Original: Fish Division ✓
cc: Education-Game
Institute for Fisheries Research
C. T. Yoder
H. L. Thompson
J. E. Williams

INSTITUTE FOR FISHERIES RESEARCH
DIVISION OF FISHERIES
MICHIGAN DEPARTMENT OF CONSERVATION
COOPERATING WITH THE
UNIVERSITY OF MICHIGAN

ALBERT S. HAZZARD, PH.D.
DIRECTOR

ADDRESS
UNIVERSITY MUSEUMS ANNEX
ANN ARBOR, MICHIGAN

September 25, 1951

Report No. 1300

AN INVESTIGATION OF THE PIKE SPAWNING AREAS IN AND AROUND DOUGLAS LAKE, CHEBOYGAN COUNTY, MICHIGAN, DURING THE SPRING OF 1951

By

J. E. Williams

Abstract

Because of recent complaints of poor pike fishing, and reports of the stranding of pike adults and fry, during and after the spawning run along the west side of Douglas Lake, Cheboygan County, an investigation was made during the spring of 1951. An extremely light run was evident from April 6 to 13; a total of nine pike were observed by the author. Areas apparently satisfactory for pike spawning were found to be located mainly around most of the edge of Marl Bay, the northern tip of Maple Bay, about the main inlet, Lancaster (Bessie) Creek, and about the outlet (East Branch of the Maple River). A further check of the area on May 14, 1951, revealed that many possible spawning areas existent in April were either dry, isolated as pools, or stagnant stream beds. Pike fry found in Van Ditch on May 14 were prevented from attaining the lake by stagnation and excessive vegetation in the ditch. Besides Van Ditch, areas of unsatisfactory water level existed along all inlet streams, but chiefly about the streams entering from the west; also in the area west of Van Road known as Beaver Meadows, drained by Dry Run, an intermittent tributary of Maple River.

Spearing in the past is reported to have been especially heavy around Douglas Lake during the spawning run of the pike, but was not in evidence this year. No stranded adult pike were observed.

It is felt that pike spawning in Beaver Meadows are mostly inhabitants of the Pellston Power Pond on the Maple River. It seems doubtful if many pike from Douglas Lake reach the Beaver Meadows area, but any spawning done here or along Van Creek could have no beneficial effect on the lake; all resulting fry would drift down to the Pellston Power Pond.

A screen at the entrance of Van Ditch, while it would prevent pike from entering that ditch, would not prevent them from using the flooded woodland nearby, would entail considerable maintenance, would increase the difficulty of law enforcement, and might increase the vulnerability of pike congregated at the screen. It is therefore recommended that the ditch not be screened but be redredged. It was dredged originally to help drain off water from the woodland area and prevent Van Road from becoming completely flooded. While this might increase the ease of violation slightly, it would help to insure that spawning here would contribute to the population of Douglas Lake. From observations and local opinion, the author is quite sure that some of the pike in Douglas Lake spawn in the shallow grassy bays already mentioned.

Original: Fish Division
cc: Education-Game
Institute for Fisheries Research
C. T. Yoder
H. L. Thompson
J. E. Williams

INSTITUTE FOR FISHERIES RESEARCH
DIVISION OF FISHERIES
MICHIGAN DEPARTMENT OF CONSERVATION
COOPERATING WITH THE
UNIVERSITY OF MICHIGAN

ALBERT S. HAZZARD, PH.D.
DIRECTOR

ADDRESS
UNIVERSITY MUSEUMS ANNEX
ANN ARBOR, MICHIGAN

September 20, 1951

Report No. 1300

AN INVESTIGATION OF THE PIKE SPAWNING AREAS IN AND AROUND DOUGLAS LAKE, CHEBOYGAN COUNTY, MICHIGAN, DURING THE SPRING OF 1951

By

J. E. Williams

Because of recent complaints of poor pike fishing, and reports of the stranding of pike adults and fry, during and after the spawning run, along the west side of Douglas Lake, Cheboygan County, it was decided that an investigation should be made during the spawning run of pike in the spring of 1951. Accordingly, Conservation Officers Norman Auldrich (Cheboygan County) and Thomas Koboski (Emmet County) were advised and requested to notify the Institute for Fisheries Research when spawning runs of pike began or were imminent at Douglas Lake. Officer Auldrich called on April 7, 1951 and said that he had seen several pike moving upstream in Lancaster (Bessie) Creek, an inlet of Douglas Lake, on the night of April 6, and that he expected there would be a run at Van Ditch shortly. Therefore, I left for Douglas Lake on April 8, arriving in the evening in time to make a check for pike runs and spearing that night. No pike were seen moving in Lancaster (Bessie) Creek (water temperature 39° F.) or elsewhere, nor had any been seen on a check made the previous night by Officer Auldrich.

The Douglas Lake spawning areas were checked by the writer from April 8-13 and on May 14, 1951 and Officers Auldrich and Koboski made

checks on the areas from late in March until late in April. Nine pike were seen by the author from April 9 to April 13 and according to the officers this was the only period when pike were observed to be present.

According to the officers, local residents and my own observations, various places about Douglas Lake are available to pike for spawning (Figure 1). Some of these areas apparently are entirely satisfactory; others are limited in area; still others, while being of large enough area, are subject to excessive reduction of water level and stranding of eggs and fry to the extent that, according to local residents, adult pike are sometimes stranded before they can return to the lake. The apparently satisfactory areas present are mostly located within the lake itself, in various shallow grassy bays. Chief among these are the eastern shore of the entrance of Lancaster (Bessie) Creek to the northernmost tip of Marl Bay (Northwest corner of lake) from the vicinity of the bay (Figure 5) and the extreme northern tip of Maple Bay (southwest corner of lake) west of Maple Point. Areas of satisfactory water level but of limited area include various weedy sections of the western shore line of the lake; the region about the outlet, Maple River, which is an area of inundated woodland; and various places along the borders of the nine streams entering the lake at this time of year (Figure 6). Areas of large size, but of unsatisfactory water level, occur along most streams entering the lake, but particularly along the six entering from the west. These streams, from the western side of Marl Bay to Van Ditch, all drain the water from the tremendous acreage of flooded land behind the high beach ridge occurring along much of the western shore. Water in this flooded woodland averages about one foot deep, but in 2 to 3 weeks, most of the woodland is exposed except for isolated pools. Another area of unsatisfactory water level conditions, not drained by these six

streams, exists farther west between Van Road and the road 1 1/2 miles to the south (Figure 2). This region, known locally as 'Beaver Meadows' is flooded with water in the early spring and is drained rapidly by a part-year tributary of the East Branch of the Maple River known as 'Dry Run.' Pike from Douglas Lake supposedly reach this area either by going down Maple River and up Dry Run, or by going up Van Ditch to Van Creek, then down Van Creek.

Of the nine pike seen by the author during the period April 9 to 13, 5 were seen in flooded woodland just 50 feet south of the exit of Maple River from the lake on the afternoon of April 10. Water in this area was approximately one foot deep over a bottom of grass, sticks and other woodland debris, and was at a temperature of 45 degrees Fahrenheit. The temperature of the adjoining river was 42 degrees Fahrenheit and that of the air 55 degrees Fahrenheit. Of these 5 fish observed, 2 were captured with the hands and were found to be ripe fish. One pike was a 24 inch male and the other a 27 inch female. The male had a non-regenerated anterior anal clip, probably from experiments done at the University of Michigan Biological Station on South Fishtail Bay. Two additional pike were observed in the lake proper, one being seen in the shallow, grassy water on the western side of Marl Bay on the morning of April 11 (water temperature 59° F.) and the other being seen in the same type of water at the extreme northern tip of Maple Bay on the afternoon of April 10 (water temperature 52° F.). Both fish avoided capture and returned to deeper water. The final two pike seen by the author were observed separately about one-half way up Van Ditch (water temperature 46° F.) on the morning of April 10 (Figures 3 and 4). Two pike were also seen lying side by side in the lower reaches of Van Ditch on the afternoon of April 13 by Officer Koboski's fire lookout. No other pike were seen

during the spawning time and it is believed that the run was exceedingly light this year (as was evident at other locations in Michigan). The lake ice was loose around the shore on April 8 and warm rain all day April 9 hastened the melting of snow and ice, so that by April 13 all snow except on deeply wooded slopes was gone and there were large areas of the lake free of ice.

On May 14, 1951, while in the vicinity, the author checked the Douglas Lake area for evidence of stranded adult pike and fry. The water in the woodlands west of the lake had receded leaving isolated pools and all inlets on the west side, while still partially filled with water, were nearly stagnated and an almost imperceptible flow of water could be noticed only where they joined the lake. Inch-long pike fry were drifting lakeward at nearby Orchard Lake, Presque Isle County, at this time, but the only fry found at Douglas Lake were inch-long fry found from 1 to 1 1/2 miles up Van Ditch. These fry were in fair abundance along this stretch (averaging about 1 to a scap net thrust) and were all prevented from attaining the lake by the absence of current in the ditch. The ditch has become fairly well choked with brush and other vegetation in many places and it would be impossible for fry to negotiate the mile to the lake. These fry could be flushed down the ditch, providing heavy rainfall raised the water level, but in the event of the ditch drying up (which happens nearly every summer) these pike would perish. No evidence of stranded adults was found nor had any been reported.

Both Conservation Officers informed me that illegal pike spearing during the spawning season has always been heavy here, especially as many of the natives apparently believe (or wish to believe) that the pike become stranded in the marshy and woodland areas and are unable to return to the lake. Violating has been especially heavy and difficult to control

along Van Ditch which parallels Van Road for over 2 miles. Certain people at Van notify violators when the pike run is on and serve as a lookout to warn violators of officers presence. This year however they complained that there were so many state personnel around that they didn't dare find out if pike were running or not. No violations or even suspected attempted violations were noticed this year, even though the areas were watched and cruised at night. In the past, persons have been arrested with as many as 60 speared pike in possession.

As mentioned above, pike have two possible routes from Douglas Lake to the Beaver Meadows area (Figure 2), either via Van Ditch and Van Creek or by Maple River and Dry Run. In using the first route they would be passing good spawning ground on the way to Beaver Meadows and would probably spawn without going that far. The second route would entail dropping down the outlet and then up a tributary which I believe would be the exception rather than the rule. If it were normal for pike to get from Douglas Lake to Beaver Meadows via Maple River they should have done so this year, inasmuch as pike were seen around the source of Maple River. In other words, I believe most pike spawning in Beaver Meadows are not inhabitants of Douglas Lake at all, but are probably fish coming from the Pellston Power Pond on the Maple River, which has a good population of pike. Officer Koboski related that in some years he has seen large numbers of pike trying to get over a beaver dam at the northeast end of the power pond where the East Branch of the Maple River enters. It seems logical that in some years the beaver dam may be partly washed out or flooded over and the pike allowed up the Maple River to Dry Run. Certainly, any pike fry hatching in Beaver Meadows would drift down Dry Run to the Maple River, and thence to the Pellston Power Pond where they likely would stay until they reached maturity. To me, the logical explanation for the

absence of pike in Beaver Meadows this year consists of two parts; the fact that no pike went down Maple River from Douglas Lake and that, the beaver dam at the power pond being in good repair, no pike went up Maple River from the Pellston Power Pond. Therefore, I am of the opinion that Dry Run, Van Creek and the area of Beaver Meadows can be ignored as far as any great importance to Douglas Lake pike fishing is concerned, as pike spawning in these places are making no contribution to the lake anyway, the fry drifting down to the Pellston Power Pond. Should any adults from Douglas Lake make their way down Maple River or Van Creek to spawn, it is probable that some would never return to the lake.

The question remains then, what is to be done about Van Ditch? The condition of the ditch at the present time is such that, while serving as a spawning place for pike, it is a trap as far as the fry are concerned, due to the thickness of vegetation in it. A screen could be placed at the mouth of the ditch to prevent pike from using it. Pike would not however, be prevented from using the flooded woodland west of the lake by a screen at Van Ditch, but would probably use the other inlets along that shore more freely. This would reduce easy violations directly from Van Road and make the violators get back in the woods where they might be more difficult to see and apprehend. A screen would furthermore pose a considerable maintenance problem as it could easily develop into a dam, stopping the flow even earlier in the ditch. There is the further hazardous possibility that pike, prevented from using the ditch by the screen, would still congregate at it and be even easier targets for a spear than while in the ditch. It is therefore the writers suggestion that the ditch be redredged in order to clean out the excessive vegetation. The ditch was originally dredged in order to hasten the run-off of spring flood water which covered Van Road. The ditch is no longer efficiently

performing this function. While redredging Van Ditch would undoubtedly make it easier for violators to find and spear pike in the ditch, it will ensure that at least some of the fry resulting from spawning here will reach the lake. In certain spring seasons when there is a prolonged dry period following the snow meltage, the water level in the lowlands may be reduced rapidly enough to strand some adult pike. Normally, however, most of the adult pike should escape back to the lake.

It must be remembered that it is extremely doubtful if a very large percentage of the pike in Douglas Lake use Van Ditch for spawning. Pike whose summer, weed-bed habitats are close by would be most likely to spawn here, the remainder of the pike in the lake spawning in areas closer to them. It has been said by a native of Douglas Lake that years ago pike were speared in large numbers in the shallow parts of Marl Bay in the spring. Marl Bay still has good pike spawning areas that are undoubtedly used by pike. It is recommended by the author that, since the pike run at Douglas Lake was extremely light this year, a further brief check be made in the near future, if and when a large run of pike does occur.

Report approved by A.S. Hazzard
Report typed by M.C. Tait.

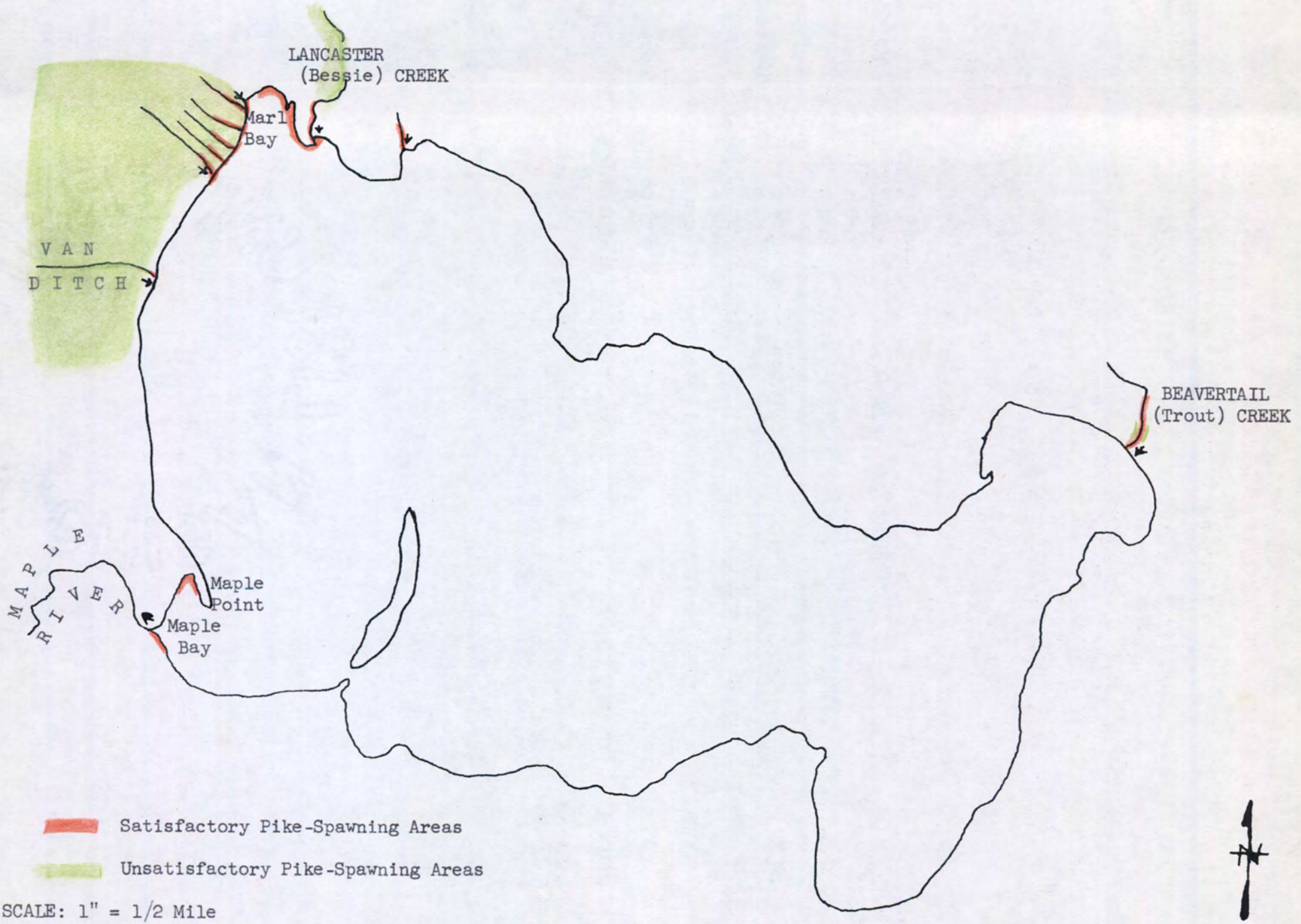

Figure 1. Pike-Spawning Areas Immediately Surrounding Douglas Lake.

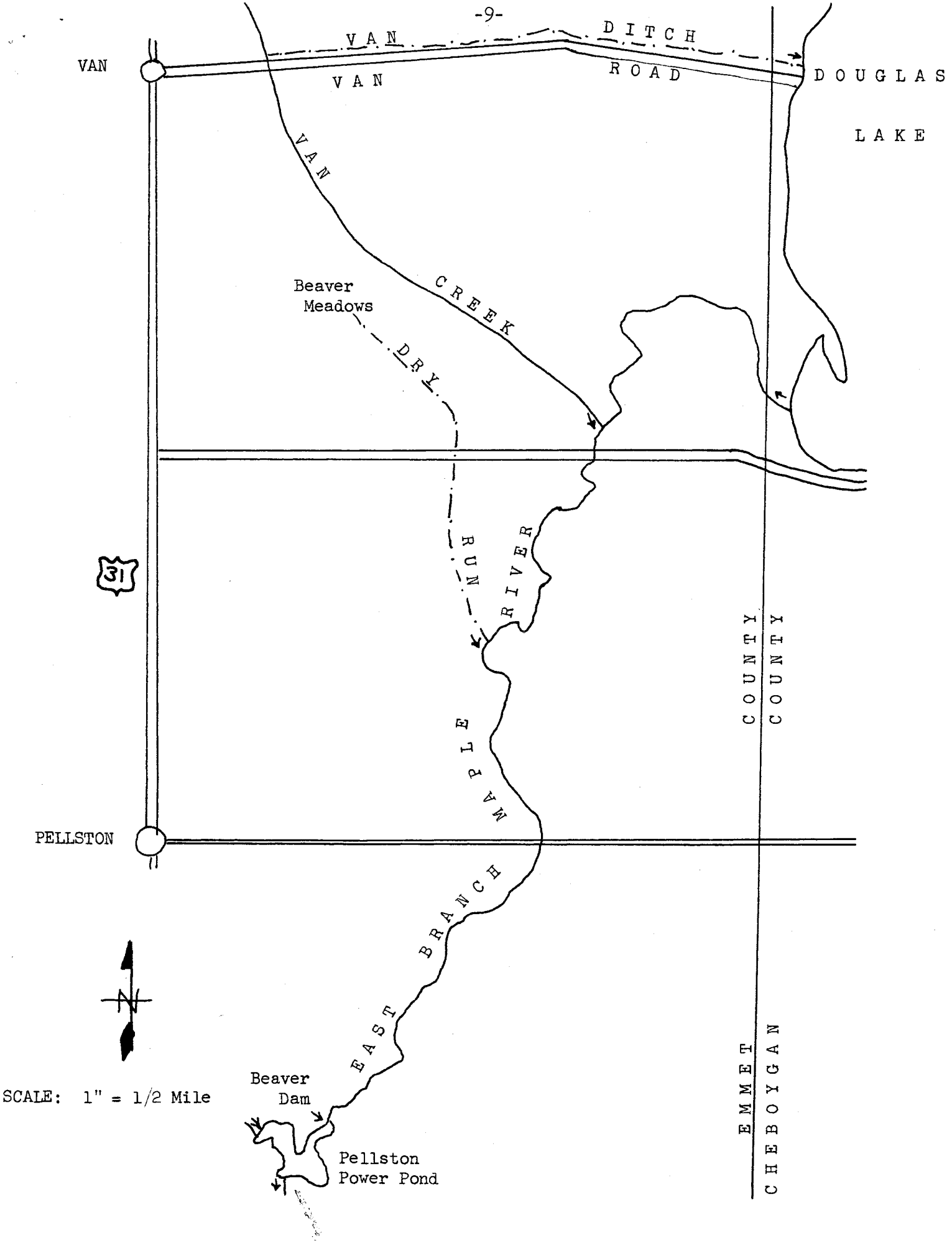

Figure 2. Drainage Map of Area Immediately Southwest of Douglas Lake.

Figure 3. Looking west toward Van (1 1/2 miles) along Van Road. Van Ditch is at the right. April 13, 1951.

Figure 4. Looking east toward Douglas Lake (one mile) along Van Road. Van Ditch appears at the left. April 13, 1951.

Figure 5. Looking northwest from the point west of the mouth of Lancaster (Bessie) Creek, showing ideal spawning ground typical of much of Marl Bay. April 11, 1951.

Figure 6. Looking northeast from the western side of the mouth of Lancaster (Bessie) Creek, showing flooded area ideal for pike spawning. The bay in the center background has the same shallow, grassy bottom. April 11, 1951.