

REPORT OF THE CHIEF OF ENGINEERS OFFICE OF THE CHIEF OF ENGINEERS
Washington DC October 19, 1872

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9. *Saugatuck Harbor, Michigan.*— —During the last season 365 feet of pile revetment was finished. Some refilling of the old revetment was found necessary.

Since June 13 1872, the work of revetting with piles the south slab pier has been continued The funds are sufficient for its completion. This work has proved to be much more costly than was originally estimated. Nothing has been done on the north side.

The recommendations (see report of Chief of Engineers 1871) for a north pier and revetment to cost \$59,300.98 are renewed.

Amount available July 1, 1871	\$14,736.32
Amount appropriated by act of June 10, 1872	15,000.00
Amount expended during fiscal year ending June 30, 1872	10,553.20
Amount on hand July 1, 1872	19,183.12
Amount required for fiscal year ending June 30, 1874	25,000.00

(See Appendixes B 9 and b 9)

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B 9
SAUGATUCK, MICHIGAN

The work of protecting the slab pier on the south side of the river, under contract of F. L. Tebel, has proceeded very slowly. But 365 feet have been finished. Some refilling of the old revetment, built in 1870, was found necessary.

The following is the detailed cost of the work:

6,342 linear feet hemlock piles, at 8 cents per foot	\$507.36
4,378 linear feet white oak piles, at 12 cents per foot	525.36
2,668 linear feet 12 by 12 pine timber, furnished framed and bolted in place, at 25 cents per linear foot	667.00
405 linear feet 4 by 8 inches oak timber furnished framed and bolted in place, at 32 cents per linear foot	129.60
456 linear feet 10 by 12 inches oak timber furnished framed and bolted in place, at 29 cents per linear foot	132.24
105.25 cords of stone, at 10 per cord 1,052 50 319 cords of slabs, at 2.50 per cord	797.50
5,426 pounds of screw bolts and washers, at 4.9 cents per pound	265.88
11,697 pounds of drift bolts and washers, at 3.9 cents per pound	456 18
Labor	875.11
Superintendence	1,189.85
Advertising	44.70
Transportation	61.13
Sundries for building bolt-shed	4.59
Sundries for dredge	161.08
Tug-boiler	2,000.00
Driving 390 piles, at 2 each	780.00
Removing 220 cords of slabs at 1.25 per cord	277.50
Total	9,927.58

Amount on hand July 1, 1871	\$14,736.32
Amount expended to June 13, 1872	- 9,927.58

Amount available June 13, 1872	\$ 4,808 74
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b 9

SAUGATUCK HARBOR MICHIGAN

The work of revetting with piles the south slab pier has been continued under the contract with F. L. Tebel, at an expenditure of \$625.62 itemized as follows:

For 25 linear feet 4 by 8 inches oak timber furnished and used, at 32 cents per foot	\$8.00
For 24 linear feet 10 by 12 inches oak timber furnished and used, at 29 cents per foot.	6.96
For 1,001 1/2 linear feet white oak piles furnished and used, at 12 cents per foot	120.18
For 1,831 linear feet hemlock piles, furnished and used, at 8 cents per foot	146.48
For 112 piles driven, at \$2 per pile	224.00
Superintendence	120.00
Total	625 62

But not completed down to June 30 1872 as shown in the accompanying tracing.

Amount on hand of appropriation approved March 3, 1871	\$4,808.74
Amount of appropriation approved June 10, 1872	15,000.00
	19,808.74
Less amount expended in fiscal year after June 13, 1872	625.62
Amount on hand July 1, 1872.	\$19,183.12

With funds available the protection of the slab pier on the south side will be completed This work has been found much more expensive than was at first supposed and owing to this fact nothing has been done on the north side.

I would renew the recommendations see report of Chief of Engineers 1871 for a north pier and revetment to cost 59,300.98 Of this sum 25,000 could be advantageously expended during the fiscal year ending June 30 1874.

Statement of vessels entered and cleared at Saugatuck Harbor, Michigan showing the number of vessels, tonnage, crews, and cargoes during the year 1871.

ENTERED

Vessels, number	558	Coal, tons.	306
Tonnage, tons	71,638	Lime, barrels.	793
Crews, number	3,897	Salt, barrels	728
Grain (not specified) bushels	12,970	Brick, thousand	300
Hay, tons	105	Pig-iron, tons	7
Hay, bales.	82	Railroad iron, bars	69
Flour, barrels	378	Hides, number	18,043
Feed. tons	20	Merchandise, packages	5,005
Pork barrels	118		

CLEARED

Vessels, number	571
Tonnage, tons	72,069
Crews, number	3,440
Lumber, thousand feet	27,495
Lath, thousand	1,712
Shingles, thousand.	24,696
Staves, thousand	740
Pickets, number	365
Railroad-ties, number	37,759
Bark, cords.	563

Wood, cords.	7,981
Headings, barrels.	3,332
Apples, barrels	728
Berries, bushels	20
Flour, barrels	60
Plastering-hair, pounds	37,550
Fish, packages	1,951
Merchandise, packages	40
Leather, pounds	609,650