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Report 231

PROJECTS FOR STREAM IMPROVEMENT WORK BY THE M.E.C.W.

FOR THE PERIOD OCT. 15, 1933 TO APRIL 15, 1934

FIRST INSTALLMENT

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PROJECT FOR THE WINTER WORK AT CAMP BLACK LAKE # 77S (Pres-
que Isle County)

In the Black Lake region the Big Ocqueoc is the most desirable stream for improvement work. While trout are caught in the Little and Big Rainey in the spring very few are taken during the summer. During late summer of the year the Little Rainey was dry just above the point where it joins the Big Rainey in Section 11, T 34 N, R 2 E. The flow of the Big Rainey was also greatly reduced, almost the entire bed of the stream being exposed. It is felt that these streams do not warrant the expenditure of money for stream improvement work. The Little Ocqueoc is a fair trout stream above the point where U.S. 23 crosses it, but below the point the beaver have dammed it severely and as long as this situation exists it is felt that no improvement is warranted. Silver Creek, a branch of the Big Ocqueoc, is in fairly good condition at present.

The streams of the region differ in character from the other streams of the lower peninsula since they are in a limestone region. The rock is near the surface and thus there is not much soil to hold water. The result of this is that after the forests were removed many of the springs have dried up and the summer flow of the streams have been greatly reduced. Any spreading of these streams is detrimental as evaporation and seepage diminishes the flow. An

example of this is the Little Rainey. While it had a fair flow in its upper stretches, it was so spread by beaver dams that it was dry for some distance in its lower reaches just above its junction with the Big Rainey.

The Big Ocqueoc is very open over a great part of its length. Above Section 22, T 35 N, R 3 E, it is very wide and shallow. There are no pools or cover. From the south line of Section 22, T 35 N, R 3 E through Section 9, T 34 N, R 3 E the stream is greatly in need of improvement. It becomes quite warm, in this region due to exposure and to beaver dams above. This stretch is practically all privately owned and thus the owners would have to be consulted if improvements were to be made.

Below the south line of Section 22, T 35 N, R 3 E, the stream is also wide and shallow but the character of the region changes. The soil becomes deeper and the water becomes progressively better as it is cooled by springs. The farther down one goes the cooler the river becomes. Many fine springs enter in Sections 23, 14, 15 and 10 of T 35 N, R 3 E. This section is largely state owned, and it is here that improvements are proposed.

Below the south line of Section 22, T 35 N, R 3 E, the stream is privately owned for about $\frac{1}{4}$ mile. The Ocqueoc Falls occur just below the section line. Below these falls the stream is very wide and there is absolutely no pools. It is strongly urged that the owners of this stretch be consulted as improvement is very desirable here. Stone slabs are very abundant in the stream and a fine demonstration could be made. This would be seen a great deal as many people visit the falls each year. It would be desirable for the state to own these falls.

Below about $\frac{1}{4}$ mile the character of the bottom changes, becoming sand and some gravel. However the stream is still much too wide. State ownership begins here and extends through Section 22, 14, 15 and through $\frac{1}{4}$ mile of Section 10. Deflectors to narrow the stream and covers are needed here. There are also 6 large sand banks in this section which are in need of control. These banks vary from 100 to 300 feet in length and from 10 to 60 feet in height.

Winter work in this area would consist in cutting fishermen's trails, erosion control of the sand banks, the cutting and hauling of material to the sand banks and the banking of material along the stream for the construction work which it is proposed to do next summer.

Work at the camp could be begun as soon as tools and materials could be obtained. However the collecting and cutting of materials could begin before special tools arrive. If a team and truck with logging trailer is provided. Erosion control would have to be delayed until tools and materials arrive. Tools could be transferred from the Pere Marquette job but it is thought best that they be retained and used in that area.

Equipment Needed

	Number
Post Mauls, 16 or 18 lbs. -----	3
Plungers for digging post holes -----	6
Pickaroons -----	4
Canthooks -----	4
Log Carriers -----	2
18 ft. logging chain with rings -----	2
Toggle chain -----	2
Draft Chain -----	1
Farmers Fence Pliers, 10 in. -----	4

Materials Needed

600 lbs. 80-penny spikes

No. 9 smooth galvanised wire--secured at Roscommon

2000 burlap sand bags

A truck with logging trailer and a team will be needed in the work. The team would be used in hauling material found lying down in the river valley and the truck would be used to haul materials for construction from Sections 14 and 13 of T 35 N, R 3 E and Section 34 of T 36 N, R 2 E.

It is recommended that a 24 man crew be used in the erosion control work which will extend until November 30. From December 1 to 31 a 12 man crew would be best. It is recommended that work here can be discontinued during January and February and be resumed March 1st with a 12 man crew to continue to April 15.

For crew foreman at the camp Mr. Howard Wigglesworth of Onaway is recommended. He is well acquainted with the region and has had a year of experience in the construction work and thus understands the methods and knows the kind, amount and type of materials needed.

PROJECT FOR THE WINTER WORK AT THE PRESQUE ISLE FOREST

Canada Creek, within the Presque Isle State Forest, is largely state owned (Sections 7, 18, 19, 20, 29, 32 and 33 of T 33 N, R 2 E). In all, about 6 miles by river course is owned by the state. This stream is ideal for improvement as it has a very fine water supply. The flow is large and the temperature is good. This stream would be an ideal trout stream if it had more pools and cover. The beneficial results of improvement on this stream will be large for the amount of effort expended.

The winter work on this stream can be classified in the same way as that in the Pigeon River Forest. That is, divided into (1) immediate improvements and (2) preparation for proposed improvements during the summer months.

The immediate improvements consist of erosion control on the sand banks and trail construction. These sand banks may vary from 5 to 30 ft. in height and from 50 to 300 ft. in length. Large amounts of sand are being added to the river each year, and the lower portions of the river are almost all sand bottom. In Section 18 and the north half of section 19 the river flows through a dense swamp. A fisherman's trail should be cut through this swamp in order to give access to the river.

The other class of winter work is the cutting and hauling of materials needed in the construction of the barriers during the summer. The upper portion of the section under consideration for improvement is open and the very little

material which is available all old cedar which is lying on the ground. The material which is on the ground can be utilized but more will have to be hauled in from the lower portion of the section which is dense swamp. The material in the swamp (Sections 18 and 19, T 32 N, R 2 E) is small and suitable for covers. Logs for the construction of deflectors can be secured in Section 25, T 32 N, R 1 E. Roads are near by each of these locations and material can be gotten out during the entire winter.

The time required for each of these projects is as follows:

1. Erosion control. October 15 to November ³20. 24 man crew.
2. Trail Construction. December 15 to 31. 12 man crew.
3. Picking up and hauling material to the upper portion of the section to be improved. Section 20, 19, 29, 32. December 1 to 15. 12 man crew.
4. Cutting, hauling and banking of materials along the stream. Cutting and sharpening of stakes. January 1 to April 15. 12 man crew.

Equipment Needed

	<u>Number</u>
Plungers for digging post holes-----	6
16 lb. Post Mauls -----	3
18 ft. logging chains with rings -----	3
Toggle Chains -----	3
Draft Chain, 10 ft. -----	2
Decking Line, 80 ft. long, 1/2 in. chain -----	1
Iron Purchase Block for Decking Line -----	1
Canthooks -----	6
Pickaroons -----	4
Farmers Fence Pliers, 10 in.-----	6
4 lb. Blacksmith Hammers -----	2
Log Carriers -----	3
Carpenters Adz -----	1
Rubber Boots -----	4 pair

Materials Needed

#9 galvanized soft wire. This is understood to be at Roscommon in sufficient quantity.

600 lbs. 80-penny spikes

2000 burlap sand bags.

A truck with a logging trailer can be used for hauling material to the sand banks on which erosion control is being done.

During the first part of December while the material is being picked up from the ground a team will be needed. After January 1 when work begins on the swamps a team will be required to haul out material and a tractor and sleigh will be necessary to haul it to the river. Due to the snow and the fact that the haul is short a tractor has been judged better than a truck. The sleigh could be supplied by the owner of the team.

Winter work requires a special type of supervision. A foreman who knows how to build sleigh roads and load and haul logs is required in this instance. Mr. Albert Post of Onaway is very well fitted for the position. He knows the whole area and thus will be able to lay out roads and get the material to the river at all suitable places. Since he has had a year of experience in construction of the barriers, he also knows what type of materials will be required. It is recommended that he be placed in charge of the crew in the camp. Mr. Post sent in an application for foreman on stream improvement work last June.

PROJECT FOR THE WINTER WORK AT FIFE LAKE CAMP # 82S.

(Grand Traverse County)

There is a great deal of stream improvement work to be done in the region of the Fife Lake Camp. The North Branch of the Boardman River needs improvement throughout its entire length except for a few short stretches. The South Branch is also in need of improvement especially from the village of South Boardman down to the Kalkaska County line. There are also stretches on the North Branch of the

Manistee River which are in need of improvement. These latter have not yet been examined.

The North Branch is the stream which is considered the best one to improve first. However, if men were available, the South Branch also should be improved. Due to the small number of men in camp and the length of the haul only the North Branch shall be considered in this report. If desired however, the plans can be modified so as to include work on the South Branch.

There are extensive state holdings along the North Branch. The river is state owned in Sections 27, 28 and 29, T 27 N, R 8 W and in Sections 25, 36, 34, and 35, T 27 N, R 9 W. The stream in this section is wide and shallow. Pools and cover are needed. There is also a large number of sand banks in need of control along this section of the river. During the summer work 4 of these banks have been controlled, but there are 30 still in need of control.

Winter work would consist of the control of these sand banks, making of trails, and hauling and banking of material along the stream for the proposed construction work of next summer.

Due to the distance from camp it is judged best to discontinue winter work from this camp during January and February. Thus the period of winter work would extend from about October 20, or as soon as materials and equipment could be secured, until December 31, stopping then to be reassumed March 1 and extending to April 15.

In order to carry on this project a crew of 24 men shall be required. A smaller crew would simply mean the cutting down of the project. Two teams and a truck with logging trailer are also needed.

With the tools already present at the camp a 12 man crew can be placed at work but as soon as additional equipment is received the full crew can be placed at work. Tools could be transferred from the Pere Marquette job if necessary. Materials would be needed at once.

<u>Equipment Needed</u>	<u>Number</u>
Plungers -----	6
Canthooks -----	6
Pickaroons -----	4
Farmers Fence Pliers, 10 in. -----	4
18 ft. Logging Chains for wrapping logs -----	2
Toggle Chains -----	2
10 ft. draft chain -----	1
3-pully block, 6" pully -----	1
2-pully block, 6" pully -----	1
4 lb. Blacksmith hammers -----	2
100 ft. 3/4" rope	
Log Carriers -----	2

Materials Needed

800 lbs. 80-penny spikes

20 lbs. 10-penny nails

3000 burlap sand bags

#9 smooth soft galvanised wire--secured from Roscommon.

Since the first part of winter would consist of erosion control work, it would really be a continuation of the work Mr. Moody has been doing. Thus he can continue with this work as soon as it is thought desirable. Work has already been laid out for him.

PROJECT FOR THE WINTER WORK AT PIGEON RIVER CAMP # 62 S.

(Cheboygan County)

The Pigeon River Camp is outstanding as a center from which to carry on stream development. There is within the Pigeon River Forest more state-owned land along the stream, than there is in any other forest in the lower peninsula. Not only is this ownership extensive but it is in large blocks, as there is very little

private ownership within state lands. Also there are very extensive areas greatly in need of improvement within the area. There are large sand banks on which erosion control should be protected. Further there are fishermen's trails to be cut, log jams to move in order to open the stream for navigation, and shade to be planted. The river is also greatly in need of pools, cover and increased food supply.

An extensive winter program can be carried on from Camp #62S. (It could be conducted on two rivers--the Pigeon and the Black.) The winter work falls naturally into two classes. The first class of work consists of direct and active improvement and the second class consists of preparation for work next season. Each of these two classes consists of two types of work. The first class consists of erosion control of the actually eroding sand banks along the stream, as well as the cutting and construction of fishermen's trails along the river to make it passable and accessible in the swamps. The second class consists of the cutting and hauling of materials to the localities to be improved next year and the cutting and making of stakes. This may be outlined as follows:

1. Active improvement work covered during the winter
 - a. Erosion control of banks
 - b. Cutting and building of fishermen's trails
2. Work in preparation for the summer project
 - a. Cutting and hauling of materials for construction
 - b. Cutting and sharpening of stakes.

The working time can be divided into three periods as follows:

1. October 15 to November 30. Erosion control.
2. December 1 to 31. Trail building.
3. January 1 to April 15. Cutting and hauling of material to the river for construction next summer.

It is proposed to divide this time between the Pigeon River and Black River, according to their relative lengths that are in need of improvement. Erosion control would be largely or entirely confined to the Pigeon River as it is along

this river that the high and active sand banks occur. Those which are along the Black in the section of state ownership are small and thus if time is not available they could be worked on during the following or summer period.

It is proposed that three weeks be devoted to the construction of trails along the Pigeon and one week to trail construction along the Black. There is about 12 miles of trail to be constructed along the Pigeon at about 3 miles along the Black.

The section of the Pigeon River which is under consideration for improvement work extends from Section 17, T 32 N, R 1 W down to Section 30, T 34 N, R 1 W or the point at which it leaves the state forest. The portion of the Black under consideration lies in sections 33, 34, 27, 35 and 36, T 32 N, R 1 W. Thus it extends from the west boundary of the forest to the Ponemah Club holdings.

During the month of January material could be hauled in and banked along the above mentioned section of the Black which is in need of improvement. This is largely an alder section and while the depth of water is good, cover is needed. Materials can be secured from the swamp just to the north of the river in Section 27, T 32 N, R 1 W.

The period of February 1 to April 15, would be used in cutting, hauling and banking along sections of the Pigeon which it is desired to improve.

Improvements are desirable on all sections of the river within the state forest which are not yet improved. except that portion of the river lying within Sections 17 and part of 21, T 33 N, R 1 W. Materials would be collected in the swamps bordering the river. It is essential that this be done in the winter while the ground is frozen as otherwise the swamp would be impassible for a team or other equipment.

Sections 8 and 5 of T 33 N, R 1 W are largely privately owned. It would be possible perhaps to have the owners sign petitions requesting the work. It is also suggested that the portion of the river from the Lansing Club down to the south line of Section 17, T 32 N, R 1 W is also greatly in need of improvement. If the section were improved the river below would benefit. This improvement

could be included in the program if petitions were secured.

The work from this camp calls for a crew consisting of one section 24 men. The work as outlined above can not be completed if a smaller crew is used.

Work from Camp Pigeon River can begin at once. Mr. Kuhne who was in charge of the summer program at the camp is still in camp and he can begin at once. While certain additional tools and materials will be needed for winter work, by using the tools already at the camp work can be carried on for a time until additional tools and materials arrive.

The project calls for the following equipment:

	<u>Number</u>
18 ft. Logging chain with rings for wrapping logs	2
Toggle Chain -----	2
Draft Chain, 10 ft. -----	1
100 ft. 3/4 in. rope	
Block with 3 pulleys -----	1
Block with 2 pulleys -----	1
Pickaroon -----	4
Canthooks -----	6
Log Carriers -----	4
Farmers Fence Pliers, 10 in. -----	2

Materials Needed

600 lbs. 80-penny spikes

#9 smooth galvanized wire-soft. Can be secured from Roscommon, I believe.

2000 burlap sand bags.

During the first period of the work a truck with a logging trailer is needed for hauling the material to the sand bank. During December no special equipment for hauling will be needed. During the period January 1 to April 15 a team and a tractor and sleighs will be needed.

There are several other streams in the area which have not been surveyed. Among them are the following: Hardwood Creek, Little McMaster, Big McMaster and Milligan Creek. These streams should be examined in order to learn their present condition. If time permits this will be done this fall.

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