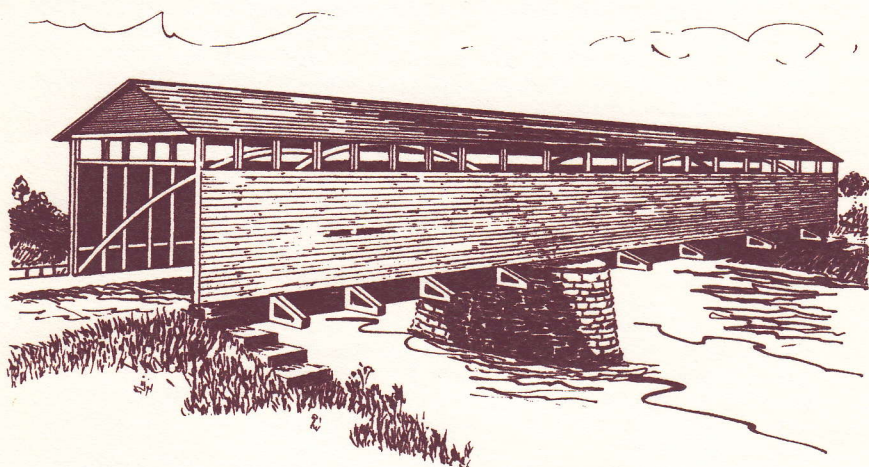


# INDIANA WATERWAYS

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Wabash & Erie Canal Aqueduct No. 1 over St. Marys River at Fort Wayne. Ink drawing by C.S.I. member Nate Tagmeyer.

## WHITEWATER CANAL PREPARED FOR NAVIGATION

We were visiting in Metamora on Sunday April 6, and had the opportunity to watch (and help) Dave Cozby show off his newly repaired canal lock. Dave Cozby is the Site Curator of the Whitewater Canal State Historic Site, where a portion of the Whitewater Canal is preserved in operating order. This site is very special in that it contains two handsome cut stone locks and the only surviving wooden covered-bridge canal aqueduct in the world. The upper lock at the village of Metamora is blocked by the water wheel that provides power for the gristmill operated by the State, but the lower lock, the "Millville Lock", was restored to operating condition in the 1950's, with repairs to the stonework and a new set of lock gates.

The Millville Lock has, unfortunately not been fully utilized over the years since its restoration. Although it has been operated occasionally, certain difficulties with the working of the lock have prevented its regular use.

There are good reasons, however, to operate the lock. At Metamora, the State operates the Ben Franklin II, a horse-drawn canal packet replica which gives visitors a taste of canal travel by carrying them down the canal through the Duck Creek Aqueduct and on to the Millville Lock and return. "Locking through" to the next level at the Millville Lock would be a wonderful educational experience as well as great fun, if it could be done.

Site Curator Dave Cozby has taken seriously his responsibility for the maintenance and operation of a "real" canal, and has tried in many ways to focus public interest on the canal itself. The repairs to the Millville Lock are one manifestation of this welcome attitude.

Excessive clearance between the bottom of the upper lock gate and its mittersill had allowed so much leakage that the water level in the lock chamber could not be lowered fast enough for practical use. The water would leak into the chamber nearly as fast as it could be discharged through the lower wickets. Also, an accumulation of silt in the lower level, combined with the shallowness of the water there, would prevent the boat from passing on out of the lock. Both of these problems have been addressed.

With much care, wooden shims were fitted to take up the gap between the lock gates and the mittersill. This has nearly eliminated the leakage around the upper gates, as Dave Cozby proudly demonstrated by operating the lock through a complete cycle of filling and emptying. The lock works perfectly, and fast enough for practical use. As for the silt blocking the lower level, we understand that plans are under way for clearing out a length of the waterway so that, in addition to the regular hourly rides from Metamora down to the lock, perhaps once each day the boat will make the longer trip through and beyond the Millville Lock. We understand that this is hoped to be realized during the coming season.

Meanwhile, the Ben Franklin II is getting a fresh coat of paint and otherwise being readied for the season, which begins in May.

For more information about the Whitewater Canal State Historic Site, write:

WHITewater CANAL  
STATE HISTORIC SITE  
Metamora, Indiana 47030

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## INDIANA FERRIES PROJECT

The Hoosier State is crossed by hundreds of rivers, creeks, runs, branches and tiny unnamed streams in an intricate network which must be encountered and dealt with during a journey of any length either within or across Indiana. Cruising along modern highways, we often fail to notice when we pass over the smaller streams, literally piped as they are under the roads through concrete or corrugated metal culverts. Even the larger creeks attract little attention as they slide through the unobtrusive concrete bridges. Only when a major stream or river is encountered do we look aside to see the river winding between its tree-lined banks.

At such moments, looking up or down the stream and seeing no obvious signs of civilization, it is easy to imagine that we are seeing the river as our ancestors saw it, quiet and peacefully flowing, with small birds darting here and there through the sunlight; that is, if we even bother to look.

How different, though, the reality must have been for the travelers of the early nineteenth century. To those stalwart folks, trudging along the forest paths that served as roads, each tiny creek was an obstacle to be surmounted, resulting in wet and muddy feet at the minimum and a thorough soaking as a more usual result. Large rivers such as the Ohio, the Wabash and the White were major barriers to the traveler even when the water was low, and in flood time, crossing any major stream meant risking one's life.

Bridges, then as now, represented a large expense, one that could be ill afforded by the sparsely settled regions of Indiana for many years, so the most common means of crossing a large river was by boat.

The ferrying of passengers and their goods across the rivers was a necessary service, money was scarce in Indiana during the early years, and often the first settlers along a river would establish a ferry as a source of ready cash.

The first Indiana ferries often consisted of no more than a bark canoe for passengers (animals had to swim), but the better-appointed ones might have a skiff or even a small flatboat that could carry a buggy or a wagon with its wheels removed.

As roads became more established, the ferrymen adapted to the increased traffic by launching larger boats, usually guided by cables across the streams to replace the little flatboats and skiffs with their oarsmen laboring against the currents. These ferries

were the only means of crossing Indiana's major rivers for many years. There are records of ferries, such as the Decker Ferry across the White River at Hazelton, Indiana, that operated continuously for over 150 years before being replaced with bridges.

Research now being conducted by Ben W. Meek of Fort Wayne has found mention of over 100 different ferries that were in operation at various times in the State of Indiana, and his growing files indicate that there were many more.

In the Spring of 1986, there are only two ferries in regular operation in Indiana. One of these, a few miles south of Terre Haute in Vigo County, crosses the Wabash to Darwin, Illinois. The other crosses the White River near Farmers Station in Owen County. Known as the Free Farmers Ferry, it is operated without toll by the Greene County Highway Department. With these two exceptions, the ferries have passed from Indiana highways; a welcome relief, perhaps, for impatient drivers.

Although the ferries' passing need not be mourned, they at least deserve to be remembered, for they were an integral and once ubiquitous element of travel.

In addition to their task of carrying people and their goods across a body of water, the ferries served as haphazard meeting places for casual exchange of news and gossip. Thus they played a part in social and political relationships. In days of no daily newspapers and only a few weeklies, the ferryman with his frequent conversations with far-ranging travelers, was often the first source of news from the rest of the country and the world.

The day of the Indiana ferries is nearly over, but their story has yet to be told. The time is right, while many people with memories of, or connections with the operations of Indiana ferries are still living. Mr. Meek wishes to thank those who have sent information to him, and asks those who may have information regarding the history of ferries and ferrying in Indiana to contact him: Ben W. Meek 4624 Muirfield Dr. Fort Wayne, Indiana 46815

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(Submitted by CSI member Frances A. Hyde)

My great-grandfather, Albert Chapman Ellithorpe, was born July 9, 1824 at St. Albans, Vermont. He left Vermont when he was 15 years old and worked his way to Chicago. I have included Chapter 5 of his privately printed autobiography telling about his coming to "the West".

BRIEF RECORD OF THE LIFE  
of  
A. C. Ellithorpe  
by Himself

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Chapter 5

During the Spring of 1838, I commenced preparation to migrate to the West.

Having acquired a fair knowledge of mechanics, I applied myself to the Carpenter and Joiners Trade, generally taking small jobs, such as casing doors, windows, making sashes, blinds, laying floors, etc. You may think that a boy not fifteen years of age was rather presumptuous in asking for a contract to do and perform any of the above named work. I did it, "just the same", and I know of no instance where I failed to give good satisfaction, and made from \$1.75 to \$2.50 per day.

You will bear in mind that in those days there were no planing mills, no boring machines, no morticing machines; all lumber came in the rough, and had to be worked to the sizes by hand tools. Most of my fancy tools I made myself.

This schooling gave me a general use of all kinds of tools for the working of wood.

The wood-turning lathe I was quite expert at, all of which I found beneficial in later years. I continued at my mechanical work through the summer, and divided my time through the winter at work and reviewing my school studies.

About the 1st of March I was ready for my journey. Having accumulated a sufficient amount of money, clothing, etc. with my full kit of tools, two rolls of home made woolen cloth (gray, two shades), each containing about twenty five yards, yard wide, all made in our own home, with an assortment of buttons, thread, needles, etc.

I also shipped, by freight, an improved fanning mill of the Livingston Patent, as a model from which to construct others.

I left St. Albans, Vermont I think, on the 20th day of February, 1839 on a Steamer for Troy the following day. I stayed in Troy three days before I found a favorable



chance to ship for Buffalo. I was fortunate in finding a boat that wanted a steersman. I hired for the voyage at two dollars a day. I was reasonably expert in handling the helm of almost any craft.

The boat was a common liner on the Canal, and freighting with merchandise for Buffalo, Milwaukee and Chicago. We were among the first boats passing through the Erie Canal to the West. This voyage was made without any incidents of note, and I enjoyed the trip.

We carried on board two span of horses, and two boy drivers, which furnished us our motive power. Each team, six hours on and six hours off. In addition to steering the boat, we had each one to care for his team, assisted by the driver.

We arrived in Buffalo on the 20th of March, where I found a steamer, the "Globe", ready to sail for Chicago. The next day I boarded the steamer to secure my passage, and to my pleasant surprise, I found a cousin of our family, John Tuttle, the First Mate of the boat. He knew and accosted me first; taking me by the collar of my sheep's gray coat, saying "Young man, what are you doing here, where are you going and who is with you?" To which I replied, "I am going to Chicago, and nobody is with me". He replied, "I think you are running away, as your brother Steve did." I replied, "No I am not. Mother and Father knew of my coming away". "Where is your luggage?" "On board the line boat 'Emmer'" said I. "Go bring it aboard" said he. "What is the fare to Chicago?" I asked. "That's all right my boy", said he.

My luggage was soon on board. I then asked him if I could not work my passage. "No" he replied rather gruffly. "Can you handle cord wood?" "Yes" I replied. "I will give you \$1.25 per day" he said, "if you want to handle wood". We put out that night about 3 P.M. The second day out one of the men landed a stick of wood on my left foot and bruised the instep badly, which disabled me for further duty on the entire trip.

John took care of me, nursed and doctored my game foot, made me mess with him and sleep in his cabin. When we arrived in Chicago, he paid me in full, \$1.25 per day, amounting to \$12.50.

Arrived in Chicago April 1st.

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## A PLAN TO SAVE THE WHITEWATER CANAL

The Whitewater Canal State Historic Site consists of about ten miles of the old Whitewater Canal lying between the Feeder Dam near Laurel, and the town of Brookville in Franklin County, Indiana.

The Laurel Feeder Dam supplies water to the upper end of the State-owned canal section. The water then flows down the canal to Metamora, where one level of the canal has been restored and is kept in a watered condition. This level, about a mile long, lies between the Metamora Lock in the town of Metamora and the Millville Lock, a short distance East of town. To the tourist as well as the historian, this is the most interesting and significant level of the Whitewater Canal if for no other reason than that it contains the Duck Creek Aqueduct. This unique historical treasure is the only surviving wooden covered-bridge type of canal aqueduct in the world.

Also at the town of Metamora, the State of Indiana maintains and operates the BEN FRANKLIN II a horse-drawn canal packet boat replica, and a canal water powered gristmill for the education and entertainment of visitors.

This State Historic Site, formerly known as the Whitewater Canal State Memorial, is a spectacular and informative facility which draws hundreds of thousands of visitors each year. Over the years, this Site has helped many people to gain an understanding of a form of transportation which was of great importance to the industrial and commercial development of the Hoosier State.

In the 1940's, when plans were being formulated for the State Memorial, the hopes were to restore to operating condition the entire stretch of the canal between Laurel and Brookville. Unfortunately, adequate funding was not available and the backers of the project had to be content with the restoration of the Laurel Feeder Dam, the Duck Creek Aqueduct and the Gristmill at Metamora, as well as other repairs to the canal. State and private money also restored the Millville Lock. This lock, with its massive gates in working condition, is one of the most valuable learning tools in the entire complex.



Ideal as it may seem at first examination, there are some serious problems with the current state of affairs, problems which threaten the continued existence of the waterway itself.

These difficulties may be illustrated by comparing a general description of a canal with a description of the Whitewater Canal as it exists today.

A canal is a man-made waterway, a sort of an artificial river, but with one very important difference. While a river slopes more or less continuously from one end to the other, a canal is made up of a series of level stretches lying at different elevations. These "levels" are joined by locks, where the entire difference in the two relative elevations is taken up at one step. Since the placement of locks on a canal is determined by relative differences in elevation and not by distance, it follows that the steeper the slopes encountered, the closer will be the spacing of the locks.

As originally built, the Whitewater Canal consisted of a series of level pools connected by locks having lifts of between six and nine feet. To prevent stagnation of the water, a slope of about one inch per mile was built into the canal bed.

Contrast this with the picture presented by the watered sections of the Whitewater Canal today. Here, instead of a series of quiet, level pools, we see what resembles a small and relatively swift stream which gurgles over rocks and gravel at the bottom of a much oversized ditch. The water flowing through this artificial creek fills the navigable level of the canal at Metamora as well as providing water to power the mill. It is the creek-like nature of the canal between Laurel and Metamora which threatens the continued survival of the entire hydraulic structure.

Erosion is a powerful and unrelenting force. It is the agency by which the great valley of the Whitewater River was carved out of solid rock, and it is just as powerful today. Erosion is what is happening to the Whitewater Canal.

Because of the speed with which the water flows through the canal between Laurel and Metamora, it takes an unhealthy portion of soil along with it. This material comes from the sides and bottom of the canal through which it flows. When the water reaches the level and pond-like stretch of the canal at Metamora, its speed decreases, causing the suspended material to be deposited on the bottom of the channel and contributing to the silting which is gradually filling up that por-

tion of the canal.

The real danger, however, stems from the fact that a canal is not merely a big cross-country ditch, but is a carefully designed and constructed water conduit which is isolated from the groundwater and surface drainage of the region through which it passes. The necessary waterproofing was usually done by means of "puddling" in which a layer of compacted clay several inches thick provides an impervious lining for the canal. If this clay puddling is subjected to serious erosion, it will eventually be pierced and will leak. This leakage will find its way to the groundwater drainage patterns and will gradually erode an easier path for itself, leading to caving in of the canal banks and destruction of the waterway. An examination of the Whitewater Canal leaves little doubt that this is its eventual fate if corrective action is not taken.

Since the presence of water in the canal is not only the cause of the present deterioration but is also the significant element in the restoration, its elimination is not desirable. What we do seek is some means of slowing the destructive speed of the water between the Feeder Dam and Metamora. Fortunately, an economical solution to the problem is near at hand.

The means originally used to divide the canal into its separate levels were locks. These consisted of large stone chambers with huge gates at each end to allow passage of the boats and regulation of the water levels. While the locks between Laurel and Metamora all lack their gates, the stone sidewalls of the chambers are, for the most part, still in place. It is the absence of their gates which prevents these locks from fulfilling their function of dividing the canal into separate levels. Replacement of the lock gates would not only stabilize the canal, but would also restore it to working order. Unfortunately, this would be a very expensive undertaking, and funding for such a project is even less likely than it was in the 1940's.

I propose instead, a plan which could be carried out with a minimum of expense and a minimum of heavy construction. This plan is for a series of small dams to be placed at the upper ends of each of the three locks between the Feeder Dam and Metamora. These dams would serve the purpose of the absent lock gates by restoring the canal to a series of level stretches and increasing the depth of the water. This deepening would effectively increase the cross section of the stream of moving water, reducing its velocity while still allowing

the passage of sufficient water to operate the facilities at Metamora.

Because the actual slope of the canal bed between locks is slight, the level of the water would only need to be raised by about two feet in order to restore the levels, so the dams would not need to be either massive or high. The series of level pools resulting from this scheme would also allow easy paddling for canoeists in both directions since the speed of the current would be greatly reduced. Ramps for passing canoes over the dams could be provided at small additional expense.

Since the project would consist of three small dams, the work could be carried out in three phases, thus stretching out the construction over a period of several years. That way, the amount of money required at any one time would be small. Much of the labor required for such a project could be provided by volunteers. Spread out over a period of several years, the construction costs might fit into the existing budget for maintenance of the facility. Funds which are already earmarked for maintenance of the Whitewater Canal State Historic Site would be well used to thus ensure the continued survival of the waterway itself.

Thomas Meek Fort Wayne, May, 1986



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