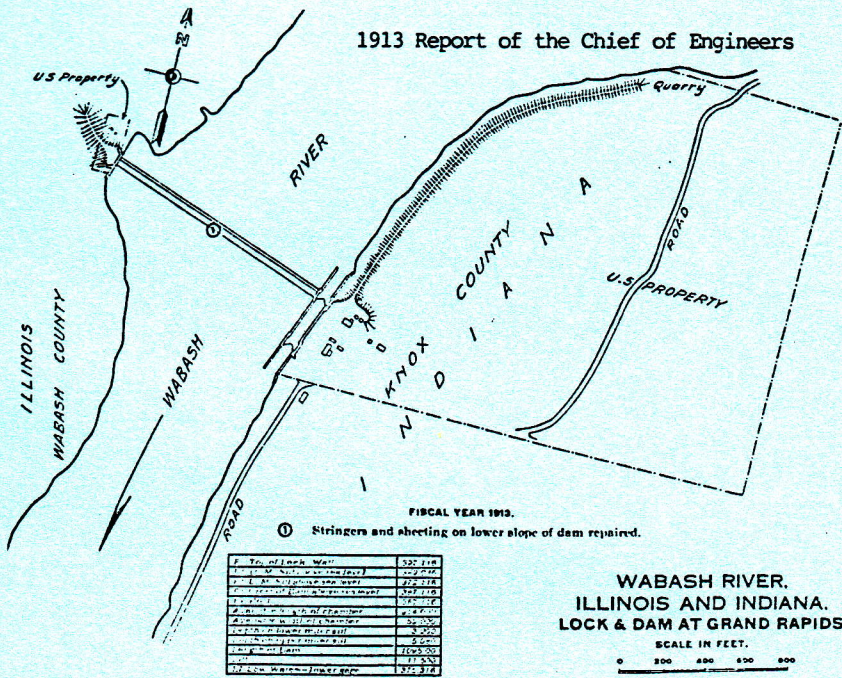


# INDIANA

# CANALS

Journal of the Canal Society of Indiana  
 Volume 1, Number 2. Winter 1990



## WABASH RIVER IMPROVEMENT PROJECTS

### THE FEDERAL YEARS

By the end of the Civil War navigation on the Wabash River had virtually disappeared. The Wabash & Erie Canal, and more importantly, the railroads paralleled most of its course and took away its trade. The Grand Rapids lock and dam though deteriorating, was still in operation but no other improvements to the river had been made. It was at this time that the federal government began looking at programs for improving the river's navigation potential.

In 1870 Congress ordered a survey of the Wabash River from its mouth to the Salamonie River. To restore the rivers pre-Civil War traffic General Godfrey Weitzel's report recommended the rebuilding of the Grand Rapids dam along with dredging and snag removal as far north as Lafayette. It was felt that these improvements would permit the development of mineral resources and by competition, help to regulate railroad rates. In 1872 the first appropriations were made and Frederic Stein was appointed to superintend twelve improvement sites. During the 1870s snags and debris were removed and dams erected to close the river's secondary channels. Engineers during this period were often frustrated by nature. Epidemics of malaria and small pox drove away work crews in 1872 and 1879. The sandy character of the river's bottom led to washouts and the undermining of the timber cribs used as wing dams to close channels. Despite these problems, work on the river continued. In 1874 the Wabash Navigation Company was paid \$7,000 for their lock and dam at the Grand Rapids.

The following year Major G.L. Gillespie was given the task of surveying a canal route from the Wabash River to Lake Michigan. Like Stansbury's 1831 report, Gillespie's survey was laid aside only to resurface again in the

twentieth century. In 1881 Major John Wilson was ordered to survey a ship canal connecting the navigable Wabash River at Lafayette with the Maumee River to Lake Erie. Following the basic route of the Wabash & Erie Canal, this new canal was designed for a 70 foot width and seven foot depth. Cost estimates for the canals construction were in the area of \$24 million.

Actual work on the river was still continuing during this period. In 1885 work north of the Grand Rapids was suspended and construction begun on a new lock and dam. This new project included a 1,095 foot timber crib dam and a masonry lock with 11½ feet of lift. Construction on this project was completed in 1894 and further funding, except for caretaking, ceased in 1902.

As construction in the south continued, so did the surveys. In 1885 a survey was made to extend navigation north to Delphi. In 1891 the river was resurveyed from Terre Haute to Lafayette. In 1909 the entire river north to Perrysville was resurveyed for a slackwater navigation program to open coal field development. This proposal recommended eleven locks and dams at a cost of \$3½ million to guarantee six feet of water for navigation as far north as Vincennes. Implementation of this project was suspended in 1909 until the Ohio River slackwater project could be completed. As delays to actual work continued, more plans surfaced.

In 1903 the Wabash River Improvement Association was formed to push for a Great Lakes to Gulf of Mexico water route. In 1912 the National Waterways Commission pushed for a 14 foot deep route connecting the Wabash River with Toledo or Lake Michigan. In 1932 a new project was proposed from the mouth of the Wabash River to Huntington. The following year a new Ohio River to Lake Erie slackwater project was reported.

While these studies continued conditions rapidly deteriorated at the Wabash River's one existing facility. Use of the Grand Rapids lock had declined to the point where removal of the dam was authorized in 1925. In 1933 the government property at the Grand Rapids was sold to the Boy Scouts and a few years later the dam was breached.

In the 1960s the Wabash River was resurrected. In 1967 a feasibility study for a Cross Wabash Waterway connecting the Ohio River to Gary or Toledo was made. Hearings at Chicago, Terre Haute and Toledo showed that the route was uneconomical, but recommended a lower Wabash River project study. In 1969 a full study was made of six routes from the Ohio River to Mt. Carmel, Illinois. The final route consisted of 20 miles of canal, 27 miles of river improvement and an 8.6 mile extension to Carmi, Illinois. The canal section was to have a 566 foot width connected to the slackwater portions with two 110 by 1200 foot locks located at dams. In 1975 an extension survey to Terre Haute found that route to be non-feasible. On the southern section of the route the study process continued. Environmental impact studies were made and further public hearings were held. Although opposition to the project surfaced during the hearings, the decline in coal and agriculture, the main cargo of the waterway, led to the abandonment of the project in 1977. Despite this setback the dream of a Wabash River project continues. As recently as 1986 funds for continued studies were authorized by Congress.

After 160 years of surveys and work on the Wabash River, little of substance is evident. The nearly forgotten remains of the Grand Rapids lock and dam in Knox County serves as the only visible reminder of any actual work accomplished.

\*\*\*\*\*

For information on an earlier Wabash River improvement programs refer back to the Winter 1986 issue of INDIANA Waterways. Questions and replies for CANAL QUERIES are still being sought for the next issue of INDIANA CANALS.-Editor.

During the 1840s the Wabash Navigation Company completed a lock and dam at the Grand Rapids of the Wabash River in Knox County. This long time navigation hazard had offered the private concern the potential of profits in tolls from shippers navigating the river. Until the sale of the structure to the federal government in 1874 river traffic on the Wabash were required to follow the following:

#### RULES AND REGULATIONS

For the general Police and Management of the Wabash Improvement at the Grand Rapids, and the navigation of the River at that point.

I. All Masters of Steam Boats, Keel Boats, Barges or Flat Boats, seeking a passage through the Lock, must first present to the Collector a correct manifest of Cargo, so arranged as to enable him to readily classify the freight and compute the toll.

II. The said manifest must first include the number of passengers on board.

Second.-A statement exhibiting the number of boxes, bales, barrels, casks, and various other packages of which the cargo consists; the weight of all articles of property on which toll is charged by the ton or one thousand pounds; the number of articles on which toll is charged by the number; the feet of each article on which toll is charged by the foot; and the quantity of all articles on which toll is charged by the barrel or bushel.

Third.-A specification of the weight or quantity of each article, where a different rate of toll is charged. And in the case of the neglect or refusal of any Master or Clerk to comply with the foregoing conditions, the whole cargo shall be charged with the toll at the rate of Class No. 1.

III. The toll must in all cases be fully arranged and settled before opening the gates, and upon payment thereof, the Master or Clerk of the boat shall receive a clearance on which will be noted the weight of the different articles; the separate classes to which they belong; the rate of toll on each, and the total amount of money paid.

IV. In order to guard against frauds, the Collector is authorized to overhaul the cargo, if he shall see cause to

suspect the correctness of the manifest, and if the Master or Clerk of any boat shall make a false or fraudulent return by placing articles in a lower class than that to which they belong, or returning a less weight than he has on board, he shall pay double toll for the entire cargo on board at the time.

V. No boat or other craft will be permitted to load or unload, or unnecessarily stop, lie by or detain in the Lock, or within two hundred yards of the same, either above or below, without the special permission of the Collector.

VI. The Master of every boat intending to pass the Lock, shall upon arriving within hearing distance of the same, ring his bell, or blow a horn, to give notice of his approach, and the Lock will be prepared for his reception.

VII. Masters and owners of boats shall in all cases be held strictly accountable for any damages done by such boats to the improvement, or any part of the fixtures connected therewith.

#### RATES OF TOLL

To be charged by the Wabash Navigation Company, at their Lock and Dam at the Grand Rapids.

Class No. 1, -Twenty-five cents per 1000lbs.

Copper of all kinds,	Merchandise, not spec'd.
Confectionary,	Oils, paints, varnishes
Drugs and medicines,	and dye-stuffs,
Furniture, ascending,	Paper and books of all
Feathers,	kinds,
Fruits, not specified,	Queensware and China-
Furs, peltries and skins	ware,
Glassware,	Oysters,
Hardware and cutlery,	Steel,
Leather, dressed,	Specie and bullion,
Liquors, foreign,	Tin and tinware,
Lead-White, red and	Tobacco, manufactured,
litherage,	Hides, dry,

Class No. 2. -Twenty cents per 1000 lbs.

Anvils and vices,	Lard and tallow,
Butter and Cheese,	Lead, in pigs and bars,
Coffee and copperas,	Nails and spikes,
Cotton and cotton yarns,	Ropes and cordage,
Codfish and mackerel,	Pork, in bulk,
Doors and blinds,	Bacon,

Groceries, not specified,	Saleratus and Saltpetre,
Hemp, oakum and flax,	Steam engines and
Hides, green and salted,	machinery,
Iron, rolled and hamm'rd,	Stoves and castings,
Marble, saw'd or in bl'ck,	Wool,

Class No. 3.—Fifteen cents per 1000 lbs.

Agricultural products,	Earthen and stoneware,
not specified,	Furniture, descending,
Agricultural implements,	Pitch, tar and rosin,
Cut stone, burr blocks,	Pig and scrap iron,
grind and mill stones,	Rags,
Dried apples and peaches,	Leaf tobacco,

#### MISCELLANEOUS.

Apples, per barrel,	2 cts.
Flour, do	3 "
Lime, do	2 "
Molasses, do	10 "
Whisky, do	8 "
Salt—nominal weight, per bbl.	5 "
Do —Turks Island and Liverpool, pr box,	2 cts.
Beer, ale and porter, per bbl.	4 cts.
Cider, do	3 "
Empty barrels, tight, each.	1 "
do do flour do	1 "
Wheat, per bush of 60 lbs.	3/4 "
Rye and barley, per bush of 56 lbs.	1/2 "
Corn and oats, do	1/4 "
Potatoes and turnips, do	1/4 "
Hay, per ton,	20 "
Straw, do	8 "
Wood—in rafts, per cord,	6 "
do boats do	2 "
Bark do	12 "
Brick, per M.	15 "
Staves and heading, hhds. do	25 "
do do bbls. do	15 "
Hoop poles, hhds. do	20 "
do bbls. do	12 "
Shingles, do	10 "
Laths, do	5 "
Timber, in rafts, per 1000 cubic feet	50 "
Sawed timber, per 1000 ft. board measure	15 "
Carriages and large wagons, each,	25 "

Buggies, small wagons and carts,	15	"
Horses and horned cattle, each,	10	"
Hogs, sheep and calves, each,	3	"
Passengers, each,	12	"
Pork, per bbl.	4	"

All articles which are not heretofore enumerated, to be charged at the rate of Class No.1-twenty-five cents per 1000 pounds.

In addition to the toll on freight and passengers, each boat passing the Lock will be charged as follows:

Steam boats, 100 tons or less,	\$5 00
do 100 " to 150.	6 00
do 150 " to 200.	8 00
do 200 " and over,	10 00
Keel boats and large flats,	1 00
Common or small do	50

\*\*\*\*\*

#### Wabash & Erie Canal Mechanical Structures - Continued

Near the mouth of this feeder is a bridge (No.9) used for the purpose of crossing the towing path, which here changes from the north to the south side. This bridge is nearly new, and will need re-building probably not before 1854.

Bridge No.10, for crossing of Yellow river road, should be rebuilt during the ensuing year.

The safety of the summit level during floods, required that a set of waste gates be erected during the ensuing winter at a point one half mile west of the mouth of the feeder.

Culvert No.28, one and a half miles west of Fort Wayne, built of wood, 6 feet by 18 inches-submerged.

Culvert No.29, near east end of wet prairie, of wood, 2 spans each 10 feet by 18 inches. The bed of the stream below this culvert requires raising 6 inches, at a cost of about \$10, for the purpose of submerging the timber and rendering it durable.

Five miles west of Fort Wayne, the canal crosses Marais Du Perches, by means of a towing path bridge, with a waste-wier and sliding gates for the passage of its floods. This structure is much decayed and must be rebuilt, or a different structure submitted for it within the next year.



Culvert No.30, 7 miles west of Fort Wayne, 10 feet by 18 inches, of timber-submerged.

Culvert No.31, of wood, 2 spans, each 10 feet by 18 inches-submerged.

Culvert No.32, of wood, 10 feet by 18 inches-submerged.

Road bridge No.11, at Mrs. Vermilya's nearly new, may last 7 years.

The next structure is aqueduct No.2, over the river Aboite, of four spans, each 28 feet clear. The trunk is of wood resting on two abutments and three piers, all of good cut stone masonry. This structure is entirely new, having been rebuilt in 1846, and will probably require but little expense for 8 or 10 years to come.

Not far below the aqueduct is road bridge No.12, nearly new, may last 8 years.

Culvert No.33, 12 miles west of Fort Wayne is built of wood, 10 feet by 18 inches-submerged.

The next structure is Culvert No.34, a large wooden culvert over Calf creek, of 2 spans, each ten feet wide and five feet high, of rectangular shape. The covering timber of this culvert has been exposed to the air since its erection in 1833 and must be partially decayed, still it has strength enough to sustain the weight, if the decay were now checked. I would therefore recommend that a dam, be erected just below the culvert and made water-tight, so as to submerge the whole structure. This may cost \$100, but will be far more economical than a renewal of the whole culvert which, otherwise, will be necessary within 2 or 3 years.

Culvert No.35, is of timber, 10 feet by 18 inches-submerged.

Culvert No.36, over Cow creek. This is a large wooden arch of 18 feet chord, semicircular. A structure of this size and shape could not be submerged, and the arch timbers have therefore been exposed to the air. Experience shows however, that timber thus situated under a moist bank of earth, is not subject to rapid decay, and it is believed that this arch may stand 3 or 4 years longer, when it should be rebuilt of cut stone. The head walls will need some repairs within two years.

The next structure is lock No.4, 15 miles west of Fort Wayne. This is the first lock west of the summit, and terminates the summit level. It is 10 feet lift, built upon the wooden frame plan. It was renewed about 4 years ago, is now in good order, and will last probably 4 or 5 years longer without much expense-gates will last 3 years.

-to be continued-

Copyright 1990 Canal Society of Indiana  
INDIANA CANALS is published quarterly  
(October, January, April and July) by the  
Canal Society of Indiana. Single copies  
available for \$1.50 each, post paid.  
Articles and information should be sent  
to the editor, Stan Schmitt at 3900 N.  
Fulton Apt. 1F, Evansville, IN 47710.