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MICHIGAN DEPARTMENT OF CONSERVATION
COOPERATING WITH THE
UNIVERSITY OF MICHIGAN

ALBERT S. HAZZARD, PH.D.
DIRECTOR

June 27, 1952

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UNIVERSITY MUSEUMS ANNEX
ANN ARBOR, MICHIGAN

Report No. 1340

SURVEY OF SAND CREEK,

(T. 2, 3 N., R. 14 W., Secs. 2, 3, 4, 5, 33, 35),

ALLEGAN COUNTY

by

I. A. Rodeheffer and Jason Day

Abstract

Sand Creek is a trout stream tributary of the Kalamazoo River; most of its course passes through the Allegan State Forest. The stream is primarily spring-fed. It is fairly well shaded on the whole. At the time of the survey in 1947, the bottom consisted mostly of sand that is subject to shifting. Stream improvement work was recommended for Sand Creek, and in 1950 a series of 24 structures was installed in a section near the mouth.

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Sand Creek rises in Section 2 of Valley Township and flows northwest into Section 3 of the same township. Throughout this section it flows north to junction with an intermittent tributary in Section 35 of Heath Township. From this point of intersection the stream flows westerly through Sections 34 and 33 of Heath Township. In the latter section the stream changes its course to southwest and returns to Valley Township where it empties into the Kalamazoo River.

The stream flows almost entirely through the Allegan State Forest and is accessible at a bridge lying three-quarters of a mile south of Dunningville. All of the stream lying west of this bridge was to be accessible from a new highway which was being constructed on the township line separating Heath and Valley Townships when Sand Creek was surveyed in July, 1947. This new highway was to cross several hundred yards above the mouth and the Highway Department intended to change the course of the stream below the bridge.

The water supply of Sand Creek is made up of springs and surface run-off. There was no pollution, but much evidence of flooding, as

the stream has low banks cut into the flood plain of a wide valley.

There were no dams on the stream, and there appeared little opportunity for impoundment because of the wide valley. Dams would have to be very long and the water withheld would spread over a wide area and kill some timber.

Downstream from the bridge, three-fourths of a mile south of Dunningville, the banks of the stream are heavily forested. Above this bridge, Sand Creek flows through cultivated and pasture lands of marginal agricultural value, its banks shaded by brush and small trees. Reports from local fishermen indicated that it furnished good trout fishing, particularly early in the season.

The work of the survey party consisted of checking several hundred yards of stream at upper and lower stations, and visiting the stream at several points between these locations. No fish life was observed at any of these places. Stream improvement devices consisting of deflectors and anchored stumps were found in the lower part of the creek.

Planting records show that Sand Creek was planted with 225 brook trout 8 inches long and 5,000 1-inch brook trout in 1945. The 1946 planting consisted of 50 brook trout averaging 9 1/2 inches long. No plantings had been made in 1947.

Spawning grounds for trout were limited in this stream as the bottom was almost entirely shifting sand. Only near the bridge on the road running south of Dunningville was some gravel found. Here the stream was small, with a flow of about 315 gallons per minute. The velocity was but 0.8 foot per second. At the lower station, just above the bridge being constructed on the Heath-Valley township line, the volume was 3 c.f.s. with a velocity of 1.2 f./s. So far as observed, the

stream in the lower section had only shifting sand for bottom with virtually no pools. Overhanging brush made fishing difficult, but this brush offered some protection for fish.

The temperature of the water during the latter part of July, 1947, was 60° F. at the upper station and 59° F. at the lower. The dissolved oxygen values ranged from 6.8 ppm. at the upper station to 10.4 ppm. at the lower. Methyl orange alkalinity varied from 136 to 144 ppm.

Aquatic vegetation was sparse, consisting of algae and mosses on submerged timbers. Fish foods, consisting of fresh-water shrimp, aquatic earthworms, and midge larvae, with some dragonfly nymphs at the upper station, were considered relatively numerous for a stream with a shifting sand bottom.

As for management, some stream improvement to add to pool and spawning areas and to control watershed erosion was regarded of value. Recommended were fry or small fingerling plantings until natural spawning conditions were improved.

Since the time of the survey, stream improvement devices have been installed in lower Sand Creek, from Highway M-89 down to the mouth. There are 24 of these structures that were put in during 1950. A descriptive list of them is appended to this report.

Stream Improvement Structures in Sand Creek, Allegan County,
Valley Twp., T. 2 N., R. 14 W., Sec. 4 (Work completed during 1950)

<u>Number</u>	<u>Type of structure</u>	<u>Length</u>	<u>Angle</u>
1.	Single wing deflector (sheet-pile) with trailer log	15' 12'	60°
2.	Double wing deflector (sheet-pile) each with digger log	15' & 10' 5'	30°

3.	Digger log	8'	90°
4.	Single wing deflector (sheet-pile) trailer log attached	10' 12'	60°
5.	Single wing deflector (log)	6'	60°
6.	Single wing deflector (log & brush) trailer log attached	10' 8'	60°
7.	Digger log	6'	60°
8.	Bank protector (log)	12'	Parallel
9.	Single wing deflector (sheet-pile) trailer log attached	12' 4'	60°
10.	Bank protector (log & limb)	8'	Parallel
11.	Digger log	10'	90°
12.	Bank protector (log)	12'	Parallel
13.	Digger log	15'	60°
14.	Single wing deflector (log & brush) trailer log attached	15' 15'	60°
15.	Bank protector (log)	3'	Parallel
16.	Single wing deflector (log)	8'	30°
17.	Single wing deflector (sheet-pile)	10'	60°
18.	Single wing deflector (log & stump)	12'	60°
19.	Single wing deflector (sheet-pile)	20'	60°
20.	Single wing deflector (log)	12'	30°
21.	Digger log	6'	30°
22.	Digger log	6'	60°
23.	Digger log	6'	90°
24.	Double wing deflector (sheet-pile)	R.15' L. 8'	45° 45°

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