clear low bridges.

Fairport has been given the nickname "Tour Boat Central" because a number of excursion vessels are based there. During the summer season they are fully booked. In the evening many feature dinner cruises with such entrees as prime rib and Lobster Newburg. The town itself has rehabilitated its canal-side area and several old warehouses now serve as restaurants and boutiques. There is no question that retention of the BARGE CANAL has helped to promote tourism in the EMPIRE STATE.

Upon departure from Fairport a continental breakfast was served and most passengers moved to the upper deck since the sun was shining brightly and the air was warm. This was certainly "Canalizing As You Like It." Moving west we passed many pleasure craft plus a few "upscale" eating establishments. Also new condominium complexes were spotted, many incorporating the name "Canal." (e. "Canalridge Estates, Canal Mews, Canal Village," etc.) CAPT. WILES provided a running commentary about the various sights we were viewing. He explained that a walkway or jogging path had been completed along the entire bank of the canal from Fairport to Lockport. It's also open to cyclists. Many such "exercise buffs" were seen as the EMIT II glided past. Certain villages had banners and signs announcing forthcoming "Canal Days" and people were spotted wearing "I LOVE CANALS" T-shirts. All I could think was that DeWitt Clinton would be pleased.

At about an hour we passed through Pittsford and alongside RICHARDSON'S CANAL HOUSE RESTAURANT, an authentic 1818 establishment which provided food and drink for the men who built the original CLINTON'S DITCH waterway and later served the needs of those working the boats. It's prices are certainly no longer in tune with the wallets of today's working class men and women. Instead, it's oriented to the "yuppies" and "yuppie" set from nearby Rochester who drive up in their BMWs and Mercedes. Soon the EMIT II glided over the GREAT EMBANKMENT and CAPT. WILES pointed out the exact locations of the 1912 and 1974 breaks in the walls. Also explained were the stop gates located at either end of the elevated section which can be lowered in the event of another break, thereby minimizing loss of water.

As the EMIT II navigated the embankment it was evident that we were sailing considerably above the level of the IROCDEQUOT VALLEY.

We passed the abandoned bridge piers which once belonged to a trolley car line from Rochester to Canandaigua which was built in the early years of the present century and cut about 1930. It died because of automobile competition. At many places on the BARGE CANAL old railroad bridge piers can be seen. These carried routes which ran north-south from the Pennsylvania coal fields to Lake Ontario. Here the coal was transferred to boats for transport to Canadian cities and power plants. Conversion to oil fuel (in pipelines) spelled the end for these railroads. Following closure the bridges were removed from across the BARGE CANAL but many of the piers were left in place.

CAPT. WILES explained that the railroads purposely constructed their bridges over the BARGE CANAL as low as possible in order to frustrate the boat owners. It prevented them from piling cargo to high levels on the decks. This in turn reduced their carrying capacity and sharply cut down on profits.

At a place known as KING'S BEND the route of the ENLARGED ERIE CANAL separates from that of the BARGE CANAL which passes a few miles south of Rochester. Until 1920 the old waterway ran directly into that city's downtown area and across the Genesee River on an aqueduct. It rejoined the present BARGE CANAL on the west side of the city where the previously described JUNCTION LOCK is situated. Lock #32 and then #33 were passed through as the EMIT II gained elevation. For most passengers, all veteran "canalers," this was not their first experience of a lockage. For the few doing it initially it must have been truly fascinating. As we neared Lock #33 another excursion vessel called the SAM PATCH was encountered headed in the opposite direction.

The EMIT II then entered the so-called "ROCHESTER CUT" which takes it through a section with steep walls on either side. This portion was excavated in the period from 1910-1918 using modern machines and blasting techniques. The guide book authored by tour leader DR. THOMAS GRASSO explained all pertinent details and had pictures showing the work in progress. As the walls of the cut became higher he pointed out various geological features. Basically there are alternating layers of sand and limestone which are clearly delineated from one another. When it was decided to run the BARGE CANAL south of Rochester the excavation of this segment was required. At certain points the walls of the cut were over 200 feet high.

At the approximate mid-point of the "DEEP CUT" the Genesee River was crossed "on the level." Vessels are thus able to head in four different directions. The warehouses and loading facilities of the BARGE CANAL in the Rochester area are situated on the Genesee about two miles north of this crossing. A dam in downtown Rochester maintains the water level of the river so canal boats can use it. North of the dam the Genesee degenerates into rapids and then it passes over a waterfall into the Rochester Gorge. The portion of the BARGE CANAL where it meets the river is surrounded by a park with beautiful trees and graceful concrete bridges. Designed by Frederick Olmstead these crescent shaped structures permit people to walk across the canal at several points. In the opinion of this writer this is the prettiest section of the entire NY STATE BARGE CANAL.

Leaving the cut we spotted the remains of the loading docks which were used by trucks which dumped scrap metal directly into canal barges. We also saw the terminal connections of pipelines which headed in the direction of nearby storage tanks. Until the 1970s petroleums and other liquids

(Concluded on Page Twelve)
CSNY'S SPRING FIELD TRIP - III

At various points along the western section of the Canal are excursion vessels which take passengers along short sections of the Canal, often with lunch provided. Here is the "Spencerport Lady" awaiting passengers.

(Concluded from Page Eleven)

were transported to Rochester by canal barge and then pumped into the aforementioned tanks for storage. This business is now gone. Soon we passed the location of the Junction Lock where the Enlarged Erie canal rejoined the right of way of the newer waterway. The JUNCTION LOCK was built in 1918 to permit boats from the BARGE CANAL to gain access to downtown Rochester where several industries dependent on water transportation were situated. Since the water level in the BARGE CANAL was three feet higher than that of the older waterway a lock was required. This structure only lasted for two years until the industries in the city were relocated to the new terminal facilities either on the BARGE CANAL or on the short section of the Genesee River near the Court Street Dam. The 6 mile remnant of the ENLARGED ERIE was then abandoned and the JUNCTION LOCK filled in. It's concrete walls are now crumbling and its chamber has trees growing inside.

Near Rochester we passed a couple of Barge Canal work-boats. These are used primarily to tow barges, dredges and other equipment needed to keep the waterway at proper depth.

On the Canal west of Rochester we passed under a number of graceful bridges designed by Frederick Olmstead. This is probably the prettiest part of the western waterway.

One of the passengers aboard the EMITA II was Michelle "Shelly" McFee, author of the recently published book on the CHENANGO CANAL titled LIMESTONE LOCKS AND OVERGROWTH: THE RISE AND DESCENT OF THE CHENANGO CANAL. (Purple Mountain Press, 1993) Mrs. McFee discussed her interest in canals and the manner in which she conducted her research on this so-called "lateral canal" which connected Utica and Binghamton, N.Y.

Lunch was served aboard the EMITA II and an hour later we arrived in Spencerport where two buses returned us to the Depot Inn in Pittsford. This three day CANAL SOCIETY of NEW YORK field trip had been a most fascinating experience. All 60 participants learned a great deal about the industrial and canal history of the Rochester area.

CANAL CALENDAR

April 12-14, 1996
Canal Society of Indiana Tour "From the Forks to Paradise", Huntington/Wabash. Contact: (219) 432-0279.

April 18, 1996
"The Railroad Navies of New York Harbor" by Thomas Flagg, 8 P.M., Farinon Center, Lafayette College, Easton, PA.

April 19-21, 1996
Combined Spring Tour of the Pennsylvania and Ohio Canal Societies, Ohio & Erie Canal, Akron to Peninsula. Write R. Baird Stewart, 215 W. 12th St., Salem, OH 44460.

April 27, 1996
42nd Anniversary Justice William O. Douglas Hike on the C & O Canal, White's Ferry to Monocacy Aqueduct and return.

April 27 & 28, 1996
Canal Society of New Jersey Spring Field Trip, Scranton to Cuddebackville, D & H Canal.

May 3-5, 1996
Annual Meeting of the Virginia Canals and Navigational Society, Goochland, Virginia. Write Mrs. Samuel Hopper, 1229 Summerfield Dr., Herndon, VA, 22070.

May 4, 1996
Canal Boat rides on Saturdays and Sundays in May, Hugh Moore Park, Easton, PA.

May 11, 1996
C & O Canal Bike Ride. Contact: Mario Abbate (301) 540-6974.

May 12, 1996
Pawpaw Tunnel Walk on C & O Canal.

May 16, 1996
"Navigation on America's Inland Rivers" by Lance Mott. 8 P.M., Farinon Center, Lafayette College, Easton, PA.

June 23, 1996
Canal Festival at Hugh Moore Park, Easton, PA.

To: Dr. William E. Trout III, President American Canal Society.

For the past three years I have been honoured to serve as the Canadian Director to the American Canal Society. As you know I have been quite interested in both the American and Canadian canal scene for many years and appreciated the opportunity to work more closely with the A.C.S.

I did speak with past A.C.S. Director Lou Cahill about the difficulty of committing sufficient time to canal affairs because of work and family obligations and understand he has also spoken with you in this regard. Due to the above I have regretfully decided to resign as A.C.S. Director. In making this decision I would like to recommend a replacement in the person of John Butnack. John is a founding member and director of the Canadian Canal Society. He should be a familiar face with canal buffs on both sides of the border as he has organized and participated in many of the joint meetings and events of the C.C.S. with the American Canal Society and the New York State Canal Society, among other organizations. I am sure you will find him an excellent and dedicated Director for A.C.S.

While I may not be formally involved in the American Canal Society, I continue to follow with interest its success in the preservation and promotion of our canal heritage. Thank you again.

Arden Phair

AMERICAN CANALS. NO. 96 FEBRUARY 1996