

*Copy to: Schoenmann*

April 17, 1933

Report 206

PROJECT FOR THE USE OF FEDERAL WELFARE LABOR TO IMPROVE CONDITIONS  
FOR FISH AND FISHING IN TWO MICHIGAN LAKES (WAMPLER AND PICKEREL)

Drawn up for the Michigan Department of Conservation by the Institute  
for Fisheries Research, University of Michigan.

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This special project is in line with our general suggestions that some of the federal welfare labor may be used to very good advantage in improving the lakes and streams of Michigan. The objects are to increase the fish supply, and to improve the conditions for fishing. The reason for, and the practicability of lake and stream improvement are dealt with in our Report No. 204, submitted simultaneously with and explanatory of the present report.

Conditions vary in different localities and in different lakes. The two examples to follow will indicate the nature of improvements which could be made to advantage in two lakes, one representing a northern type, the other a southern type.

In general the following improvements are involved:

1. Planting of willows along margin. These tend to prevent erosion and to increase insect food.
2. Improvement of trails to make the lake accessible for anglers. Many northern lakes have very poor trails and a number of the lakes have no trails leading to them.
3. Creating or improving camp sites on the lakes, for primary use of anglers.
4. Construction of boat landings and building paths to waters edge.
5. Construction of rafts. Many northern lakes have no boat liveryes and persons without boats are therefore prevented from fishing.

6. Construction of brush shelters. These provide shelter and food for the young fish and, at the same time, tend to attract the larger fish to the vicinity of the shelters, thus improving fishing as well as assuring fish for the future.

7. Construction of slab devices for minnow spawning. Some of our most valuable forage fishes spawn only on the under surface of flat objects. Slabs, usually readily available serve the purpose unusually well.

8. Improvement of spawning conditions for game fish by providing gravel. This can be placed on the bottom at proper depth where the bottom is firm and can be placed in boxes made of old lumber where the bottom is soft.

9. Planting of aquatic vegetation for the benefit of both fish and ducks. Desirable aquatic vegetation can be obtained in other lakes in the vicinity and transplanted in the lakes devoid of vegetation.

Some lakes call for certain of these improvements, other lakes demand others.

If this project is approved, we stand ready to prepare other detailed projects, in line with our general report.

Pickerel Lake  
(area 40.6 acres)

This lake is located in the Pigeon River State Forest. The improvement of conditions for fishing in this lake, is an integral part of the project of the Michigan Department of Conservation of developing this area to a maximum of all around utility, economic and recreational, as a demonstration of what can be done to utilize the vast public holdings in the cutover area.

The lake has the basic qualities necessary for good fishing and should respond well to improvement.

It now contains little vegetation, very limited food and almost no protection for young fish. It supports both trout and bass but these are now present in limited numbers due to certain unfavorable conditions which can be easily remedied with little expense outside of labor.

The following improvements are recommended for this lake, together with approximate length of time needed and cost of improvement.

Improvement of camp site .....	30 man-days
Improvement of shade along part of margin by planting willows ..	40 man-days
Construction of boat landing (lumber available in forests) .....	30 man-days
Construction of 5 rafts (material available in forest) .....	25 man-days
Construction and installing of 30 large brush shelters and of brush carpet along part of margin .....	75 man-days
Construction and installing of 25 slab devices (slabs available).	15 man-days
Construction and installing of 35 spawning boxes (wood and gravel available) .....	20 man-days
Total	<u>275 man-days</u>

Time required approximately 1 week for three crews of 15 men each (or 3 weeks for one crew of 15 men).

Cost of trucking, supplies and equipment.

Truck miles, 300 at \$.10 .....	\$30.00
Outboard motor miles, 20 at .05 .....	1.00
Sacks, 120 at .08 .....	9.60
Staples, 20 lbs. at .045 .....	.90
Wire, 50 lbs. at .03 .....	1.50
Cost of equipment*.....	25.72
Additional .....,.....&	<u>6.00</u>
Total	74.72

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\* This item is figured on the basis of using the equipment for 3 crews, estimated to cost \$120.00 per crew, for a 14 week season (see general report). This particular project is scheduled for 1 week (1/14 of the season). Most of the equipment, however, should be available for a second season.

Cost of labor

Supervision (1 week) .....	\$35.00
Truck driver (1 week) .....	10.00
Labor 45 men, 1 week at \$7.00 .....	<u>315.00</u>
	<u>Total</u> 360.00
Total estimate	435.28

Wampler Lake

This southern lake for which we submit an improvement project, is located in the Irish Hills in Jackson and Lewawee Counties. Half a mile of the shore line is in Walter J. Hayes State Park. The area is listed in the "Michigan Lakes and Streams Directory" as 800 acres. From this stated acreage and from the fact that the margin is more or less regular, the length of shore line is probably 6 to 8 miles. At least 50% of the shore line is occupied by summer homes. Gravel for spawning is present in places. A considerable amount of brush is available on state-owned land. The bottom is chiefly of sand. Vegetation is relatively scarce. The lake has a wide shoal area.

Improvements recommended together with time and cost:

Planting of willows in places to prevent bank erosion .....	15 man days
Construction and installing of 200 brush shelters .....	315 man days
Planting of aquatic vegetation .....	30 man days
Improvement of spawning conditions .....	30 man days
Construction and instelling of 200 slab devices .....	60 man days
To increase minnow spawning.	
	<u>Total</u> 450 man days

Time required aporoximately 2 weeks for 3 crews of 15 men each (or 6 weeks for one crew of 15 men).

Cost of trucking, supplies and equipment

Truck miles, 200 at .10 .....	\$20.00
Outboard motor miles, 200 at .05 .....	10.00
Sacks, 400 at .08 .....	32.00
Staples, 50 lbs. at .045 .....	2.25
Spikes, 50 lbs. at .03.....	1.50
Wire, 300 lb. at .03 .....	9.00
Cost of equipment* .....	51.43
Additional .....	<u>5.00</u>
Total	131.18

Cost of labor

Supervision at \$35.00 per week .....	70.00
Truck driver at \$10.00 per week .....	20.00
Labor, 45 men, 2 weeks at \$7.00 per week .....	<u>630.00</u>
Total	720.00

Total estimate 851.18

APPENDIX

Detailed list of equipment and supplies.

General equipment (for all 3 crews)

1 grindstone at \$5.25 .....	5.25
1 outboard motor at \$90.00 .....	<u>90.00</u>
Total	95.25

General equipment (for each crew)

30 lbs. 1/2" rope at .20 .....	6.00
8 double-bit axes at \$1.65 .....	13.00
8 carpenter hammers at .35 .....	2.80

\*This item calculated as for Pickerel Lake, except that estimate in this case is for two weeks.

5 pliers at \$1.20 .....	\$6.00
2 boats at \$12.00 .....	24.00
4 long handled shovels at .80 .....	2.40
2 brush snags and brush hooks at \$2.40 .....	4.80
Additional .....	<u>20.00</u>

Total per crew 79.20

Total per 3 crews 332.85

Supplies per week, per crew for Pickerel Lake

Sacks, 120 at \$.08 .....	9.60
2" staples, 20 lb. at \$.045 .....	.90
#9 wire, 50 lbs. at \$.03 .....	1.50
Gloves, 15 pairs at \$.10 .....	1.50
Nails, 15 lbs at \$.05 .....	.75
Additional .....	<u>2.00</u>

Total 16.25

Supplies per week, per crew for Wampler Lake

Sacks, 200 at .08 .....	16.00
Staples, 25 lb. at \$.045 .....	1.13
Spikes, 25 lbs. at \$.03 .....	.75
Wire, 150 lbs. at \$.03 .....	4.50
Additional .....	<u>2.50</u>

Cost of supplies per week 24.88

Cost for two weeks 49.76