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DIVISION OF FISHERIES  
MICHIGAN DEPARTMENT OF CONSERVATION  
COOPERATING WITH THE  
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REPORT NO. 433

INSPECTION OF BEAVER DAMS ON WEST BRANCH OF BIG CREEK,  
EAST BRANCH OF BIG CREEK, AND A SMALL PORTION OF THE  
MIDDLE BRANCH OF BIG CREEK *Crawford Co.*

Following instructions received from Dr. A. S. Hazzard, two days were spent in cruising various portions of the branches of Big Creek. Five dams were found on the East Branch, two dams were found on the West Branch and none were found on the Middle Branch in the two miles above the Forty Foot Span.

West Branch of Big Creek (Cruised 8/16/37)

Dam in Sec. 9, T 28 N, R 1 W

This is an old dam located about one mile by stream below the Lovells-Lewiston Bridge. As reported by Johnstone (letter of August 7, 1937), much sand is held back by this dam. Little water is backed up, as the dam is broken at one end and is passable to fish at present. There were no signs of recent beaver activity here. As the stream is very sandy both above and below this dam, it will make little or no difference whether or not this dam is taken out.

Dam in Sec. 3, T 27 N, R 1 W. *See Smith (1937)*

This is a relatively new dam, and of fairly recent construction and is occupied at present. It is located at and uses the old abandoned lumber trail bridge near the middle of section 3. The dam proper is about 35 feet wide and has a head of water of about 4 feet. The old road embankment

supplements the dam on the wings, so that the backwaters just above the structure are about 50 yards in width. The dam is impassable to fish. Considerable bank cover has been cut by the beaver or is being drowned out. The stream is over its banks for at least 3/8 of a mile upstream; the water is dead and coffee-colored. There is considerable deposition of the usual beaver-dam sludge in the pond and in the stream. If the dam is allowed to remain this section of the stream will become nothing more than an unsightly mudhole.

Below the bridge the stream channel is normal, having a clean gravel bottom. Pictures 4, 5, and 6 show views of this dam.

Temperatures

4:25 p.m.	Air - 86	
	Water in dam - 74	Sky clear
	Water above dam - 73	Wind mod. SW
4:15 p.m.	at Smith's Cottage 3/8 mile above dam	
	Air - 87	
	Water - 74	

East Branch of Big Creek (Cruised 8/15/37)

Dam in Sec. 8, T 28 N, R 1 E

This beaver dam is located about 500 yards above the junction of Wright's Creek with the East Branch. It is a new and occupied dam of about 20 feet in width and has a fall of about 2 feet. Water is backed up for about 300 yards. There are heavy deposits of muck in this dam. Picture 7 is a view upstream toward this particular dam pond.

Between this dam and Griffin's cowpath there are three old dam sites. The dams have been removed, but their effect on the stream is very noticeable in the form of beaver-cut timber trash in the channel, the absence of shade along the banks, and a heavy deposit of muck and detritus over the gravel bottom. In places this muck is knee deep.

Dam in Section 7, T 28 N, R 1 E

This dam is located about 75 yards above Griffin's cowpath, and is an old and unoccupied dam. There is a fall of about 18 inches, and water is backed up for about 150 yards. The usual heavy muck deposit is present. The dam is an impassable barrier to fish migration. Pictures 8 and 9 show views of the stream at this point. Below the dam the stream becomes normal again.

The fishing in this section above Griffin's cowpath seems fairly good. One hour's fishing with worms yielded 4 legal brook trout of 8-9 inches, and ten other brook trout of 5- 6 7/8 inches were also taken. Two 5-inch Semotilus were caught, and many black-nosed dace were observed.

Temperatures

3:00 p.m.	Air - 84	
	Water in dams - 72	Sky clear
	Water in stream - 70	Wind mod. SW.

Meridian Line Dam (Sec. 7-12, T 28 N)

This beaver-pond is located about two miles upstream from the Forty Foot Span, which is at the junction of the East and Middle Branches of Big Creek. Good gravel bottom and riffles are interspersed with deep holes in this stretch of the East Branch until the dam is encountered. The dam has a 4 foot head of water and is approximately 35 feet wide. It spreads somewhat over its banks, and backs water up for at least 200 yards. Beaver are occupying the pond at present, and the dams seemed to be of recent construction. It is impassable to spawning fish. Bottom conditions are poor, and will become worse if the dam is allowed to remain. Pictures 10, 11, 12 and 13 show views of the stream in the region of the dam.

Dam on Section 23-14, T 27 N, R 1 W (Cruised 8/16/37)

This dam is about 1/2 mile north-east of the open field which is east of the Northwoods Club lodge. It is a new dam and occupied at present by beaver. There is an old house, possibly now being used by the beaver,

located on this pond. The dam is approximately 2 feet in height, and about 50 feet long, being built angularly to the current. Deadwater is backed up for about 200 yards, with the resultant heavy muck deposits. Shade bushes have been drowned out, and the stream is littered with trash for about 100 yards above and below the dam. Pictures 14, 15, and 16 show views of this dam. The dam is possibly passable to fish if not further reinforced.

Dam on Section 23, T 27 N, R 1 W (Cruised 8/16/37)

This is an old dam located directly east of the Northwoods Club lodge. The dam is passable at present to fish, but will probably not remain so, as there are signs of rebuilding. We were absent from the site about 45 minutes, and in that time a beaver had cut down an 8 inch poplar about 20 yards above the dam. Some 50 yards of back water are created here, but only sand has been deposited. The dam has about 1 foot fall, and is about 30 feet in width. Pictures 18, 19 and 20 show views of this dam.

Temperatures

9:25 a.m.      Air - 73  
                  Water - 60 both in and outside of dams  
                  Sky clear. Mod. SW winds

The Middle Branch of Big Creek was cruised for two miles above the Forty Foot Span on August 15, 1937, but no dams were found and no signs of beaver activity could be discovered.

General Conclusions from the Inspection

Although general conditions for trout life are not seriously in danger at the present moment, if these dams just reported on are allowed to remain in the streams and the beaver continue to build (as they give signs of doing), the East and West Branches of Big Creek will in two or three years become sub-marginal trout waters since the dams will block the movements of fish seeking suitable spawning grounds, and the muck deposits

will smother much of the insect life that normally inhabits the clean gravel bottoms.

Secondary effects produced by the dams are a loss of shade and bank cover and the raising of the water temperatures of the stream. All these points have been demonstrated by Salyer. Deleterious chemical effects have also been demonstrated by the same individual to occur in beaver dams.

Some grouse and woodcock cover in the low areas along both East and West Branches of Big Creek is also being flooded out.

In view of the objections mentioned above, I believe that the Big Creek drainage would be more healthy for trout if all dams were removed and the beaver live-trapped and removed from the area.

#### Problem of Removal

It will be possible to remove all the dams on the East Branch, as the property owners have expressed a desire to have these dams taken out. The upper two dams are on Griffin's land, and the lower three are located on the property of the Northwoods Club (M. C. Newman, caretaker, states he has been given authority to permit the dams to be removed).

The dam on Sec. 3, T 28 N, R 1 W is on the property of one Tom Smith of Ann Arbor, Michigan, and I am told that he desires that this dam be left in as he likes to fish in the backwaters from a boat. However, this is the most objectionable dam of all that were visited and should be removed if it is at all possible. (Might it not be possible for the state to force removal under the same legal point of view used to attack the Ne-Bo-Shone case, i.e. public use of the stream, inasmuch as Big Creek was used as a logging stream when they cut the timber?)

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