

## REPORT

*Of the Canal Commissioners, relative to the extension of the Pennsylvania Canal.*

Read in the House of Representatives, Dec. 19, 1833,

*Canal Commissioner's Room,*

DECEMBER 19, 1833.

William Patterson, Esq.,

Speaker of the House of Representatives:

Sir; I have the honor of enclosing a report made by the Canal Commissioners, in obedience to four resolutions of the House of Representatives, adopted on the 9th, 10th, and 11th of December, in relation to the extension of the extension of the Pennsylvania Canal.

I am yours, respectfully,

JAMES CLARKE,

*President of the Canal Commissioners.*

To Wm. Patterson. Esq.,

Speaker of the House of Representatives;

In obedience to four resolutions which were passed by the House of Representatives, on the 9th, 10th, and 11th of December, instant, "requesting the Canal Commissioners to report to the House, their opinions to the advantages the State would derive from the extension of the Pennsylvania Canal to its original contemplated termination, and connection with Lake Erie, at the bay of Presque Isle." And "and as to the advantages this State would derive from a connection of the Pennsylvania, and Ohio Canals, by a cross-cut from Akron, on the Ohio Canal, along the valley of the Mahoning, to the Pennsylvania Canal." And also, "of the advantages to be derived by this State, and the expediency of adopting speedy measures to connect the Pennsylvania Canal, at or near Pittsburg, with the State improvements on the Beaver division; together with their views of the important bearing which this connection holds, in reference to a junction, (under existing provisions,) with the Ohio Canal, and with the extension of the Pennsylvania Canal to the town of Erie." And likewise, "of the expediency and necessity of constructing a navigable feeder for the Pennsylvania Canal, from the Allegheny river, above the mouth of the Kiskeminetas." The Canal Commissioners respectfully submit the following Report.

*A Navigable Feeder* from the Allegheny river, to intersect the Pennsylvania Canal at the north-west end of the aqueduct near the mouth of the Kiskeminetas, would be a valuable improvement for the following reasons :

1st, The Canal has now to be fed with water from the Leachburg dam, in the Kiskeminetas, (which dam is 23 feet high, above low water mark,) to Pittsburg; being about 36 miles in distance, including the two branches into the Allegheny and Monongahala rivers. In the mouths of August and September last, the Kiskeminetas riverr become so low that, for a few weeks, a full head of water could not be maintained in the Canal. What has happened may again take place during a very dry season; and that, too, at a time when an immense increase of trade will require corresponding increase of lockage-water.

A feeder from the Allegheny river, would not only release the Kiskeminetas from supplying 39 miles of Canal below the junction, but in ease of much leakage through the high dam at Leachburg, it would

assist ,the navigation on the same level, for 12 miles above the junction. Hence, for this reason alone, such a feeder is very desirable.

2d, Such a feeder would be a guarantee against any very serious interruption of the trade on the main line, in the event of the failure of the great aqueduct over the Allegheny river, at the mouth of the Kiskeminetas . But, without the feeder, a breach of that aqueduct would render the 73 miles of Canal below Blairsville, wholly useless for the great Western Commerce.

3d, The feeder would be from 13 to 16 miles long, depending upon the site chosen for a dam in the Allegheny river, and in either case would, with the pool of the dam, give an artificial navigation of about 23 miles. This improvement would accommodate some valuable Salt Works, and unite Kittaning, the county town of Armstrong county, and the surrounding country, more closely with the Pennsylvania Canal and it would also be a link in the chain of future improvements for connecting the main line of Canal with the French Creek division.

4th, Should the Canal be continued from the present termination of the Western division, in Alleghenytown, to connect with the Beaver division, this feeder will be indispensable. A survey was made by Mr. Gay, in 1828, of the Allegheny river from the mouth of French Creek to the mouth of the Kiskeminetas. Two sites were selected by him for dams in the river-one of which is near Kittaning, and the other one is three miles below that town. From the lower site, he located a Canal on the east side of the river about 13 miles, to form a junction with the main line, at the south-east end of the large aqueduct. The estimate for erecting a dam in the Allegheny, and constructing a Canal from thence to the aqueduct, was \$230,293.80. As no satisfactory survey has ever been made on the west side of the river, when a navigable feeder should be constructed, the Canal Commissioners are unable to give an estimate of its cost.

A connection of the Western and Beaver division of the Pennsylvania Canal has been object of much solicitude. Three modes have been proposed for forming the connection.

1st, By a Railroad. This plan of uniting the two parts of the Canal is believed, by the Canal Commissioners, to be inexpedient, if not inadmissible. Because the construction of a good Rail road, with double tracks, will cost twice as much as a good Canal. Because heavy articles, such as iron, coal, and agricultural productions, can be carried for half the sum, (toll included) on a Canal, that their conveyance will cost on a Rail road. And because it would subject the north-western trade to a double transshipment, which an inability to a cure a continuous water conveyance could alone justify.

2d, By improving the channel of the Ohio river, and employing Steam boats for towing canal boats between Beaver and Pittsburg. This plan is, at least, plausible, and is recommended as being much cheaper than any other project heretofore suggested, for accomplishing the desired object. The Canals of Pennsylvania will be unobstructed by ice, from nine to ten months of the year, and the Ohio river is at all times open during Canal navigation. In ordinary seasons, Steam boats of 80 to 100 tons are not prevented by low water more than from three to four months, from visiting Pittsburg. But, in very dry years, such as was last summer, west of the mountains, there is about five months that such Steam boats cannot run on the upper part of the Ohio river. Last summer, a small Steam boat, rated at 43 to 50 tons burden, plied daily, between Pittsburg and Beaver, except about six weeks at the lowest stage of water, and she always took in tow, a keel or Durham boat carrying from 10 to 20 tons of loading. Hence,

it is believed by well informed persons, that \$60,000, expended in erecting brush wing dams in the Ohio, and clearing out bars at the ripples, would secure an uninterrupted navigation for Canal boats, and no other improvement is necessary. It is also worthy of remarks, that the boat channel through almost all the ripples between Pittsburg and Beaver, is near the north shore of the river, and hence, the formation of a towing path along the river bank has been proposed as a means of enabling those who are engaged in Canal transportation, to use their own horses, instead of subjecting them to the necessity of employing a steam boat to tow them up the river.

3d, A Canal from Pittsburg to Beaver. Notwithstanding the cheapness and apparent feasibility of the project for improving the channel of the river and using Steam boats; or constructing a horse path, along the river bank for towing Canal boats - yet the plan of uniting the Beaver and western divisions by an independent Canal, is, in the opinion of the Canal Commissioners, decidedly preferable. The great interests involved in the improvements already made, and in the contemplated extension of the Pennsylvania Canal to Lake Erie, and a cross-cut Canal to unite those of Ohio and Pennsylvania, will, within a short period, require this link in the north-western chain of communication to be completed.

Punctuality is said to be the life of business; but, to be punctual to engagements, requires certainty in the means by which those engagements are to be fulfilled. Therefore, in a contest for the rich trade of the west, and north-west, we should, if possible, avoid all risks or delays, and consequently broken voyages, that may arise from either floods or low water, by having continuous Canals, from the Allegheny mountain to Lake Erie, and the Ohio river below its principal obstruction; And hence, the extension of the western division of the Canal to Big Beaver will become necessary.

On the 10th of January, 1827, an act was passed by the Legislature of the State Ohio, entitled "an act to incorporate the Pennsylvania and Ohio Canal Company" which act was approved and ratified by the Legislature of Pennsylvania, by an act passed on the 14th day of April, 1827.

The second section of the above act authorizes the corporation to "construct, and forever maintain, a navigable Canal, and commencing at such suitable points on the Portage Summit of the Ohio Canal, as the Ohio Canal Commissioners shall direct, thence in the waters of the Mahoning river, and thence to meet or intersect the Pennsylvania or Chesapeake and Ohio Canal at or near the city of Pittsburg, in the State of Pennsylvania with liberty, in case either of said Canals shall be continued from Pittsburg down the Ohio river and up the valley of Big Beaver, towards Lake Erie, then to intersect either of said Canals, constructed as aforesaid, at the most suitable and convenient point." And the 25th section of said act provides "that if the corporation hereby created shall not, within ten years from the time of the taking effect of this act, construct, finish and put in operation the Canal hereby contemplated, &c., then the said corporation shall henceforth forever cease, and their charter be forfeited.

" It will be readily admitted by the advocates of internal improvement, that a union of the Ohio and Pennsylvania Canals, as contemplated in the act, incorporating a Company, in making the Cross-cut Canal, will be highly beneficial to both states. But by the terms of the act, their charter will be forfeited in ten years from the date of its ratification, by the Legislature of Pennsylvania, unless they "construct,

finalize and put into operation, the Canal hereby contemplated;" that is, as recited in the act, to a point "at or near the City of Pittsburg." And hence, if they wish to save their charter, they must carry their Canal to Pittsburg, and occupy the very ground that is necessary, for connecting our own Western and Beaver divisions of the Canal. The corporation are, however, at "liberty" to intersect the Pennsylvania Canal, at the most suitable and convenient point," if it shall be continued from Pittsburg down the Ohio river, and up the valley of Big Beaver, towards Lake Erie." Pennsylvania has constructed a Canal "up the valley of Big Beaver, towards Lake Erie;" and it requires her to continue the western division, "from Pittsburg, down the Ohio river" to Big Beaver, to enable the corporation to proceed with their improvement, by releasing them from the obligation to extend their Canal to Pittsburg, which is about 50 miles from "the most suitable and convenient point" of connecting it with the Beaver division.

The act of the Legislature of Pennsylvania, ratifying the law of Ohio, which incorporates the Pennsylvania and Ohio Canal Company, provides: "that it shall not be lawful for said company to commence the said Canal in Pennsylvania, until after the Board of Pennsylvania Canal Commissioners shall have fixed the point for the eastern termination thereof; and the said Board are hereby authorized, on application made for that purpose by the said Company, to determine and fix the point of termination of said Canal as may be deemed most advantageous to the public. But the act of Ohio, had fixed the termination to be "at or near the City of Pittsburg; unless "the Pennsylvania Canal or Chesapeake and Ohio Canal, shall be continued from Pittsburg, down the Ohio river. And hence, the Canal Commission believe that this provision in the act of Pennsylvania is bugatory, for if the Commissioners fix the point of termination at any place short of a point "at or near the City of Pittsburg" then the act of Ohio, cannot "take effect and be in force," as it expressly makes the construction of a Canal "from Pittsburg, down the Ohio river;" a condition which we apprehend the Legislature of Pennsylvania had no power to alter, although they had a right to refuse their assent, or to make another termination of the Pennsylvania and Ohio Canal a condition of that assent, which condition must be ratified by the Legislature of Ohio, before the Canal from "Pittsburg down the Ohio" can be dispensed with. In 1837, Doctor Whlppo, made a survey and estimate for a Canal from Pittsburg, by the Ohio, Big Beaver and Shenango, to lake Erie, at the harbor of Presque Isle, in which he makes the distance from the termination of the Western division of the Pennsylvania Canal, in Alleghenytown, to the mouth of Big Beaver 25 miles and 208 perches, and he estimates its cost of construction at \$283,821.23.

A cross cut Canal from Akron on the Ohio Canal, along the valley of the Mahoning to the Pennsylvania Canal, would in the opinion of the Canal Commissioners, as already slated, be highly beneficial to both states. It would open a direct, safe, cheap and expeditious channel for the citizens of Ohio, to send their agricultural productions to a market on the seaboard, and enable them in return to receive merchandize from the east. It would open an extensive outlet for the salt, iron, marble, etc. of Pennsylvania, and greatly increase the trade and manufactures of Philadelphia and Pittsburg. It would, by additional commerce thrown upon the Pennsylvania and Ohio Canals, give activity to trade, employment to capital, and business to merchants, trailers and boatmen, and consequently, it would stimulate and promote the great primary interest of agriculture. And it would contribute largely to swell the streams

of revenue flowing into the coffers of the Commonwealth, from Canal tolls, Auction duties, Bank dividends, Shop keepers' licenses, &c..

In a report made by the Canal Commissioners of Ohio, to their Legislature, on the 17th of January, 1833, they remark, that through the northern part of the Ohio Canal, the proposed Pennsylvania and Ohio Canal, and the Pennsylvania Canal, a direct intercourse between the great Lakes of the Northwest on the one hand, and the Delaware and Chesapeake Bays, and Atlantic Ocean on the other, will be carried on to an immense extent. And they add, "should the Pennsylvania and Ohio Canal be completed, we shall see an active commerce carried on between the City of Pittsburg, on the one hand, and the country bordering on the Ohio river, below the mouth of Scioto, on the other, through that Canal, and the Ohio Canal, during those seasons when the water in the upper part of the Ohio river, is too low for Steam boat navigation. These enlightened views of the Ohio Canal Commissioners, taken six years ago, have our cordial approbation. the extensive trade carried on, on the Ohio Canal since it was finished, and the near completion of the main line of the Pennsylvania improvements, has magnified the importance of the proposed cross cut Canal, and rendered it an object of peculiar consequence at present.

Should the western division be extended to Big Beaver, and the Beaver division be continued to the Ohio line, every ton of goods passing through the cross cut Canal bound to or from Philadelphia,( except what should pass through the Union and Schuylkill Canal.) would be carried four hundred and fifty four miles on our State improvements, and pay from \$7.50 to \$12.50 toll into the State's treasury. Hence a company starting two boats from each end of the line daily, each one carrying only 2 tons, would pay \$1,000 of toll per day, or from \$300,000 to \$250,000 during the season of navigation every year. There are eight daily lines of boats, regularly employed on the New York Canal, between Albany and Buffalo. It is, therefore, thought that the above is a moderate estimate for the increase of trade, that will be created by the construction of the cross cut Canal. In last September, while the Board were examining the public works in the western part of the State, two of the members went up the valley of the Mahoning, and along or near to the proposed rout for the cross cut, to Akron, on the portage summit of the Ohio Canal. And it is, in their opinion, the most favorable ground along the whole rout for constructing a Canal that they have ever seen, with an ample supply of water that can conveniently be brought to the summit level.

A survey was made by Sebried Dodge, Esq. in 1827, of so much of the rout of this proposed Canal, as is within the limits of the State of Ohio. From which we learn that

From Akron, on the Portage summit of the Ohio Canal.	M.	P.
to the Pennsylvania line, is	75	202
	M.	P.
Cuyahoga Feeder,	7	64
Three other feeders,	<u>4</u>	<u>64</u>
		<u>11</u> <u>128</u>
Aggregate length of Canal and feeder	<u>87</u>	<u>100</u>

The estimated cost is as follows:

Cost of main line from Akron to the Pennsylvania line,		\$383,762.69
Feeder, &c. from Cuyahoga	\$50,932.95	
Three other feeders and reservoirs.	<u>29,677.34</u>	
		<u>80,610.29</u>
Aggregate cost of Canals, and reservoirs and feeders		\$764,372.98

The whole amount of Lockage is 343 feet.

The Board are not in possession of any survey or estimate of the proposed Canal, from the Ohio line, to its junction with the Beaver division; but from the character of the ground, they believe its cost per mile will not exceed the average expense on the other part of the rout. The distance is said to be about twelve miles.

Impressed with the importance of this Canal, the Canal Commissioners have no hesitation in recommending the extension of the Beaver division to the Ohio line, at the expense and for the benefit of the commonwealth. And thus avoid collisions, that may arise from a corporation acting within the limits of our State; but under an authority the control of the control of the legislature of Pennsylvania.

In answer to the resolution of the House, requesting the opinion of the Canal Commissioners as to the advantages the State would derive from the extension of the Pennsylvania Canal to its original contemplated termination and connection with lake Erie, at the Bay of Presque Isle. The Board reply, that they believe that the State would derive many advantages from such an extension of the Canal.

The amount of commerce on the Lakes is becoming immense, and is from year to year increasing with a rapidity that is truly astonishing. A few facts will illustrate its Condition and importance. In 1835, about 4500 tons was the aggregate burden of all the vessels of every description navigating the Lakes. But their aggregate burden at this time amounts to 15,600 tons, including more than 20 steam boats, many of which are of the largest class, and all of which have constant and profitable employment.

In 1829, the amount of merchandize sent westwardly from Buffalo was 7150 tons, but the estimated amount for the present season is 12,000 tons. The trade of the Lakes has doubled within the last five years, and it will continue to increase in a compound ratio, as the western wilds round the sweeping shores of the inland seas of North America become settled, cleared and cultivated. It has been estimated that about 60,000 emigrants have passed from Buffalo up the Lakes during the past season; and this tide of hardy, enterprising citizens, will continue to flow on until the present outlets of the Lakes through the New York and Welland Canals can no longer vent their surplus products, or return their supplies of merchandize.

From the rapidity with which the "Great West" is settling, this trade, large as it is at present, must increase ten-fold in a short period. But even a moiety of its present amount secured to Pennsylvania, and her economical cities, would, we conceive, justify the Legislature in extending the Canal to the Bay of Presque Isle.

If the Canal was made, the proximity of Pittsburgh to Erie would secure her an advantage over all domestic competition in vending her numerous manufactures. And Philadelphia could at all times compete successfully with the city of New York, in bidding for the trade of the upper Lakes. There are, however, still stronger inducements to making an exertion to secure this trade. It is well known that the accumulation of ice at the lower end of Lake Erie in the spring, blocks up Buffalo harbor until the active business season of the year is far advanced; and that the want of sea room near the lower end of the lane, renders navigation extremely dangerous during the prevalence of the fall winds; while the unrivalled harbor of Erie is easy of access at almost all times during the season of navigation. And hence the Pennsylvania Canal would enjoy a monopoly of the Lake trade for two months in the year, and that too at the times of its greatest activity, in the month of September last, while the Canal Commissioners were on their western tour, one of the members passed along the contemplated rout for a Canal from New Castle to Conneaut lake, (another member of the Board had previously passed twice over the rout.) From Meadville the Board went by the Waterford rout to Erie, to view the Canal Basin constructing at that place at the expense of the State, and they returned to Conneaut lake by the Elk creek rout. The country along each of the routs presents the usual facilities for constructing a Canal; and some of it, particularly along the Shenango, between New Castle and Conneaut lake, is highly favorable.

In 1827, survey and estimate were made by Dr. Whippo, for a Canal from Pittsburg by the Beaver and Shenango to Conneaut lake from which we obtain the following result --

From the present termination of the improvement on the Beaver division, at the head of slack water made by the Shenango dam to Conneaut lake, is 61 miles and 80 perches with 248 feet of lockage, and is estimated to cost \$392,796.74

In 1827, a survey and estimate were made by Major D. B. Douglas, for a Canal from the present termination of the French creek feeder, at the south end of the Conneaut lake, by the Elk Creek rout to the Bay of Presque Isle", at the town of Erie. By which it appears that the length of the Canal would be 47 miles and 140 perches, and the lockage is 5071/2 feet. He estimated the cost of the improvement at \$835,329.63. In 1827, a survey and estimate were also made by Dr. Whippo for a Canal from the commencement of the French creek feeder at Bemus' mill, above Meadville, by the Waterford rout to

	Miles	Perch
Erie harbor, which shows		
The length of the main Canal is	45.	272
A feeder from French creek	<u>7</u>	<u>60</u>
Aggregate length of Canal and feeder,	53	12
It would have 773 feet of lockage		
Estimated cost of Canal,	\$386,945.55	
do. feeder	<u>29,965.14</u>	
Cost of Canal and feeder,	\$416 010.69	

While on the subject of an extension of the Pennsylvania Canal to the harbor at Erie, the Board cannot in justice to themselves avoid saying, that there is some doubt still remaining on their minds about the supply of water being adequate to the demands of an active trade on either of the proposed routs, in a dry season, without the aid of reservoirs. And consequently the cost of constructing suitable reservoirs,

should be added to the estimated cost of the Canal. With respect to the several estimates in this report, the Board have to remark that those made by Dr. Whippo, contemplated locks to be built entirely of wood, which were estimated at \$150 per foot lift. This sum is entirely too low for such locks as the Board believe ought to be constructed. It has also been proved by experience, that the actual cost of constructing the Public works of Pennsylvania have invariably much exceeded the estimates which were made of our improvement system. In several instances the cost of construction has been double and in some cases treble the amount of the original estimates. This has arisen from a desire, in the first instance, to build the works on the cheapest plan that would answer the purpose of navigation thus sacrificing safety and durability to a mistaken economy and from the great number of public works in progress in the United States, which raised and kept up the wages of labor. And also from the Engineers not making sufficient allowances in their estimates for the innumerable contingencies to which works of such magnitude along our large rivers are liable.

All which is respectfully submitted.

JAMES CLARKE, President

*Board Canal Commissioners.*