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**A FISHERY SURVEY
OF THE
LAKES AND PONDS
of
CONNECTICUT**

By

**State Board of Fisheries and Game
Lake and Pond Survey Unit**

Report No. 1

**Financed Under
THE FEDERAL AID TO FISHERIES ACT**

Project F-4-R



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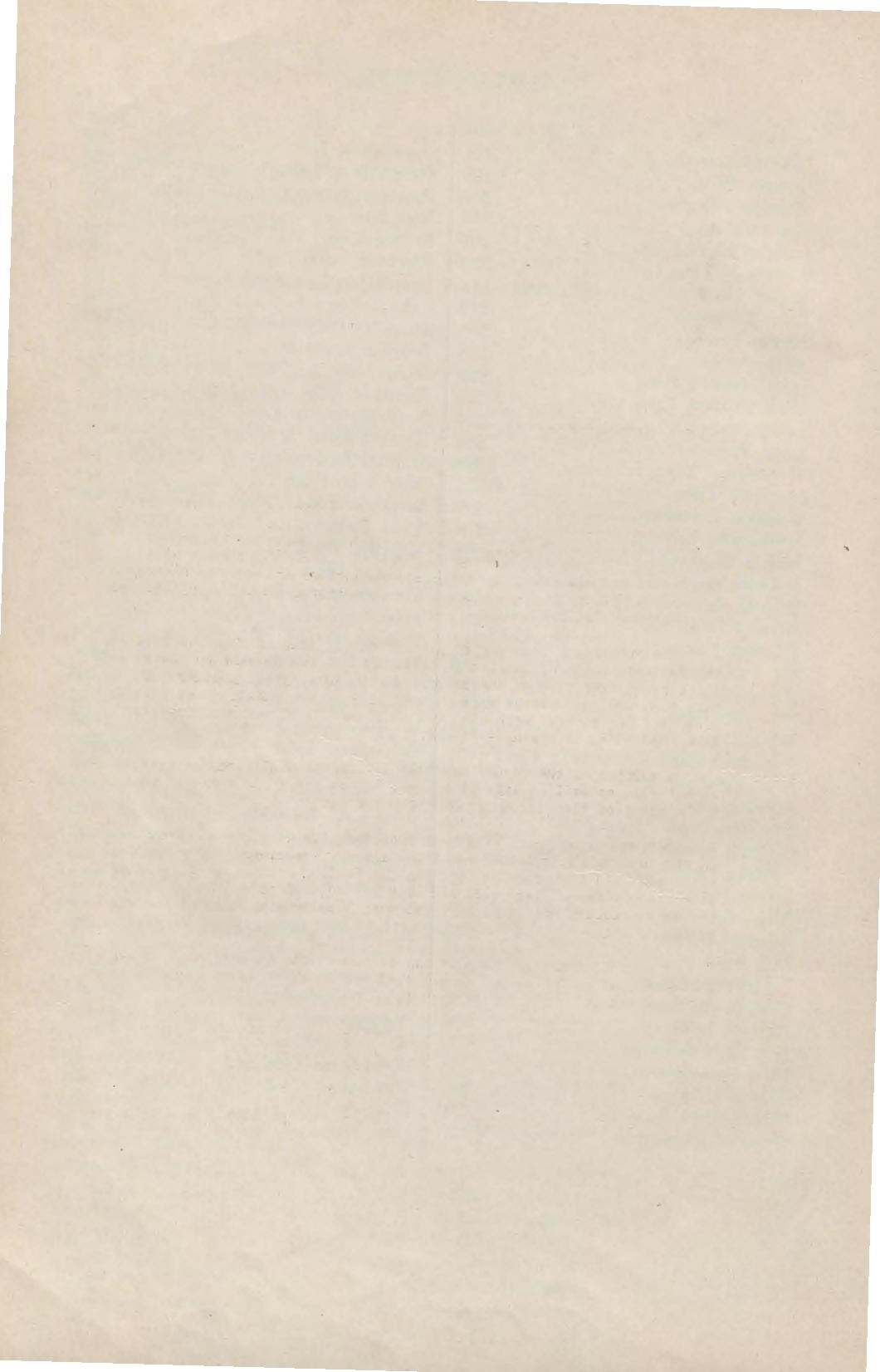
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STATE OF CONNECTICUT

BOARD OF FISHERIES AND GAME

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ADDRESS ALL MAIL TO
STATE OFFICE BUILDING, HARTFORD

State Board of Fisheries and Game
State Office Building
Hartford, Connecticut

Gentlemen:

We have the honor to transmit herein a report on "A Fishery Survey of the Lakes and Ponds of Connecticut". This report, which is a series of studies inaugurated for the purpose of determining how to improve fishing in the impounded waters of the state, is in the nature of a supplement to Bulletin 63 of the State Geological and Natural History Survey, "A Fishery Survey of Important Connecticut Lakes". Bulletin 63 was published in 1942.

The original intent was to publish the results of these studies in two separate volumes; one for the area east of the Connecticut River and one for the area west of the River. In the interest of economy and to make the results of these surveys available to the public at an earlier date, the two reports were combined to cover all of the more important lakes and ponds in a single volume.

A portion of the report has been devoted to small pond management techniques, as well as life histories, habits and photographs of most of the species of fish encountered during the survey.

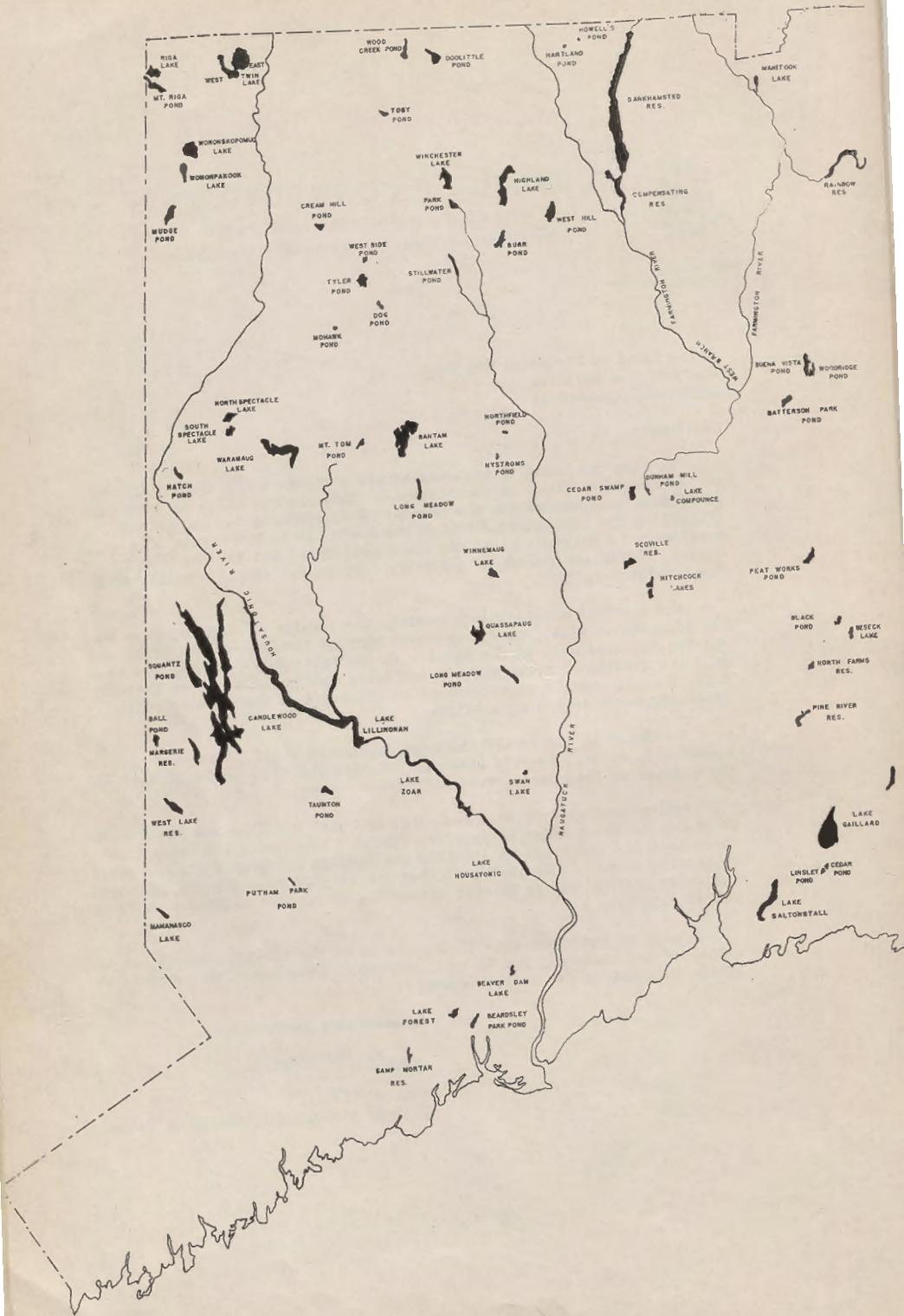
Bottom contour maps have been included with the lake and pond reports to aid in locating areas of specific depths. Experience has shown that these maps aid fishermen in locating the feeding areas of various species at certain times of the year, and they are helpful to engineers calculating water storage and to parties attempting to recover drowned persons or sunken objects.

A mass of technical data of importance to the fishery manager has been collected and analyzed, but is not included in this report since it is of little interest or use to the layman.

Respectfully submitted,

Cole W. Wilde

Cole W. Wilde
Fishery Biologist in Charge of Survey



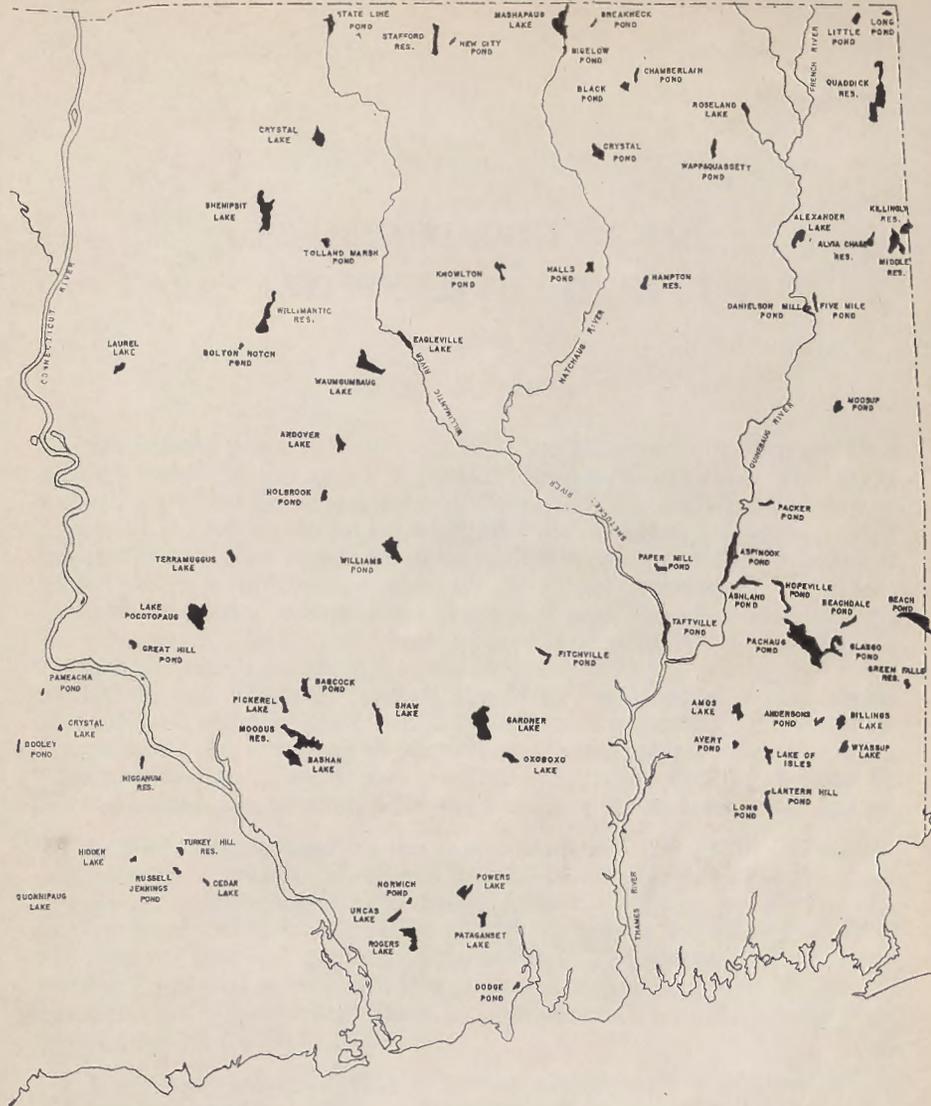


FIGURE 1. Frontiers—map of Connecticut showing lakes and ponds surveyed.

A FISHERY SURVEY OF THE LAKES AND PONDS OF CONNECTICUT

INTRODUCTION

During the years 1937 through 1939, the Lake and Pond Survey Unit studied many of the more important Connecticut Lakes. The lakes selected for attention were scattered throughout the State because it was important to gain a general knowledge of the problems involved in pond fish restoration. The results of these earlier investigations have been reported on in a publication entitled, "A Fishery Survey of Important Connecticut Lakes," Connecticut Geological and Natural History Survey Bulletin No. 63. In this publication, now out of print, a considerable amount of space was devoted to an explanation of the principles of fish production and lake management, life history and habits of the species encountered, and the effect and distribution of important fish parasites. The primary objective was to provide sportsmen with a reference book where up-to-date scientific information and its practical application to fish restoration was presented for the benefit of the non-technical reader.

In the years covered by the present report (1953-1955), the survey unit attempted to visit all of the known lakes and ponds in the state (Figure 1) including the large bodies of water reported on previously. The smaller ponds were studied only enough to gain a knowledge of their size, present use and general characteristics. The larger and more important fishing lakes were studied in detail and a summary of this information with recommendations for management and/or development is presented on pp. 65 to 389.

The survey disclosed that numerous small ponds which are shown on United States Geological Survey maps are no longer in existence and that many additional ponds have been created in recent years. Without a doubt, many of the most recently developed small impoundments were not covered by the survey because their existence was unknown to the survey personnel.

This report is, in character, a supplement to the early report covering the period 1937 to 1939. Explanations which have appeared in Bulletin No. 63 will, for the most part, not be repeated here. For this reason, it is desirable that the reader refer to the first report.

Scope of the Survey

This report presents the results of a fishery survey of 81 lakes and ponds located west of the Connecticut River and 73 lakes and ponds

located east of the Connecticut River. The greater part of the field work was carried on during the summers (June 15-September 15) of 1953, 1954 and 1955. Bottom contour mapping, using a recording echo sounder, was also carried on during the fall of 1953 and the spring and fall of 1954 and 1955.

Organization and Personnel

During the summer of 1953, field headquarters were located at Bantam and Avon. The field crew consisted of the following men:

Douglas D. Moss	}	Biologists in Charge
Cole W. Wilde		
William Gladfelter		Assistant Biologist
Charles Steinmetz		Special Assistant
Aubrey R. Randall		Special Assistant
Richard K. Robinson		Special Assistant
Raymond A. Arzylowicz		Special Assistant
Peter Buzosky		Special Assistant
Newton Hitchcock		Skilled Tradesman

During the summer of 1953, field headquarters were located at Ridgefield, Durham, and Voluntown. The field crew consisted of the following men:

Cole W. Wilde	}	Biologists in Charge
Ernest G. Karvelis		
Robert B. Chapoton		Assistant Biologist
Edwin A. Swenson		Assistant Biologist
Robert L. Bray		Parasitologist, Special Assistant
Carl J. George		Special Assistant
Roger W. Bachman		Special Assistant
Virgil Durso		Special Assistant
John A. Hartwick		Special Assistant
Harold W. Pillsbury		Special Assistant
William F. Petras		Special Assistant
John Orintas		Special Assistant
David Shores		Special Assistant
Newton Hitchcock		Skilled Tradesman

During the summer of 1955, field headquarters were located at Coventry. The field crew consisted of the following men:

Cole W. Wilde	}	Biologists in Charge
Ernest G. Karvelis		
Ralph A. Clark		Assistant Biologist
Charles S. Long		Assistant Biologist
Robert L. Bray		Parasitologist, Special Assistant
John Orintas		Special Assistant
Harold Purvis		Special Assistant
William Petras		Special Assistant
David Shores		Special Assistant
William Guillotte, Jr.		Special Assistant
John A. Hartwick		Skilled Tradesman



FIGURE 2. Photo of echo sounder.



FIGURE 3. Biologist making chemical analyses.

The survey crew each year was divided into three units, each of which was responsible for a specific part of the work. These units were chemistry, mapping and fisheries studies. Examinations of small ponds on which only superficial information was gathered, were made by various members of the crew working in pairs. Most of the laboratory work and rough drafting was done at the base camps. Final drafts of all bottom contour maps were prepared by John A. Hartwick and John Orintas in the Hartford Office.



FIGURE 4. Biologists setting gill nets to obtain fish samples.

Acknowledgments

These surveys were financed under the Federal Aid to Fisheries Act, Project F-4-R, and were part of a three-year program to complete the surveys of all lakes and ponds in the eight counties of the state.

We wish to express our appreciation to the White Memorial Foundation of Litchfield and the Avon Old Farms School of Avon for providing housing and work facilities during 1953; to the Woodcock Nurseries of Ridgefield, the Town of Durham and the State Park and Forest Commission for providing housing and work facilities during 1954; and to the Water Front Heights Association of Coventry for providing housing and work facilities during 1955.

We are indebted to Seth J. Monroe, Alfred J. Hunyadi, Edward T. Bement, Harding F. Joray, John E. Wood and the late Raymond E. Piaggi, who, as District Supervisors, provided valuable help while the survey unit was located in their districts.

SMALL POND MANAGEMENT

INTRODUCTION

It is apparent that the large number of small ponds throughout the state constitute an appreciable area suitable for fish production and for fishing enjoyment. A visual inventory of the small ponds in the Litchfield and Hartford districts during the summer of 1953 disclosed more than 1,000 ponds with a combined area in excess of 5,000 acres, thus exceeding a lake the size of Bantam by more than five times. The ability of such a water area to produce fish food is far greater than that of most large bodies of water. The greater productive potential of small ponds is due primarily to the higher fertility level and the shallowness of most small ponds. The ability of any one pond to produce fishes is limited and the factors concerned with producing them are easily upset with the result that many well-meaning attempts to improve fishing in small waters fall far below expectation and frequently result in reducing, rather than increasing the usable fish crop. It is because of situations of this general nature and because of the considerable increase in the construction of farm fish ponds during the past decade that the following discussion and suggestions on the management of small ponds are presented.

HISTORY OF WATER MANAGEMENT

In many sections of Europe and Asia, the raising of pond fish is an old, well-established form of agriculture. The development of pond fish culture or "water farming" in the Old World was due to some extent to rapidly increasing populations and the need for greater production of high protein foods on limited acreages.

The Chinese, one of the first people to develop fish culture, have raised pond fish for food for several thousand years. Their system at first was rather crude; wild fish eggs, probably from carp, were gathered at the spawning beds and broadcast into the flooded rice fields. If the eggs hatched and the fish lived at harvest time, the farmer had fish in his diet as well as rice.

The ancient Romans also practiced pond fish culture. They placed fish eggs in marble pools where the fish hatched and were fed until they reached table size.

Fish ponds existed in southern Poland as long ago as the twelfth and thirteenth centuries. In "water farming" as it existed at that time, carp were the most commonly cultured species. It has been estimated that in 1928, forty-three percent of the total fish production of Poland came from ponds and that, in 1934, Poland had 185,000 acres of ponds



FIGURE 5. Emergent aquatic vegetation. (Courtesy of Phelps Dodge Refining Corporation.)

with a total yield of 22 million pounds of fish. Carp made up 80 percent of the pond fish produced.⁴

Fish culture has been developed over a long period in the Mediterranean countries, and in Malaya, Indo-China, the Philippines and other Asiatic countries. In 1940, the Philippines had 141,564 acres devoted to ponds for raising milk fish. It was estimated that these ponds produced annually 98 million pounds of fish and that the milk fish industry was worth approximately 25 million dollars.³

There was little improvement in pond fish culture until the latter part of the nineteenth century. It has only been in recent years that any appreciable amount of research in pond fish culture has been carried on. Work was started in the 1930's in the United States and Canada on the management of artificial ponds for fish production—an expanding population with increased leisure placed a greater burden on fish populations; research on farm fish pond management was in response to this increasing pressure and in the United States to the tremendous increase in the number of small ponds following the expansion of the Soil Conservation Service.

As the number of small ponds increased, it became apparent that the problem of stocking and management needed investigation. Swingle and Smith of Alabama were among the first to investigate these problems. They concluded that the large mouth bass and the bluegill sunfish in combination could furnish good fishing.⁶ This combination has been quite successful in the southeast where it was originally tested, but has, most often, proven unsuccessful in the northeast. Further research is necessary to determine the species or combination of species best adapted to small pond management in this region.

THEORY OF SMALL POND MANAGEMENT

Most ponds, even small ones, will support fish if they are not too shallow. In ponds that are very shallow, fish may die due to oxygen deficiency. Oxygen deficiency may occur in the winter during a heavy ice and snow cover, or during hot still evenings in the summer. Fish kills due to an oxygen deficiency are unusual in Connecticut ponds that have an appreciable area of water four feet or more in depth.

For illustrative purposes, a typical small Connecticut pond will be described. The average farm or mill pond is between one-quarter and five acres in size. It is formed by an earth or stone dam across a small stream at a suitable location, by an earthen dam or dike partially around the low end of a swamp, or by an earthen dam or dike so located as to retain surface runoff. The resulting impoundment may have a maximum depth of from five to fifteen feet and an average depth of considerably less. The pond bottom is most frequently of mud with beds of such vegetation as coontail, hornwort, bladderwort, parrot feather and pond weeds. The surrounding shores often support such emergent aquatic plants as cattail, bullrushes, pickerel weed, smart weed, burrweed and arrowhead.

In the water itself, live a host of animals: small almost microscopic "water fleas" which subsist upon still smaller animals and plants; mayfly



FIGURE 6. White water lilies and parrot feather. (Courtesy of Phelps Dodge Refining Corporation.)



FIGURE 7. Typical submerged "water weeds." Left to right—*Chara* sp. (Muskgrass), *Najas* sp. (Bushy pondweed), *Myriophyllum* sp. (Parrot feather) and *Anacharis* sp. (Anacharis).

nymphs and other insect forms burrow in the bottom ooze or swim jerkily among the submerged plants; caddis fly larvae drag cases of leaves, twigs or plant items.

These insects and other small animals feed upon the plant and microscopic animal life in the water and, in turn, are fed upon by large carnivorous forms such as "perch bugs," diving beetles and crayfish. Fishes, the important end product of the water, utilize them all for food.



FIGURE 8. Dragonfly nymph (*Didymops*). Ventral view of a sprawler on sandy shoals.

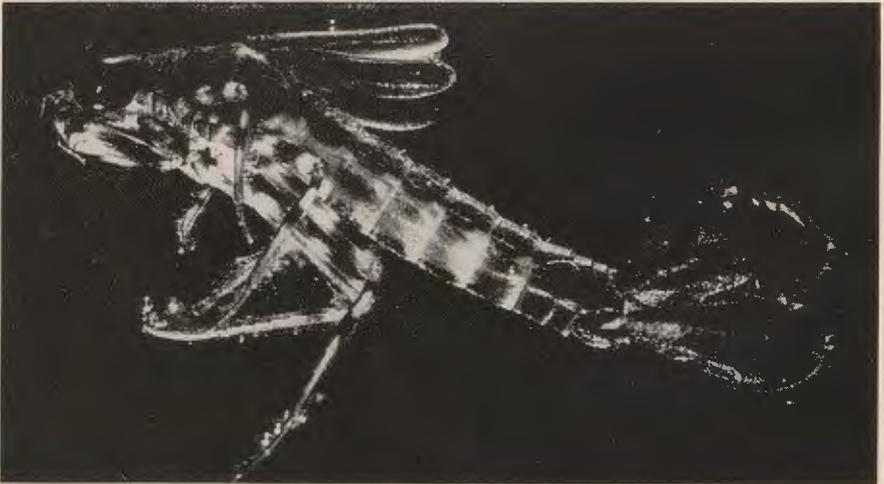


FIGURE 9. Damselfly nymph (*Argia*).

Yellow perch, chain pickerel, bullheads, pumpkinseeds and golden shiners (pond shiner) constitute the usual assemblage of fishes residing there. Largemouth bass, smallmouth bass, rock bass, calico bass, trout

and other fishes have frequently been added with the object of improving fishing. The management of a small pond must take into consideration all of the plants and animals present.

The efficient utilization of waters for the production of fish involves procedures that are no more complicated than those used in standard agricultural practices. Application of the same general principles used by the average farmer to bodies of water would virtually constitute the management policy necessary to produce a satisfactory fish crop. It will be found convenient and, it is hoped, enlightening as well, to continue this comparison between agriculture and fish production.

The farmer, in working his land, utilizes certain tracts for raising corn, others for garden produce, others for pasture and so on. The significant point is that at *one particular time*, the farmer usually utilizes a tract of land to produce only *one primary crop*.

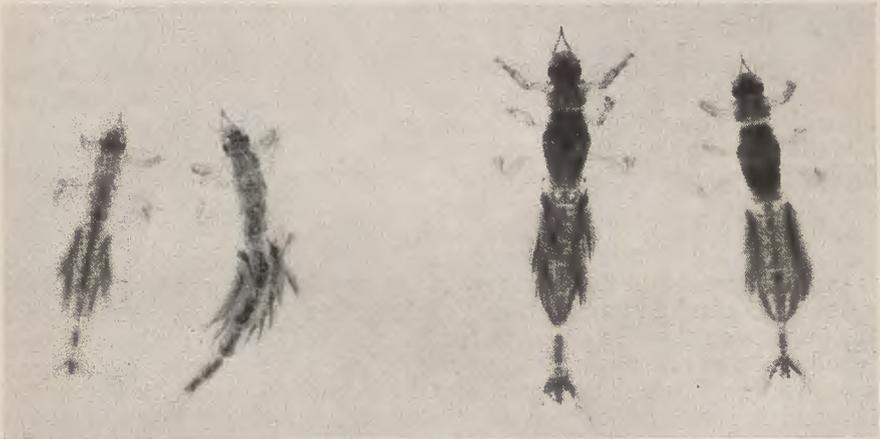


FIGURE 10. Nymphs of the large burrowing mayfly (*Hexagenia*) abundant in the bottoms muds of many lakes and streams.

A second important point is that certain soils are best suited for raising certain crops. A third point is that a farmer increases the yield of farm produce from a tract of land by increasing the fertility of the land. A fourth point is best illustrated from certain practices in forestry. In harvesting a stand of timber only the prime trees are cut; the others are left to complete their period of most efficient growth and to reseed the area. The fundamentals of land management change but little when applied to the production of a fish crop. The small pond may, therefore, be compared to a tract of land.

Ponds differ just as lands do; some are weed-choked, while others have but scant vegetation. Many ponds become very warm during hot weather periods, while a few fed by springs or spring brooks remain cool throughout the year. Each species of fish does best in the pond type best suited for it, just as each crop thrives best on a certain type of soil.

Certain groups or associations of fishes find a favorable habitat side by side in the same small pond just as do certain garden crops. To expect any single small body of water to efficiently support a half-dozen or more species, some of which are highly competitive in food and habitat preferences, is like expecting to reap a profitable harvest from the sowing of several different crops on one piece of land.

It is obvious that the complete removal of catchable fishes from a pond (except in the case of some trout ponds) would be folly if their perpetuation was desired. The need for seed stock is evident and it will be no more than mentioned here. The principle of sustained yield, derived from forestry, is to harvest all trees at the completion of the most efficient growth period to make room for younger, faster-growing trees. The same principle should govern the harvesting of fish crops. The regulation of the fish harvest is the most difficult part of a management program and on it depends the future quality and quantity of fishing. If too many fish are removed, the stock may be depleted; if too few are removed an undesirable, overcrowded condition among some elements may result.

Unusual success in reproduction with inadequate removal of the excess population is the chief explanation of overcrowding. Such crowded conditions naturally place an increased burden upon the food supply and the inevitable result is poor growth and a stunted population of fishes. Stunting in small ponds most frequently occurs with the bluegill sunfish, yellow perch, white perch, common sunfish and bullhead; large numbers of small fish and only a rare large one are its chief symptoms. Stunted fish are of little use for sport or food purposes and their existence is purely wasteful in the economy of the pond. It is popularly believed that such a condition arises through inbreeding. Many people are under the impression that the situation can be rectified by the addition of new blood and that this can be best accomplished by stocking more fish from other waters. There is no experimental evidence to substantiate this belief and it is not difficult to see that further additions to the existing stock in such a situation only tend to aggravate the condition. Stunted populations also exist in some large lakes where the mathematical chance that offspring of the same spawning fish would mate in successive generations is infinitely remote. Bantam Lake, prior to 1939, was an excellent example of stunting conditions in white and yellow perch. This lake has since been restored to a productive balance. Figure 56 presents growth curves for Bantam Lake white perch in 1939 and 1951. Another argument against the inbreeding theory is that close breeding of selected trout in hatcheries over a period of fifty to sixty years has produced superior stocks of fish at least insofar as growth is concerned. It would appear, therefore, that *under most conditions*, natural reproduction in warm-water lakes is quantitatively adequate and there is no need to augment the stock on hand by artificial means.

Previous to 1955, the General Assembly prescribed legal lengths and daily creel limits for most game species. This principle of blanket restrictive laws governing the taking of fish is quite widely accepted as sound conservation practice. Actually, such measures may not only fail to give the desired results, but may be harmful to fishing. The reasons why this is so become apparent if one analyzes the nature of a population

of fishes in a pond together with factors which are involved in producing a crop of fish for anglers.

There is always danger in over-simplification of a complicated matter for the purpose of making clear an explanation. However, it does seem possible to list briefly certain facts and explanations which bear on the production of a crop of fish in ponds. In the discussion that follows, the authors had in mind the small ponds of Connecticut, although the points which are made apply quite generally to larger impoundments as well.

1. A given body of water will produce a certain quantity of fish food. This basic food production is determined primarily by the amounts of nutrients in the water and can only be increased by raising the basic fertility of the water. Increasing the basic fertility by artificial fertilization is practical in some small ponds and will be discussed later.

2. The total production of fish which a body of water will support is determined by the quantity of food present.

There are differences in the efficiency with which various species utilize their food but, in general, the total poundage of fish produced in a given body of water is determined by the available food supply.

3. The growth of individual fish is extremely variable and is governed by the amount of food available to each individual. The average size of fish in a given body of water, then, depends upon the number of fish present in relation to the food supply.

4. The number of fish present in a body of water is determined by the rate of stocking (natural and/or artificial) less those fish removed by natural mortality (disease, old age, parasites, predation) or angling.

5. Every fish in a body of water has some effect on every other fish present. Fish compete directly or indirectly with each other for food, cover, spawning areas and perhaps space.

6. A fish population is dynamic; it is a constantly changing, renewable resource.

Young fish are constantly being added, and they make additional demands upon the food supply for growth. Older fish are constantly being removed by man, predators, disease, parasites and old age. The removal of older fish represents an easing of the demands on the food supply and thus has a great effect upon the growth rate of younger fish.

7. Good game fish production depends upon maintaining a productive balance between species and between the numbers of fish and the food supply.

From the anglers' point of view, a productive balance between species is one in which game fish predominates and there exists only sufficient numbers of forage fish to utilize and make available to game fish food which could not otherwise be utilized by the game fish. Likewise, a productive balance between the numbers of fish and the food supply is one in which the share of food available to each fish is sufficient to give rapid growth. Thus, the average size of catchable fish will be such as to give angling satisfaction. If the rate of addition and the rate of

removal could be perfectly controlled, it would be possible to adjust the average size of fish present within characteristic maximum size of the species. The production of a good crop of game fish, then, becomes a problem of understanding and balancing the biological and human forces. This is fishery management.

8. Fishing often tends to destroy a productive balance.

Under typical Connecticut pond conditions, there are several species present and the fishing burden is heavy. The angler desires and takes certain species, and virtually ignores the others. The inevitable result is that the total poundage of fish which the body of water will support becomes largely composed of less desirable non-game species which renders this portion of the productive capacity of the water useless to the angler.

9. It is possible to establish and maintain a productive balance by proper management.

There are several ways in which human efforts can be applied to help nature maintain a productive balance and produce a desirable crop of game fish. Some of these are: (a) *By increasing the food supply.* It was pointed out previously that this could only be accomplished by increasing the basic fertility and that the fertility level can only be raised by the addition of organic or inorganic fertilizers. The practicality of fertilization for small ponds is discussed later in this section. However, it should be borne in mind that increasing the food supply will not, in itself, improve fishing, although it will usually increase the poundage of fish which the pond will support. It is still necessary to keep the fish population in a productive balance if the potential benefits from the additional food are to be realized. (b) *By exercising control over additions to existing stock.* This may consist of introducing predatory or forage fish, giving or withholding protection of spawning fish, creating additional spawning facilities if needed, destroying or creating escape cover, giving or withholding protection of various sizes of fish. (c) *By controlling the removal of stock.* This is the measure most commonly used; under it comes all restrictive regulations governing the taking of fish such as closed seasons, minimum legal lengths, daily creel limits and the type of equipment which may be used. Under certain conditions, undesirable species have been partially removed by seining or trap netting; this device has also been used to relieve overcrowded conditions among game species. In many states, fisheries workers have found certain ponds which were so badly out of balance or so heavily infested with carp or goldfish, that the quickest way to restore game fish production was to remove all fish and restock with desirable species.

Beseck Lake, Middlefield, reclaimed with rotenone in the fall of 1954, was heavily infested with carp. This lake has been restocked with largemouth bass, yellow perch and golden shiners and was opened to fishing in 1956.

The possibility of selective poisoning to remove or reduce the numbers of certain species also offers a possible approach to restoring a productive balance in some ponds.

From what has been said about the biological complexities of a population of fishes in a pond, it might appear practically impossible to secure and maintain a productive balance. This is not true. Fairly simple survey techniques give adequate information as to the relative fertility of a body of water, the approximate balance between species of fish present, and numbers of fish present in relation to the food supply. If it appears that the existing balance is not productive from the anglers' point of view, the balance can be altered by the application of corrective measures appropriate to that body of water in order to obtain the desired results. The return to a productive balance is not always easy



FIGURE 11. Beseck Lake, salvage operations prior to reclamation. Landowner and sportsmen's groups cooperated to make this work possible.

and may require several years. The most common cause of failure in pond management comes from ignoring the basic principles involved.

There are certain generalities which can be made about pond management. In general, the fewer species present, the better. The theoretical ideal arrangement would be to have only one species present; this fish should be one that could fully utilize the microscopic organisms and insect life in the pond and as an adult would be a satisfactory game fish for the angler. (This "one species" type of management is used extensively in Europe and Asia in water farming, and the crop is harvested with nets or by draining the pond.) Obviously, there are few species that completely meet these requirements; trout in cold-water ponds that

have been reclaimed are entirely satisfactory for "single species" management.

The next best arrangement is a combination of two species, one primarily for forage and which also serves as a panfish, and the other a carnivorous game fish. (The forage fish should be capable of attaining an adequate size to be acceptable to anglers, of a quality desirable for food, and with feeding habits that make it readily available to anglers.) Since the abundance of both of these species can be controlled by angling, it should be relatively simple to maintain a productive balance between the two by adjusting the fishing effort. The bluegill sunfish-largemouth bass combination which has been given such widespread publicity and which has been used with considerable success in fertilized ponds in the southeast falls in this category. Unfortunately, this combination has, in most cases, proven unsuccessful in small ponds in the north and northeast. These failures have perhaps been due, in part, to the cooler climate and reduced growth rate in this region, but certainly to a great extent to the reluctance of anglers to accept the bluegill as a desirable panfish. In many ponds of the state this reluctance to fish for sunfish has resulted in an inadequate harvest of the bluegill, allowing this species to over-populate the pond and become stunted.

When there are many species present, as is the case in most Connecticut ponds, the relationship between them becomes much more complex. Under these conditions it is still possible, although a great deal more difficult, to create and maintain a productive balance. However, it is possible that the degree of efficiency in converting fish food into game fish flesh will not be as great under these conditions as it would be with a less complex fish population.

In general, the most satisfactory method of maintaining the balance of a complex fish population is to make certain that some one game species dominates the other species. This primary game species should be well suited for the particular water and it should be predaceous in its food habits.

The abundance of the game species should be favored by some of the measures suggested previously and, at the same time, it may be necessary to use restraining measures on other less desirable species. When the desired state of balance is reached, that is, when the primary game species clearly dominates all other species, it is then possible to maintain a productive balance by regulating the take of the primary game species. The idea is to remove each year enough of the game species to insure good growth of the remainder, but never to remove so many that the forage fish can gain dominance.

It is difficult to maintain such a balance in any waters, particularly those open to public fishing. It is much easier, though still difficult, for the small pond owner to do this since he has a better opportunity to regulate the harvest of game and forage fish from year to year. The pond owners' observations on the abundance and average size of game and forage species constitute a good guide to the amount of fishing the pond will support and still retain a productive balance between the different species present. The production of forage or panfish species in small ponds often reaches astronomical numbers and, for the most

part, these fish are under-harvested by pond owners. Yellow perch, for example, often reach numbers in excess of 1,500 per acre, all of a harvestable size. Under a condition such as this, unlimited angling pressure on the forage fish is an absolute necessity, and, at the same time, rather light pressure on the predaceous species is in order. At times even these measures may be inadequate to control the forage species.

From the foregoing discussion of pond management, it can readily be seen that no two ponds are alike or have exactly similar problems.

Within the limits imposed by the basic food supply, balance between species determines the annual crop of harvestable fish. When this is understood, it becomes apparent that blanket laws or regulations are apt to fail to make each body of water produce to the fullest its potential crop of fish. From the standpoint of management alone, ignoring complicated enforcement problems, the ideal situation would be to have separate regulations for each pond so designated that every body of water could be made to produce to its fullest potential.

The growth rate of each species varies considerably in various waters. For this reason, it is essential to determine the rate of growth made by game and forage fishes in each sizeable lake or pond in order to promote an efficient harvest. Cropping should be heaviest during the period of rapid growth and prior to the increase in natural mortality. It was usually impractical for the survey to collect specimens and make growth rate studies of fish from the smaller private or semi-private ponds. However, the growth rate of game and forage species from a number of small ponds has been determined and pond owners or anglers interested in particular waters may obtain information on growth rates by sending scale samples of fish to the State Board of Fisheries and Game. Special envelopes for this purpose will be provided upon request.

GENERAL HABITAT REQUIREMENTS FOR POND FISH

It has been mentioned previously that each kind of fish has a particular type of habitat for which it is best suited. Since a knowledge of this is essential to proper management, a brief summary of the habits and habitat preferences of some common Connecticut pond fishes is given. More detailed information may be found in Survey Report No. 1 (State Geological and Natural History Survey—Bulletin No. 63).

CHAIN PICKEREL (*Esox niger*)

The chain pickerel shows a distinct preference for weedy areas and does best in waters which have an abundance of marginal submerged weeds.

The feeding of this fish differs from such fish as the bass and perch in that typically it waits for its prey to swim by, rather than actively foraging for it. They are voracious feeders and fish of various species make up most of their diet, although in some waters crayfish are important as food. Previous stomach analysis data from the earlier surveys disclosed one pickerel 3 1/4 inches long that had glutted itself with 21 golden shiner fry, and still another, 9 1/4 inches long, that had eaten 18 small bullheads and 2 tadpoles. A good supply of forage fish, such



FIGURE 12. Typical chain pickerel habitat.

as yellow perch or golden shiners, is essential to a pond which is to be managed for pickerel. The pickerel remains active throughout the winter months and is particularly susceptible to ice fishing. The maximum size of this species is probably about 30 to 34 inches and 6 to 7 pounds.

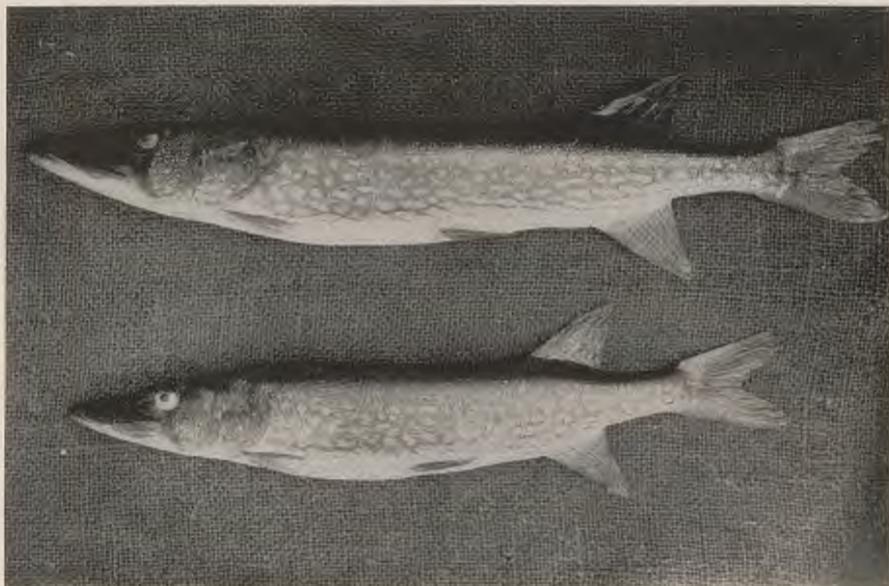


FIGURE 13. Adult chain pickerel from Wood Creek Pond, Norfolk.

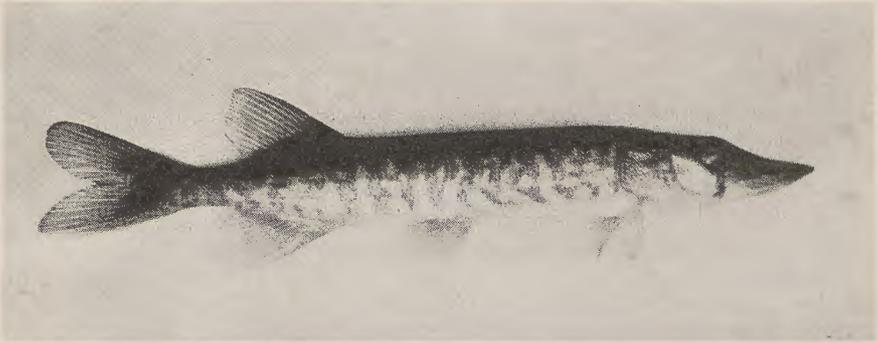


FIGURE 14. Juvenile chain pickerel.

The breeding season is early spring; late February, March and April in Connecticut waters. Spawning occurs in the shallows over mud bottom and dead vegetation. The eggs, which are adhesive, are broadcast over the spawning area. No parental care is given the eggs or the young.

The chain pickerel is usually not desirable for the average small pond. Apparently, the abundance of this species is seldom sufficient to furnish satisfactory fishing in small, one to three acre ponds.

GRASS PICKEREL (*Esox americanus*)

The little grass pickerel attains a maximum size of around 12 inches. It is not commonly found in lakes, although it has been established in several Connecticut lakes. This species is worthless from the point of view of the angler, and should be destroyed whenever it is taken. The chunky form, eye position, short snout and the vertical barring of the color pattern help to distinguish this useless species from the chain pickerel.

The grass pickerel is similar in its habits to the chain pickerel.

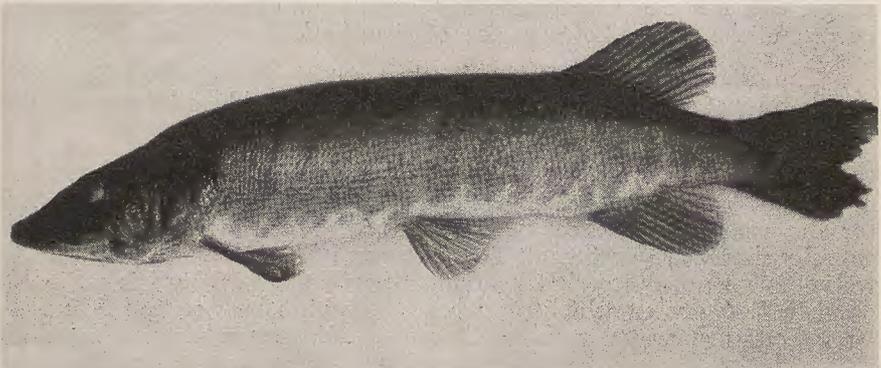


FIGURE 15. Grass pickerel.

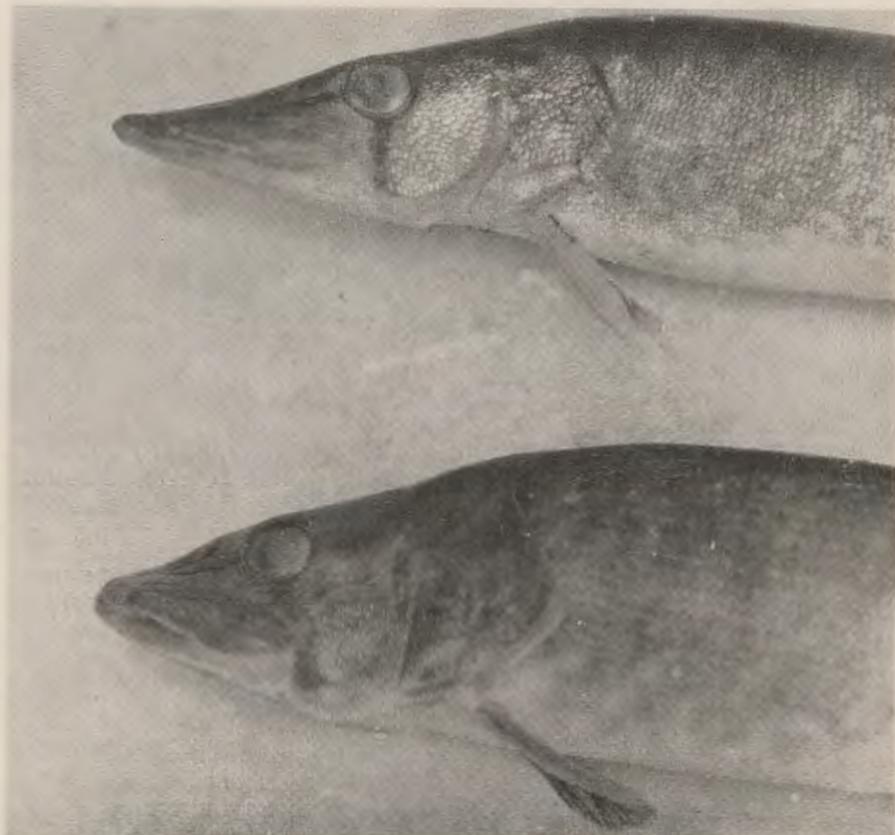


FIGURE 16. Top: chain pickerel. Lower: grass pickerel.

SMALLMOUTH BASS (*Micropterus dolomieu*)

It will probably be a surprise to many Connecticut anglers to learn that the smallmouth is not native to the waters of the state. In its natural range, this fish came no closer to Connecticut than the St. Lawrence River and the Finger Lakes region of New York State. (Bulletin No. 63.)

The smallmouth is undoubtedly the most highly prized of Connecticut warm-water fishes. It is one of the few valuable additions to the native fish fauna.

This species is not generally suited to small pond management. Experience has shown that lakes of 200 to 300 acres or more are best suited for the smallmouth. Clear water lakes with considerably rocky and gravelly shores are preferred. The presence of these conditions in small waters is no assurance that smallmouth will thrive. There is no small pond in Connecticut which produces smallmouth bass comparable with large bodies of water such as Columbia, Waumgumbaug or Gardner Lake. The smallmouth spends the winter in a dormant or semi-dormant state in the deeper waters. The adults have a very specialized diet, the

most important item of which is crayfish. These constitute the bulk of the food in most waters, but fish are not infrequently found in the stomachs of large smallmouth bass.

The smallmouth is particularly susceptible to the bass tapeworm (*Proteocephalus ambloplites*). This internal parasite, though it usually does not kill the infested fish, greatly reduces reproduction. In a few lakes in the state, smallmouth reproduction has been virtually eliminated by this parasite and the species is slowly disappearing.

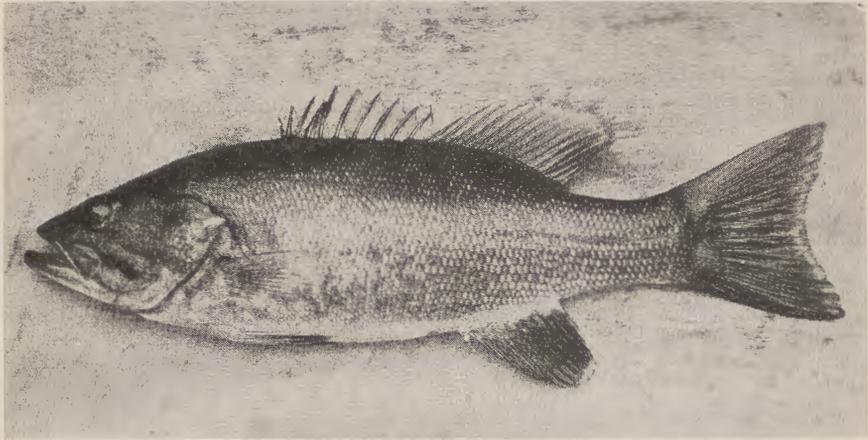


FIGURE 17. Smallmouth bass.

In Connecticut waters, most smallmouth bass mature at three years of age and/or a length of ten inches. Spawning occurs from the middle of May to the end of June over gravel shoals.

The male bass clears away a circular depression about eighteen inches in diameter. Spawning takes place shortly after nest building, and the male bass remains to guard the eggs and later the young. The young bass, upon hatching, remain in a compact school or swarm and the male parent remains in attendance. The young bass gradually disperse along the rocky shores, finally to be deserted by the male.

During this period of nest building and guarding, the male bass is very pugnacious and may easily be caught.

LARGEMOUTH BASS (*Micropterus salmoides*)

The largemouth bass is also an introduced species to Connecticut waters. Its natural range was more southern than that of the smallmouth.

The largemouth bass makes a more favorable showing in small ponds than does its cousin, the smallmouth. In parts of its native habitat in the south the smaller waters, such as the bayous, pot holes and sloughs, furnish a substantial part of the fishing for this species. This species is at home in an environment generally considered quite unacceptable to the smallmouth, but it will also thrive in ponds which are predominantly

smallmouth water. Small, weedy ponds often produce good largemouth fishing and the species is not limited by temperatures of 90 degrees F. or over.

Although the largemouth is not considered as able a game fish as the smallmouth, it has become well established in many of the best Connecticut lakes and often furnishes excellent fishing. This species is susceptible to the bass tapeworm, but becomes infested with the parasite to a much lesser degree than does the smallmouth.

Food habits are closely allied with those of the smallmouth, but fish make up a much greater proportion of their diet.

The male largemouth, as in the case of other members of the sunfish family, builds the nest but is not as particular about its breeding site as is the smallmouth. The male builds its nest upon mud bottoms and on

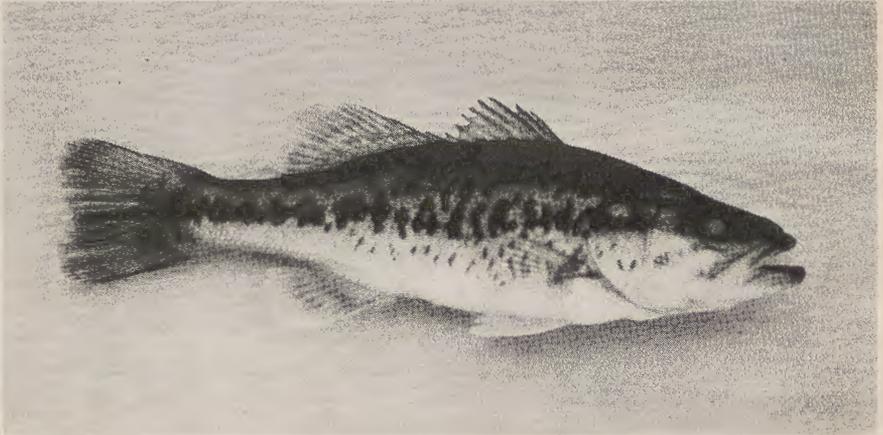


FIGURE 18. Largemouth bass.

the roots of aquatic plants as well as on rocks and gravel. Parental care and habits of the young are similar to the smallmouth, although the fry remain in a school for a much longer period before scattering. While in the school they are commonly called black fry. Spawning occurs in late May and June.

BLUEGILL SUNFISH (*Lepomis macrochirus*)

The bluegill sunfish reaches the largest size and is the most gamy of the sunfishes. It, too, is an introduced species. The adults live in the weed beds and very often travel in schools. The food of the bluegill consists largely of aquatic insects and algae.

The bluegill is fast becoming more common in the lakes and ponds of the state and, in some cases, particularly shallow weedy waters, such as Peat Works Pond, presents a serious problem. This fish is a prolific spawner and unless the predator population and fishing pressure are high, over-population, accompanied by stunting, is likely to occur.

COLOR PHOTOGRAPHS

OF IMPORTANT

CONNECTICUT FISHES



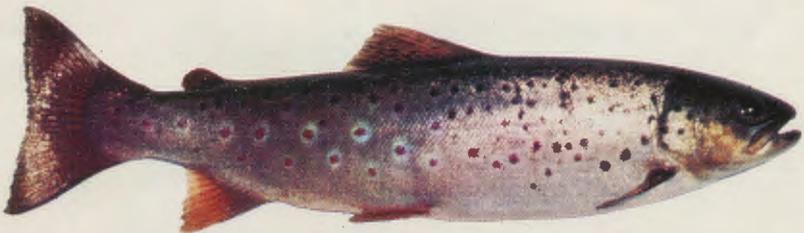
BROOK TROUT
(*Salvelinus fontinalis*)



RAINBOW TROUT
(*Salmo gairdnerii*)



BROWN TROUT
(*Salmo trutta*)
Stream form



BROWN TROUT
(*Salmo trutta*)
Lake form



CHAIN PICKEREL

(*Esox niger*)



GREAT NORTHERN PIKE

(*Esox lucius*)



SMALLMOUTH BASS
(*Micropterus dolomieu*)



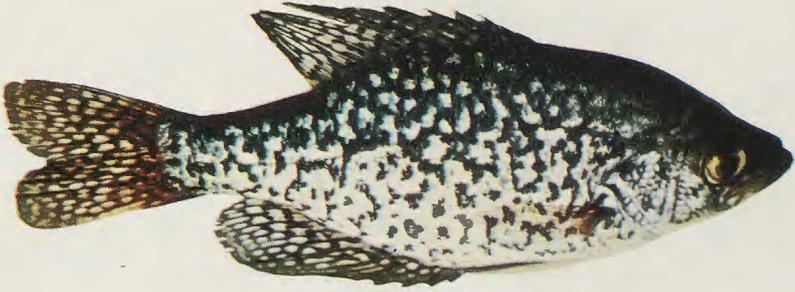
LARGEMOUTH BASS
(*Micropterus salmoides*)



YELLOW PERCH
(*Perca flavescens*)



WHITE PERCH
(*Morona americana*)



CALICO BASS
(*Pomoxis nigromaculatus*)



BLUEGILL SUNFISH
(*Lepomis macrochirus*)



RED-BELLIED SUNFISH
(*Lepomis auritus*)



COMMON SUNFISH
(*Lepomis gibbosus*)

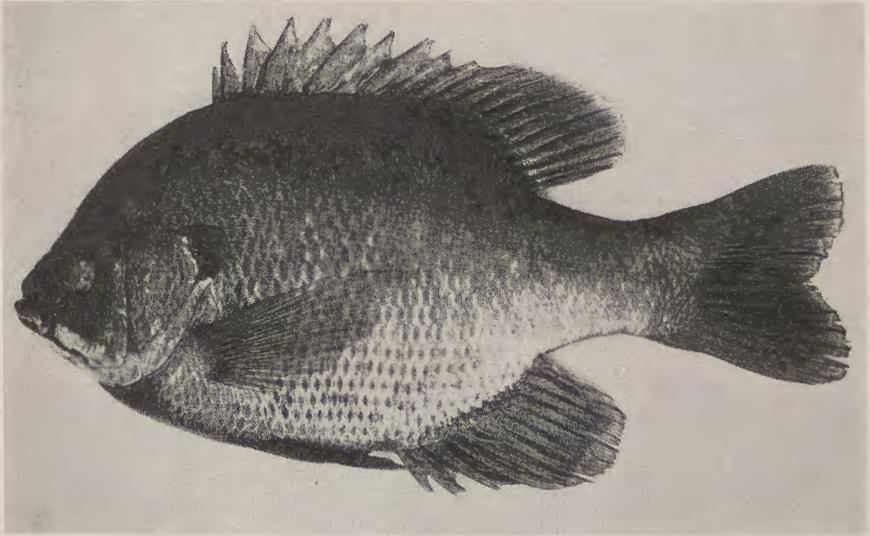


FIGURE 19. Bluegill sunfish.

The bluegill is, like the basses, a nest builder; the nests are built over fine gravel in shoal areas and usually occur in groups. Most bluegills spawn in May or June, but the breeding season is extended and apparently lasts well into August for some fish.

RED-BELLIED SUNFISH (*Lepomis auritus*)

The red-bellied sunfish is a native species that nests in shallow water, often only eight to ten inches deep, during late June, July and early

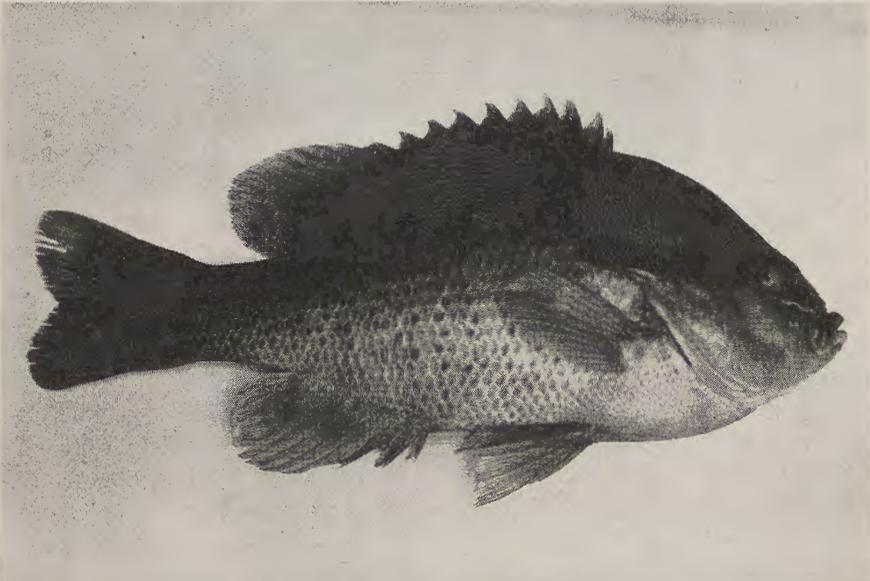


FIGURE 20. Red-bellied sunfish.

August. The nests, built by the male, are commonly in colonies. The eggs are adhesive and stick to the gravel and rocks and to one another, sometimes in large clusters.

The young remain together in schools during the first summer, but larger fish do not show a tendency to school.

COMMON SUNFISH (*Lepomis gibbosus*)

The common sunfish, pumpkinseed or johnny-roach, as it is more commonly known in Connecticut, is a native of the state and abundant in most lakes and ponds. It is a brilliantly colored fish, always ready to feed, and so has earned the reputation of being a "small boy's" fish.

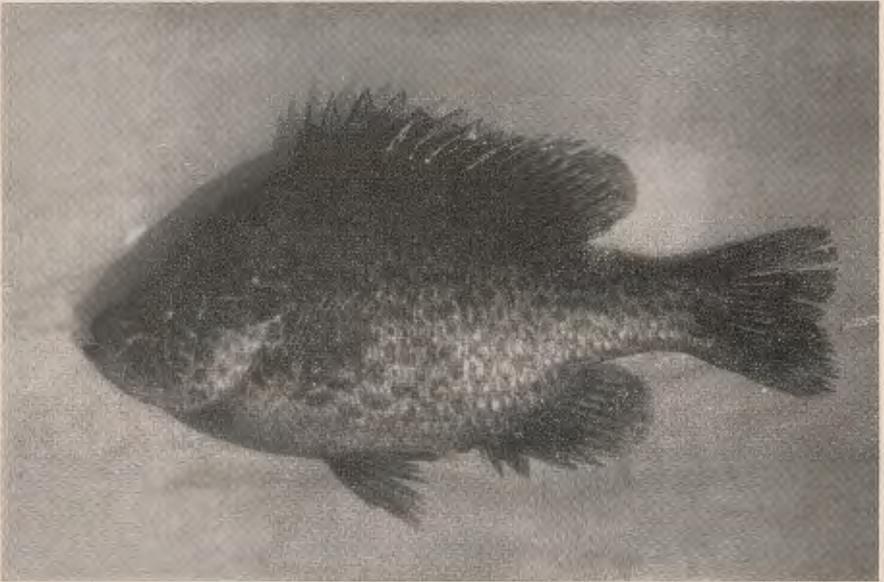


FIGURE 21. Common sunfish.

The common sunfish spawns during June and July and spawning may extend into August. The nests are commonly built in colonies and are sometimes very abundant along shores where spawning conditions are ideal. Nests are made in fine gravel or sand, or in the absence of these, even in mud.

As is the case with other sunfish and bass, the male is a bold defender of his eggs and young, and will not hesitate to attack intruders several times his size.

The johnny-roach lives both in weedy and rocky habitat, but seems to prefer the latter. It may often be seen on the edges of weeds rather than in them. The pumpkinseed feeds predominantly upon insects, small crustaceans, and snails.

This sunfish is common in shallow water, but may also be found in the deeper waters with bass and perch. The young sunfish remain together in schools and even adults are often seen in small schools.

Present knowledge indicates that this species is undesirable for stocking in small ponds. Over-population and stunting is common and this species is a direct competitor for food with other more desirable species.

CALICO BASS (*Pomoxis nigro-maculatus*)

The calico bass or black crappie is an introduced species from the south and midwest.

Spawning probably occurs in May and June. The nests are constructed in sand or gravel and may be in vegetation. The eggs adhere to the bottom of the nest or upon the aquatic plants in which the nest is built.

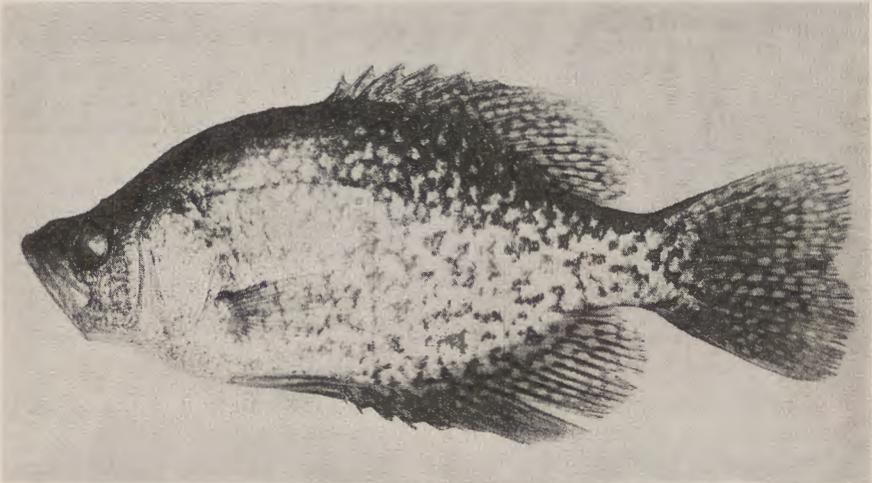


FIGURE 22. Calico bass.

The calico bass is a weed-loving fish and adults are found over beds of submerged vegetation or under floating vegetation. The young inhabit weeds growing along the shore. Here, they feed primarily on aquatic insects and young fishes.

The black crappie takes a fly well and furnishes good sport in some lakes. It is not, however, a good fighter.

Calicos may have a tendency to prey on more desirable species. This fish is a prolific spawner and it often over-populates waters and becomes stunted. For these reasons, this species is probably not suited for small pond management.

ROCK BASS (*Ambloplites rupestris*)

The center of distribution of the rock bass is the Mississippi Valley, but its natural range includes parts of New England and it is common in many of the waters of this state. The rock bass attains a length of ten to twelve inches.

Spawning occurs in late May, June and July. Nests are made in shallow water in sand, gravel or in the presence of vegetation or debris.

Adults live over weedy and rocky bottoms and young rock bass are often taken over beds of submerged vegetation along the shore. The food of the rock bass consists mainly of insects, crayfish and some small fish.

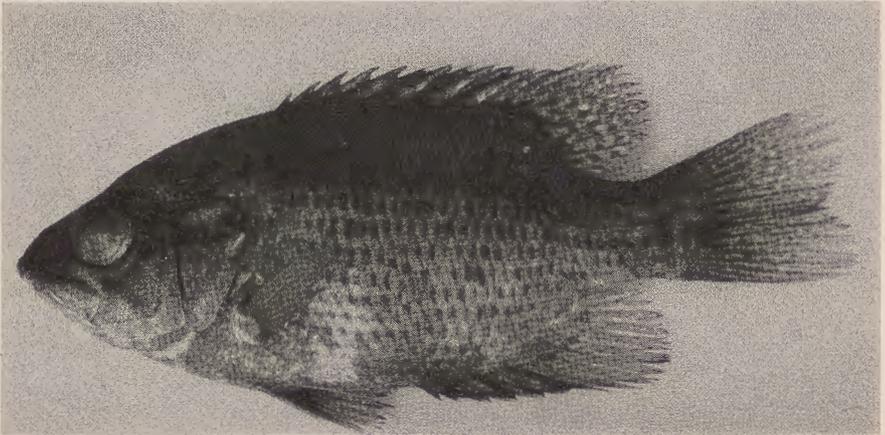


FIGURE 23. Rock bass.

For this reason, it is not recommended for small pond management. The rock bass is a competitor for food with many of the game fish and probably preys on the young of game fish.

YELLOW PERCH (*Perca flavescens*)

The yellow perch is one of the more valuable species sought by Connecticut anglers. It is abundant, easily caught, delicious eating and added to these qualities, it is an important forage item for other fishes. This fish acts as a "buffer" species, in that it serves to relieve to some extent, the angling pressure on bass, pickerel and trout.

The yellow perch appears to do best in less weedy habitat than that preferred by the chain pickerel. The larger lakes with rocky shore lines and extensive beds of submerged vegetation, particularly *Chara* or *Nitella*, are consistently the best producers (i.e.: East Twin Lake). However, this species does very well in small fertilized ponds as long as its numbers are kept within the available food supply. The yellow perch

is carnivorous, but the food varies widely and may include almost any of the animal life present in the water. In their stomachs may be found water fleas, small mollusks, crayfish, any of the aquatic insects or small fishes. Such a distinctly non-specialized diet makes the yellow perch a successful inhabitant of almost any inland water. This may work to the detriment of many ponds, since an over-population accompanied by stunting often occurs.

The yellow perch may be taken by anglers fishing shallow water for bass or pickerel or it may be taken in trout lakes in 50 or 60 feet of water while angling for trout. Thus, it serves as a sort of consolation prize and most anglers feel that they have had a successful day if they catch two or three bass or pickerel and eight or ten yellow perch.

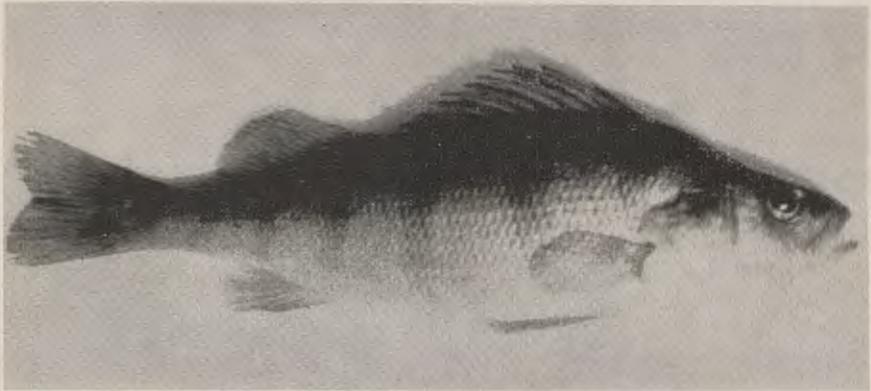


FIGURE 24. Yellow perch.

Like the chain pickerel, yellow perch are active throughout the winter months and large numbers are frequently taken through the ice.

Spawning occurs in late February, March or April, depending upon water temperatures. The eggs are enclosed in a long gelatinous-like string, from one to eight feet long, which is draped among stalks of aquatic vegetation or upon the branches of submerged brush. The latter can be supplied artificially and makes excellent spawning sites in ponds deficient in suitable spawning areas for yellow perch. Once the eggs are laid, they are deserted by the parent fish.

This technique has also been applied to cut down the numbers of perch when they become overly abundant. After the egg strings are deposited on the branches, these branches are lifted out daily, the egg strings removed and destroyed and the branches replaced to attract additional spawners.

This species is not desirable for small ponds unless angling pressure and harvest are unusually heavy and predaceous fish are abundant.

WHITE PERCH (*Morone americana*)

The natural distribution of the white perch in Connecticut was in the coastal waters. It is an anadromous species thus able to live in fresh and salt water. The distribution has been greatly extended inland by stocking and this fish is now found in scattered waters throughout the state. Most of the waters where the white perch furnishes good fishing are located in the western part of the state.

Inland forms spawn in June, July and August in this state, though this is somewhat later than the spawning season for fish from salt or brackish waters.

A study of the food habits of the white perch made during the summer months of 1939 indicates a rather unique diet among fish. Ninety per cent of the volume of the stomach contents of night-caught fish consisted of the larvae and pupae of the phantom midges and other midges. The remaining ten per cent were scattered among such other food items as small fishes, other insect larvae, water fleas and a few other small crustaceans.

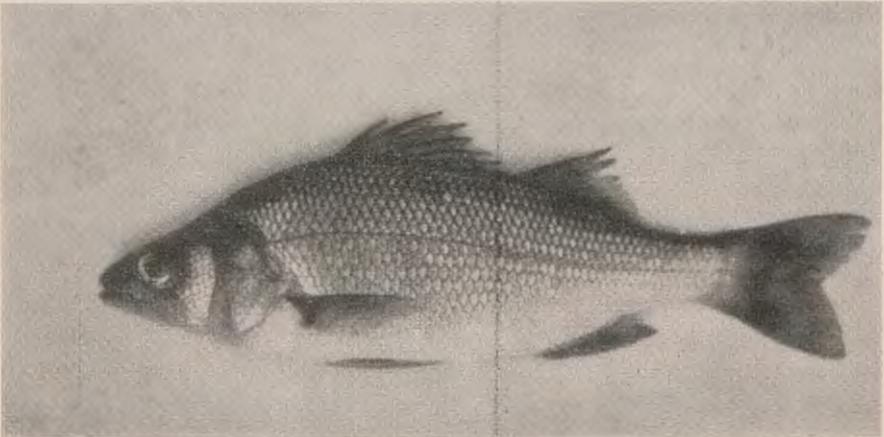


FIGURE 25. White perch.

The large amounts of midge larvae and pupae eaten indicates that the white perch may feed to a considerable extent on the bottom. The white perch may feed on the midge larvae during their nocturnal migration from the bottom to the surface.

White perch travel in schools and may, at times, move close to the surface in a manner similar to yellow perch.

The tendency to over-run its environment makes this species hazardous to experiment with in stocking and the introduction of white perch into waters where it is not already present should be avoided.

COMMON BULLHEAD (*Ameiurus nebulosus*)

The brown bullhead, or horned pout, occurs in almost every pond in Connecticut. This fish shows a distinct liking for mud bottoms, of which there is no lack in most of our lakes and ponds. Their food varies but bottom animals, such as scuds, small clams and snails, midge larvae and other insects, predominate. The bullhead, if present in large numbers, can be a serious competitor for food with the young of the game fishes.

Bullheads spend the winter months in a dormant or semi-dormant condition. They breed in Connecticut in late May and June. The adults make nests in the shallow waters, usually near the shelter of a rock, stump or under the roots of submerged trees and may even burrow into vertical banks. The bottom used for spawning is frequently mud, but may be rocks or gravel. One or both of the parent fish guard first the eggs and then the young, sometimes until they have reached the length of an inch or more. Young bullheads remain in a compact school during this period.

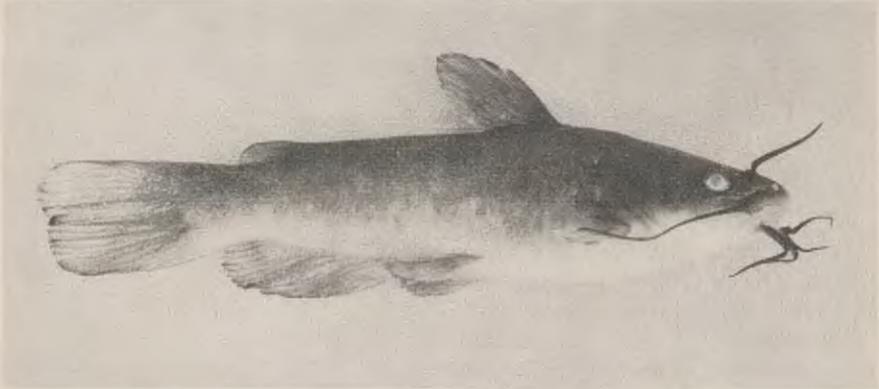


FIGURE 26. Common bullhead.

Both the adults and the young are largely nocturnal in their habits, showing marked increase in activity with the approach of darkness. The bullhead spends a good share of its time in deep water, ordinarily over bottoms of mud or submerged vegetation.

As a food species, it occupies a leading place among Connecticut lake fishes.

This species is a very successful breeder and can easily over-populate a small pond and become stunted due to lack of food. It is possible that the bullhead, stocked in combination with largemouth bass and subjected to heavy angling pressure, may furnish excellent fishing in small ponds. Largemouth bass, apparently find small bullheads desirable forage and may be capable of holding down the numbers of bullheads so that stunting does not result. Under some conditions largemouth bass may suppress bullheads to the point where they are not sufficiently abundant to furnish fishing.

GOLDEN SHINER (*Notemigonus crysoleucas*)

The golden shiner or pond shiner is a popular Connecticut bait minnow and thrives in most small weedy ponds.

Golden shiners are typically a fish of the weeds and although their abundance varies considerably, this species is present in nearly all lakes and ponds of the state. This species exhibits a strong schooling tendency and particularly in young fish these schools may reach considerable size.

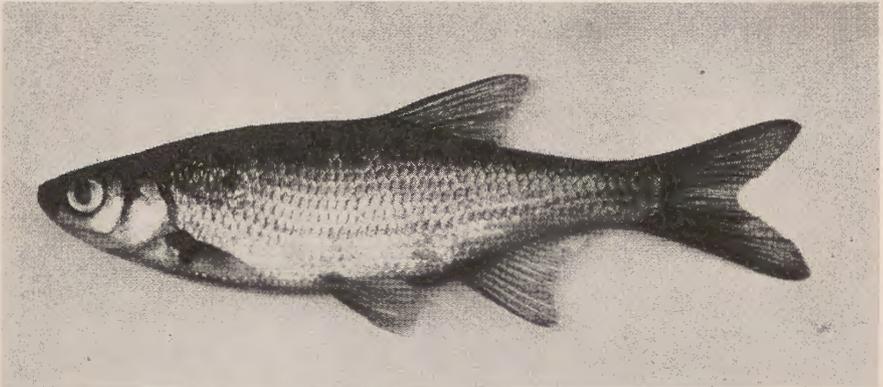


FIGURE 27. Golden shiner.

The food of this shiner is insects, small mollusks, crustaceans and algae.

The golden shiner is probably the most valuable of all forage fish in Connecticut waters. The extended breeding season of this shiner is important in that it means that a constant supply of tiny minnows is available to young game fish.

Spawning occurs from the middle of June through early August. The eggs are broadcast over beds of submerged vegetation.

SPOT-TAIL MINNOW (*Notropis hudsonius amarus*)

The spot-tail minnow or river bait is native to Connecticut and is most abundant in those lakes impounded on rivers.

Spot-tail minnows are usually found in large schools in the shallows where vegetation is scant or lacking.

This minnow is one of the most important bait fishes in Connecticut and is undoubtedly of considerable importance as a forage fish in such rivers as the Connecticut and Housatonic.

BRIDLED SHINER (*Notropis bifrenatus*)

This small minnow is found in many of the lakes and ponds of the state, but is seldom abundant.

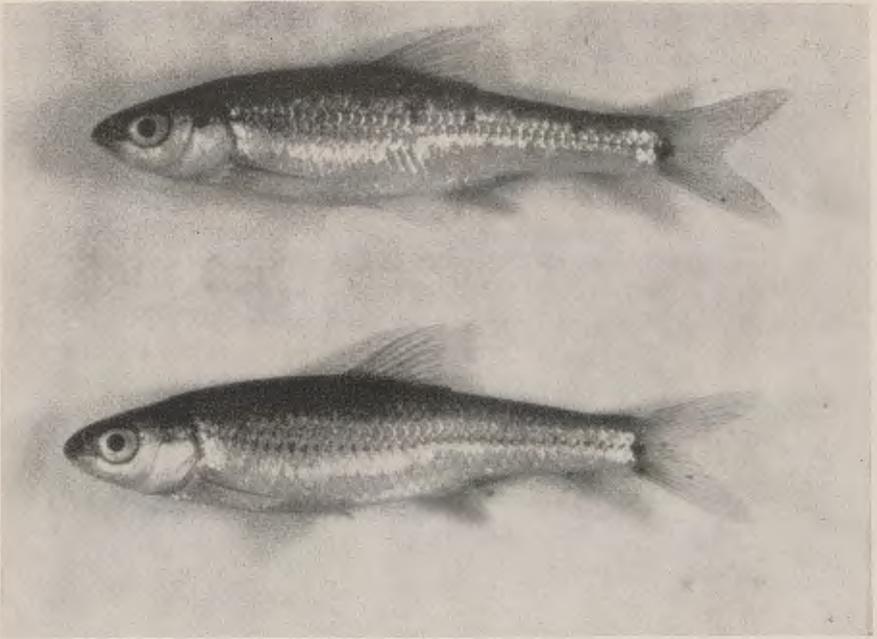


FIGURE 28. Spot-tail shiner.

The bridled shiner breeds during June and early July. It is a minnow of the weedy areas and is a schooling fish, though these schools are usually of only moderate size.

This minnow may be of some importance as forage fish for small bass or pickerel, though the extent of its importance is somewhat indefinite.

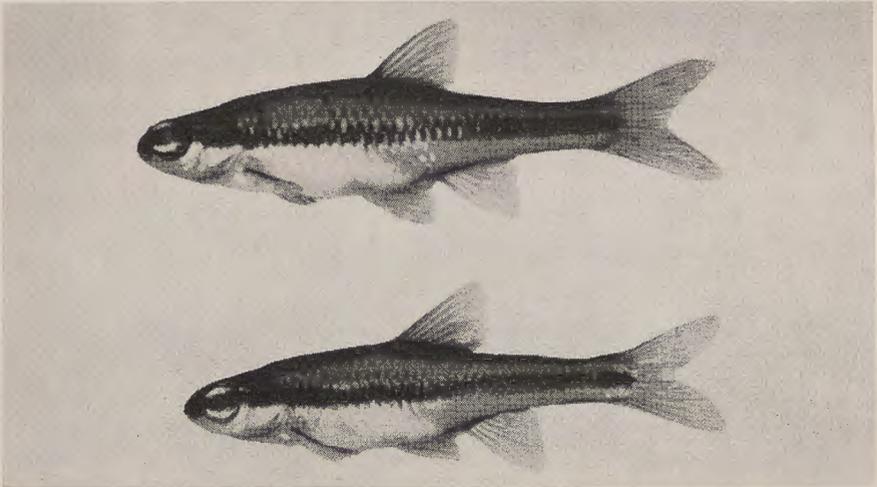


FIGURE 29. Bridled shiner.

COMMON SUCKER (*Catostomus commersonnii commersonnii*)

The common sucker appears in nearly every stream and most of the lakes and ponds in the state. It is of some value as a food fish but its value is slight because it becomes soft as warm weather approaches and the large number of small bones makes it unattractive as a table fish. Nearly all suckers taken for food are captured during the spawning migrations in March and April, when the flesh is reasonably firm.

There is considerable contradictory evidence concerning the damage caused by suckers feeding on the spawn of game fishes. Some studies have disclosed that these fish have eaten considerable amounts of spawn and others have been unable to disclose any evidence of spawn eating.

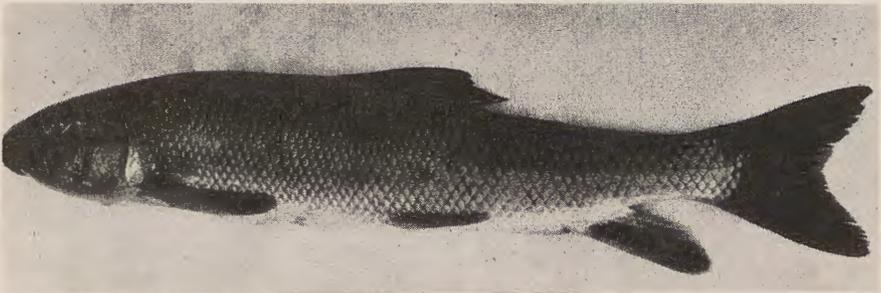


FIGURE 30. Common sucker.

It is true, however, that adult suckers in large numbers could be serious competitors with the young of the game fishes since these fish feed on insect larvae, crustaceans, mollusks and algae.

The young suckers probably are important as forage for adult game fish.

CHUB SUCKER (*Erimyson oblongus oblongus*)

The chub sucker is present in many Connecticut lakes and ponds, but its distribution is more limited than that of the common sucker.

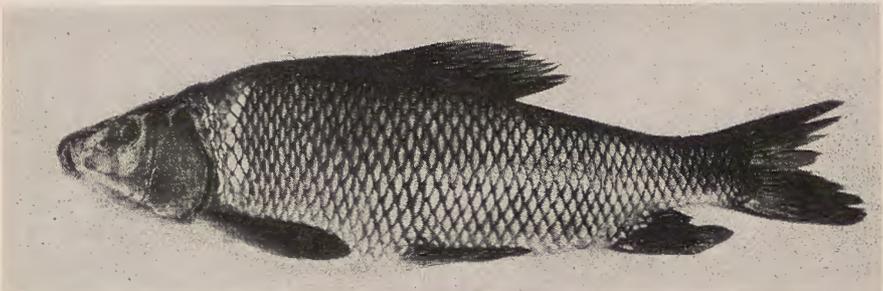


FIGURE 31. Chub sucker.

Spawning occurs in April and May.

This fish feeds upon much the same organisms as the common sucker, indicating that it is a bottom feeder.

Little is known about the chub sucker. It may be important forage for game fish, since, in small ponds, it is usually associated with pickerel, perch and largemouth bass.

BROOK TROUT (*Salvelinus fontinalis*)

The brook trout, or speckled trout, is the familiar native representative of the charrs. Its distribution throughout the state has been limited to areas where cool stream conditions still prevail.

Except for the lake trout, brook trout are more critical of water temperatures than any of the trout common to Connecticut waters. In general, temperatures above 70°F. are unsuitable for brook trout, and temperatures close to 60°F. are preferable.

This trout feeds on adult aquatic insects, insect larvae and pupae, crustaceans, mollusks, aquatic weeds and, to some extent, on small fish.

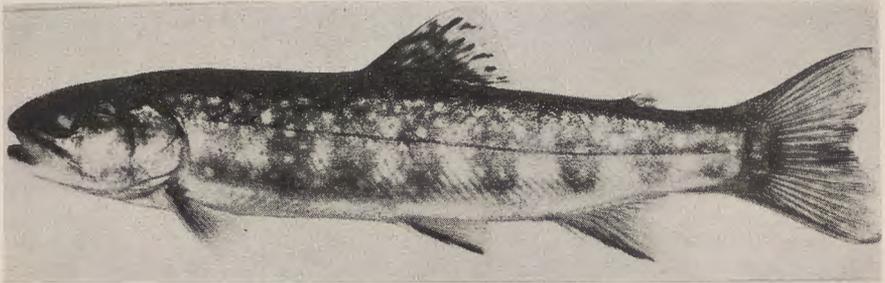


FIGURE 32. Brook trout.

The brook trout is the favorite trout of most fishermen. It is easily taken and heavy fishing pressure will decimate its numbers.

The spawning season is in October and November, usually in small, cold, headwater streams. The eggs are deposited in nests or redds that are dug in the gravel. No parental care is given the eggs or the young.

This species does well in small, cold ponds that are free of all other fish. The brook trout will not spawn successfully in such ponds except in rare instances over bottom springs. Brook trout stocked as fingerlings (3" to 4") at the proper stocking rate in suitable small ponds often reach a weight of one-half to three-quarters of a pound in one year.

LAKE TROUT (*Salvelinus namaycush*)

The lake trout is the largest of the salmon family with the exception of the Pacific king salmon. This fish was stocked in many lakes in the

state from 1890 to 1910, but is present in only two lakes in the state. It was successful to an appreciable extent only in Wononskopomuc Lake.

Spawning occurs in the late fall, from late October through early November. The eggs are deposited over rocks, gravel or broken ledge, usually in wave swept shoal areas.

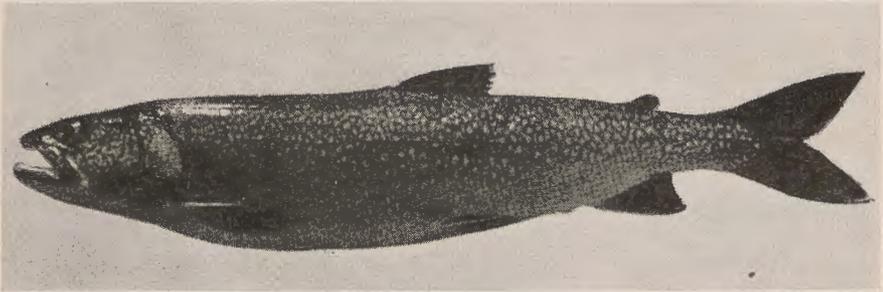


FIGURE 33. Lake trout.

The lake trout is an inhabitant of large, deep, well-oxygenated, cold water lakes. In the spring, this trout is often taken on the surface, but during the summer months, it is not unusual for lake trout anglers to use wire line and fish in 80 to 100 feet of water. This fish is a voracious feeder on other fish. Growth is slow and specimens sixteen to eighteen inches long from Wononskopomuc Lake are from five to seven years old.

This species is not suitable for small ponds and, in general, is not suited to Connecticut lakes.

BROWN TROUT (*Salmo trutta*)

The brown trout, a European import, has been stocked extensively throughout Connecticut. Since its introduction it has, to a large extent, taken over in waters that were originally inhabited by the brook trout. This has been due to changing water conditions which have made many waters no longer suitable for brook trout and partially to the greater adaptability of the brown trout. The brown trout can withstand warmer water and more pollution than can the brook trout, and is probably a more efficient competitor than the other trout.

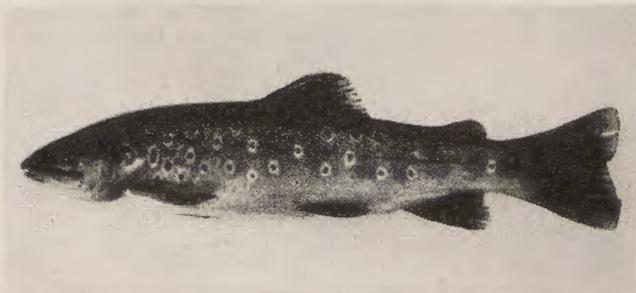


FIGURE 34. Brown trout.

Brown trout, like brookies, are fall spawners. Spawning takes place in gravel bottom streams, though usually not as far upstream as is the case of the brook trout.

Browns feed on much the same food as the brook trout except that small fish may form a more important part of their diet. Two brown trout



FIGURE 35. Lake trout from Lake Wononskopomuc, Salisbury.

taken at Lake Quassapaug had eaten several six to seven inch yellow perch. The smaller fish, 15 1/2 inches long, had eaten two perch and the larger fish, 16 inches long, had eaten three perch. This species does remarkably well in lakes inhabited by land-locked alewives and occasionally exhibits almost phenomenal growth. One specimen taken in the gill nets had attained a weight of five pounds in three years.

The brown trout has often been referred to as the trout of civilization. This species becomes more and more difficult to take as individuals grow older and, as a result, is probably not suitable for small ponds unless subjected to heavy angling pressure.

RAINBOW TROUT (*Salmo gairdnerii*)

The rainbow trout is a Pacific coast import. There are numerous sub-species of this fish and they exhibit a wide range of variation. Rainbow and steelhead trout are considered as one species since the steelhead is merely a sea-run rainbow.



FIGURE 36. Rainbow trout.

Most rainbows are spring spawners, becoming mature in March or April. Lake dwelling forms migrate at this time into streams where spawning takes place. A nest or redd is built in the gravel, usually by the female fish. After spawning, the female covers the eggs, which have settled to the bottom of the nest. No parental care is given the eggs or the young.

The food of the rainbow trout consists of fresh water shrimp, other crustaceans, midge larvae and other aquatic and terrestrial insects. It is only rarely that other fish are found in the stomach contents of the rainbow in Connecticut waters.

The rainbow trout is a highly prized spectacular game fish under suitable conditions. Unfortunately, there are no Connecticut lakes ideally suited to this fish. The rainbow trout must have streams in which to spawn and none of the lakes of the state are fed by suitable spawning tributaries. Maintenance of all rainbow fishing immediately becomes dependent upon stocking. This alone would not be a serious drawback since it is also true of the brook and brown trout. However, the migratory habits of this trout make it difficult to keep it within the confines of a

lake. Most of the lakes in the state, even when screened to prevent escape of the rainbows, apparently hold over few fish to subsequent years.

This trout has, in some instances, worked out well in small, cold farm ponds, particularly if the outlets are screened and the fish are stocked as fingerlings. The rainbow, like the brown trout, can withstand temperatures up to 78° considerably higher than that tolerated by the brook trout.

Members of the trout and salmon family are probably the best known and, in general, the most highly regarded of the fresh water fishes. They are typically of northern distribution in lakes and streams where the waters remain cool the year around. All of them are more or less migratory in nature, particularly in their search for satisfactory spawning streams. In some instances, as in the various salmon and the salt water form of the rainbow trout, this migratory instinct is highly developed and either species may travel in excess of 1500 miles to reach home spawning grounds.

SMALL POND TROUT MANAGEMENT

The primary requisite of a trout pond is that the bottom waters remain cool throughout the hot periods of the summer. In small ponds this means that the waters must be fed by bottom springs or by spring brooks of an appreciable size. As a general rule, ponds in the one-quarter to one-half acre size with a maximum depth of eight to ten feet and an average depth of five feet are quite apt to be suitable for trout management. Ponds in the one-acre and larger class should have proportionately greater depth; that is, ponds of one acre should have a maximum depth of 12 or more feet and an average depth of about eight feet. Shallow ponds, unless fed by a spring brook of considerable volume, will warm rapidly during hot weather to temperatures above the limits tolerated by trout. Quarry holes usually have sufficient depth to remain cool, but such waters are often deficient in dissolved oxygen and low in food production. As a result, many quarry holes are unsuitable for trout.

The bottom temperature in trout ponds should not exceed the low 70's, and the water should contain sufficient dissolved oxygen to enable trout to live. Trout, particularly browns and rainbows, can withstand temperatures above the low 70's, but not for an extended length of time. Rainbow trout can withstand somewhat higher temperatures than brook trout, and the same or slightly higher temperatures than brown trout, but due to their highly developed migratory instinct difficulty may be experienced in keeping them in ponds which are not carefully screened.

Bottom features are relatively unimportant in trout ponds, if the temperature and dissolved oxygen content of the water are satisfactory. Hard gravel shores are the most satisfactory from the anglers' point of view, since mud bottoms tend to grow aquatic vegetation in such quantities as to interfere with fishing. However, mud bottoms are more productive of fish food than hard, gravel bottoms and low, dense, carpeting vegetation such as musk-grass (*Chara*, always associated with hard water ponds) forms valuable food-producing areas.

Trout fishing in small ponds is best and most economically supplied by stocking fingerling trout in the fall. It is important that no other species of fish are present in the pond. Trout are extremely poor competitors and do not do well in ponds that contain other fish. If ponds that are to be managed for trout contain other fish, they should first be reclaimed with rotenone to remove all such fish. If bottom water temperatures remain below 70°F., the best results will be obtained from stocking brook trout. This species will usually grow more rapidly and is more easily taken than the other trout.

Trout will not reproduce in most ponds. Trout, to spawn successfully, must have access to gravel bottom streams, although on rare occasions brook trout may spawn successfully over springs. As a result of the inability of trout to spawn successfully in most small ponds, it is necessary to restock each year or possibly at two-year intervals. This, of course, adds to the cost of management, but has a definite advantage in that these ponds will never become over-populated if correctly stocked. The pond owner has complete control over the number of fish in the pond and can regulate the numbers stocked to obtain the growth rate he desires. For the average small trout pond, a stocking rate of 200 to 300 fish per acre will usually produce good fishing, and the trout will grow well.

Trout ponds should not be fertilized. This recommendation is, however, based on present knowledge and may, in the future, be altered for some ponds of unusual depth and extremely low fertility. The addition of fertilizer and the resultant increase in microscopic plants and animals increases the oxygen demand in the deep water. This is the result of the increased requirement of dissolved oxygen necessary for the decay of the greater volume of dead microscopic plants and animals.

ASSOCIATION OF FISHES

Production primarily of one or two game species has been mentioned as one of the main features of pond management. This is based on the theory that a pond will produce a certain poundage of fish. If this production is scattered among several competitive game fishes, the yield of any one species is small and relatively unimportant.

The following associations of species are known to produce reasonable fishing in some small Connecticut ponds.

1. Largemouth bass, chain pickerel, yellow perch and golden shiners.
2. Largemouth bass, yellow perch and golden shiners.
3. Largemouth bass and golden shiners or largemouth bass and some other small pond minnow.
4. Brook trout, if the pond remains cool enough for this species, or rainbow trout in suitable ponds which are adequately screened.

The first two combinations should furnish good fishing. However, it is essential that the harvest of yellow perch be heavy. The bass and/or pickerel must be allowed to reach 12 to 14 inches and 16 to 18 inches respectively before they are taken. The predator species must be allowed to reach this size so that they can aid in keeping the yellow perch under control through predation.

In the southeast a combination of largemouth bass and bluegill sunfish, adequately harvested, has proven very successful in small, heavily fertilized ponds. This combination has not proven satisfactory in the northeast for two reasons; first, generally lower pond water temperatures slows growth of bluegills but decreases reproduction very little resulting in an overabundance of small bluegills. Secondly, the Yankees of the northeast have become accustomed to the races of sunfishes being generally too small to serve as a satisfactory panfish and they refuse to recognize sunfish as an edible and, therefore, desirable species. Lack of any possibility of an adequate harvest allows bluegills in northeastern farm ponds to over-run the food supply assuring stunting of the bluegills. This allows for an adequate food supply for the bass which, under these circumstances, will not be easy to catch. In the southeast the more rapid growth of the bluegills and the ready acceptance of this species as a desirable and good quality panfish encourages an adequate harvest of bluegills and a balanced pond.

Small ponds in the northeast of from less than one acre to about three acres and with depths of ten to fifteen feet respectively can usually be satisfactorily managed for a single trout species, but additional experimental work on combinations of species suitable for small pond management in this latitude is urgently needed.

THE PLACE OF AQUATIC VEGETATION IN SMALL PONDS

Many pond owners have felt that since vegetation is associated with fish production, a program of planting aquatic plants would be valuable in the improvement of fishing. It is certainly true that aquatic vegetation is important to fish production. However, its effect is indirect rather than direct. Fish feed upon insects and crustaceans which inhabit



FIGURE 37. Weed-choked pond.

weed beds rather than upon the plants themselves. In addition, weed beds provide cover and spawning facilities for several species of game fish.

Fertilization experiments on small farm ponds have changed somewhat the older conception of the importance of higher plants in fish production. In these experiments, it has been found that unless the higher plants are closely controlled, most of the fertilizer that is added to the water is taken up by these plants. This is fine for the "water weeds," but does the fish no good. When the "water weeds" are properly controlled, the fertilizer promotes the growth of algae (the green summer bloom of some of our ponds) and a short food chain terminating in fish flesh.

It may well be that in non-fertilized lakes and ponds a considerable part of the potential fish production is not realized because higher plants are absorbing too much of the fertilizing elements in solution in the water. In addition, heavy growths of "water weeds" interfere with fishing and may make it difficult to maintain a proper balance between species of fish because of excessive protection afforded young forage fish.

FERTILIZATION TO INCREASE FISH PRODUCTION

It has been mentioned previously that the poundage of fish which can be supported by any body of water is limited by the amount of fertilizers in solution. Common management procedures, such as stocking, imposing legal lengths, daily creel limits and closed seasons can help to shift the balance between the species and can regulate the sizes or age groups which will make up the annual harvest. However, such measures in no way change the productive capacity of the body of water. They merely decide in what form that capacity will be expressed. Thus, for example, a pond may be made to support 1,000 fish, each weighing eight ounces or 8,000 fish, each weighing one ounce. In each case, the total poundage remains the same. It is only by management that the most satisfactory fishing can be made within the limits imposed by the nutrients present in the water. However, when, due to small size or excessive fishing demands, a pond is unable to supply as much fishing as is desired, the productive capacity frequently may be increased by fertilization.

The fact that fertilizing does increase fish production, sometimes to an extraordinary degree, has been quite well demonstrated in hatchery rearing ponds and in small fishing ponds, particularly in Alabama and the southeast. It has been possible to increase bass production as much as 50 percent in rearing ponds through fertilization. Swingle and Smith, experimenting with the effects of fertilizers in small farm ponds in Alabama, were able to increase fish production in ponds which ordinarily produced about 140 pounds per acre to as much as 580 pounds per acre.⁵

There is little experimental data from Connecticut waters which can be offered as a guide to the amount or kinds of fertilizers to use, or to the yield which can be anticipated from the program of fertilization. The scant experimental data available for this area indicates that the most efficient combination for each application per acre of water is 80 pounds of 5-10-5 commercial fertilizer plus 20 pounds of nitrate of soda. These

applications should be started as soon as the pond is free of ice and should be continued at two-week periods until an algal bloom is produced. Later applications should be made whenever transparency is increased to a point where light-colored objects are visible in 18 inches of water.

Fertilizing in the fall is dangerous because the resultant activity when covered with a seal of ice may cause serious oxygen depletion and loss of fish. It is probable that no further applications of fertilizer should be made after the first week in August. It is further true, based on present knowledge and discussed on preceding pages, that ponds in trout production *should not be fertilized*. Pond owners who contemplate using fertilizer should bear in mind that this method of stimulating fish production usually renders the pond less desirable for swimming. Following fertilization, microscopic plants and animals which are the foundation of fish production become abundant and give the water a cloudy appearance.

There have been some popular articles published on the advantages of fertilizing fishing ponds. In general, these articles have been misleading and did not mention several factors which should be considered when contemplating a fertilization program, such as:

1. Ponds that have a fast turnover of water are not suitable for fertilization. The "rule of thumb" is that if the overflow in one month's time would be equal to the total volume of the pond, it seldom pays to fertilize.

2. Higher plants must be controlled to obtain the most efficient use of the fertilizer.

3. Fertilization is an added and continuing expense and the addition of fertilizer does not permanently enrich the pond.

4. Fertilizing promotes the growth of algae and may render the water undesirable for swimming.

5. Fertilizing is not a substitute for fishery management. Unless a productive balance between species and between age groups is maintained, the additional food created by fertilization will not be reflected in additional useable game fish production.

The U. S. Fish and Wildlife Service, U. S. Soil Conservation Service and the Alabama Agricultural Experiment Station have several detailed publications dealing with the fertilization and management of small ponds.

DANGER TO FISH PRODUCTION FROM CHEMICALS USED TO CONTROL ALGAE

The practice of introducing various chemicals into ponds for the purpose of controlling algae is, unfortunately, increasing. Pond owners have learned that it is possible to control this vegetation by using chemicals without killing fish. Since fish usually are not killed, it is often assumed that harm has not come to the fishing. Nothing could be farther from the truth.

Practically every living thing in a pond has some effect on fish production. Algae are especially important. The algae are used for food by a host of animals, which, in turn, are used either directly by young game

fish or by intermediate forms which support the large game fish. The algae, then, are the first link in the chain of food organisms which are essential to fish production. It is obvious that if the algae are killed by chemicals, the ability of the pond to support fish has been greatly reduced.

PREDATORS

It is a popular misconception that animals preying upon fishes take a heavy toll of the fish population. Frequently, predators are blamed for poor fishing. It is true that animals eat fishes, but there is very little factual evidence to indicate the amount of fish eaten. Where there are heavy concentrations of fish, as in hatchery pools, a few predators may be the cause of considerable damage, and the need for control is then clearly indicated. Other rare instances are known such as depredations by mergansers of Canadian salmon streams. Under natural conditions, however, fish are usually well scattered. If it is assumed that a great blue heron eats 20-30 small game fish and minnows from a pond in a day, it then gives the impression that considerable numbers could be lost. But when one considers that the predator fish population of the same pond may consume in excess of a hundred times that many each day, the heron's food demands appear in their true significance of relative unimportance.

Snapping turtles have been the object of considerable attention in Connecticut waters. During a recent six-year period, 1,200 snappers totaling over 12 tons, were removed from the lakes and ponds in the state by the law enforcement personnel. Examinations of the stomachs of 470 of these specimens revealed that the food volume was composed almost equally of both aquatic plants and fish (36% and 38% respectively). The only fishes present in significant amounts were: yellow perch—4%; sunfish—7%; bullheads—6%; suckers—3%; lamprey eels—2%; unknown fish—12%.¹ This study points out, in addition, that many of these fish were small in size, and that a considerable portion may well have been taken as carrion, or at least as sick or dying individuals. The snappers' well-known penchant for scavenging and the nearly complete absence of the true game species in the food further confirms this opinion.

Other significant and pertinent investigation of the food habits of snapping turtles thoroughly corroborates these findings. This analysis of 173 stomachs from natural waters in Michigan gave the following volumetric percentages: vegetable matter—36%; and fishes—35% of which game and panfish represented 34%. This author goes on to evaluate these figures thus: "... we may assume that the contents of 186 stomachs and 278 colons (of 302 specimens from natural waters) approximately represent 464 sample meals! In this large number of meals, the creel fish average six-tenths of an individual per turtle. This interpretation probably offers the truest picture of predation on game fishes by snapping turtles . . ." And, "... It seems a conservative estimate that on the average, not more than one game fish or panfish is eaten per day by the individual snapping turtle. . . ."² The Michigan report concludes that since tagging studies indicate that snapping turtles seldom reach concentrations greater than two per surface acre in natural waters "these considerations further minimize the significance of the estimate that each snapper, on the average,

consumes six-tenths of a game fish per feeding. Thus, there need be little concern as to the adverse relations of snapping turtles to game fish populations in wild waters. . . ."²

Water snakes are, almost without exception, of little importance in their predatory effects upon fish. A few published photographs of snakes eating fishes are scarcely justification for complete condemnation of snakes. Water snakes eat small fish, but the conception of quantity should be relative.

Fish-eating birds such as the great blue, little green, and black-crowned night herons, mergansers, kingfishers and bitterns are common



FIGURE 38. Conservation officers with snapping turtles in traps.

in many waters, particularly those which are weedy and are not extensively developed as summer resorts. As yet, there is not a satisfactory measure of their drain on a population of fishes in nature, but some birds consume an appreciable quantity. Fish-eating birds do harbor many fish parasites and, in respect to fish populations, it is possible that therein lies their real importance rather than in direct loss of fish. This is not meant to imply that fish-eating birds should be exterminated. At present, it is illegal to kill many species of these birds.

PARASITISM

Pond fishes often harbor a variety of parasites. Some of these, such as black grubs which encyst under the scales or in the fins, are quite

conspicuous, but the majority pass unnoticed. None of the species known from Connecticut waters are harmful to man and, in any event, such parasites as remain after cleaning are readily killed by the usual cooking procedures.

Some parasites cause the death of their host; others have been shown to cause a loss in weight or interfere with reproduction. While in many cases, it would appear that parasites cause little or no damage, fish as free as possible from parasites are to be desired. Fish for stocking purposes should be closely watched in this respect. This is particularly true of smallmouth bass. The presence of bass tapeworm can almost completely stop reproduction.

Because of the seriousness of bass tapeworm infestations, a more detailed discussion of this parasite is included here.

The bass tapeworm (*Proteocephalus ambloplitis*) is one of the most important parasitic worms found in Connecticut fishes. The life cycle of

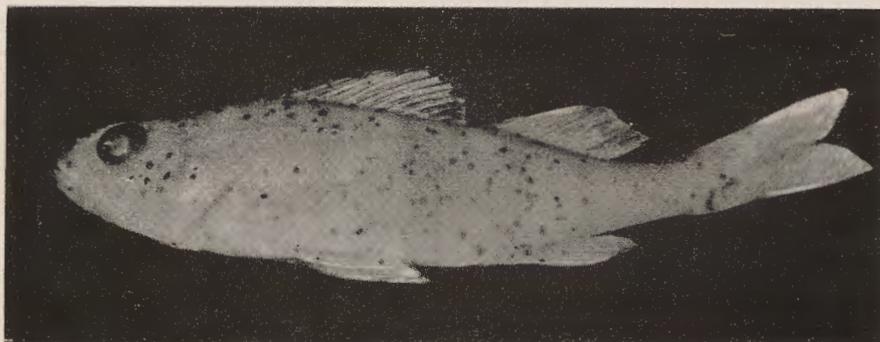


FIGURE 39. Yellow perch with black grubs.

this parasite is now well known, as it involves a tissue-invading larval form, while the adult inhabits the intestine of several species of fish. Segments of the adult worm pass from the intestine into the water. Eggs contained in these segments are liberated when the segment leaves the fish and enters the water. When these eggs are eaten by almost microscopic crustaceans (copepods), they hatch and the resulting larvae migrate into the body cavity of the crustacean. This stage remains in the crustacean for at least two weeks. Any species of fish, particularly while very small, may eat these infested crustaceans. The parasite then bores through the wall of the digestive tract and migrates into the mesenteries and viscera. It finally comes to rest in the mesenteries, liver, spleen or reproductive organs. Severe infestation of the reproductive organs can cause sterility. (It is this larval stage and not the adult form that is resulting in the reduction or absence of smallmouth bass reproduction in many of the lakes in Connecticut.) This larval stage takes place in the second intermediate host. Maturity can only be reached if this second intermediate host is eaten by a larger bass or other species of fish that

can act as the final host. This brings the larval tapeworm back to the digestive system of the larger fish and the larval form then grows into an adult tapeworm. This completes the cycle. See Figure 40 for sketch of the life cycle of the bass tapeworm.

A more detailed discussion of the other parasites found in Connecticut fresh water fishes is given in Bulletin 63.

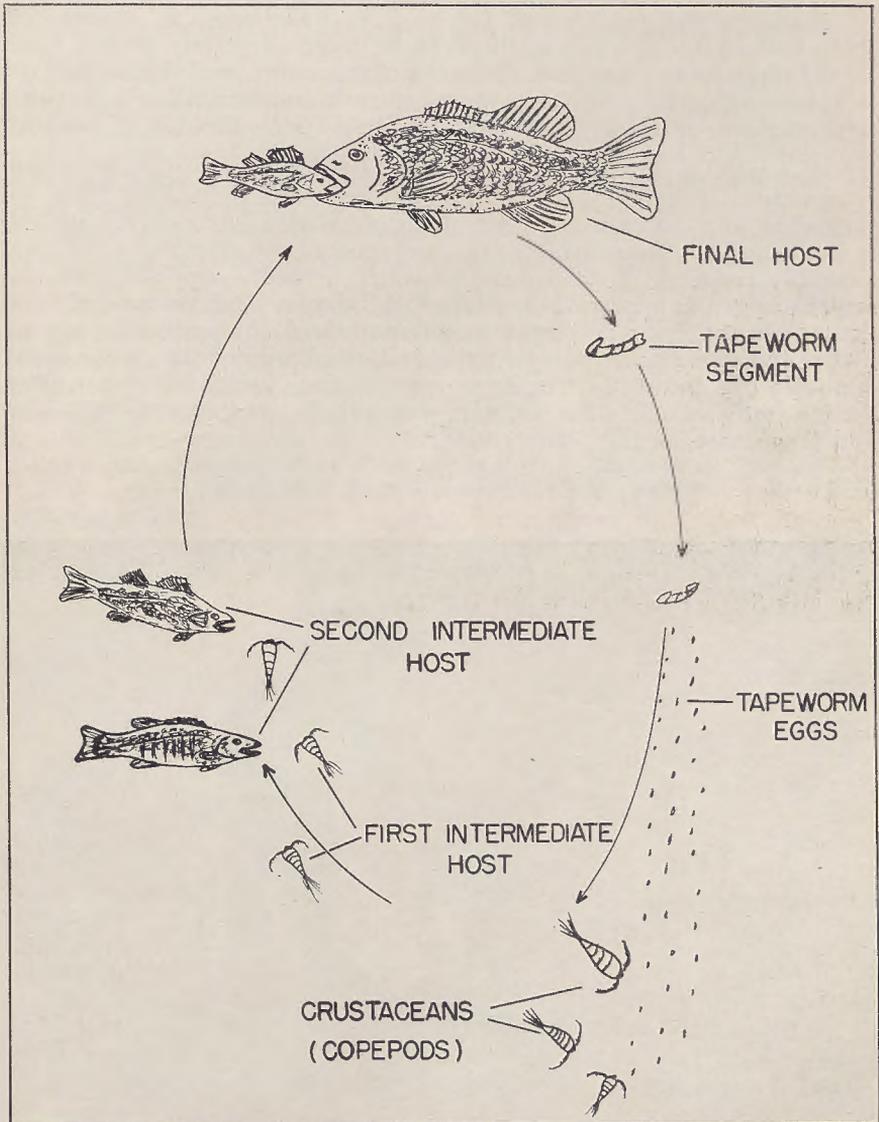


FIGURE 40. Life cycle of the bass tapeworm.

CHANGES IN WATER LEVEL

Removal of water from a pond with resultant exposure of the bottom is not conducive to fish production, particularly in small ponds. The undesirable effects of lowering the water level are several: destruction of much of the insect life and other animals living upon the bottom; exposure of breeding grounds or spawn, should the drop occur in the spring; and removal of the richest forage areas in the pond from availability to fish. Drawdown can be a valuable management tool in warm-water ponds that are badly out of balance. Where there are large numbers of small, stunted panfish and forage fish, drawdown can concentrate these undesirable fish where they can be more effectively preyed upon by the predaceous game fish. Lowering of the water level should be kept at a minimum, particularly in spring and early summer. Allowing a pond to winter over at a lowered water level is also to be avoided, if possible.

If a pond is shallow, reduced water level may allow ice formation to continue, completely to the bottom, thus killing the fish. After ice formation, the water is cut off from contact with atmospheric air and sunlight and the oxygen-producing activities of aquatic plants are considerably reduced. If the volume of water normally supplied with dissolved oxygen is appreciably reduced, the combined drain placed upon the oxygen supply by fish, other animals and the decomposition of organic matter in the water may deplete the oxygen to a point where the water is unable to support life. The appearance of dead fish in the water when the ice first goes out in the spring may usually be attributed to this cause and is commonly called "winter kill."



FIGURE 41. Ice fishing.

ICE FISHING

Ice fishing offers a means for harvesting a fish crop from many small ponds which, because of inaccessibility or heavy weed growths, cannot be successfully fished in the summer. Available information indicates that the pickerel population particularly may be more heavily depleted by ice fishing than by summer fishing. Excessive removal of pickerel may well be one of the most important factors in throwing such ponds out of productive balance.

THE ROLE OF SYSTEMATIC STOCKING IN MAINTAINING FISHING

For many years the most common fish restoration measure has been stocking. Prodigious numbers of fish have been propagated and distributed by federal, state and private agencies. The belief that stocking is essential if fishing is to be maintained is widespread and firmly believed by many people. The fact that this idea is entirely erroneous so far as pond fish are concerned cannot be repeated too often. The superficial logic which assumes that man must replace fish which are removed by angling is not supported by a knowledge of their life history.

Lack of adequate reproduction is commonly used as a justification for stocking. Actually, this is a factor which rarely is important in pond fish production. Most fish have a tremendous reproductive capacity which compensates for heavy mortality among the eggs and smaller fish. The following figures on egg production (normal range for different ages of females) of various species show that only a very few spawning adults are necessary to adequately stock a pond with young each year: small-mouth bass, 1,000-10,000; yellow perch, 10,000-100,000; pike-perch, 100,000-1,000,000.

The ill effects of inbreeding are often blamed for poor fishing and stocking is urged for the purpose of changing "blood lines." Since 1938, the survey has examined a number of lakes where fishermen believed the stock had deteriorated due to inbreeding. In each case, a more logical cause was discovered, usually involving an unproductive balance between species and between the fish population and the food supply.

Stocking should be regarded as only one of several management measures to be used for the improvement of fishing when its need is indicated. It can be justified when a new species is to be introduced or when natural reproduction is poor due to parasitism or lack of proper spawning facilities. It sometimes occurs that a desirable species is being crowded out by less desirable ones. Stocking may help the desirable species to regain dominance, but it is usually necessary to practice some manner of control of undesirable species at the same time.

REMOVING FISH POPULATIONS IN ORDER TO MAKE A NEW START

It frequently occurs, particularly in small ponds, that an extremely unproductive balance exists between species or between the fish and the food supply. This may be the result of stocking too many fish in relation to the size of the pond, stocking too many different species with similar food habits, stocking species which are poorly adapted to the

prevailing conditions, reduction of the food supply by poisons used to control vegetation, or improper harvesting of the fish crop. When a pond is in an acute state of unbalance as a result of one or a combination of these factors, often the quickest way to restore good fish production is to remove all of the fish present and make a new start. Although removing all fish and restocking with a selected brood stock, particularly in the case of a pond suitable for trout management is, in many cases, a sound practice, it should only be done upon the advice of a person qualified to make such a recommendation.

SUGGESTIONS FOR MANAGING PONDS

There are obvious reasons why it is impossible to give specific directions which would cover the proper fisheries management of all ponds. However, it is possible to lay down the following general rules which, if followed, would be a vast improvement over the practices which are prevalent on the majority of such waters at the present time:

1. Manage primarily for one or two species of game fish. If the water temperature is low enough, trout will probably furnish the greatest satisfaction.
2. Manage for the species best adapted to the pond.
3. In general, do not stock species which are already present in the pond. Natural reproduction is usually adequate.
4. Observe a legal length on the primary game species which will insure that this species always dominates the fish population. In general, legal lengths are only necessary in ponds that are heavily fished. From observations in Connecticut, it appears that the legal length of 16 inches for pickerel and 12 inches for black bass gives adequate protection in most cases under fairly concentrated fishing. Yellow perch, bullheads, calico bass and sunfish are usually able to maintain their numbers without the protection of a legal length or bag limit. A heavy harvest is usually encouraged.
5. Insure that a fair crop of fish is harvested each year by removing all fish taken by angling which are above the recommended lengths.
6. Recognize stunted populations (symptoms: many small fish and a very few large ones), and correct by drastic thinning.
7. Consider the advisability of increasing fish production by fertilization in ponds suitable for this practice.
8. Do not introduce copper sulphate or other poisonous substances into ponds which are important for fish production except under the supervision of the State Board of Fisheries and Game or its authorized agents.
9. Maintain as constant a water level as possible unless drawdown is recommended by a fisheries biologist.
10. Seek competent aid in solving special problems.

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RECLAMATION FOR TROUT MANAGEMENT

Webster's dictionary defines "reclaim" as being an attempt to recover possession of, or reduce to a desired state by discipline, labor or cultivation. To reclaim a lake or pond has fundamentally the same meaning: that is, to recover from the less desirable or unsuitable species of fish the habitat which they occupy and to return the water to a more desirable state or balance by replacing the fish that were removed with other species more nearly suited to that particular body of water. As applied to fisheries management, "reclaim" has, through general usage, come to mean the removal of all of the fish in a body of water by introducing a chemical which is toxic to fish. Usually, this chemical is rotenone, or a rotenone derivative.

Connecticut anglers have a keen, well-developed interest in trout fishing. Partially because of this interest and because it is the most effective method of management, one of the top priority fisheries techniques will be to reclaim those lakes and ponds which are suitable chemically and physically for trout management. These waters will then be restocked with trout. At the present time, most of the waters suitable for trout management contains populations of warm-water fish that are furnishing relatively poor returns to the angler. Wononskopomuc Lake, Lakeville, is a fine example of the poor returns to the angler of warm water fish. In 1954, an estimated 6,200 anglers fished more than 36,000 hours and took only 1,750 bass, perch, pickerel, sunfish, rock bass and bullhead. This represented a catch of 0.049 fish per hour or 0.28 fish per angler. This same lake, if reclaimed and stocked with fingerling rainbow trout, could reasonably be expected to produce a yearly catch of 20,000 trout. In trout ponds containing warm-water fish, the bulk of the poundage of fish is in non-game species. Most of the species present are not undesirable in the proper habitat, but usually in the typical trout lake, the condition is one of over-abundance and stunting of one or more of the panfish species. Over-abundance and stunting is not always the case, but except in rare instances, the catch of warm-water fish is very low.

A properly managed trout pond should contain no fish other than

trout—in most cases no forage fish is necessary. Trout are extremely poor competitors and if they are forced to compete for food with the more adaptable and highly successful warm-water fish, only a small percentage of the food organisms present will be available to the trout. The end result is that trout stocked in ponds that contain warm-water fish usually grow very slowly, if at all, and in many cases these stocked trout actually lose weight. If hatchery trout stocked in ponds inhabited by pondfish are not caught the first year, they seldom live over to the next or following years.

There are many advantages in managing suitable ponds for trout alone. Among these is the fact that trout are a popular species with the angler and contrary to popular opinion, are more easily caught than most warm-water fish. The relative ease with which trout can be taken results in greater angler satisfaction than is the case with warm-water fish. In Wononskopomuc Lake, for example, 6,200 anglers took nearly 4,400 trout and during the same period, these same anglers took only 1,750 warm-water fish. In reclaimed waters where all competing species have been removed, trout exhibit excellent growth rates and survival is high. Trout stocked as fall fingerlings (3 to 5 inches) often reach lengths of 11 to 14 inches by the following fall. In fact, in many reclaimed ponds, the growth of trout surpasses that normally attained in hatcheries. Survival of trout in such ponds is excellent and often more than 50 per cent of the stocked fish reach the anglers' creel the first year with large numbers living over to enter the catch in subsequent years. These holdover trout may reach a size of two to three pounds. Another advantage to reclamation is that although the highest quality trout fishing is obtained during the early months of the season, particularly May and June, consistently good catches can be expected in July and August with increased catches in September and October. This means that in Connecticut, the



FIGURE 42. Fish removed during the reclamation of Lake Forest, Bridgeport.

angler can expect above-average trout fishing in such lakes and ponds for six and a half months of the year. From a purely economic viewpoint, reclamation and restocking of suitable lakes with trout is a sound financial investment that will furnish the highest returns on the stocking dollar regardless of whether fingerling, yearling or two-year-old trout are stocked.

Reclamation of cold-water lakes and restocking these bodies of water with trout presents an excellent opportunity to manage these waters to obtain the maximum production of catchable game fish. Trout will not reproduce in most of the trout lakes in the state, due to the lack of adequate inlet streams suitable for spawning. This is an advantage from the management angle in that the yearly stocking rate can be adjusted to take full advantage of the food production of the lake to obtain the desired growth rate. The fact that trout will not reproduce in lakes is not a serious economic consideration because fingerling trout can be stocked at a comparatively low cost. In waters where these fish would be forced to compete with warm-water fish, fingerling stocking is impractical and uneconomical because research has proven that not more than two per cent of these fish can be expected to survive to reach the anglers' creel.

Lakes reclaimed for trout are usually restocked with fingerling trout at rates varying from 100 to 200 per acre. The stocking rate employed depends on the relative fertility and the fish food production of each



FIGURE 43. Trout taken following reclamation of Lake Forest, Bridgeport.
(Courtesy of Alexander Read)

body of water. Wononskopomuc Lake, for example, is one of the best trout lakes in the state and would, if reclaimed, be stocked with at least 200 fingerling rainbow trout per acre. Beach Pond, Voluntown, on the other hand, is very infertile and would probably not maintain desirable growth rates if stocked with more than 100 fingerling trout per acre. Each of these ponds would receive an additional stocking of two-year-old trout the first spring following reclamation to provide immediate fishing.

There are at least 20 lakes in the state chemically and physically suited for trout that can best be managed to produce the greatest angler satisfaction if first reclaimed and then restocked with trout only. These lakes vary in size from 15 to 400 acres and are scattered about the state to the extent that every county has one or more lakes suitable for reclamation and trout management.

The technique presently being used throughout the country to reclaim lakes is to introduce into the waters of the impoundment some form of rotenone. Rotenone is an extract of the derris root found in Oceania, Southern Asia or Australia or the cube root from South America. These plants are members of the bean family: *Lonchocarpus sp.* Rotenone-containing legumes have been used by natives of the Amazon River area and sections east of the Andes Mountains for hundreds of years to kill fish for food purposes. Fisheries workers in the 1930's and early 1940's used rotenone in a powdered form. This material was an effective killer, but was difficult to dissolve in water and the dust was irritating to the eyes and nasal passages. Today, a 5 per cent emulsifiable liquid extract of rotenone is used almost exclusively except in the case of extremely large reclamation projects where the reduced cost of the powder is an important consideration.

Rotenone properly applied at the concentration level necessary for eradicating fish life is non-toxic to humans or other air-breathing animals. Rotenone is a specific toxicant harmful only to gill-breathing creatures and insects. This chemical, which is also one of the components of many insecticides, tends to irritate and distend the tiny gill filaments of the fish, and thereby inhibits the passage of oxygen. Death of the fish is caused by suffocation rather than by poisoning, and these fish can be safely eaten if recovered previous to spoilage.

The quantity of rotenone necessary to kill all the fish in a pond is based on the volume of water to be treated. The dosage required is from three-quarters of a pound to one pound of rotenone per million pounds of water. (0.75 to 1.0 parts per million). During the course of the lake and pond survey, accurate bottom contour maps were prepared for most of the major ponds of the state and from these maps the volume of water in each impoundment was calculated. From these data, it is relatively simple to calculate the amount of rotenone necessary.

Because of the layering or thermal stratification, it is necessary to pump rotenone down to the various depths as well as on the surface.

The relationship between temperature and density of the water is such that as the surface waters warm up in the spring and summer they become lighter, and complete circulation no longer takes place. As a result of incomplete distribution of heat through the lake, the deepest

waters remain cold and cut off from circulation, and the lake becomes divided into three layers. This division of the waters into three layers is called thermal stratification, and only takes place in relatively deep

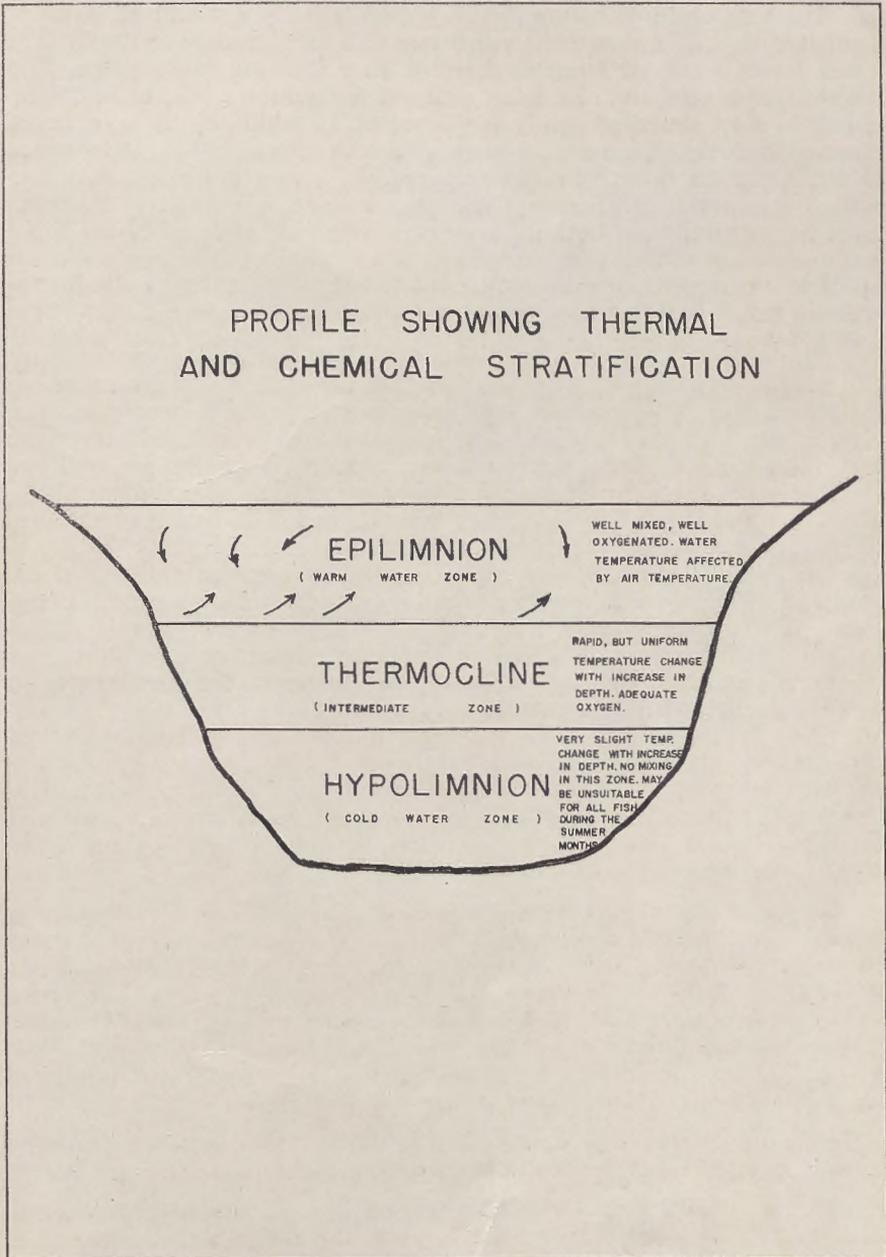


FIGURE 44. Thermal stratification.

lakes. The upper or surface layer is warm, and the water is more or less freely circulating. The depth of this layer depends on the surface area of the lake exposed to the wind. The middle layer is a region of transition or rapid temperature change.

The temperature change in this region is fairly uniform at about 1° Centigrade (1.8° Fahrenheit) per meter (3.3 feet) change in depth. The lower layer is cut off from circulation after layering takes place. This lower layer is cold and of a fairly uniform temperature (45° to 50° Fahrenheit in most stratified ponds in this state). In addition, all bays, coves, swamps and inlet streams must be treated with rotenone. This latter phase of the operation, though the least impressive, is very difficult and of considerable importance. Usually, these areas cannot be treated by boat and must be sprayed from back-pack pumps. Every effort is made to obtain a complete kill so that reinfestation with warm-water fish does not occur at all. If a complete kill cannot be obtained, it is hoped that reinfestation will not take place in serious numbers in less than five years.

The practicality and effectiveness of this method of management can readily be attested to by the fact that the State of Washington has reclaimed over 200 lakes, varying in size from 5 acres to over 900 acres. New Hampshire has reclaimed over 100 lakes and ponds, and New York and Massachusetts have each reclaimed over 50 ponds. In addition, Oregon has reclaimed numerous bodies of water. One of these was 3,000-acre Diamond Lake. This lake was reclaimed in 1955. More than 100 tons of powdered rotenone were used on this job at a cost in excess of \$100,000. During the first year of fishing following reclamation (1956), 35,700 anglers took 61,430 rainbow trout that averaged nearly a pound a piece. Previous to reclamation (1953), anglers caught only 2.8 pounds of fish per acre from the lake. In 1956, anglers caught from the lake more than 20 pounds of trout per acre. Almost every state in the northern trout belt has reclaimed one or more lakes for trout.

SUMMARY OF INFORMATION, RECOMMENDATIONS
and/or
DEVELOPMENT PLANS FOR THE IMPROVEMENT OF FISHING

Within the following pages is presented a short summary of the survey data concerning each pond, together with recommendations for management.

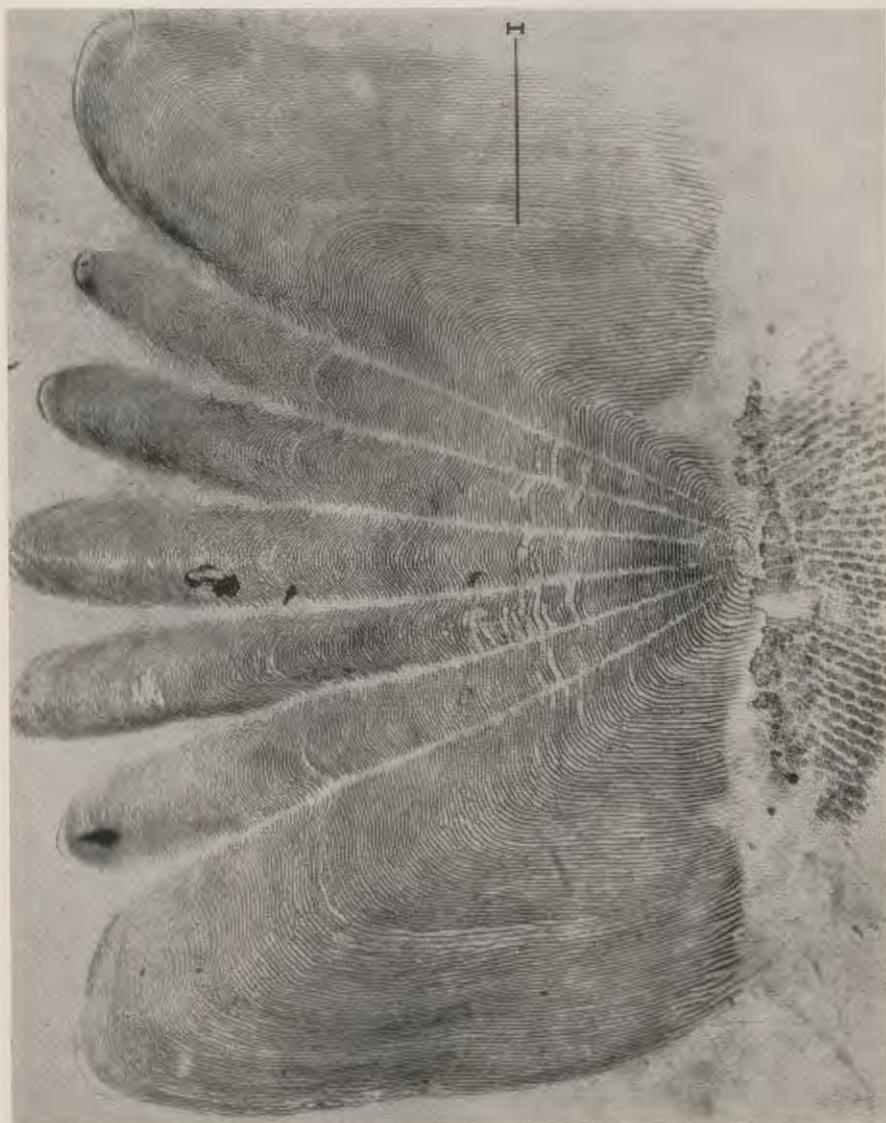


FIGURE 45. Yellow perch scale—8 $\frac{1}{2}$ " specimen from Langs Pond, Glastonbury.

The quality of the lakes and ponds discussed in the following pages was judged on several factors such as: (1) physical characteristics, (2) chemical characteristics, (3) numbers of fish taken or observed and (4) the size of these fishes at various ages (growth rate).

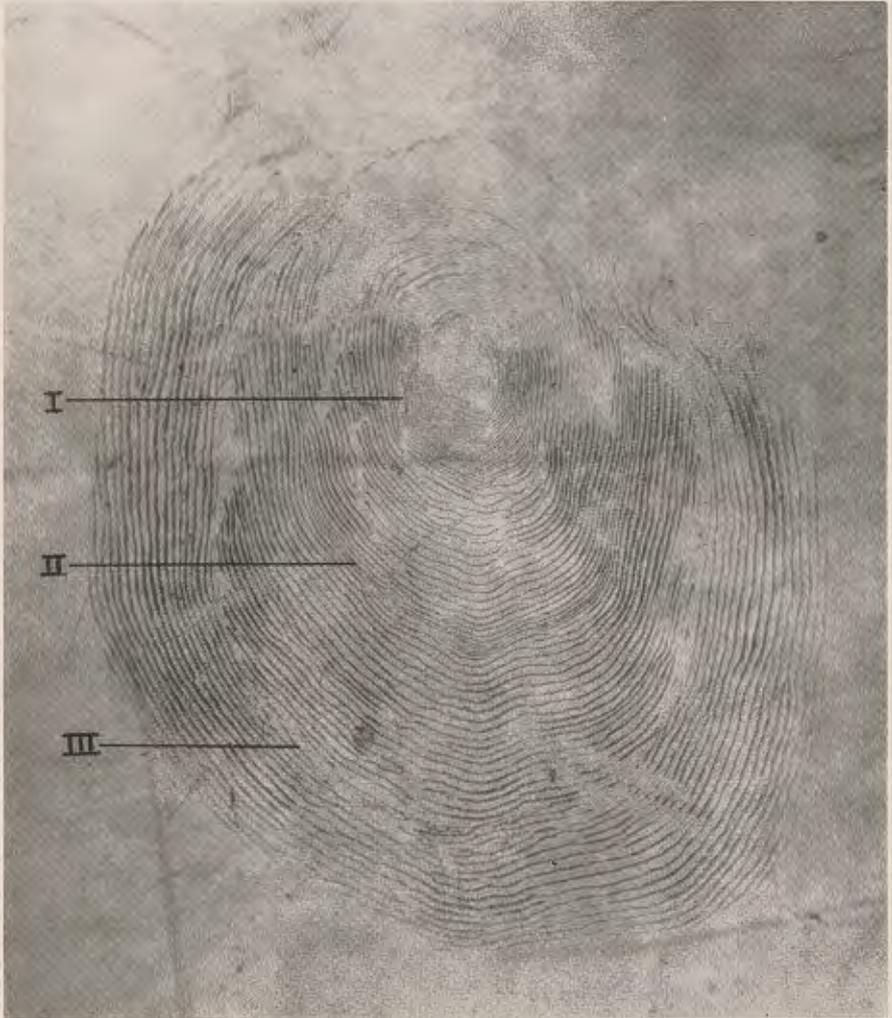


FIGURE 46. Brown trout scale—217/16, 5 lbs. 1/4 oz. specimen from Lake Saltonstall, East Haven—Branford.

For most species of fish, age can be determined by microscopic examination of the scales. A few selected scales from each fish were removed and these scales were made up into permanent plastic mounts. These plastic mounts consist of pressure impressions of the scales on special plastic strips. Figures 45 and 46 show photographs of scale im-

pressions from two species of Connecticut fish. The year marks or annuli are identified with Roman numerals. Examination of these scale impressions under a projector giving 40-diameter magnification makes it possible to determine the age of each fish and further to calculate the length of a specific fish at each year during its life.

From the age and length data, growth curves can be prepared similar

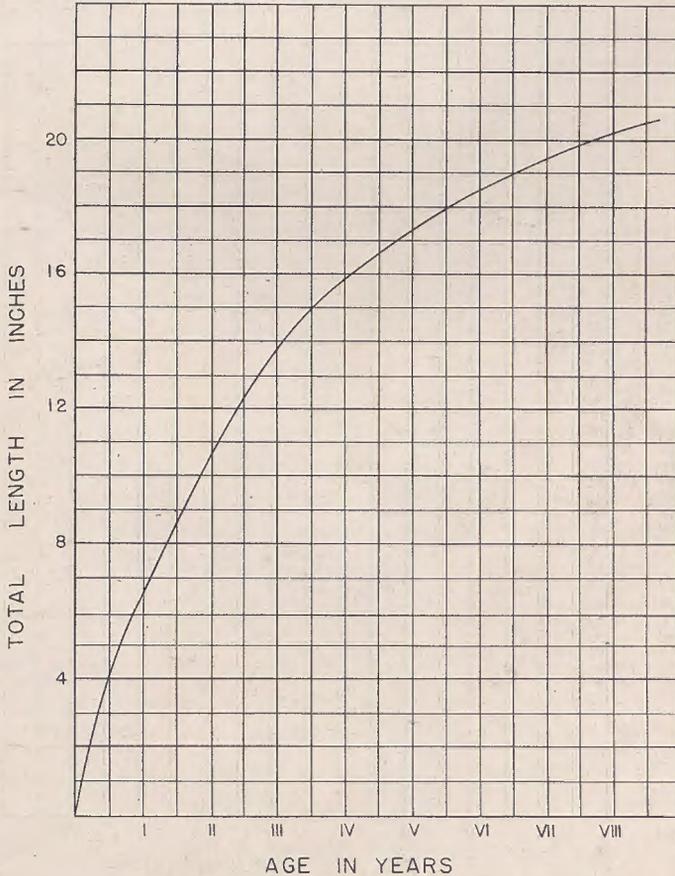


FIGURE 47. Growth curve for chain pickerel.

to those shown in Figures 47 to 53 which present the average growth of seven species of fish important in the economy of most Connecticut warm-water lakes. Such growth curves were prepared for each species of fish in each of the lakes and ponds surveyed. These growth curves were then compared to the state-wide average curves for the respective species. Growth rates are reported on for each species in individual ponds in the following pages. The management plans presented are based to a considerable extent on the relative abundance of the desirable species and

whether these species exhibited above-average, average or below-average growth.

Many of the individual lake and pond survey reports include recommendations for increased minimum legal lengths for chain pickerel and/or largemouth bass. It is true, of course, that a 15-inch pickerel is more desirable than two 12-inch pickerel, but these recommendations for in-

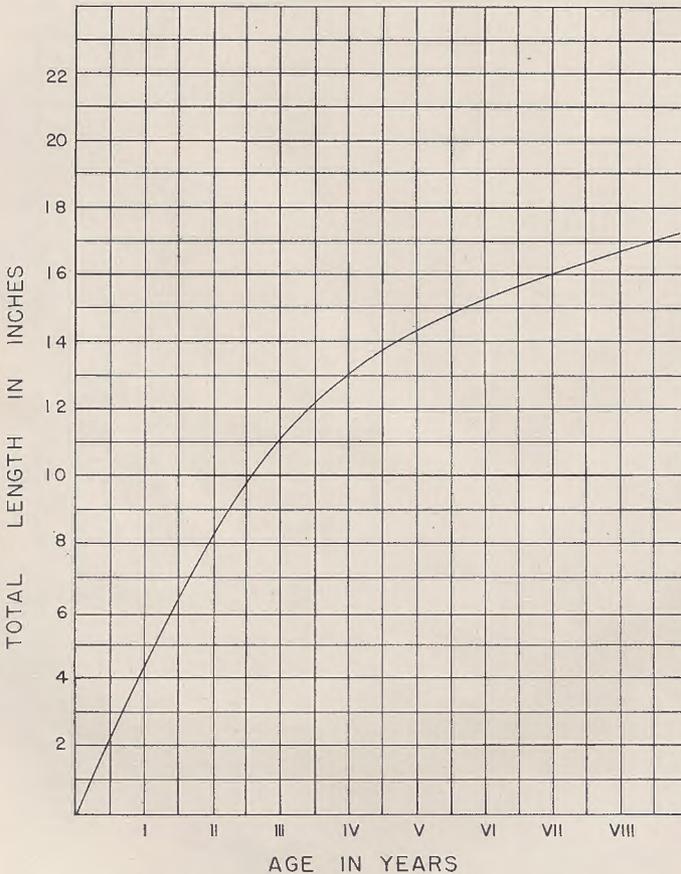


FIGURE 48. Growth curve for largemouth bass.

creased legal lengths are not to produce a more desirable size fish. The increased minimum length is to assure greater numbers of large fish that can more efficiently forage on panfish and forage fish.

There is considerable evidence that a greater number and greater total poundage of pickerel can be produced with a 12-inch length limit. Unfortunately, a pickerel of this size is far less efficient as a predator than a pickerel of 15 or 16 inches. In addition, an increase of three

inches in total length from 12 inches to 15 inches represents a weight increase of approximately one-half pound.

An increase in the minimum legal length for largemouth bass from 12 inches to 14 inches represents a sizeable increase in weight. In addition a 14-inch largemouth bass is a much more efficient and voracious predator than a bass of 10 or 12 inches.

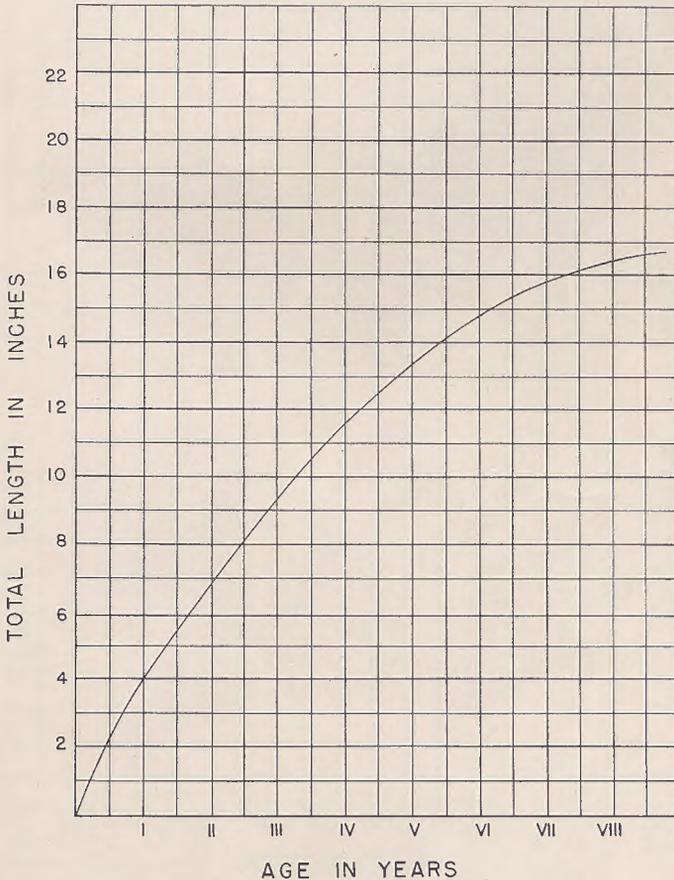


FIGURE 49. Growth curve for smallmouth bass.

Many of the development plans, such as pond reclamation for trout management, can only be carried out successfully with the cooperation, approval and assistance of riparian property owners, sportsmen and other interested parties. The majority of the impoundments open to public fishing are either partially or completely in private ownership. Any developmental work must first have the approval of the property owners.

The Board will further need the active assistance and cooperation

of these property owners and sportsmen to carry many of these plans to a successful completion. The staff of the department is not large enough to supply all the manpower necessary to carry out some of the developmental projects. Volunteer help from sportsmen, landowners, boy scouts and other interested groups will be essential to the success of this work.

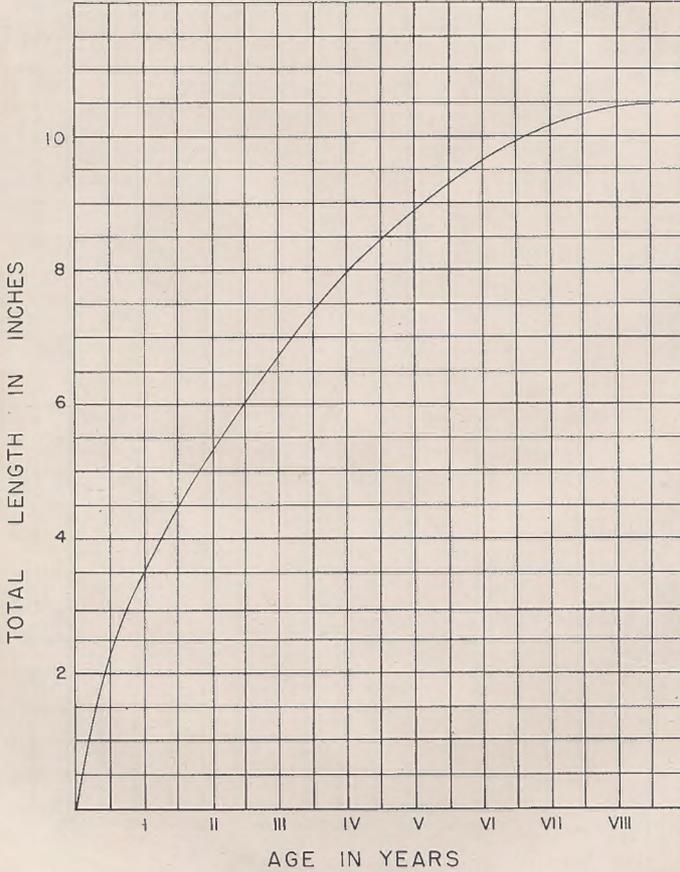


FIGURE 50. Growth curve for yellow perch.

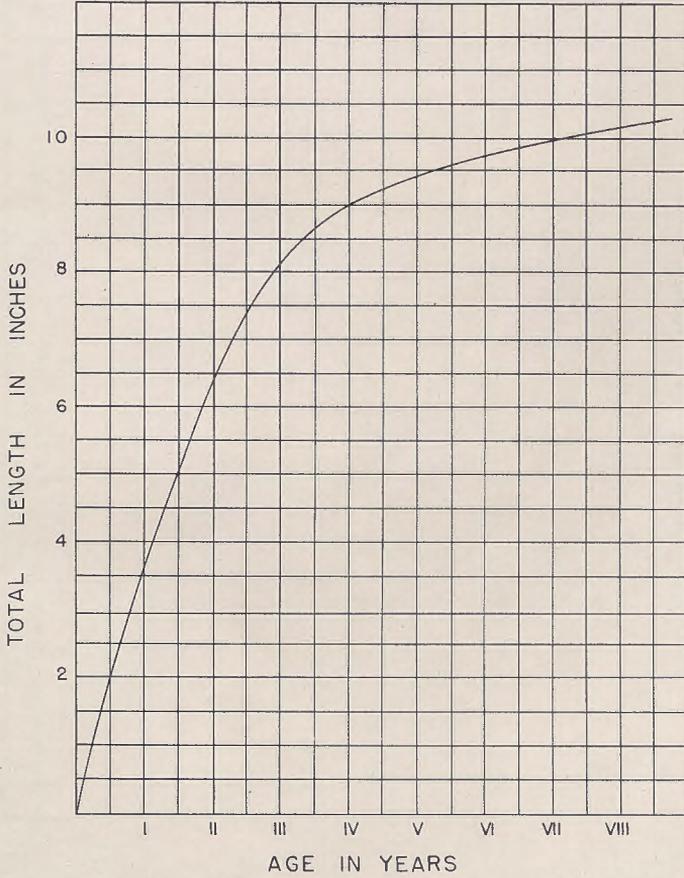


FIGURE 51. Growth curve for white perch.

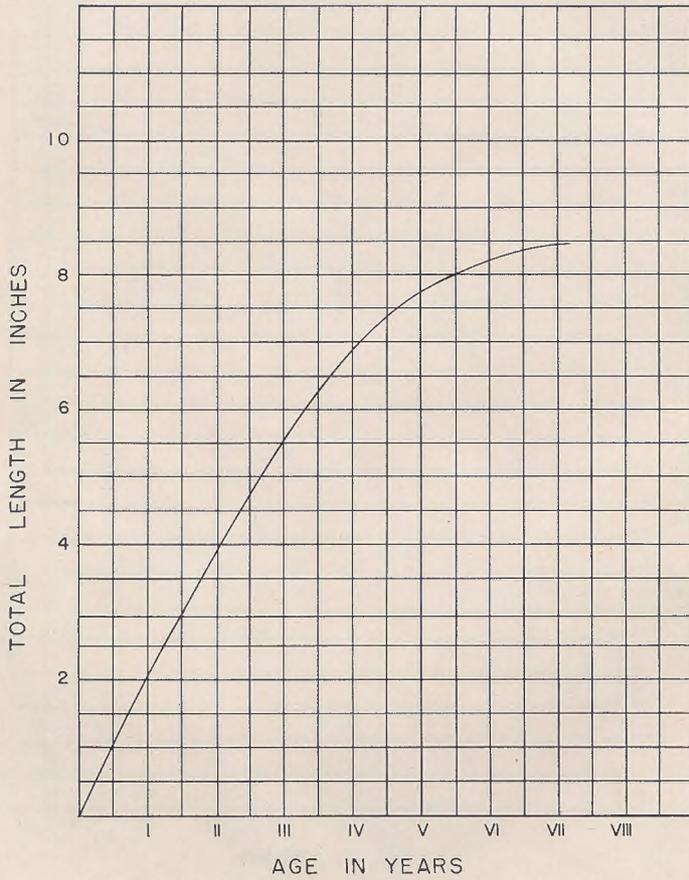


FIGURE 52. Growth curve for bluegill sunfish.

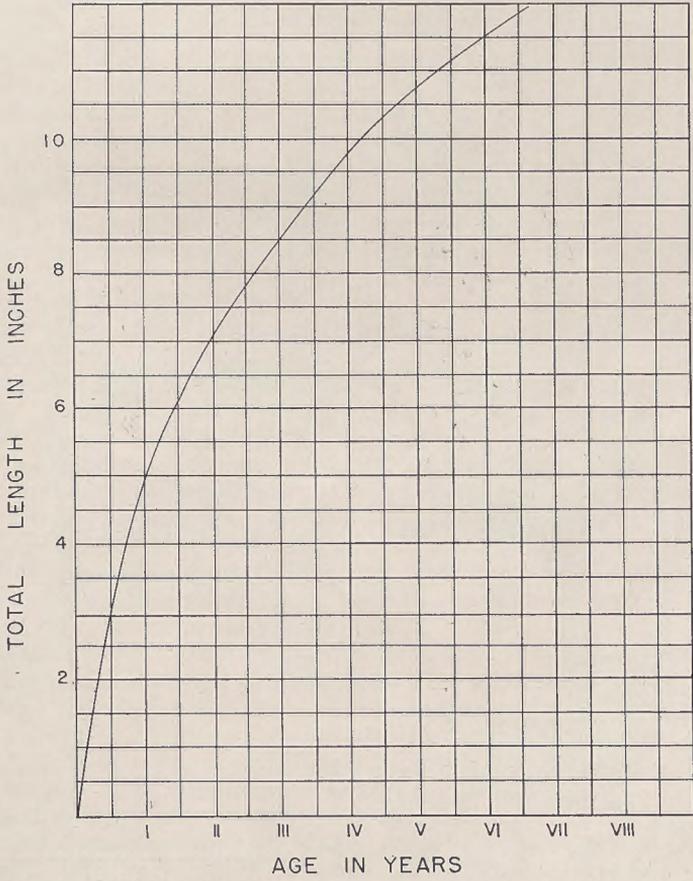
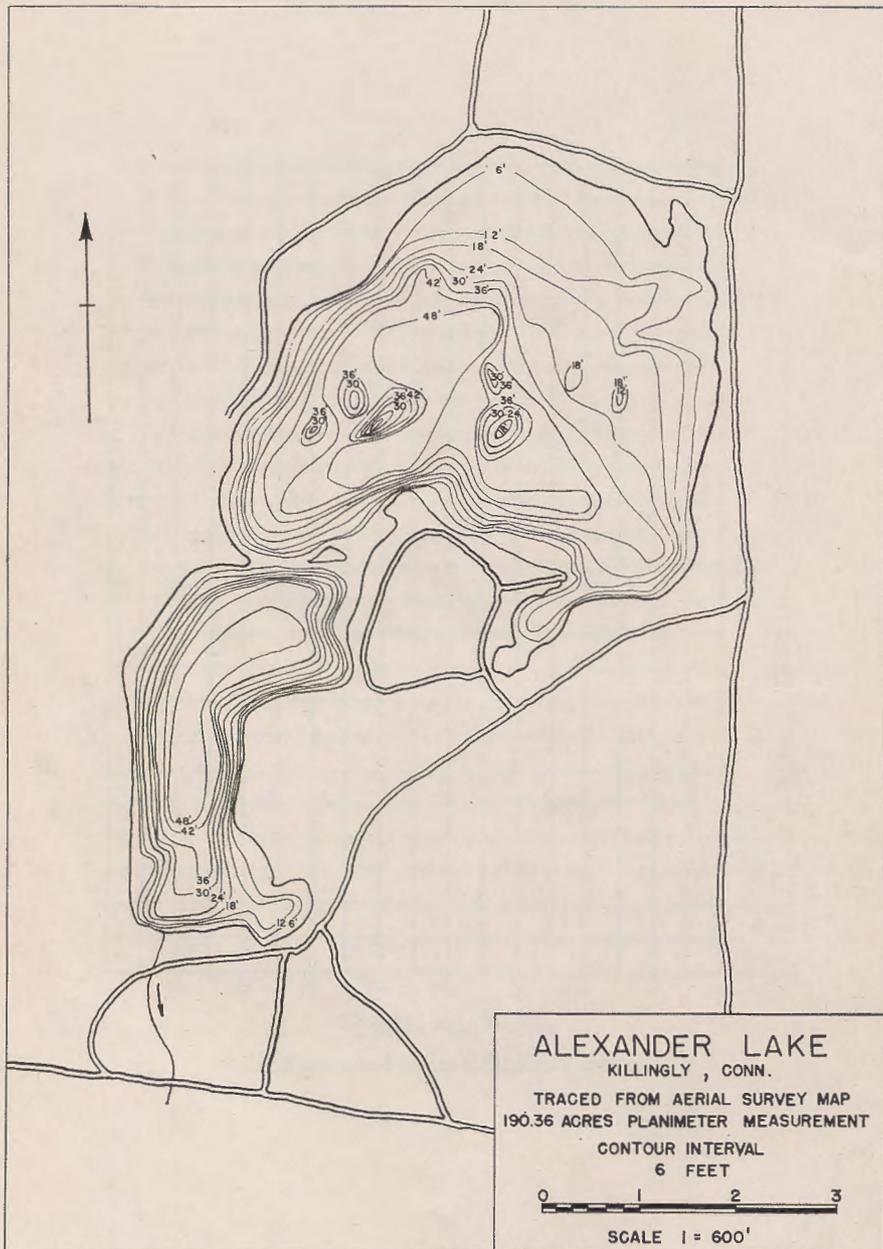


FIGURE 53. Growth curve for calico bass.



ALEXANDER LAKE

Alexander Lake is a large, deep-water lake located in Windham County in the township of Killingly. It has a surface area of 190.4 acres, a maximum depth of 53 feet and an average depth of 24.2 feet. The bottom varies considerably, but is composed mostly of sand, gravel, coarse rubble and boulders. The water is very clear and transparency exceeds 20 feet. The lake is thermally stratified and, except in the very deepest waters, is well supplied with dissolved oxygen.

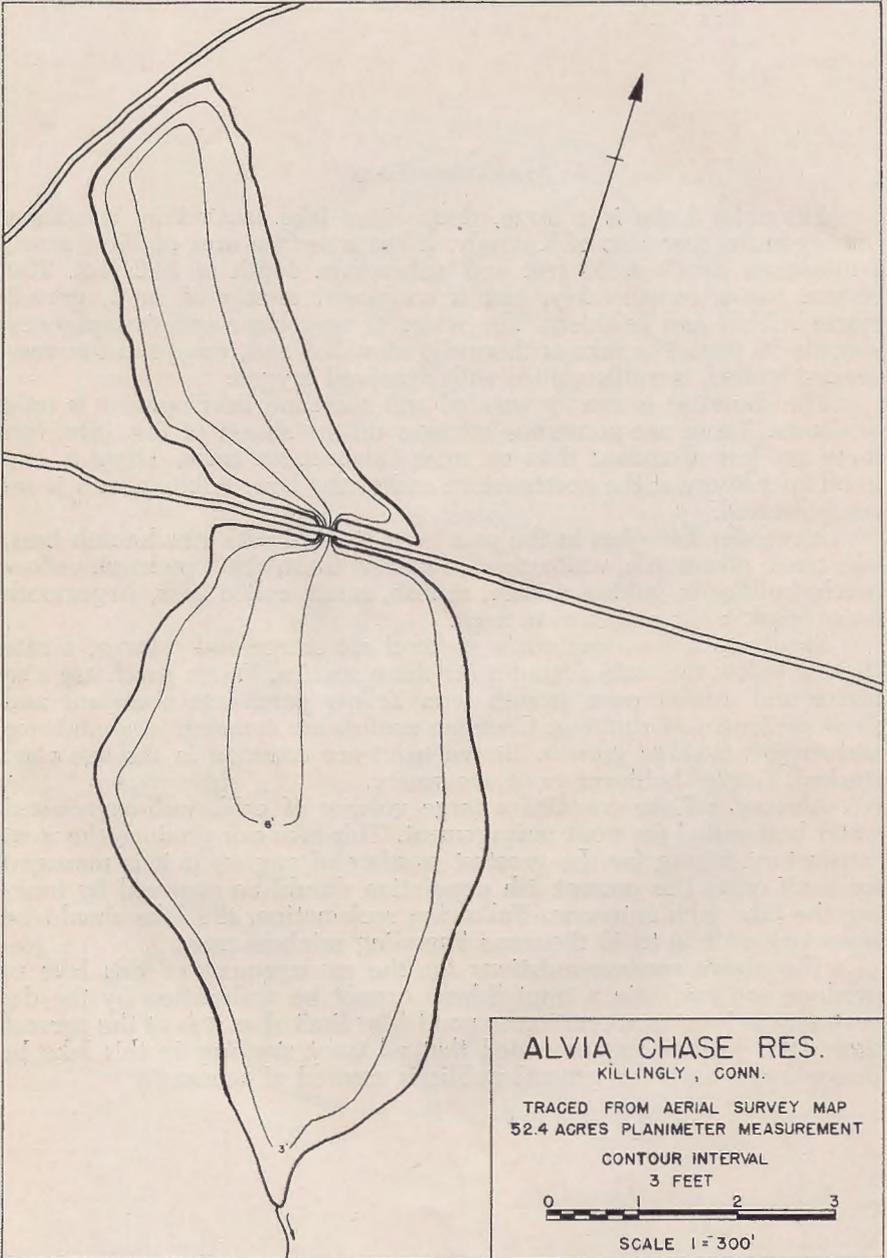
The shoreline is mostly wooded and shoreline development is only moderate. There are numerous cottages on the shores of this lake, but these are less abundant than on most Connecticut lakes. There is one small boat livery at the northeastern end of the lake. Public access is severely limited.

Alexander Lake has in the past been stocked with smallmouth bass, lake trout, pike-perch, white perch, rainbow trout, chain pickerel, yellow perch, bullheads, golden shiners, sunfish, smelt, calico bass, largemouth bass, brook trout and brown trout.

Smallmouth bass and chain pickerel are scarce and grow at a rate slightly below the state averages for these species. White perch are also scarce and exhibit poor growth rate. Yellow perch are abundant and show evidences of stunting. Common sunfish are common in abundance and exhibit average growth. Brown trout are common in the age class stocked. Larger holdover trout are scarce.

Alexander Lake contains a large volume of cold, well-oxygenated water best suited for trout management. This lake can produce the most satisfactory fishing for the greatest number of anglers if it is managed for trout only. The present fish population should be removed by treating the lake with rotenone. Following reclamation, the lake should be restocked with 30 to 40 thousand fingerling rainbow trout.

The above recommendations for the management of this lake to produce and maintain a trout fishery cannot be undertaken by the department as long as access to the pond is as limited as it is at the present time. It is further recommended that all trout stocking in this lake be discontinued until the general public is assured of access.



ALVIA CHASE RESERVOIR

Alvia Chase Reservoir is a shallow, weedy body of water located in Windham County in the town of Killingly. It is artificial in origin, and is fed by Bear Mountain Brook and two small intermittent brooks. This reservoir covers a surface area of 52.4 acres, has a maximum depth of 8 feet and an average depth of 3.1 feet.

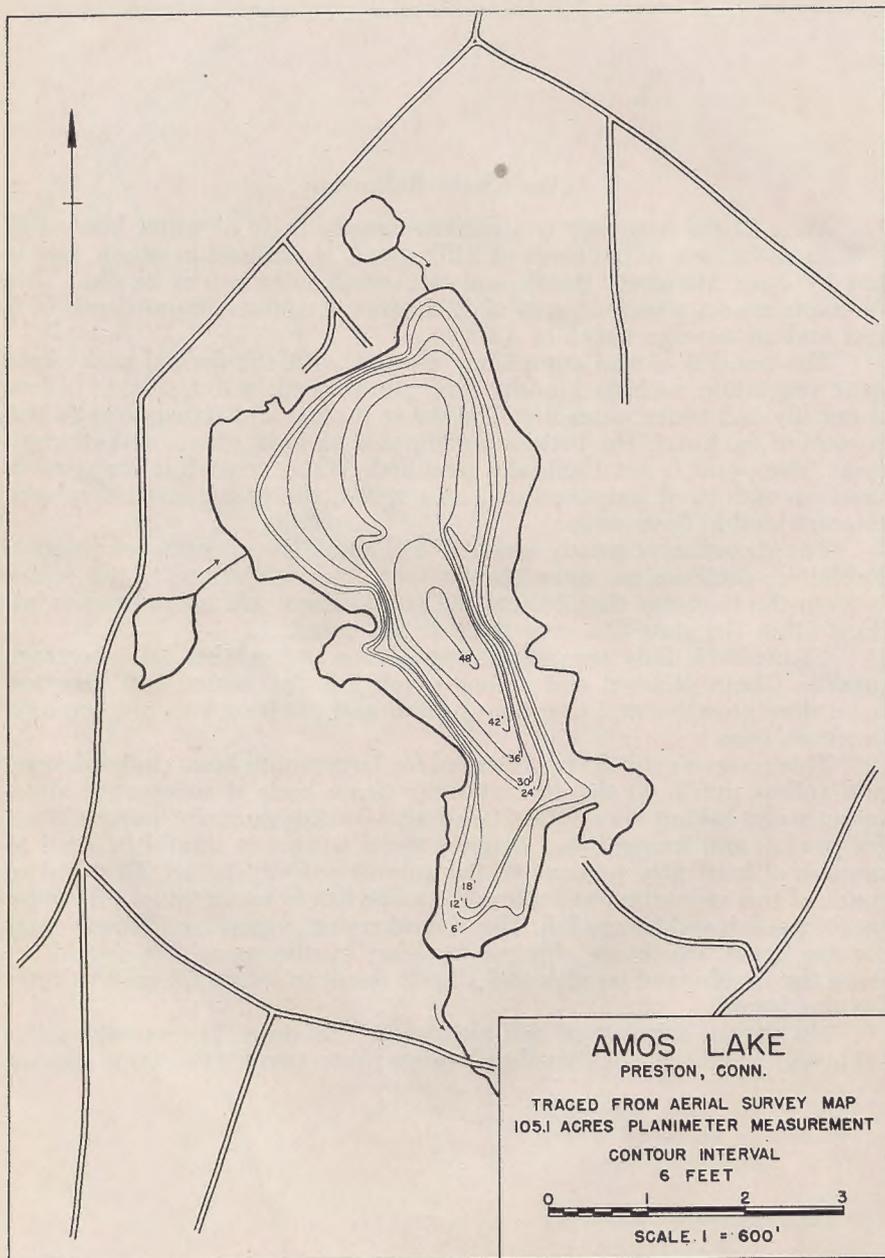
The pond is almost completely choked with submerged and emergent vegetation such as bladderwort, pond weed, water shield, yellow water lily and white water lily. The water is clear and transparent to the bottom of the pond. The bottom is composed of sand, gravel and swampy ooze. The pond is not thermally stratified. Water from this reservoir is used for industrial purposes and, as a result, the water level is subject to considerable fluctuation.

The shoreline is mostly wooded and there are no cottages present. Public use facilities are completely absent. The only access to this water is from the highway that bisects the pond. There are no records to indicate that the state has ever stocked this pond.

Largemouth bass are present, but scarce and exhibit below-average growth. Chain pickerel and yellow perch are also scarce and they too have slow growth rates. Common sunfish and chub suckers are common in abundance.

This reservoir should be managed for largemouth bass, chain pickerel and yellow perch. At the present time, dense beds of submerged vegetation make fishing very difficult and also furnish excessive escape cover for panfish and forage fish. Chemical weed treatment should be used to remove at least fifty percent of the submerged vegetation. Removal of much of this vegetation will allow the game fish to forage more efficiently on the panfish and forage fish. This should result in increased growth rates for the game fish. More efficient foraging by the game fish should reduce the numbers of panfish and should result in increased growth rates for the former.

No special regulations are needed at this time. The normal statewide regulations should provide adequate protection for the game species.



AMOS LAKE

Amos Lake is located in New London County in the township of Preston. It is natural in origin with the level raised approximately two feet by a small, masonry dam. The lake has a surface area of 105.1 acres, a maximum depth of 48 feet and an average depth of 19.1 feet. It is fed by two small brooks, surface runoff and springs. There is a considerable quantity of submerged and emergent vegetation in the shallow, shoreline areas. In the deeper areas aquatic vegetation is scarce. The water is clear, but transparency is slightly reduced to about eight feet by a light algal bloom. The lake bottom in the shoal areas is mostly of sand, gravel and rubble. In the deeper areas the bottom is mostly of sand and gravel or of sand and gravel overlain with swampy ooze. The lake is thermally stratified and during the summer months the water below 22 feet is devoid of dissolved oxygen.

Public access to this body of water is provided through one small boat livery at the southern end of the lake and through a state-owned access road, parking area and boat launching area on the southwestern shore. There are no other facilities available for public use.

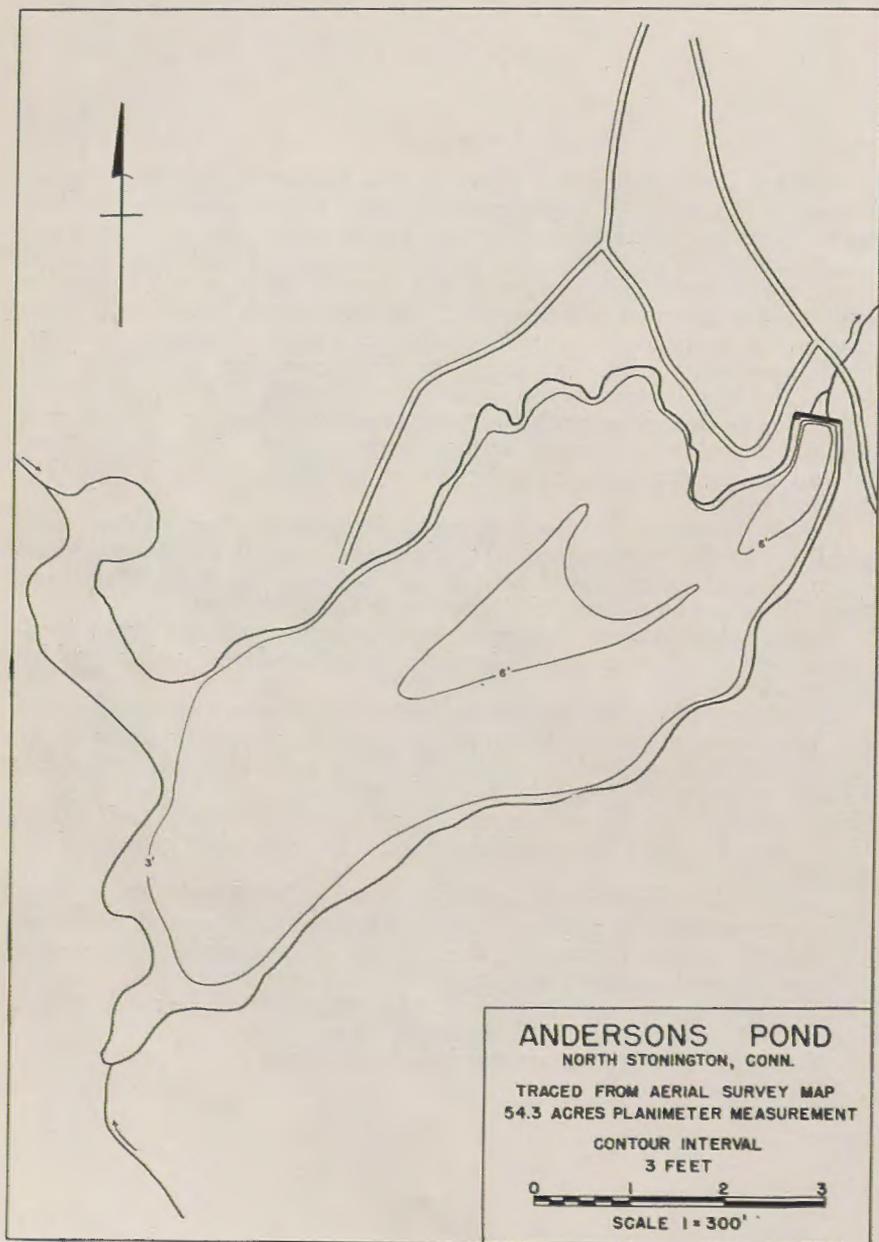
Amos Lake has been stocked in the past with smallmouth bass, land-locked salmon, yellow perch, chain pickerel, bullheads, calico bass, golden shiners and sunfish.

Smallmouth bass are present, but relatively scarce. This species exhibits above-average growth. Chain pickerel are abundant and grow exceptionally fast. Yellow perch are scarce, but they grow at a rate well above the state average. Common sunfish and bullheads are common in abundance. Bluegill sunfish are scarce. Land-locked alewives and golden shiners are abundant and probably account for the rapid growth of the game fish.

Amos Lake should be managed for chain pickerel and yellow perch. At the present time, smallmouth bass are present in this pond, but these fish are very scarce. Apparently the scarcity of smallmouth bass can be attributed directly to the presence of the bass tapeworm.

An experimental planting of adult brown trout will be made to find if this species can augment fishing in the lake.

No special regulations are needed at this time.



ANDERSONS POND

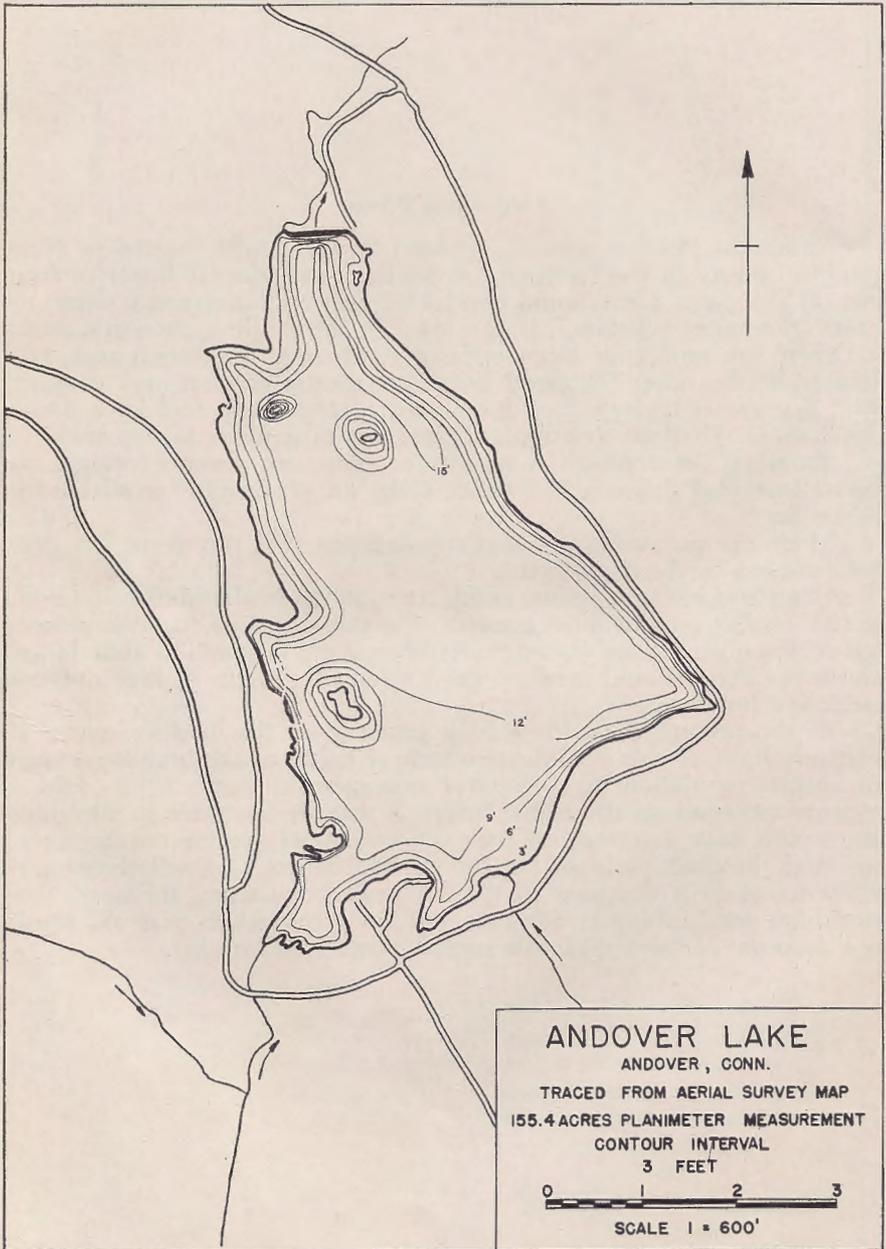
Andersons Pond is a small, artificial impoundment located in New London County in the township of North Stonington. It has a surface area of 54.3 acres, a maximum depth of 7 feet and an average depth of 4 feet. Emergent vegetation is abundant in the shallow, shoreline areas and there are numerous large beds of submerged vegetation scattered throughout the lake. The pond bottom is mostly of mud and swampy ooze. The water transparency is reduced to about two feet by a dense algal bloom. Thermal stratification does not take place in this pond.

Shoreline development is moderate. There are several cottages on the well-wooded shores of this pond. There are no facilities available for public use.

There are no available records to indicate that this pond has ever been stocked by the department.

Chain pickerel and yellow perch are common in abundance and both species exhibit growth rates equal to the state average. Golden shiners and common sunfish are abundant. Bullheads are common in abundance. Andersons Pond should produce good fishing for chain pickerel, yellow perch and bullheads.

At the present time, the fishing pressure on this body of water is relatively light. It is in a productive state of balance and there is no need for special regulations or corrective management work. If the fishing pressure increases greatly in the future, it may be desirable to introduce largemouth bass. Largemouth bass can withstand greater angling pressure than the chain pickerel, but the introduction of bass will almost certainly result in a decrease in the bullhead population. Bullheads are furnishing good fishing at this time and any introduction that will result in a decrease of these desirable panfish should be avoided.



ANDOVER LAKE

Andover Lake is a shallow, privately controlled artificial lake located in Tolland County in the township of Andover. It has a surface area of 155.4 acres, a maximum depth of 16 feet and an average depth of 10.9 feet. The lake bottom is of sand, coarse rubble, boulders and mud. The water is stained a dark tea color and the transparency is approximately five feet. Submerged and emergent vegetation is scarce in all areas of the pond. This lake is too shallow to stratify.

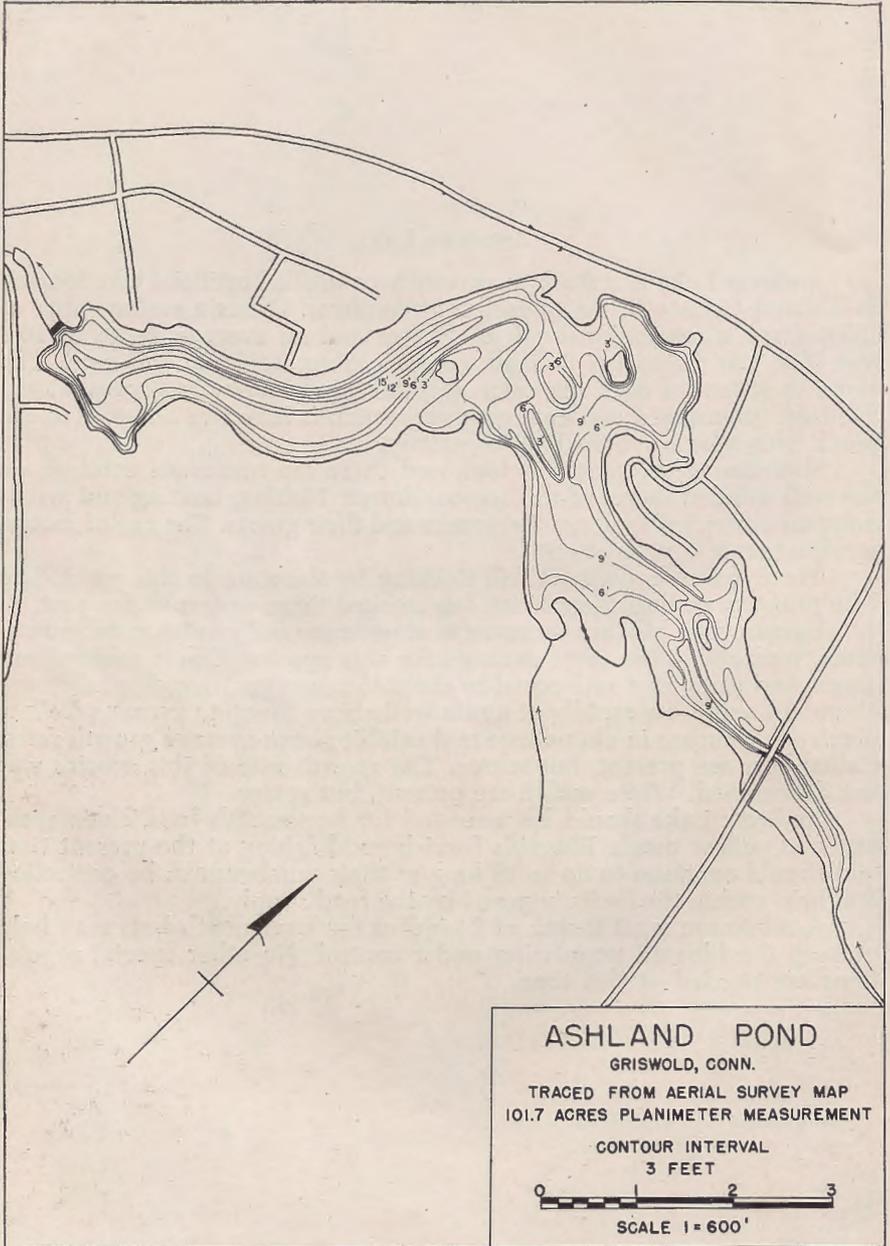
Shoreline development is high and there are numerous cottages on the well-wooded shores of this impoundment. Fishing, boating and swimming are restricted to property owners and their guests. The use of motor-powered craft is prohibited.

There are no records of fish stocking by the state in this pond. The lake property owners' association has stocked these waters in the past.

Largemouth bass are common in abundance and exhibit good growth rates, well above the state average for this species. Chain pickerel are scarce and grow at a rate equal to the state average. Bluegill sunfish are abundant and grow rapidly at a rate well above the state average. Yellow perch are common in abundance and exhibit above-average growth rates. Calico bass are present, but scarce. The growth rate of this species was not determined. White catfish are present, but scarce.

Andover Lake should be managed for largemouth bass, chain pickerel and yellow perch. Bluegills furnish good fishing at the present time and should continue to do so as long as their numbers can be controlled and held within the limits imposed by the food supply.

A minimum legal length of 14 inches for largemouth bass may help to keep the bluegill population under control. No other special regulations are needed at this time.



ASHLAND POND

Ashland Pond is an artificial impoundment on the Pachaug River. It is located in New London County in the township of Griswold. The pond has a surface area of 101.7 acres, a maximum depth of 17 feet and an average depth of 6.1 feet. The bottom is of gravel, rubble and mud. Water transparency is considerably reduced by a dark, tea-colored stain. Submerged and emergent vegetation is abundant, particularly in the shoal areas. Thermal stratification does not take place in this pond. Water from this impoundment is used for industrial purposes and, as a result, the water level is subject to considerable fluctuation.

In the past this pond has been stocked with largemouth bass, smallmouth bass, chain pickerel, yellow perch, bullheads, calico bass and golden shiners.

Largemouth bass, chain pickerel and bluegill sunfish are common in abundance. Common sunfish, calico bass and yellow perch are scarce.

Yellow perch and chain pickerel exhibit above-average growth rates. The growth rates of largemouth bass and bluegill sunfish closely approximate the state averages. Calico bass exhibit poor growth, that is, well below the state average.

Ashland Pond should furnish good fishing for bass and pickerel.

This pond is in a relatively productive state of balance. The two-game species are comparatively abundant and exhibit at least average growth rates.

No special regulations are needed at this time.



FIGURE 54. Making plastic impressions of fish scales for age determinations.

ASPINOOK POND

Aspinook Pond is artificial in origin and was formed by the construction of a concrete and wooden dam across the Quinebaug River. The impoundment formed by this dam covers an area of 333.3 acres, has a maximum depth of 27 feet and an average depth of 8.7 feet. It is located in New London and Windham Counties in the townships of Lisbon, Griswold and Canterbury. Submerged and emergent vegetation is abundant, but is confined mostly to shoal areas. The bottom is of sand, gravel and mud. A dense algal bloom reduces water transparency to less than three feet. The water of this pond is completely mixed from top to bottom and thermal stratification does not take place. Water is drawn from the pond for industrial use and this results in considerable fluctuation of the water level.

There are several cottages on the well-wooded shores of this impoundment, but shoreline development is below average. There are no public facilities on this pond. It is open to public fishing, but there is no public access point.

The pond has been stocked with yellow perch, bullheads, golden shiners and bluegill sunfish.

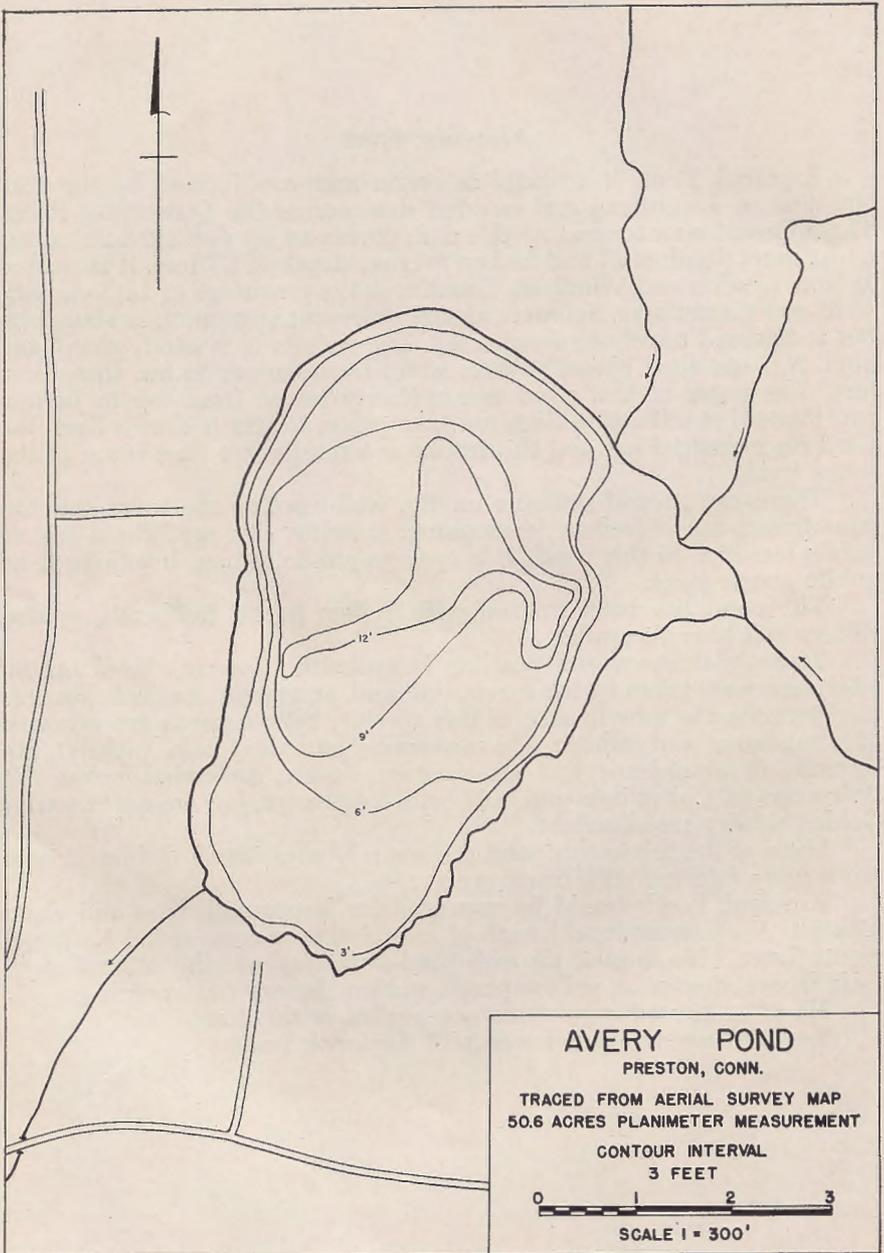
Young-of-the-year and yearling largemouth bass are abundant. No adult bass were taken by the survey unit and, as a result, it was impossible to determine the growth rate of this species. Yellow perch are common in abundance and exhibit above-average growth. Chain pickerel are common in abundance and grow rather slowly, somewhat below the state average. Calico bass and bullheads are present, but are quite scarce. Golden shiners are abundant.

Many of the fish in this pond are severely parasitized. Golden shiners are heavily infested with black grub.

Aspinook Pond should be managed for largemouth bass and chain pickerel. A minimum legal length of 14 inches is recommended for largemouth bass. This should, through predation, increase the utilization of such forage species as yellow perch, golden shiners and sunfish.

No other special regulations are needed at this time.

See back cover pocket for map of Aspinook Pond.



EVERY POND

Avery Pond is a small, natural body of water located in New London County in the township of Preston. The waters of this pond cover an area of 50.6 acres; it has a maximum depth of 14 feet and an average depth of 6.8 feet. The pond is fed by small brooks, bottom springs and surface runoff. The pond bottom is of sand, gravel and swampy ooze. The shallow areas are almost completely choked with submerged and emergent vegetation. In the deeper areas, submerged and emergent vegetation is much less abundant than in the shallows. Water transparency is considerably reduced by a dark, tea-colored stain. The waters of this pond are not thermally stratified.

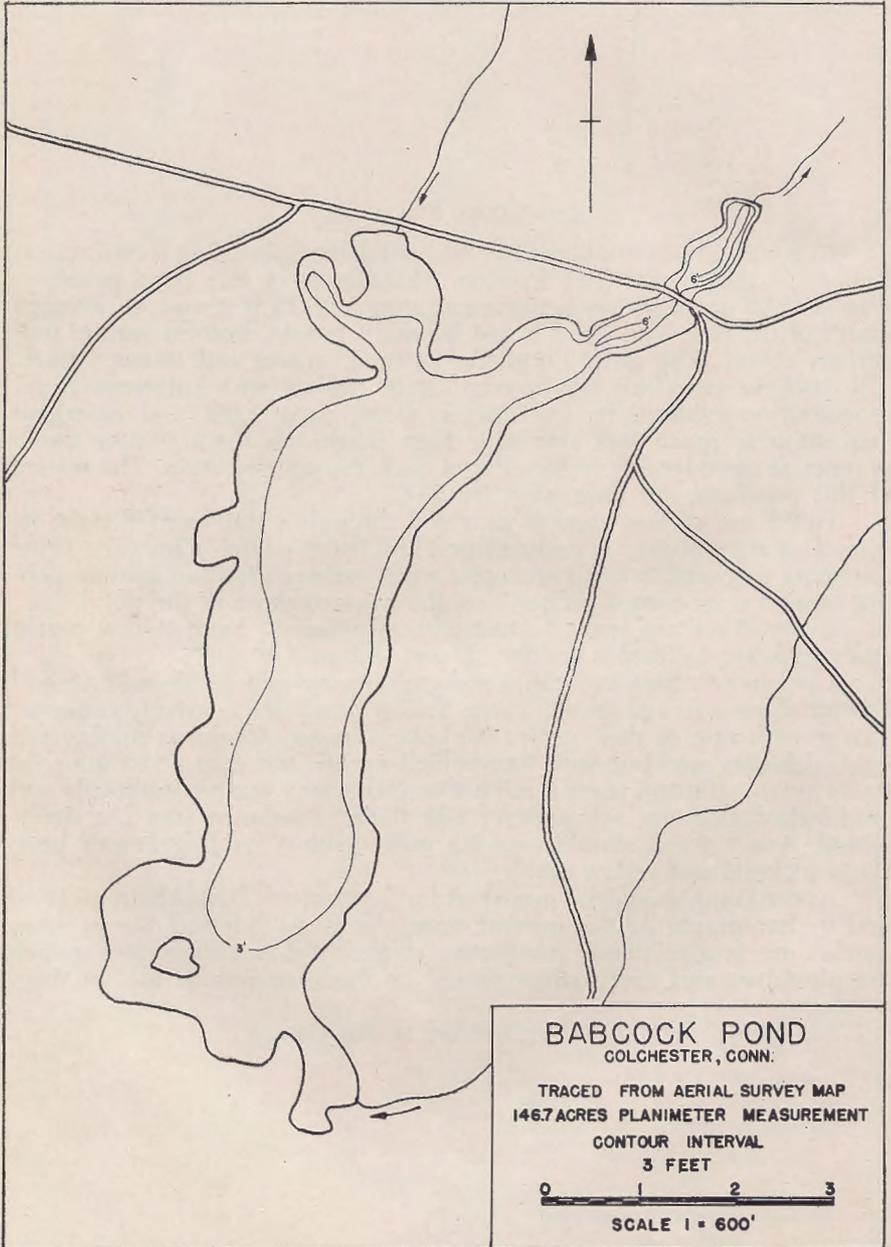
Public use of this pond is provided through a state-owned right-of-way. This right-of-way is undeveloped and is not passable for cars. Plans are being prepared to build an access road, parking area and boat launching area on state-owned property on the western shore of the pond.

Avery Pond has been stocked with smallmouth bass, yellow perch, chain pickerel, bullheads, golden shiners and sunfish.

Largemouth bass and chain pickerel are common in abundance and exhibit above-average growth rates. Yellow perch are relatively common. The growth rate of this species is above average. Common sunfish and golden shiners are abundant. Red-bellied sunfish and calico bass are relatively scarce. Bluegill sunfish are present, but very scarce. Bullheads and land-locked alewives are present, but their abundance was not determined. Avery Pond should provide good fishing for largemouth bass, chain pickerel and yellow perch.

Avery Pond should be managed for largemouth bass, chain pickerel and yellow perch. At the present time, the game fish and the primary panfish are in a relatively productive state of balance. Common sunfish are abundant and every effort should be made to reduce the numbers of this species.

No special regulations are needed at this time.



BABCOCK POND

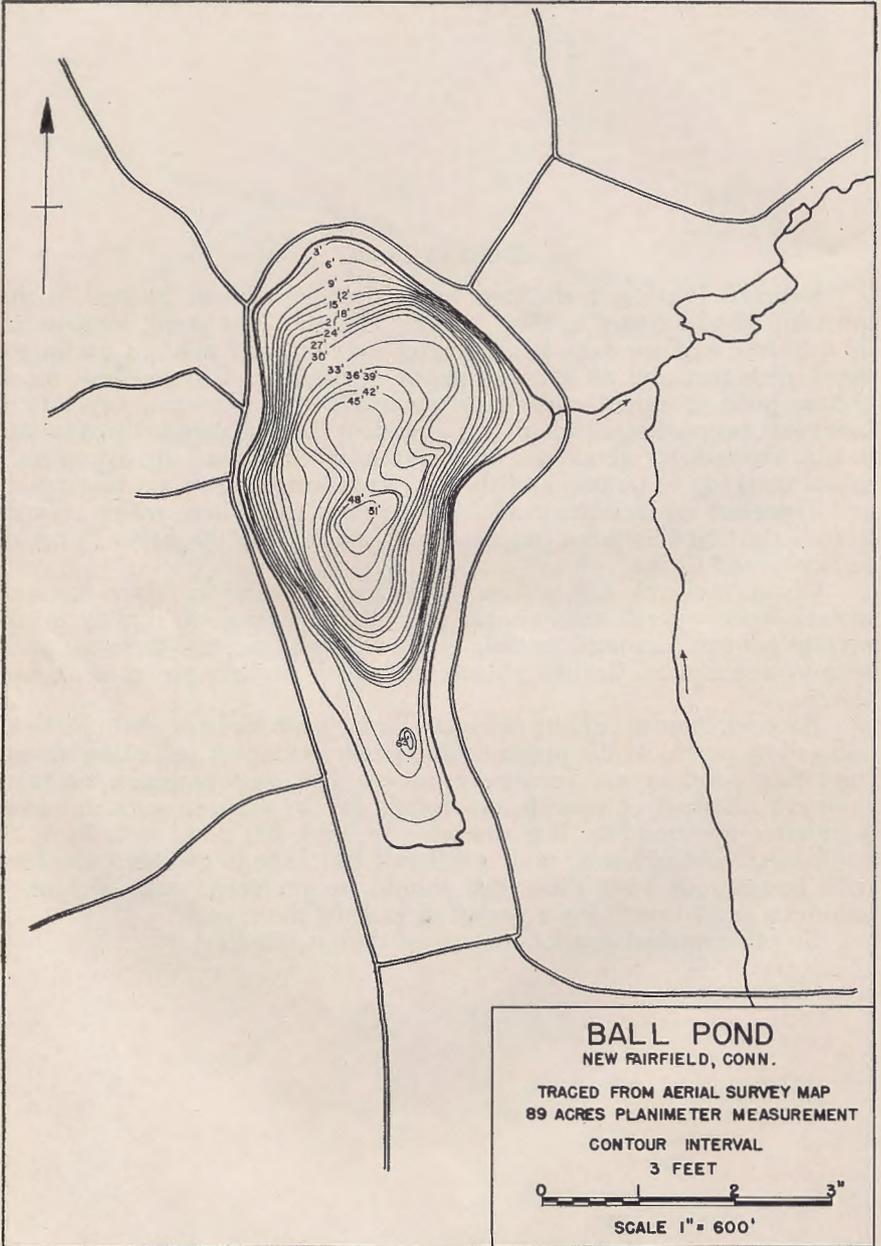
Babcock Pond is a shallow, artificial impoundment located in the township of Colchester in New London County. This pond, impounded by a 10-foot earthen dam, has a surface area of 146.7 acres, a maximum depth of 8 feet and an average depth of 2.8 feet. This shallow, mud-bottom pond is almost completely choked with submerged vegetation. Emergent vegetation, although less abundant than submerged vegetation, is still exceedingly abundant. The waters of this pond are completely mixed from top to bottom and thermal stratification does not take place.

There are no facilities available for public use. There are no records to indicate that this pond has ever been stocked by the State Board of Fisheries and Game.

Chain pickerel are scarce. This species exhibits above-average growth. Yellow perch are common and exhibit average to slightly below average growth. Common sunfish, bullheads and golden shiners are common in abundance. Bridled shiners and chub suckers are present, but scarce.

Babcock Pond should be managed for largemouth bass, chain pickerel and yellow perch. At the present time, largemouth bass are either absent from this pond or are extremely scarce. This impoundment contains sufficient numbers of panfish and forage fish to support a much larger population of game fish. It is desirable to stock this pond with 50 to 70 adult largemouth bass or with 4,000 to 5,000 fingerlings. After stocking with largemouth bass, these fish should be protected with a 14-inch minimum legal length for a period of at least three years.

No other special regulations are needed at this time.



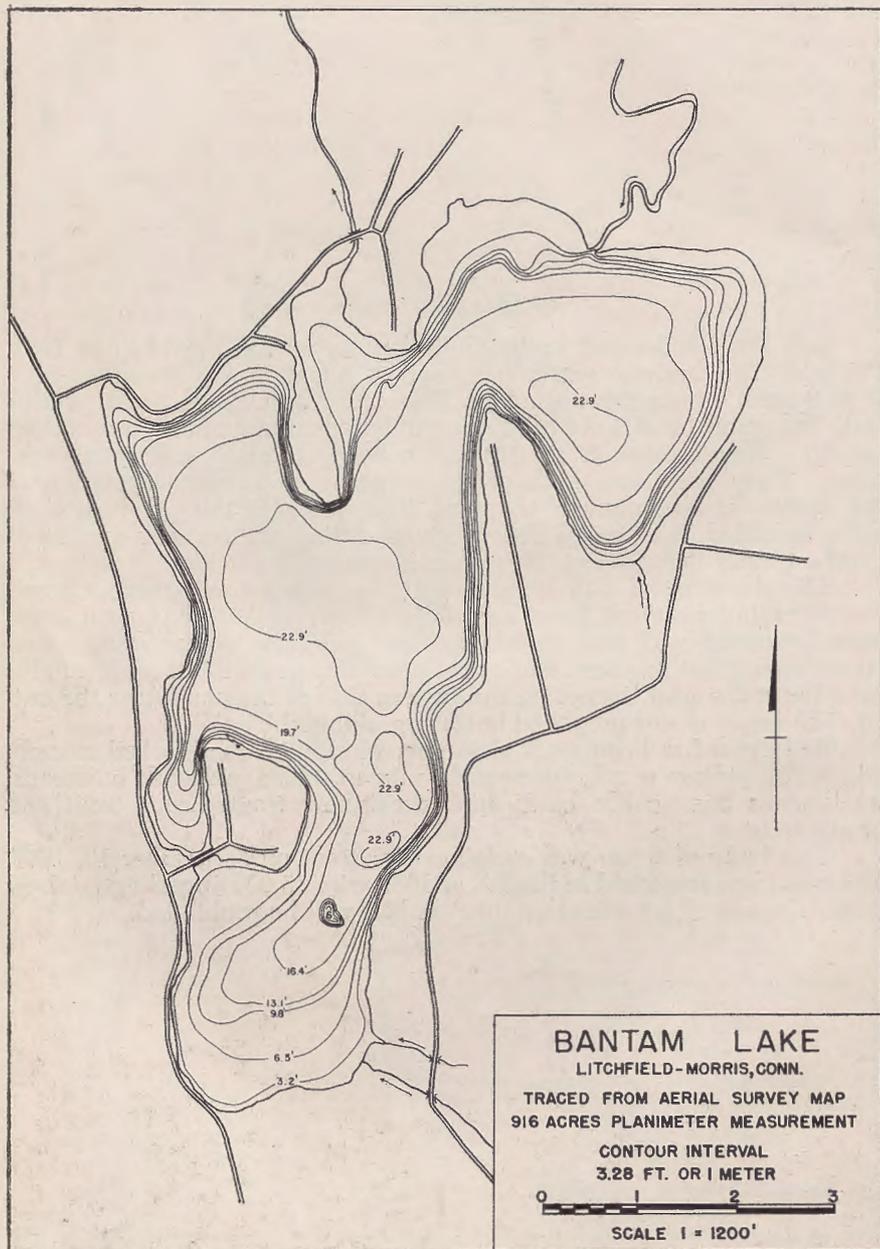
BALL POND

Ball Pond is located in Fairfield County in the township of New Fairfield. This body of water is natural in origin. It has a surface area of 89.9 acres, a maximum depth of 52 feet and an average depth of 22.7 feet. The water level is maintained entirely by surface runoff and bottom springs. The shoreline is mostly rocky, with scattered emergent vegetation. There are dense beds of submerged and floating vegetation in the shallow southern arm of the pond. The waters of this pond are thermally stratified. An oxygen deficit occurs during the summer months at depths greater than 25 feet. This pond is average in fertility.

The shoreline of Ball Pond is partially wooded and there are numerous cottages present. Boats are available for rental at two boat liveryes. Boat launching and parking facilities are available at the state-owned access area at the southern end of the pond. Picnic facilities are available for a fee at the boat liveryes on the eastern side of the pond near the outlet. The use of motor-propelled boats is prohibited.

Ball Pond has been stocked in past years with land-locked salmon, lake trout, yellow perch, pike-perch, salmon, chain pickerel, bullheads, smallmouth bass, calico bass, shiners, rainbow trout, brook trout and brown trout.

This body of water was reclaimed for trout on September 10, 1957. The pond was restocked in the fall of 1957 with 15,000 fingerling rainbow trout. The use of fish (dead or alive) as bait will be prohibited.



BANTAM LAKE

Bantam Lake is located in Litchfield County in the townships of Litchfield and Morris. The lake covers a surface area of 916 acres, has a maximum depth of 25 feet and an average depth of 14.3 feet. This body of water is natural in origin, but the level has been raised by a low dam at the northwestern end of the lake in the village of Bantam. The maximum possible fluctuation in water level is seven and one-half feet. The Bantam River, the main inlet stream feeding Bantam Lake, enters and leaves the lake at the northern end, southeast of the village of Bantam. The eastern and western shorelines are rocky. Those on the northern and southern ends are relatively flat with extensive shoal areas. There is considerable submerged and emergent vegetation in these shoal areas. The dissolved nutrients and plankton values are high for this region, but bottom food organisms are somewhat below average in abundance.

The shores of the pond are partially wooded and shoreline development is intensive with numerous cottages present. Flowage rights are owned by a utilities company. Most of the northern and eastern shoreline is owned by the White Memorial Foundation. Motor-propelled boats operated in the town of Morris must be registered with the town clerk and may not be operated between the hours of 11:00 P.M. and 5:00 A.M.

In the past seventy or eighty years, Bantam Lake has been stocked with yellow perch, chain pickerel, common bullheads, largemouth bass, smallmouth bass, calico bass, sunfish, white perch, golden shiners, lake trout and land-locked salmon.

Angling should be excellent for white perch, yellow perch and large-



FIGURE 55. Lifting gill nets at Bantam Lake, Litchfield-Morris.

mouth bass. These species are abundant in all age classes and exhibit good growth rates, well above the state average. Yellow perch are abundant, but are not as abundant as white perch. White perch are more abundant in this impoundment than in any other body of water surveyed. Smallmouth bass are common to abundant and fishing for this species should be fair. Calico bass and chain pickerel are relatively scarce and probably furnish poor angling.

Most largemouth bass taken by anglers from this pond are reported to be taken by night fishing with live bait or surface plugs.

White perch growth has improved considerably since the 1939 survey. This change in growth rate is presented graphically in Figure 56. Yellow perch growth has shown no significant change since the previous survey.

It is desirable to manage these waters primarily for largemouth bass, white perch and yellow perch. Yellow perch and white perch appear to be on the increase and, as a result, a decrease in growth rate can be expected in the near future. To reduce the numbers of panfish and insure

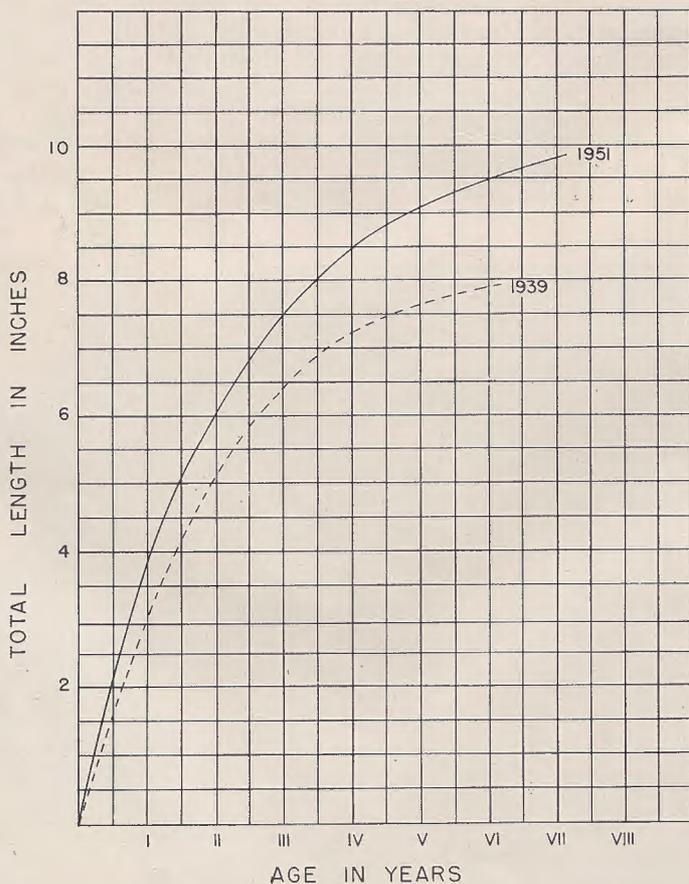


FIGURE 56. Growth curve for white perch in Bantam Lake, Litchfield-Morris.

continued good growth for large white perch and yellow perch, it appears desirable to impose a 14-inch minimum length limit on largemouth bass. The greater length limit should result in more large bass, increased predation on panfish and a better-balanced panfish population.

It is desirable to encourage the harvest of panfish. Therefore, it is recommended that there be no restrictions as to size, daily limit or season on these species.

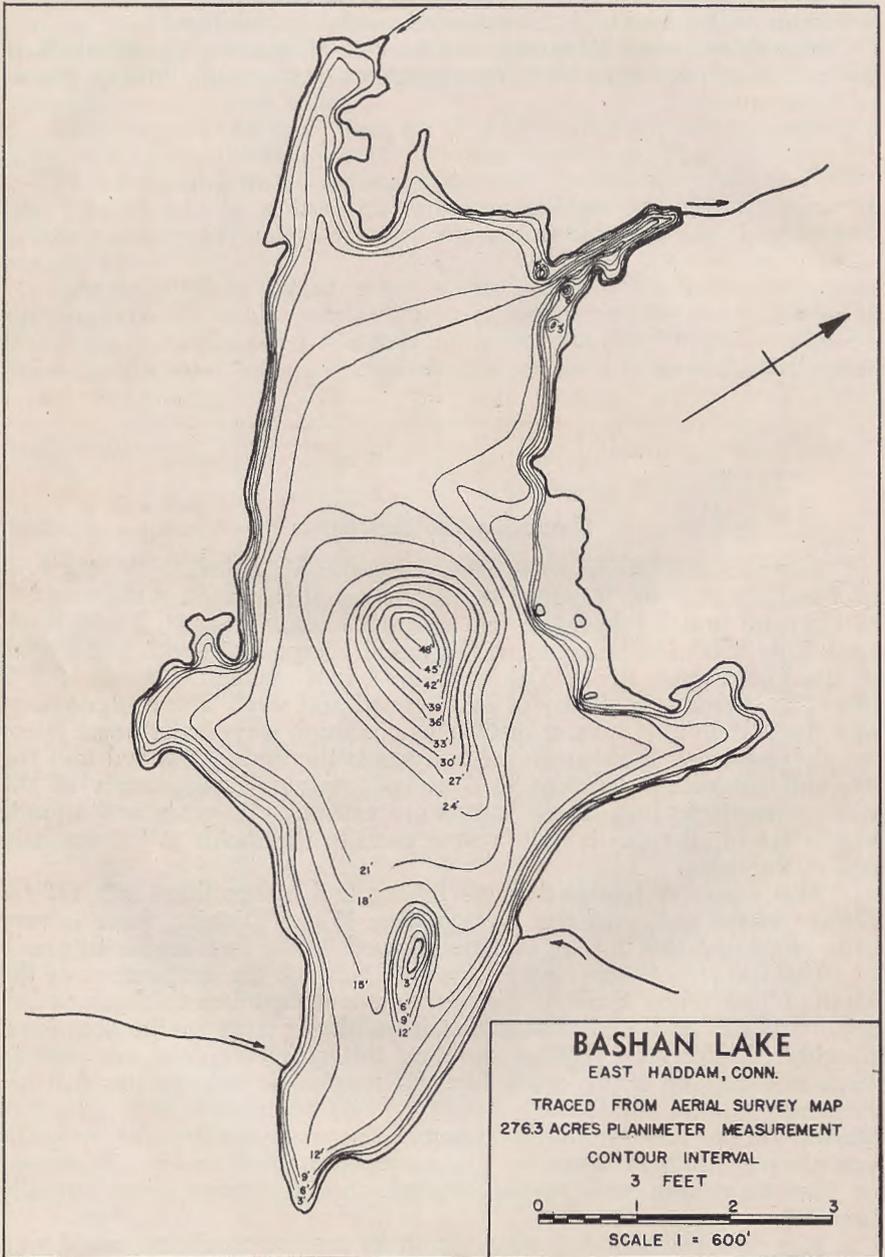
BARKHAMSTED RESERVOIR

Barkhamsted Reservoir is owned by the Metropolitan Water District and is part of the Hartford Water System. It is located in the counties of Hartford and Litchfield in the townships of Barkhamsted and Hartland. This 2,320-acre reservoir was formed by impounding the east branch of the Farmington River. The reservoir has a maximum depth of 105 feet. The shoreline is mostly of rock, gravel and sand. There is considerable fluctuation in the water level. This condition is typical of most water supply reservoirs. Barkhamsted Reservoir is thermally stratified and the deepest waters are deficient in dissolved oxygen. Transparency of the water exceeds 20 feet. These waters are extremely infertile and aquatic vegetation of all types is quite scarce even in the shoals at the northern end of the basin.

This reservoir is closed to all fishing and unless there is a radical change in the policy of the Metropolitan Water District, there is very little likelihood that fishing will be allowed in the foreseeable future.

Barkhamsted Reservoir was surveyed through the cooperation of the Metropolitan Water Bureau. The survey was undertaken to check on fish populations in an impoundment that is unfished except by the occasional poacher. Contrary to popular opinion, this reservoir does not contain large numbers of trophy-sized fish. All species of warm-water fish are extremely scarce. Smallmouth bass are fairly common in the older age classes, but are very rare in the young-of-the-year, yearling and two-year-age classes. All bass taken by the survey crew had severe infestations of bass tapeworm and normal reproductive functions were virtually impossible.

It is doubtful that this reservoir, in its present condition, could support an appreciable amount of angling for warm-water fish. This body of water contains nearly as much trout water as the combined total of all the trout ponds in the state that are presently open to public fishing.



BASHAN LAKE

Bashan Lake is located in Middlesex County in the township of East Haddam. It is natural in origin with the level raised by a 25-foot masonry and earthen dam. It is fed by small tributary streams, bottom springs and surface runoff. This impoundment has a surface area of 276.3 acres, a maximum depth of 48 feet and an average depth of 15.9 feet. The lake bottom is of sand, gravel, coarse rubble and boulders. Submerged and emergent vegetation is scarce in all parts of the lake. The water is very clear and transparency exceeds 15 feet. The lake is thermally stratified and the deep water is well supplied with dissolved oxygen. The upper warm-water layer extends beyond 30 feet. Cold water is confined to the depth between 35 feet and 48 feet and this constitutes a very small percentage of the total volume of the lake.

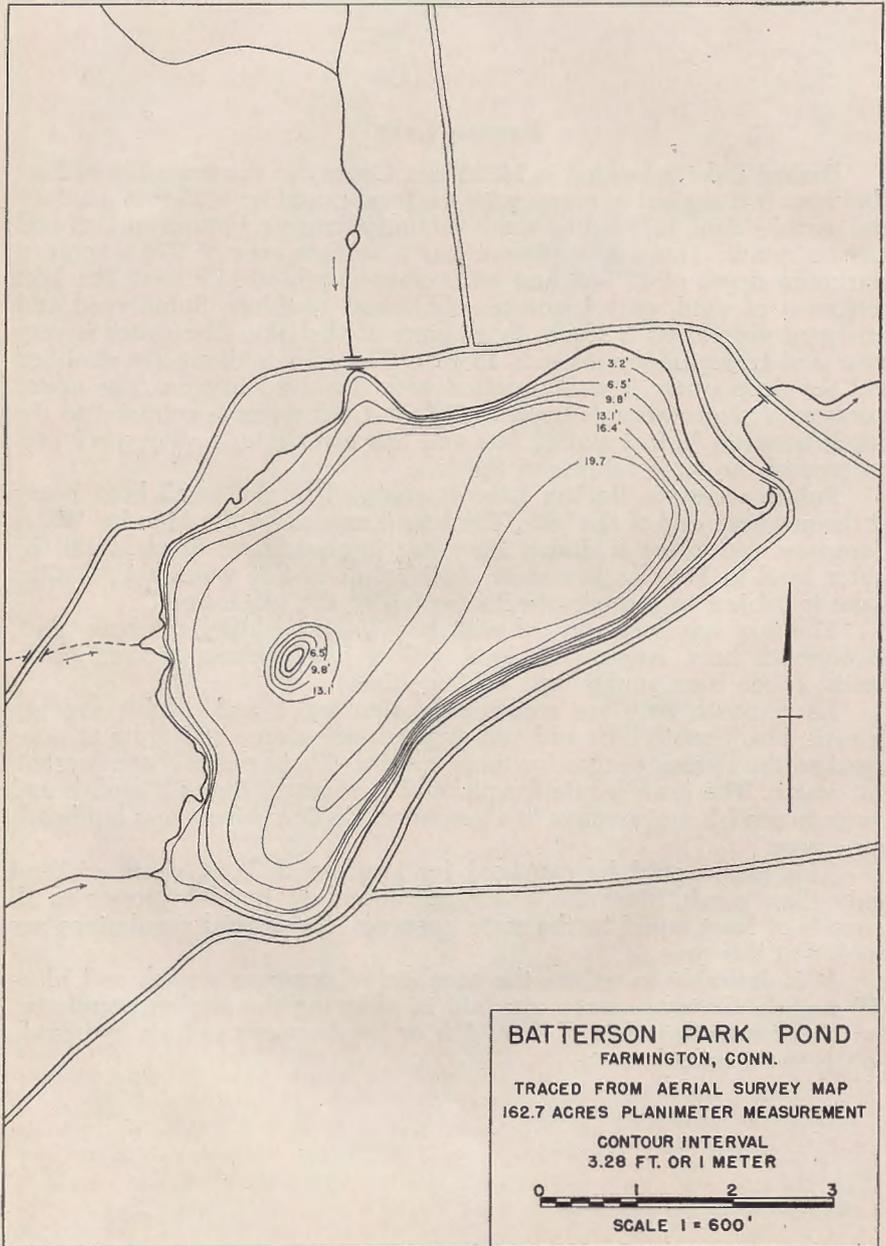
Public access to Bashan Lake is confined to one small boat livery at the northern end of the lake. The lake is owned by the Moodus Water Company and water is drawn from this impoundment to maintain the water level in Moodus Reservoir. As a result of this water use, Bashan Lake is subject to a moderate fluctuation of the water level.

The lake has been stocked with land-locked salmon, rainbow trout, smallmouth bass, largemouth bass, yellow perch, chain pickerel, bullheads, calico bass, sunfish and golden shiners.

Largemouth bass are common in abundance and exhibit average growth. Smallmouth bass and yellow perch are scarce and grow at rates equal to the state averages for these species. Chain pickerel are present, but scarce. The growth rate for pickerel is average. Bluegill sunfish and common sunfish are common in abundance. Golden shiners and bullheads are scarce.

This lake should be managed for largemouth bass, chain pickerel and yellow perch. Most species are not abundant, but fish growth in all cases is at least equal to the state averages. No special regulations are needed at this time.

It is desirable to reduce the numbers of common sunfish and bluegill sunfish. Cottage owners can aid in reducing the sunfish population by raking over the nests of these fish or by dropping sodium hydroxide pellets in the sunfish nests.



BATTERSON PARK POND

Batterson Park Pond is located in Hartford County in the townships of Farmington and New Britain. The waters of this pond cover an area of 162.7 acres. The maximum depth is 20 feet and the average depth is 14.8 feet. These waters are artificial in origin, and are impounded by an earthen and stone dam. The dam was constructed prior to 1900 but is still in good condition. The shoreline is mostly meadow and woodland. Submerged and emergent vegetation is scarce, and confined mostly to shoal areas. The bottom of the pond is of rock, gravel and mud.

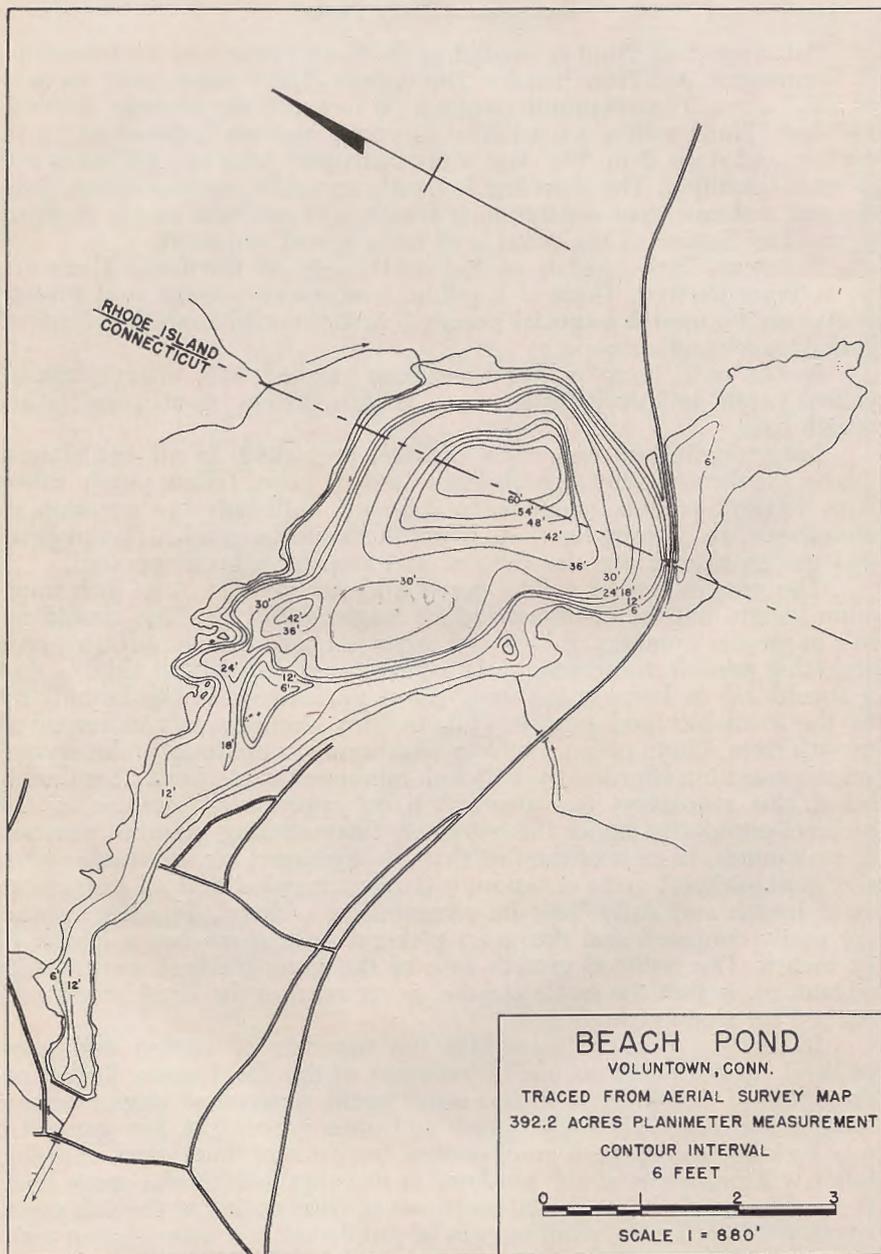
Batterson Park Pond is owned by the city of Hartford. There are no cottages present. There is a public boat livery present, and private boats may be used if a special permit is first obtained from the Hartford Park Department.

In the past, these waters have been stocked with chain pickerel, yellow perch, bullheads, calico bass, golden shiners, sunfish and largemouth bass.

Largemouth bass and chain pickerel are scarce in all age classes, fishing for these species is probably relatively poor. Yellow perch, calico bass, bluegill sunfish, common sunfish and bullheads are common in abundance, and fishing for these pondfish should be good. Grass pickerel and golden shiners are also present and carp have been reported.

The growth rate of yellow perch is above average. A 14-inch minimum length limit is recommended for largemouth bass. This should result in greater numbers of bass and increased predation on yellow perch and other panfish. Increased predation on the panfish is desirable, in that it should aid in keeping the numbers of panfish within the bounds set by the available food supply. This, in turn, should result in increased growth rates. Chain pickerel have not increased in numbers under several years' protection afforded by a 16-inch minimum length limit. It is doubtful if this regulation can accomplish an appreciable increase in the pickerel population under the extremely heavy fishing pressure common to park ponds. In view of the fact that chain pickerel are extremely scarce and grass pickerel quite common, it is recommended that all restrictions as to length and daily limit be removed for pickerel. The two species are easily confused and the grass pickerel seldom reaches a length of 12 inches. The reduced growth rate of the grass pickerel works to its advantage, in that the small pickerel never reaches the legal length prescribed for chain pickerel.

It may be possible to reduce the numbers of sunfish and grass pickerel by the judicious use of rotenone in the shoal areas. Partial reclamation of the shallows should result in the removal of large numbers of common sunfish, bluegill sunfish and grass pickerel. A few game fish may be killed during such an operation, but most of these more desirable fishes will move out of the shallows at the approach of the spray boat. It is recommended that partial reclamation—elimination of the fish population inhabiting the pond margin be employed as a management technique in this body of water.



BEACH POND

Beach Pond has a surface area of 394.3 acres, a maximum depth of 65 feet and an average depth of 20.1 feet. It is natural in origin, but the level has been raised approximately 10 feet with an earthen and masonry dam. The portion of this impoundment that is in Connecticut is in New London County in the township of Voluntown. A small portion of the pond is in Rhode Island. There is considerable variation in the bottom but for the most part it is of sand, gravel, rubble and boulders. The bottom of the shallow cove on the Rhode Island side is mostly of mud. Submerged and emergent vegetation is scarce in all areas of the pond. The water is very clear and transparency exceeds 15 feet. The pond is thermally stratified and the cold bottom waters are abundantly supplied with dissolved oxygen.

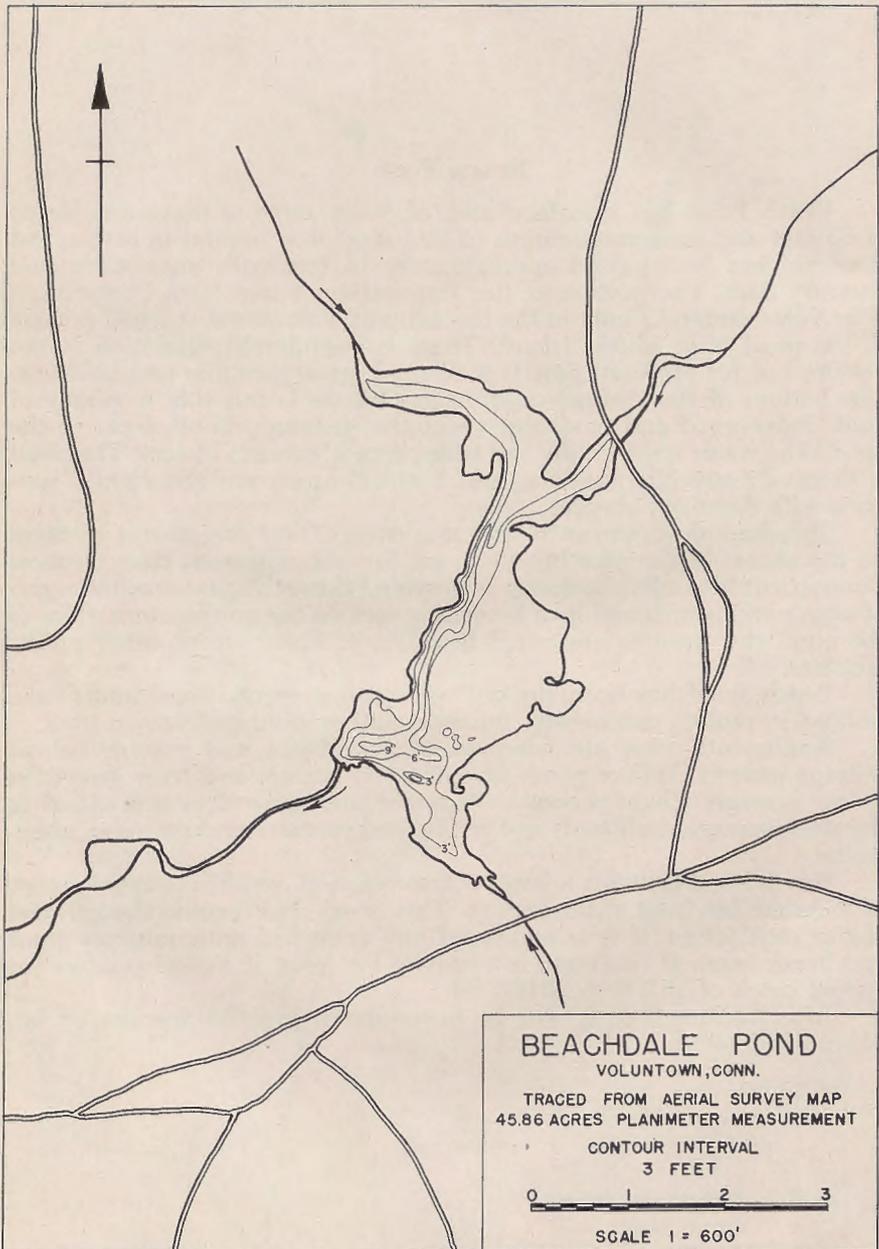
Shoreline development is only moderate. There are several cottages on the shores of the lake but these are far less numerous than on most Connecticut lakes. Public access is provided through a state-owned right-of-way, parking area and boat launching area on the northeastern shore of the pond and through one small boat livery. There are no other public facilities.

Beach Pond has been stocked with yellow perch, smallmouth bass, bullheads, sunfish, calico bass, shiners, rainbow trout and brown trout.

Smallmouth bass are common in abundance and exhibit below-average growth. Yellow perch are relatively scarce, and their growth is below average. Chain pickerel are scarce and grow at a rate equal to the state average. Bullheads and red-bellied sunfish are common in abundance.

Beach Pond contains a large volume of cold, well-oxygenated water, best suited for trout management. This pond will furnish the greatest angler satisfaction, if it is reclaimed and restocked with rainbow trout and brook trout. If this pond is managed for trout, it should produce an annual catch of 15,000 to 20,000 fish.

After reclamation, it will be necessary to prohibit the use of fish (dead or alive) as bait.



BEACHDALE POND

Beachdale Pond is a small, artificial impoundment on the Pachaug River. It is located in New London County in the township of Voluntown. Shoal areas are almost completely choked with emergent vegetation. The only open water throughout most of the impoundment is reduced to a relatively narrow channel by the abundant emergent vegetation. The bottom in shoal areas is mostly of gravel and rubble. In the channel areas most of the bottom is of mud and swampy ooze. Transparency is reduced to about two feet by a dark, tea-colored stain. Thermal stratification takes place in one small area near the dam.

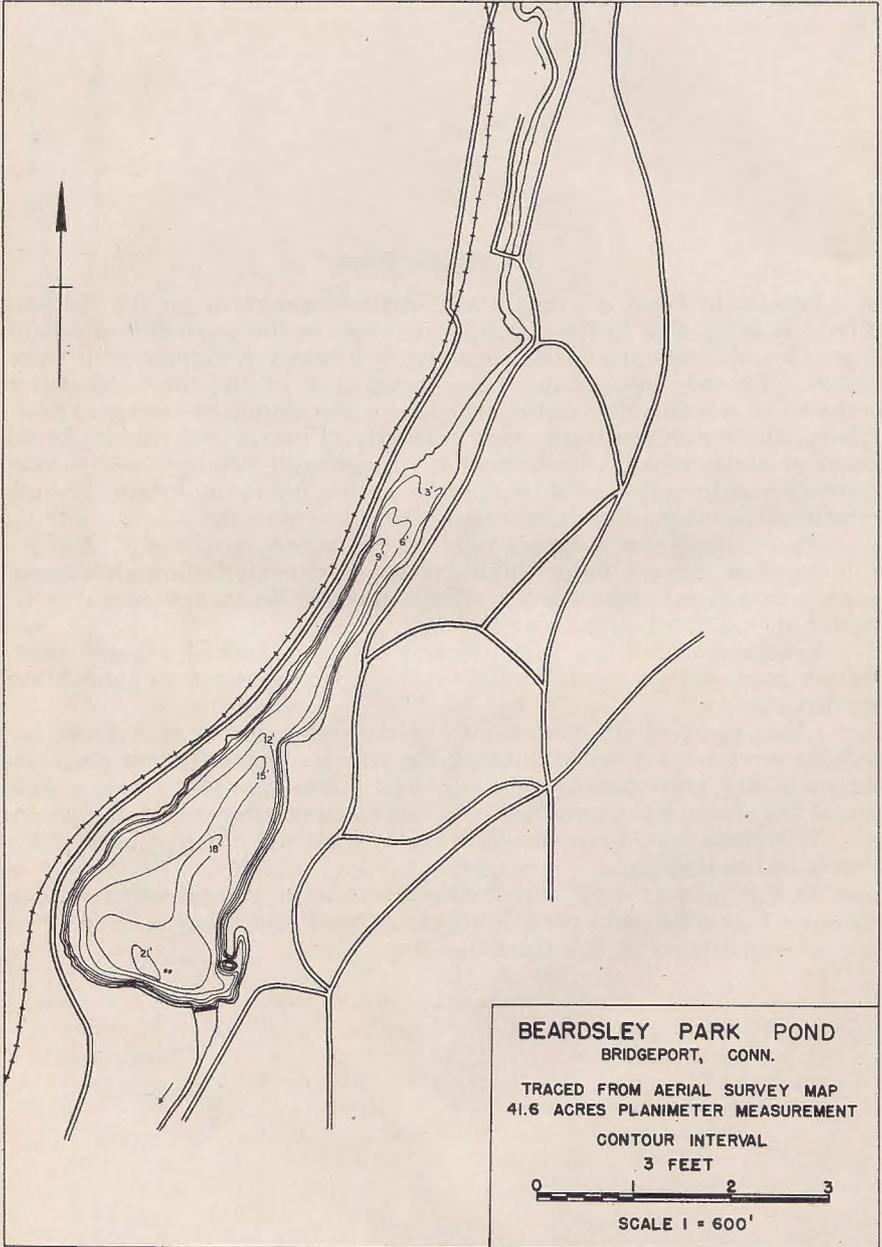
There are a few cottages near the dam but, in general, shoreline development is very light. Public access is provided through a small, poorly developed right-of-way off Route 138. Boats are available for rental at one small livery near the dam.

Beachdale Pond has been stocked with land-locked salmon, small-mouth bass, yellow perch, bullheads, calico bass, common sunfish and golden shiners.

Chain pickerel and largemouth bass are common in abundance and exhibit growth rates very similar to the state averages. Yellow perch are common and grow rapidly at a rate well above the state average. Bullheads are abundant. Calico bass and brown trout are present, but scarce.

This pond should provide good fishing for chain pickerel, bass, yellow perch and bullheads.

At the present time, Beachdale Pond is in a productive state of balance. Game fish and panfish are doing well and there is no need for special regulations at this time.



BEARDSLEY PARK POND (*Bunnells Pond*)

Beardsley Park Pond is located in Fairfield County in the township of Bridgeport. Bunnells Pond, as it is commonly known, is owned by the city of Bridgeport. The pond has a surface area of 41 acres, a maximum depth of 22 feet and an average depth of 10.9 feet. It is artificial in origin and was formed by the construction of an earthen and concrete dam across the Pequonnock River. The shoreline is mostly open. The bottom is of coarse stone, gravel and sand with mud and silt in the deeper sections. Submerged vegetation is scarce. There is a moderate amount of emergent vegetation in the shoal areas. The waters are relatively fertile and plankton and bottom fauna production is good. A dense algal bloom during the summer usually reduces transparency to three feet or less.

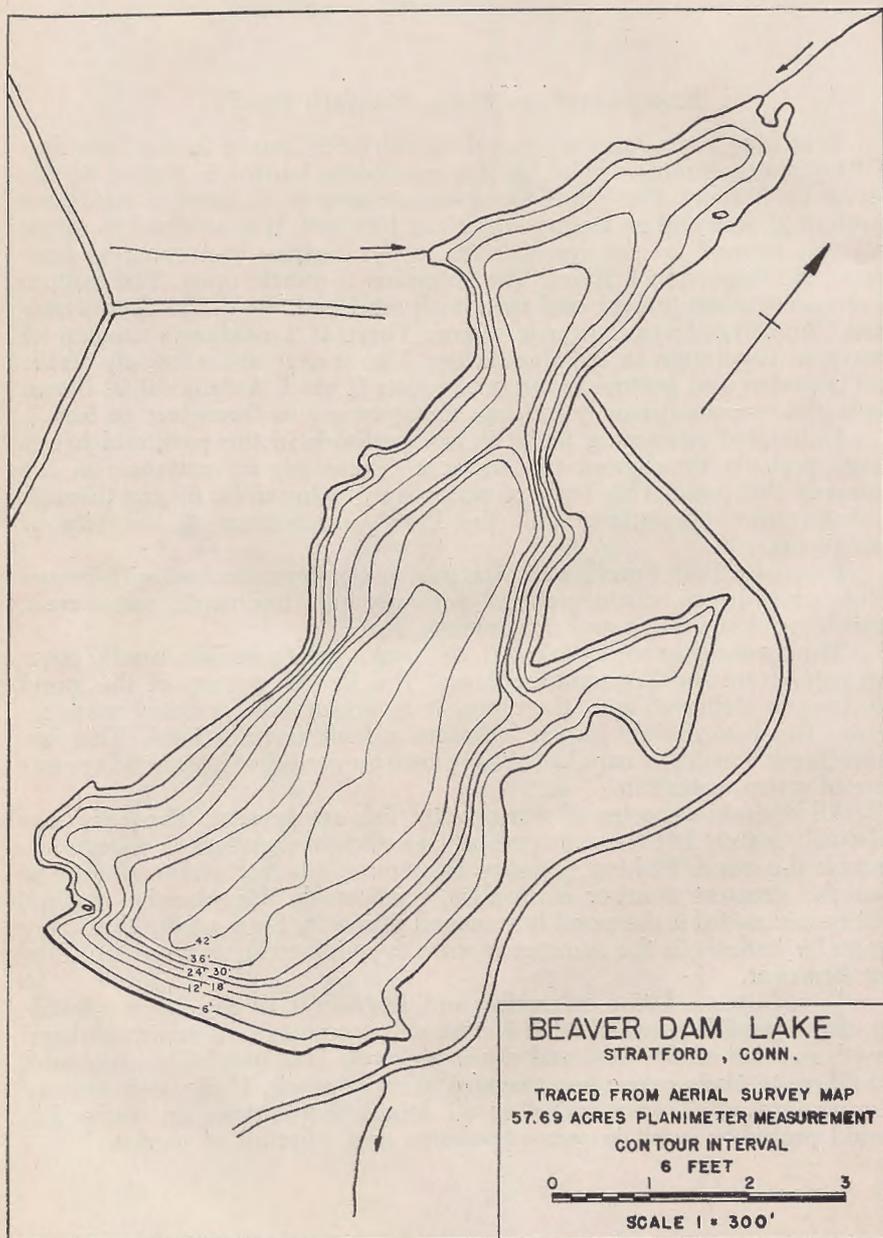
Picnic and swimming facilities are available in the park and heavy usage prevails throughout the summer. There are no cottages on the shores of this pond. This body of water is open to public fishing through a cooperative agreement with the Park Commission of the city of Bridgeport.

Beardsley Park Pond has, in the past years, been stocked with brown trout, white perch, chain pickerel, yellow perch, bullheads, calico bass, sunfish, golden shiners and largemouth bass.

Trout are occasionally taken in the pond, but these fish usually enter the pond from the Pequonnock River. The bottom waters of this pond are oxygen deficient and, therefore, it is unsuitable for trout management. The heavy algal bloom indicates a high fertility level. This impoundment should be capable of supporting a considerable poundage per acre of warm-water fish.

All desirable species of warm-water fish are present. These fish are relatively scarce, but they are present in sufficient numbers to adequately restock the pond. Fishing pressure is extremely heavy and it is evident that the greatest number of anglers, particularly the juvenile anglers, will be successful if the pond is managed primarily for panfish. The heavy usage by bathers in the summer months is a deterrent to successful fishing, however.

To reduce predation on panfish and, in general, to encourage a build-up of the panfish population, it is desirable to remove all minimum legal length restrictions for bass and chain pickerel. This type of management would quite likely prove unsuccessful in most ponds. Under more nearly normal fishing pressure, relaxing all length regulations on game fish would probably result in over-population and stunting of panfish.



BEAVER DAM LAKE

Beaver Dam Lake is located in Fairfield County in the township of Stratford. The lake has a surface area of 57.7 acres, a maximum depth of 44 feet and an average depth of 21.9 feet. This body of water is artificial in origin and is fed by springs and overflow from Trap Falls Reservoir. The water is clear and transparency exceeds 10 feet. The pond bottom is of ledge, gravel, sand and mud. Submerged and emergent vegetation is scarce and confined to the shoal areas. The waters of this lake are thermally stratified and are deficient in oxygen in the deepest portions.

Beaver Dam Lake is privately owned and fishing is restricted to residents. There are several cottages present, but shoreline development is far lighter than usual on most Connecticut lakes. The shoreline is mostly wooded.

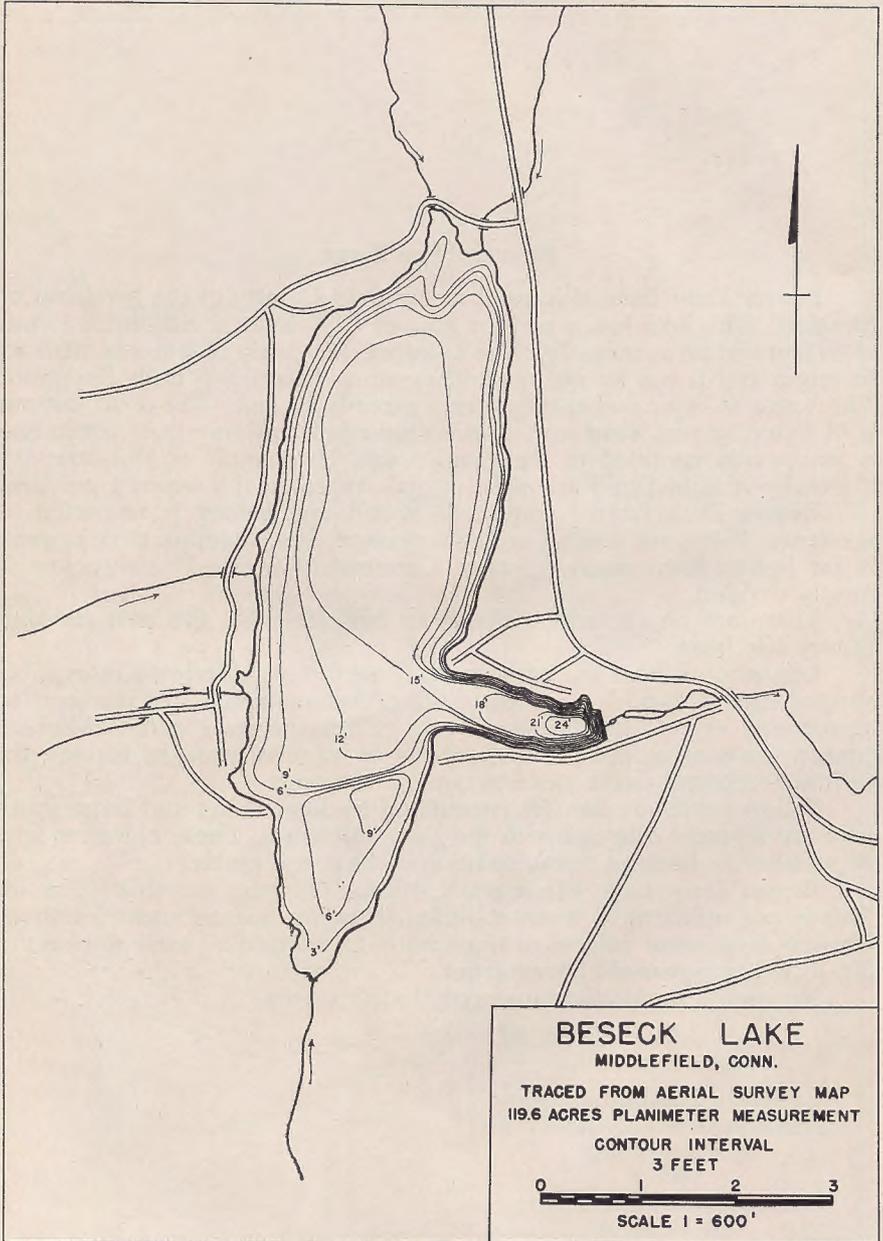
There are no records available to indicate what the past stocking history has been.

Largemouth bass are common and exhibit good growth rates. This species should furnish excellent fishing. Yellow perch are common to scarce and exhibit good growth rate. Chain pickerel and red-bellied sunfish are scarce, but are well above average in growth. Fishing for yellow perch and chain pickerel is probably poor.

Yellow perch are heavily parasitized by liver flukes and largemouth bass are severely infested with the bass tapeworm. These parasites may be a factor in limiting the population of bass and perch.

Beaver Dam Lake has a small volume of water suitable for trout. This is not sufficient to warrant reclamation and management for trout. There is a sufficient volume of trout water to warrant a yearly stocking of 300 to 400 two-year-old brown trout.

No special regulations are needed at this time.



BESECK LAKE

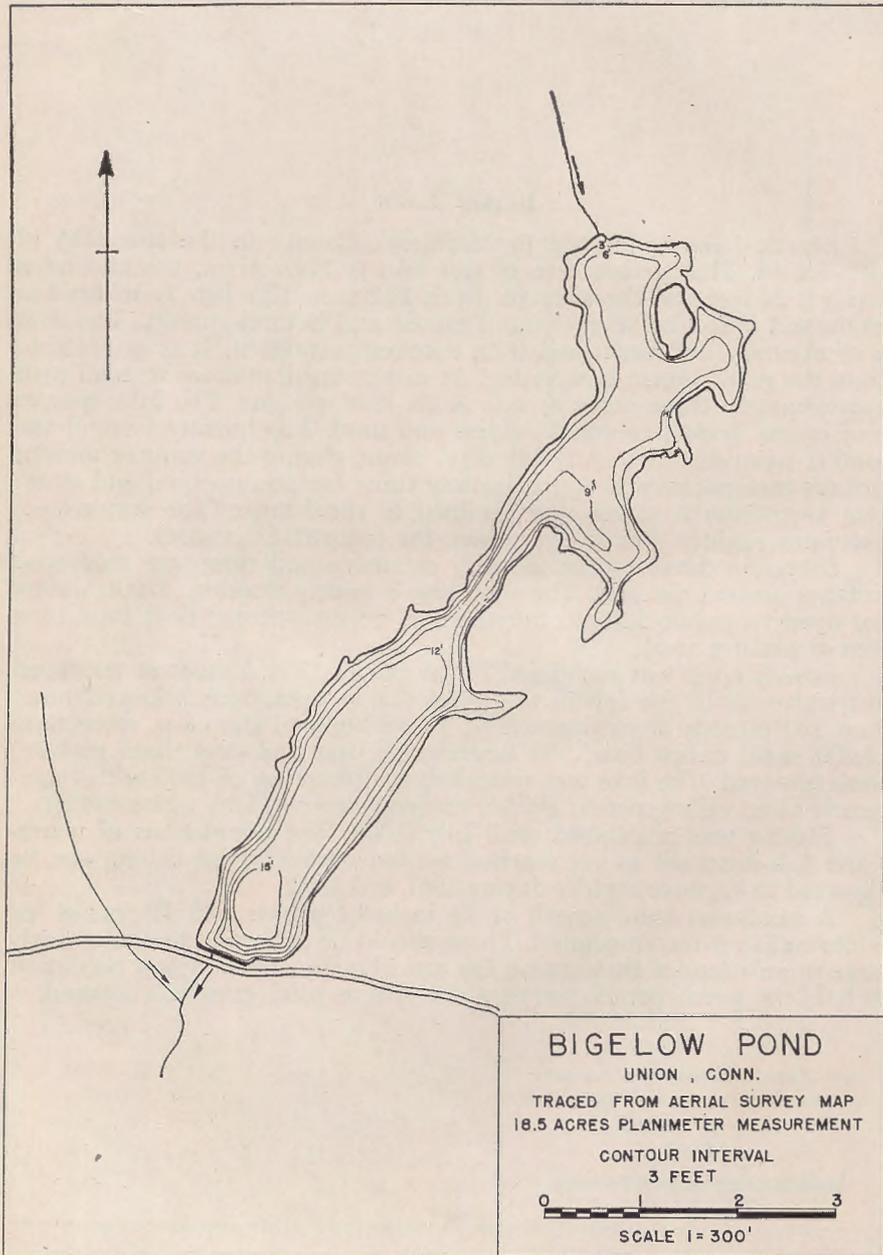
Beseck Lake is located in Middlesex County in the township of Middlefield. The surface area of this lake is 119.6 acres, the maximum depth is 24 feet and the average depth 11.2 feet. This lake is artificial in origin and is fed by several small brooks and bottom springs. The dam is of masonry and earth and is in excellent condition. It is possible to drain the pond almost completely. At maximum drawdown a small pool approximately three acres in size is all that remains. The lake bottom is of coarse gravel, rubble, boulders and mud. The fertility level of the pond is relatively high. A dense algal bloom during the summer months reduces transparency to approximately three feet. Submerged and emergent vegetation is scarce and confined to shoal areas. The water level fluctuates slightly due to drawdown for industrial purposes.

Shoreline development is fairly extensive and there are numerous cottages around the lake. The shoreline is mostly wooded. These waters are open to public fishing, but there is no satisfactory boat launching area or parking area.

Beseck Lake was reclaimed in the fall of 1954. Rotenone was used to remove all of the fish in the pond. These operations removed more than 150 pounds of carp per acre. In addition to the carp, more than 14,000 small calico bass, 300 largemouth bass and one chain pickerel were removed. The lake was restocked in the spring of 1955 with largemouth bass, yellow perch, golden shiners, alewives and white catfish.

Fishing was prohibited until July, 1956. The populations of warm-water fish have not as yet reached normal numbers, but fishing can be expected to improve rapidly during 1957 and 1958.

A minimum legal length of 14 inches for bass and 12 inches for white catfish is recommended. These should be adequate to assure fairly large populations of these game fish and also provide sufficient predation to hold the perch population to a size where good growth is assured.



BIGELOW POND

Bigelow Pond is a small state-owned pond located in Bigelow Hollow State Park in Tolland County in the township of Union. It is natural in origin with the level raised by an 8-foot dam of earth and concrete. The impounded waters cover an area of 18.6 acres, have a maximum depth of 16 feet and an average depth of 7.5 feet. Submerged vegetation is scarce in all areas of the pond. Emergent vegetation is abundant in the shallow shoreline areas. The pond bottom is mostly of sand, gravel and mud. The water is clear and the transparency exceeds 10 feet. The pond is thermally stratified and the bottom waters are well supplied with dissolved oxygen.

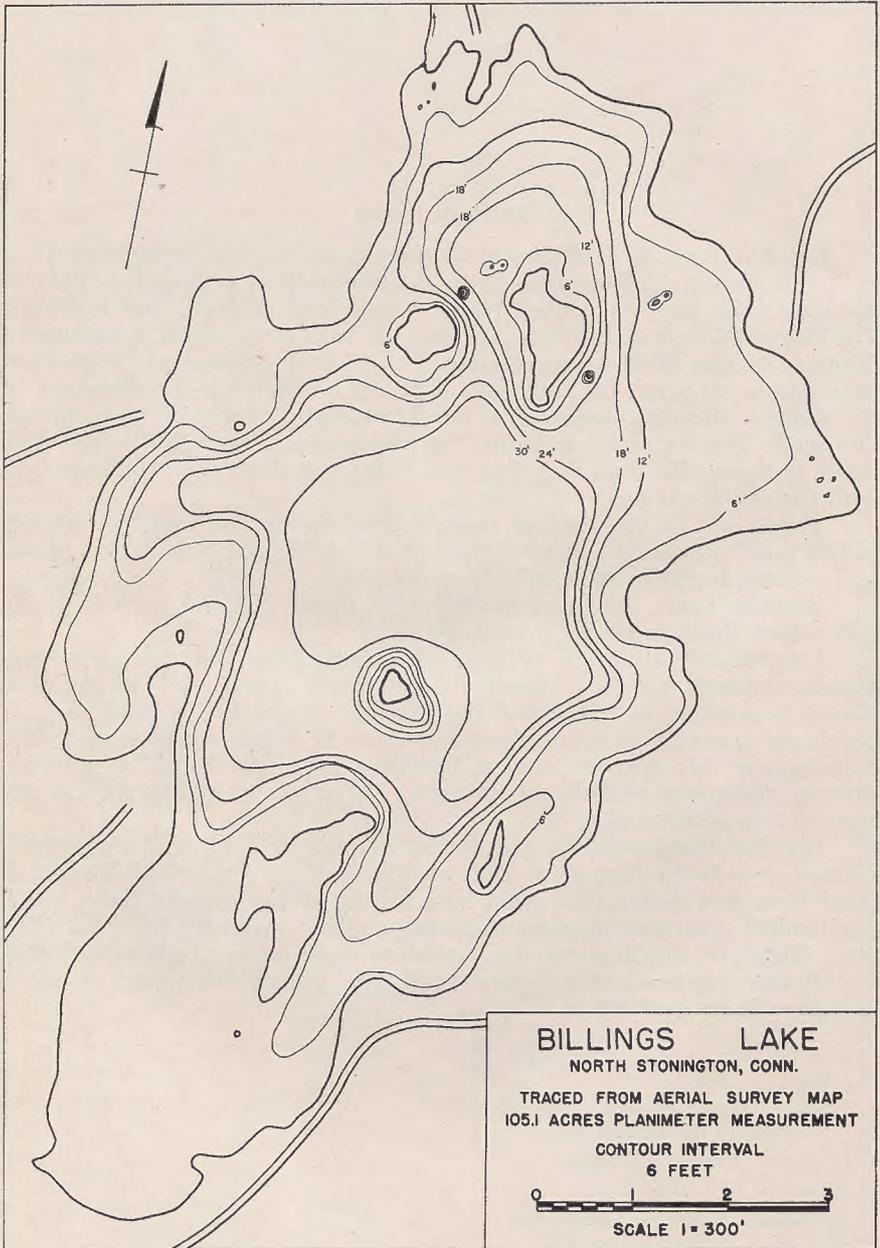
There are no cottages or boat liveries on the well-wooded shores of this pond. Access is provided through a public right-of-way and picnic and parking facilities are available at the pond.

Bigelow Pond has been stocked with chain pickerel, yellow perch, calico bass, bullheads and brown trout.

Largemouth bass are common in abundance and exhibit above-average growth. Chain pickerel are extremely scarce and, as a result, it was impossible to determine the growth rate of this species. Yellow perch are common in abundance and grow at a rate equal to the state average for this species. Calico bass are scarce and exhibit average growth. Common sunfish are present, but scarce. Golden shiners are common in abundance.

Bigelow Pond contains a sufficient volume of cold, well-oxygenated water to warrant reclamation and management for trout. This impoundment furnishes reasonably good bass fishing at the present time, but it can furnish greater enjoyment to more people if managed for trout only. Bass fishing in this area can be furnished close by in Mashapaug Pond.

If this impoundment is reclaimed, the use of fish (dead or alive) as bait will be prohibited.



BILLINGS LAKE

Billings Lake is located in New London County in the township of North Stonington. The lake has a surface area of 105.1 acres, a maximum depth of 33 feet and an average depth of 13.7 feet. It is natural in origin, but the level has been raised by a 10-foot masonry and concrete dam. This impoundment is fed by bottom springs and surface runoff. The water level fluctuates moderately due to natural causes. The lake bottom is mostly of sand, gravel, coarse rubble, boulders and ledge. Submerged and emergent vegetation is abundant in shoal areas.

Public access is provided through a state-owned parking area and boat launching area. There are no other facilities available for public use. Shoreline development is moderately high and can be expected to increase rapidly in the near future.

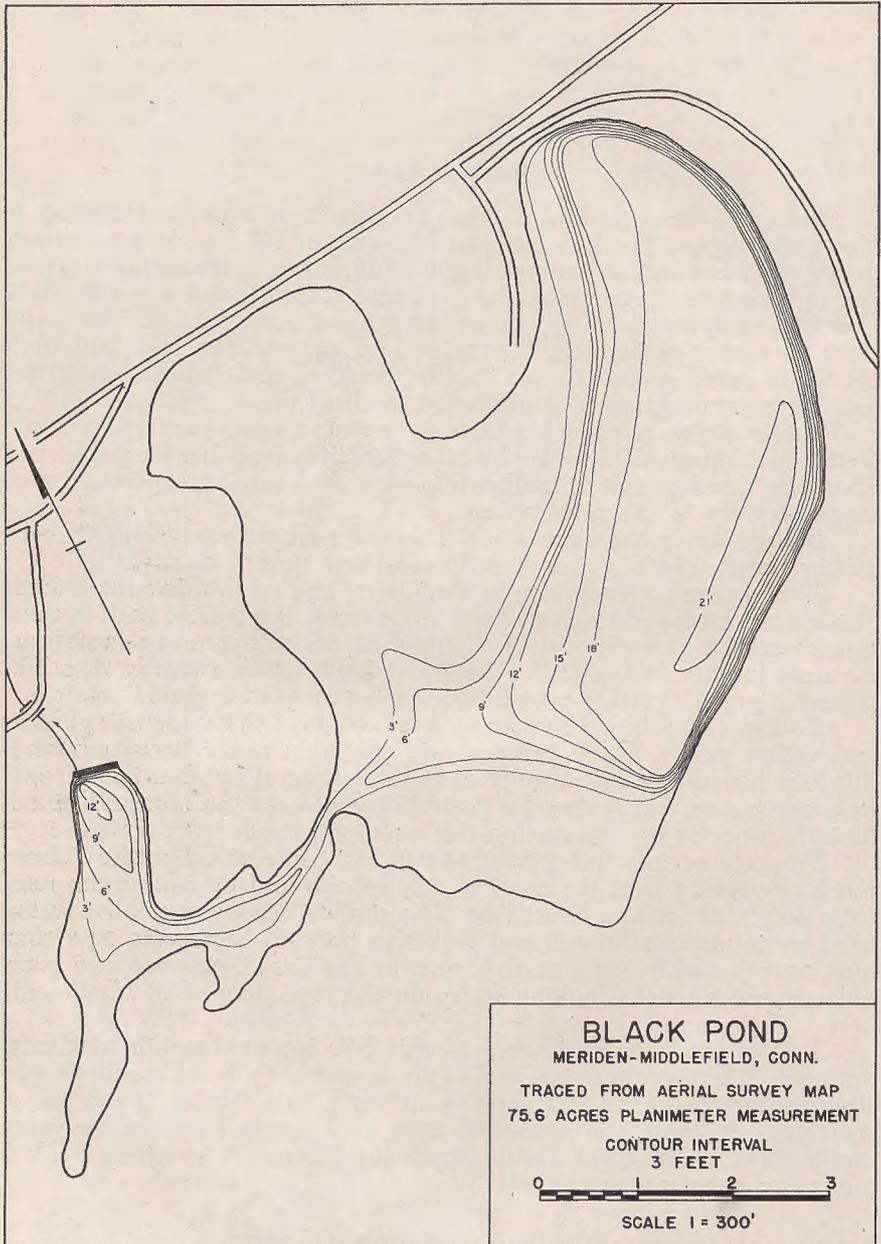
Billings Lake has been stocked in the past with smallmouth bass, yellow perch, chain pickerel, bullheads and golden shiners.

Yellow perch are common in abundance and exhibit average growth. Smallmouth bass and chain pickerel are present, but scarce. Both of these species exhibit average growth. Golden shiners and common sunfish are common in abundance. Calico bass and bullheads are scarce. The lake probably provides rather poor fishing except for yellow perch.

Billings Lake should be managed for smallmouth bass, chain pickerel and yellow perch. Chain pickerel will probably never be abundant in this lake because of the scarcity of typical pickerel habitat. Smallmouth bass are scarce, but it may be possible to increase the numbers of this desirable species by suppressing the common sunfish.

Property owners and sportsmen can assist in controlling the "johnny roach" by raking over the nests of this species and by salting the nests with pellets of sodium hydroxide. The sunfish occupy the same waters used by young smallmouth and they also prey on bass nests. The common sunfish and bluegill sunfish, next to the bass tapeworm, are probably the most serious limiting factor on the reproduction of smallmouth bass.

It may be desirable to reclaim this lake for smallmouth bass management. This management technique appears to have excellent possibilities for producing first class smallmouth bass fishing. If the lake is reclaimed, it should be restocked with smallmouth bass, yellow perch and bullheads. These fish should be obtained from a lake where the bass tapeworm is not present.



BLACK POND

Black Pond is located in New Haven and Middlesex Counties in the townships of Meriden and Middlefield. The pond has a surface area of 75.6

acres, a maximum depth of 23 feet and an average depth of 8.6 feet. It is natural in origin, but the level has been raised approximately five feet with a concrete and earthen dam. The pond bottom is composed of rock and gravel in shoal areas and of mud and silty ooze in the deeper areas. This body of water is fed almost entirely by bottom springs and surface runoff. Shoal areas are almost completely choked with submerged and emergent vegetation. The waters are thermally stratified and well supplied with dissolved oxygen, except in the deepest areas. Bottom food production is good and the waters are average in fertility. The shoreline is mostly wooded.

Shoreline development is low, and there are no cottages except on the lower shallow basin. There is a state-owned right-of-way, parking area and boat launching area located at the northern end of the pond. There is also a boat livery on the northern shore of the pond.



FIGURE 57. Lifting gill nets, Black Pond, Meriden.

The pond has in the past been stocked with smallmouth bass, land-locked salmon, salmon, chain pickerel, yellow perch, bullheads, calico bass, shiners, sunfish, largemouth bass and brown trout.

Largemouth bass and chain pickerel are common to abundant and growth rates are good. These species should furnish good to excellent fishing. Yellow perch are scarce and exhibit good growth rate, well above average for the species. Bluegill sunfish are abundant and stunted. Common sunfish are also abundant, but exhibit above-average growth. Land-locked alewives are present in this pond, but are less abundant than

during previous surveys. Bullheads are common and should provide good fishing. Brown trout are present in the age class stocked, but holdover fish are scarce.

Black Pond contains a relatively small amount of water suitable for trout. This is not sufficient to warrant reclamation for trout management, but it does warrant an annual stocking of 300 two-year-old brown trout.

A 14-inch minimum length for largemouth bass is desirable. This legal length will result even in more large bass and may be a definite aid in reducing the population of common sunfish and bluegill sunfish. The regular state legal length of 15 inches for chain pickerel should be adequate protection for this species.

BLACK POND

Black Pond is located in Windham County in the township of Woodstock. This natural body of water covers a surface area of 73.4 acres, has a maximum depth of 23 feet and an average depth of 12.2 feet. Submerged and emergent vegetation is relatively abundant, but is confined to the shoal areas. The pond bottom is mostly of sand, gravel, boulders and mud. The water is clear and the transparency exceeds 10 feet. The pond is thermally stratified and the deeper waters are well supplied with dissolved oxygen.

Shoreline development is low and there are only a few cottages on the well-wooded shores. Public access is provided through a state-owned right-of-way, parking area and boat launching area. There are no public picnic or swimming facilities available. Rental boats may be obtained from one small livery.

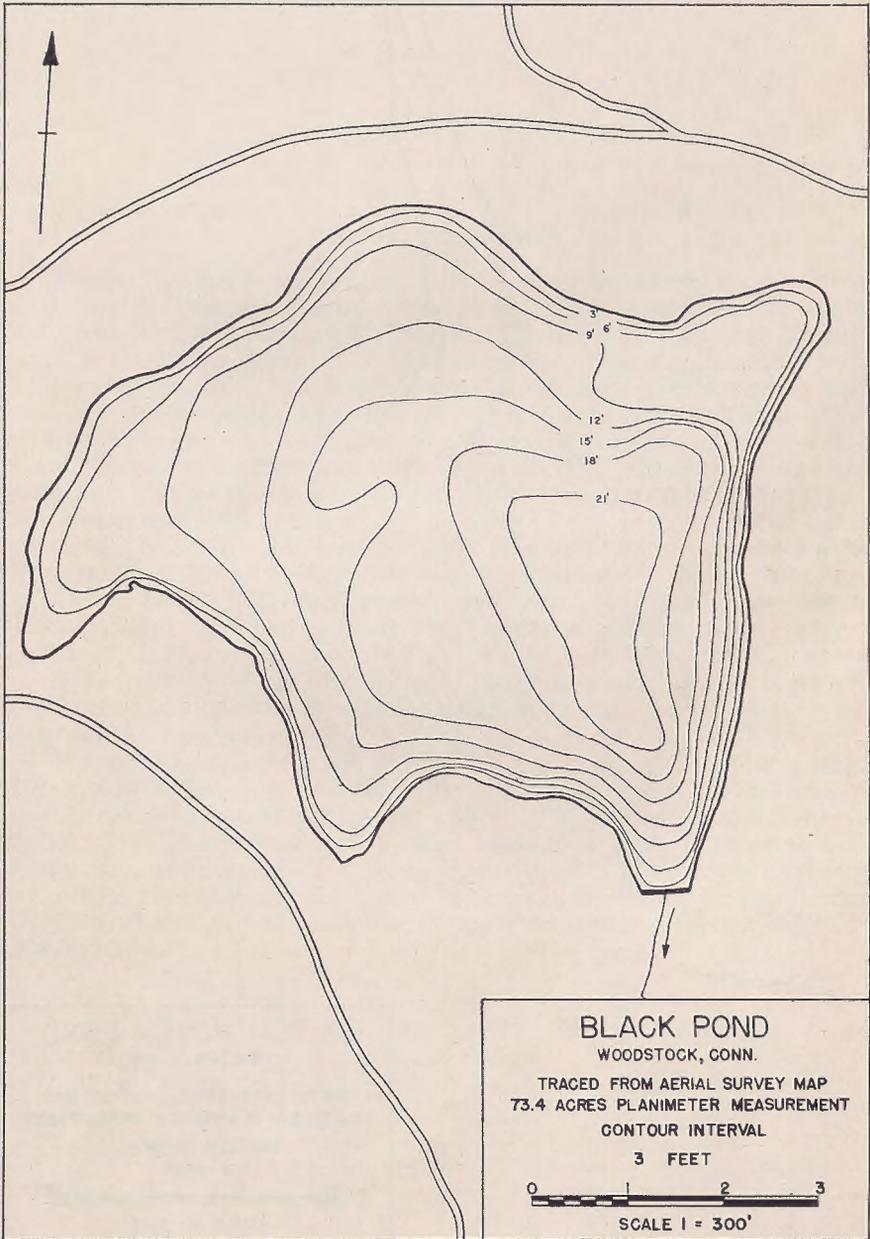
Black Pond has been stocked with smallmouth bass, chain pickerel, yellow perch, bullheads, calico bass, sunfish, golden shiners and brown trout.

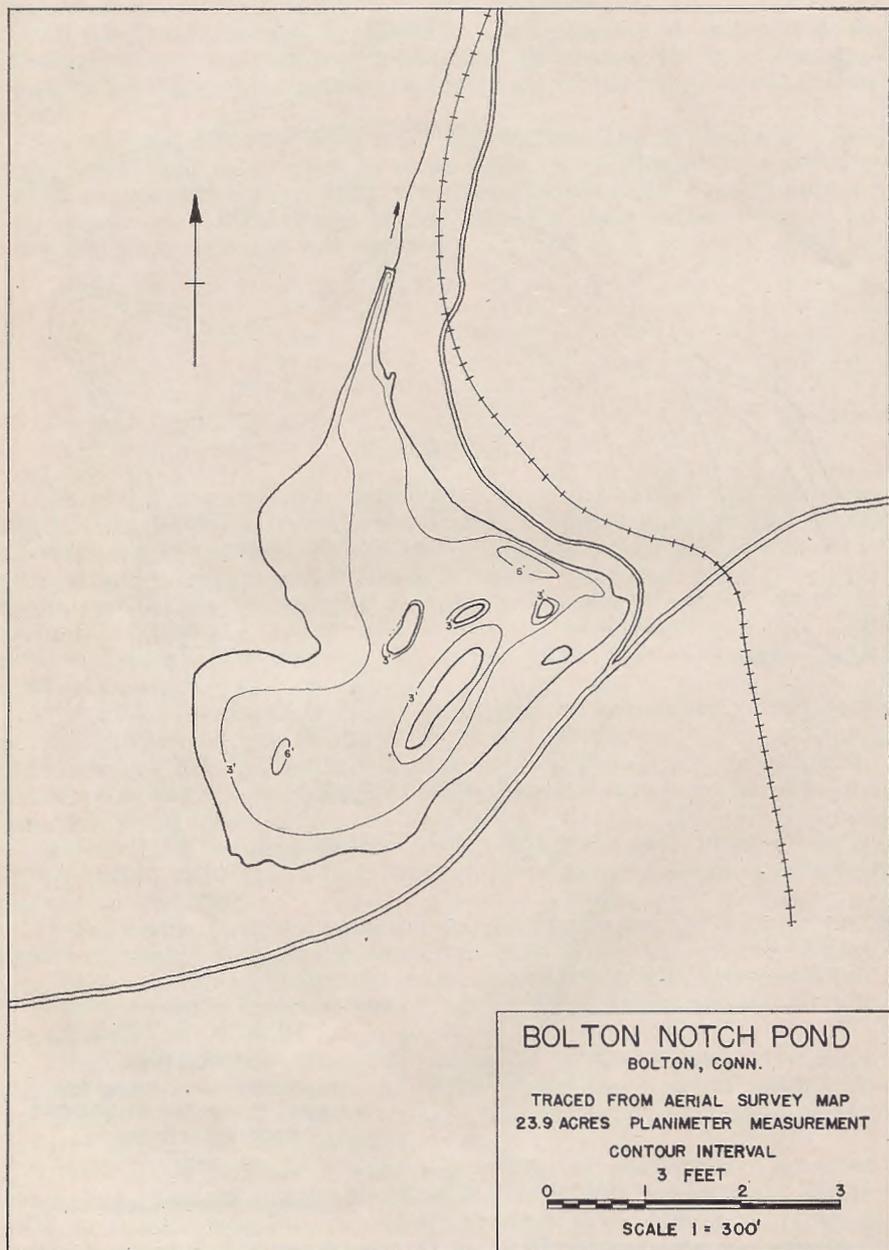
Smallmouth bass are common in abundance and exhibit average growth. Chain pickerel are common and grow slowly at a below-average rate. Yellow perch and calico bass are also common with below-average growth. Bullheads, common sunfish and golden shiner are common in abundance.

This body of water should be managed for smallmouth bass, chain pickerel and yellow perch. At the present time, this body of water is in a relatively productive state of balance and should provide good fishing for smallmouth bass and pickerel.

Black Pond contains a sufficient volume of cold, well-oxygenated water to warrant an annual stocking of 500 to 800 two-year-old brown trout. At the present time, the bass tapeworm, if present at all, is not a serious limiting factor on bass reproduction. If this parasite becomes well established, it may be desirable to reclaim this pond.

No special regulations are necessary at this time. The state-wide regulations should furnish adequate protection for the game species.





BOLTON NOTCH POND

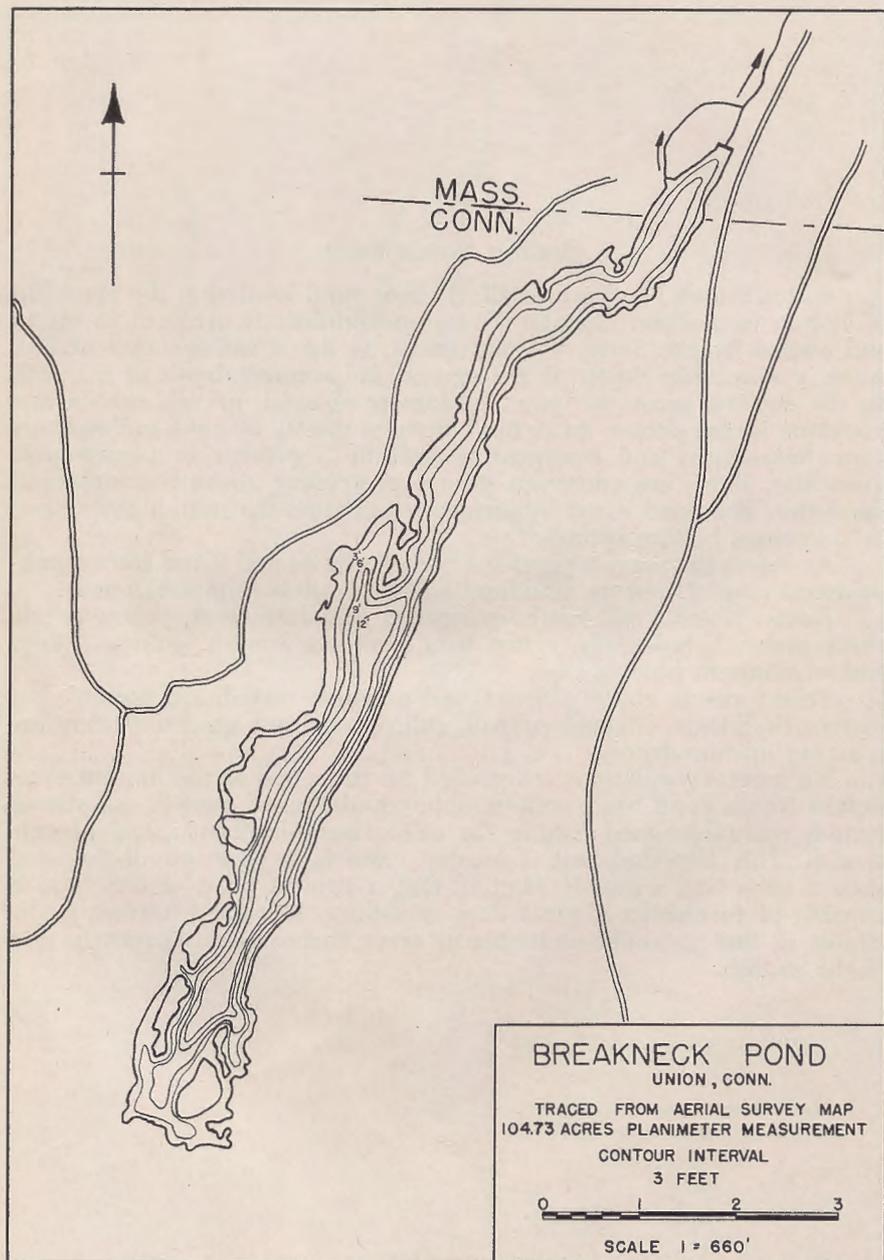
Bolton Notch Pond is a small, shallow pond located in the township of Bolton in Tolland County. This impoundment is artificial in origin and owned by the State of Connecticut. It has a surface area of 23.9 acres, a maximum depth of 8 feet and an average depth of 2.1 feet. In the shallow areas the pond bottom is of sand, gravel, rubble and boulders. In the deeper areas the bottom is mostly of mud and swampy ooze. Submerged and emergent vegetation is present in considerable quantities. There are numerous stumps protruding above the surface of the water. The pond is fed by surface runoff from the state highway and by numerous bottom springs.

Access to the pond is provided from Route 44 and 6 and from a public access road. There are no other facilities available for public use.

Bolton Notch Pond has been stocked with lake trout, yellow perch, chain pickerel, bullheads, calico bass, common sunfish, golden shiners and smallmouth bass.

Yellow perch, chain pickerel, and common sunfish are present, but scarce. Bullheads, bluegill sunfish, calico bass and golden shiners are common in abundance.

No special regulations are needed for this pond at the present time. Bolton Notch Pond has a considerable population of panfish and should furnish relatively good fishing for calico bass, bullheads and bluegill sunfish. This impoundment is located close to a large population and should be a very valuable asset in that a panfish pond of this type is capable of furnishing a great deal of fishing. Increased harvest is desirable in that it would undoubtedly serve to increase the growth rate of the panfish.



BREAKNECK POND

Breakneck Pond is a small natural body of water located in Tolland County in the township of Union. It has a surface area of 104.7 acres, a maximum depth of 14 feet and an average depth of 4.9 feet. The pond bottom is mostly of mud and swampy ooze. Submerged and emergent vegetation is abundant in all areas of the pond. The water is stained a dark, tea color and transparency is somewhat reduced. These waters are thermally stratified and are oxygen deficient below six feet.

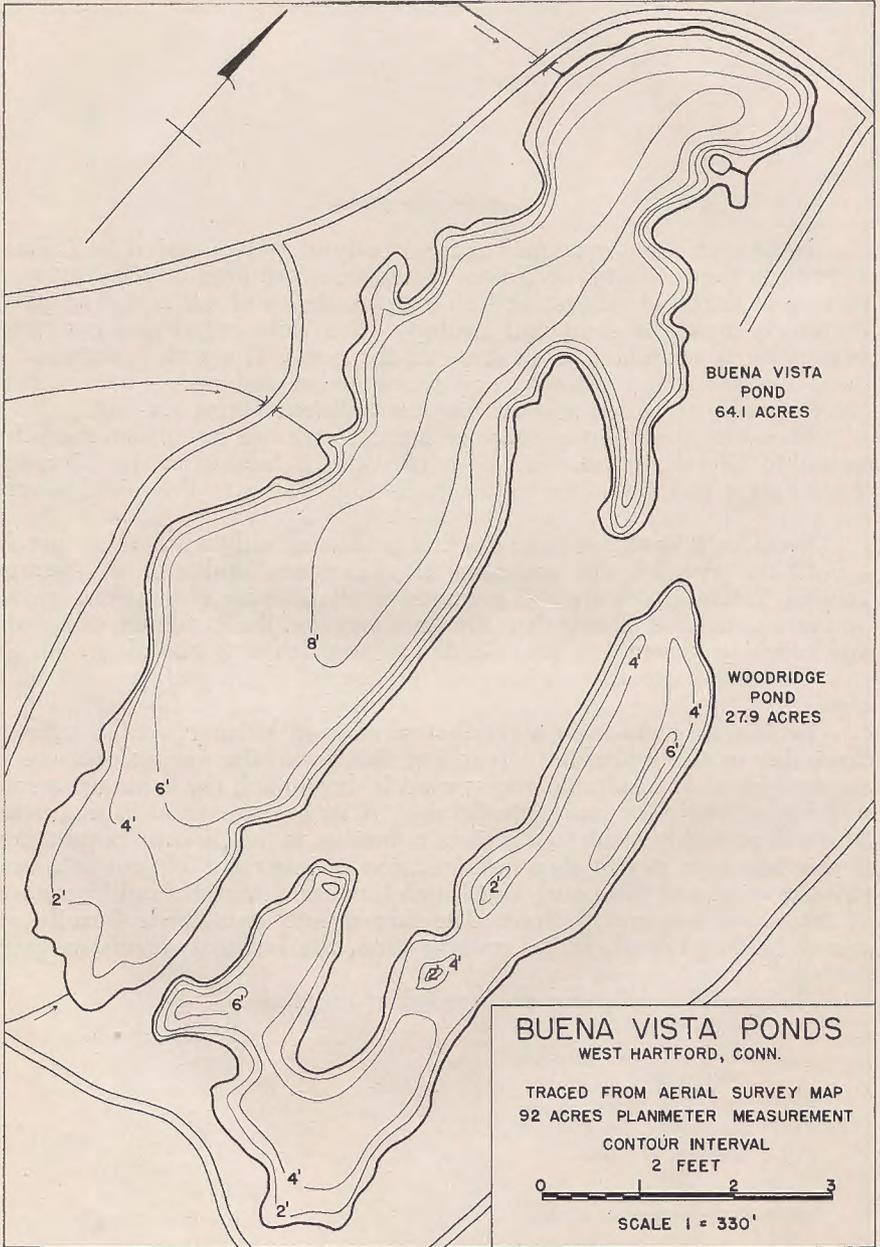
Shoreline development is very light. There are no special facilities available for public use. This body of water is located in the Nipmuck State Forest and it is open to public fishing. Access to this pond is very poor.

Breakneck Pond has been stocked in the past only with yellow perch. Chain pickerel are common in abundance and exhibit average growth. Yellow perch are also common in abundance. This species grows at a rate somewhat slower than the state average. Bullheads are abundant and reach an acceptable size. Golden shiners are very abundant.

This pond should provide good fishing for chain pickerel and bullheads.

Breakneck Pond is in a productive state of balance. At the present time, due to the difficulty in reaching this pond, the fishing pressure is relatively low. If a suitable access road is developed, the fishing pressure will undoubtedly increase considerably. A large increase in fishing pressure will probably result in a serious reduction in the pickerel population. If this happens, it will then be desirable to introduce largemouth bass into the waters of this pond. Until such time, no attempt should be made to introduce largemouth bass. The largemouth bass feeds heavily on young bullheads and, at the present time, the bullhead furnishes good fishing.

No special regulations are needed at this time.



BUENA VISTA POND

Buena Vista Pond is in Hartford County in the township of West Hartford. It is artificial in origin and is fed by Trout Brook and springs. The dam is of earth and is in good condition. This pond has a surface area of 64.1 acres, a maximum depth of 8 feet and an average depth of 5.5 feet. The bottom is mostly of mud and swampy ooze. Submerged and emergent vegetation is scarce. The shoreline is mostly wooded. The water is stained a dark, tea color and transparency is reduced to approximately three feet.

Shoreline development is extensive and there are many permanent homes on the shores of the pond. Buena Vista Pond is not open to public fishing. Use of the pond is restricted to residents and members of the Ridgewood Association.

The State Board does not have any stocking records for this water.

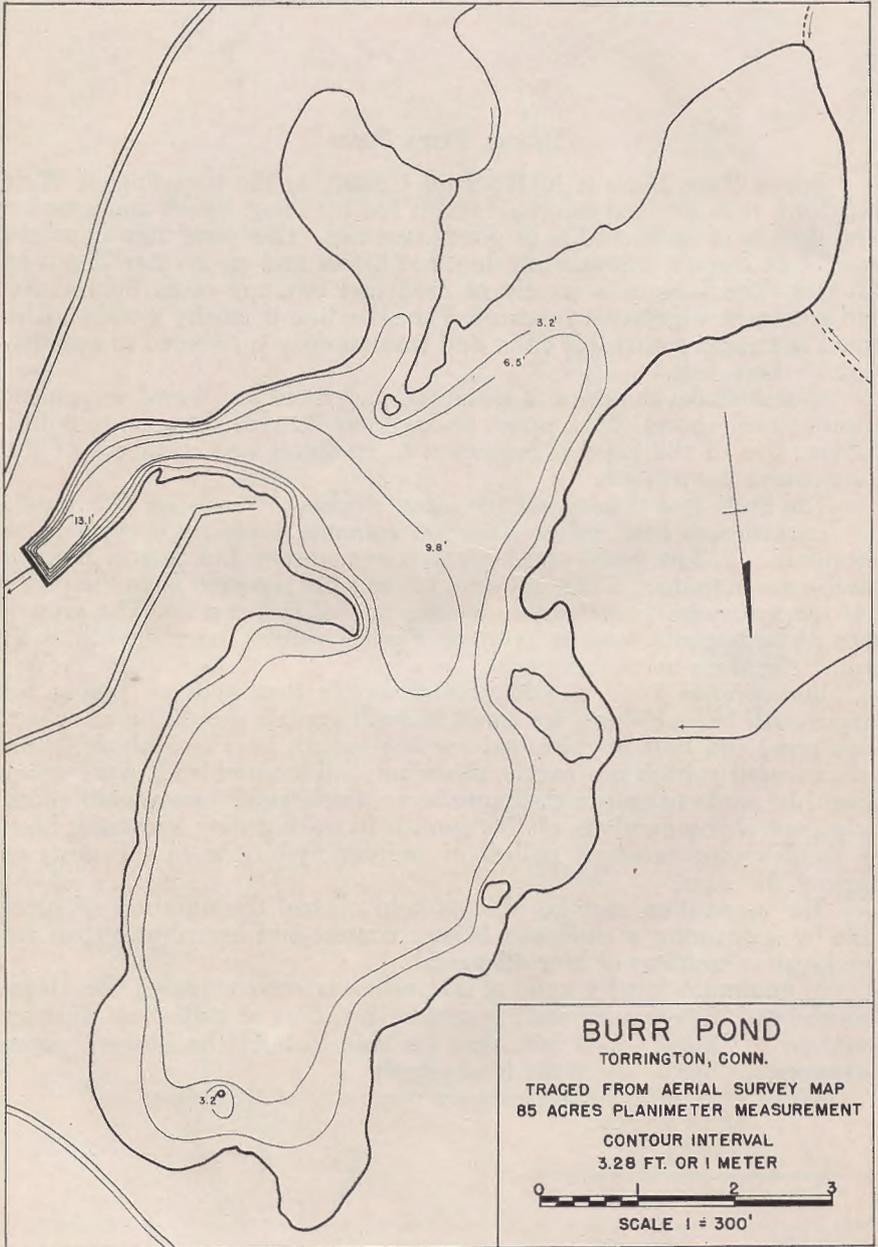
Largemouth bass, calico bass and common sunfish are common in abundance. Yellow perch and bullheads are present, but scarce. Bluegill sunfish are abundant. Chain pickerel are reliably reported from the pond, but the survey unit was unable to take any of this species. The growth rate of largemouth bass is average. Panfish exhibit poor growth, well below the state averages.

Buena Vista Pond should provide better than average fishing for largemouth bass. Fishing for small bluegill sunfish should be excellent. This pond can best be managed for largemouth bass and bluegill sunfish. Bluegill sunfish are overly abundant and stunted and every effort should be made to reduce their numbers. Members of the association can help control the numbers of this sunfish by raking over spawning beds or by dropping one-inch pellets of sodium hydroxide in the nests to destroy the eggs.

The association may be able to help control the numbers of bluegills by sponsoring a children's fishing contest and awarding prizes for the greatest numbers of bluegill sunfish.

A minimum legal length of 14 inches is recommended for largemouth bass. This should result in greater numbers of large bass. Greater numbers of 12-to-14-inch bass may be able to hold the bluegill population within the limits of the food supply.

No other special regulations are necessary at this time.



BURR POND

Burr Pond is located in Litchfield County in the township of Torrington. This state-owned pond in the Burr Pond State Park has a surface area of 85 acres, a maximum depth of 13 feet and an average depth of 5.1 feet. It is artificial in origin. This impoundment is shallow and infertile with scant submerged and emergent vegetation. The shoreline is rocky and the boulder-strewn bottom is covered with mud and silt. The water is dark, almost black and is quite acidic. The shoreline is wooded.

There are no cottages on the shores of this pond. Picnic and swimming facilities are available in the state park. There is a boat livery at the northwestern end of the pond. No suitable boat launching areas are available.

Burr Pond has in the past been stocked with yellow perch, calico bass, chain pickerel, common bullheads, sunfish, golden shiner and largemouth bass.

Chain pickerel and yellow perch are scarce in all age classes and exhibit poor growth rates. These species probably provide very poor fishing. Bullheads are common in all age classes and should provide fair fishing. Golden shiners are very abundant particularly in young-of-the-year and yearling age classes and should furnish excellent forage for game fish. Largemouth bass have been stocked two different times but have not become established. It is quite possible that largemouth bass are unable to maintain themselves in water as acidic as that found in Burr Pond. It may be possible to use yearly applications of ground limestone to neutralize the water and make the pond more satisfactory for largemouth bass. This possibility will be explored more thoroughly and if it proves economical, another attempt to establish largemouth bass will be made after the waters have been neutralized.

At the present time, no special regulations are needed. It is inadvisable to undertake any further stocking at this time.

CANDLEWOOD LAKE

Candlewood Lake, the largest impoundment in the state, is located in Fairfield and Litchfield Counties in the townships of Sherman, New Milford, New Fairfield, Danbury and Brookfield. Candlewood was impounded in 1923 and includes in its basin Neversink, Squantz and Barse Ponds. The dam, approximately 90 feet high, is of earth and concrete. The impoundment covers an area of 5420 acres, has a maximum depth of 85 feet and an average depth of 29.3 feet. It is fed by several small brooks and by water pumped in from the Housatonic River. Water from this lake is used to generate electricity and this results in a considerable fluctuation of the water level. The long shoreline (over 65 miles) provides a variety of fish habitat ranging from sheer rocky cliffs to dense growths of aquatic vegetation on shallow mud flats. The waters are average in fertility and plankton and bottom fauna production are average. The waters of the lake are thermally stratified and are deficient in dissolved oxygen at all depths below 30 feet.

The shoreline is extensively developed in localized areas, but much is undeveloped because of steep cliffs at the waters' edge. There are several boat liveryes present. Picnic facilities are available in Squantz Pond State Park. The shoreline of the pond is mostly wooded.

In the past 34 years Candlewood Lake has been stocked with bullheads, yellow perch, smallmouth bass, yellow pike-perch, chain pickerel, smelt, white perch, largemouth bass, sunfish, shiners, rainbow trout and brown trout.

Largemouth bass, yellow perch, white perch and bluegill sunfish are abundant and exhibit above-average growth rates. These species should

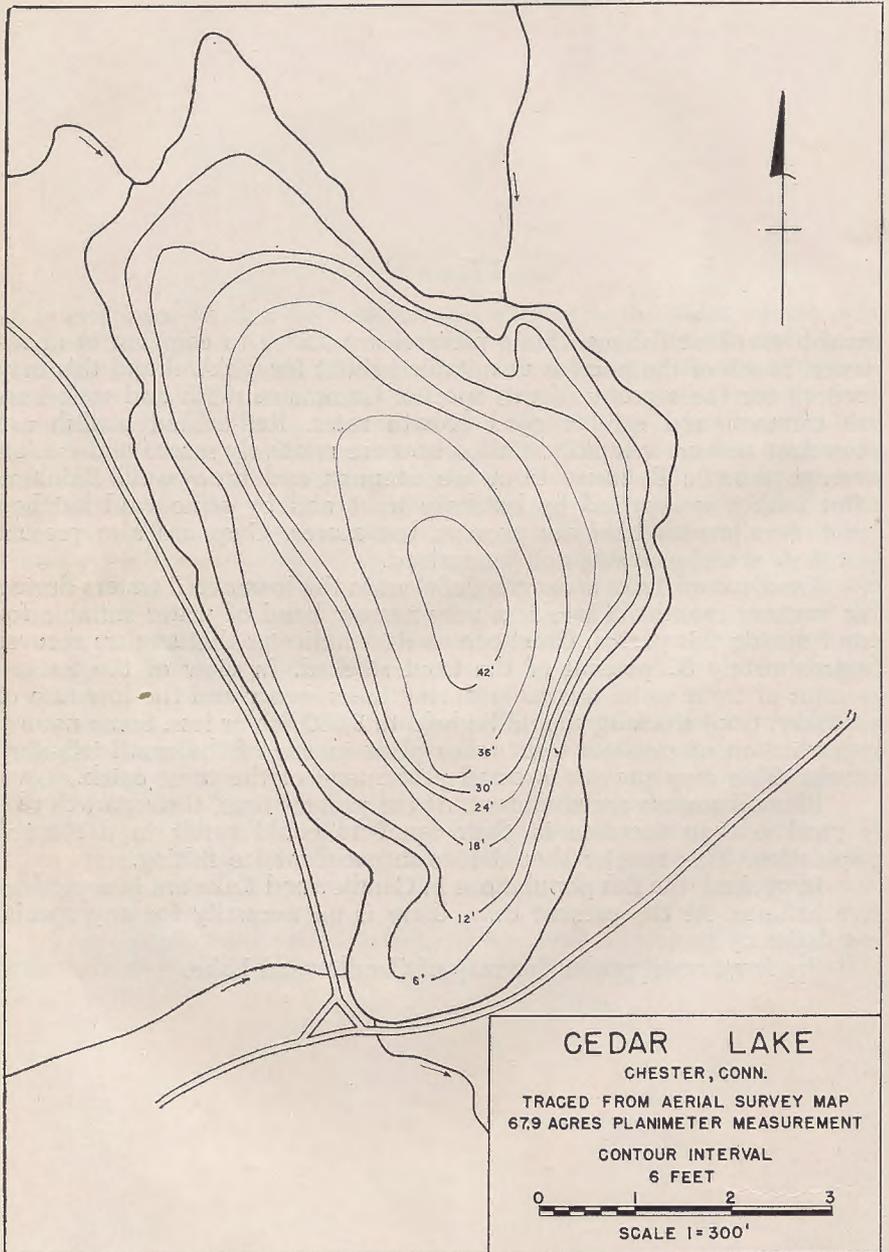
furnish excellent fishing. Chain pickerel are scarce to common in abundance. Much of the pond is unsuitable habitat for pickerel and this may account for the scarcity of this species. Common sunfish and rock bass are common and exhibit good growth rates. Red-bellied sunfish are abundant and grow rapidly. Calico bass are relatively scarce and exhibit average growth. Rainbow trout are common and grow well. Rainbow trout fishing is supplied by hatchery trout and by some wild hatched trout. Smallmouth bass are present, but scarce. Carp are also present but their abundance was not determined.

Candlewood Lake is oxygen deficient in the lower cold waters during the summer months. There is a very narrow band of water suitable for trout during this period. Creel census data indicates that anglers recover approximately 35 percent of the trout stocked. In view of the limited amount of trout water available during the summer and the low rate of recovery, trout stocking should be held to 3,000 fish or less. Some natural reproduction of rainbow trout takes place in one of the small tributary brooks. This may provide a small percentage of the trout catch.

Bluegill sunfish are abundant. At the present time, their growth rate is good but an increase in their numbers could result in a stunted population. This species should furnish excellent ice fishing.

In general, the fish populations in Candlewood Lake are in a productive balance. At the present time, there is no necessity for any special regulations.

See front cover pocket for map of Candlewood Lake.



CEDAR LAKE

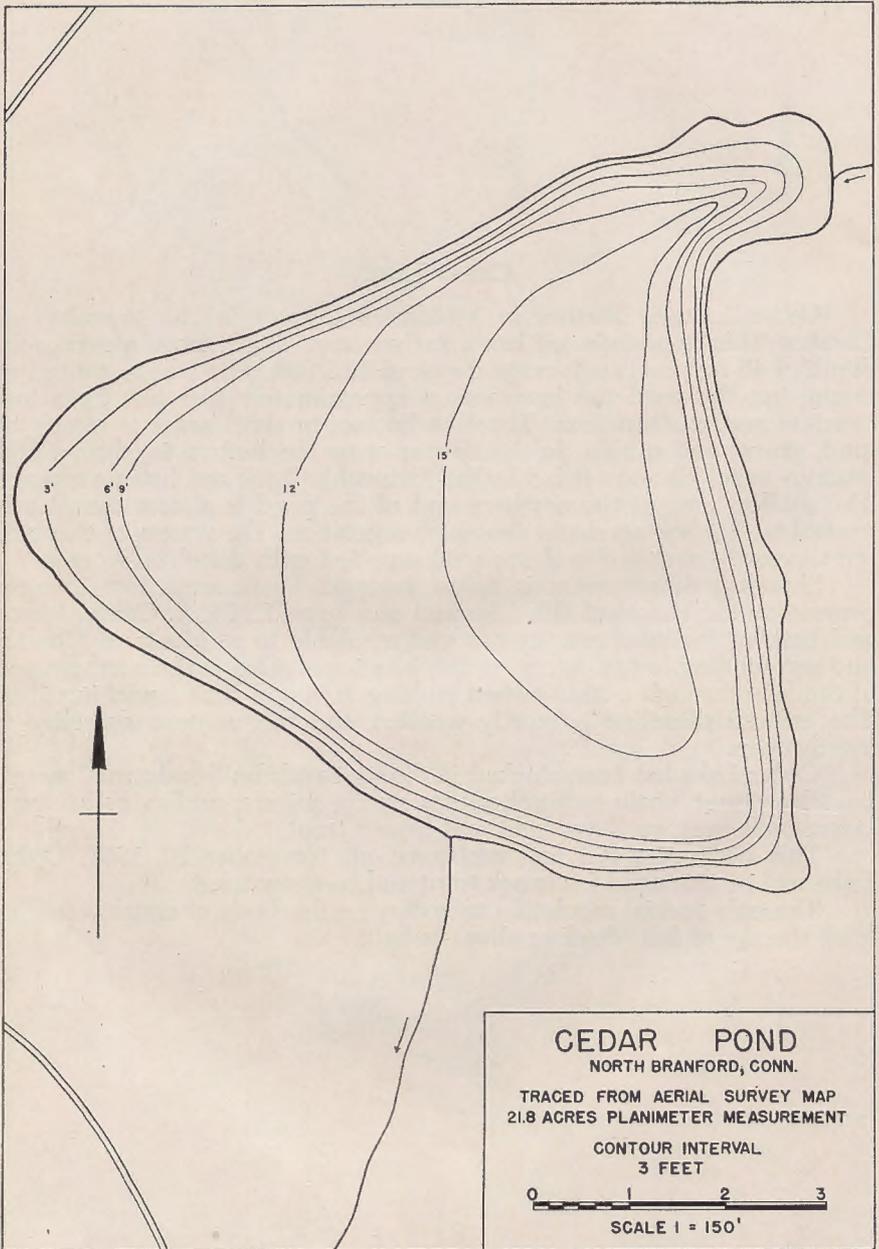
Cedar Lake is located in Middlesex County in the township of Chester. This impoundment has a surface area of 68 acres, a maximum depth of 45 feet and an average depth of 19.3 feet. The lake is natural in origin, but the level has been raised approximately two feet by a low concrete and earthen dam. The lake bottom in shoal areas is mostly of sand, gravel and rubble. In the deeper areas the bottom is of mud and swampy ooze. The lake is fed by the Pattaconk Creek and bottom springs. The shallow area at the northern end of the pond is almost completely choked with submerged and emergent vegetation. The waters of this lake are thermally stratified and are well supplied with dissolved oxygen.

Shoreline development is below average. There are a few cottages present on the shores of this lake and one large Y.M.C.A. Camp. Picnic and bathing facilities are present and available to residents of Chester and surrounding towns. Access to this lake is provided at the northern end of the lake through a state-owned parking area and boat launching area. The eastern shoreline is mostly wooded and the western shoreline is mostly open.

Cedar Lake has been stocked in the past with bullheads, smallmouth bass, lake trout, chain pickerel, yellow perch, shiners, sunfish, calico bass, largemouth bass, rainbow trout and brown trout.

This body of water was reclaimed on November 19, 1957. Cedar Lake will be managed for brook trout and rainbow trout.

The only special regulation necessary on this body of water is to prohibit the use of fish (dead or alive) as bait.



CEDAR POND

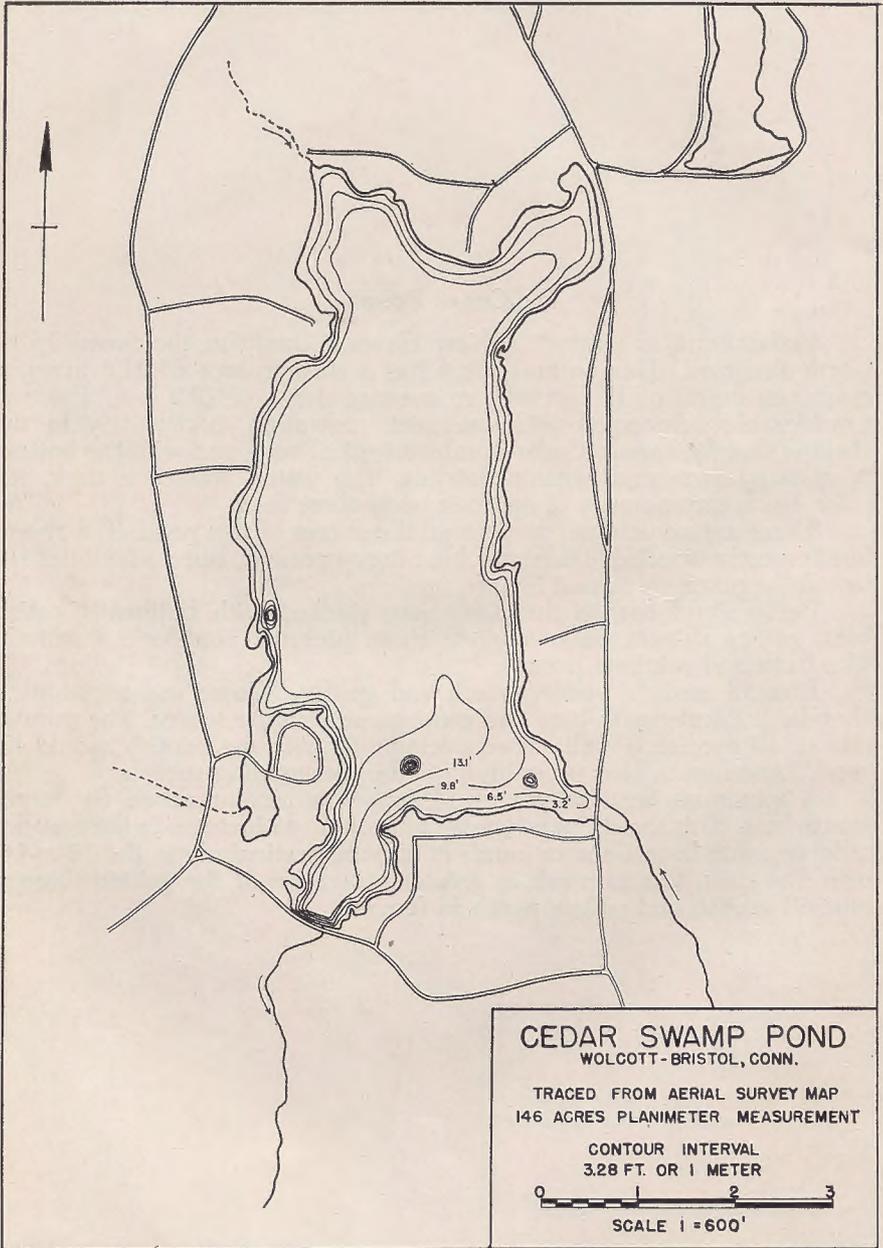
Cedar Pond is located in New Haven County in the township of North Branford. This natural pond has a surface area of 21.6 acres, a maximum depth of 17 feet and an average depth of 10.9 feet. There is considerable submerged and emergent vegetation, particularly in the shallow shoreline areas. Cedar Pond is a typical bog pond with the bottom of swampy ooze and organic detritus. The water, stained a dark, tea color, has a transparency of approximately three feet.

There are no cottages present on the shores of this pond. The shoreline is mostly wooded. There is a boat livery present, but no facilities for launching privately owned boats.

Cedar Pond has, in the past, been stocked with bullheads, calico bass, golden shiners, yellow perch, chain pickerel, land-locked salmon, lake trout and rainbow trout.

Bluegill sunfish, yellow perch and golden shiners are common to abundant. Largemouth bass and common sunfish are scarce. The growth rate of all species is well above average. Fishing for panfish should be good. Largemouth bass probably provide poor angling success.

A minimum legal length of 14 inches is recommended for largemouth bass. This should be adequate to provide an increase in the number of largemouth bass. Greater numbers of bass, particularly in the 12-to-14-inch size class, should result in greater utilization of the golden shiners, bluegill sunfish and yellow perch as forage.



CEDAR SWAMP POND

Cedar Swamp Pond is located in Hartford County in the townships of Wolcott and Bristol. This artificial impoundment has a surface area of 146 acres, a maximum depth of 14 feet and an average depth of 8.5 feet. The bottom is mostly of rocks and silty ooze, but with some scattered gravel areas. The transparency of the water is somewhat reduced by a tea-colored organic stain. The fertility level of the water is high and bottom food and plankton production are above average for the area. There is considerable fluctuation of the water level due to intensive drawdown for industrial purposes.

The shoreline of the pond is mostly wooded. There are numerous cottages present. Access to the lake is provided by several boat liveries.

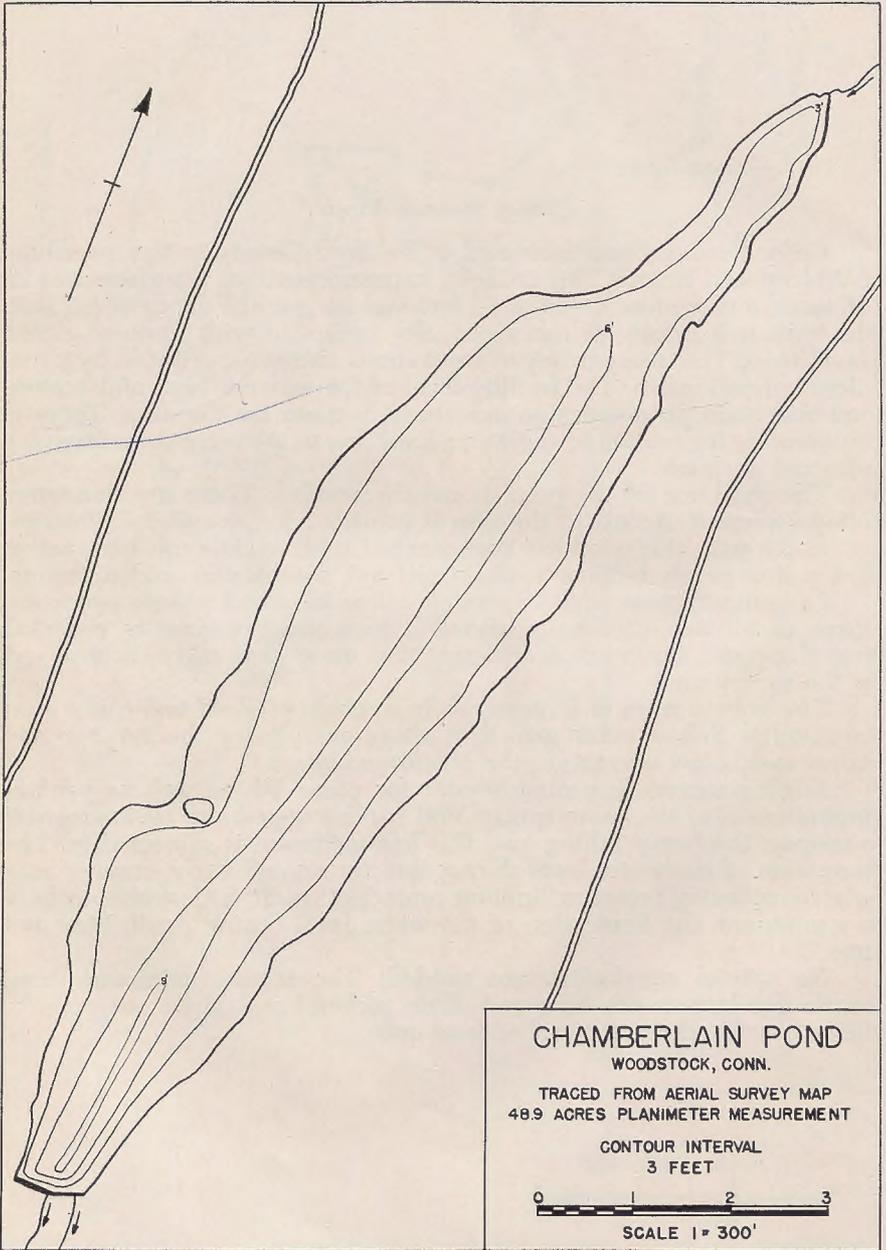
In the past, this pond has been stocked with smallmouth bass, calico bass, yellow perch, bullheads, chain pickerel, sunfish and golden shiners.

Largemouth bass, chain pickerel, calico bass and yellow perch are scarce in all age classes. Smallmouth bass are occasionally reported from this pond. Bullheads are present, but none were taken or observed by the survey crew.

The growth rates of largemouth bass, chain pickerel and calico bass are average. Yellow perch growth is above average for the first two age classes and below average in the older age classes.

Angling success is probably poor for game fish as well as panfish. Reproduction of the game species and panfish appears to be inadequate to support the heavy fishing load this impoundment is subjected to. The fluctuation of the water level during late spring and early summer may be a contributing factor in limiting reproduction. It is desirable to hold to a minimum the fluctuation of the water level during April, May and June.

No special regulations are needed. The regular minimum legal lengths for largemouth bass and chain pickerel should be adequate to allow these species to spawn at least once.



CHAMBERLAIN POND

Chamberlain Pond is a small, shallow, artificial pond located in Windham County in the township of Woodstock. This impoundment is spring-fed with well-wooded shores. It covers a surface area of 48.9 acres, has a maximum depth of 10 feet and an average depth of 3.9 feet. Dense beds of submerged vegetation cover the entire pond bottom and the pond is almost completely choked with submerged and emergent vegetation. The water is stained a dark, tea color and transparency is reduced to approximately three feet. Gravel, rubble and silty ooze make up most of the pond bottom. Like most shallow ponds, thermal stratification does not take place.

There are no cottages on the shores of this impoundment. Public access is provided only through one small boat livery; all other public facilities are lacking.

Stocking records indicate that Chamberlain Pond has no past stocking history.

Chain pickerel are common in abundance. Yellow perch are scarce and golden shiners and bullheads are common in abundance. Chub suckers are present but scarce. The growth rate of all species are well below the state averages.

This impoundment should be managed for chain pickerel, yellow perch and bullheads. Chamberlain Pond can be expected to supply reasonably good bullhead fishing and fair pickerel fishing. This pond would be suitable for largemouth bass but, usually bullhead fishing deteriorates after the introduction of bass. Bullhead fishing can be expected to furnish satisfaction to a greater number of anglers than can be supplied by bass fishing.

No special regulations are needed at this time.

COMPENSATING RESERVOIR

Compensating Reservoir is located in Litchfield and Hartford Counties in the township of Barkhamsted and New Hartford. This body of water is artificial in origin and was formed by the construction of an earthen and concrete dam across the East Branch of the Farmington River, a short distance below Barkhamsted Reservoir. The resulting impoundment has a surface area of 387 acres, a maximum depth of 60 feet and an average depth of 22.1 feet. It is fed by water drawn from the bottom of Barkhamsted Reservoir and by Beaver Brook. Aquatic vegetation is very scarce. The bottom is mostly of sand, gravel and boulders. The waters of this reservoir are thermally stratified. Extreme drawdown and sudden inflows of large volumes of water from Barkhamsted Reservoir often disturb and alter the stratification.

Compensatory Reservoir is owned by the Metropolitan Water Bureau, but it is not a part of the potable water supply for Hartford. The reservoir is open to fishing, boating and swimming. There is a boat livery and boat launching area at the northeastern end of the reservoir. Swimming and picnic facilities are also available.

This impoundment has been stocked with yellow perch, chain pickerel, bullheads, brook trout, rainbow trout and brown trout.

Chain pickerel are abundant in the younger age classes, but are restricted to the shallow coves. Elsewhere in the reservoir they are extremely scarce. Yellow perch, smallmouth bass, common sunfish, rock

bass, calico bass, golden shiners and bullheads are present, but scarce. The reservoir has an extensive history of trout stocking but holdover fish are rare.

Fishing is probably poor except for trout stocked for the year.

The growth rate for chain pickerel is below average. Smallmouth bass growth is slightly above average, but this species is infested with the bass tapeworm. Yellow perch growth is variable but, in general, above average. Rock bass exhibit good growth.

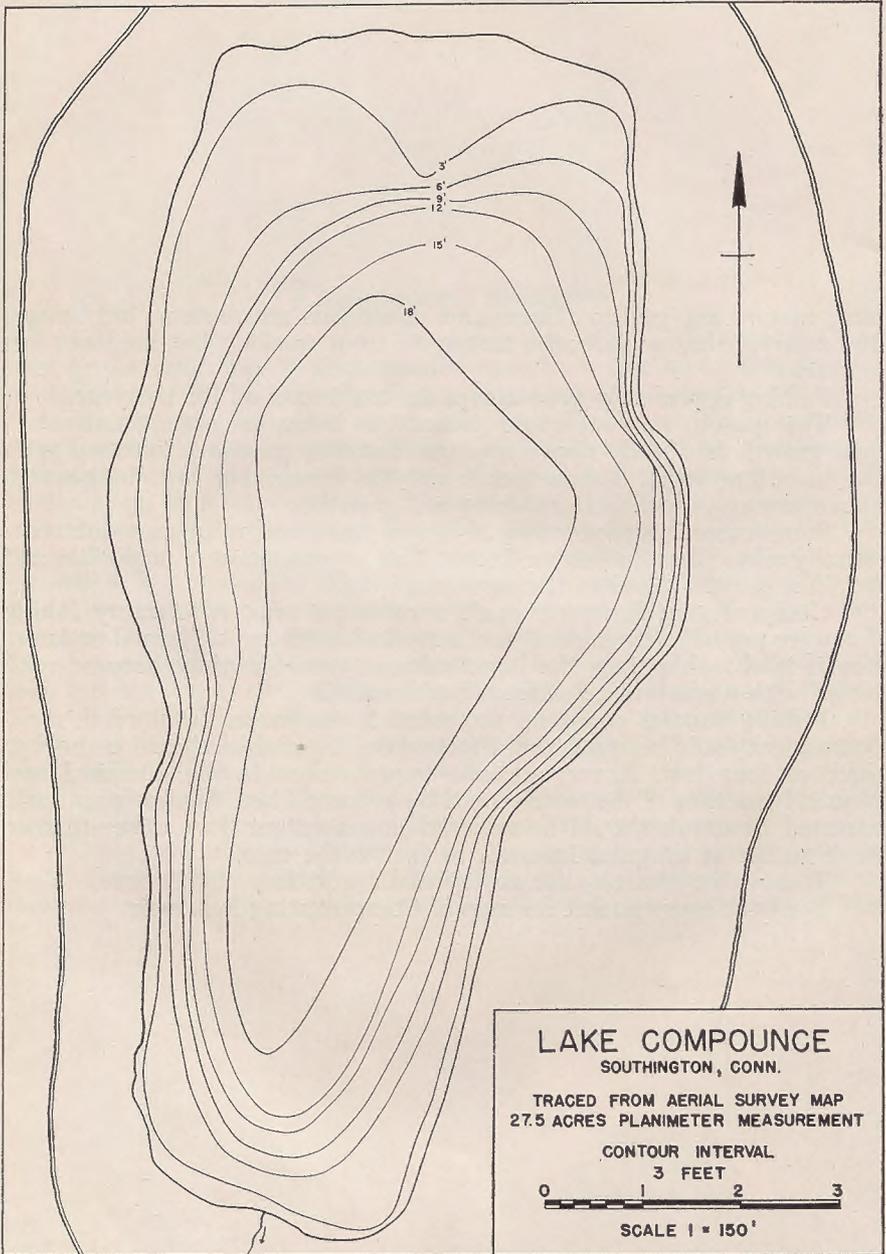
Some natural reproduction of brown trout and rainbow trout occasionally takes place in Beaver Brook. This reproduction is negligible and its effect is not noticed in the reservoir.

Compensating Reservoir could furnish the most satisfactory fishing if it were periodically drained and restocked with trout. Normal reclamation is inadvisable since the impoundment would rapidly become reinfested with warm-water fish from Barkhamsted.

Fishing success could be improved if the water level of this impoundment could be stabilized. Fluctuation, if possible, should be held to three or four feet. A very definite improvement in the chemical and physical qualities of the water could be accomplished. Water from Barkhamsted Reservoir should be released in a constant flow rather than in huge gushes at irregular intervals as is now the case.

There is no necessity for any special regulations at this time.

See back cover pocket for map of Compensating Reservoir.



LAKE COMPOUNCE

Lake Compounce is located in Hartford County in the township of Southington. This small natural lake has a surface area of 27.9 acres, a maximum depth of 19 feet and an average depth of 10.2 feet. The bottom is largely of sand, gravel and mud. Submerged and emergent vegetation is scarce. A light algal bloom in the summer reduces transparency to approximately six feet.

The shoreline of this privately owned lake is mostly wooded. There are picnic and swimming facilities available for a fee, but there is no boat livery.

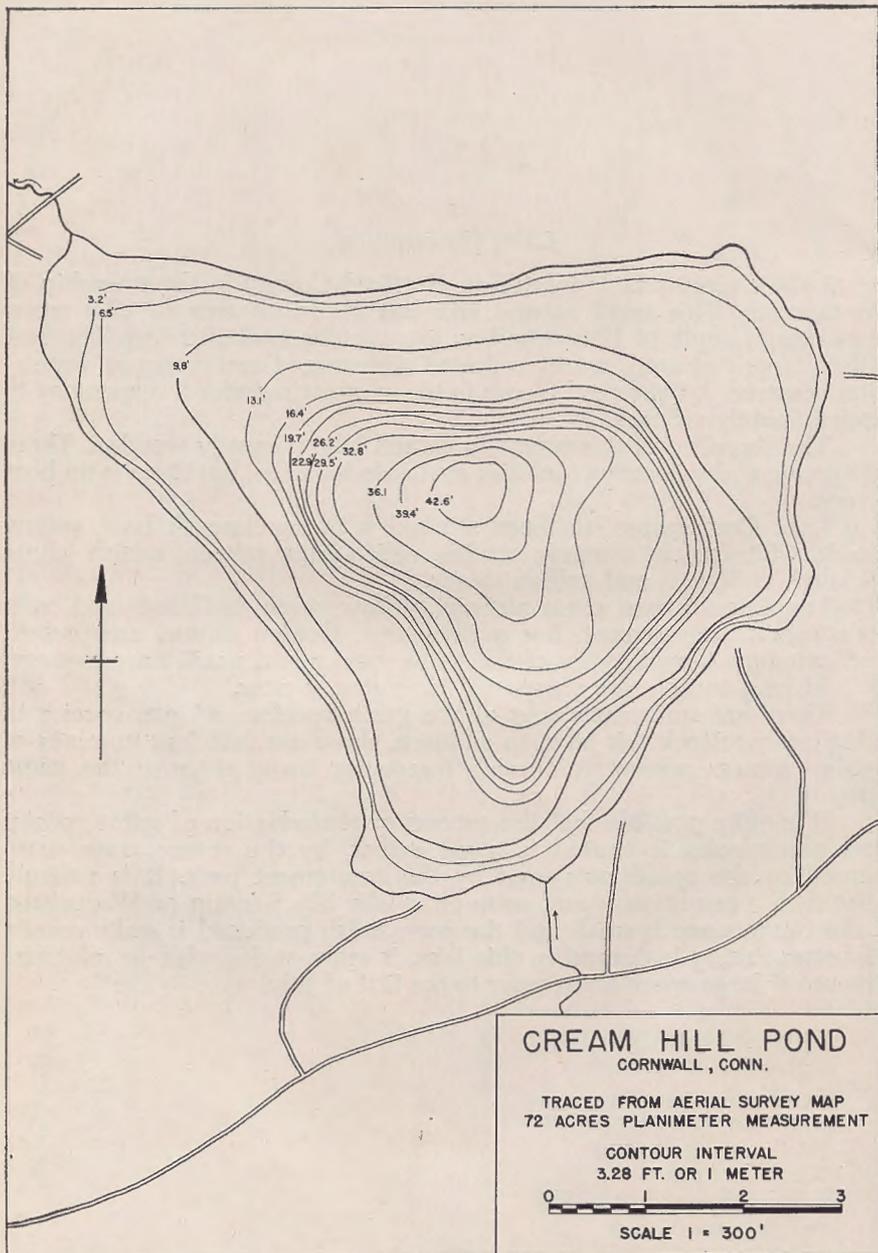
Lake Compounce has been stocked with smallmouth bass, yellow perch, white perch, common sunfish, calico bass, salmon, catfish, chain pickerel, bullheads and golden shiner.

Largemouth bass, chain pickerel, yellow perch, bullheads and common suckers are present, but quite scarce. Golden shiners are present and common. Growth rates of the game species and panfish are average.

Fishing success for all species is relatively poor.

There are sufficient stocks of the game species and pan species to adequately restock this lake. In addition, there are sufficient numbers of golden shiners present to furnish forage for many more of the game species.

It is quite possible that the success of reproduction of game species and pan species is limited to some extent, by the severe wave wash caused by the speedboats used by the amusement park. It is unlikely that such a condition would arise on a lake like Bantam or Waramaug. Lake Compounce is small and the wave wash produced is quite severe. If better fishing is desired in this lake, it appears desirable to minimize the use of large speed boats prior to the first of July.



CREAM HILL POND

Cream Hill Pond is located in Litchfield County in the township of Cornwall. It covers a surface area of 72 acres, has a maximum depth of 43 feet and an average depth of 15.7 feet. The pond is natural in origin and the water level has been raised slightly by a low earthen and masonry dam. This water level is maintained by bottom springs and the inflow from one very small brook. The shoreline is almost entirely wooded. The bottom is largely of coarse boulders and there are dense beds of submerged vegetation in the shoal areas. The pond is thermally stratified and the deep waters are fairly well supplied with dissolved oxygen.

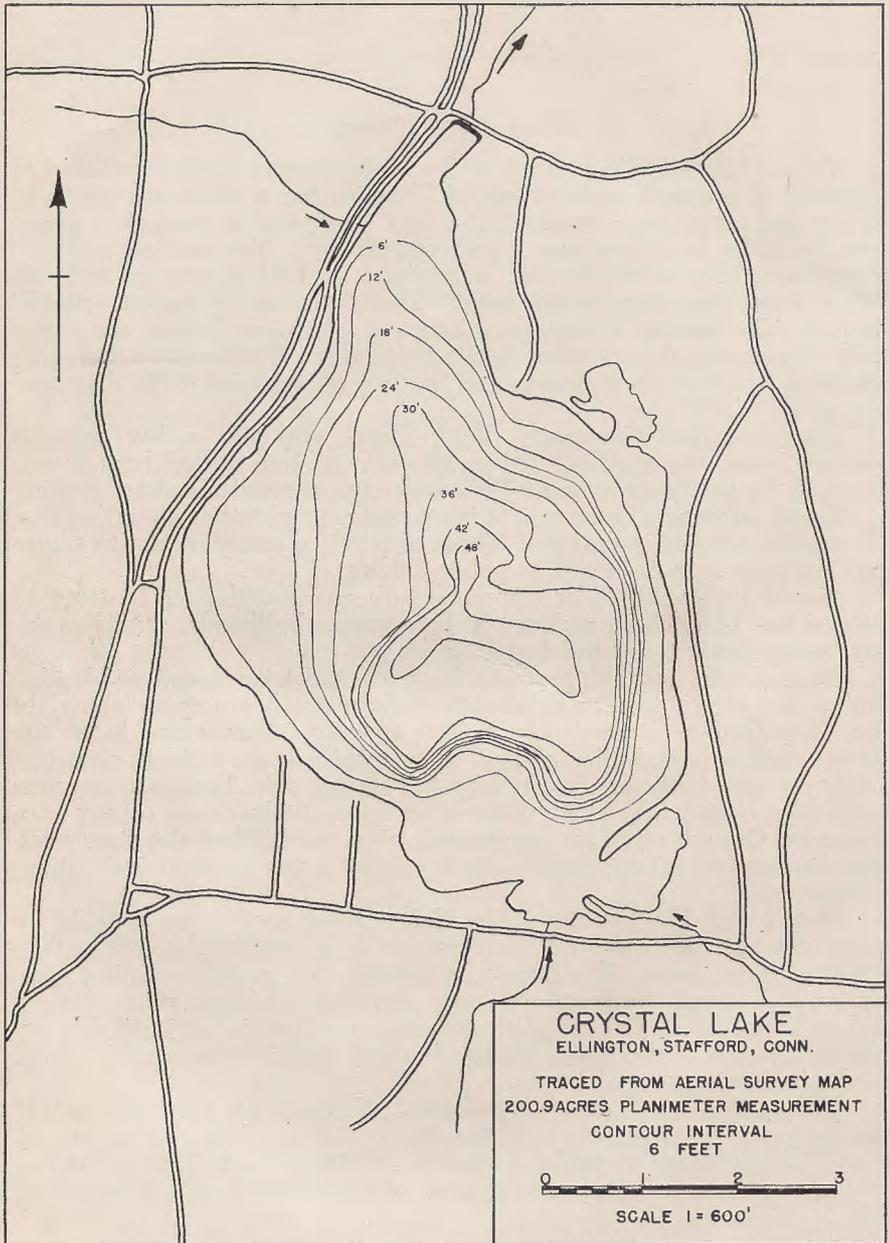
Shoreline development is slight. There are only a few cottages present. Boats are available for rental from a state-owned boat livery. Privately owned boats may not be launched at the state landing. Fishing is allowed only from boats and it is necessary to obtain a permit to fish. The use of motors is prohibited. These restrictions are necessary to assure that the pond remains open to public fishing.

Cream Hill Pond has been stocked with smallmouth bass, largemouth bass, calico bass, chain pickerel, yellow perch, bullheads, sunfish, rainbow trout, brook trout and brown trout.

Smallmouth bass, largemouth bass, chain pickerel and red-bellied sunfish are scarce in all age classes. Yellow perch are more abundant than the above-mentioned species, but are also rather scarce in all age classes. Calico bass, bullheads and golden shiners are reliably reported, but none were taken or observed by the survey unit. Trout are common in the age class stocked but there is no apparent holdover of any consequence. Growth rates are, in general, poor, well below the state averages except for yellow perch which exhibit good growth, well above average.

Cream Hill Pond contains a moderate volume of water suitable for trout. It is not ideally suited for trout, but it is considerably better than marginal trout water. This pond can provide the greatest angling satisfaction if it is reclaimed with rotenone and restocked with rainbow trout and/or brook trout. The use of this management tool is not justifiable unless greater use of the pond can be obtained than is now possible under the limited access available.

Unless this pond can be reclaimed, there is no need for special regulations as to minimum legal lengths. If this pond can be reclaimed, it will be necessary to prohibit the use of fish as bait. This regulation will be necessary to reduce the chances of reinfestation with warm-water fish.



CRYSTAL LAKE

Crystal Lake is located in Tolland in the townships of Ellington and Stafford. This impoundment is natural in origin with the level raised approximately six feet by a concrete dam. It is fed by Aborn Brook, two other small tributaries and bottom springs. The lake has a surface area

of 200.9 acres, a maximum depth of 50 feet and an average depth of 19.6 feet. Submerged and emergent vegetation is scarce and confined mostly to the shallow areas. The bottom in the shoal areas is mostly of sand, gravel and boulders. The water is clear and the transparency exceeds 10 feet. This impoundment is thermally stratified and the deep waters are well supplied with dissolved oxygen. An oxygen deficit exists below 40 feet.

The shoreline is partially wooded. Cottages and summer homes are very numerous. Public access is provided through two large boat liveries and a state-owned boat launching area. Swimming facilities are available at the locations on a fee basis.

Crystal Lake has an extensive stocking history and has been stocked with smallmouth bass, largemouth bass, yellow perch, chain pickerel, calico bass, bullheads, smelt, catfish, sunfish, golden shiners, land-locked salmon, lake trout, brook trout, rainbow trout and brown trout.

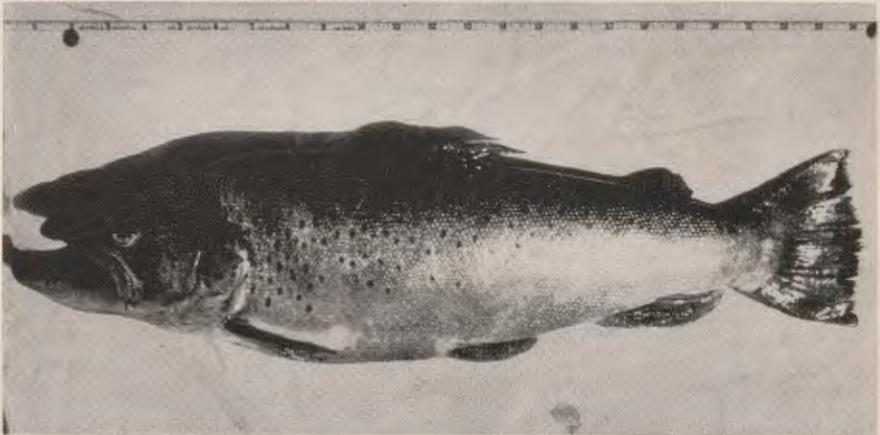
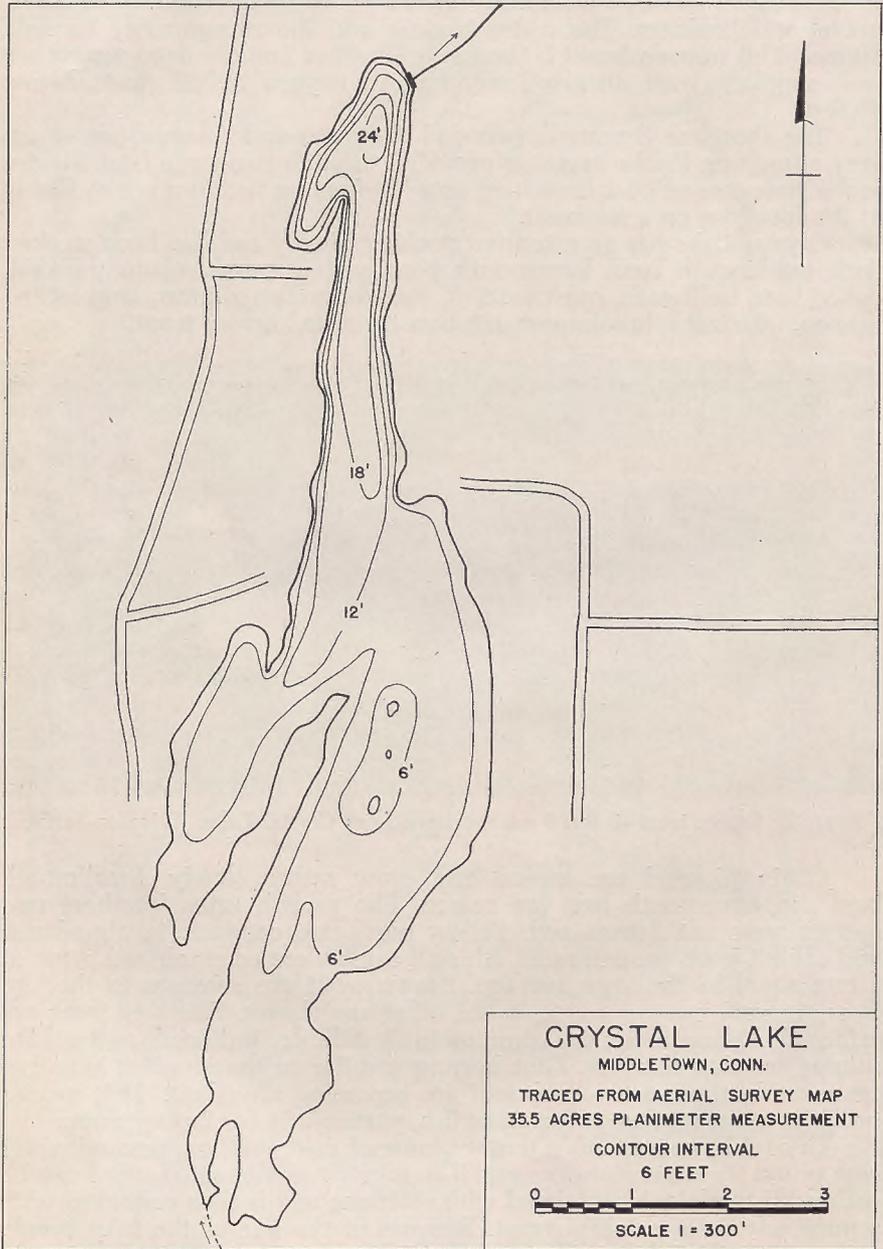


FIGURE 58. Brown trout—6 lbs. 6 oz. specimen from Crystal Lake, Ellington-Stafford.

Chain pickerel are scarce and grow rather slowly. Smallmouth bass and largemouth bass are scarce. The growth rates for these two species were not determined. Yellow perch are common in abundance and exhibit good growth rates. Bluegill sunfish are common and grow at a rate equal to the state average. Brown trout are common in the age class stocked, but are scarce in the older age classes. Rainbow trout are extremely scarce. Smelt are common in abundance. Bullheads and golden shiners are also common. Glut herring (similar to the alewife) have become established in this lake and are becoming abundant. This species provides excellent forage for game fish, particularly for brown trout.

Crystal Lake contains a large volume of cold, well-oxygenated water best suited for trout management. The greatest angler satisfaction can be realized if the lake is reclaimed with rotenone and is then restocked with a pure culture of rainbow trout. Because of the size of the inlet brook, reclamation of this lake will be a difficult, but not impossible task. Properly managed, this body of water should be capable of providing a yearly catch of ten to fifteen thousand trout.

When this lake is reclaimed, the use of fish (dead or alive) as bait will be prohibited.



CRYSTAL LAKE

Crystal Lake is located in Middlesex County in the township of Middletown. This lake is artificial in origin and has a surface area of 35.5 acres, a maximum depth of 24 feet and an average depth of 7.9 feet. Marginal emergent vegetation is scarce. There is a considerable quantity of submerged vegetation in the shallow areas. The bottom is of sand, gravel, ledge and mud. The water is clear and normally quite transparent. The lake is thermally stratified, but stratification takes place only in one small deep hole at the northern end of the basin. The shoreline is mostly wooded.

Shoreline development is fairly extensive; there are numerous cottages present. There is a boat livery present on the eastern side of the lake and there are swimming facilities available at this point for a fee.

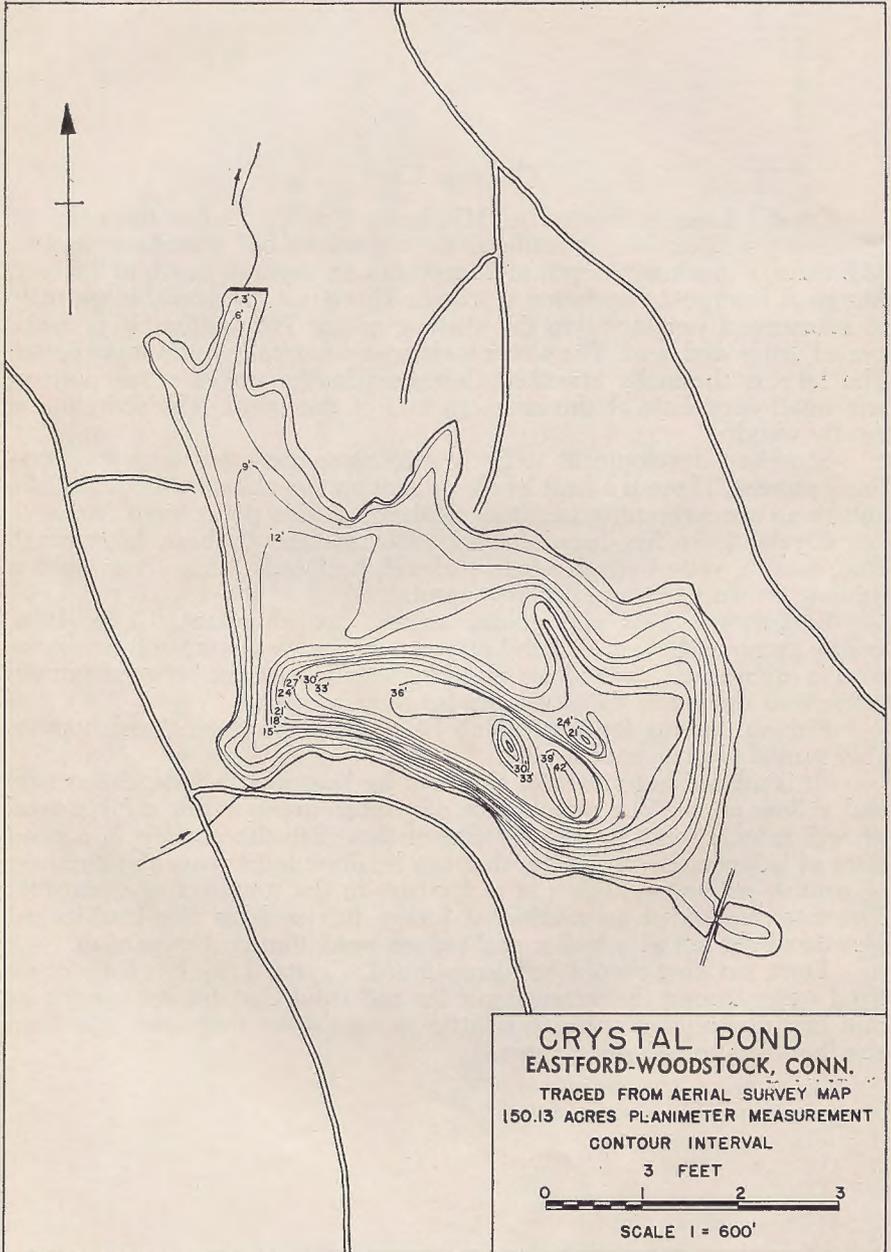
Crystal Lake has been stocked with smallmouth bass, largemouth bass, sunfish, yellow perch, chain pickerel, bullheads, calico bass, golden shiners, brown trout and rainbow trout.

Largemouth bass and golden shiners are abundant. Calico bass, yellow perch and chain pickerel are scarce. The common sunfish is common in abundance. Calico bass and largemouth bass exhibit good growth rates; well above the state averages for these species.

Fishing success for largemouth bass should be good. Panfish probably provide rather poor fishing.

It is advisable to manage this lake for largemouth bass, calico bass and yellow perch. The populations of panfish are low but exhibit good growth rates. Except for the scarcity of these fish the pond is in a good state of balance. There is little that can be done to increase the numbers of panfish without resulting in a decrease in the numbers of game fish. The introduction of an additional forage fish such as the land-locked alewife might act as a buffer and reduce predation on the panfish.

Trout stocking should be discontinued. Crystal Lake has little or no trout water during the summer months and trout that are not caught by mid-July probably die. There is little or no chance that uncaught trout can live over to following years.



CRYSTAL POND

Crystal Pond is a moderately deep natural pond located in Windham County in the townships of Woodstock and Eastford. It has a surface area of 150.1 acres, a maximum depth of 44 feet and an average depth of 14.5 feet. The water level in this impoundment has been raised slightly by a small concrete dam. The lake is mostly spring-fed. Submerged and emergent vegetation is scarce and is confined mostly to the shoal areas. The bottom is composed of coarse rubble and boulders with scattered areas of mud and sand. The water is clear and the transparency exceeds 8 feet. This pond is thermally stratified and the deep waters are well supplied with dissolved oxygen.

The shoreline is well wooded with numerous cottages and summer homes. Access to the lake is limited to one small boat livery. There are no public facilities on this impoundment.

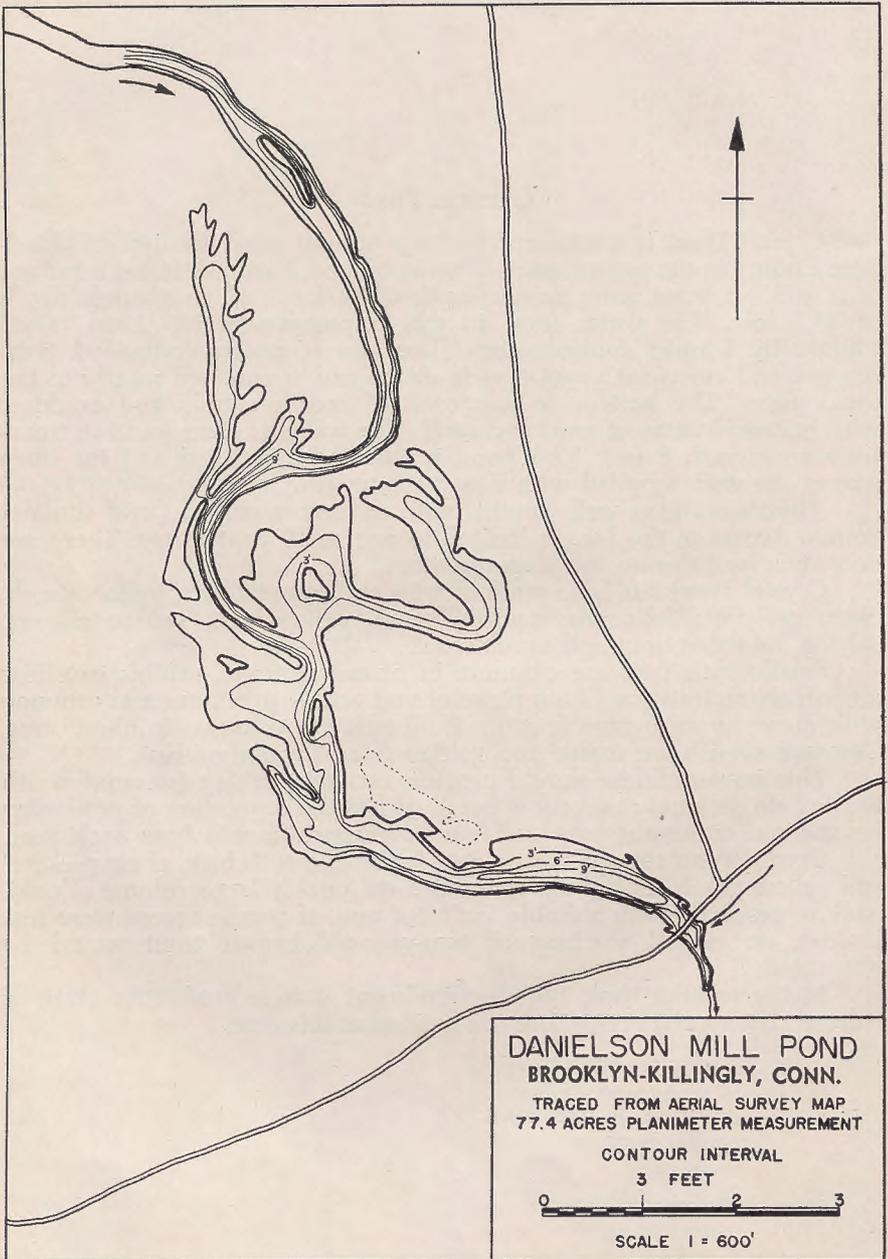
Crystal Pond has been stocked with smallmouth bass, yellow perch, chain pickerel, bullheads, sunfish, smelt, calico bass, golden shiners, salmon, rainbow trout and brook trout.

Smallmouth bass are common in abundance and exhibit excellent growth characteristics. Chain pickerel and yellow perch are also common with above-average growth rates. Bullheads are common in abundance. Common sunfish are scarce and golden shiners are abundant.

This impoundment should provide excellent fishing for smallmouth bass, chain pickerel and yellow perch. It has the reputation of producing for the rod numerous four and five pound smallmouth bass each year.

Crystal Pond should be managed for smallmouth bass, chain pickerel and yellow perch. This pond contains a reasonably large volume of cold, well-oxygenated water suitable for trout and, if public access were less limited, an annual stocking of two-year-old brown trout would be warranted.

At the present time, this impoundment is in a productive state of balance. No special regulations are needed at this time.



DANIELSON MILL POND

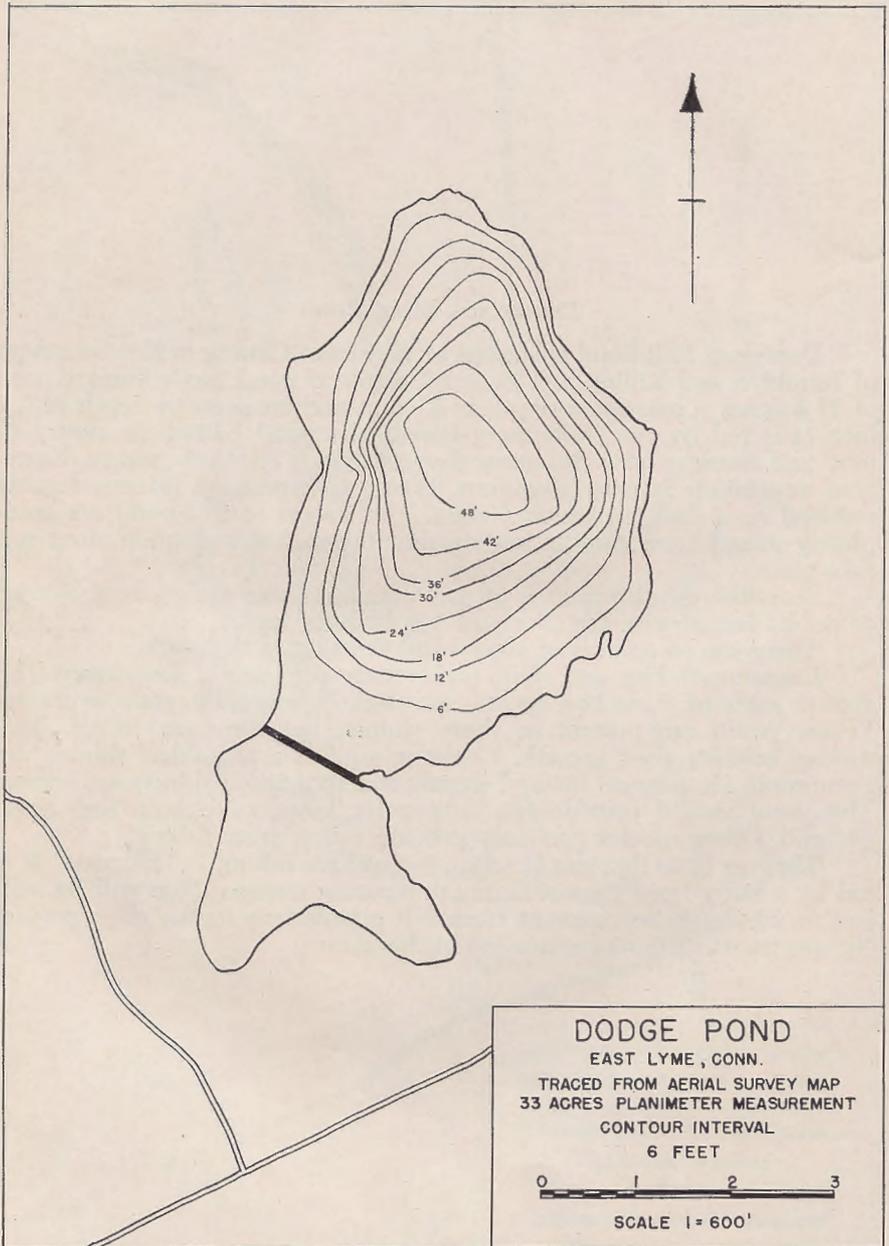
Danielson Mill Pond is located in Windham County in the townships of Brooklyn and Killingly. This small artificial pond has a surface area of 77.4 acres, a maximum depth of 11 feet and an average depth of 3.4 feet. It is fed by the Quinebaug River. The pond bottom is mostly of mud and swampy ooze. Submerged vegetation is relatively scarce. Emergent vegetation is very abundant. Water transparency is considerably reduced by a dark, tea-colored stain. The waters of this pond are completely mixed from top to bottom and thermal stratification does not take place.

Shoreline development is at a minimum. There are no boat liveries or public facilities on the shores of this body of water.

There are no records of any official stocking in this pond.

Largemouth bass and chain pickerel are common in abundance. The growth rates of these two species are slightly below the state averages. Yellow perch are present in these waters, but they are scarce. This species exhibits poor growth. Common sunfish and golden shiners are common in abundance. Bridled shiners and spot-tailed shiners are scarce. This pond should provide fair fishing for largemouth bass and chain pickerel. Other species probably provide rather poor fishing.

There is little that can be done to improve fishing in this pond. It is fed by a fairly large river and any population manipulation will be subject to wholesale recruitment from fish populations in the river proper. No special regulations are needed at this time.



DODGE POND

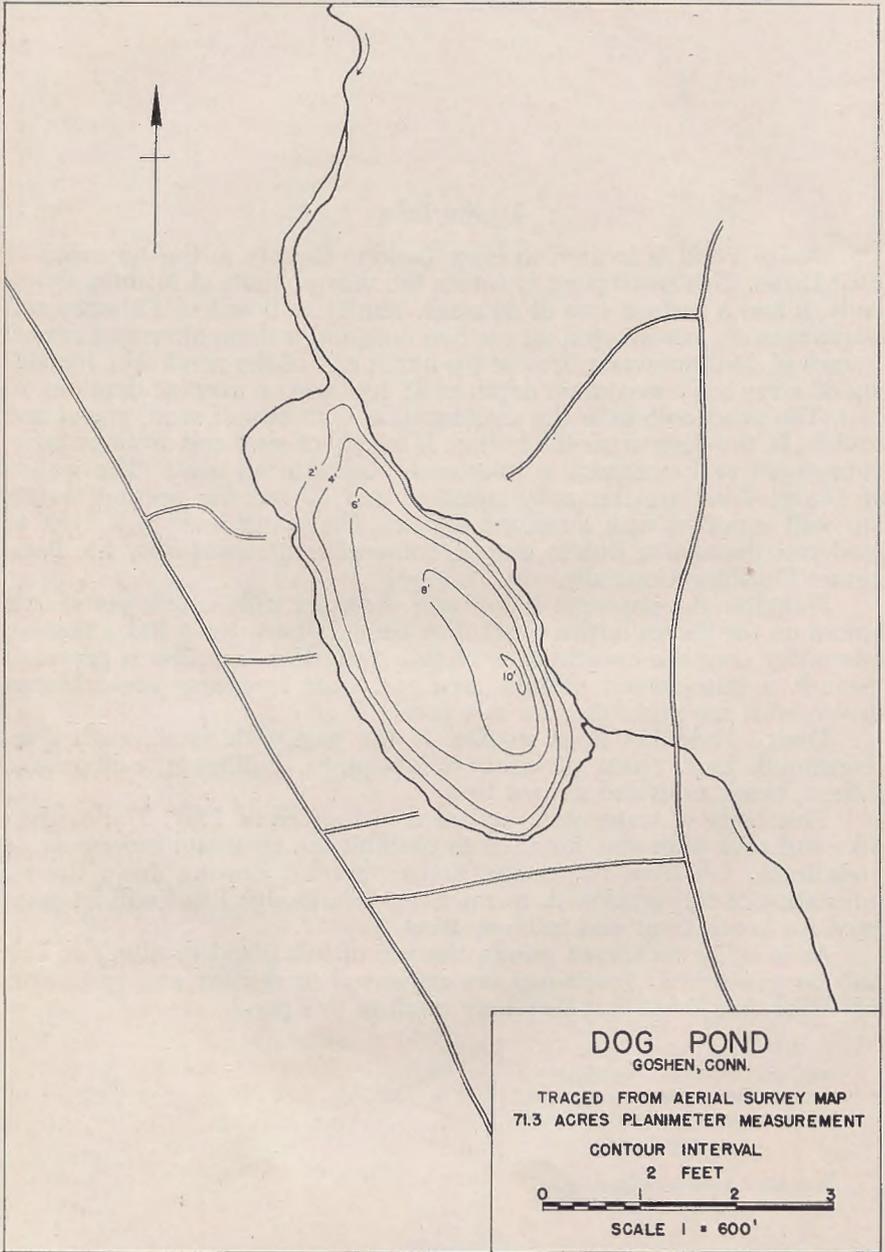
Dodge Pond is located in New London County in the township of East Lyme. This small pond is within the village limits of Niantic. Originally, it had a surface area of 40 acres. The State Board of Fisheries and Game recently constructed an earthen dike and a stone filter that cut off 7 acres of shallow swamp area at the outlet end of the pond. The remaining 33 acres has a maximum depth of 48 feet and an average depth of 20 feet. The pond bottom in the shallow areas is mostly of sand, gravel and rubble. In the deep areas the bottom is mostly of mud and swampy ooze. Submerged and emergent vegetation is scarce in all areas. The waters of Dodge Pond are thermally stratified and all but the deepest waters are well supplied with dissolved oxygen. The water level is subject to moderate fluctuation due to evaporation and to drawdown by the Pataganset Finishing Company.

Shoreline development is low and there are only a few permanent homes on the shores of this pond. The United States Navy has a floating laboratory over the deepest area of this pond. Public access is provided through a state-owned parking area and boat launching area. Motor-driven craft are prohibited on this pond.

Dodge Pond has been stocked in the past with smallmouth bass, largemouth bass, chain pickerel, yellow perch, bullheads, calico bass, shiners, brook trout and striped bass.

This body of water was reclaimed in the fall of 1957. The earthen dike and rock filter was installed to prohibit the upstream movement of undesirable fish from Pataganset Brook, thereby, slowing down the reinfestation of this pond with warm-water fish. Dodge Pond will be managed for brook trout and rainbow trout.

As in other reclaimed ponds, the use of fish (dead or alive) as bait will be prohibited. Sportsmen are requested to destroy any species of fish other than trout that they may catch in this pond.



DOG POND

Dog Pond is located in Litchfield County in the township of Goshen. This impoundment has a surface area of 71.3 acres, a maximum depth of 11 feet and an average depth of 4.7 feet. It is natural in origin, but has had its level raised by a low earthen and masonry dam. The pond is fed by bottom springs and by the West Branch of the Bantam River. The bottom is mostly mud and the water is stained a dark, tea color, almost black. There is abundant submerged and emergent vegetation in all areas of the pond and fertility is above average. The shoreline is mostly wooded.

There is a state-owned right-of-way, parking area and boat launching area available for public use. Boats may be rented at a small boat livery on the western side of the pond. Shoreline development is low and there are only a few cottages present.

Dog Pond has been stocked with calico bass, yellow perch, chain pickerel, smallmouth bass, bullheads, sunfish and golden shiner.

Largemouth bass are abundant as young-of-the-year and yearlings. This species is less abundant but still common in the older age classes. Yellow perch are abundant as young-of-the-year, but scarce in older age classes. Chain pickerel are scarce as young-of-the-year, but are common in the older age classes. Common sunfish are abundant in all age classes particularly in the shallow shoreline areas. Golden shiners are abundant in all age classes. Largemouth bass and yellow perch exhibit above-average growth rates. Chain pickerel growth is approximately equal to the state average for this species.

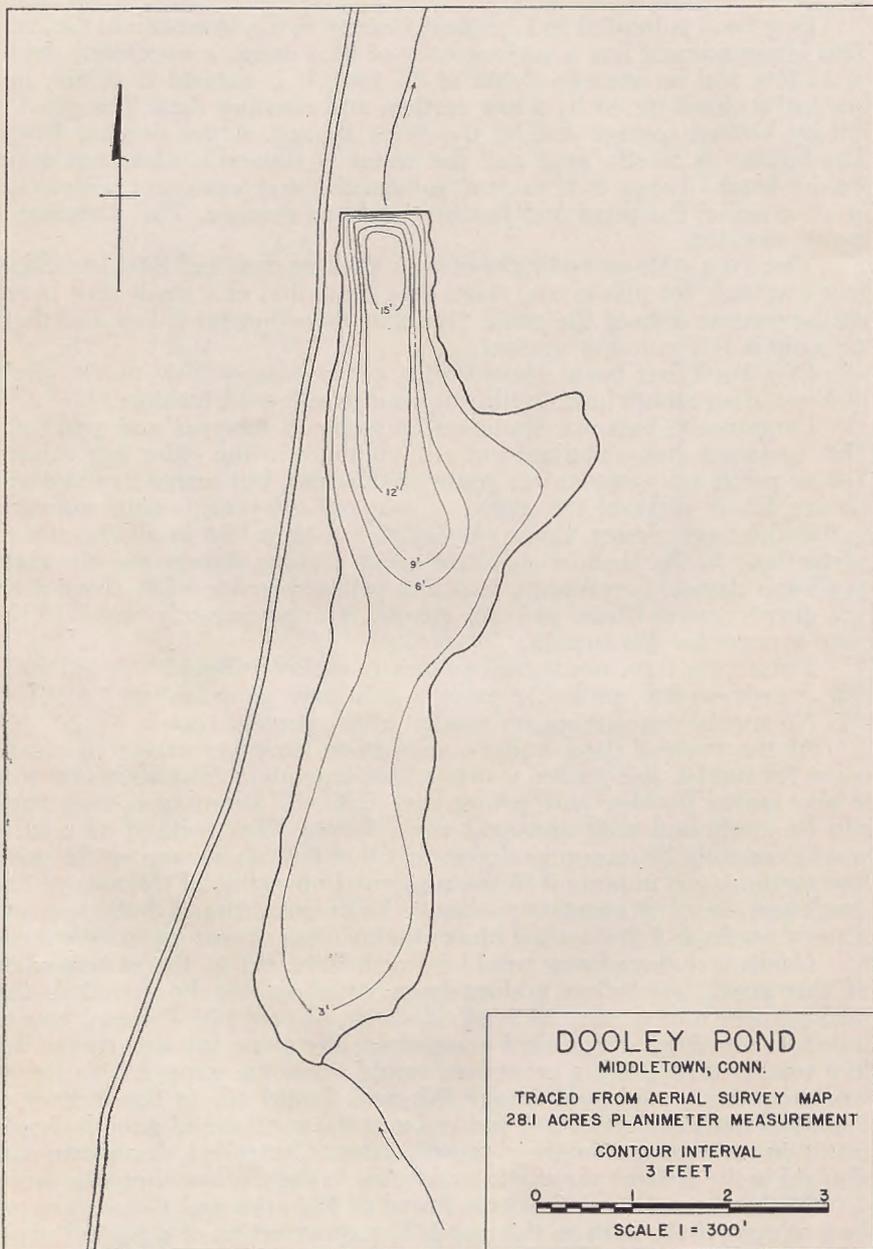
Fishing for largemouth bass and chain pickerel should be good. Panfish, except sunfish, probably provide relatively poor fishing.

No special regulations are needed at the present time.

At the present time, aquatic vegetation furnishes excessive escape cover for sunfish and golden shiners. This vegetation is so abundant that it also makes boating and fishing very difficult. Submerged vegetation can be controlled with chemical weed killers. This method of control would normally be recommended except that there is a camp on the pond and swimming is important to the continued operation of this camp. The death and decay of vegetation releases large quantities of fertilizers and usually results in a dense algal bloom that is often obnoxious to swimmers.

Controlled drawdown would be a definite aid in the management of this pond, but unless a drawdown structure can be installed, this management tool cannot be used. If the pond could be lowered two to four feet every fall, this would concentrate the game fish and forage fish in a smaller area. Such a procedure would allow the game fish to forage freely on the panfish and forage fish and should aid in the control of these less desirable species. A reduction in the numbers of panfish should result in an increase in their growth rates. Controlled drawdown can also aid in the control of aquatic vegetation in the shallow shoreline areas.

At the present time, the State Board of Fisheries and Game does not own or control the dam on this pond. The construction of a control structure cannot be undertaken by the Board unless they own the dam and water rights.



DOOLEY POND

Dooley Pond is located in Middlesex County, in the township of Middletown. This small artificial pond has a surface area of 28 acres, a maximum depth of 16 feet and an average depth of 4.9 feet. The pond is impounded by a small earthen and masonry dam and it can be almost completely drained. It is fed by bottom springs and small brooks. There is some marginal vegetation around the shores. The bottom is mostly of mud with some sand, gravel and rubble. The waters are almost completely choked with submerged vegetation, particularly in the shallow southern end of the pond. During most of the late spring, summer and early fall, a dense algal bloom reduces transparency to less than two feet. This pond is extremely fertile. The shoreline is mostly open pasture.

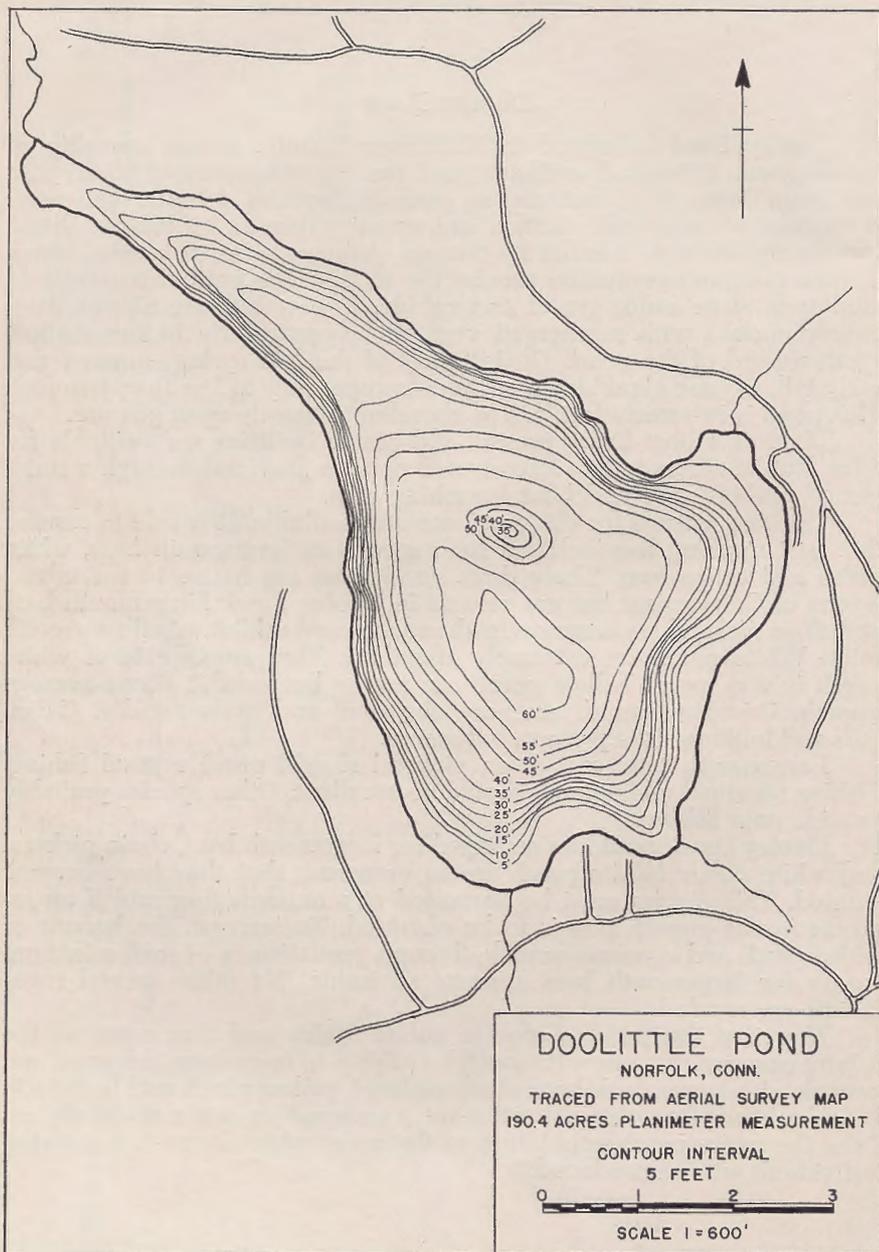
There is a boat livery present and picnic facilities are available for a fee. Public access to this state-owned pond is provided through a state-owned parking area and boat launching area.

Stocking records for this pond are not available. It is safe to assume that past stocking has included such species as largemouth bass, white perch and calico bass. These three species are not native to the inland waters of Connecticut but are present in Dooley Pond. Largemouth bass and chain pickerel are common in abundance and exhibit excellent growth rates. White perch are extremely abundant. The growth rate of white perch is very poor. Yellow perch are scarce but exhibit above-average growth. Common sunfish are very abundant and grow rapidly. Calico bass and bullheads are present, but scarce.

Largemouth bass and chain pickerel should provide good fishing. Fishing for small white perch should be excellent. Other species probably provide poor fishing.

Dooley Pond should be managed for largemouth bass, chain pickerel and white perch. White perch are so numerous that they have become stunted. This species must be harvested at a much higher rate if an increase in the growth rate is to be obtained. To increase the harvest of white perch and common sunfish, through predation, a 14-inch minimum length for largemouth bass appears advisable. No other special regulations are needed.

Now that this pond is open to public fishing and if as expected the fishing pressure increases, it would be advisable to reclaim the pond and restock with largemouth bass, chain pickerel, yellow perch and bullheads. It is doubtful if anything short of total reclamation can successfully reduce the white perch population to the point where large fast growing individuals will be produced.



DOOLITTLE LAKE

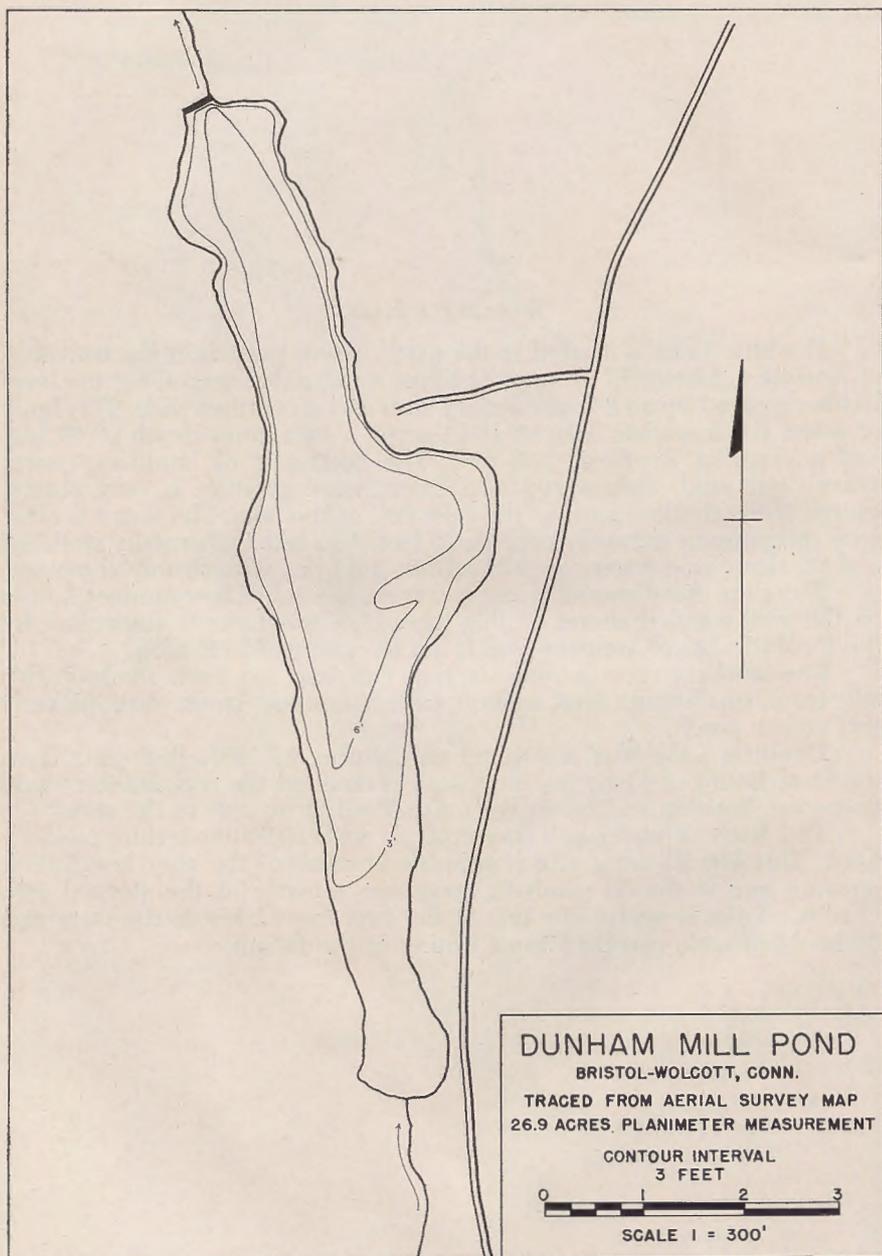
Doolittle Lake is located in the northeastern portion of the township of Norfolk in Litchfield County. The lake is natural in origin, but the level has been raised by an 8-foot masonry dam and an earthen dike. This body of water has a surface area of 190.4 acres, a maximum depth of 60 feet and an average depth of 29.8 feet. The bottom is of boulders, coarse gravel and sand. Submerged and emergent vegetation is very scarce, except in the shallow areas at the inlet end of the lake. The water is clear and transparency normally exceeds 20 feet. The lake is thermally stratified and the deep, cold waters are abundantly supplied with dissolved oxygen.

Shoreline development is low and there are only a few summer homes on the well-wooded shores of this lake. Doolittle Lake is controlled by the Doolittle Lake Company and is not open to public fishing.

The stocking records indicate that this lake has been stocked with lake trout, smallmouth bass, salmon, catfish, rainbow trout, chain pickerel and yellow perch.

Doolittle Lake was reclaimed on October 8, 1957. Biologists from the State Board of Fisheries and Game performed the reclamation work. Rotenone, housing and meals were furnished at no cost to the state.

This body of water will be restocked with 10,000 fingerling rainbow trout. This low stocking rate is possible because of the very low fishing pressure and it should result in maximum growth for the stocked fish. Doolittle Lake is potentially one of the best trout lakes in the state and it should provide excellent trout fishing in the future.



DUNHAM MILL POND

Dunham Mill Pond is located in Hartford and New Haven Counties in the townships of Bristol and Wolcott. This artificial impoundment has a surface area of 26.7 acres, a maximum depth of 8 feet and an average depth of 4.8 feet. The dam is of earth and masonry construction. The original drawdown device is inoperable. Submerged and emergent vegetation is abundant, particularly in the shallow areas. The bottom is of gravel, rubble and swampy ooze. Bottom food production is average. The water level is subject to considerable fluctuation.

This pond is controlled by the Jacklin Rod and Gun Club of Bristol and is not open to public fishing. Shoreline development is low and there are only a few cottages present. There is no public right-of-way and there are no boat liveries present. The shoreline is mostly wooded.

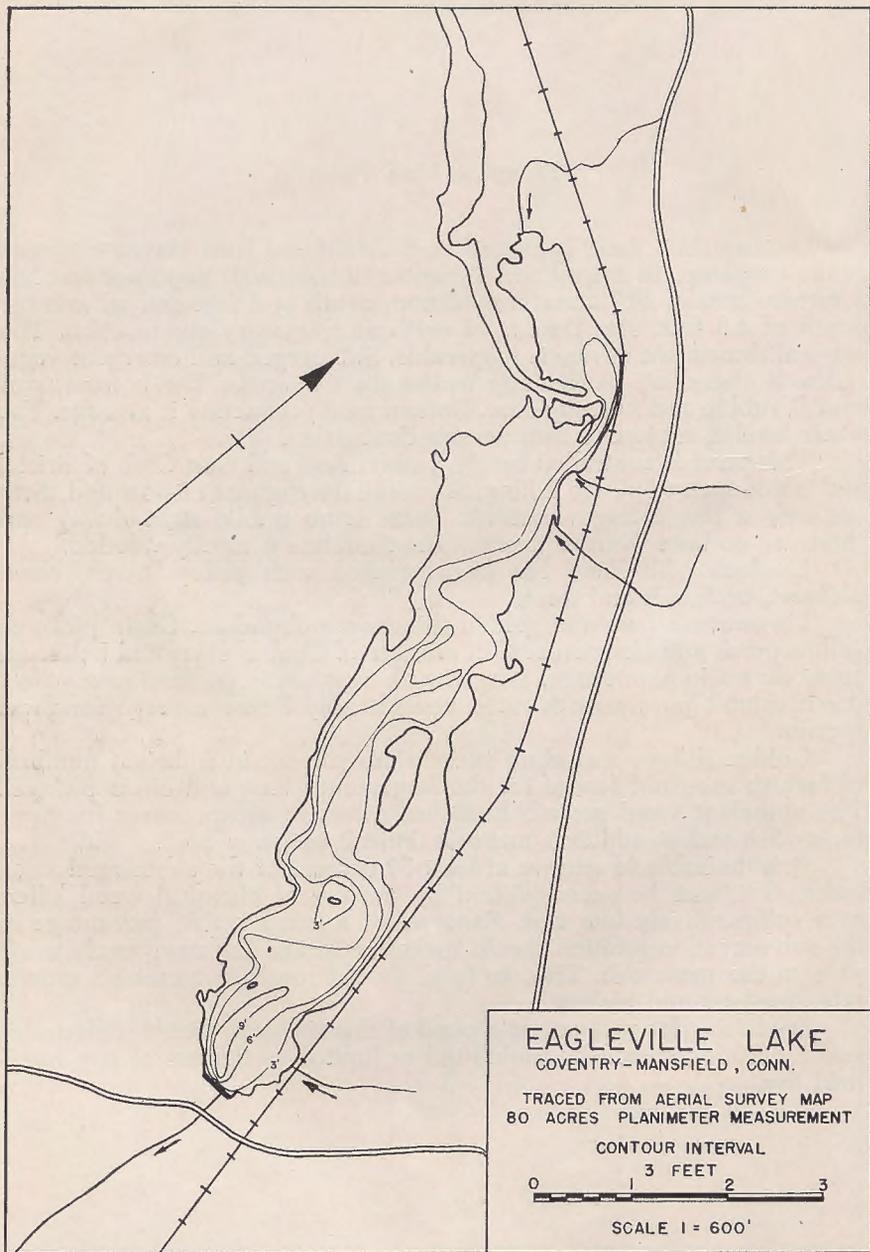
Dunham Mill Pond has been stocked with yellow perch, chain pickerel, bullheads and trout.

Largemouth bass and golden shiners are abundant. Chain pickerel, yellow perch and common sunfish are scarce. Chub suckers and bullheads are common in abundance. Largemouth bass, chain pickerel and yellow perch exhibit poor growth rates, considerably below average for these species.

Golden shiners and chub suckers are present in sufficient numbers to furnish excellent forage for the largemouth bass and chain pickerel. The abundant weed growth furnishes excessive escape cover for these forage fish and, in addition, makes it difficult to fish or boat.

It is desirable to remove at least 50 percent of the submerged vegetation. This can be accomplished by the use of chemical weed killers at a comparatively low cost. Removal of a considerable percentage of the submerged vegetation should make the forage fish more easily available to the game fish. This, in turn, should result in increased growth rates for bass and pickerel.

Ice fishing for pickerel on a pond of this size is probably undesirable and ice fishing should be prohibited or limited to the use of two hand-held jigs.



EAGLEVILLE LAKE

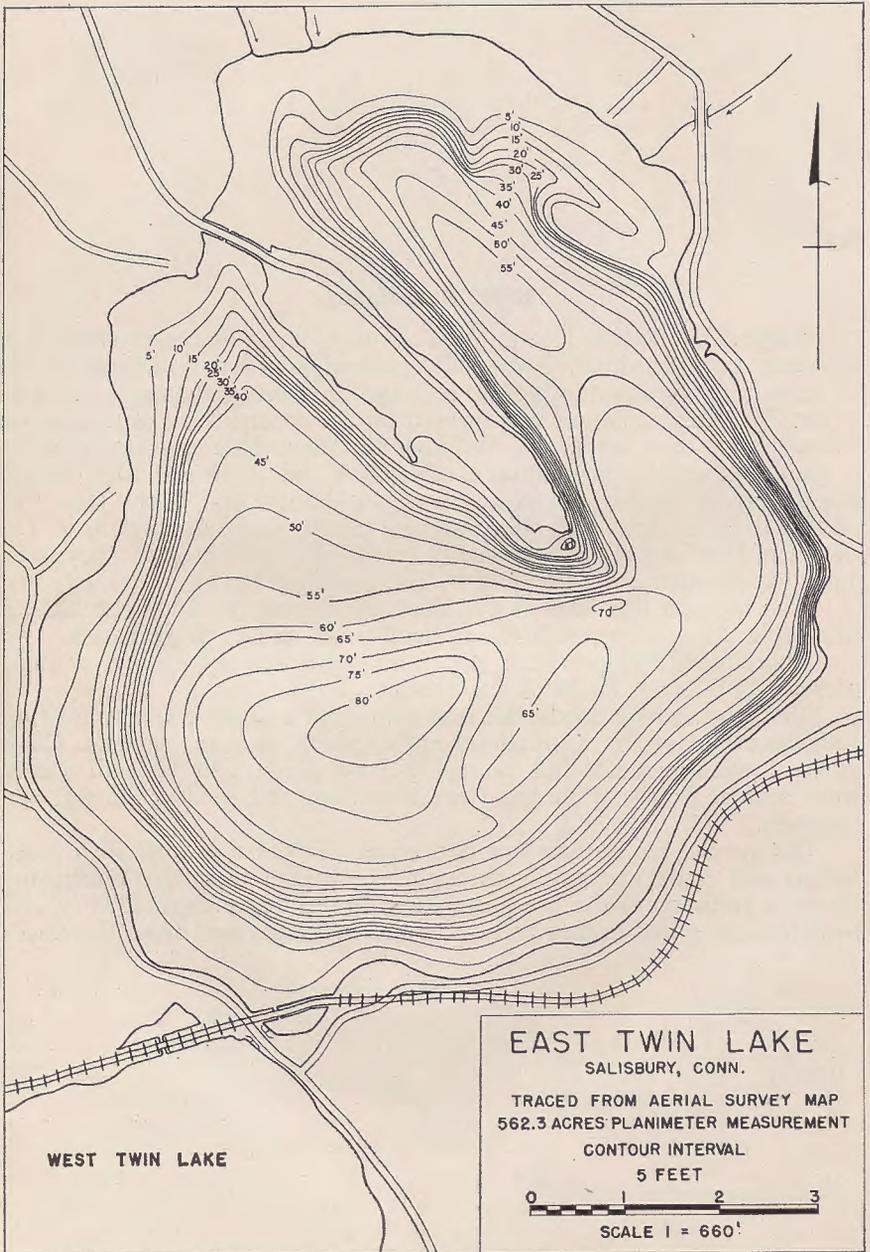
Eagleville Lake is located in Tolland County in the townships of Coventry and Mansfield. This small, shallow pond has a surface area of 80 acres, a maximum depth of 10 feet and an average depth of less than 3 feet. This impoundment was formed by the construction of an earthen and masonry dam across the Willimantic River. Submerged vegetation is scarce. Emergent vegetation is abundant and there are large island-like clumps of pickerel weed in the upper shallow end of the lake. The lake bottom is mostly of sand, gravel, rubble and swampy ooze. The waters of this lake are not thermally stratified. Water transparency is reduced to approximately two feet by a dense algal bloom.

The dam on this lake was washed out during the floods of 1955. It was replaced shortly thereafter and reflooded almost immediately.

Shoreline development is light and there are only a few cottages present. Public use facilities are absent.

Prior to the 1955 floods, this lake contained a sizeable fish population. Largemouth bass were abundant and exhibited average growth. Chain pickerel were present, but scarce. Yellow perch and bluegill sunfish were scarce. Common sunfish were abundant and golden shiners were common.

No special regulations are needed at the present time. Fish populations will build up rapidly through recruitment from the Willimantic River. A resurvey of the fish population should be made in 1958 or 1959 to determine whether this body of water has recovered from the floods.



EAST TWIN LAKE

East Twin Lake is the largest body of water in the state that is suitable for trout and open to public fishing. It has a surface area of 562.3 acres, a maximum depth of 80 feet and an average depth of 32.4 feet. This lake is located in Litchfield County in Salisbury township. The lake is natural in origin, and is fed by very small brooks and numerous bottom springs. In shallow areas, the bottom is mostly of sand, gravel and rock. There are dense beds of low submerged vegetation at depths below the zone of wave action. The northern end of the basin is shallow, and there is abundant submerged and emergent vegetation in this area. The lake is located in the limestone region and the water is hard. The unusually high transparency, which exceeds 25 feet, allows rooted vegetation to grow at great depths. The bottom is very productive of fish food organisms at all depths. The lake is thermally stratified, and the waters are well supplied with dissolved oxygen, even in the deepest areas. The shores are mostly wooded.

Shoreline development is moderately high and there are numerous cottages present. Access is provided by a state-owned right-of-way and through boat liveries.

East Twin Lake has an extensive stocking history. It has been stocked with land-locked salmon, lake trout, smallmouth bass, rainbow trout, white perch, chain pickerel, yellow perch, bullheads, smelt, calico bass, golden shiner, sunfish, sockeye salmon, brook trout and brown trout.

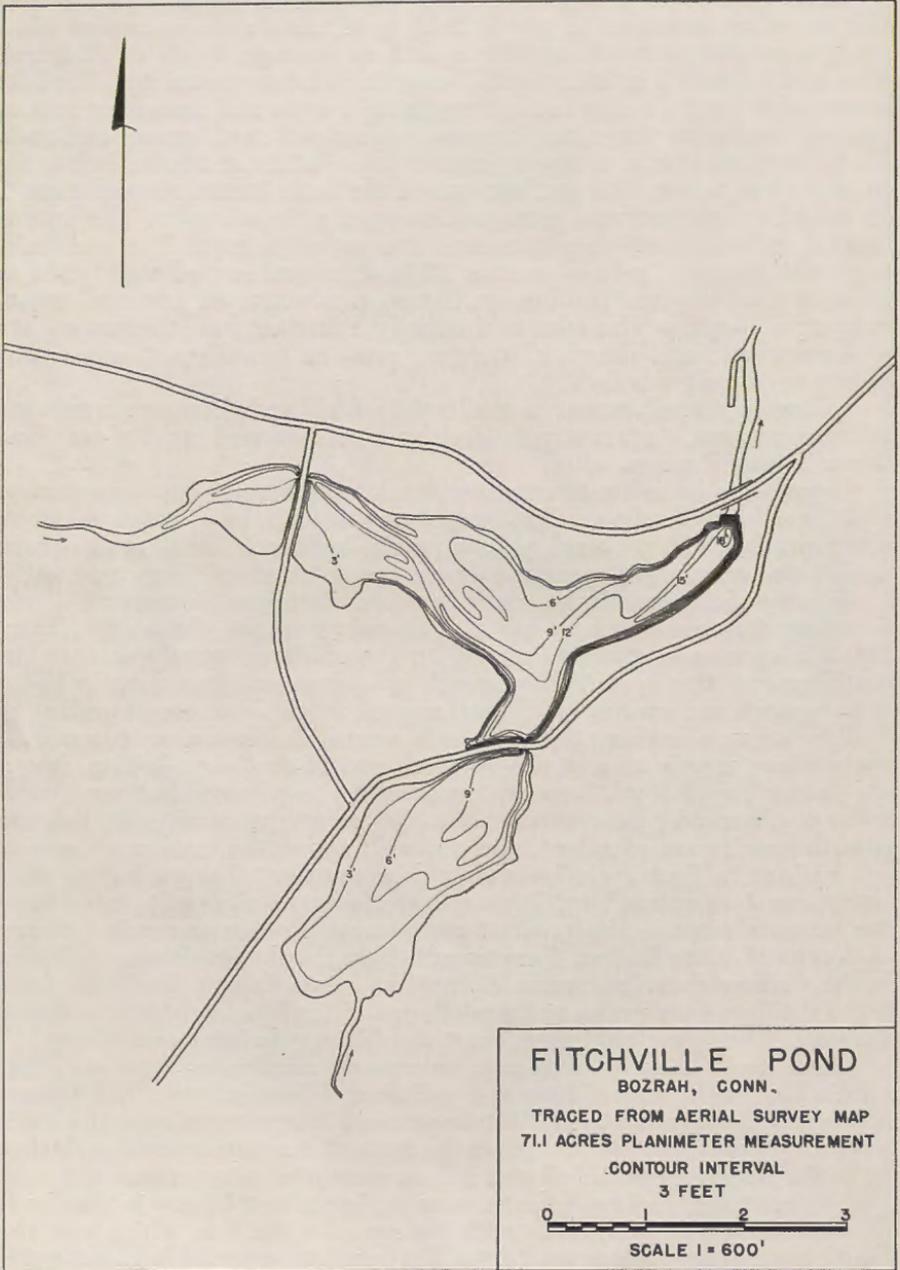
Young-of-the-year largemouth bass are abundant along most of the shoreline. Largemouth bass are also abundant in the older age classes, but this species is confined mostly to the shallow, weedy area at the north end of the lake. Yellow perch are abundant in all age classes. White perch are scarce in all age classes. Rock bass are abundant in shallow areas, elsewhere this species is scarce. Bullheads are common in the shallow, weedy area at the northern end of the lake. Golden shiners are scarce. Smallmouth bass are reported to be present, but none were taken or observed by the survey unit. The growth rates of game fish and panfish species are excellent, and are well above the state averages.

Fishing in East Twin Lake should be excellent. Large, fast-growing yellow perch are abundant. These fish are found at all depths, but during the summer months, the greatest concentration of large perch is found at depths of 30 to 50 feet. Largemouth bass should furnish good fishing in the shallow shoreline areas. Pickerel and bass fishing should be good in the shallow, weedy area at the north end of the lake. A moderate annual stocking of two-year-old brown trout should provide fair trout fishing.

East Twin Lake has a greater volume of trout water than any other public lake in the state. There is a sufficient volume of good trout water to warrant stocking up to 12,000 two-year-old brown trout annually. Such a stocking cannot be warranted on the basis of economics until such time as better access is provided and fishing pressure increases several fold.

At one time, sockeye salmon were an important fishery in this body of water. These salmon, along with the round white fish, which was also found here, have disappeared from the lake. An attempt is being made to re-establish the sockeye in this body of water.

East Twin Lake is in an excellent state of balance. No special regulations are necessary at this time.



FITCHVILLE POND

Fitchville Pond is artificial in origin and is located in New London County in the township of Bozrah. This impoundment, on the Yantic River, has a surface area of 71.1 acres, a maximum depth of 20 feet and an average depth of 6.2 feet. The pond was formed by the construction of a 20-foot stone dam across the Yantic River. The bottom of the pond is composed of sand, gravel and mud. Submerged and emergent vegetation is moderately abundant in the shoal areas. Aquatic vegetation is scarce in the deeper areas. This pond does not stratify during the summer.

Public access to this impoundment is provided through one boat livery. There are no other facilities available for public use.

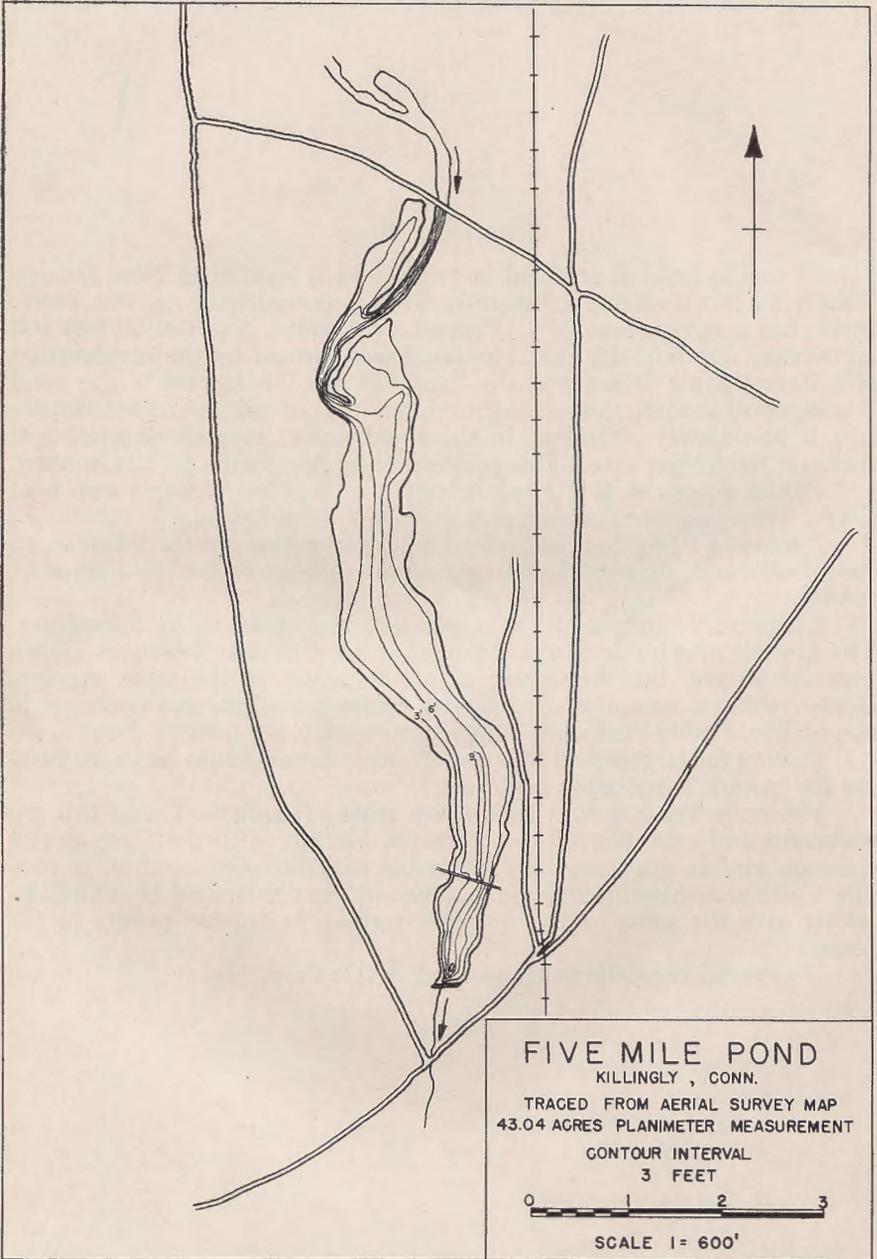
Fitchville Pond has been stocked with yellow perch, smallmouth bass, bullheads, chain pickerel, calico bass, golden shiners and common sunfish.

Largemouth bass and chain pickerel are common in abundance. The growth rate for both species approaches the state averages. Calico bass are scarce, but they grow at a rate equal to the state average. Golden shiners, common sunfish and common suckers are common in abundance. Red-bellied sunfish and white catfish are present, but scarce.

Fishing for largemouth bass and chain pickerel should be good. Fishing for panfish is probably mediocre.

Fitchville Pond is in a productive state of balance. Game fish are numerous and exhibit good growth rates. Panfish, with the exception of common sunfish, are scarce. It is desirable to reduce the numbers of sunfish. Cottage owners around the lake can aid in the control of sunfish by raking over the nests or by dropping sodium hydroxide pellets in the nests.

No special regulations are needed at this time.



FIVE MILE POND

Five Mile Pond is a small, artificial impoundment located in Windham County in the township of Killingly. It was formed by the construction of a small concrete and masonry dam across the Five Mile River. This impoundment has a surface area of 43 acres, a maximum depth of 13 feet and an average depth of 2.4 feet. The pond bottom is mostly of mud and swampy ooze. Submerged vegetation is abundant. Emergent vegetation is scarce in most areas of the pond, but there are several isolated areas where this vegetation is quite abundant. Transparency is considerably reduced by the presence of a dark, tea-colored stain in the water. Thermal stratification of the water in this impoundment does not take place.

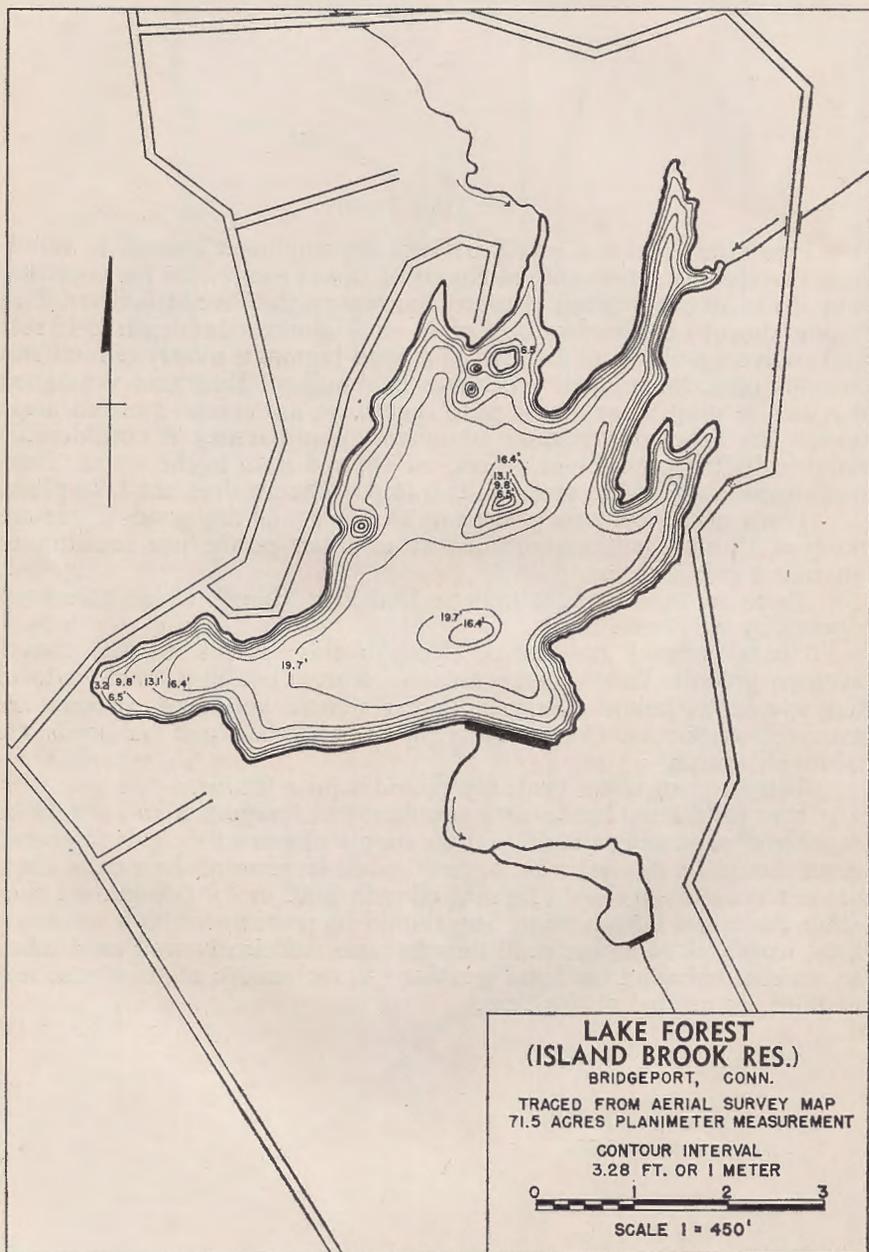
There are no cottages present on the shores of this pond. There are no boat liveryes, public rights-of-way or other public use facilities to guarantee public access.

There are no records to indicate that Five Mile Pond has ever been stocked by the Board.

Chain pickerel are scarce, although this species exhibits above-average growth. Yellow perch are also scarce, but the growth rate of this species is below average. Golden shiners and chub suckers are extremely abundant. Common sunfish are abundant and bullheads are relatively scarce.

This body of water probably provides poor fishing.

Five Mile Pond has a large population of forage fish and should be capable of producing a much greater supply of game fish. This impoundment should be stocked with 20 or 30 adult largemouth bass or, if these are not available, it should be stocked with 3,000 or 4,000 fingerling bass. After the initial introduction, bass should be protected with a minimum legal length of 14 inches until they become sufficiently well established to warrant reducing the legal length to 12 inches. No other special regulations are needed at this time.



LAKE FOREST (Island Brook Reservoir)

Lake Forest is located in Fairfield County in the township of Bridgeport. This body of water, artificial in origin, has a surface area of 69.6 acres, a maximum depth of 22 feet and an average depth of 14.7 feet. The dam is of earth and masonry and is in excellent condition. The pond can be almost completely drained. The bottom is of sand, gravel, rubble and boulders. There is considerable submerged vegetation in the shallow areas. The water is clear, with a transparency in excess of eight feet. Bottom food production is high, well above average. The lake is thermally stratified and the bottom waters are well supplied with dissolved oxygen. The shoreline is partly wooded.

Lake Forest is privately owned and is not open to public fishing. Use of the lake is limited to members of the Lake Forest Property Owners' Association and their guests. Shoreline development is extensive and there are a great many homes in the housing development that surrounds most of the lake.

At the time of the survey, Lake Forest contained smallmouth bass, chain pickerel, rock bass, yellow perch, common sunfish, golden shiners, bullheads, red-bellied sunfish and eels. Game fish were extremely scarce and panfish abundant but small. As a result of the survey, it was apparent that fishing was very poor. The lake contains a relatively large volume of water suitable for trout. The Lake Forest Club, on the recommendation of the State Board of Fisheries and Game, stocked rainbow trout and brown trout in the lake. The club obtained good results from this plant and many of the fish held over.

In view of the results obtained from the initial plant of trout, the club decided to proceed with reclamation as originally recommended by the Board. Lake Forest was reclaimed in September, 1955, and was restocked with rainbow trout in early April, 1956. Fishing was prohibited until Memorial Day, 1956. During the 1956 angling season members of the lake property owners' association reported excellent fishing. The rainbow trout which had been stocked at a length of 5 to 6 inches in April had grown to more than 12 inches by the end of the first season.

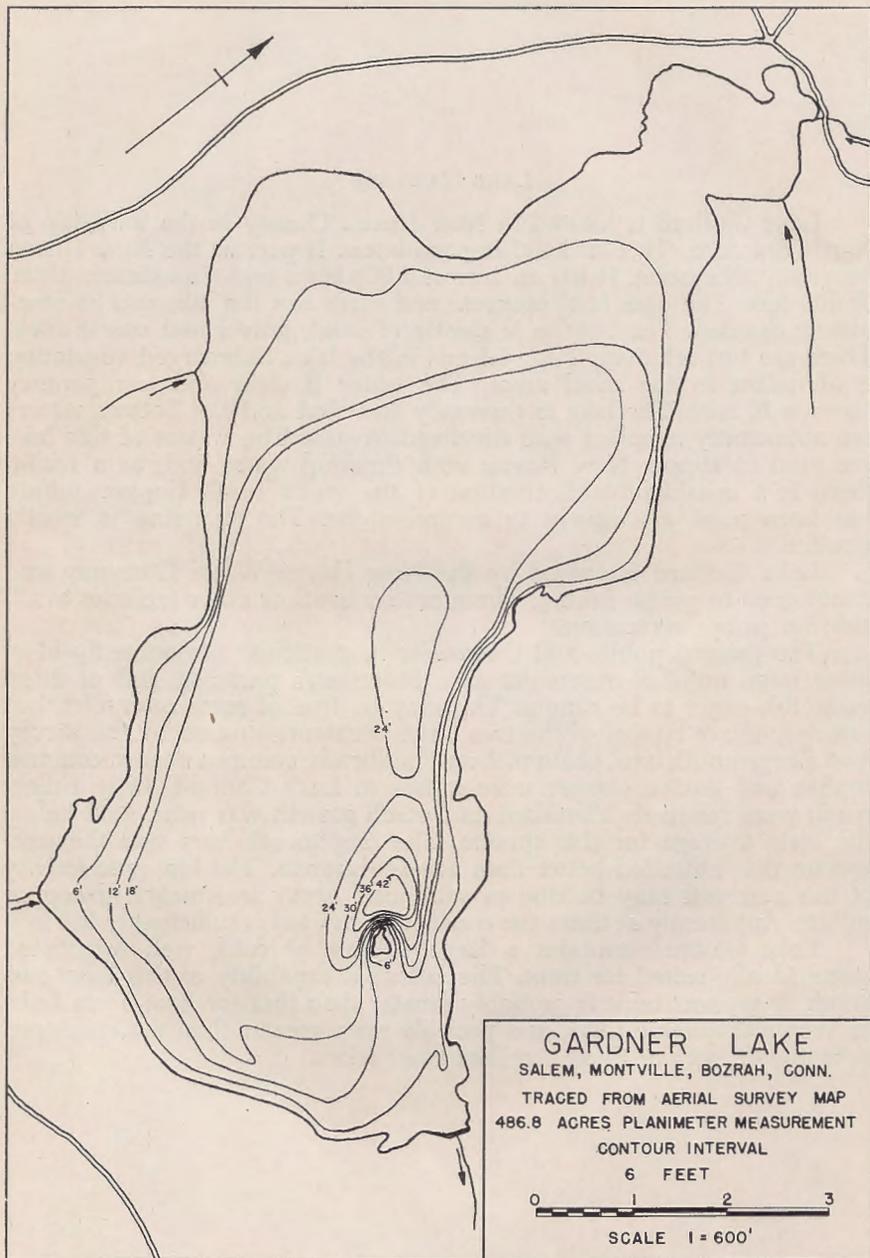
LAKE GAILLARD

Lake Gaillard is located in New Haven County in the township of North Branford. This artificial impoundment is part of the New Haven water supply system. It has an area of 1,009 acres and a maximum depth of 100 feet. The dam is of concrete and earth and the lake can be completely drained. The bottom is mostly of sand, gravel and coarse rock. There are two relatively large islands in the lake. Submerged vegetation is abundant in the shoal areas. The water is clear and transparency exceeds 10 feet. The lake is thermally stratified and the bottom waters are abundantly supplied with dissolved oxygen. The waters of this lake are used to supply New Haven with drinking water and, as a result, there is a considerable fluctuation of the water level. Copper sulfate has been used extensively to control algae. The shoreline is mostly wooded.

Lake Gaillard is owned by the New Haven Water Company and is not open to public fishing. There are no boats or other facilities available for public recreation.

The general public and the angler in particular undoubtedly view these large unfished reservoirs as a fisherman's paradise, full of large game fish eager to be caught. This may be true of some reservoirs, but certainly is not typical of the two large reservoirs studied by the survey unit. Largemouth bass, chain pickerel, bullheads, common sucker, common sunfish and golden shiners were scarce in Lake Gaillard. Only yellow perch were relatively abundant and perch growth was poor, well below the state average for this species. The largemouth bass was the only species that exhibited better than average growth. The low productivity of this reservoir may be due to continued heavy treatments of copper sulfate. Apparently at times the concentration used is sufficient to kill fish.

Lake Gaillard contains a large volume of cold, well-oxygenated water ideally suited for trout. The potential capability of this large reservoir to support trout is probably greater than that for East Twin Lake or Wononskopomuc Lake, and possibly even greater than the combined potential of both of these excellent trout lakes.



GARDNER LAKE

Gardner Lake is located in New London County in the townships of Salem, Montville and Bozrah. It is natural in origin, but the water level has been raised slightly by the construction of a small masonry dam. The lake has a surface area of 486.8 acres, a maximum depth of 43 feet and an average depth of 13.7 feet. There is a moderate amount of submerged and emergent vegetation, but this is confined mostly to the shoal areas. The bottom is variable and is composed of sand, gravel, rubble and boulders, with scattered areas of mud and swampy ooze. The water is clear and the transparency exceeds 10 feet. The lake is thermally stratified and the water, in all but the deepest areas, is well supplied with dissolved oxygen.

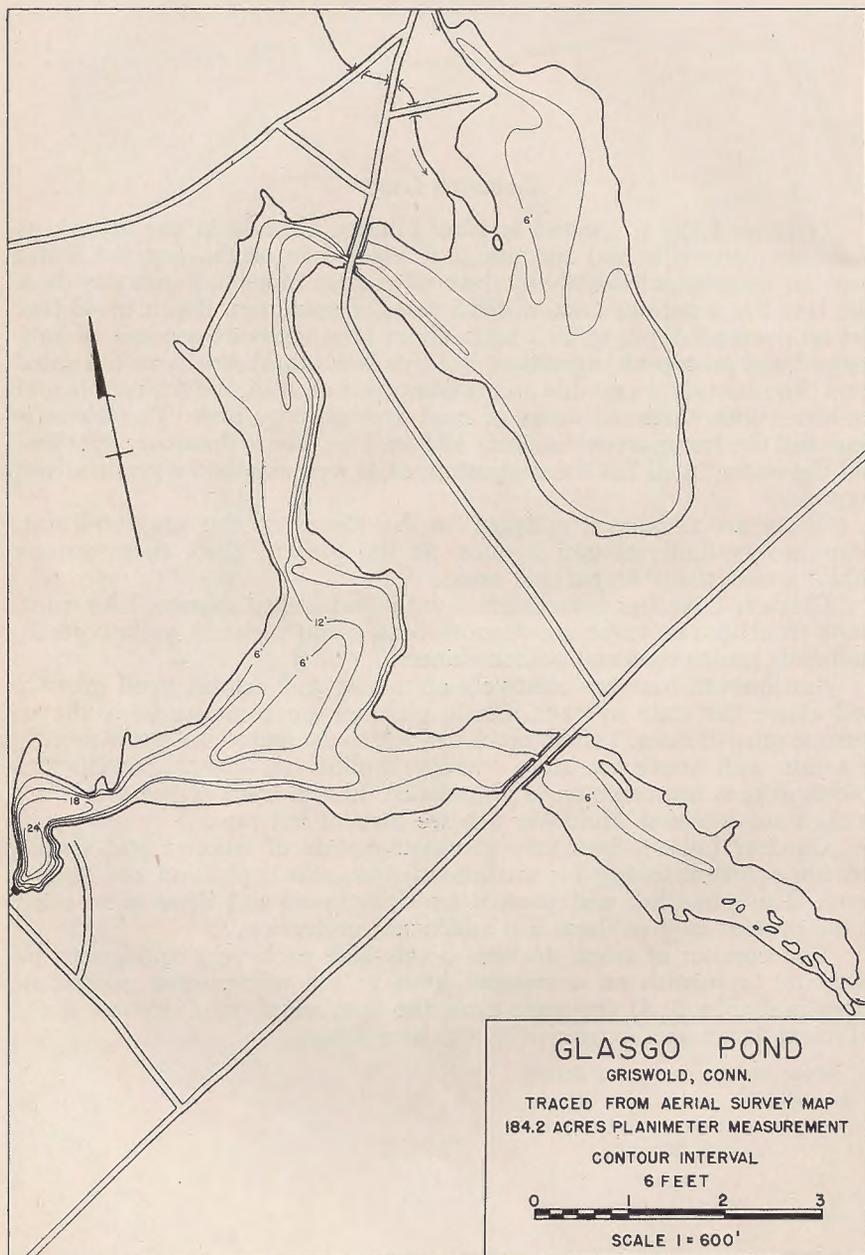
There are numerous cottages on the shores of this impoundment. Boats are available at two liveryes. At the present time, there are no public access roads or parking areas.

Gardner Lake has been stocked with land-locked salmon, lake trout, brook trout, brown trout, smallmouth bass, chain pickerel, yellow perch, bullheads, calico bass and golden shiners.

Smallmouth bass are relatively abundant and exhibit good growth, well above the state average. Chain pickerel are common with above-average growth rates. Yellow perch are relatively scarce but grow rapidly at a rate well above the state average. Bullheads, bluegill sunfish and golden shiners are common in abundance. Brown trout of the year class stocked are common. Holdover fish are present but rare.

Gardner Lake is in a very productive state of balance and should provide excellent fishing for smallmouth bass, chain pickerel and yellow perch. The game fish and panfish are doing well and there is no need at the present to give these fish additional protection.

The number of trout stocked in this lake each year appears to be adequate to furnish an occasional trout to the warm-water anglers as an extra dividend. At the same time, the number of trout stocked is not sufficient to act as a detriment to the bass fishery.



GLASGO POND

Glasgo Pond is an artificial impoundment formed by the construction of a large masonry dam across the Pachaug River. It has a surface area of 184.2 acres, a maximum depth of 25 feet and an average depth of about 10 feet. This impoundment is located in New London County in the townships of Griswold and Voluntown. Emergent vegetation is particularly abundant in the shoal areas. There is considerable submerged vegetation in most areas of the pond. The bottom is variable, but for the most part is of sand, gravel, boulders and mud. Transparency is reduced to approximately four feet by a dark, tea-colored stain. Thermal stratification of the water does not take place in this pond.

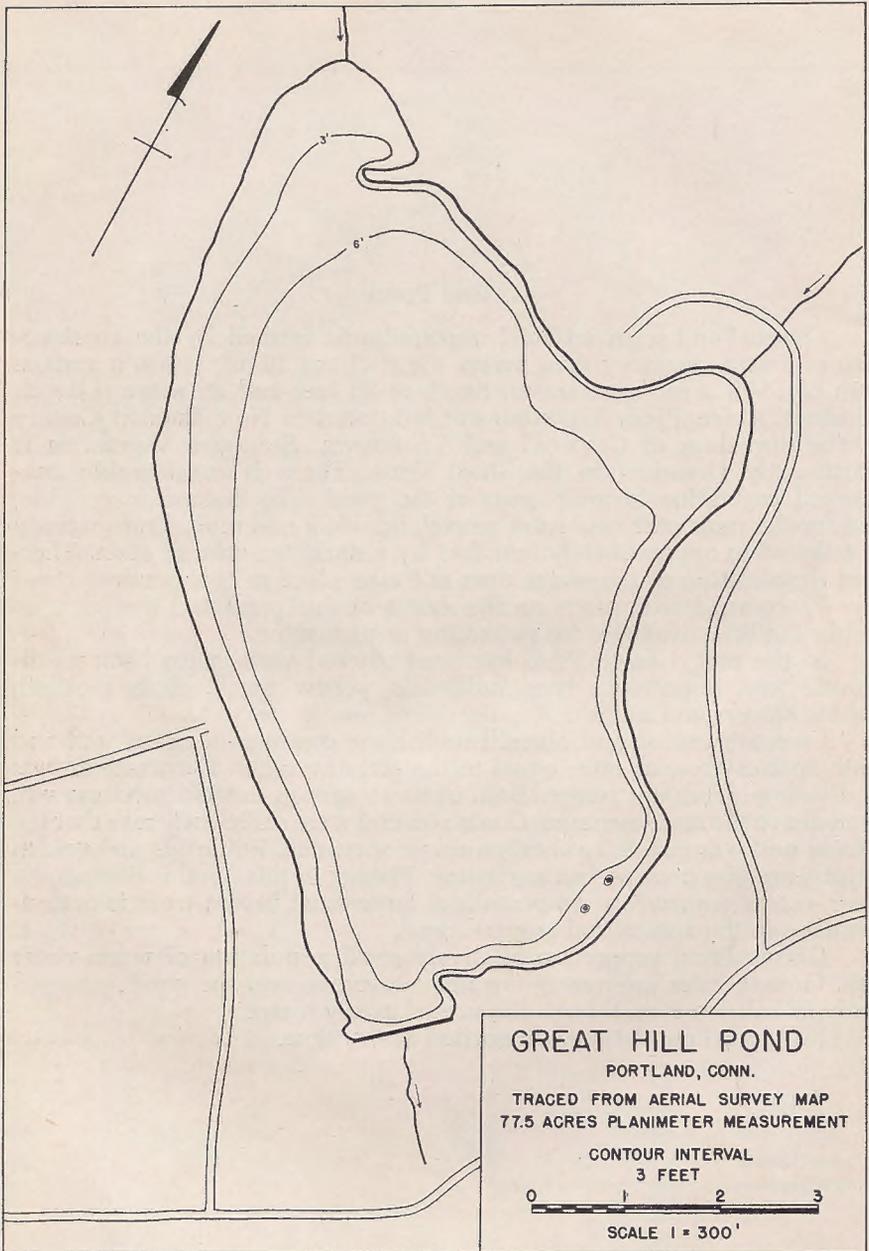
There are few cottages on the shores of this pond and there are no public facilities available for swimming or picnicking.

In the past, Glasgo Pond has been stocked with calico bass, small-mouth bass, largemouth bass, bullheads, yellow perch, chain pickerel, golden shiners and sunfish.

Common sunfish and bluegill sunfish are common in abundance and both species grow at rates equal to the state averages. Largemouth bass and yellow perch are scarce. Both of these species exhibit good growth, well above the state averages. Chain pickerel were sufficiently rare that the survey unit was unable to obtain a single specimen. Bullheads and golden shiners are also present, but are scarce. Fishing in this pond is likely to be poor, except for sunfish. An occasional large-sized brown trout is not uncommon in the specialized anglers' creel.

Glasgo Pond supports a relatively small population of warm-water fish. Growth rates are average or above average and the pond is apparently in balance even though fish are relatively scarce.

No special regulations are needed at this time.



GREAT HILL POND

Great Hill Pond is a small, artificial impoundment located in Middlesex County in the township of Portland. Water is impounded by a 10-foot earthen dike. The pond has a surface area of 77.5 acres, a maximum depth of 8 feet and an average depth of 5.5 feet. Submerged vegetation is abundant in most areas of the pond. Emergent vegetation is limited to scattered patches in the shoal areas. The bottom is mostly of sand, rubble and mud. The water is clear and transparent to the bottom. Thermal stratification does not take place.

There are several cottages present on the well-wooded shores of this pond, but shoreline development is not as great as on most Connecticut ponds. Public access is provided through a state-owned right-of-way. There are no other public facilities available.

Great Hill Pond has been stocked with calico bass, smallmouth bass, bullheads, chain pickerel, yellow perch, white perch, golden shiners and sunfish.

Largemouth bass are common in abundance and grow at a rate equal to the state average. Bluegill sunfish are common in abundance, with very poor growth. Yellow perch are scarce and exhibit below-average growth. Golden shiners are present, but scarce. Chain pickerel are reported from this impoundment but none were taken or observed by the survey unit.

This pond should provide relatively good fishing for largemouth bass and poor fishing for all other species.

Great Hill Pond is best suited for largemouth bass, chain pickerel and yellow perch. At the present time, pickerel are extremely scarce or are not present in this impoundment. It is desirable to stock 50 to 100 adult pickerel in these waters in an attempt to re-establish this species.

No special regulations are needed at this time.

Since the above material was set in type, this pond has been reclaimed with an application of rotenone and will be managed for warm-water fishing.



GREEN FALLS RESERVOIR

Green Falls Reservoir is a small, state-owned artificial impoundment. It is located in the Pachaug State Forest in New London County in the township of Voluntown. There is considerable submerged vegetation in the shoal areas; elsewhere this type of vegetation is scarce. Emergent veg-

etation is scarce and confined entirely to the shoal areas. The pond bottom is of gravel, rubble and boulders. In the deeper sections the bottom is overlain with swampy ooze. The 30-foot dam impounding this body of water is of stone and masonry construction and is in excellent condition. This body of water is thermally stratified and the deepest bottom waters are deficient in dissolved oxygen. The water is clear and transparency exceeds 10 feet. This reservoir is very infertile and bottom food production is considerably below average. The water is highly acid with the pH range varying between 4.5 and 5.5.

Access to this water is provided through state forest property in the Pachaug State Forest. Picnic facilities are also available at various points around the shoreline. There are no cottages or other developments on the well-wooded shores of this reservoir.

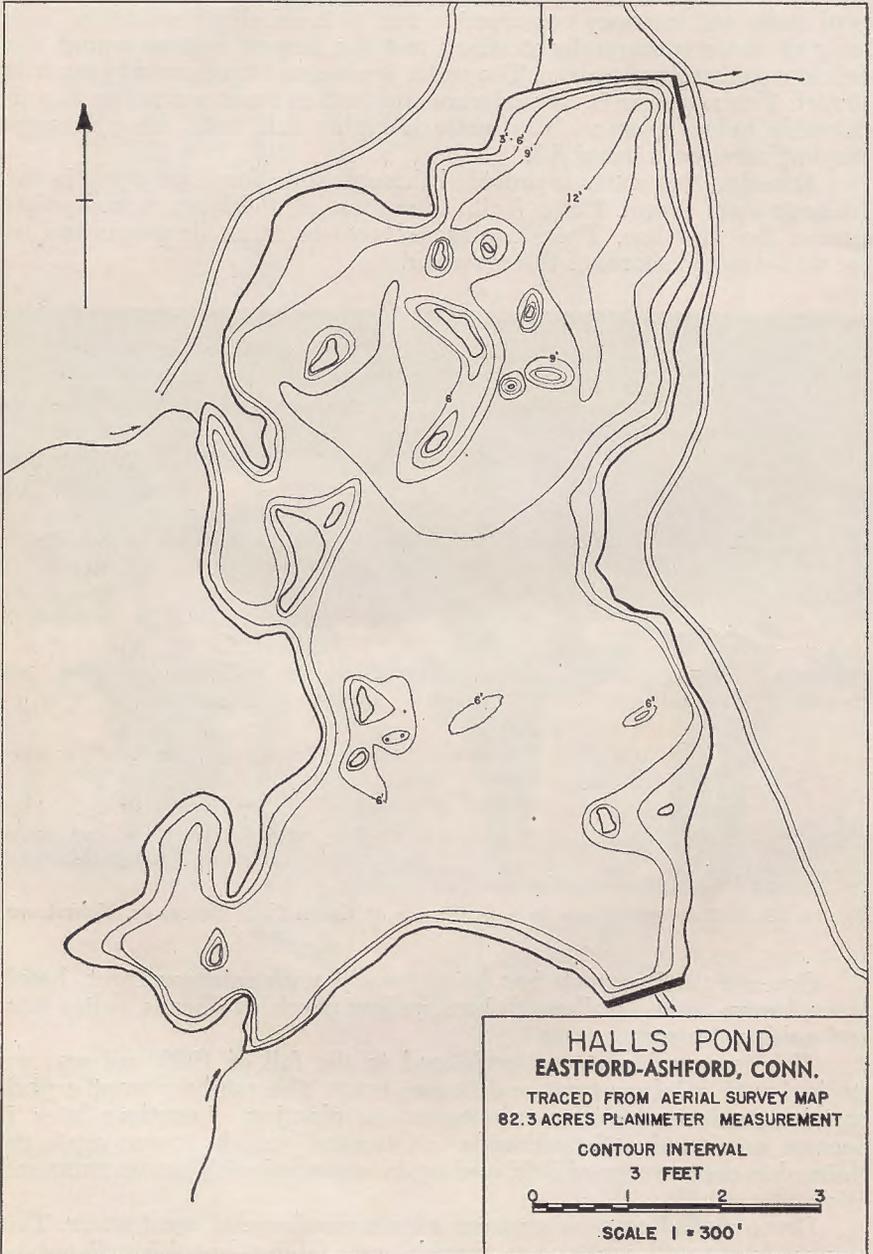


FIGURE 59. Liming operations through the ice at Green Falls Reservoir, Voluntown.

Green Falls Reservoir has been stocked with rainbow trout, brook trout, brown trout, smallmouth bass, yellow perch, bullheads, calico bass and golden shiners.

This impoundment was reclaimed in the fall of 1950 and was restocked with rainbow trout and brown trout. The rainbow trout experienced notable mortalities subsequent to planting. Sometime later it became reinfested with bullheads and banded sunfish. It was again reclaimed in the summer of 1956 and again restocked with brown trout and rainbow trout.

Green Falls Reservoir contains a limited volume of trout water. This impoundment will continue to furnish trout fishing, but this will not be of top quality. At the present time, an attempt is being made to neutralize the waters of the reservoir with lime. If these liming operations are successful, it should be possible to produce satisfactory rainbow trout fishing. After one year's work, these operations appear to be of considerable merit.



HALLS POND

Halls Pond is a small, artificial, state-owned pond located in Windham County in the townships of Eastford and Ashford. This impoundment covers a surface area of 82.3 acres, has a maximum depth of 14 feet and an average depth of 6.7 feet. Submerged and emergent vegetation is scarce, except in the southwestern cove where there is a considerable amount of submerged vegetation. The bottom is of sand, gravel and rubble overlain in the deeper areas with swampy ooze. Transparency is reduced to approximately five feet by a dark, tea-colored stain in the water. This pond is not thermally stratified.

There are only a few cottages present on the well-wooded shoreline of this pond. Public access is provided through a state-owned right-of-way. There are no boat liveryes and no swimming or picnic facilities on the shores of this pond.

Halls Pond has been stocked with largemouth bass, smallmouth bass, chain pickerel, yellow perch, bullheads, sunfish, calico bass and golden shiners.

Largemouth bass are abundant with a well above-average growth rate. Smallmouth bass are present, but very scarce. Chain pickerel are scarce and exhibit an above-average growth rate. Yellow perch are abundant with above-average growth, but considerably below that exhibited in 1951. Common sunfish are common in abundance. Calico bass are present, but scarce. The green sunfish is present in this pond and is becoming more abundant. There is a considerable amount of hybridization between the common and green sunfish.

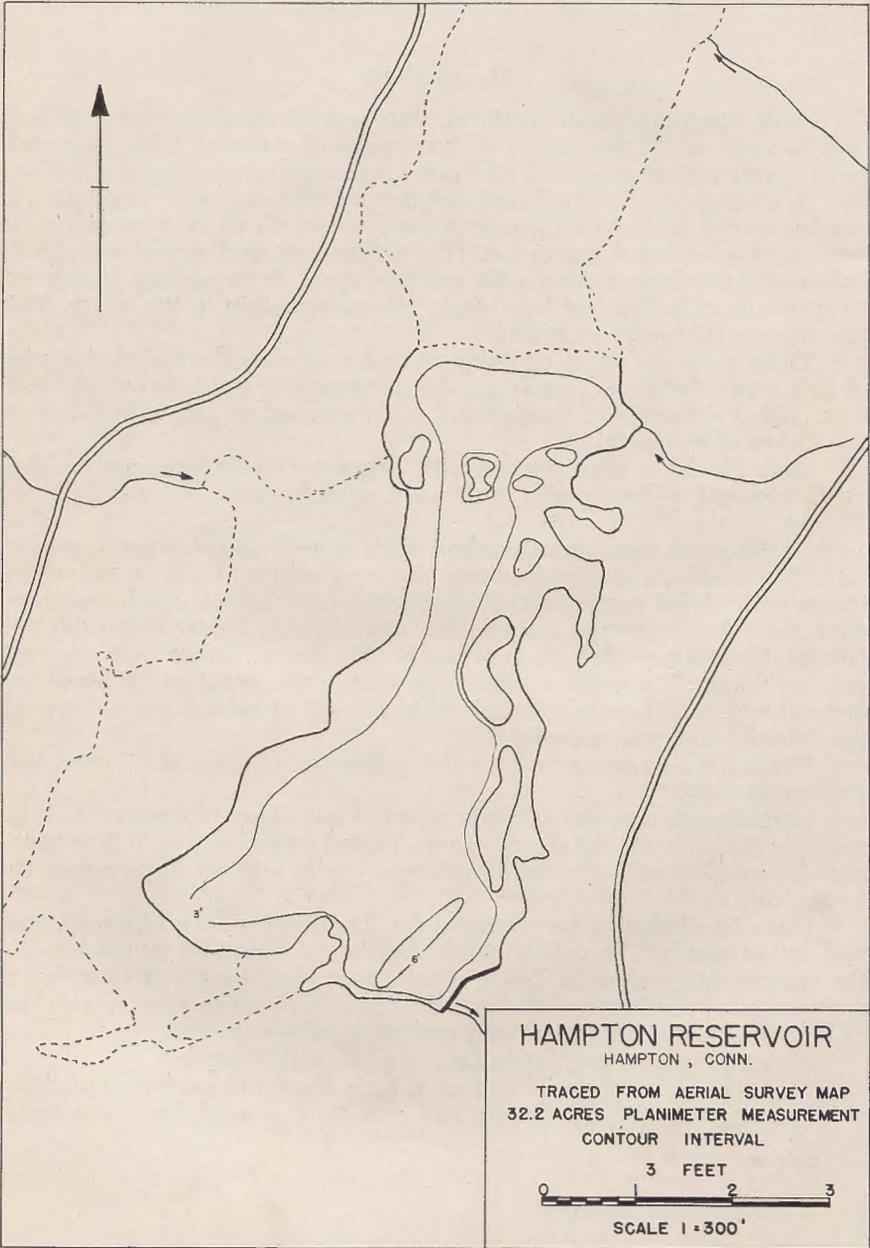
Fishing for largemouth bass and yellow perch should be of above-average quality.

Largemouth bass are severely infested with bass tapeworm, but apparently the infestation has not, as yet, limited reproduction. Yellow perch are also infested with the bass tapeworm but to a lesser degree than the largemouth.

Halls Pond should be managed for largemouth bass, chain pickerel and yellow perch. The yellow perch population is rapidly increasing and the growth rate is slowing down. A minimum legal length of 14 inches is recommended for largemouth bass. This should result in greater numbers of largemouth bass and increased predation on the panfish.

No other special regulations are needed at this time.

Since the above material was set in type, this pond has been reclaimed with an application of rotenone and will be managed for warm-water fishing.



HAMPTON RESERVOIR

Hampton Reservoir is a small, artificial pond located in the Natchaug State Forest in Windham County in the township of Hampton. It has a surface area of 32.2 acres, a maximum depth of 7 feet and an average depth of 2.9 feet. This impoundment is fed by two small tributary streams and swamp drainage. The pond is almost completely choked with submerged and emergent vegetation. The bottom is mostly of mud and swampy ooze. The water is stained a dark, tea color and the transparency is reduced to three feet. These waters are not thermally stratified.

The shoreline is well wooded and cottages are entirely absent. There are no boat liveries, or picnic or swimming facilities. Access to the pond is provided by a public right-of-way passable for cars.

Hampton Reservoir has been stocked with yellow perch, bullheads, calico bass, sunfish and largemouth bass.

Dense weed growth made it impossible for the survey unit to set gill nets, and as a result, no fish samples were obtained for growth analyses. It was possible to determine the abundance of various species by observation and shoreline seining.

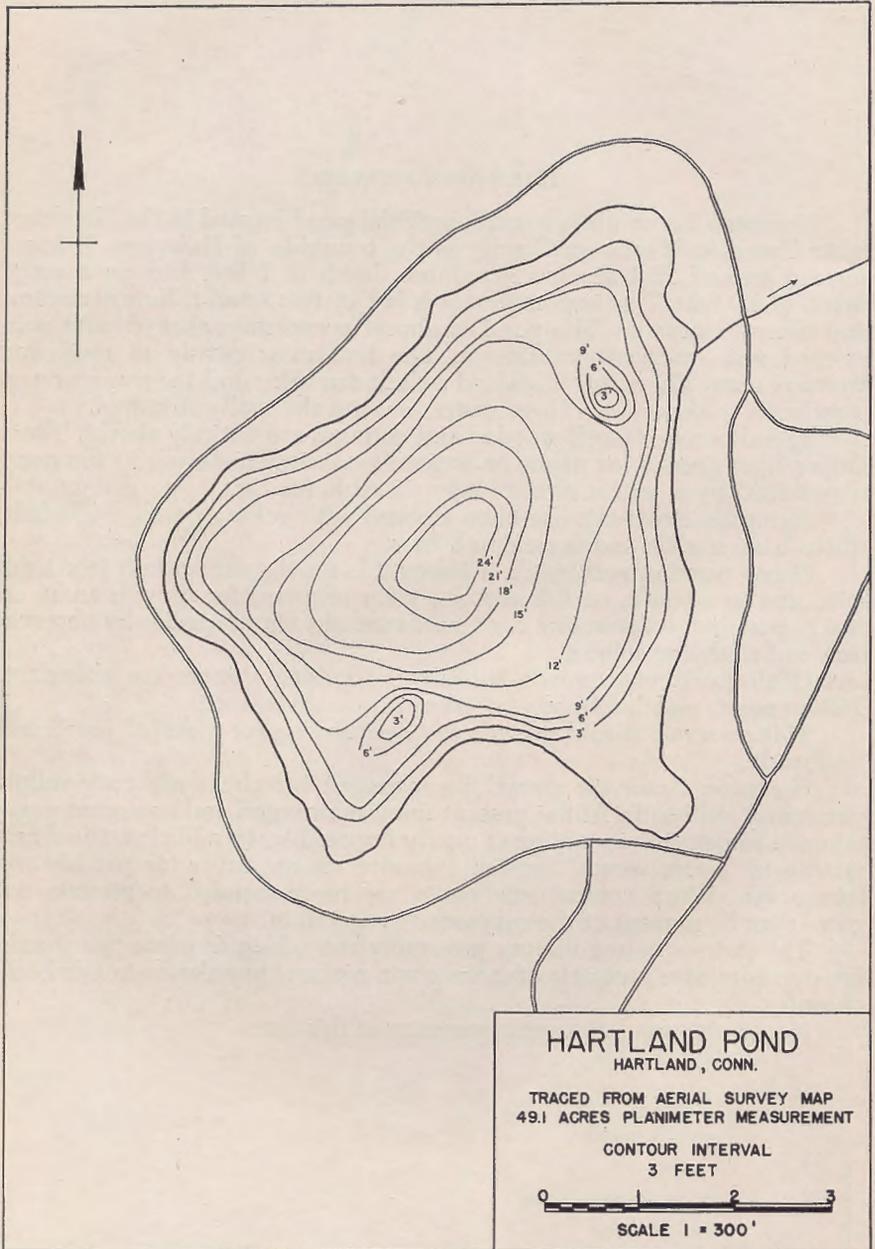
Chain pickerel, common sunfish and golden shiners are abundant. Yellow perch and bullheads are common in abundance.

This reservoir should provide excellent fishing for pickerel, perch and bullheads.

Hampton Reservoir should be managed for chain pickerel, yellow perch and bullheads. At the present time, submerged and emergent vegetation is so dense that angling is nearly impossible. In addition, the dense growth of "water weeds" furnish excessive escape cover for panfish and forage fish. Weed control treatments are recommended to remove not more than 50 percent of the submerged vegetation.

The state-wide regulations governing the taking of game fish should provide adequate protection for the chain pickerel population in this body of water.

No special regulations are necessary at this time.



HARTLAND POND

Hartland Pond is located in Hartford County in the township of Hartland. It has a surface area of 49.1 acres, a maximum depth of 24 feet and an average depth of 9.1 feet. It is natural in origin, with the level raised. The bottom is mostly of sand, gravel and large rocks, with scattered areas of mud and organic ooze. It is fed mainly by bottom springs. There is scant submerged and emergent vegetation which is confined to the shallow shoreline areas. The water is clear and transparency exceeds 12 feet. The waters of this pond are below average in fertility.

There are several cottages present. The pond is open only to residents of Hartland. There are no boat liveries.

Hartland Pond has been stocked with smallmouth bass, salmon, yellow perch and land-locked salmon.

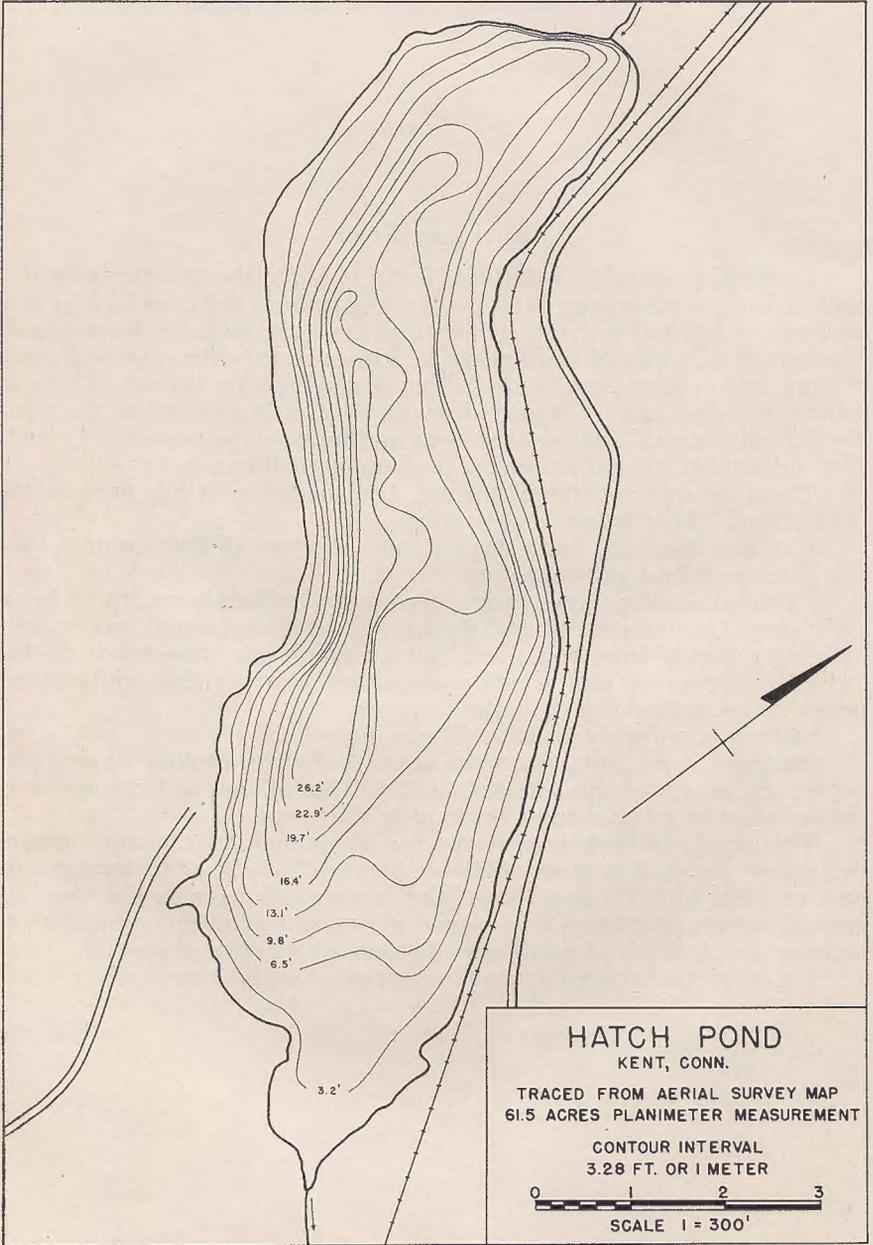
Chain pickerel, yellow perch and common bullheads are scarce in all age classes. Common sunfish and golden shiners are common. Smallmouth bass are reported from this pond, but no specimens were taken or observed by the survey unit. Chain pickerel and yellow perch exhibit good growth rates, well above the state averages.

Fishing is probably poor for all species.

Hartland Pond contains a small amount of water capable of supporting trout throughout the summer months. The volume of trout water is not sufficient to warrant trout stocking in this pond.

This pond can best be managed for largemouth bass, chain pickerel and yellow perch. It appears advisable to stock 50 to 75 adult largemouth bass or 3,000 to 5,000 fingerlings. The largemouth bass should then be given complete protection for a period of two or three years or until they become sufficiently well established to warrant an open season.

No other special regulations are warranted at this time.



HATCH POND

Hatch Pond is located in Litchfield County in the township of Kent. It has a surface area of 61.5 acres, a maximum depth of 26.2 feet and an average depth of 11.5 feet. The pond is natural in origin, but has had its level raised slightly. The eastern and western shores are mostly rocky. The northern and southern portions have a bottom of mud and silty ooze. There are excessive beds of submerged and emergent vegetation over most of the pond bottom. In the shallow sections at the northern and southern ends of the pond, the water is almost completely choked with aquatic vegetation. The water is fairly hard, with below-average fertility. Transparency is poor, being less than six feet. Plankton and bottom food production is below average. The deeper waters are deficient in dissolved oxygen during the warm summer months. The shores are partially wooded.

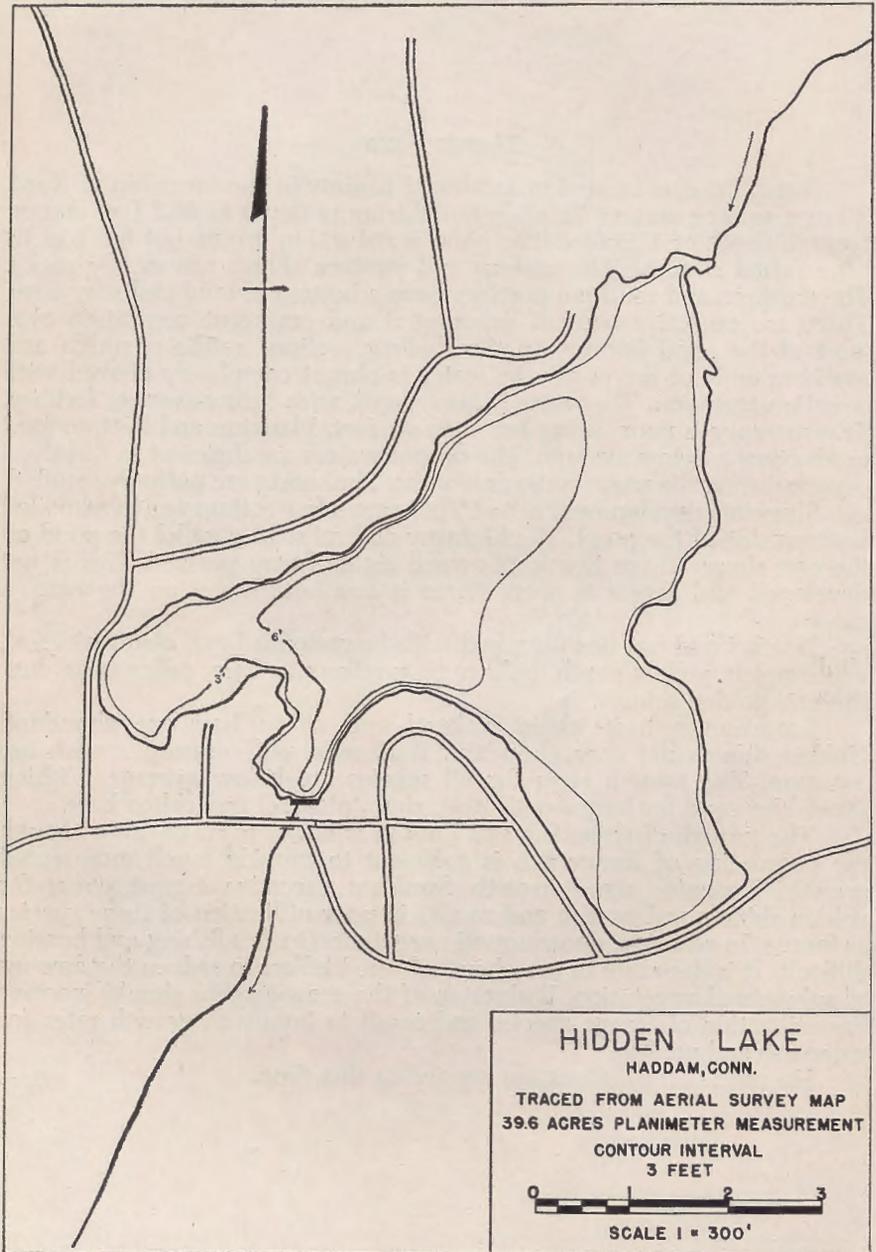
Shoreline development is low. There are a few cottages on the wooded western side of the pond. The highway and railroad parallel the pond on the east shore. There is a state-owned right-of-way present. This is not developed and access is poor. There is one boat livery on the eastern shore.

Hatch Pond has been stocked with largemouth bass, chain pickerel, white perch, yellow perch, bullheads, smallmouth bass, calico bass, sunfish and golden shiners.

Largemouth bass, chain pickerel and calico bass are abundant. Golden shiners are very abundant. Bullheads and common sunfish are common. The growth rates for all species are below average. Fishing should be good for largemouth bass, chain pickerel and calico bass.

The growth of game fish and panfish is below average, even though the population of forage fish is sufficient to provide much more rapid growth. Excessive weed growth furnishes excessive escape cover for golden shiners and sunfish and results in poor utilization of these species as forage. In addition, dense aquatic vegetation makes fishing and boating difficult. It is desirable to use chemical weed killers to reduce the amount of submerged vegetation. Reduction of the escape cover should increase the utilization of forage species and result in improved growth rates for game fish and panfish.

No special regulations are needed at this time.



HIDDEN LAKE

Hidden Lake is located in Middlesex County in the township of Had-dam. It is artificial in origin and is impounded by an earthen and masonry dam. The pond has a surface area of 37.3 acres, a maximum depth of 9 feet and an average depth of 4.6 feet. The bottom is of rubble, boulders and swampy ooze. Submerged and emergent vegetation is abundant in all areas of the pond. The water is stained a dark, tea color and the transparency is less than five feet. The bottom food production is excellent, well above the average for this region. The bottom waters are deficient in oxygen, probably due to accumulated organic detritus and reduced light penetration. The shoreline is mostly wooded.

There are numerous cottages on the shores of this lake. The absence of an access point or boat livery effectively closes this pond to public use.

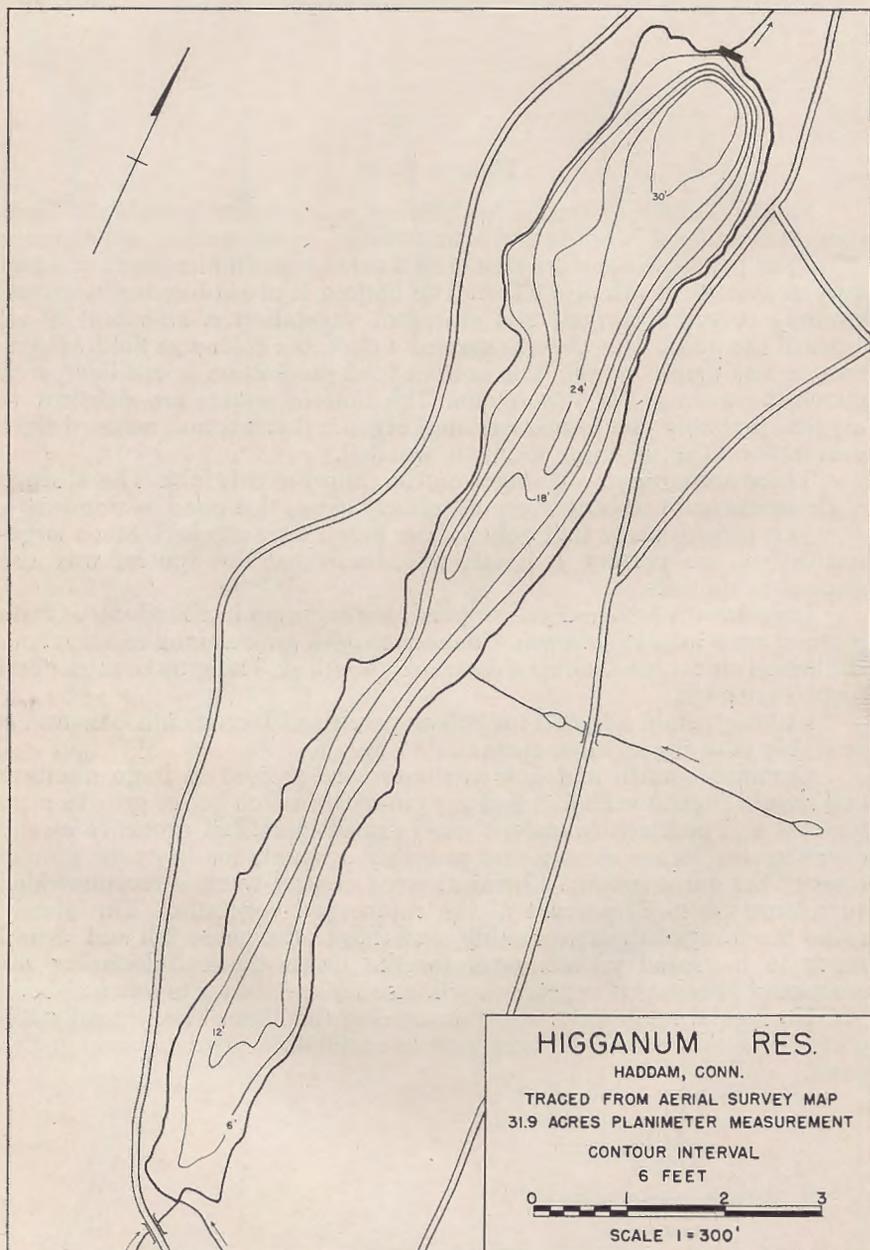
Past records show that only yellow perch were stocked. Since largemouth bass are present, it is safe to assume that this species was also stocked in the lake.

Largemouth bass and yellow perch are common in abundance. Chain pickerel are scarce to common. Common sunfish are common to abundant. Bullheads are scarce. Golden shiners are abundant. The growth rates of all species are poor.

Fishing should be good for yellow perch and largemouth bass and is probably poor for all other species.

Common sunfish and golden shiners are present in large numbers and should furnish sufficient forage to maintain much better growth rates for bass and pickerel. Abundant weed growth furnishes excessive escape cover for the forage species and probably accounts for the poor growth rates of the game species. Chemical weed control work is recommended to remove 30 to 50 percent of the submerged vegetation. This should make the forage fish more readily available to the game fish and should result in increased growth rates for the game species. Reducing the amount of submerged vegetation will also make it easier to fish and boat.

No special regulations are warranted at this time. The normal state-wide regulation should be adequate to maintain a good balance in this pond.



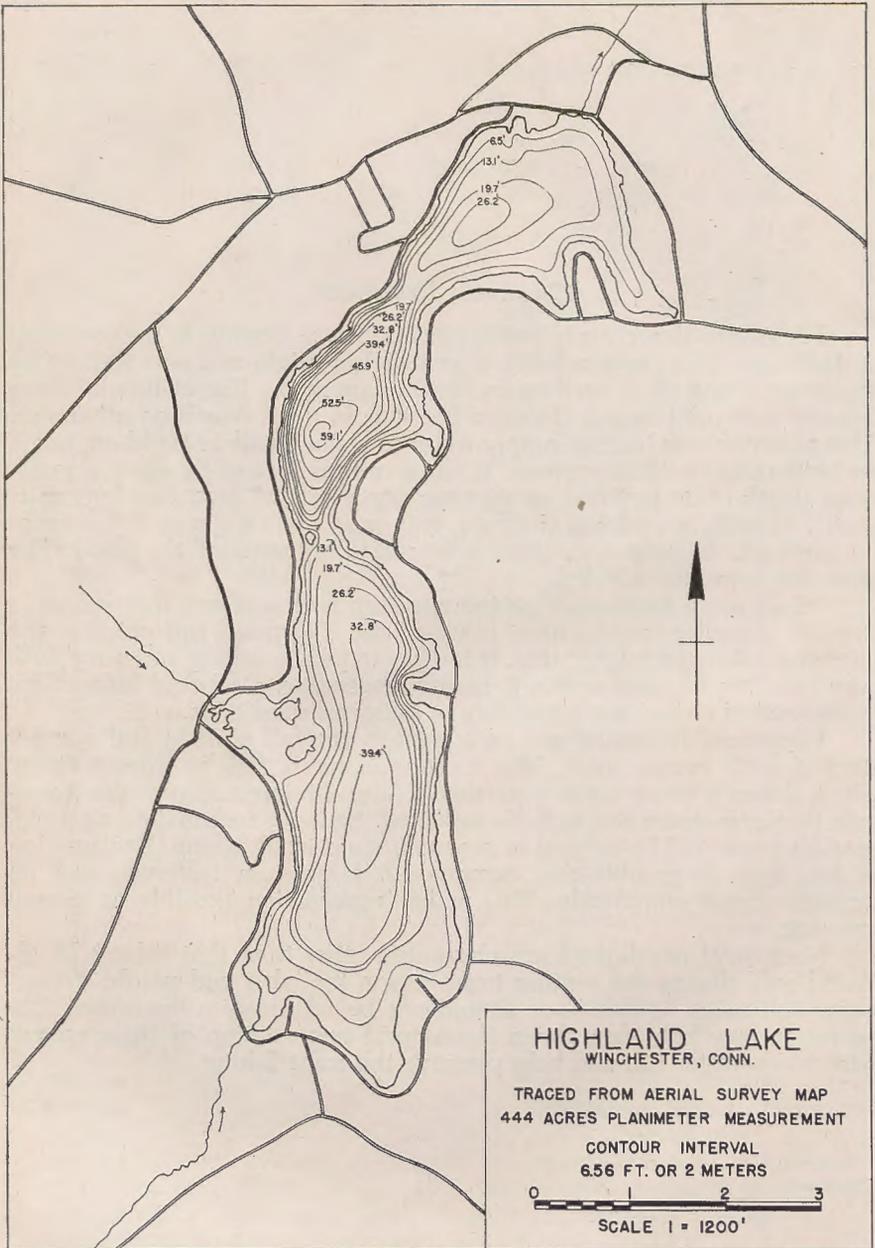
HIGGANUM RESERVOIR

Higganum Reservoir is located in Middlesex County in the township of Haddam. This impoundment is artificial in origin and was formed by the construction of an earthen and stone dam across Ponset Brook. There is some seepage through the dam but it is in good condition otherwise. This reservoir was built to supply water to a small mill in Haddam, but is no longer used for this purpose. It has a surface area of 32 acres, a maximum depth of 34 feet and an average depth of 12.6 feet. The bottom is mostly of sand, gravel and boulders, with mud and silty ooze in the deepest portions. Aquatic vegetation is scarce in all areas of the pond. The shoreline is mostly wooded.

There are a few homes on the northern and southern shores but, in general, shoreline development is very light. The pond and much of the shoreline is owned by the state. It is open to public fishing and a right-of-way passable for cars makes it readily accessible. Outboard motors are prohibited to reduce the possibility of nuisance conditions.

Higganum Reservoir was reclaimed in the fall of 1954 and was restocked with brown trout. This impoundment is fed by Ponset Brook which drains a rather large watershed. Natural reinfestation of the Reservoir by warm-water fish is to be expected. Periodic reclamation at three-year intervals will be needed to maintain good trout fishing. Reclamation of this type is feasible and economical. Higganum Reservoir can be drained almost completely. This makes reclamation possible at a very low cost.

No special regulations are warranted other than that fishing be allowed only during the regular trout season for lakes and ponds. Warm-water fish taken in this pond should not be returned to the water. Cooperation may help slow down the natural reinfestation of these waters with warm-water fish and help preserve the trout fishing.



HIGHLAND LAKE

Highland Lake is located in Litchfield County in the township of Winchester. It is a natural lake with the level raised approximately 10 feet by an earthen and masonry dam. Highland Lake lies in a high valley

overlooking Winsted. The lake has a surface area of 444 acres, a maximum depth of 62 feet and an average depth of 19.7 feet. It is composed of three basins, of which the middle is the deepest. This impoundment is thermally stratified and the deepest waters are deficient in dissolved oxygen. The shoreline is mostly wooded. The bottom is of boulders and rocks. There are extensive flats in the shallow upper basin and there is considerable aquatic vegetation in this area. Elsewhere in the lake submerged and emergent vegetation is scarce. It is fed by several small brooks and bottom springs. The basic fertility of the water is below average.

Water from the lake is used for industrial purposes and this results in considerable fluctuation of the water level. Shoreline development is high and there are numerous cottages around the lake. Access to the lake is provided through boat liveryes and a State Park. There is also a town landing at the northern end of the lake. Boats with motors must be licensed through the town clerk.

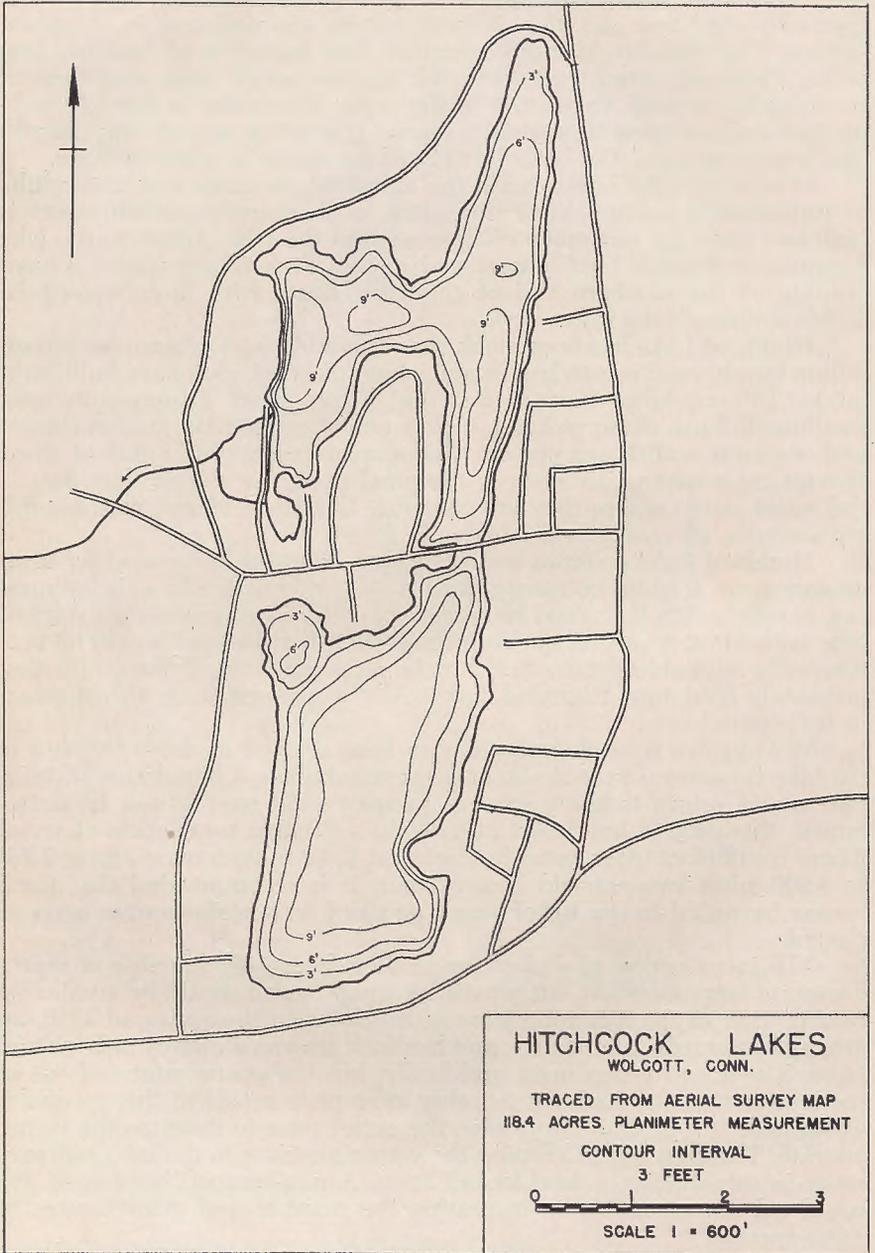
Highland Lake has been stocked with land-locked salmon, lake trout, yellow perch, smallmouth bass, smelt, chain pickerel, rock bass, bullheads, golden shiners, calico bass, sunfish and brown trout. Largemouth bass, smallmouth bass, chain pickerel, yellow perch, calico bass, golden shiners and common sunfish are present, but scarce. Young-of-the-year of these species are scarce in all areas of the pond except in the shallow flats in the upper basin, where they are common. Older age classes of these fish are scarce in all areas of the lake.

Highland Lake contains a large volume of water best suited for trout management. It could be managed most efficiently to produce the greatest angler satisfaction if it could be reclaimed with rotenone and then stocked only with trout. A project of this magnitude is feasible and would be economically advisable if fish could first be removed from all the ponds that ultimately feed into Highland Lake. At the present time, this appears to be impossible.

Wild brown trout fingerlings have been stocked in the tributaries to the lake for several years in an attempt to establish a population of trout that would return to these streams to spawn. As near as can be determined, this project has failed to provide a fishable population of trout. There is sufficient trout water in Highland Lake to warrant stocking 2,000 to 4,000 adult two-year-old brown trout. It is recommended that these waters be added to the list of waters stocked with adult trout as soon as possible.

The introduction of a plankton-feeding forage fish capable of reproducing in large numbers but remaining small in size would be a valuable contribution to the fish population of this lake. In the spring of 1956, an attempt was made to introduce and landlock sea-run alewives in Highland Lake. The adults reproduced prolifically, but the young migrated out of the lake during the summer. Another attempt to establish this species is warranted. It is desirable to screen the outlet prior to the time the young migrate. This may aid in keeping the young alewives in the lake and may assist in establishing a land-locked form. A non-competitive forage fish could aid immeasurably in increasing the number and growth rates of game species.

No special regulations are warranted, except that all fishing be prohibited from the last Sunday in February to the third Saturday in April. This regulation is desirable to protect freshly stocked hatchery trout. Trout for lakes are usually stocked early in March.



HITCHCOCK LAKES

Hitchcock Lakes are in reality one lake divided by a road and causeway. They are located in New Haven County in the township of Wolcott. These waters cover an area of 118.4 acres, have a maximum depth of 10 feet and an average depth of 6.2 feet. They are artificial in origin. The bottom is of sand, gravel and mud and is covered by a dense growth of submerged vegetation. These waters are above average in fertility.

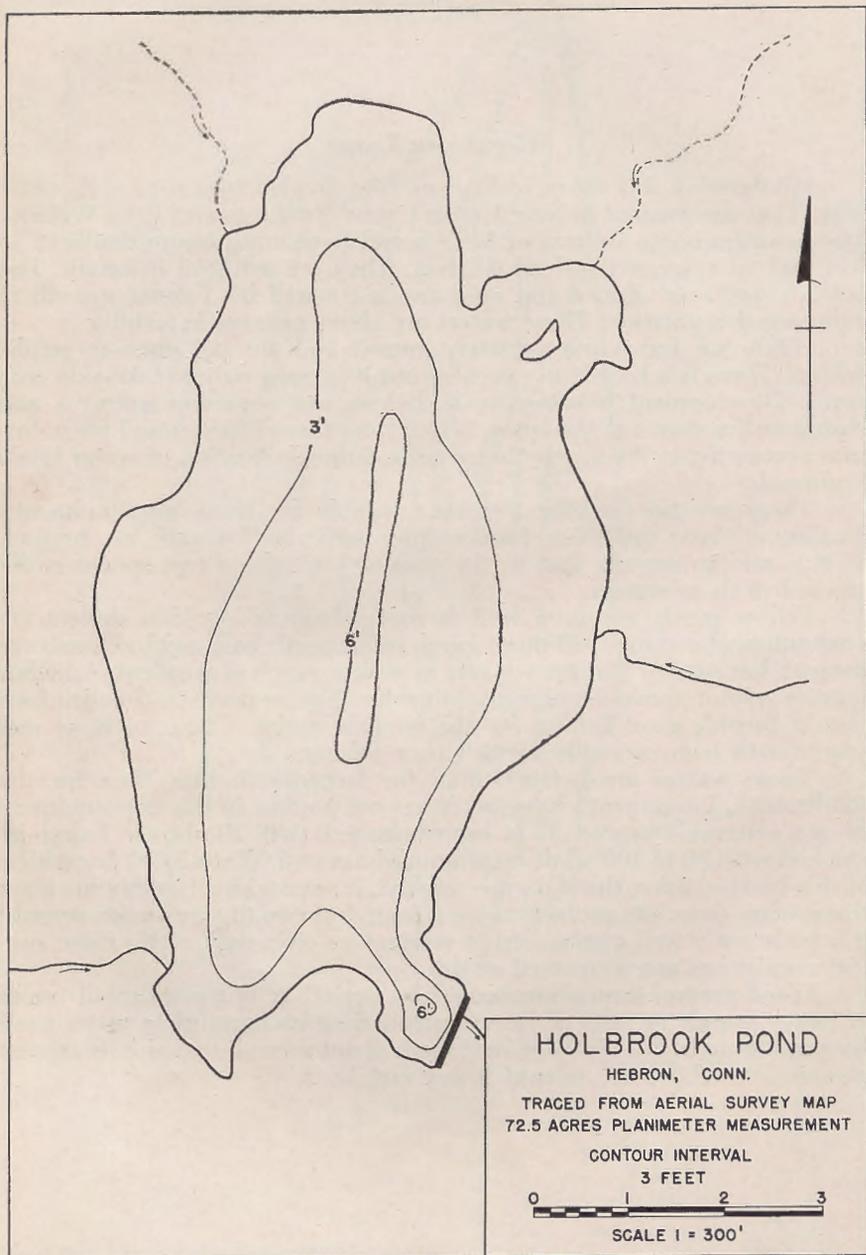
Hitchcock Lakes are privately owned and are not open to public fishing. There is a boat livery present but it is open only to lake-side residents. Development is extensive and there are numerous cottages and homes on the shores of the lakes. Water from these lakes is used for industrial processing in the nearby brass mills. Some fluctuation of water levels is normal.

There are no stocking records available for these impoundments. Smallmouth bass and calico bass, neither native to this state, are present, so it is safe to assume that in the past at least these two species were stocked in these waters.

Yellow perch, common sunfish, calico bass and golden shiners are common in abundance. Chain pickerel, smallmouth bass and bullheads are present, but scarce. The growth rate of yellow perch is excellent. All other species exhibit above-average growth rates. Yellow perch and calico bass should furnish good fishing for the panfish angler. Chain pickerel and smallmouth bass probably furnish poor fishing.

These waters are better suited for largemouth bass than for the smallmouth. Largemouth bass are either not present in this impoundment or are extremely scarce. It is recommended that Hitchcock Lakes be stocked with 50 to 100 adult largemouth bass or 3,000 to 5,000 fingerlings of this species. After the lakes are stocked, it would be advisable to afford this species complete protection for a period of two to three years or until it is sufficiently well established to warrant an open season. No other special regulations are warranted at this time.

Weed control treatments would be desirable, but even small traces of heavy metals or salts of heavy metals may be harmful in water used for processing brass. Weed control work is not recommended because the chemicals used are the salts of heavy metals.



HOLBROOK POND

Holbrook Pond is a small, artificial impoundment owned by the state and located on state forest lands. It is located in Tolland County in the township of Hebron. The pond has a surface area of 72.5 acres, a maximum depth of 6 feet and an average depth of 3.9 ft. Submerged and emergent vegetation is abundant in all areas of the pond. The bottom is mostly of gravel, coarse rubble and silt. Transparency is considerably reduced by a dark, tea-colored stain. Thermal stratification does not take place in this pond. The shoreline is entirely wooded. Overflow from this pond forms the headwaters of the Jeremys River.

Public access is provided by means of a gravel road from Route 85 to the pond. There is a poorly developed but useable boat launching area at the southern end of the pond near the dam. There are no cottages on the shores of this impoundment.

Holbrook Pond has been stocked with yellow perch, bullheads, chain pickerel, calico bass, largemouth bass and golden shiners.

Yellow perch are common in abundance and exhibit good growth. Largemouth bass are present, but scarce. The growth rate of this species is approximately equal to the state average. Calico bass are common in abundance and grow at a rate equal to the state average. Bullheads, common sunfish and golden shiners are abundant. Chain pickerel are scarce. The growth rate of this species was not determined. Holbrook Pond should provide good fishing for panfish such as yellow perch, calico bass and bullheads.

This impoundment should be managed for largemouth bass, yellow perch and calico bass. Largemouth bass have been recently introduced and, as yet, are relatively scarce. This species should be protected by a 14-inch minimum length until it is sufficiently well established to warrant a more liberalized legal length. No other special regulations are recommended at this time.

Emergent vegetation is particularly abundant in this body of water but, unfortunately, there is no good, safe chemical, at the present time, that can be used to control these nuisance aquatics. Chemical treatments should be made to reduce the quantity of submerged vegetation.

HOPEVILLE POND

Hopeville Pond is an artificial impoundment of 149.4 acres on the Pachaug River. It is located in New London County in the township of Griswold. The pond has a maximum depth of 16 feet and an average depth of 4.6 feet. There are scattered patches of submerged and emergent vegetation but, in general, aquatic vegetation is not abundant. There are numerous tree stumps in the pond and these come almost to the surface of the water. The pond bottom is mostly of mud and swampy ooze. The water is stained a dark, tea color and as a result, transparency is reduced to approximately three feet.

Hopeville Pond State Park is located on the northeastern end of the pond. There are no boat liveries on the pond. There are some cottages present, but these are far less numerous than on most Connecticut waters. Access to the pond is provided through a state-owned road. Picnic and swimming facilities are also available in the park.

Hopeville Pond has been stocked with smallmouth bass, largemouth bass, yellow perch, chain pickerel, bullheads, calico bass, sunfish and golden shiners.

Largemouth bass are common in abundance. The growth rate of this species is equal to the state average. Chain pickerel are scarce and exhibit average growth. Yellow perch and bluegill sunfish are common in abundance. These species exhibit below-average growth rates and bluegills are in serious danger of becoming stunted. Calico bass and bullheads are present, but scarce.

Fishing for largemouth bass should be good; for other species, fishing is probably quite poor.



FIGURE 60. Shoreline seining to check on reproduction.

This pond should be managed for largemouth bass, chain pickerel and yellow perch. A minimum legal length of 14 inches is recommended for largemouth bass. This should result in greater numbers of bass which should ultimately bring about a decrease in the numbers of panfish through increased predation. A decrease in the number of panfish should make more food available for individual fish of these species and should result in more rapid growth.

See front cover pocket for map of Hopeville Pond.

LAKE HOUSATONIC

Lake Housatonic is a long, narrow impoundment on the Housatonic River. It was formed by the construction of a large, concrete dam across the river just above Derby. It is located in Fairfield and New Haven Counties in the townships of Monroe, Shelton, Oxford, Seymour and Derby. The lake has a surface area of 328.2 acres, a maximum depth of 26 feet and an average depth of 9.4 feet. The bottom is of sand, gravel, broken ledge, boulders and mud. Submerged vegetation is scarce except in the shallow coves. Some emergent vegetation is present in the shallow shoreline areas. The shoreline is mostly wooded.

Shoreline development is heavy on the eastern shore and cottages and summer homes are numerous. Swimming and picnic facilities are available at a state park on the western side of the pond. Boats may be obtained at boat liveryes on the eastern shore. Water from this impoundment is used for hydroelectric power and industrial processing. The water level fluctuates considerably throughout the day depending on periodic water demand.

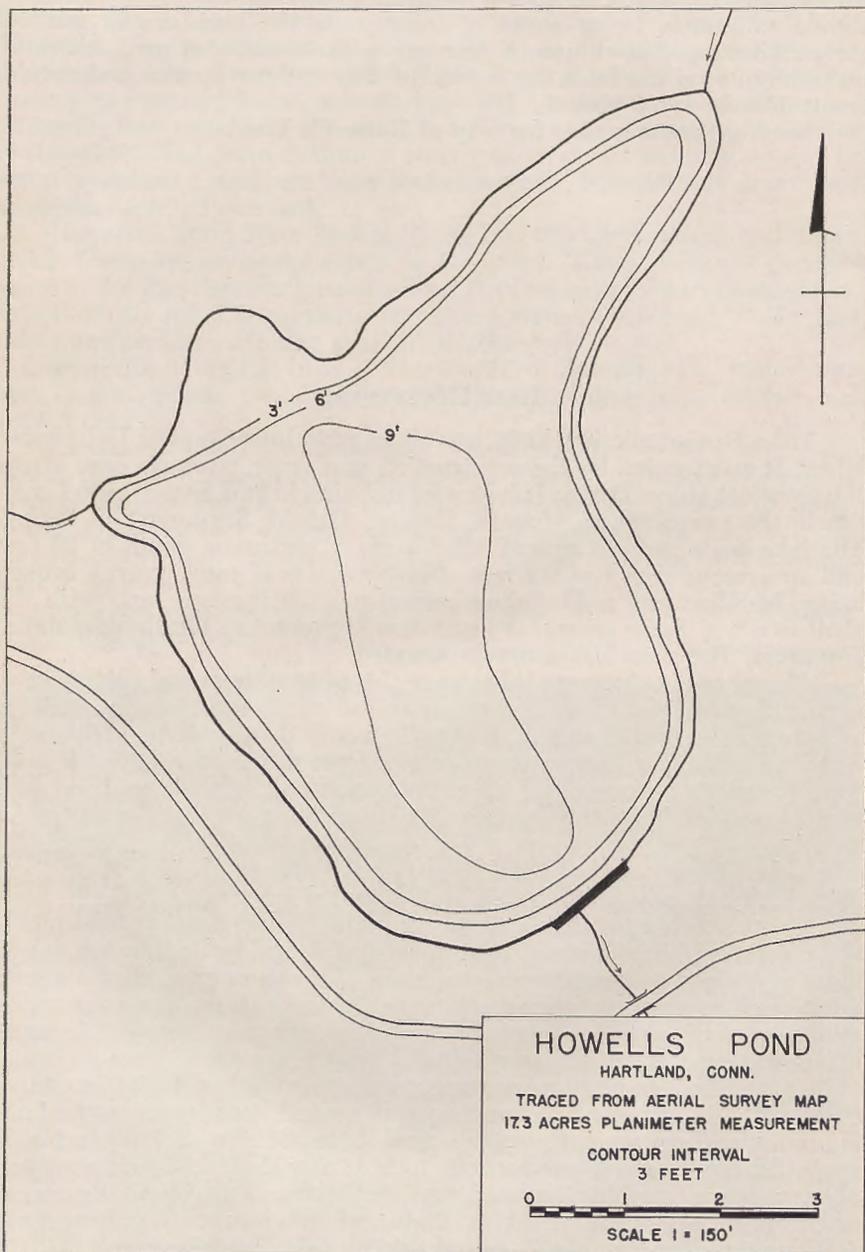
Lake Housatonic has been stocked with salmon, chain pickerel, yellow perch, calico bass, bullheads, sunfish and shiners.

Largemouth bass are scarce to common. Yellow perch, white perch, chain pickerel, bluegill sunfish, common sunfish, red-bellied sunfish, small-mouth bass and golden shiners, are scarce. Growth rates of all the above-mentioned species are average or above average. Carp are common to abundant. The abundance of this trash species may account to some extent for the scarcity of game fish and panfish.

It is difficult to make management recommendations for an impoundment with the constantly changing water conditions common to Lake Housatonic. Carp are sufficiently abundant to act as a limiting factor on game fish and panfish production. It is highly desirable to completely eliminate carp from this impoundment, but such a project has little chance of lasting success. Carp could be eliminated only temporarily, since Lake Housatonic is fed by Lake Zoar and this lake also contains carp.

Commercial fishing for carp with fyke nets and trap nets may help to keep the numbers of this trash fish under some semblance of control.

See front cover pocket for map of Lake Housatonic.



HOWELLS POND

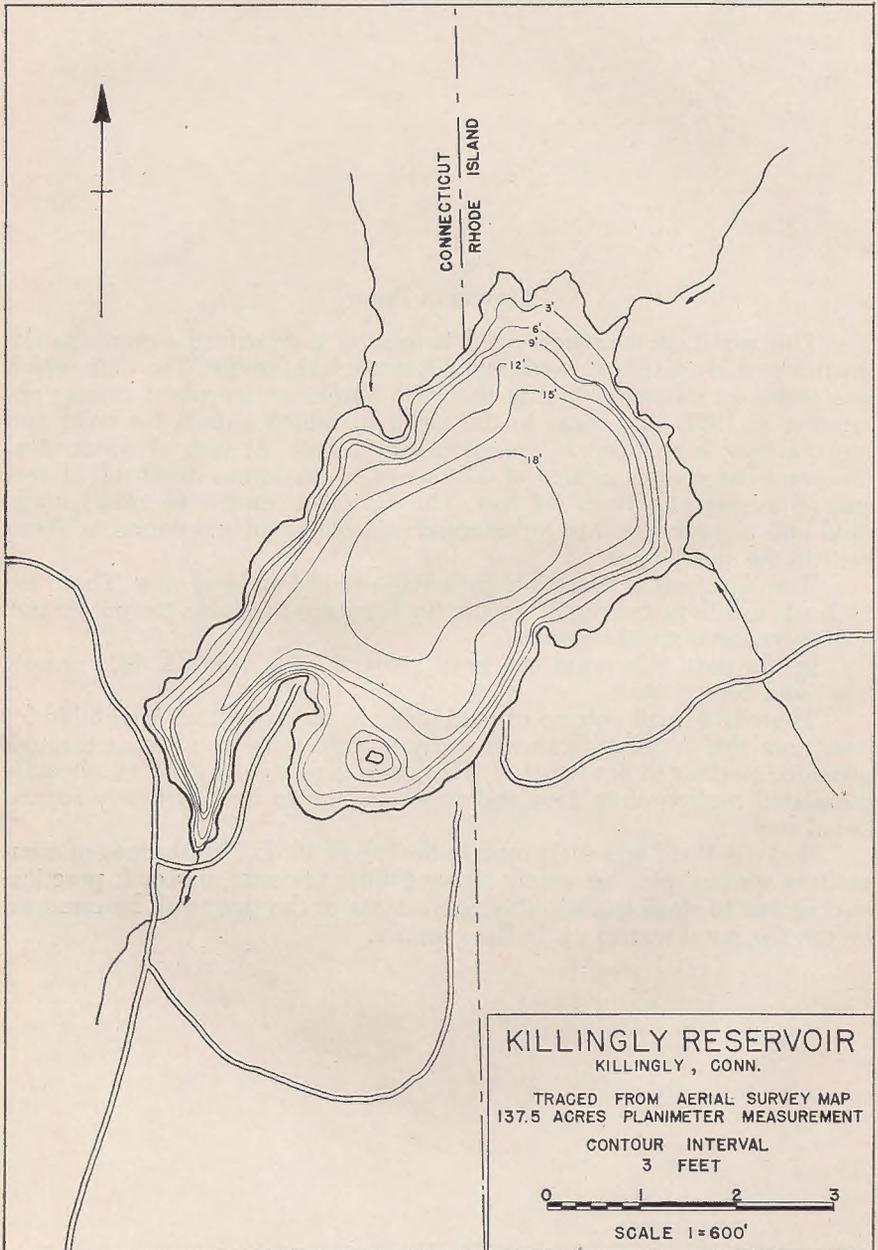
This small, state-owned pond is located in Hartford County in the township of Hartland. Howells Pond is artificial in origin. The dam which was seriously damaged during the 1955 floods was repaired during the summer of 1957. The water in this pond is stained a dark, tea color and transparency is reduced to approximately 5 feet. At normal water level the pond has a surface area of 17.3 acres, a maximum depth of 11 feet and an average depth of 6.4 feet. The bottom is mostly of gravel, rock, mud and organic detritus. Submerged and emergent vegetation is abundant in the shoal areas.

Howells Pond is accessible by a state-owned right-of-way. There are no boats available for rental. Picnic facilities are available for public use. The shoreline is mostly wooded.

In the past, this pond has been stocked with brook trout, rainbow trout and brown trout.

There is a small volume of cold water in the pond that is suitable for trout, but this is not sufficient to carry a large number of trout through extended periods of hot weather. This pond is relatively close to a heavily populated metropolitan area and is located in an area of heavy recreational use.

Howells Pond was reclaimed in the fall of 1957. The absence of competitive species, plus extremely heavy fishing pressure, makes it practical to continue to stock trout in this pond. Most of the trout will be removed before the pond warms up in the summer.



KILLINGLY RESERVOIR (Killingly Pond)

Killingly Reservoir, owned by the Chestnut Hill Reservoir Company, is located in Windham County in the township of Killingly. A portion of the reservoir extends into Rhode Island. This artificial impoundment has an area of 137.4 acres, a maximum depth of 20 feet and an average depth of 11.6 feet. The pond is fed by small tributary brooks and springs. Submerged and emergent vegetation is scarce and is confined to the shallow areas. The bottom is variable and is composed mostly of sand, gravel, rubble, boulders and ledge. The water is clear and the transparency exceeds 10 feet. This reservoir, like most shallow ponds, is not thermally stratified.

The shoreline is well wooded with only a few cottages and summer homes present. There are no boat liveryes or other public facilities. This pond may be fished with either a Rhode Island or Connecticut angling license.

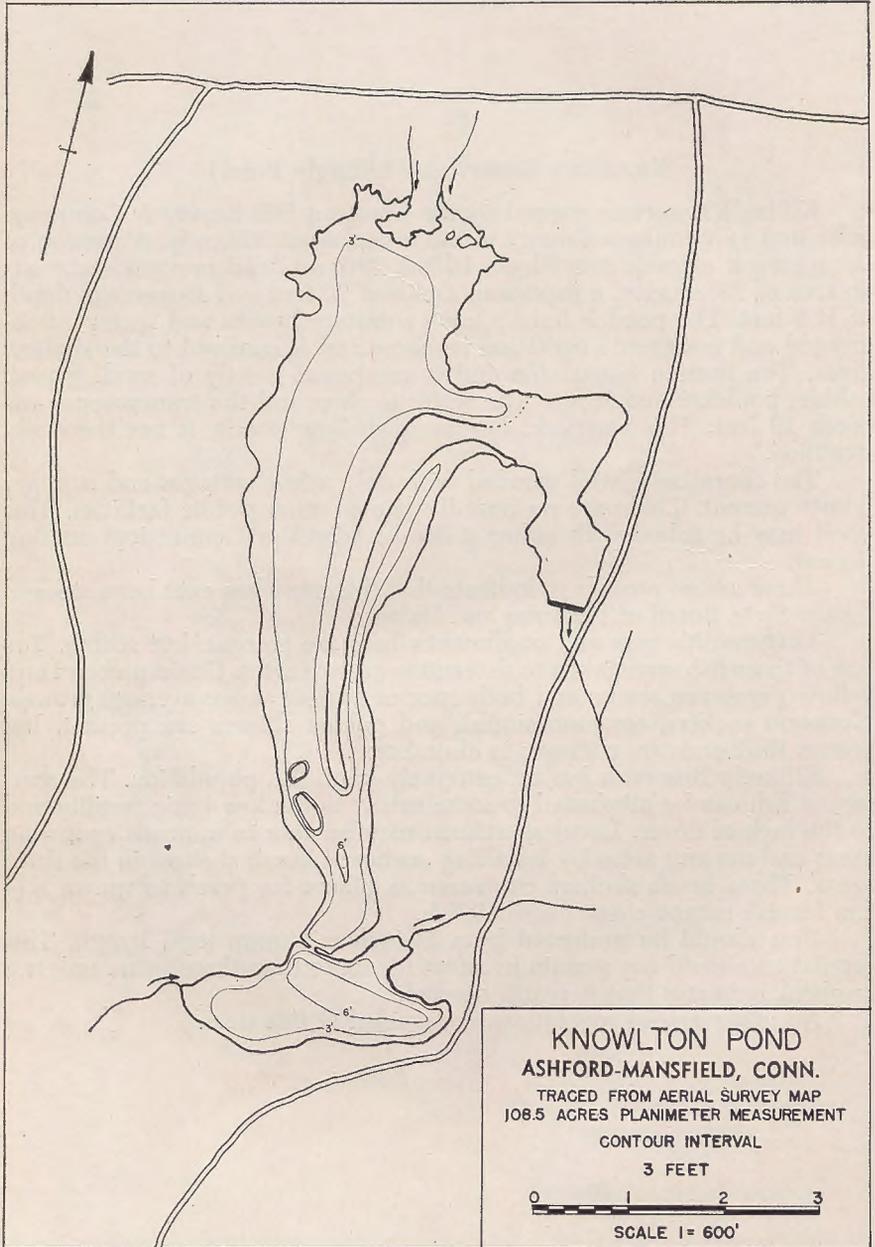
There are no records to indicate that this pond has ever been stocked by the State Board of Fisheries and Game.

Largemouth bass and smallmouth bass are present, but scarce. Too few of these fish were taken to determine growth rates. Chain pickerel and yellow perch are scarce and both species exhibit above-average growth. Common suckers, common sunfish and golden shiners are present, but scarce. Bullheads are common in abundance.

Killingly Reservoir has an extremely small fish population. The scarcity of fish can be attributed to some extent to the low basic fertility and to the lack of cover. Local sportsmen may be able to improve spawning areas and nursery areas by installing anchored brush shelters in the shoal areas. These brush shelters can serve as places for perch to spawn and can furnish escape cover for small fish.

Bass should be protected by a 14-inch minimum legal length. This regulation should not remain in effect for more than three years unless a re-check indicates that it is still needed.

No other special regulations are needed at this time.



KNOWLTON POND

Knowlton Pond is a small, semi-private, artificial pond located in Windham and Tolland Counties in the townships of Ashford and Mansfield. It covers a surface area of 108.5 acres and has a maximum depth of 7 feet. The lower basin has an average depth of 3.9 feet and the upper basin has an average depth of 2.8 feet. The upper basin is the largest of the two basins and is almost completely choked with submerged and emergent vegetation. The lower, smaller basin has abundant submerged and emergent vegetation, but this is confined to the shoal areas. The bottom is mostly of mud and swampy ooze, with small, scattered areas of coarse rubble and boulders. The water is stained a dark, tea color and transparency is reduced to approximately five feet. Neither basin is thermally stratified.

This impoundment is open to fishing with the permission of the adjacent land-owner on the western side. Boats are available for rental at one small livery on the western shore. There is no shoreline development and there no public facilities available for swimming or picnicking.

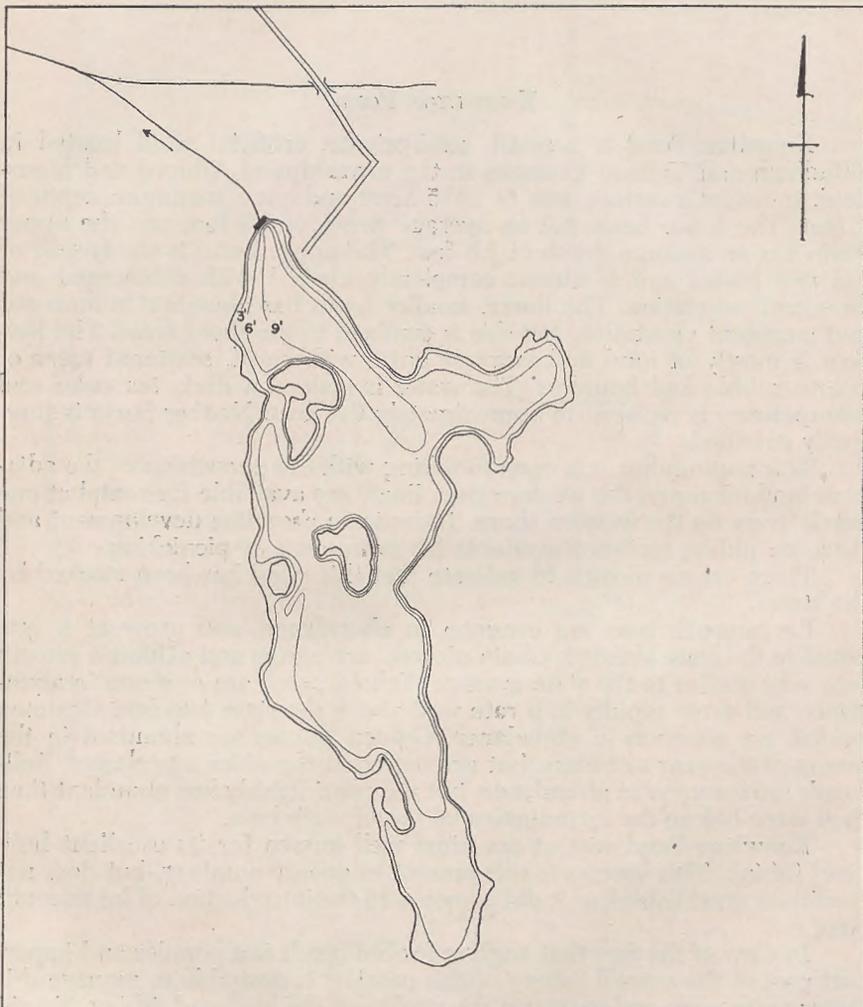
There are no records to indicate that this pond has been stocked by the state.

Largemouth bass are common in abundance, and grow at a rate equal to the state average. Chain pickerel are scarce and exhibit a growth rate very similar to the state average. Yellow perch are common in abundance and grow rapidly at a rate well above the state average. Common sunfish are common in abundance. Golden shiners are abundant in the young-of-the-year age class, but are scarce in the older age classes. Bullheads are common in abundance, but are considerably less abundant than they were before the introduction of largemouth bass.

Knowlton Pond was at one time well known for its excellent bullhead fishing. This species is still present in goodly numbers, but does not furnish as good fishing as it did previous to the introduction of largemouth bass.

In view of the fact that angling for bullheads is a popular and important part of the overall fishery of this pond, it is desirable to manage this water to improve and maintain the quality of the bullhead fishing. To aid in improving this part of the fishery, it appears desirable to reduce the minimum legal length for bass from 12 inches to 10 inches.

No other special regulations are needed at this time.



LAKE OF ISLES
NO. STONINGTON, CONN.
TRACED FROM AERIAL SURVEY MAP
87.1 ACRES PLANIMETER MEASUREMENT
CONTOUR INTERVAL
3 FEET
0 1 2 3
SCALE 1 = 600'

LAKE OF ISLES

Lake of Isles is a small, shallow impoundment located in New London County in the township of North Stonington. It is natural in origin with the level raised slightly by a low, earthen dam. The impoundment flows an area of 87.1 acres; it has a maximum depth of 10 feet and an average depth of 6.1 feet. Submerged and emergent vegetation is abundant, particularly in the shoal areas. The bottom is largely of gravel and broken ledge overlain in places with swampy ooze. The water is clear and normally quite transparent. Thermal stratification does not take place in this pond.

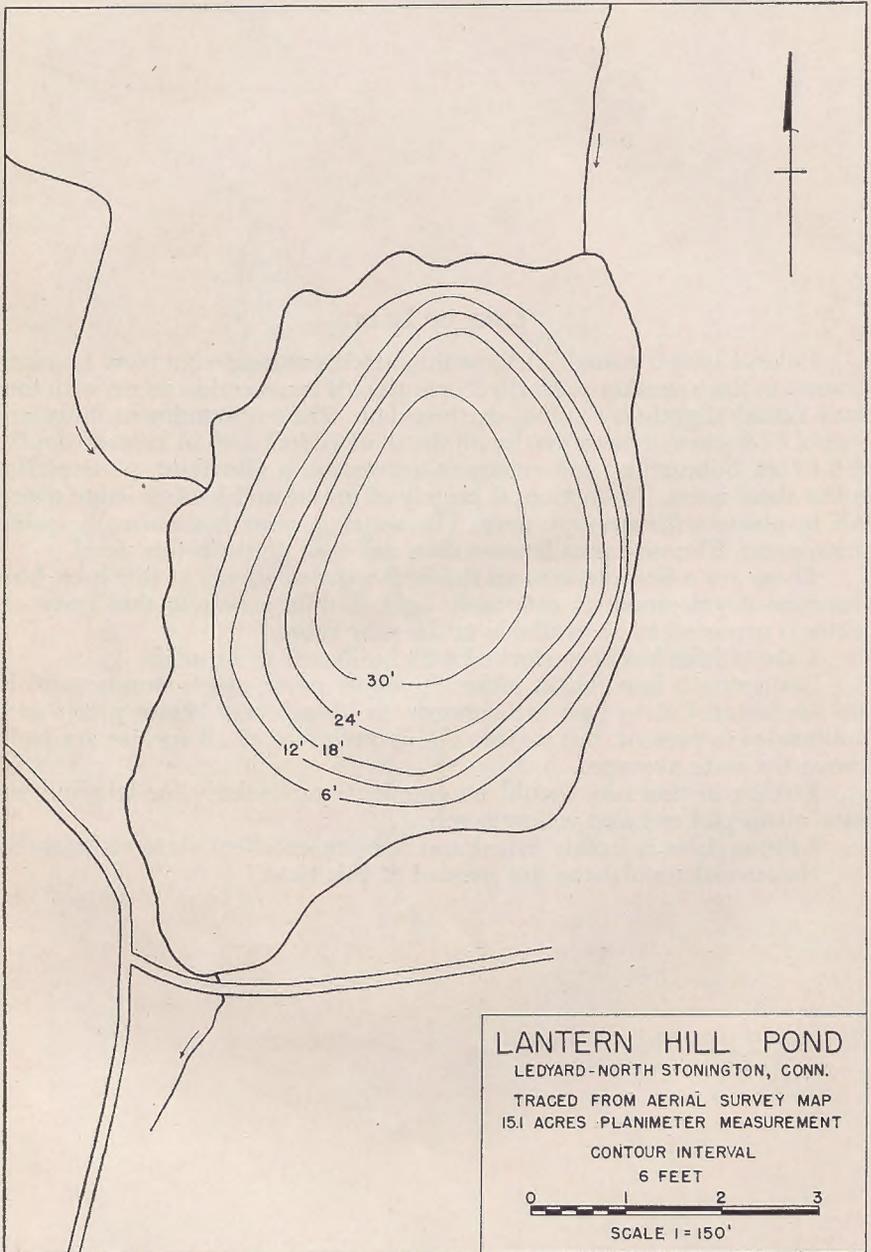
There are a few cottages on the well-wooded shores of this lake, but shoreline development is extremely light. Public access to this body of water is expected to be available in the near future.

Lake of Isles has been stocked with bullheads and sunfish.

Largemouth bass, chain pickerel, yellow perch and common sunfish are abundant. Calico bass are common in abundance. White perch and bullheads are present, but scarce. The growth rate of all species are well above the state averages.

Fishing in this lake should be excellent, particularly for largemouth bass, chain pickerel and yellow perch.

Lake of Isles is lightly fished and is in an excellent state of balance. No special regulations are needed at this time.



LANTERN HILL POND

Lantern Hill Pond is located in New London County in the townships of Ledyard and North Stonington. The pond was originally natural, but the water has been raised by a low, stone dam. It has a surface area of 15.1 acres, a maximum depth of 32 feet and an average depth of 14.6 feet. Submerged and emergent vegetation is abundant in the shoal areas. The pond bottom is of gravel, rubble, mud and swampy ooze. Portions of the pond bottom are covered with silex material from the silex mine on the southeastern shore. There is a considerable quantity of silex material in suspension in the water. The pond is thermally stratified and all but the deepest waters are well supplied with dissolved oxygen. An oxygen deficit occurs in the deepest waters.

There are no cottages or boat liveries on this impoundment.

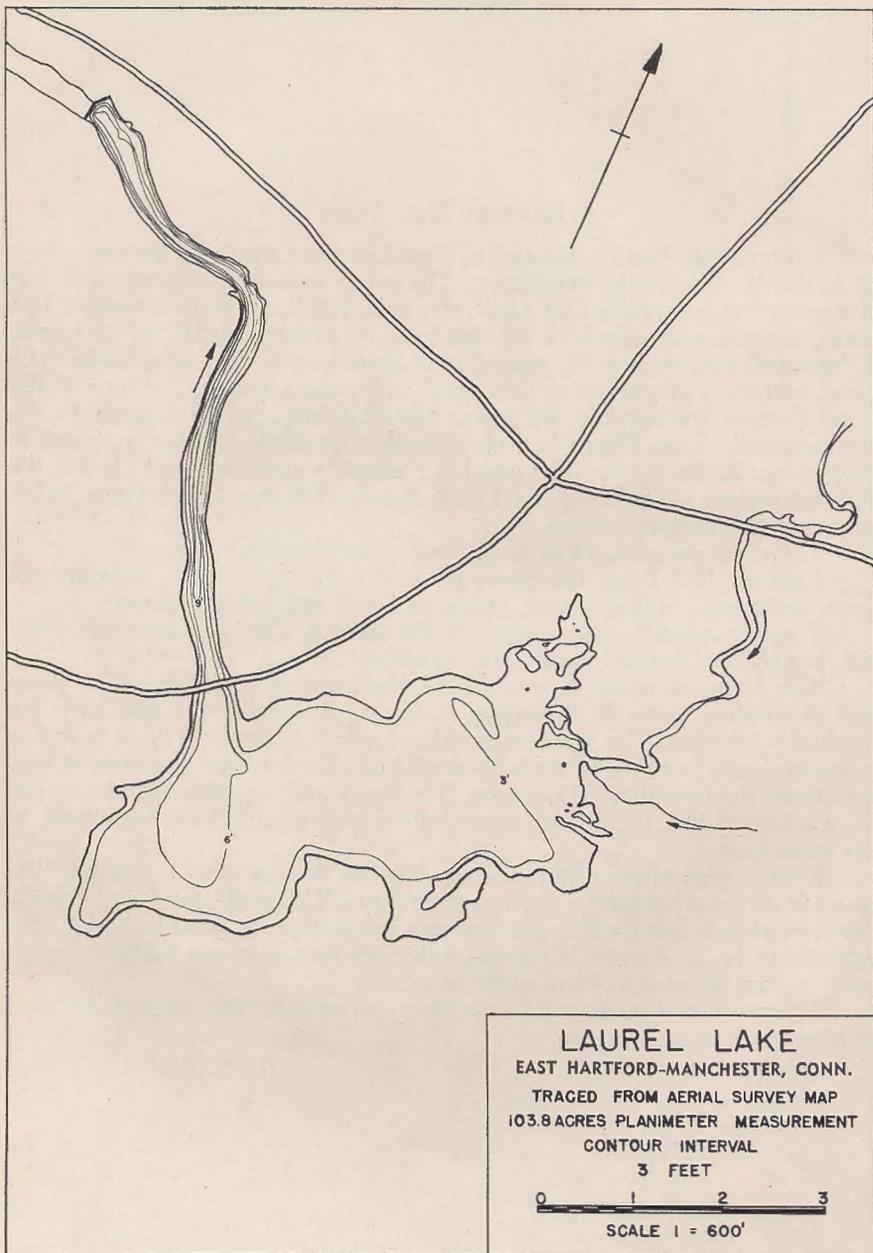
Lantern Hill Pond has been stocked with calico bass, smallmouth bass, bullheads, yellow perch, chain pickerel and golden shiners.

Common sunfish are common in abundance. Chain pickerel are present, but scarce. Banded sunfish are abundant.

This body of water is well suited for trout management. The pond and the entire watershed feeding it should be reclaimed and then restocked with trout. The inlet system that feeds Lantern Hill Pond is rather extensive and, because of its size, would greatly increase the cost of reclamation. Reclamation of Lantern Hill Pond and its inlet system would be warranted if Long Pond, immediately below, could be reclaimed at the same time.

Every effort should be made to stop the flow of silex waste into the pond from the mine on the southeastern shore. This pollutant is apparently not toxic to fish, but the fine silt covering the bottom in areas near the dam appears to be so devoid in normal nutrients that common bottom organisms are not present in their usual numbers.

After reclamation, it will be necessary to prohibit the use of fish (dead or alive) as bait.



LAUREL LAKE

Laurel Lake is located in Hartford County in the townships of East Hartford and Manchester. It has a surface area of 103.7 acres, a maximum depth of 11 feet and an average depth of 3.9 feet. There is considerable emergent vegetation in the shoal areas and around the inlet at the northeastern end of the pond. Submerged vegetation is scarce in all areas. This reservoir is artificial in origin and was formed by impounding the Hockanum River. This impoundment is grossly polluted with domestic and industrial wastes from cities and villages upstream. Due to the increased fertility resulting from this pollution, a dense algal bloom is produced each year and this reduces transparency to approximately one foot. Thermal stratification does not take place in this pond.

There is no shoreline development on this reservoir and there are no public facilities present.

Laurel Lake has been stocked with largemouth bass.

Largemouth bass are scarce and exhibit poor growth. Chain pickerel are present, but scarce. The growth rate of this species was not determined. Yellow perch are scarce. This species grows at a rate well above the state average. Golden shiners, goldfish, common sunfish and common suckers are extremely abundant. Carp and bullheads are present, but scarce.

Laurel Lake is grossly polluted with industrial and domestic sewage and until this problem can be overcome, it is impossible to formulate an effective management plan. If the pollution problem is removed, it will be advisable to reclaim this pond to remove the undesirable trash species. The lake can then be restocked with largemouth bass, chain pickerel and yellow perch and managed for these species.

At the present time, no special regulations are needed on this pond.



FIGURE 61. Gill nets from Lake Lillinonah with pike-perch.

LAKE LILLINONAH

Lake Lillinonah is a newly impounded lake on the Housatonic River above Lake Zoar. It is located in Fairfield, Litchfield and New Haven Counties in the townships of Newtown, Brookfield, New Milford, Bridge-water and Southbury. This 1,900-acre impoundment is owned by the Connecticut Light and Power Company and water from the lake is used to generate hydroelectric power. The maximum depth at the dam is nearly 100 feet. The lake basin is very steep-sided and the average depth probably exceeds 25 feet. Due to drawdown for generating purposes, the water level is subject to considerable fluctuation. These waters are not thermally stratified. Water for generating purposes is taken from the deepest part of the lake. This procedure disrupts stratification and the water is completely mixed from top to bottom. During July and August, bottom temperatures approach 75°F. The biological oxygen demand is extremely high and, as a result, there is an oxygen deficiency in the deeper waters. This condition may change as the impoundment ages. The lake is fed by the Housatonic River, Shepaug River and numerous small brooks.

Public access to Lake Lillinonah will be provided on each side of the bridge on Route 133. Shoreline development is light at the present, but can be expected to increase greatly within the next five years.

The lake has not been completely surveyed as yet. Preliminary investigations indicate that the population of warm-water fish are increasing rapidly. Smallmouth bass are abundant and grow at a very rapid rate. Largemouth bass are less abundant than the smallmouth but are still numerous. Yellow perch, white perch, bluegill sunfish, common sunfish and red-bellied sunfish are common in abundance and exhibit excellent growth rates.

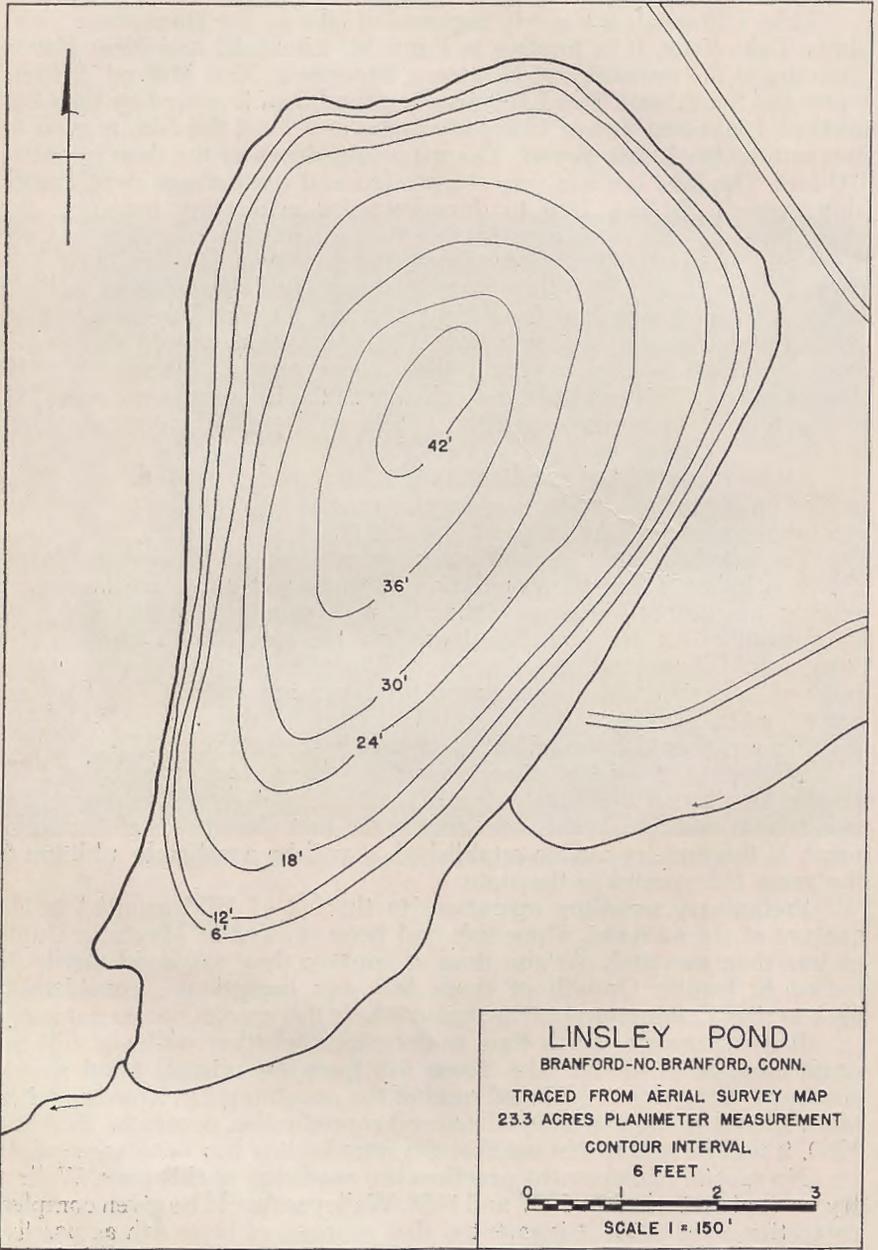
Fishing should be excellent, particularly for smallmouth bass.

Walleye-pike (yellow pike-perch) have been stocked in Lake Lillinonah. An attempt is being made under a Federal Aid to Fisheries project to establish walleyes in this lake during the first three years of impoundment. If this species can be established, it will be a valuable addition to the game fish species in the state.

Preliminary sampling operations in the fall of 1956 resulted in the capture of six walleyes. These fish had been stocked in May at a length of less than one inch. At the time of capture they averaged nearly 10 inches in length. Growth of these fish was exceptional; considerably greater than that attained in the region where this species occurs naturally.

It is impossible at this time to determine whether walleyes will become established in this lake. Some fish from the original plant should reach spawning size in 1958 and most of the remaining fish from the initial plant should mature in 1959. If natural reproduction occurs in 1959 and 1960, it will be safe to assume that the introduction has been successful.

No special management practices are necessary at this time. Walleye fry were also stocked in 1957 and 1958. Walleyes should be given complete protection until 1959. It is essential that as many of these fish as possible reach sexual maturity and have at least one opportunity to spawn before they become legal quarry for the angler.



LINSLEY POND

BRANFORD-NO. BRANFORD, CONN.

TRACED FROM AERIAL SURVEY MAP
23.3 ACRES PLANIMETER MEASUREMENT

CONTOUR INTERVAL

6 FEET



SCALE 1" = 150'

LINSLEY POND

Linsley Pond is located in New Haven County in the townships of Branford and North Branford. These waters, natural in origin, cover a surface area of 22.3 acres, have a maximum depth of 44 feet and an average depth of 20.5 feet. The pond bottom is mostly of mud and swampy ooze. There is a considerable amount of submerged and emergent vegetation in shallow shoreline areas. Elsewhere in the pond, aquatic vegetation is scarce. During the warm summer months, a dense algal bloom reduces the water transparency to less than five feet. The waters of this pond are thermally stratified and an oxygen deficit exists in the deeper areas. The shoreline is mostly wooded.

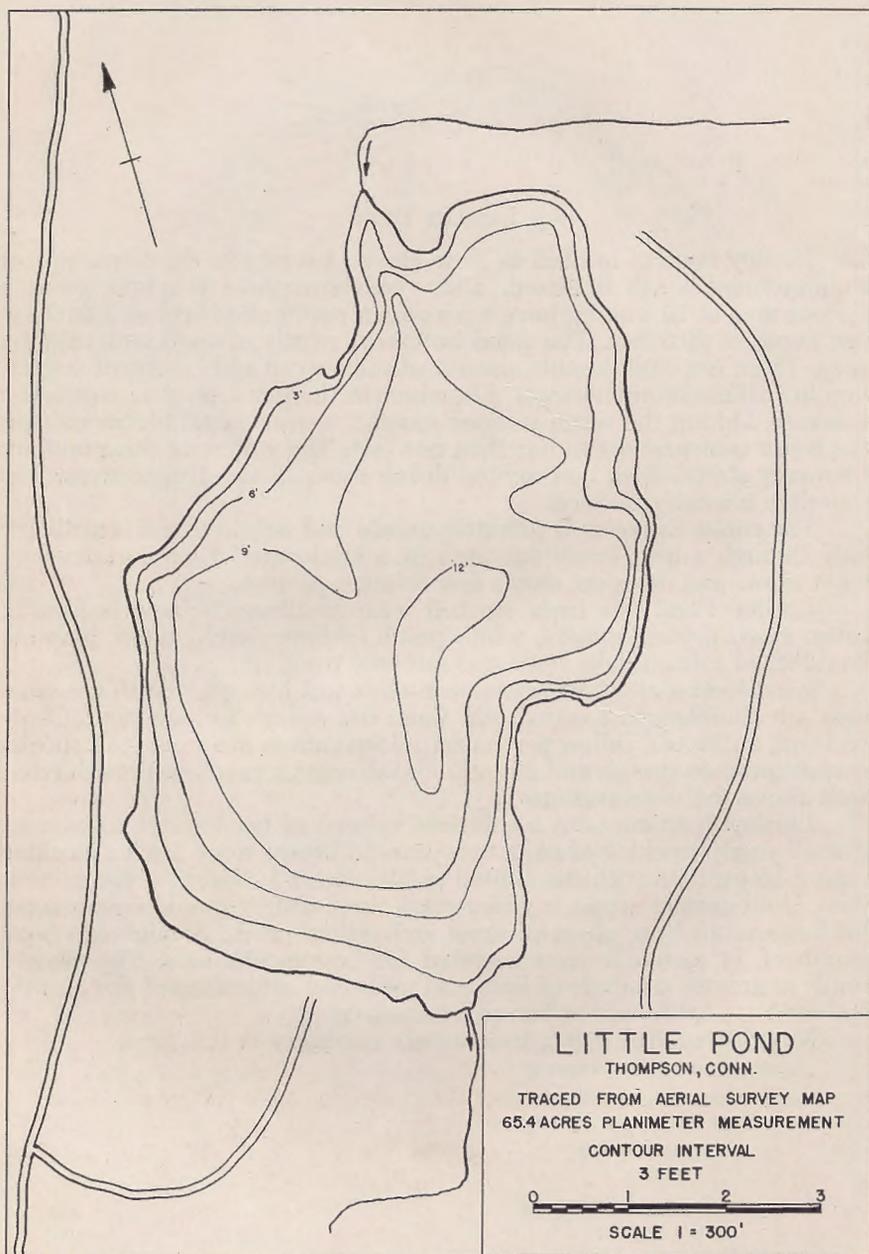
The entire shoreline is privately owned and public access is available only through a boat livery operated by a landowner. Shoreline development is low and there are only a few cottages present.

Linsley Pond has been stocked with smallmouth bass, bullheads, calico bass, golden shiners, white perch, yellow perch, chain pickerel, land-locked salmon, lake trout and rainbow trout.

Land-locked alewives, common sunfish and bluegill sunfish are common in abundance. Largemouth bass are scarce to common. Chain pickerel, bullheads, yellow perch and golden shiners are scarce. All species except common sunfish and bluegill sunfish exhibit excellent growth rates, well above the state averages.

Linsley Pond contains a sufficient volume of trout water to warrant a small yearly stocking of adult two-year-old brown trout. Such a stocking cannot be justified with the limited public access available at the present time. Until greater access is guaranteed, these waters should be managed for largemouth bass, chain pickerel and yellow perch. A minimum legal length of 14 inches is recommended for largemouth bass. This should result in greater numbers of bass and increased utilization of the alewife and sunfish populations as forage for the bass.

No other special regulations appear necessary at this time.



LITTLE POND (Schoolhouse Pond)

Little Pond is located in the township of Thompson in Windham County. This natural pond has a surface area of 65.4 acres, a maximum depth of 14 feet and an average depth of 7.8 feet. It is fed by swamp drainage, surface runoff and bottom springs. The bottom is of sand, gravel, coarse rubble and boulders. Prior to 1956, the lake was nearly choked with submerged vegetation. The "water weed" that was present in Little Pond is known as Parrot Feather and this particular aquatic is one of the most difficult of the submerged plants to control. Chemical treatment of these "water weeds" was successfully undertaken in the spring of 1956. Some regrowth of submerged vegetation was noted by July of 1957, but apparently will not resume nuisance proportions before 1958 at the earliest.

Public access to Little Pond is provided through a state-owned right-of-way, boat launching area and parking area. This access point was a gift from the township of Thompson and was developed with Federal Aid funds. There are numerous cottages on the shores of this pond but, in general, shoreline development is below average.

Little Pond has been stocked with yellow perch, chain pickerel, largemouth bass, bullheads, rainbow trout, brook trout and brown trout.

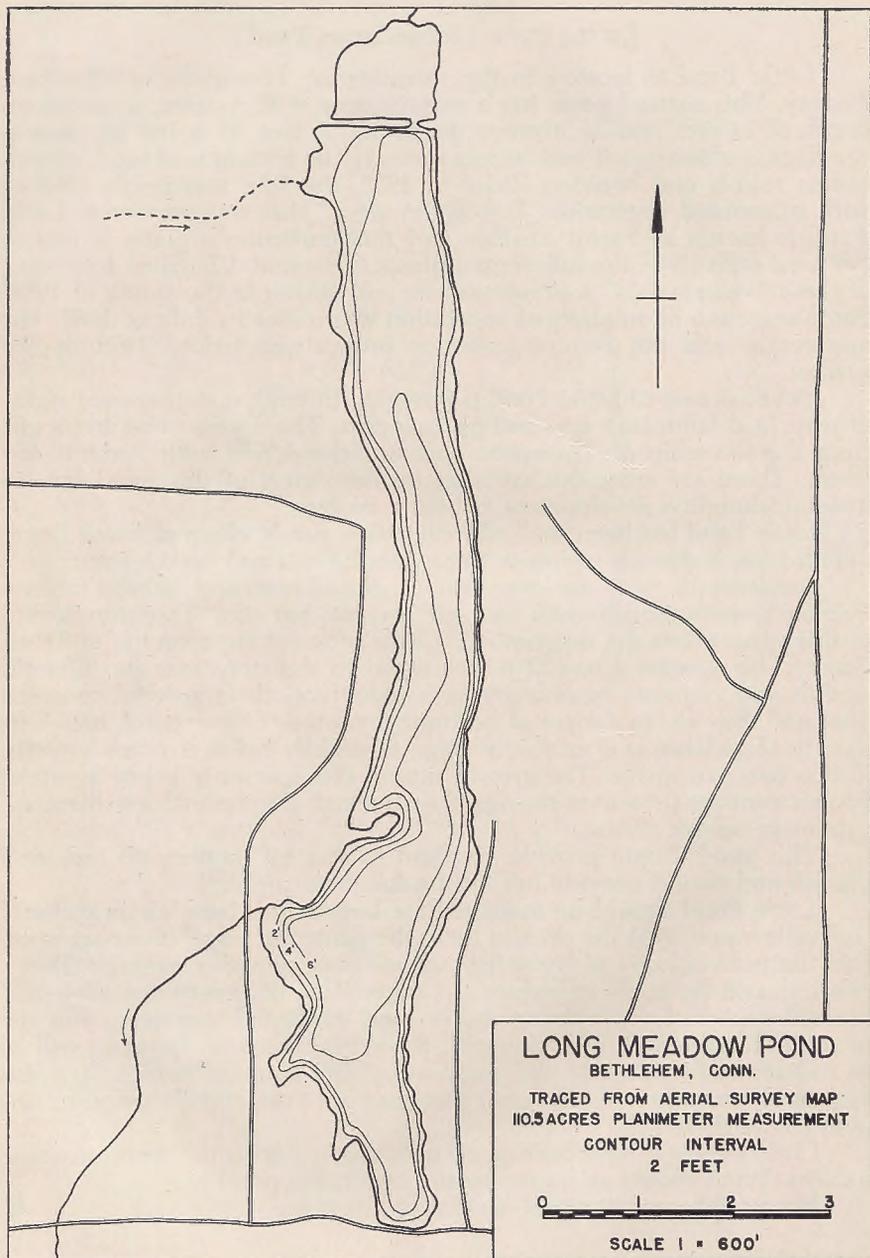
Largemouth bass are common in abundance and exhibit above-average growth. Smallmouth bass are present, but rare. The growth rate of this species was not determined. Chain pickerel are common in abundance. This species grows at a rate equal to the state average. Bluegill sunfish and common sunfish are very abundant; their growth rates are poor and they are in danger of becoming stunted. Yellow perch are common in abundance and exhibit average to slightly below-average growth. Calico bass are scarce. The growth rate of this species is below average. Brown trout are present in the age class stocked. Larger holdover trout are extremely rare or absent.

This pond should provide excellent fishing for largemouth bass and panfish and should provide fair fishing for chain pickerel.

Little Pond should be managed for largemouth bass, chain pickerel and yellow perch. At the present time, the game fish populations are good and the growth rates of these fish are average or above average. Every effort should be made to reduce the population of common sunfish and bluegill sunfish. Local cottage owners and interested sportsmen can aid in controlling these fish. Raking over the sunfish nests or dropping pellets of sodium hydroxide into the nests are effective methods of killing the eggs, and over a period of several years can aid in materially reducing the numbers of these fish.

Little Pond contains little or no trout water during the warm summer months. Trout should no longer be stocked in this pond.

No special regulations are needed at this time.



LONG MEADOW POND

Long Meadow Pond is artificial in origin and was formed by the construction of an earthen and masonry dam across the narrow mouth of a small valley. This impoundment is located in Litchfield County in the township of Bethlehem. It is fed by a small brook, bottom springs and surface runoff. The pond has a surface area of 110.5 acres, a maximum depth of 7 feet and an average depth of 4.2 feet. The bottom is of mud, gravel, silt and boulders. The shallow northern end of the basin is almost completely choked with submerged and emergent vegetation. A dense growth of submerged vegetation covers most of the pond bottom. The shoreline is mostly woods and pasture land.

Long Meadow Pond is controlled by the township of Bethlehem and is open only to residents of the township and their guests. There are numerous cottages on the shores of the lake, but shoreline development is less extensive than on most Connecticut lakes.

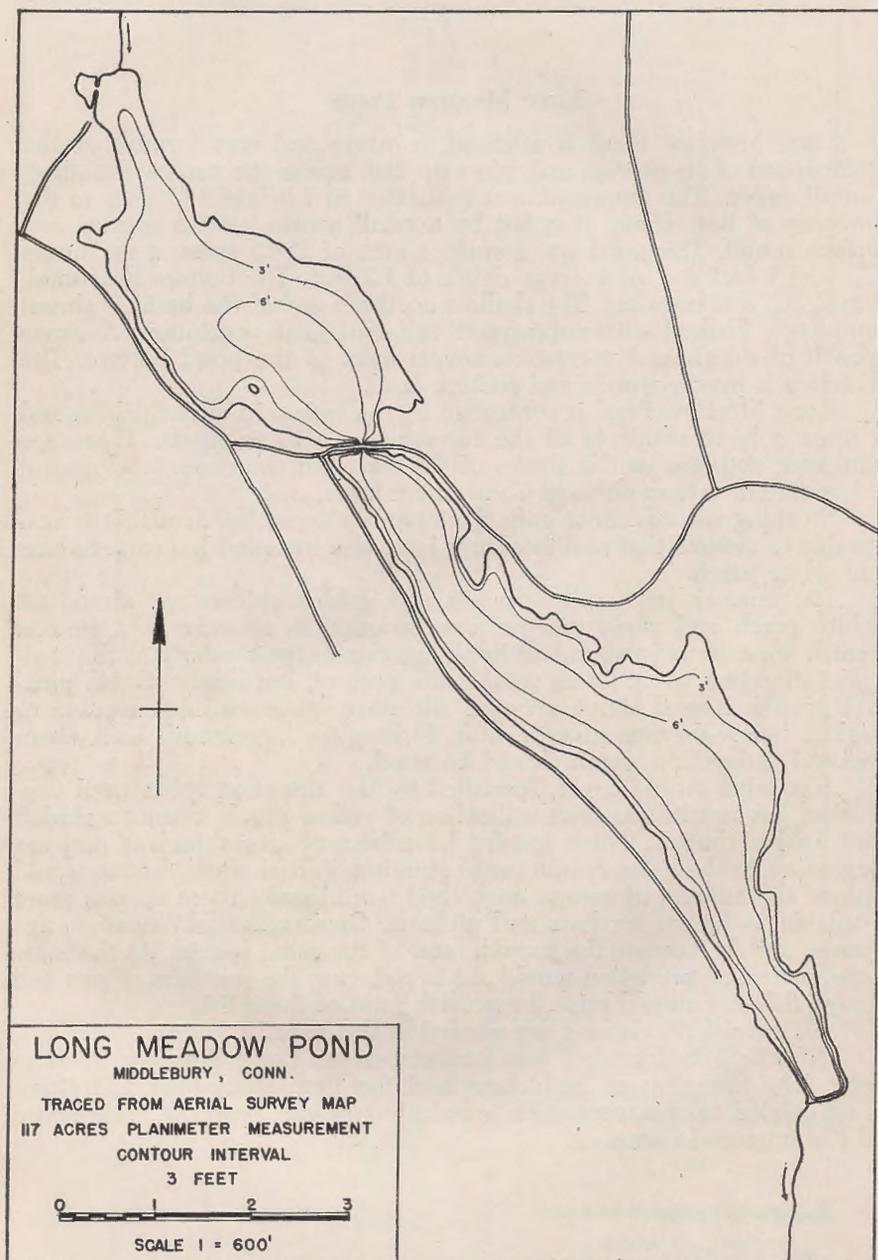
Stocking records show only the introduction of bullheads. It is reasonable to assume that past stockings have also included largemouth bass and white perch.

Largemouth bass, yellow perch and golden shiners are abundant. White perch and chain pickerel are common in abundance. Common sunfish are extremely abundant in all age classes, particularly in the shallower shoreline areas. Chub suckers are present, but scarce. Chain pickerel growth is well above average. All other species exhibit average or slightly below-average growth rates. Fishing for largemouth bass, chain pickerel and yellow perch should be good.

Excessive escape cover, furnished by the abundant submerged vegetation, has resulted in poor utilization of yellow perch, common sunfish and golden shiners. These species have become overabundant and are beginning to show the symptoms of stunting. Partial weed control would reduce the amount of escape cover and would make these species more available as forage for bass and pickerel. Greater availability of forage species should increase the growth rates of the game species. At the same time, increased predation would aid in reducing the numbers of pan and forage fish and should raise the growth rates of these fish.

No special regulations are needed at this time.

NOTE: Weed control was undertaken on Long Meadow Pond in 1955. The township of Bethlehem and the Bethlehem Fish and Game Club carried on this work with technical assistance from the State Board of Fisheries and Game.



LONG MEADOW POND

Long Meadow Pond is located in New Haven County in the township of Middlebury. It has a surface area of 117 acres, a maximum depth of 8 feet and an average depth of 4.4 feet. It is natural in origin, but the level has been raised by a low, earthen and masonry dam. The north end of the pond is rapidly being filled in with silt and these waters are slowly reverting to a swamp. Submerged and emergent vegetation is abundant. The bottom is mostly of mud and swampy ooze. The fertility of the water is below average. Bottom food production is also below average. The shoreline is mostly wooded.

There are several cottages present, but shoreline development is below average. Access to the pond is provided by one boat livery.

Long Meadow Pond has been stocked with rainbow trout, yellow perch, smallmouth bass, chain pickerel, calico bass, bullheads, sunfish and golden shiners.

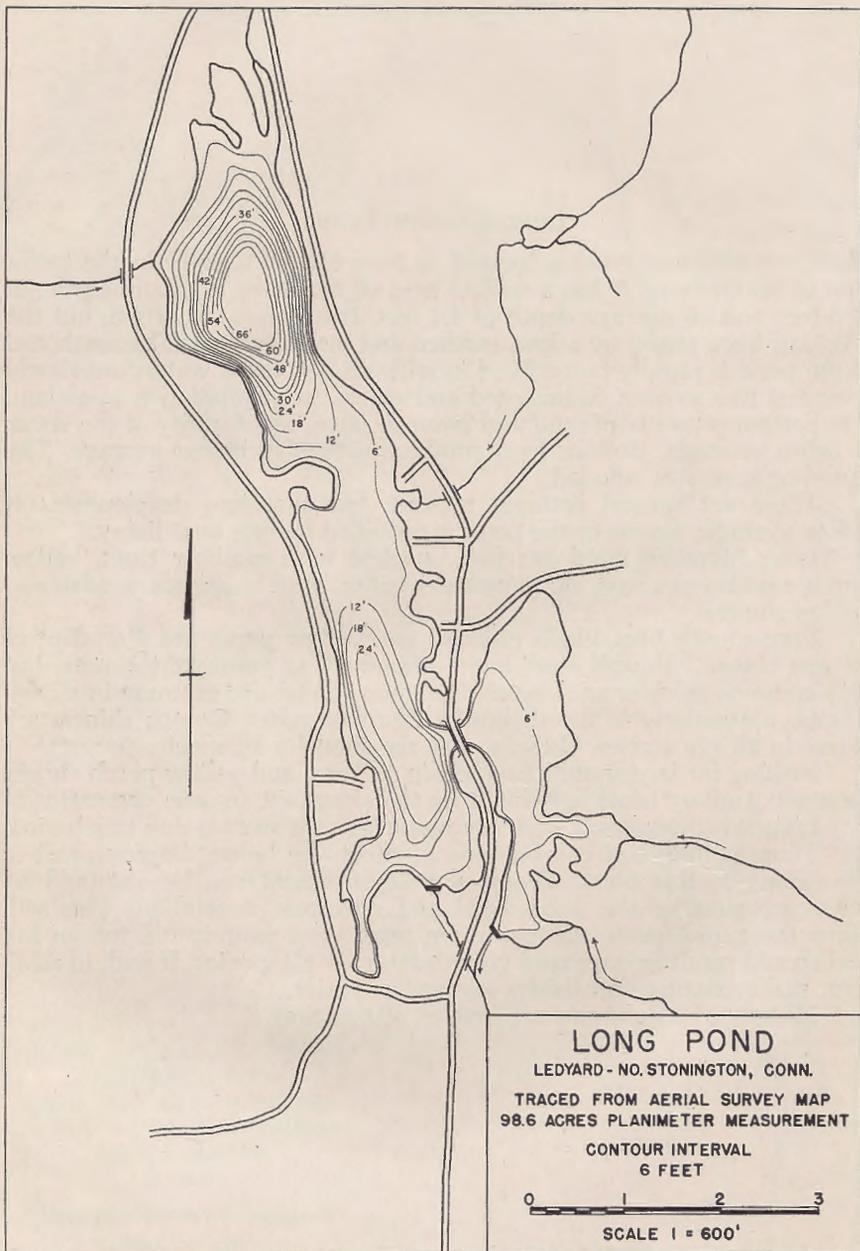
Largemouth bass, chain pickerel and yellow perch are abundant in all age classes. Bluegill sunfish are abundant as young-of-the-year, but only common in older age classes. Common sunfish are common in all age classes, particularly in the shallower shoreline areas. Golden shiners are scarce in all age classes. Growth rates are good for all species present.

Fishing for largemouth bass, chain pickerel and yellow perch should be good. Angling is made difficult by the abundant aquatic vegetation.

Long Meadow Pond is slowly reverting to a swamp due to siltation.

There is little that can be done to effect any lasting improvement of the fishing in this pond. Temporary improvement can be obtained by removing most of the submerged and emergent vegetation. This will allow the game species to feed more readily on panfish and forage fish and should result in improved growth rates for all species. It will, in addition, make boating and fishing somewhat easier.

No special regulations are needed at this time.



LONG POND

Long Pond is located in New London County in the township of Ledyard and North Stonington. This body of water is natural in origin with the water level raised approximately 12 feet by a low, earthen and masonry dike and dam. The resulting impoundment has a surface area of 98.6 acres, a maximum depth of 72 feet and an average depth of 15.2 feet. It is fed by Lantern Hill Brook, Silex Brook and three other small brooks. The pond bottom in shoal areas is of sand, gravel, rubble and boulders. In the deeper areas the bottom is mostly of rubble, boulders and swampy ooze. Submerged and emergent vegetation is moderately abundant in the shoal areas; elsewhere in the pond, aquatic vegetation is scarce. This pond is divided into two distinct basins. The northern, deepest basin is thermally stratified and the deep waters are well supplied with dissolved oxygen. The southern, shallower basin is also thermally stratified, but the waters below 15 feet are deficient in dissolved oxygen.

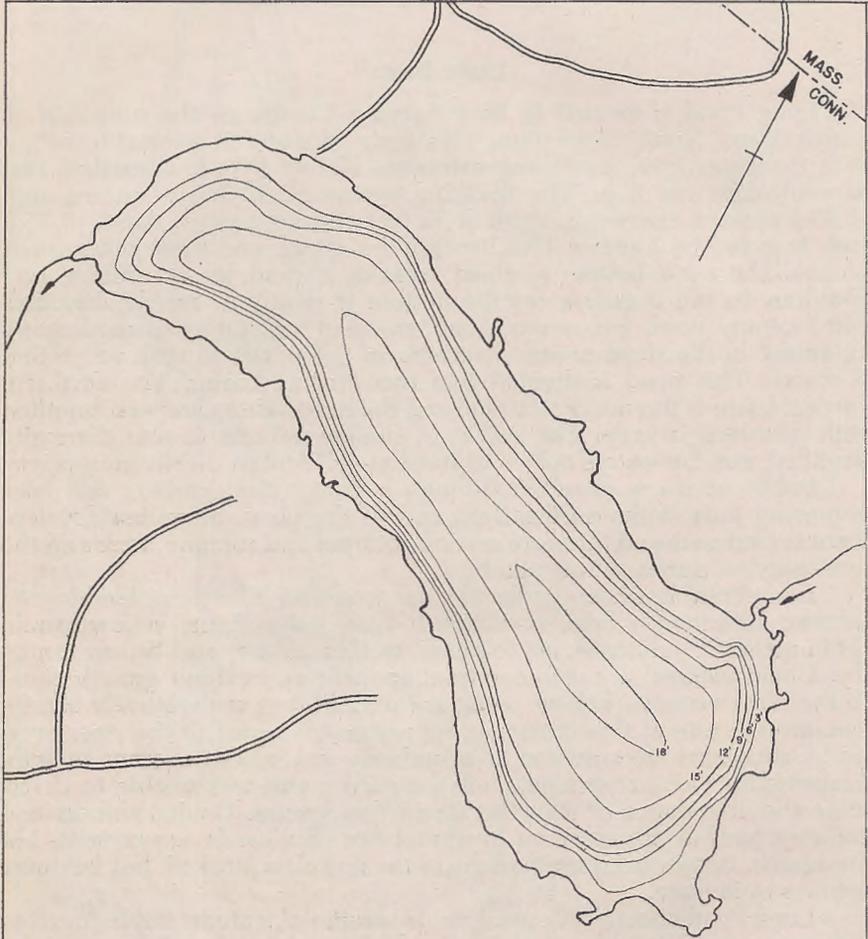
Public access is provided through a state-owned parking and boat launching area at the northeastern end of the pond. Shoreline development is moderate and there are several cottages and summer homes on the well-wooded shores of this pond.

Long Pond has been stocked in the past with lake trout, land-locked salmon, largemouth bass, smallmouth bass, calico bass, yellow perch, chain pickerel, bullheads, white perch, sunfish, shiners and brown trout.

Chain pickerel are common in abundance and exhibit growth equal to the state average. Yellow perch are present, but are relatively scarce. The growth rate of this species is approximately equal to the state average. Calico bass are common in abundance and exhibit average growth. Largemouth bass are present, but the survey unit was unable to determine the abundance or growth rate of this species. Golden shiners and common sunfish are common in abundance. Bullheads are present, but are scarce. Brown trout are present in the age class stocked, but holdover fish are quite rare.

Long Pond contains a considerable volume of water suitable for trout management. This body of water should be reclaimed and managed for rainbow trout and brook trout. If and when this pond is reclaimed, it will also be necessary to reclaim Lantern Hill Pond and the entire drainage system that feeds the two ponds. This is a large undertaking but by no means impossible or impractical. After reclamation, Long Pond would be restocked with 8,000 fingerling brook trout and 4,000 fingerling rainbow trout.

After this body of water is reclaimed, it will be necessary to prohibit the use of fish (dead or alive) as bait.



LONG POND
THOMPSON, CONN.
TRACED FROM AERIAL SURVEY MAP
20.8 ACRES PLANIMETER MEASUREMENT
CONTOUR INTERVAL
3 FEET
0 1 2 3
SCALE 1 = 200'

LONG POND

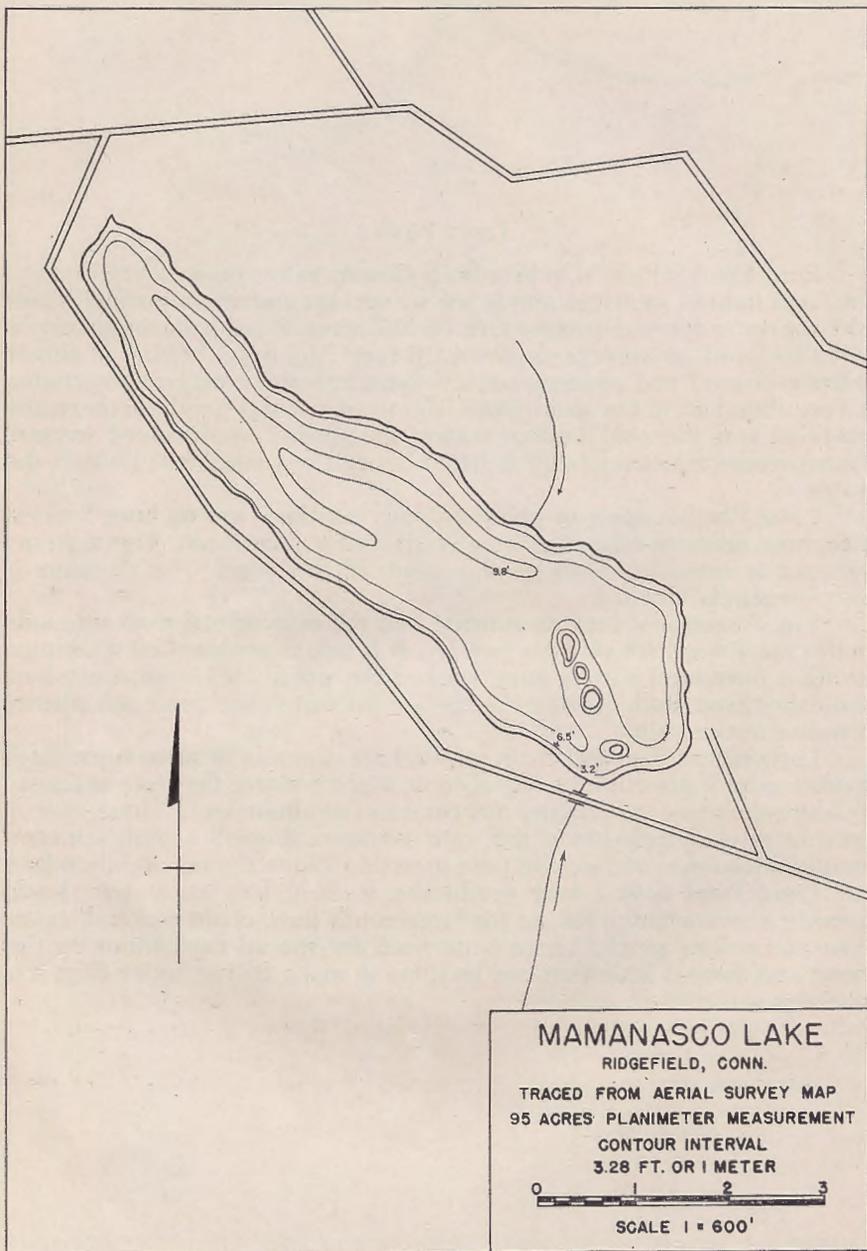
Long Pond is located in Windham County in the township of Thompson. It is natural in origin and is fed by springs and surface runoff. This body of water covers a surface area of 20.7 acres. It has a maximum depth of 19 feet and an average depth of 9.3 feet. The pond bottom is almost entirely of mud and swampy ooze. Submerged and emergent vegetation is very abundant in the shoal areas. The waters of this pond are thermally stratified and the cold bottom waters are devoid of dissolved oxygen. Transparency is considerably reduced by a dark, tea-colored stain in the water.

Long Pond is open to public fishing, but there are no boat liveries, launching areas or other facilities available for public use. There are no cottages or summer homes on the shores of this pond. The shoreline is almost entirely wooded.

The department records indicate that the only official stocking made in this pond was with yellow perch fry. It is safe to assume that sportsmen or other interested parties have stocked the pond with largemouth bass and calico bass. Both of these species are present in the pond and neither is native to the state.

Largemouth bass and chain pickerel are common in abundance. Both species exhibit growth rates equal to or slightly above the state averages. Yellow perch and calico bass are common in abundance. These species grow at rates slightly below the state averages. Bluegill sunfish are common in abundance and exhibit poor growth. Golden shiners are abundant.

Long Pond is in a very productive state of balance and it should provide above-average fishing for largemouth bass, chain pickerel, calico bass and yellow perch. There is no need for special regulations on this pond and there is little that can be done to make fishing better than it is at the present time.



MAMANASCO LAKE

Mamasasco Lake is located in Fairfield County in the township of Ridgefield. It is natural in origin, but has had its level raised by a low, earthen and stone dam. The lake has a surface area of 92 acres, a maximum depth of 10 feet and an average depth of 6.9 feet. The bottom is of ledge, broken ledge and swampy ooze. Emergent vegetation is scarce and confined to the shallower shoreline areas. This impoundment is almost completely choked with submerged vegetation. Bottom food production is good and the water is above average in fertility. The shoreline is mostly wooded.

Limited access to this lake is provided by one small boat livery. Shoreline development is moderate; there are numerous cottages present. Picnic and swimming facilities are available on a fee basis. Outboard motors are prohibited.

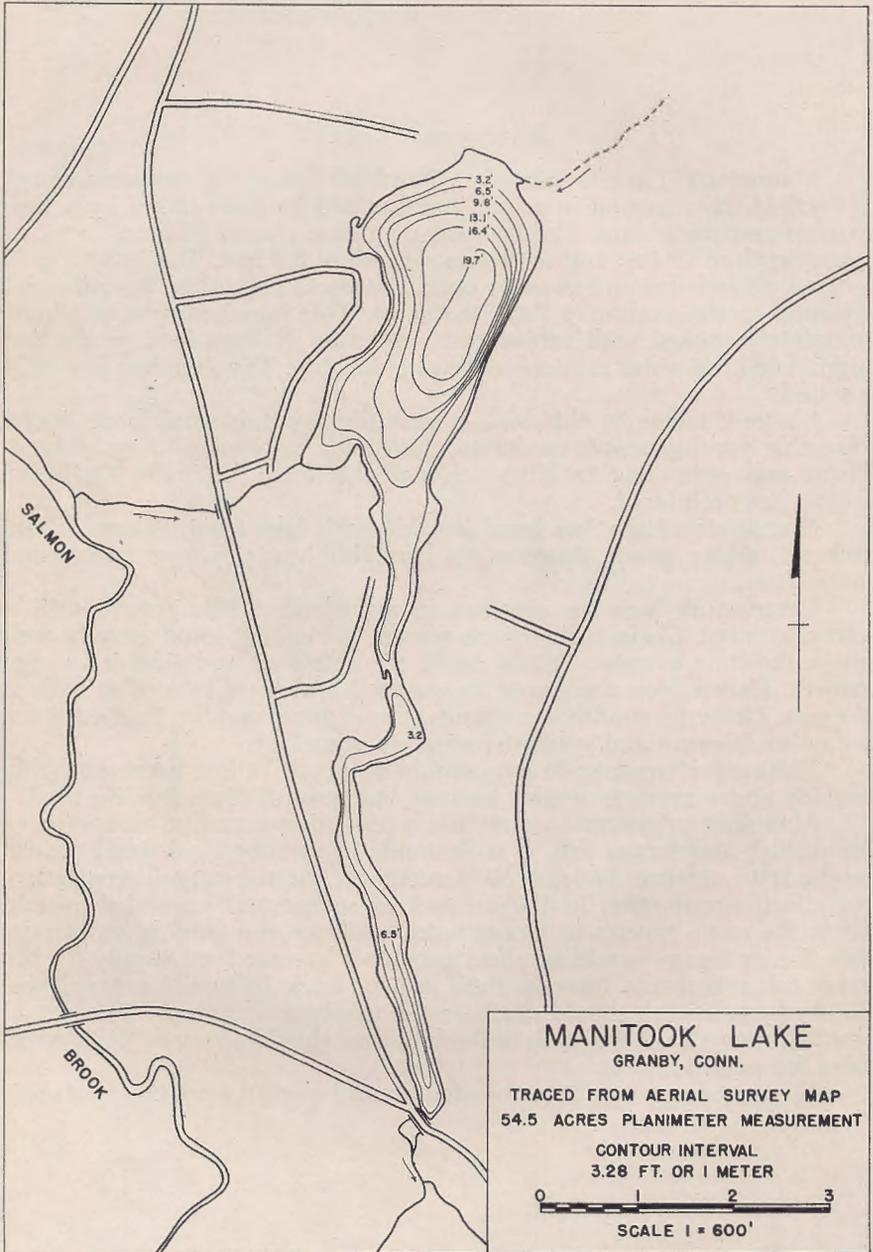
Mamasasco Lake has been stocked with lake trout, salmon, chain pickerel, white perch, largemouth bass, bullheads, yellow perch and calico bass.

Largemouth bass are common in abundance; their growth rate is above average. Chain pickerel are scarce, but exhibit good growth, well above the state average. Yellow perch are abundant and exhibit average growth. Calico bass are scarce to common and their rate of growth is average. Common sunfish are abundant and grow rapidly. Bullheads are scarce to common and golden shiners are abundant.

Fishing for largemouth bass should be good. Yellow perch probably provide above-average angling success, but most of these fish are small.

Abundant submerged vegetation is providing excessive escape cover for panfish and forage fish. It is desirable to use chemical weed control methods to remove at least 50 percent of the submerged vegetation. An effective reduction in the amount of submerged vegetation would allow the game species to forage more easily on the panfish and forage fish. Easier forage would in effect provide a greater food supply for the game fish and should increase their growth rates. In turn, increased predation by game fish should decrease the numbers of panfish. This would result in more food for each individual and should increase the growth rates for panfish.

No special regulations are needed if weed control work is undertaken.



MANITOOK LAKE (Cranberry Pond)

Manitook Lake commonly known as Cranberry Pond is located in Hartford County in the township of Granby. The lake has a surface area of 54.5 acres, a maximum depth of 20 feet and an average depth of 8.0 feet. It is natural in origin, but has had its level raised by a low, earthen and masonry dam. The water level is maintained by inflow from Salmon Brook and two other small brooks. The pond bottom in shallow areas is mostly of sand. In the deeper areas the bottom is mostly of mud and swampy ooze. Submerged vegetation is abundant in shoal areas; elsewhere it is scarce. A light, algal bloom reduces transparency to approximately six feet. The shoreline is mostly wooded.

Public access is provided through a boat livery. Shoreline development is moderate and there are numerous cottages present.

Cranberry Pond has been stocked with smallmouth bass, land-locked salmon, lake trout, bullheads, yellow perch, chain pickerel, common sucker, golden shiners, calico bass and sunfish.

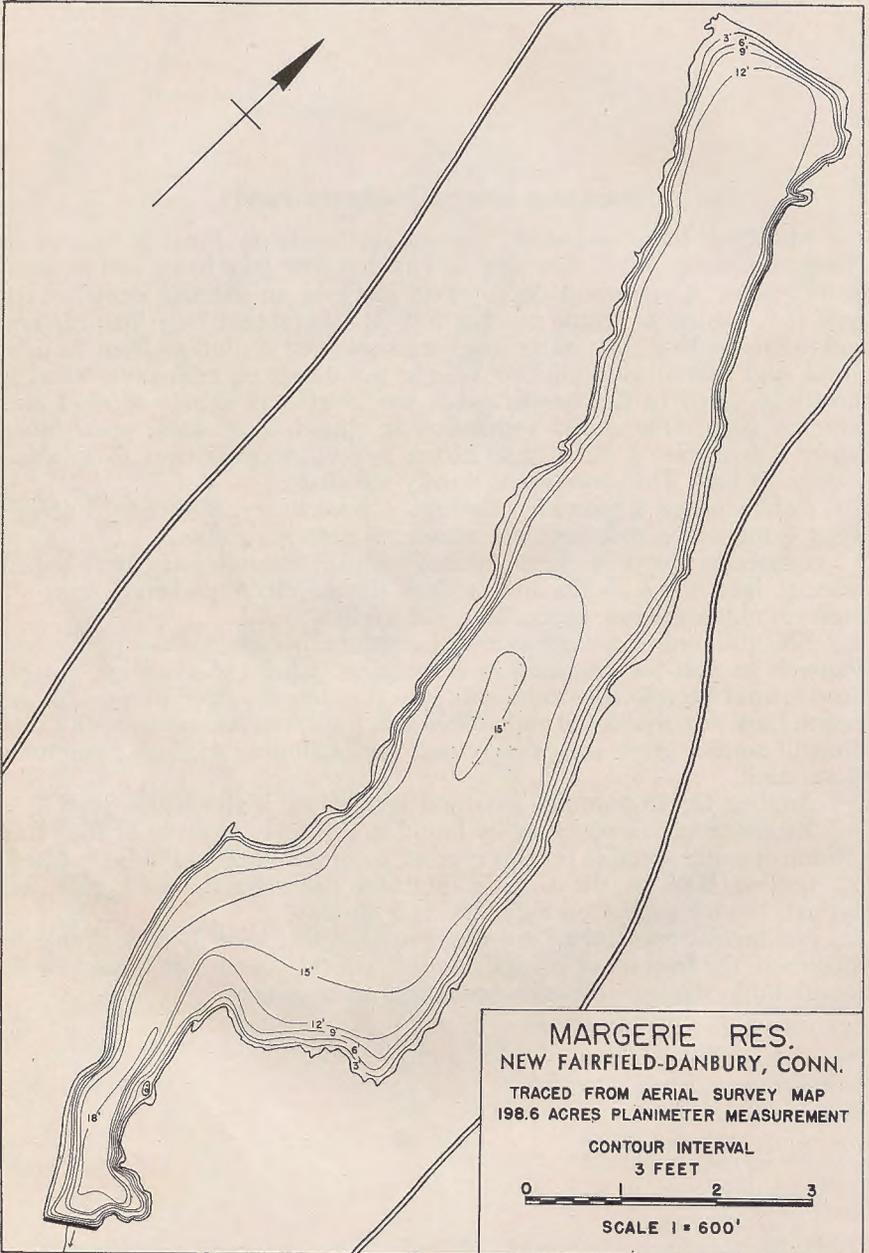
Bluegill sunfish are abundant. Largemouth bass, yellow perch and common sunfish are common in abundance. Chain pickerel are scarce. Brown trout occasionally enter this lake through the inlet stream. Largemouth bass, chain pickerel and yellow perch exhibit average growth rates. Bluegill sunfish grow very slowly and are beginning to show symptoms of stunting.

Angling for largemouth bass and yellow perch should be good.

Brown trout are occasionally found in this lake. Because of the small volume of water suitable for this species, trout stocking cannot be justified.

Section 5006 of the General Statutes prohibits the taking of fish through the ice except on Saturday and Sunday.

No special regulations are necessary for this lake. It is desirable to encourage the harvest of bluegill sunfish, for this species at times can do considerable damage through predation on bass nests.



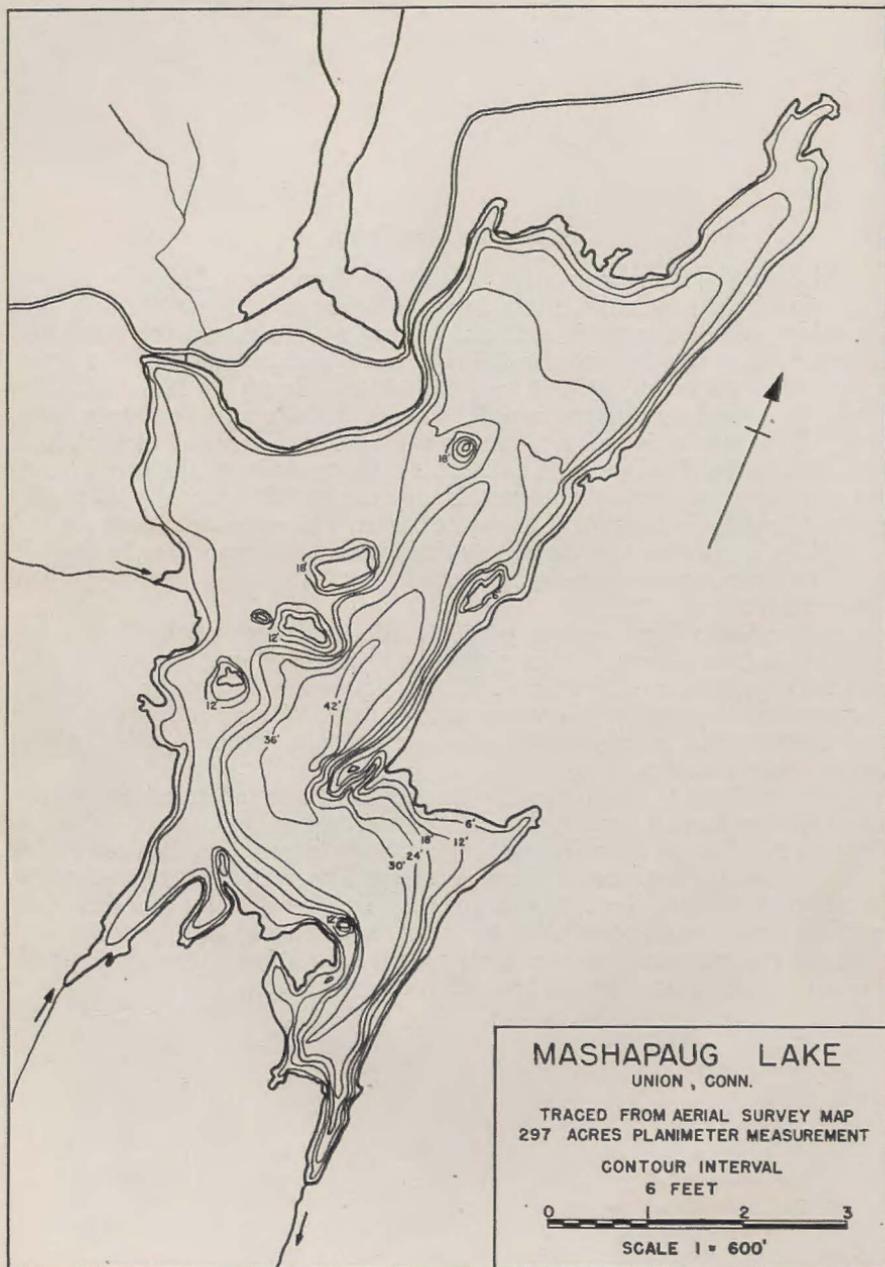
MARGERIE RESERVOIR

Margerie Reservoir is part of the Danbury water supply system. It is located in Fairfield County in the townships of New Fairfield and Danbury. The Reservoir is artificial in origin. The dam is of earth and concrete and is in excellent condition. It has a surface area of 198.6 acres, a maximum depth of 20 feet and an average depth of 12.5 feet. This Reservoir is fed by surface runoff, bottom springs and one very small brook. The bottom is of sand, gravel and mud. Submerged vegetation is abundant in the shoal areas. A dense, algal bloom reduces the water transparency to approximately four feet. Heavy use of this water supply results in considerable fluctuation of the water level. The shoreline is wooded.

Policy regarding the use of this reservoir varies from time to time. It is, or has been, open to fishing by special permit from the Danbury Water Department.

Largemouth bass, yellow perch, golden shiners and bullheads are common in abundance. Chain pickerel are scarce. Common sunfish and spot-tail minnows are abundant. White perch are extremely abundant. Largemouth bass exhibit above-average growth. White perch are stunted; their growth rate is considerably below average. Other species exhibit average growth rates.

It is difficult to make specific management recommendations to improve fishing in this impoundment. Only a limited amount of fishing is allowed and there is little chance that a change in policy in the near future will provide for increased fishing pressure. The waters of this reservoir are above average in fertility and are capable of providing excellent fishing. The white perch population is already stunted and this condition will probably become more serious. Only severe harvesting of the white perch can return this impoundment to a productive balance.



MASHAPAUG LAKE

Mashapaug Lake is natural in origin with the level raised approximately 8 feet by the construction of an earthen dam across the outlet. It is located in the township of Union in Tolland County. This lake has a surface area of 297.1 acres, a maximum depth of 43 feet and an average depth of 9.2 feet. As in most large lakes, the bottom is variable. In the shallows, the bottom is mostly of sand, gravel, rubble, boulders and ledge. In the deeper waters, there are considerable areas where the bottom is of swampy ooze. Submerged and emergent vegetation is relatively scarce except in some scattered, shallow areas where it is fairly abundant. The surrounding countryside is mostly hilly and wooded. Water from this lake is used for industrial purposes and, as a result, the water level is subject to considerable fluctuation. The lake is thermally stratified and the waters to a depth of 30 feet are well supplied with dissolved oxygen. An oxygen deficiency exists at depths greater than 30 feet. The water is clear and transparency exceeds 15 feet.

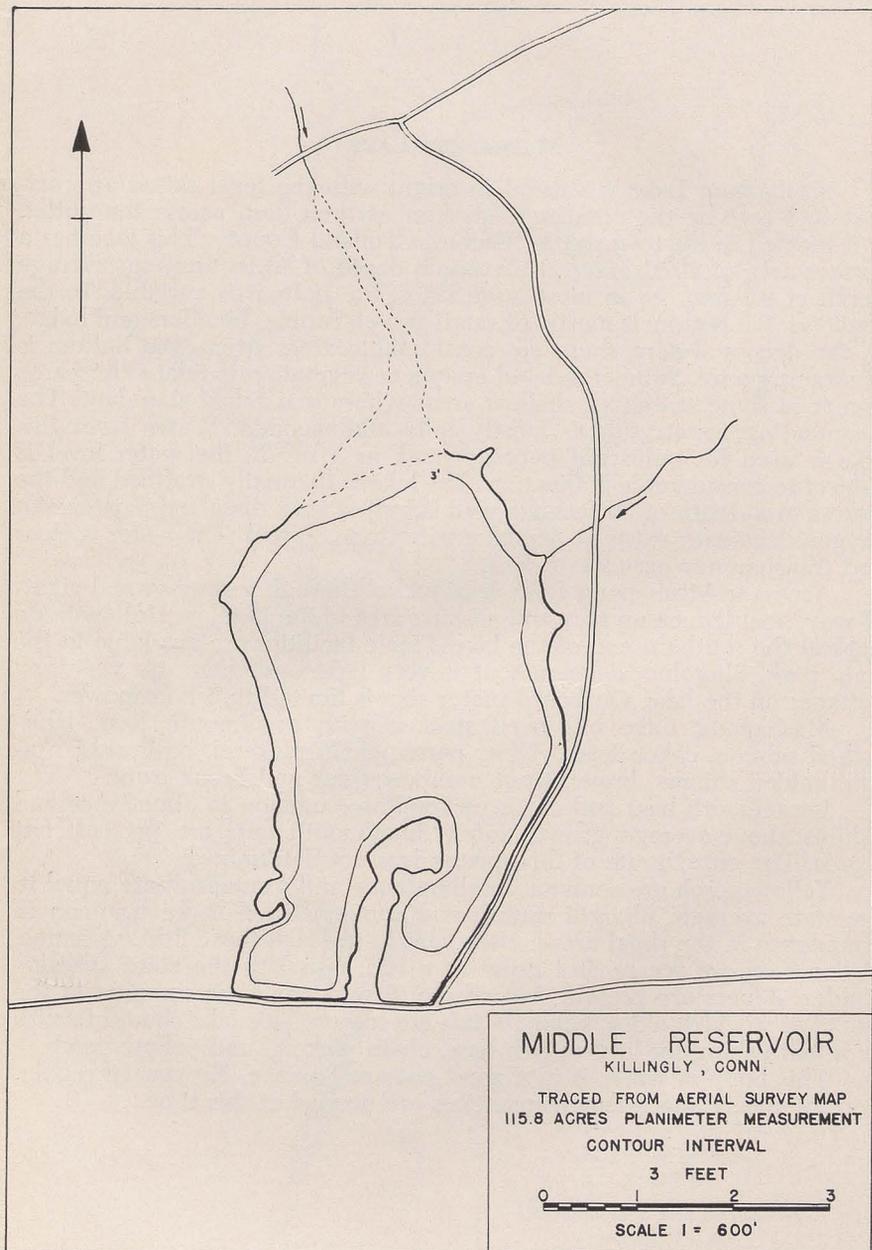
Access to Mashapaug Lake is provided through a state-owned right-of-way, boat launching area and parking area in the Bigelow Hollow State Park at the southern end of the lake. Picnic facilities are available in the state park. Shoreline development is very light and there are very few cottages on the lake. Outboard motor size is limited to 5 horsepower.

Mashapaug Lake has been stocked with smallmouth bass, landlocked salmon, calico bass, yellow perch, chain pickerel, bullheads, sunfish, golden shiners, brown trout, rainbow trout and brook trout.

Largemouth bass and chain pickerel are common in abundance and exhibit above-average growth rates. Smallmouth bass are present, but scarce. The growth rate of this species was not determined.

Yellow perch are common in abundance and grow at a rate equal to the state average. Bluegill sunfish and common sunfish are common in abundance in the shoal areas; elsewhere in the lake these fish are scarce. Calico bass are scarce and grow at a rate equal to the state average. Golden shiners are present, but scarce. Brown trout are common in the age class stocked; older, holdover fish are scarce. This lake should furnish excellent fishing for largemouth bass, chain pickerel and yellow perch.

This body of water is in a good state of balance. No special regulations or special management practices are needed at this time.



MIDDLE RESERVOIR (Bog Meadow Reservoir)

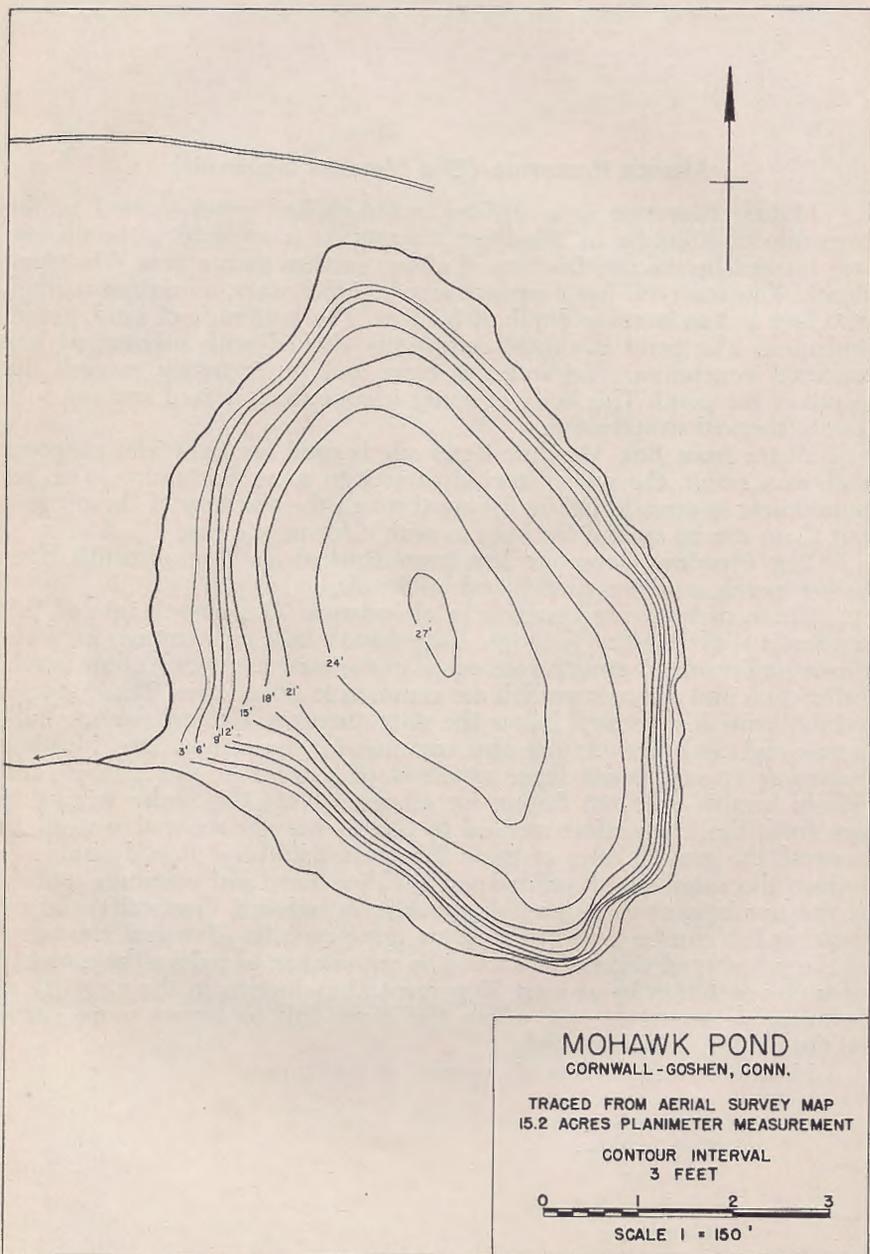
Middle Reservoir is a shallow, weed-choked pond located in the township of Killingly in Windham County. It is artificial in origin and was formed by the construction of a low, earthen dam across Whetstone Brook. This reservoir has a surface area of 115.3 acres, a maximum depth of 5 feet and an average depth of 3.1 feet. The bottom is of sand, gravel and mud. The pond is almost completely choked with submerged and emerged vegetation. The water is clear and transparency exceeds the depth of the pond. This body of water is completely mixed and not subject to thermal stratification.

Water from Bog Meadow Reservoir is used for industrial purposes and, as a result, the water level is subject to some fluctuation. The impoundment is open to public fishing through the courtesy of the owners, but there are no special facilities available for public use.

Bog Meadow Reservoir has been stocked with smallmouth bass, yellow perch, common sunfish and bullheads.

Chain pickerel are common in abundance. The growth rate of this species is slightly below average. Largemouth bass are common in abundance and exhibit a growth rate equal to the state average. Yellow perch, calico bass and common sunfish are common in abundance. These species exhibit growth rates well below the state averages. Golden shiners, bullheads and chub suckers are also common in abundance. Bog Meadow Reservoir is supporting large numbers of game fish and panfish and should furnish excellent fishing for all species for the angler willing to put forth the extra effort needed to fish in heavily weeded waters. In general, the growth rates of these fish are satisfactory. It is desirable to reduce the numbers of yellow perch, calico bass and common sunfish. If the numbers of these panfish species are reduced drastically, the remaining fish can be expected to grow more rapidly. Chemical treatment of the submerged vegetation should be undertaken to reduce the quantity of such vegetation by at least 50 percent. A reduction in the quantity of submerged vegetation will allow the game fish to forage more easily on the panfish and forage fish.

No special regulations are needed at this time.



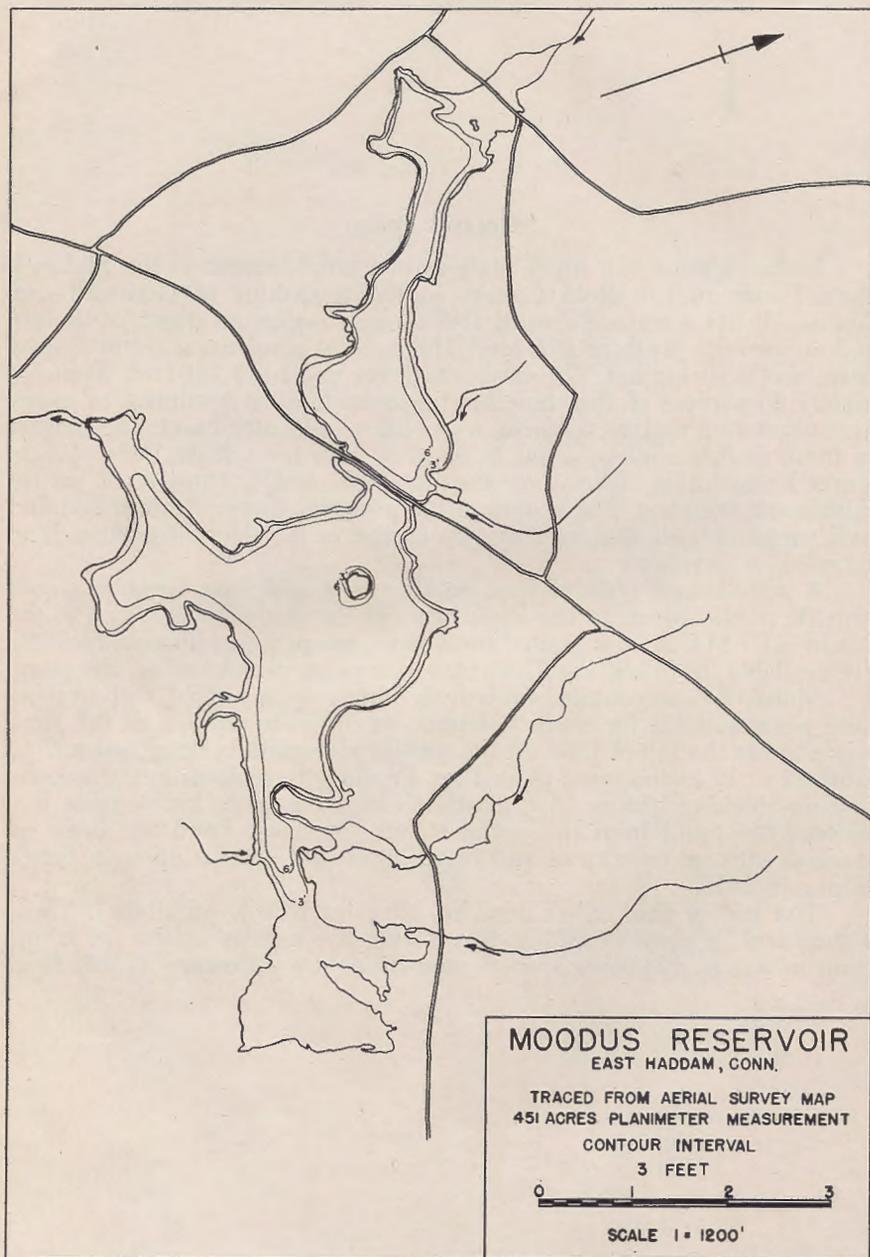
MOHAWK POND

Mohawk Pond is a small, state-owned pond located in the Mohawk State Forest in Litchfield County in the townships of Cornwall and Goshen. It has a surface area of 15.2 acres, a maximum depth of 27 feet and an average depth of 15.9 feet. This natural pond has a kettle-shaped basin and is spring fed. The elevation of the pond is 1,181 feet. Approximately 50 percent of the shoreline has considerable quantities of emergent vegetation such as bullrush, water lilies and watershield. The bottom in these muddy shallow areas is covered with low, dense beds of submerged vegetation. Elsewhere the shoreline and bottom is of coarse rubble and boulders. The waters of the pond are thermally stratified and well supplied with dissolved oxygen except in the deepest portion. The shoreline is wooded.

A state-owned right-of-way, parking area and boat launching area provide public access to this pond. Part of the shoreline is leased to the Litchfield Y.M.C.A. and is used for a boy's camp. No swimming facilities are available for public use. Outboard motors are prohibited on this pond.

Mohawk Pond contains a relatively large volume of cold, well-oxygenated water suitable for trout. Rotenone was used to remove all fish from this pond in the fall of 1956. At the time of reclamation, three brook trout from 14 to 19 inches were picked up. Previous to reclamation, this pond had no stocking history. Apparently these three large brook trout had entered the pond from the outlet stream. Mohawk Pond has been restocked with rainbow trout and brook trout and will be open to public fishing in 1957.

The use of fish, either dead or alive, as bait is prohibited. These waters will be open to fishing only during the regular season for taking trout in ponds. No other special regulations are necessary at this time.



MOODUS RESERVOIR

Moodus Reservoir is a large, shallow, artificial impoundment located in Middlesex County in the township of East Haddam. This body of water has a surface area of 451 acres and has a maximum depth of 10 feet. The reservoir is fed by several small brooks. Aquatic vegetation is extremely abundant and the reservoir is almost completely choked with submerged vegetation. The pond bottom is of sand, mud and swampy ooze. The water is stained a dark, tea color and transparency is reduced to approximately four feet. The shallow waters of this pond are completely mixed and thermal stratification does not take place. The water is used for industrial purposes and, as a result, the water level is subject to considerable fluctuation.

There are several cottages present but, in general, shoreline development is rather light. Public access is provided through privately operated boat livery. There are no other public facilities on the shores of this reservoir.

Departmental records indicate that Moodus Reservoir has been stocked with calico bass, largemouth bass, rock bass, bullheads, yellow perch, chain pickerel, sunfish and golden shiners.

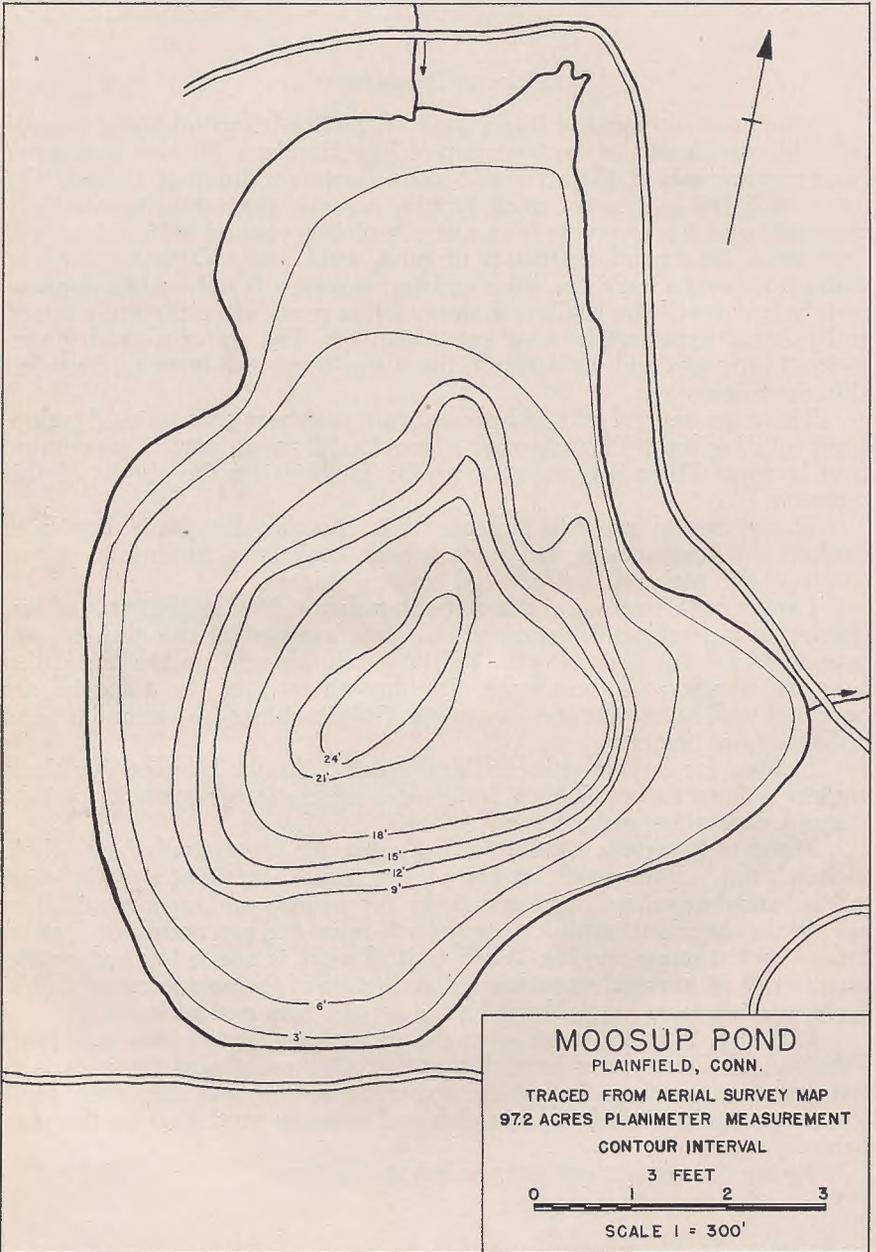
Largemouth bass are common in abundance. The growth rate of this species is approximately equal to the state average. Chain pickerel are scarce and exhibit poor growth. Yellow perch, bluegill sunfish and calico bass are common in abundance. The growth rates of these species are poor and well below the state averages. Golden shiners are abundant and bullheads are common.

Fishing for largemouth bass and panfish should be good for those anglers willing to put forth a little extra effort. Dense growths of submerged vegetation make fishing difficult.

Moodus Reservoir should be managed for largemouth bass, chain pickerel and yellow perch. At the present time, abundant aquatic vegetation furnishes excessive escape cover for panfish and, as a result, they are overly abundant, exhibit poor growth rates and are poorly utilized as forage by the game species. Weed control work is needed to reduce the quantity of submerged vegetation. A reduction of the escape cover should make panfish more available as forage for the bass and pickerel.

It is also desirable to stabilize the water level during May and June. Fluctuation of the water level during the other months of the year is of less consequence than during the spawning season and may even serve to concentrate game fish and panfish and increase predation on the panfish.

No special regulations are needed at this time.



MOOSUP POND

Moosup Pond is natural in origin and is fed by Tyler Brook, surface runoff and bottom springs. It has a surface area of 97.2 acres, a maximum depth of 26 feet and an average depth of 9.3 feet. This pond is located in the township of Plainfield in Windham County. The pond bottom is variable and is composed of sand, gravel, coarse rubble and mud. Submerged and emergent vegetation is abundant in the shoal areas. Elsewhere in the pond, aquatic vegetation is much less abundant. The water is clear, with a transparency in excess of 9 feet. Moosup Pond is thermally stratified and all but the deepest water is well supplied with dissolved oxygen.

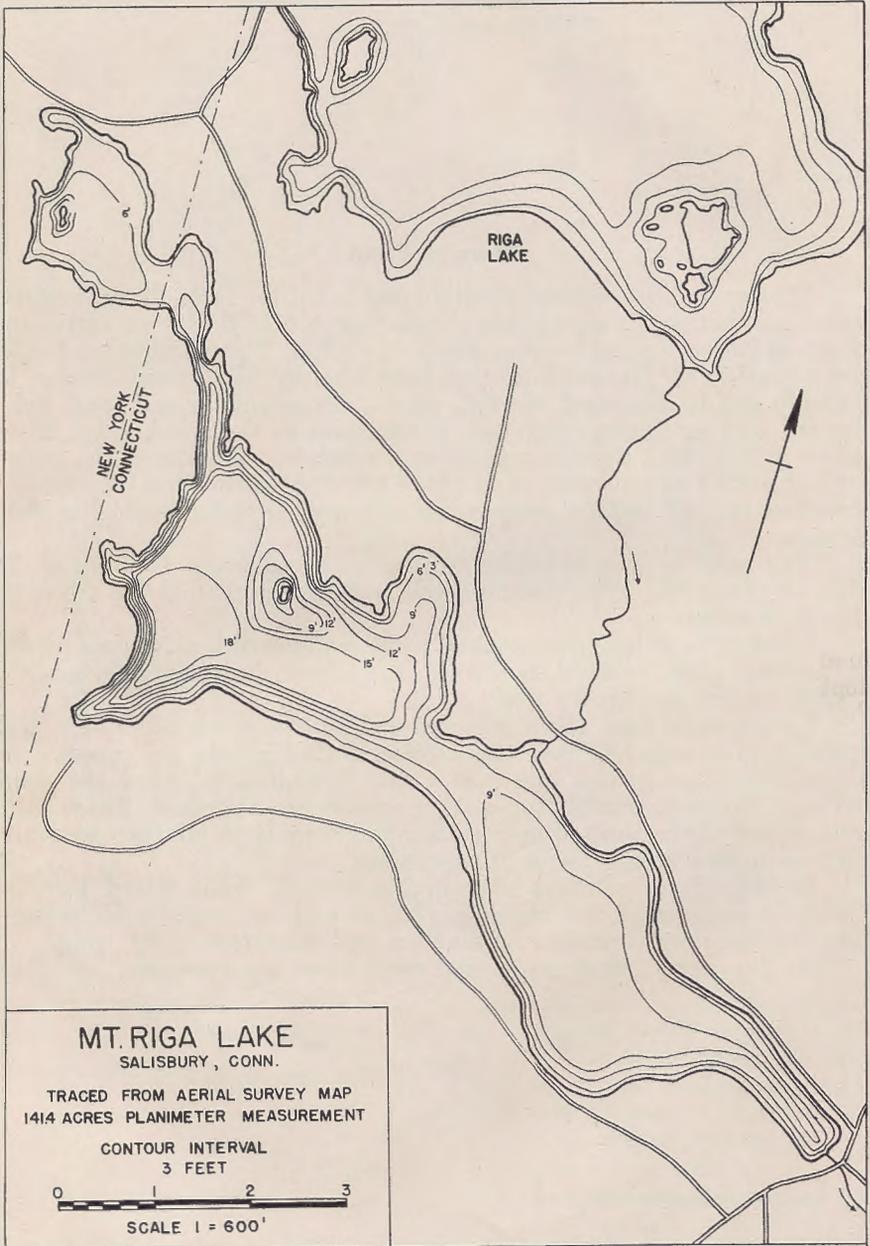
This pond is open to public fishing, but there are no facilities available for public use. There are numerous cottages present on the shores of this body of water.

Moosup Pond has been stocked with smallmouth bass, yellow perch, calico bass, chain pickerel, bullheads, largemouth bass, common sunfish, golden shiners and brown trout.

Largemouth bass, chain pickerel and yellow perch are scarce and grow at rates equal to the state averages. Calico bass are common in abundance. This species grows at a rate considerably below the state average. Common sunfish and golden shiners are abundant. Trout have only recently been stocked in this pond and there is no information available as to their abundance as holdover fish.

Moosup Pond contains a limited volume of trout water. Further chemical analysis of the water quality should be made to determine whether this pond warrants reclamation and management for trout.

At the present time, no special regulations are necessary.



MT. RIGA LAKE

Mt. Riga Lake is located in Litchfield County in the township of Salisbury at an elevation of 1,715 feet. It covers an area of 141.4 acres, has a maximum depth of 20 feet and an average depth of 8.9 feet. South Pond, as this impoundment is often called, is natural in origin but has had its level raised by an earthen and masonry dam. It is fed by springs, small tributaries and overflow from Riga Lake. The bottom is of coarse rubble, boulders and ledge. Submerged and emergent vegetation is scarce. The water is very clear and transparency exceeds 15 feet. The fertility level of this pond is very low. There is considerable fluctuation in the water level. The shoreline is almost entirely wooded.

Shoreline development is very low; there are very few summer homes present. There are no boat liveries or public picnic or swimming facilities available.

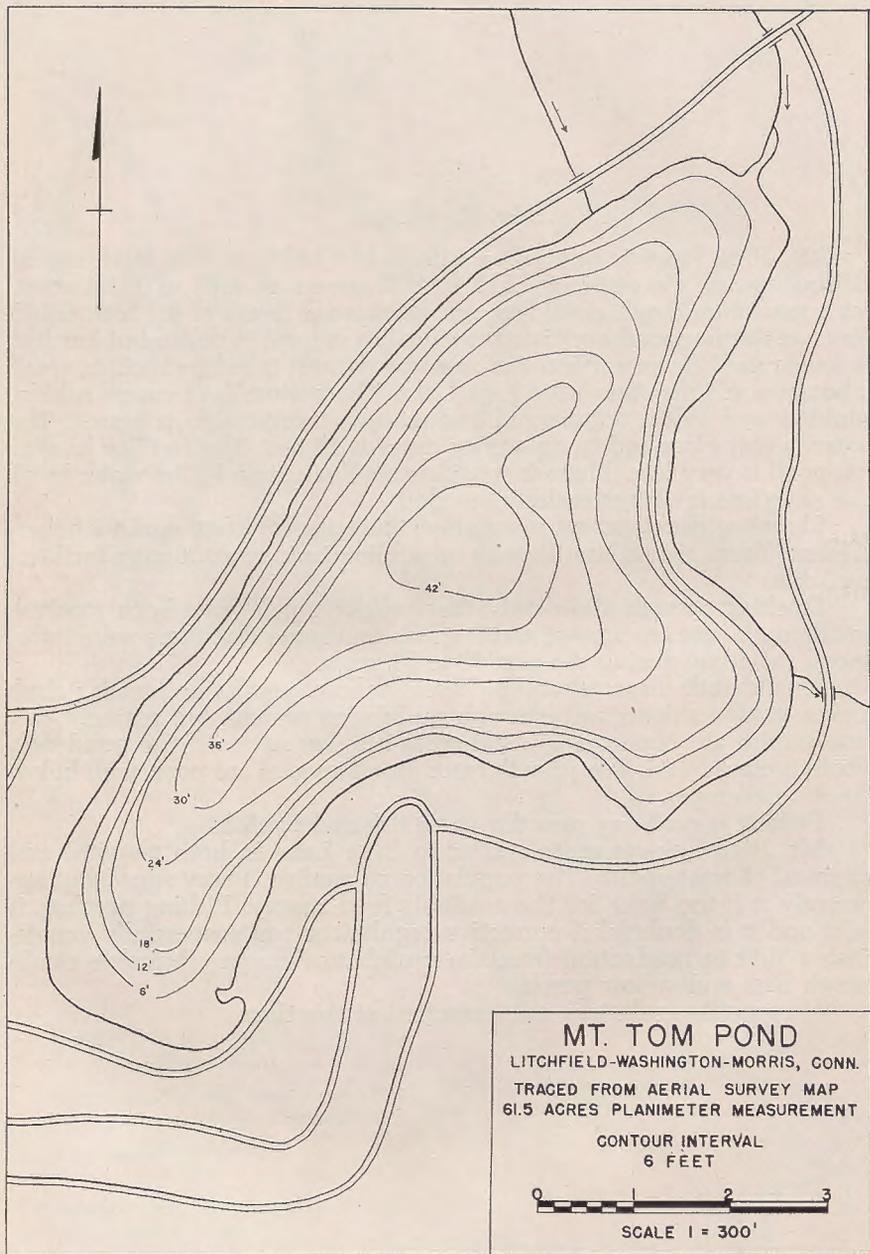
Stocking records show only that yellow perch have been stocked. Smallmouth bass are present and it is safe to assume that these were introduced sometime during the past 60 to 80 years.

Smallmouth bass, chain pickerel, yellow perch, bullheads, chub sucker, golden shiners and common sunfish are present, but scarce. Common sunfish are common in shoal areas but are scarce if the pond as a whole is considered. The growth rates for all species are poor, well below the state averages.

Fishing is probably poor for game fish and panfish.

Mt. Riga Lake is quite similar to Riga Lake in both physical and chemical characteristics. The population of panfish is very small, but apparently it is too large for the available food supply. Fishing pressure is light and it is doubtful if corrective regulations can successfully accomplish a shift in production from the sunfish to the more desirable smallmouth bass and yellow perch.

No special regulations are warranted at this time.



MT. TOM POND

Mt. Tom Pond is located in Litchfield County in the townships of Litchfield, Morris and Washington. It is natural in origin, has a surface area of 61.5 acres, a maximum depth of 46 feet and an average depth of 21.2 feet. The water is very clear and transparency is approximately 15 feet. There is considerable emergent, marginal vegetation along the shoreline. Elsewhere in the pond, aquatic vegetation is scarce or absent. The bottom is of gravel, rubble and mud. The pond is thermally stratified and the deepest waters are deficient in dissolved oxygen. Plankton production is fair and bottom food production is above average. The shoreline is almost entirely wooded.

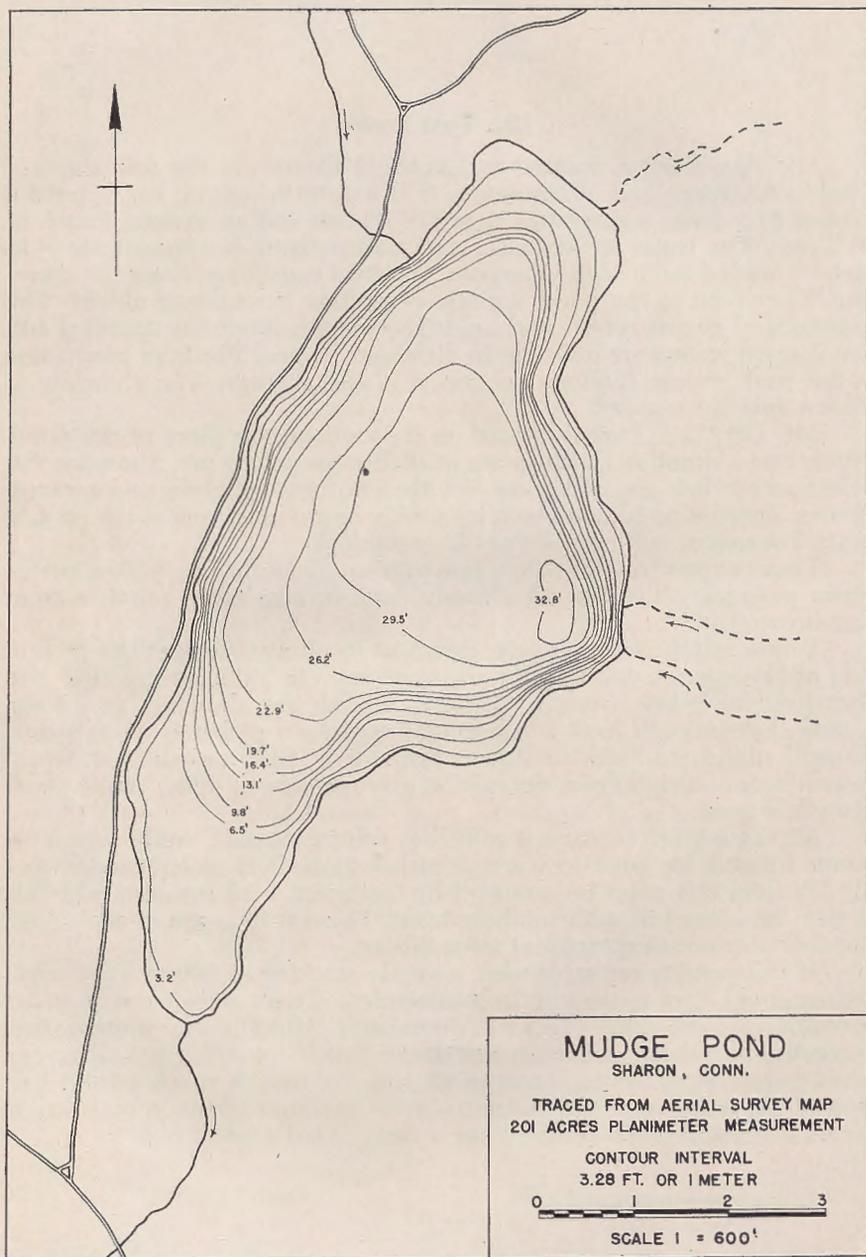
Mt. Tom State Park is located on the southeastern shore of this pond. Picnic and swimming facilities are available for public use. Shoreline development is low and there are less than a dozen cottages and summer homes. There is no suitable boat launching or mooring area at the present time. The use of outboard motors is prohibited.

These waters have been stocked with smallmouth bass, yellow perch, chain pickerel, calico bass, bullheads, sunfish, lake trout, rainbow trout and brown trout.

Yellow perch are extremely abundant in all age classes. The growth rate of this species was slightly above average in 1953, but by 1956 had decreased to below average. Common sunfish are abundant in all age classes. Largemouth bass, smallmouth bass, chain pickerel, white perch, bluegill sunfish and golden shiners are scarce. Largemouth bass, smallmouth bass and chain pickerel exhibit average growth rates. White perch growth is poor.

Mt. Tom Pond contains a sufficient volume of cold, well-oxygenated water suitable for trout to warrant reclamation. It is recommended that all fish from this pond be removed by treatment with rotenone and that it then be restocked with rainbow trout. These waters are, if reclaimed, capable of producing excellent trout fishing.

If this pond is not reclaimed, a yearly stocking of 500 to 1,000 adult two-year-old brown trout is recommended. Trout stocking will in all probability result in increased fishing pressure. Until fishing pressure does increase appreciably, there is little hope that corrective regulations can assist in returning the pond to a productive balance. A much greater harvest of the yellow perch is necessary if the numbers of this species are to be reduced sufficiently to allow for a more rapid growth rate.



MUDGE POND

Mudge Pond is natural in origin but has had its level raised by an earthen and masonry dam. It is located in Litchfield County in the township of Sharon. The pond covers an area of 201 acres, has a maximum depth of 35 feet and an average depth of 22 feet. Emergent vegetation is abundant in the shallows, particularly along the southeastern and northern shores. Submerged vegetation is abundant in most areas where the depth is 10 feet or less. The bottom is mostly of mud and swampy ooze. The water is hard and the fertility level is average for the region. Plankton and bottom food production is good. The transparency of the water usually exceeds 10 feet. The pond is thermally stratified and the deep waters are deficient in dissolved oxygen. The shoreline is wooded on the northern, eastern and southern sides of the pond. A highway parallels the pond on the western shore and provides limited access.

Shoreline development is low; cottages and summer homes are not numerous. Boats may be obtained at two liveries at the southwestern end of the lake. There is a state-owned right-of-way at the southeastern end of the lake and there are parking and boat launching facilities at this point.

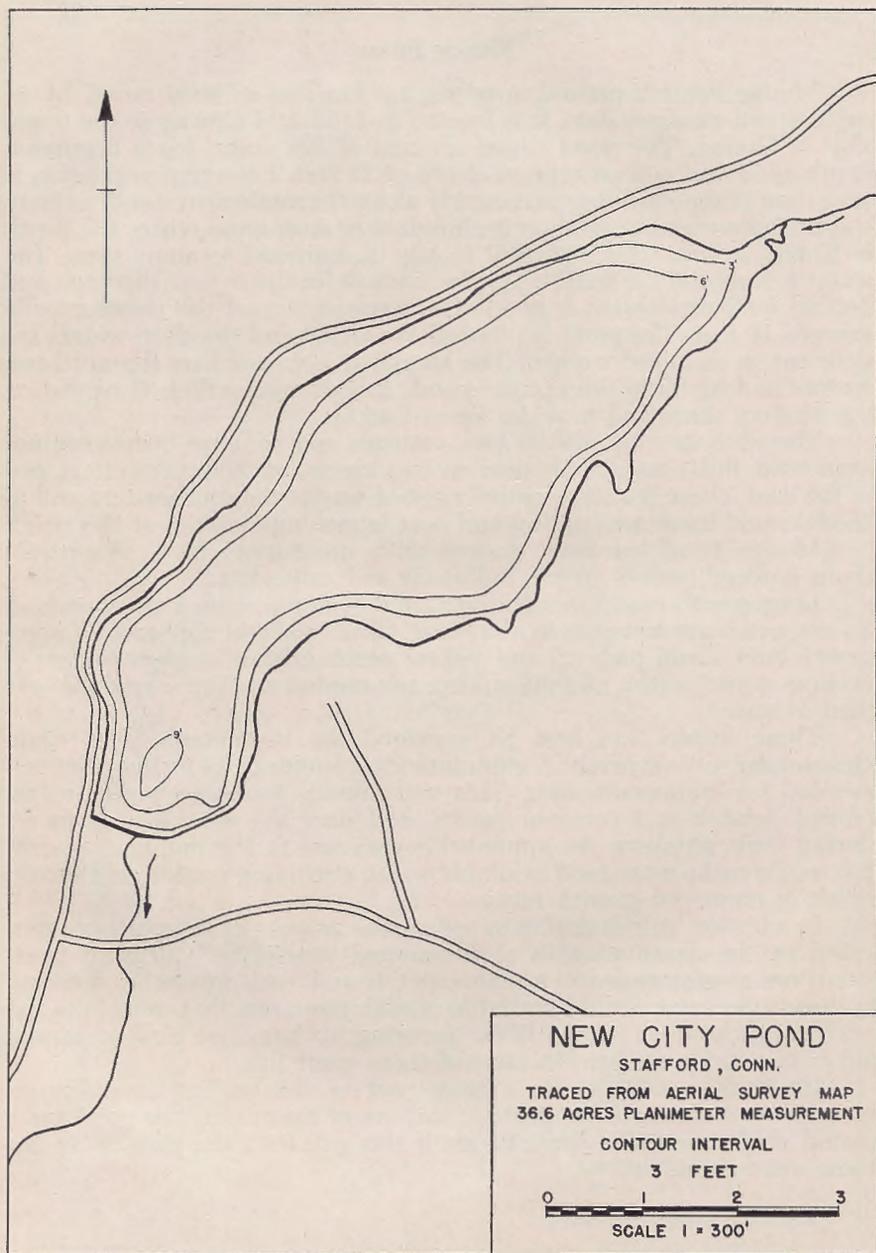
Mudge Pond has been stocked with smallmouth bass, pike-perch, chain pickerel, yellow perch, bullheads and calico bass.

Largemouth bass, bluegill sunfish and common sunfish are abundant. Yellow perch are common to abundant. Chain pickerel are scarce. Largemouth bass, chain pickerel and yellow perch exhibit average to below-average growth rates. Bluegill sunfish are stunted and grow much slower than average.

These waters can best be managed for largemouth bass, chain pickerel and yellow perch. A minimum legal length of 14 inches is recommended for largemouth bass. This will provide increased predation on bluegill sunfish and common sunfish and may aid considerably in reducing their numbers. An appreciable decrease in the numbers of sunfish would make more food available to the remaining panfish and should result in improved growth rates.

In addition, it is desirable to reduce the amount of escape cover provided by the dense growths of submerged vegetation. Chemical treatments are recommended to accomplish this end. An appreciable decrease in the escape cover should make the panfish more readily available to the bass and pickerel as forage. Better foraging for bass and pickerel should aid in increasing the growth rates of these game fish.

Ice fishing accounts for a large part of the angling mortality on pickerel. It is advisable to prohibit the use of tip-ups on this pond for a period of three or four years to see if this will help the pickerel to become more abundant.



NEW CITY POND

New City Pond is a small, shallow, artificial impoundment in the township of Stafford in Tolland County. The waters of this pond are impounded by a low stone dam across Furnace Brook. This impoundment has a surface area of 36.6 acres, a maximum depth of 10 feet and an average depth of 5.7 feet. The pond bottom is mostly of sand, gravel and rubble with scattered areas where the bottom is of mud. Submerged and emergent vegetation is scarce in all areas of the pond. Water transparency is reduced to about 6 feet by a light, tea-colored stain. The waters of this pond are completely mixed from top to bottom and thermal stratification does not take place.

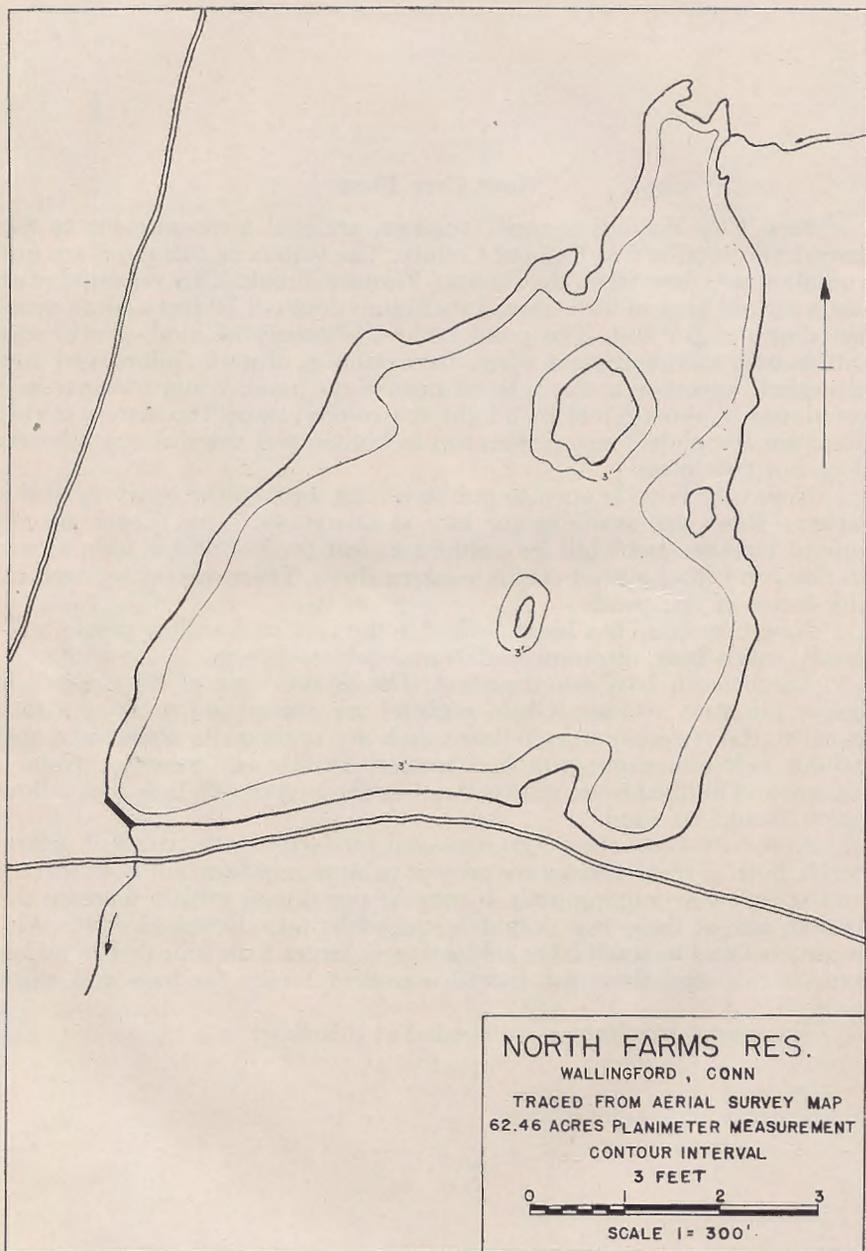
New City Pond is open to public fishing through the courtesy of the owners. Boats are available for hire at one small livery. There are no special facilities available for public use, but the public can gain access to this pond from a road on the western shore. There are no cottages on the shores of this pond.

New City Pond has been stocked in the past with yellow perch, bullheads, calico bass, common sunfish and golden shiners.

Largemouth bass are abundant. The growth rate of this species is below the state average. Chain pickerel are scarce and grow at a rate equal to the state average. Yellow perch are common in abundance and exhibit below-average growth. Common sunfish are common. Golden shiners and bullheads are scarce. Angling for largemouth bass and yellow perch should be good.

New City Pond should be managed for largemouth bass and yellow perch. Both of these species are present in large numbers, but both species exhibit below-average growth. It may be possible to greatly increase the growth rate of these two desirable species by introducing alewives. Alewives confined to small lakes seldom grow larger than four to five inches and, at this size, these fish furnish excellent forage for bass and chain pickerel.

No special regulations are needed at this time.



NORTH FARMS RESERVOIR

North Farms Reservoir is artificial in origin and was formed by the construction of an earthen dike and masonry dam across Catlin Brook. The dam is in very poor condition and is badly in need of extensive repairs. The reservoir has a surface area of 62.5 acres, a maximum depth of 5 feet and an average depth of 3.1 feet. It is located in New Haven County, in the township of Wallingford. The bottom is of gravel and rubble overlain with swampy ooze and mud. The waters are almost completely choked with submerged vegetation. This condition makes boating and angling very difficult. These waters are above average in fertility. Plankton and bottom food production is high.

Access to the pond is provided through a boat livery at the southeastern corner of the reservoir. Shoreline development is extremely low and there is only one cottage present. Parking and boat launching facilities will be provided in the near future.

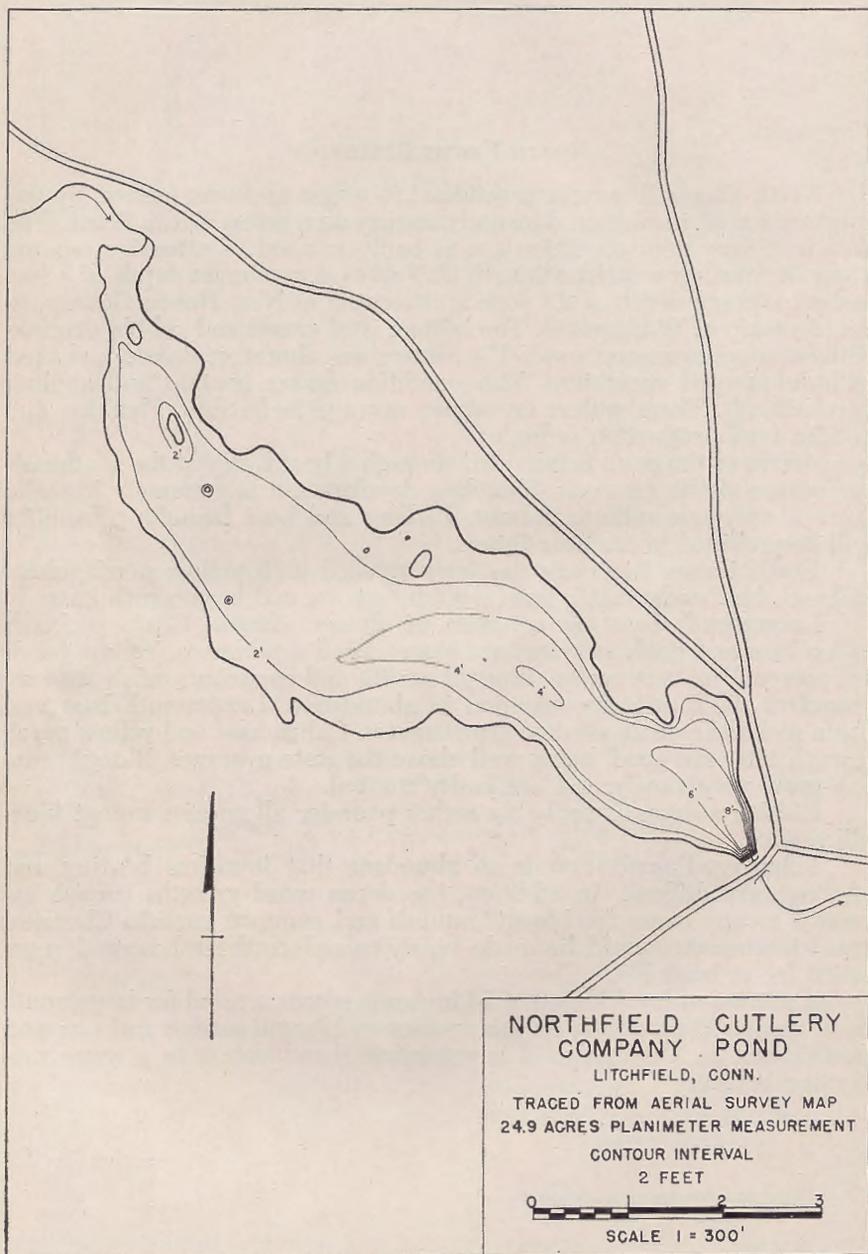
North Farms Reservoir has been stocked with yellow perch, chain pickerel, bullheads, calico bass, sunfish, shiners and largemouth bass.

Largemouth bass are common in all age classes. Chain pickerel, calico bass and golden shiners are scarce in all age classes. Yellow perch are present, but very scarce. Bluegill sunfish and common sunfish are very abundant. Bullheads are common in abundance. Largemouth bass and chain pickerel exhibit average growth rates. Calico bass and yellow perch growth rates are good, being well above the state averages. Bluegill sunfish grow very slowly and are badly stunted.

Fishing success is probably rather poor for all species except bluegill sunfish.

Submerged vegetation is so abundant that it makes boating and angling very difficult. In addition, the dense weed growths furnish excessive escape cover for bluegill sunfish and common sunfish. Chemical weed treatments should be made yearly to reduce the submerged vegetation by at least 50%.

A minimum legal length of 14 inches is recommended for largemouth bass. Increased predation by this species on bluegill sunfish and common sunfish can be a definite aid in returning these waters to a more productive balance.



NORTHFIELD CUTLERY COMPANY POND (Northfield Pond)

Northfield Cutlery Company Pond is a state-owned pond with a surface area of 24.9 acres, a maximum depth of 8 feet and an average depth of 2.9 feet. It is located in Litchfield County in the township of Litchfield. These waters are impounded by an earthen and masonry dam. The dam is in very poor condition and is in need of extensive repairs. Leakage of water through the dam reduces the depth of most of the pond to less than 18 inches. The bottom of the pond is mainly of swampy ooze with scattered boulders. The water supply comes from two small brooks. Submerged and emergent vegetation is abundant. Siltation is rapidly filling the pond and it is reverting to a swamp.

Access is provided by a state-owned right-of-way accessible to cars. There are no boat liveryes present.

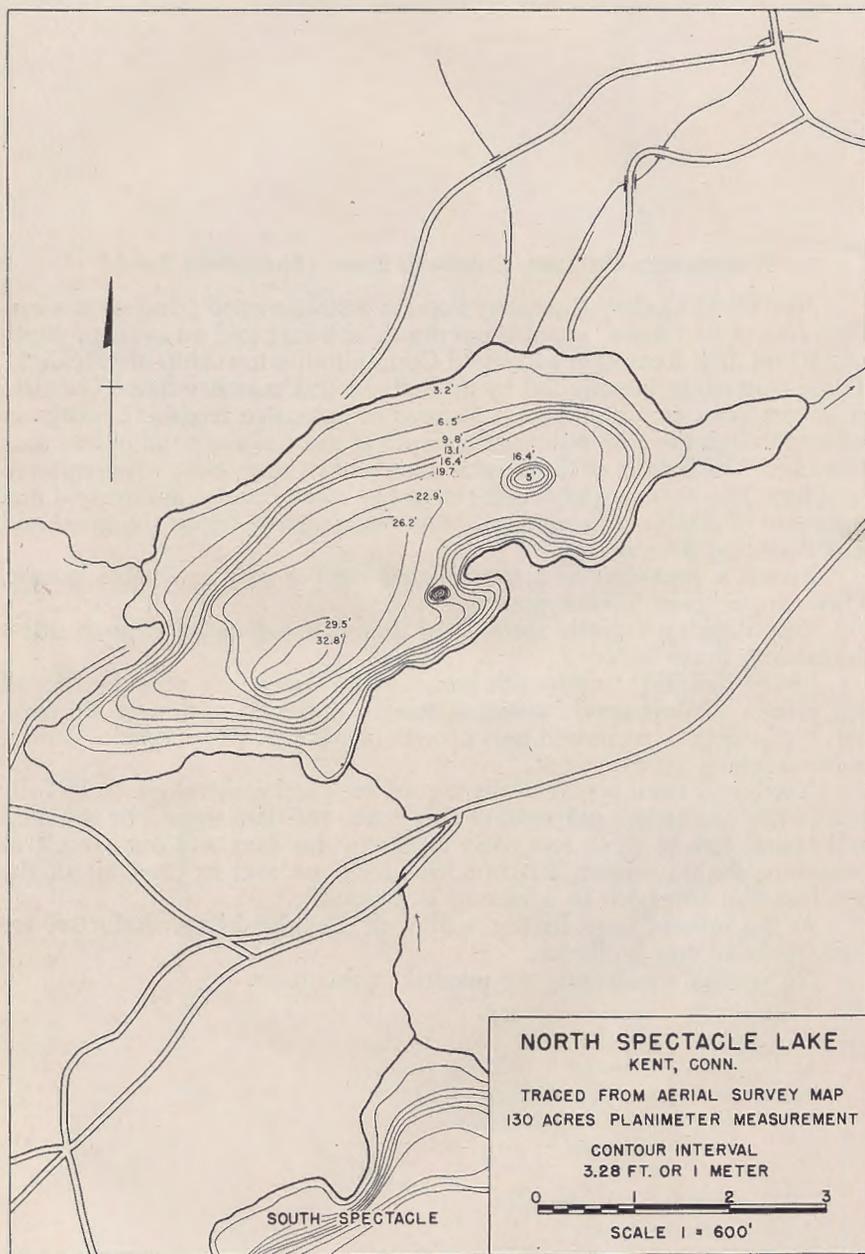
Past stocking records show only that calico bass have been introduced into these waters.

Chain pickerel, largemouth bass and bullheads are abundant in all age classes. Yellow perch, common sunfish and golden shiners are present, but scarce. Largemouth bass growth is average. Other species exhibit below-average growth rates.

Northfield Pond is potentially a good bass and pickerel pond. To fully realize the productive potential of this pond, the dam should be repaired and raised two to three feet. Any repair to the dam will only result in temporary improvement. Siltation will continue and in time fill in the pond so that reversion to a swamp is inevitable.

At the present time, fishing is difficult, but should be productive for bass, pickerel and bullheads.

No special regulations are needed at this time.



NORTH SPECTACLE LAKE

North Spectacle Lake has a surface area of 130 acres, a maximum depth of 33 feet and an average depth of 14.1 feet. It is located in Litchfield County in the township of Kent. The lake is natural in origin, but the level has been raised slightly with a low earthen and masonry dam. The shoreline is rocky and the bottom in shoal areas is mostly of sand and coarse gravel. In the deeper areas and in the shallow southern end of the basin, the bottom is of swampy ooze and plant detritus. The fertility level and bottom food production are below average. The water is stained a faint brown and transparency is reduced to about 7 feet. The lake is thermally stratified and the cool bottom waters are deficient in dissolved oxygen. Aquatic vegetation is scarce except in the shallow southern end of the basin. In this area, submerged and emergent vegetation is abundant.

There are several cottages and one large summer camp on the shores of North Spectacle Lake. There are no boat liveries or other facilities available for public use. The general public is denied the use of these waters by lack of suitable access.

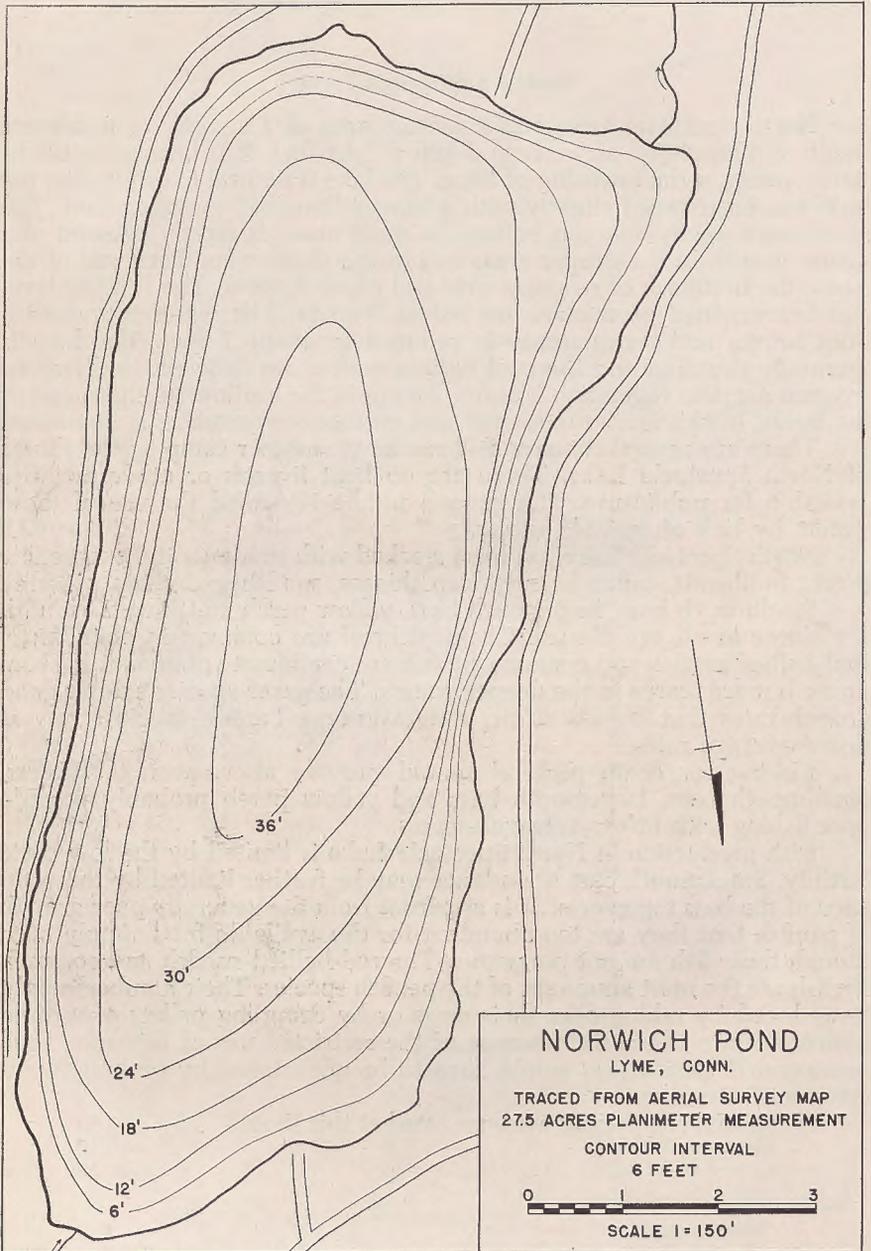
North Spectacle Lake has been stocked with smallmouth bass, yellow perch, bullheads, calico bass, golden shiners, sunfish and chain pickerel.

Smallmouth bass, largemouth bass, yellow perch and bluegill sunfish are scarce in all age classes. Chain pickerel are common in abundance. Red-bellied sunfish and common sunfish are common to abundant in shoal areas, but are scarce in the deeper waters. The game species exhibit good growth rates that are above the state averages. Panfish species grow at below-average rates.

Fishing for chain pickerel should provide above-average success. Smallmouth bass, largemouth bass and yellow perch probably provide poor fishing with below-average success.

Fish production in North Spectacle Lake is limited by the low basic fertility. Smallmouth bass abundance may be further limited by the presence of the bass tapeworm. It is apparent from the generally poor growth of panfish that they are too abundant for the available food supply even though these fish are not numerous. The red-bellied sunfish and common sunfish are the most abundant of the panfish species. Their numbers might be reduced by raking over their nests or by dropping pellets of sodium hydroxide into the nests. Because of the restricted use of this lake, such management procedures would have to be undertaken by property owners around the lake.

No special regulations are warranted at this time.



NORWICH POND

Norwich Pond is a small, state-owned pond located in the Nehantic State Forest. It is natural in origin, but the level has been raised slightly by a low earthen dam. This pond is in New London County in the township of Lyme. It has a surface area of 27.5 acres, a maximum depth of 38 feet and an average depth of 22.9 feet. The shoreline is heavily wooded. Submerged and emergent vegetation is scarce and confined to shoal areas. The bottom is mostly of sand and gravel with some boulders and rubble. The pond is thermally stratified and all but the deepest waters are well supplied with dissolved oxygen.

Public access is provided over a good oiled road from Route 156 south of Hamburg. There are parking and boat launching facilities available for public use at the southwestern end of the pond. Shoreline development is below average and there are only a few cottages on the eastern shore of the pond. There are no boat liveryes present. The town of Lyme has enacted a town ordinance prohibiting the use of motor-driven craft on this pond.

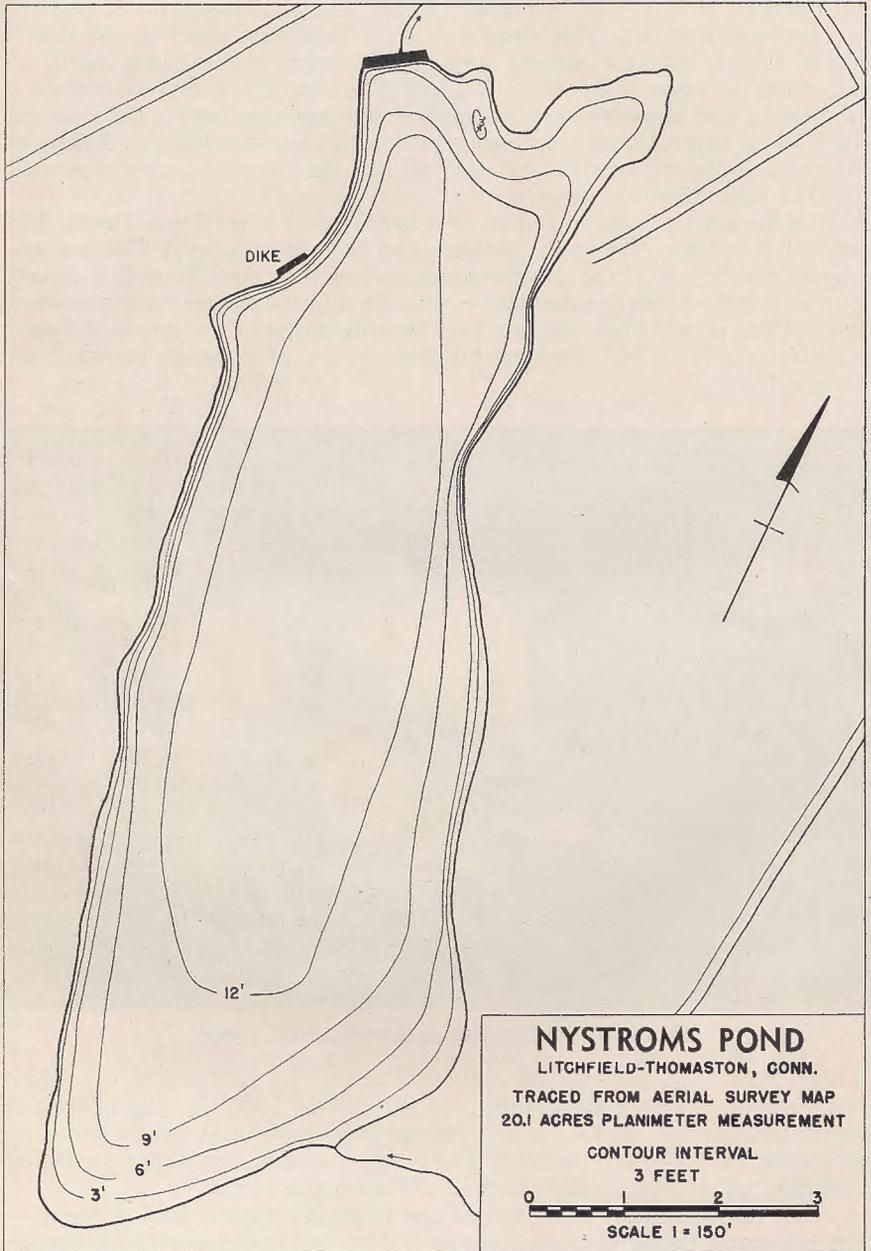


FIGURE 62. Reclamation on Norwich Pond, Lyme.

Norwich Pond was reclaimed in the fall of 1956. It was restocked during the late fall of that year with rainbow trout and brook trout. In the spring of 1957, the opening day catch was 2.87 trout per angler as compared to the state-wide check of .77 trout per angler.

This body of water should continue to produce good fishing for rainbow trout and brook trout as long as it does not become reinfested with warm-water fish.

The use of minnows or other fish as bait is prohibited. No other special regulations are needed at this time.



NYSTROMS POND

Nystroms Pond is a small, 20-acre pond located in Litchfield County in the townships of Litchfield and Thomaston. It is artificial in origin, has a maximum depth of 13 feet and an average depth of 7.6 feet. The dam is of earthen and masonry construction. The pond is fed by bottom springs and one small intermittent brook. The bottom of the pond is of sand, gravel and boulders. Submerged and emergent vegetation is abundant. As the result of a leak at the base of the dam, there is considerable fluctuation of the water level. It is desirable to repair the dam so that the fluctuation in the water level will be reduced. The shoreline is mostly wooded.

Access to the pond is provided by a public right-of-way at the northeastern end of the pond. There are no boat liveries on the pond. Shoreline development is low and there are only a few cottages present.

Past stocking records show only that largemouth bass have been introduced. This introduction was apparently unsuccessful because largemouth bass are not present or are extremely rare.

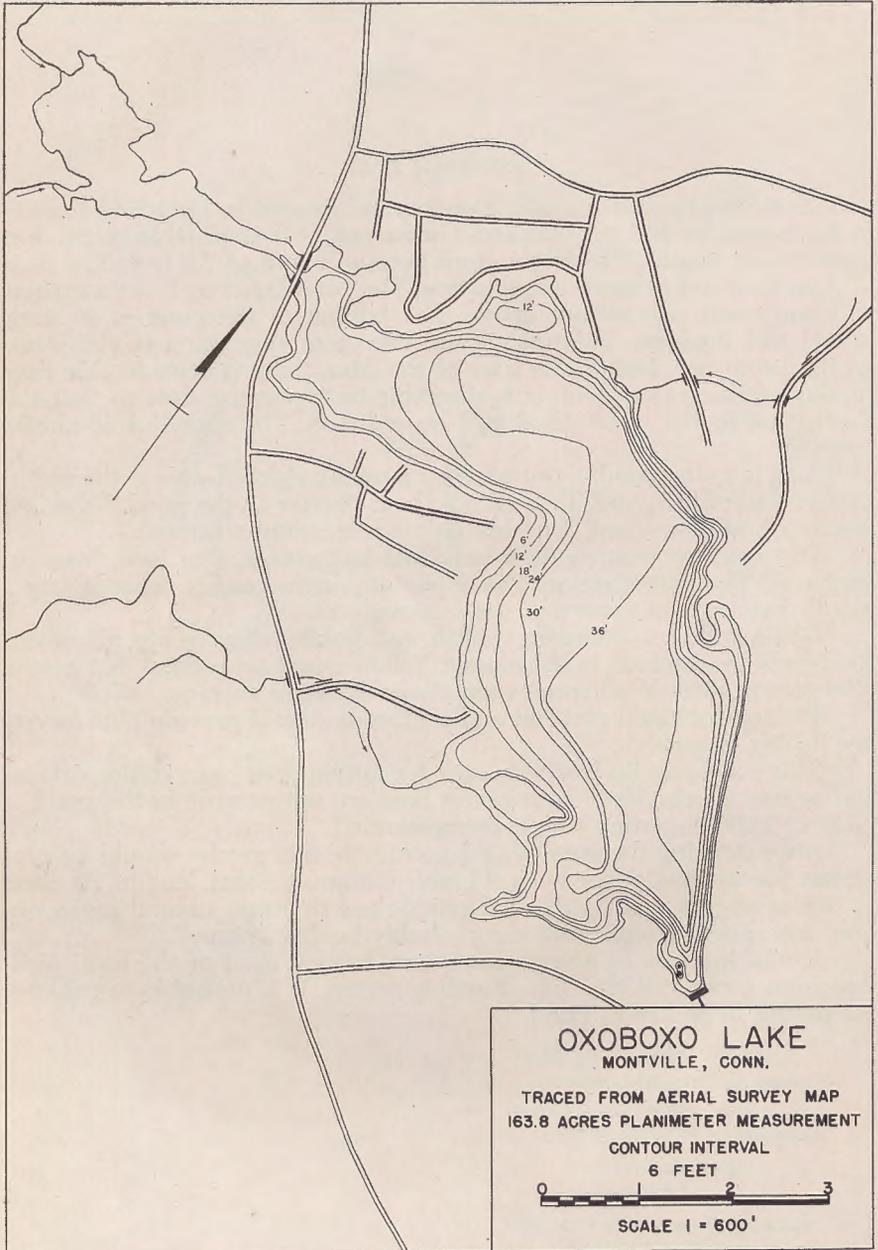
Chain pickerel, common sunfish and golden shiners are abundant. Bullheads are common in abundance. Yellow perch are present, but scarce. The growth rates of all species are above the state averages.

Fishing for chain pickerel and bullheads should provide above-average fishing success.

This pond can be best managed for largemouth bass, chain pickerel and yellow perch. Since largemouth bass are not present in the pond, a plant of 2,000 fingerling bass is recommended.

After stocking the pond with largemouth, this species should be protected for several years by a 14-inch minimum legal length. As soon as this species is sufficiently well established to insure natural reproduction, this special length limit can probably be discontinued.

Ice fishing can, in a very short time, harvest most of the legal pickerel from a pond of this size. For this reason, it is desirable to prohibit ice fishing in Nystroms Pond.



OXOBOXO LAKE

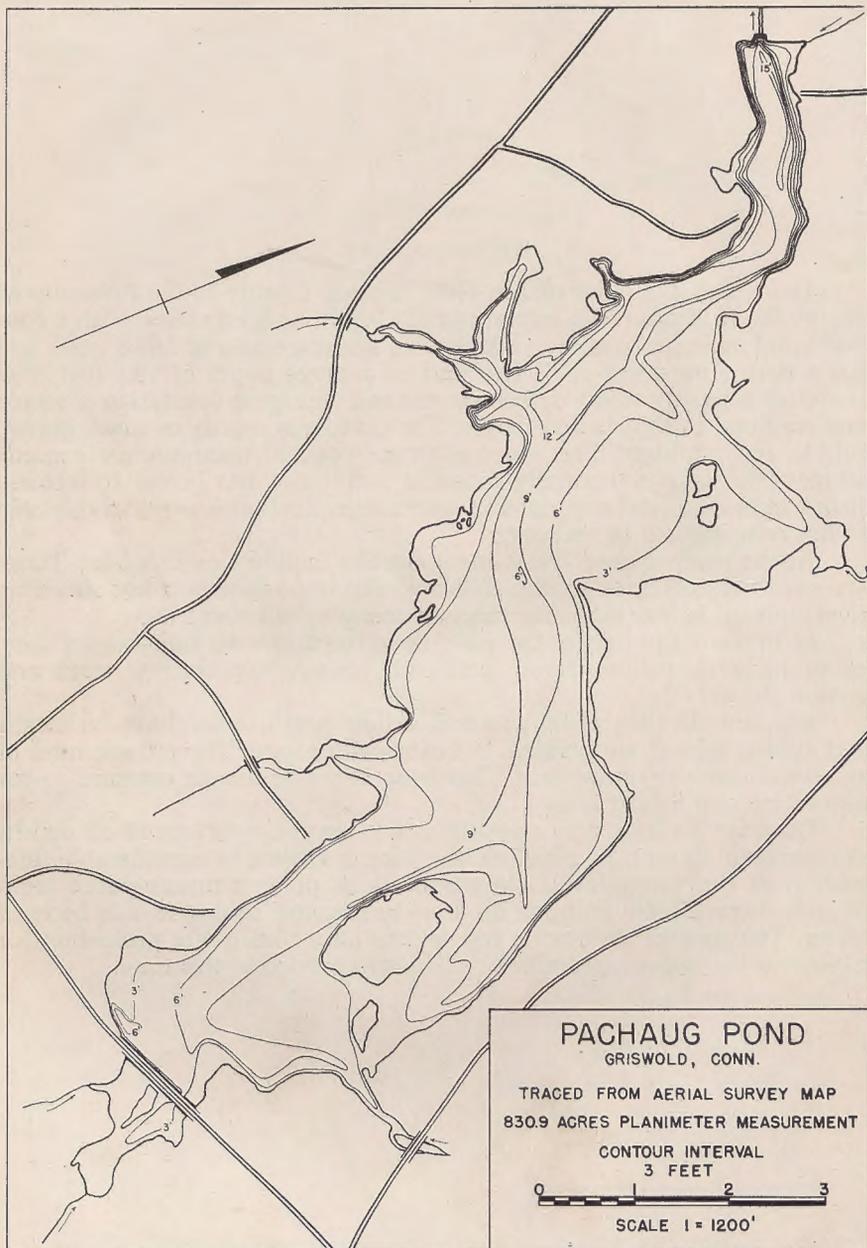
Oxoboxo Lake is located in New London County in the township of Montville. It is natural in origin, but the level has been raised with a concrete and masonry dam. The lake covers a surface area of 163.8 acres and has a maximum depth of 37 feet and an average depth of 18.8 feet. The shoreline is mostly wooded. Submerged and emergent vegetation is scarce and confined to the shallow coves. The bottom is mostly of sand, gravel, rubble and boulders. The water is very clear and transparency exceeds 10 feet. This lake is thermally stratified and the waters below 10 feet are deficient in dissolved oxygen. The water level fluctuates considerably due to heavy water use by industry.

At the present time, there are no public facilities on this lake. There are numerous cottages on the shores of this impoundment, but shoreline development is less extensive than on many Connecticut lakes.

Oxoboxo Lake has, in the past, been stocked with smallmouth bass, chain pickerel, yellow perch, bullheads, calico bass, brown trout and golden shiners.

Smallmouth bass, chain pickerel, yellow perch, calico bass, bullheads and golden shiners are present, but extremely scarce. The growth rates of all species are extremely poor. This body of water has an extremely poor reputation as a fishing lake.

Oxoboxo Lake is very infertile and is oxygen deficient at all depths greater than 10 feet. In addition, the lake is subject to considerable fluctuation of the water level. On the basis of present management techniques, there is little that can be done to improve fishing in this body of water. The present state-wide regulations afford adequate protection for game species and no special regulations are needed at this time.



PACHAUG POND

Pachaug Pond is a large, artificial impoundment located in New London County in the township of Griswold. This shallow, fertile pond was formed by impounding the Pachaug River. It has a surface area of 830.9 acres, a maximum depth of 18 feet and an average depth of 6.1 feet. Much of the well-wooded shoreline is in the Pachaug State Forest. Submerged and emergent vegetation is abundant, particularly in the shoal areas and shallow areas. The pond bottom is of mud, swampy ooze and sand. A dense algal bloom reduces transparency to two feet. The waters of this pond are not thermally stratified.

Shoreline development is very light and there are only a few cottages present. Boats are available for rental at a livery at the southern end of the pond. There is a state-owned right-of-way present, but this is poorly developed and is unuseable.

Pachaug Pond has been stocked with smallmouth bass and yellow perch.

Largemouth bass are common in abundance and exhibit excellent growth. Yellow perch are common in abundance. This species grows at a rate equal to the state average. Bluegill sunfish are abundant and grow at a rate well above the state average. Chain pickerel are scarce and exhibit an above-average growth rate. Calico bass are common in abundance. The growth rate of this species is equal to the state average. Bullheads are common in abundance and golden shiners are abundant.

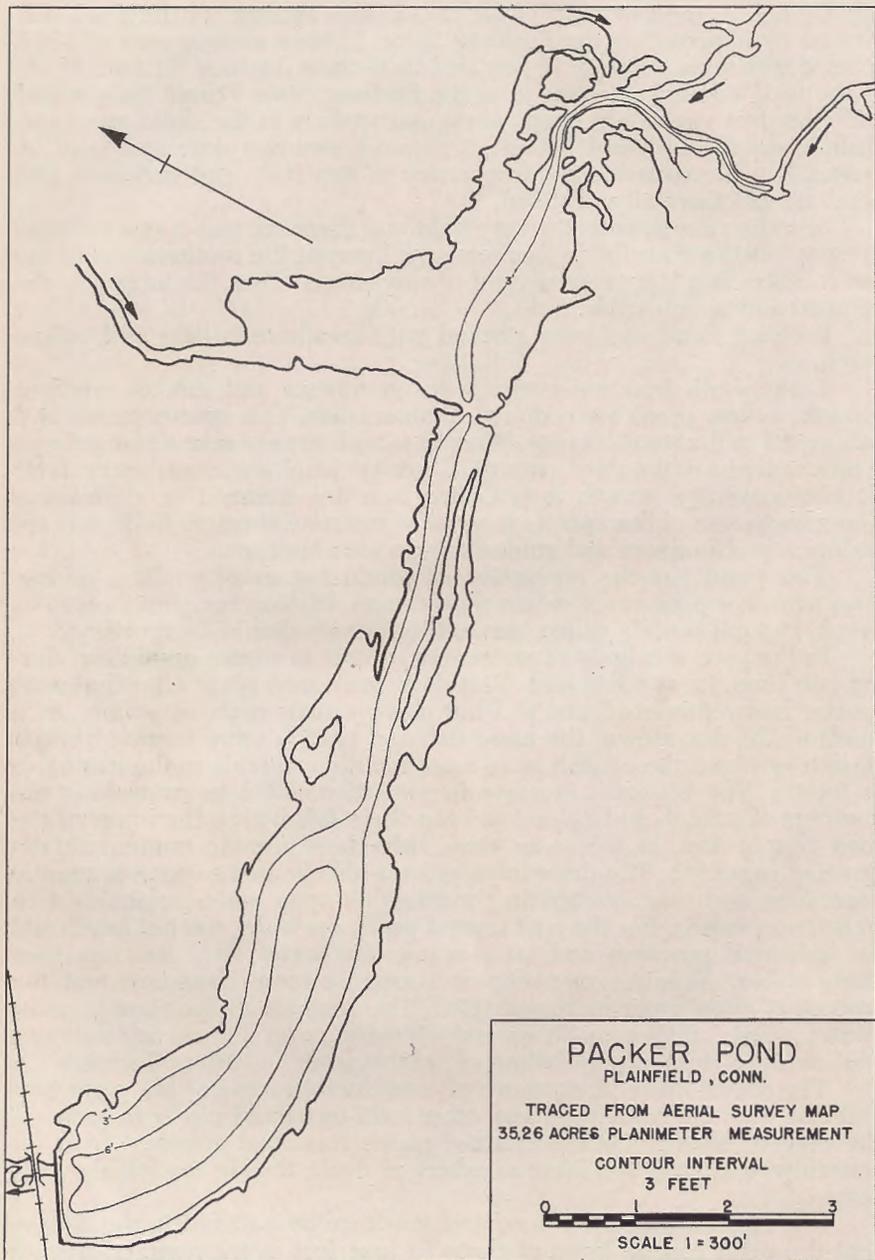
This pond has the reputation of producing excellent bass fishing. Bass over five pounds are relatively common. Fishing for panfish such as perch, bluegill sunfish, calico bass and bullheads should be excellent.

In the past, this body of water was subject to severe drawdown during late June, July and August. This drawdown took place after the game species had reproduced and did not destroy their nests or young. As a result of the drawdown, the game fish and panfish were crowded into a smaller area and the panfish were more readily available to the game fish as forage. The resultant increase in predation aided in controlling the numbers of panfish and helped to keep these fish within the limits of the food supply and, at the same time, helped to provide numerous fast-growing game fish. The drawdown process also helped to control aquatic vegetation and this resulted in considerable open water relatively free from water weeds. For the past several years, the water has not been used for industrial purposes and, as a result, the water level has remained fairly stable. Aquatic vegetation is becoming more abundant and the amount of open water more restricted. This increase in the abundance of "water weeds" may provide excessive escape cover for panfish and can well result in stunted populations of yellow perch and bluegill sunfish.

The drawdown and exposure of considerable areas of the pond bottom also allowed smartweed and other semi-terrestrial plants to grow on the exposed shoals. These terrestrial plants furnished excellent food for waterfowl and attracted large numbers of ducks during the fall shooting season.

It is recommended that a control structure be installed in the dam so that the pond can be lowered three to four feet every summer. Such a drawdown should be started in June and the reduced water level should be held until the end of August.

No special regulations are recommended at this time.



PACKER POND

Packer Pond is located in Windham County in the township of Plainfield. This impoundment was formed by the construction of a concrete and masonry dam across Mill Brook. It has a surface area of 35.3 acres, a maximum depth of 7 feet and an average depth of 2.9 feet. The pond bottom is composed of gravel, rubble, mud and swampy ooze. Submerged vegetation is scarce. Emergent vegetation is very abundant. The waters in this pond are thermally stratified and the water below 3 feet is deficient in dissolved oxygen. Transparency is considerably reduced by the presence of a dark, tea-colored stain in the water.

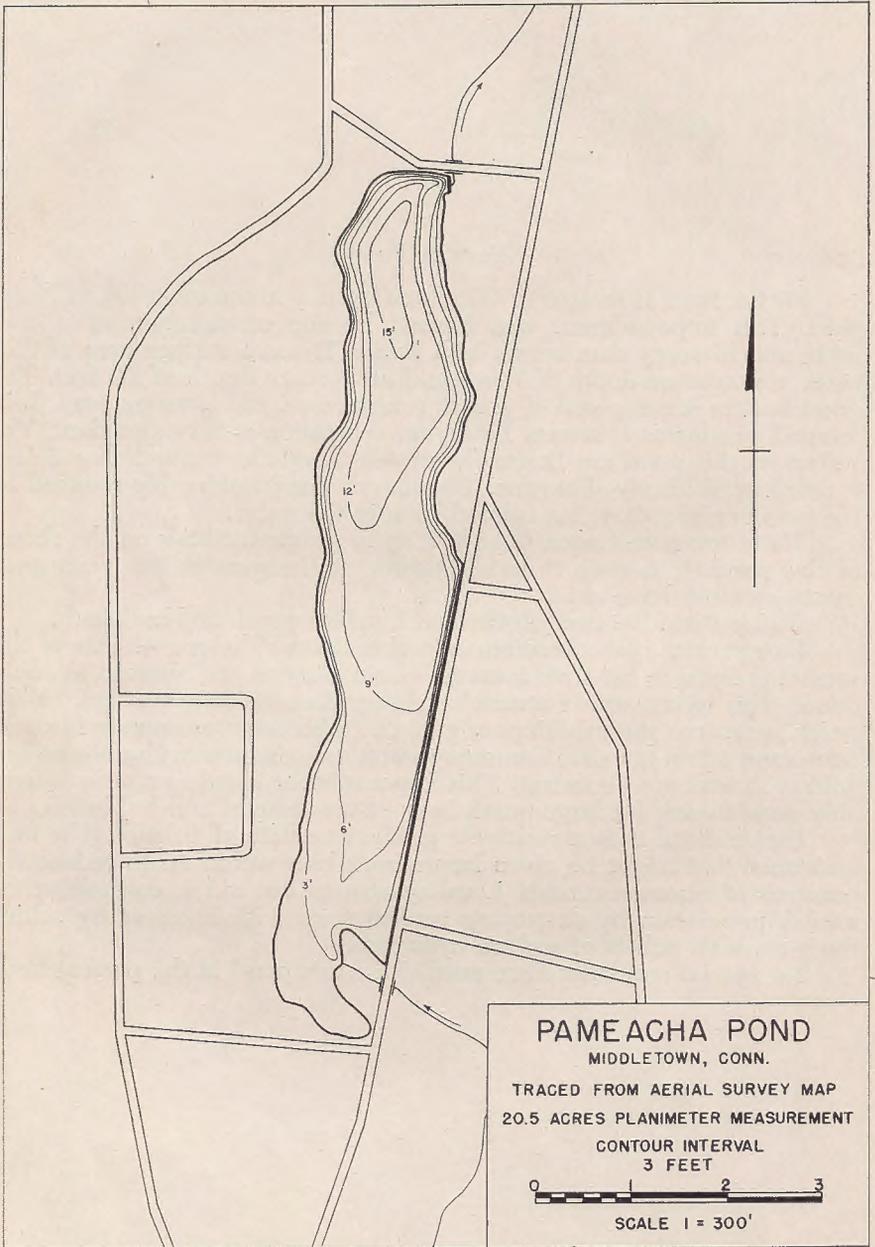
There are no cottages, boat liveries or public facilities on the shores of this pond. It is open to public fishing at the present time, but good access facilities are absent.

Packer Pond has been stocked with yellow perch and bullheads.

Largemouth bass are common in abundance. The growth rate of this species is equal to the state average. Chain pickerel are common in abundance. This species grows somewhat slower than the state average. Yellow perch are scarce and exhibit poor growth. Bullheads are common in abundance and attain fair size. Common sunfish are common in abundance and golden shiners are abundant. This impoundment should provide reasonably good fishing for largemouth bass, chain pickerel and bullheads.

Packer Pond is in a relatively productive state of balance. The only assistance that might be given largemouth bass would be to reduce the numbers of common sunfish. Local sportsmen can aid in controlling the sunfish population by destroying sunfish nests with rakes or by salting the nests with pellets of sodium hydroxide.

No special regulations are needed for this pond at the present time.



PAMEACHA POND

Pameacha Pond is located in Middlesex County in the township of Middletown. It has a surface area of 20.5 acres, a maximum depth of 16 feet and an average depth of 7.7 feet. The pond is artificial in origin and was formed by the construction of a large masonry dam across Long Hill Brook. The bottom is of sand, gravel, rubble and mud. There is a considerable quantity of submerged and emergent vegetation in the shoal areas. Water transparency is reduced to approximately two feet by a light algal bloom and a dark, tea-colored stain. The pond is thermally stratified and deficient in dissolved oxygen at depths greater than 10 feet. The northern shoreline is wooded. The southern shoreline is open and paralleled by Route 15.

Access to the pond can be gained from Route 15.

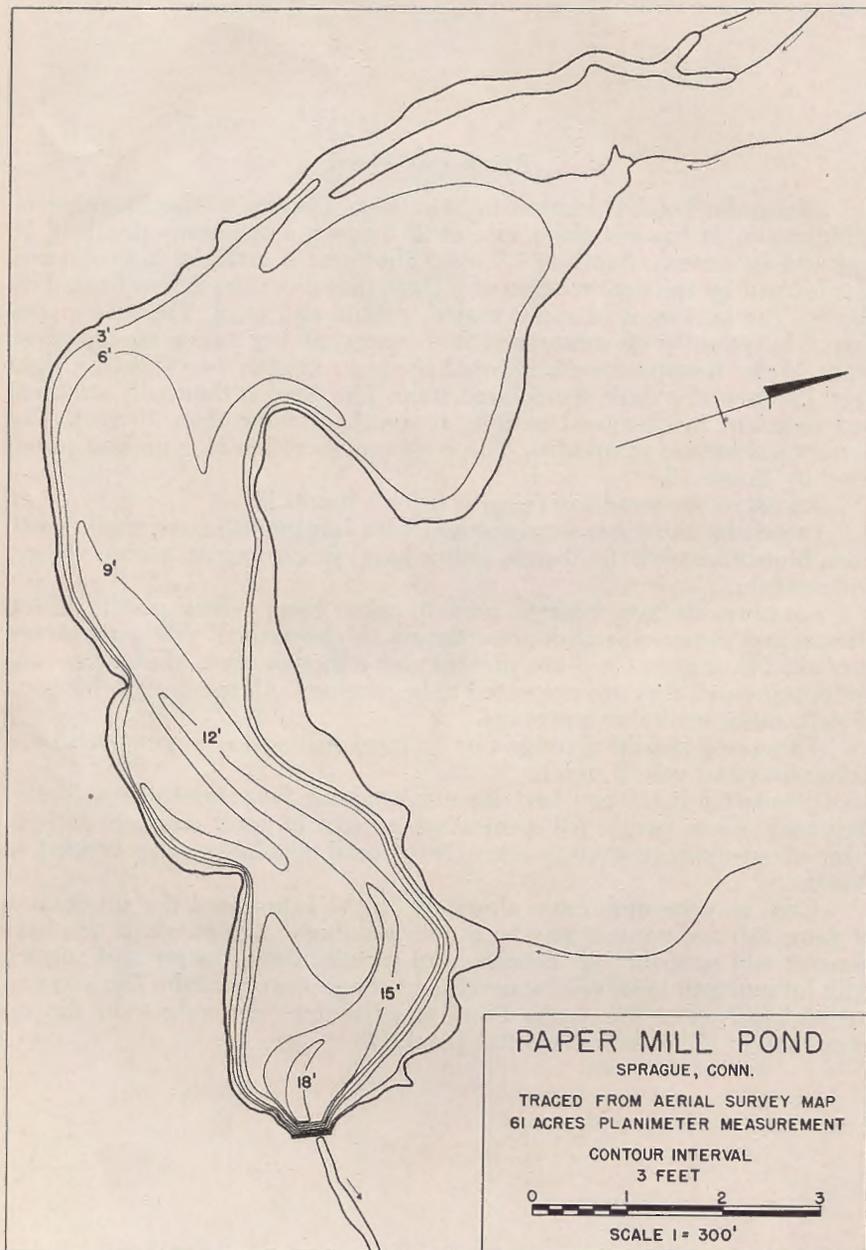
Pameacha Pond has been stocked with largemouth bass, smallmouth bass, bluegill sunfish, bullheads, calico bass, yellow perch, golden shiners and sunfish.

Largemouth bass, bluegill sunfish, calico bass, yellow perch, golden shiners and common sunfish are common in abundance. White perch are present, but scarce. Carp are present and although their abundance was not determined, they are suspected to be common. All species exhibit good growth rates, well above average.

This pond should provide fair to good fishing for largemouth bass, calico bass and yellow perch.

Pameacha Pond can best be managed for largemouth bass, calico bass and yellow perch. All species are present in good numbers and exhibit above-average growth rates. No special regulations are needed at this time.

Carp may become more abundant in the future and the production of game fish and panfish may be seriously reduced as a result. If this happens, it will probably be necessary to reclaim these waters and restock with largemouth bass, yellow perch and some other panfish. The successful reclamation of Pameacha Pond is, of course, dependent on the reclamation of all waters above this pond.



PAPER MILL POND

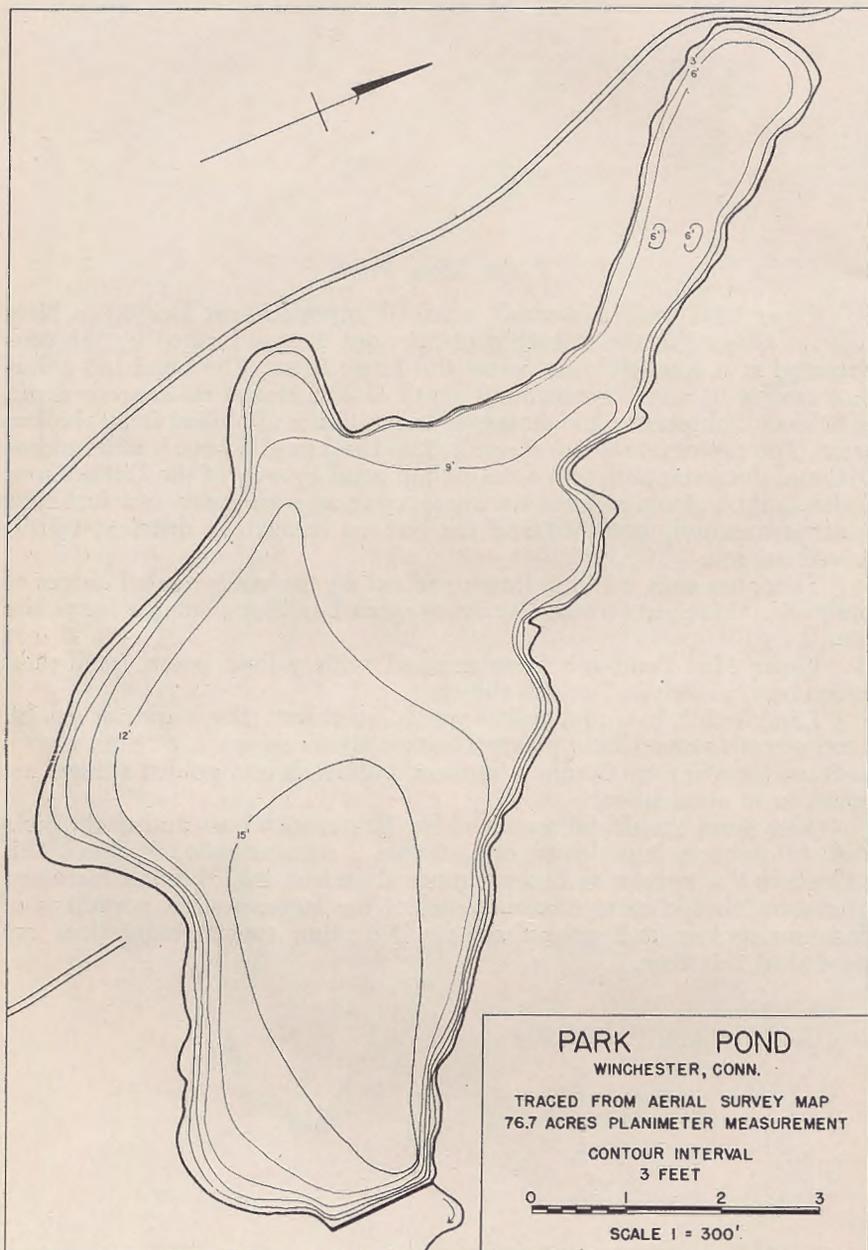
Paper Mill Pond is a small, artificial impoundment located in New London County in the township of Sprague. It was formed by the construction of a concrete dam across the Little River. The pond has a surface area of 61 acres, a maximum depth of 20 feet and an average depth of 6.3 feet. Submerged and emergent vegetation is abundant in all shallow areas. The bottom is mostly of sand, gravel and mud. There is some industrial and domestic pollution entering the pond by way of the Little River. A dense algal bloom reduces transparency to approximately two feet. The pond is thermally stratified and the bottom waters are deficient in dissolved oxygen.

There are only a few cottages present on the well-wooded shores of the pond. There are no boat liveryes or other facilities available for public use.

Paper Mill Pond has been stocked with yellow perch, bullheads, calico bass, sunfish and golden shiners.

Largemouth bass and yellow perch are scarce. These species exhibit good growth rates. Chain pickerel are relatively common with an above-average growth rate. Common suckers, bullheads and golden shiners are common in abundance.

This pond should be managed for largemouth bass and chain pickerel. A minimum legal length of 14 inches is recommended for bass. This will allow this species to become more abundant, and through increased predation, should more efficiently utilize the large, unused poundage of common suckers and golden shiners. No other special regulations are needed at this time.



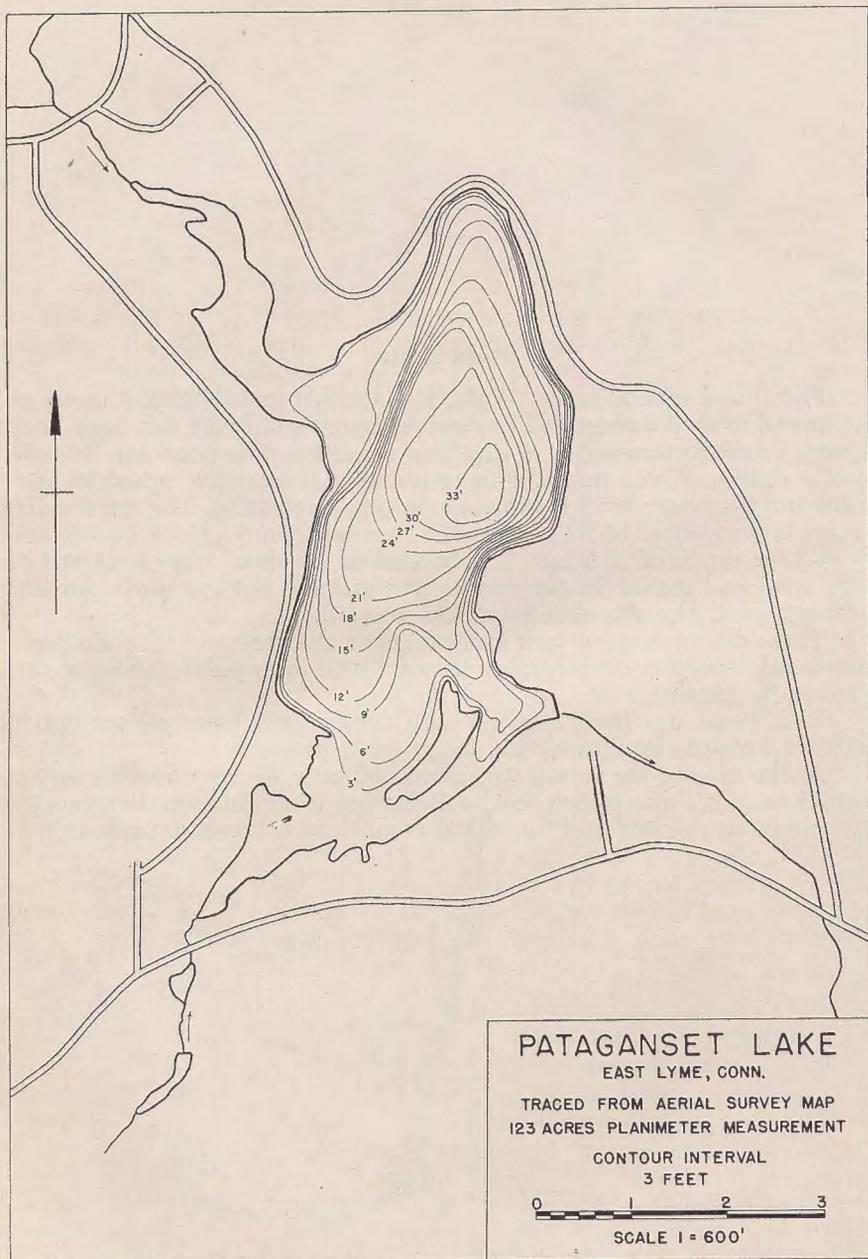
PARK POND

Park Pond is artificial in origin. It is located in Litchfield County in the township of Winchester. The dam is approximately 15 feet high, is of masonry construction and is in excellent condition. The pond can be completely drawn. Water from the impoundment is used for industrial purposes and the water level is subject to severe fluctuation. The impounded waters cover an area of 76.7 acres, have a maximum depth of 15 feet and an average depth of 10.6 feet. The bottom in the shoal areas is mostly of rock, sand and gravel. In the deeper portions, the bottom is of mud and swampy ooze. The shoreline is mostly wooded.

There are several cottages and camps on the shores of this pond but, in general, shoreline development is low. There is no public access to this pond at the present time.

Park Pond has been stocked with smallmouth bass, yellow perch, catfish (probably bullheads) and largemouth bass.

At the time of the survey, the pond had been drawn down for an extended period. These waters will be rechecked when fish populations have become re-established and biological conditions become stabilized.



PATAGANSET LAKE

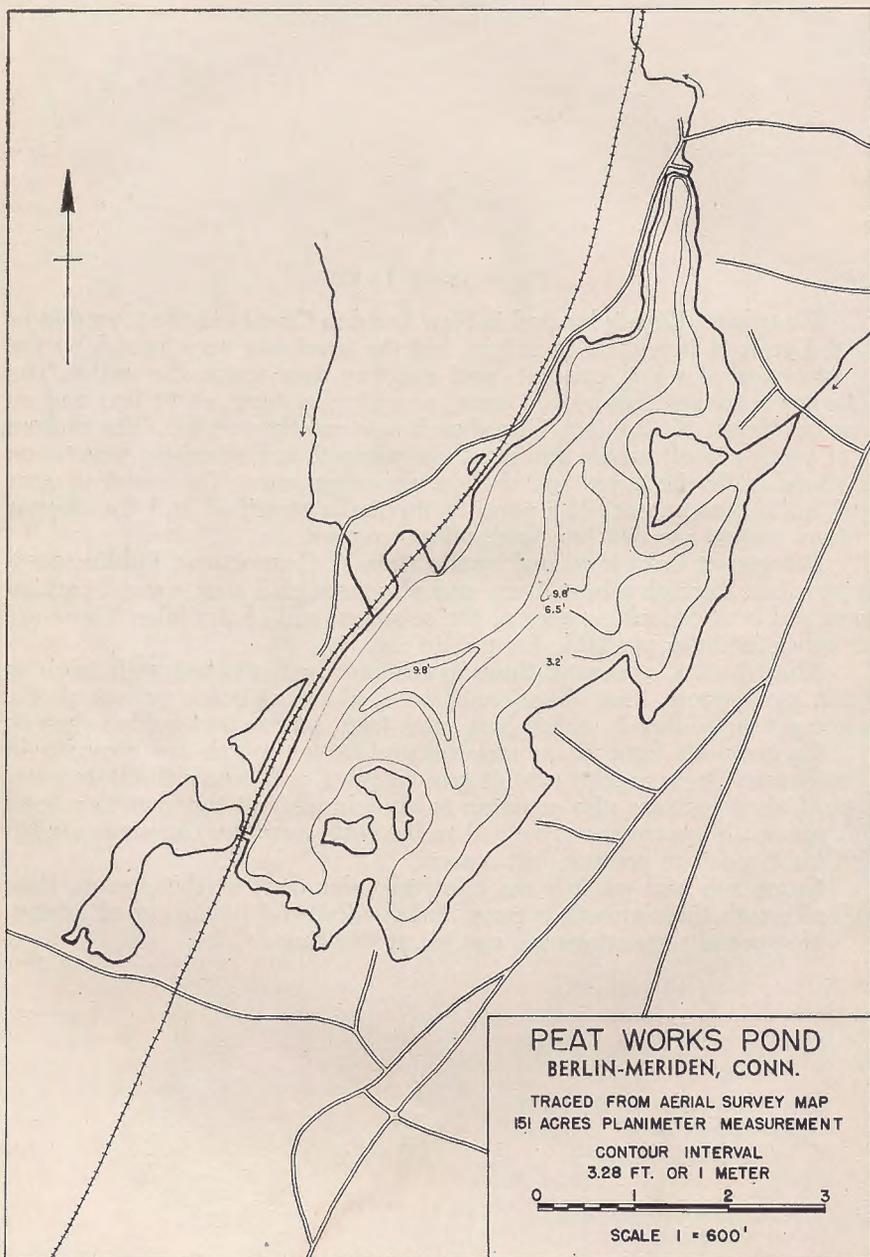
Pataganset Lake is located in New London County in the township of East Lyme. It is natural in origin, but the level has been raised by the construction of a low, concrete and masonry dam across the outlet. The lake has a surface area of 123 acres, a maximum depth of 34 feet and an average depth of 12.4 feet. The shoreline is mostly wooded. The bottom is of sand, gravel, rubble and mud. Submerged and emergent vegetation is abundant in the coves and shallow shoreline areas. The water is clear and quite transparent. The pond is thermally stratified and the deeper bottom waters are deficient in dissolved oxygen.

Pataganset Lake is owned by the State of Connecticut. Public access is provided through a boat livery and also through a state-owned parking area and boat launching area at the southern end of the lake. There are no other facilities available for public use.

The lake has, at various times in the past, been stocked with rainbow trout, smallmouth bass, largemouth bass, chain pickerel, yellow perch, white perch, bullheads, calico bass, rock bass, sunfish and golden shiners.

Largemouth bass, chain pickerel and yellow perch are common in abundance. These species exhibit growth rates well below the state averages. Calico bass are also common in abundance, but the growth rate of this species is approximately equal to the state average. Common sunfish and bullheads are present, but scarce.

Game fish and panfish are relatively abundant at the present time and although their growth is poor, the pond should furnish good fishing. No special regulations are needed at this time.



PEAT WORKS POND (Silver Lake)

Peat Works Pond is located in Hartford and Middlesex Counties in the townships of Berlin and Meriden. It is artificial in origin and is fed mostly by bottom springs. The dam is of earthen and masonry construction and is in good condition. Silver Lake, as this impoundment is often called, has a surface area of 151 acres, a maximum depth of 12 feet and an average depth of 4.5 feet. The bottom is mostly of mud and swampy ooze except in shallow shoreline areas, where it is of coarse gravel. There is some emergent vegetation in shallow shoreline areas. Dense beds of submerged vegetation covered the entire pond bottom prior to 1952. Submerged vegetation was removed in the spring of 1952 with an experimental application of a chemical "weed killer." Submerged vegetation was noted in 1953, but the growth of these "water weeds" had not assumed proportions sufficient to be a nuisance to fishing. Some regrowth of the submerged vegetation was again treated successfully in 1954, 1955 and 1956. These later treatments were much lighter than the original application made in 1952. Chemical weed control can be expected to give satisfactory relief from submerged vegetation for one year and occasionally for two. Following the treatments of submerged vegetation and the resultant death and decay of these plants, a dense algal bloom took place. This bloom reduced transparency to less than two feet. All submerged vegetation that was not killed by the chemical was quickly killed by the shading effect of the algal bloom.

Basic fertilizers, plankton and bottom food production are exceptionally high.

Peat Works Pond is state-owned. There is a state-owned right-of-way, boat launching area and parking area at the northwestern corner of the pond, just south of the dam. There are a few cottages on the eastern shore, but shoreline development is low. The New York, New Haven and Hartford Railroad borders the pond on the west, and the Berlin Turnpike parallels the pond about one half mile to the east.

Silver Lake has been stocked with land-locked salmon, chain pickerel, yellow perch, bullheads, calico bass, golden shiners, sunfish, smallmouth bass, largemouth bass and northern pike.

Young-of-the-year largemouth bass are scarce. Bass in the one-year class and older age classes are common in abundance. Chain pickerel are common in abundance. Calico bass are abundant in the young-of-the-year class, but are much less common in the older age classes. Yellow perch are very scarce in all age classes. During the survey made in the late 1930's, yellow perch were very abundant and stunted. This species has since been displaced by the less-desirable bluegill sunfish. Bluegill sunfish are extremely abundant in all age classes and are badly stunted. Common sunfish are abundant in the young-of-the-year class but are less abundant in older age classes. Golden shiners are abundant in the older age classes. Common suckers are present, but scarce. Large bullheads are common in abundance. Growth rates of largemouth bass, chain pickerel and yellow

perch are good and are well above the state averages. Calico bass and bluegill sunfish exhibit very poor growth rates.

Reproduction appears to be adequate for the game species and overabundant for the panfish species with the possible exception of yellow perch.

Fishing for chain pickerel and largemouth bass should be good with above average success. Fishing for small bluegill sunfish should be excellent.

The extensive "weed beds" present prior to 1952 provided excessive escape cover for panfish, particularly bluegill sunfish. The elimination of most of the submerged vegetation should provide the game species with



FIGURE 63. Weed control apparatus.

greater freedom of movement and should allow greater utilization of the panfish as forage.

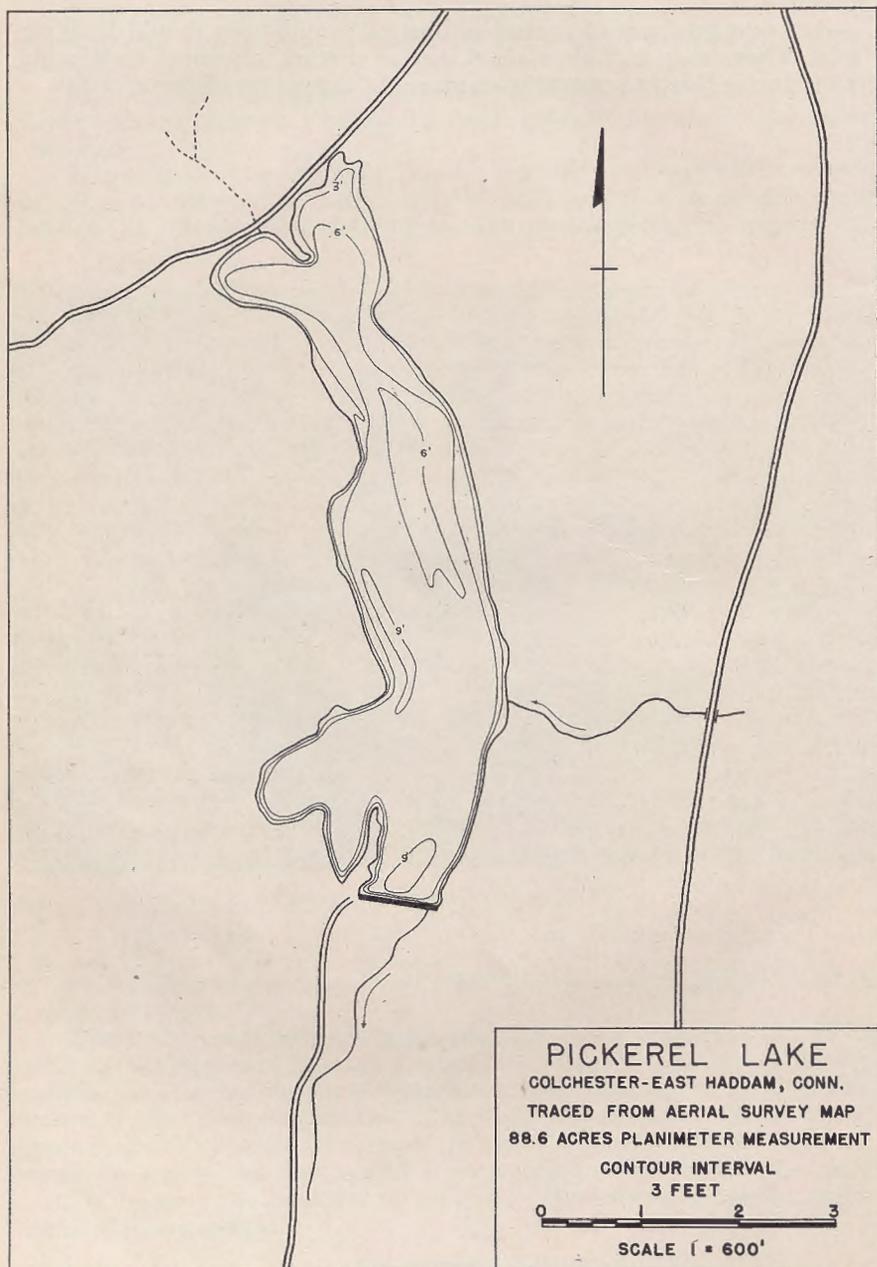
Every effort will be made to increase the numbers of game fish in this pond so that they can, through predation, reduce the numbers of bluegill sunfish. To accomplish this objective northern pike are stocked in these waters as they become available. The supply of northern pike is entirely dependent on commercial fishing on the Connecticut River and, as a result, the number of pike available for stocking each year is rather small.

To increase the numbers of game fish, the following special regulations are recommended:

Bass	14" minimum length—6 per day
Chain Pickerel	18" minimum length—6 per day
Northern Pike	—No open season
Ice Fishing	—No open season

These protective measures should remain in effect until the bluegill population is severely reduced or until it is apparent such measures are ineffective.

Any new methods of control of bluegill populations should be given a trial. These may include such things as netting, chemical treatments, use of electro-fishing apparatus or manual destruction of nests.



PICKEREL LAKE

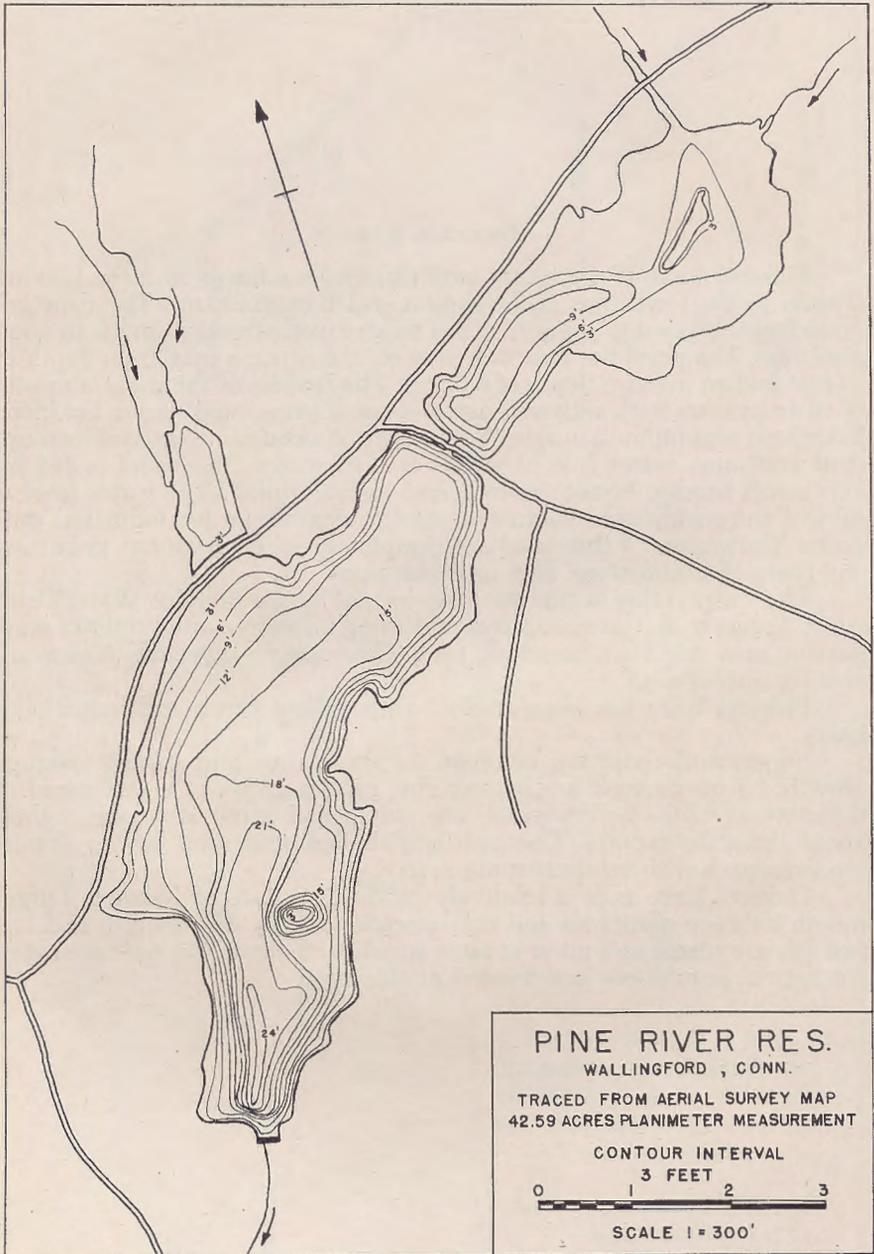
Pickerel Lake is a shallow, artificial impoundment in New London County in the townships of Colchester and East Haddam. The dam impounding this pond is of earthen and masonry construction and is in good condition. The pond has a surface area of 88.6 acres, a maximum depth of 10 feet and an average depth of 6.0 feet. The bottom of the pond is mostly of swampy ooze with scattered areas of sand, gravel and coarse boulders. Emergent vegetation is scarce. Submerged vegetation is extremely abundant and open water free of weeds is very scarce. The pond is fed by very small brooks, bottom springs and surface runoff. The water level is subject to considerable fluctuation due to drawdown for industrial purposes. The waters of this pond are completely mixed from top to bottom and thermal stratification does not take place.

The water rights in this pond are owned by the Moodus Water Company. Access to the pond is provided through a state-owned right-of-way, parking area and boat launching area. There are no other facilities available for public use.

Pickerel Lake has been stocked with yellow perch and largemouth bass.

Largemouth bass are common in abundance and exhibit average growth. Chain pickerel are scarce. This species grows at a rate equal to the state average. Yellow perch are scarce and grow at a rate slightly above the state average. Common sunfish, bullheads and golden shiners are present, but these species are scarce.

Pickerel Lake is in a relatively productive state of balance. Largemouth bass are numerous and exhibit good growth. The panfish and forage fish are scarce and grow at rates equal to or above the state averages. No special regulations are needed at this time.



PINE RIVER RESERVOIR

Pine River Reservoir is owned by the Wallingford Water Company and is located in New Haven County in the township of Wallingford. It has a surface area of 70 acres, a maximum depth of 25 feet and an average depth of 9.0 feet. It is artificial in origin. The dam is of earth and concrete and is in excellent condition. Submerged and emergent vegetation is scarce. The bottom is of mud and swampy ooze. Transparency of the water is greatly reduced by a dense algal bloom. The shoreline is mostly open.

This reservoir is open to public fishing from shore. Permits may be obtained from the patrolman at a fee of 25 cents. Angling is limited to the hours between 6:00 a.m. and 9:00 p.m.

There are no stocking records for this body of water.

Largemouth bass, chain pickerel and common sunfish are scarce. Yellow perch are common to abundant. Bluegill sunfish, bullheads and common suckers are common in abundance. Golden shiners are abundant. Largemouth bass growth is poor, being below the state average. Other species exhibit above-average growth rates.

Angling for game fish is probably poor. Fishing success for yellow perch, bullheads and bluegill sunfish should be above average. This impoundment serves as a reservoir for the city of Wallingford, and while stabilization of the water level and discontinuance or lighter use of copper sulfate are desirable, its use as a water supply has top priority. With fishing pressure limited to casting distance from shore, there is little that can be done to improve fishing. No special regulations are warranted. This may be an instance where all legal lengths, seasons and creel limits could safely be abolished.



LAKE POCOTOPAUG

Lake Pocotopaug is located in Middlesex County in the township of East Hampton. The lake is natural in origin, but the level of the water has been raised so that the impoundment now has a surface area of 511.7 acres. It has a maximum depth of 38 feet and an average depth of 11.3 feet. Submerged and emergent vegetation is scarce in all areas of the lake. In the shallows the bottom is of sand, gravel, rubble and boulders. In the deeper areas, the bottom is mostly of swampy ooze and organic detritus. The water is clear and transparency exceeds 10 feet. The lake is thermally stratified and the deep bottom waters are deficient in dissolved oxygen.

There are numerous cottages present on the lightly wooded shores of this lake. Access to the lake is provided through boat liveries and through a town-owned right-of-way.

Lake Pocotopaug has been stocked with land-locked salmon, lake trout, largemouth bass, smallmouth bass, white perch, chain pickerel, calico bass, bullheads, sunfish, golden shiners and brown trout.

Smallmouth bass are common in abundance, but exhibit below-average growth. Yellow perch are common in abundance. This species grows rapidly at a rate well above the state average. Chain pickerel are extremely scarce. The growth rate of this species was not determined. Rock bass are abundant and exhibit good growth. Bluegill sunfish and common sunfish are common in abundance. The growth rates of these species are below average. Calico bass and red-bellied sunfish are present, but scarce. Carp have been reliably reported from this pond, but none were taken or observed by the survey unit. At the time of the old survey in the late 1930's, largemouth bass were common and smallmouth bass were scarce. Since that time, the population has shifted to favor the smallmouth, and now the largemouth is extremely scarce or absent from the lake.

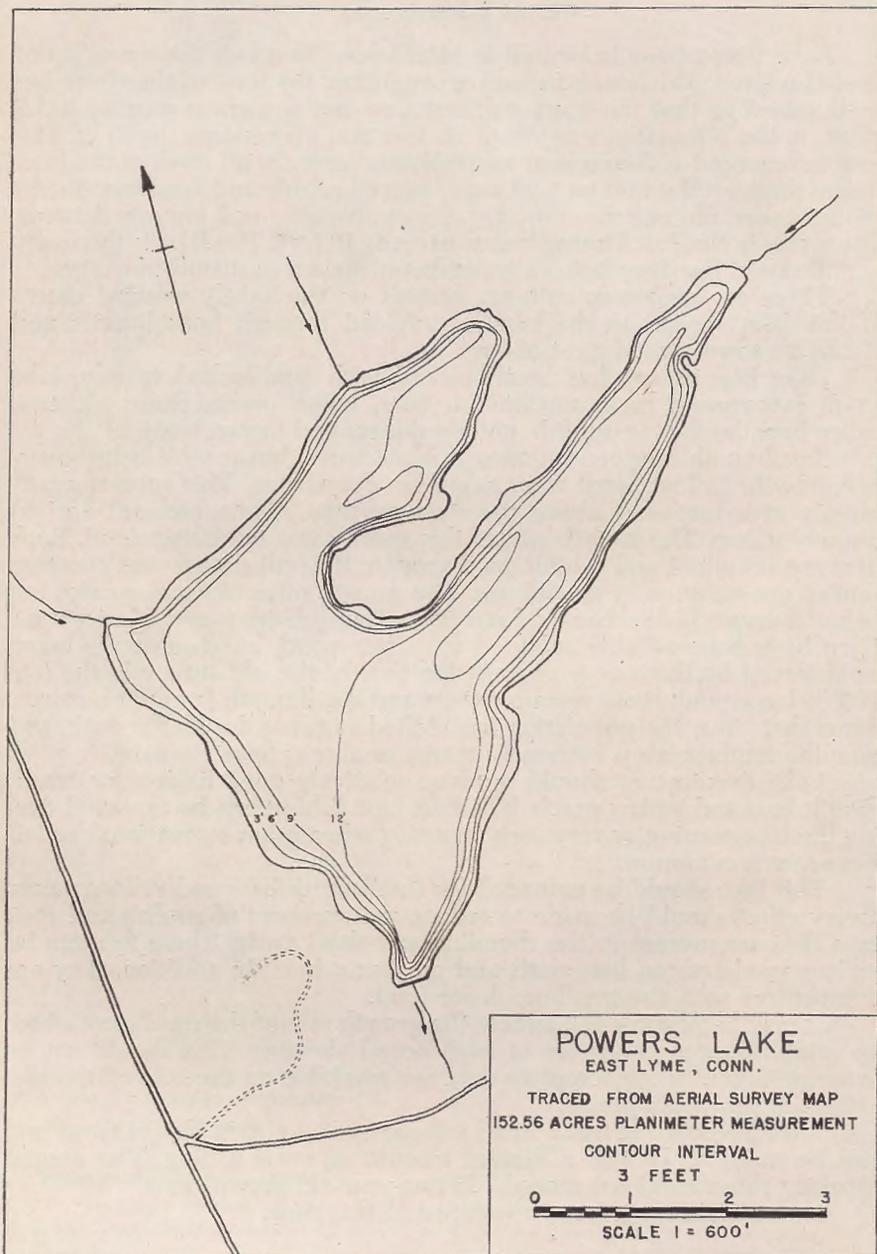
Lake Pocotopaug should produce relatively good fishing for smallmouth bass and yellow perch. The best bass fishing can be expected during the late evening or very early morning when other recreational activities are at a minimum.

This lake should be managed for smallmouth bass and yellow perch. Every effort should be made to reduce the numbers of sunfish and rock bass that are present in the shoreline and shoal areas. These fish can be serious predators on bass nests and on young bass. In addition, they are competitors with the smallmouth for food.

It may be possible to increase the growth rate of the smallmouth bass by establishing a population of land-locked alewives. This should not be attempted until more complete data are available on the role of the alewife in warm-water ponds.

Lake Pocotopaug has a small volume of water suitable for trout and can be made to furnish a limited amount of trout fishing. The annual stocking rate should not exceed 750 two-year-old brown trout.

No special regulations are needed at this time.



POWERS LAKE

Powers Lake is a state-owned artificial impoundment located in the township of East Lyme in New London County. This impoundment has a surface area of 152.6 acres, a maximum depth of 13 feet and an average depth of 7 feet. Submerged and emergent vegetation is scarce in all areas of the pond. The bottom is mostly of sand, gravel, ledge, boulders and mud. The water is relatively clear and transparency exceeds six feet. This pond does not stratify.

There are no cottages on the well-wooded shores of this pond. Yale University Engineering School owns most of the property bordering Powers Lake. Public access is provided through a state-owned right-of-way. There are no boat liveries or other facilities available for public use.

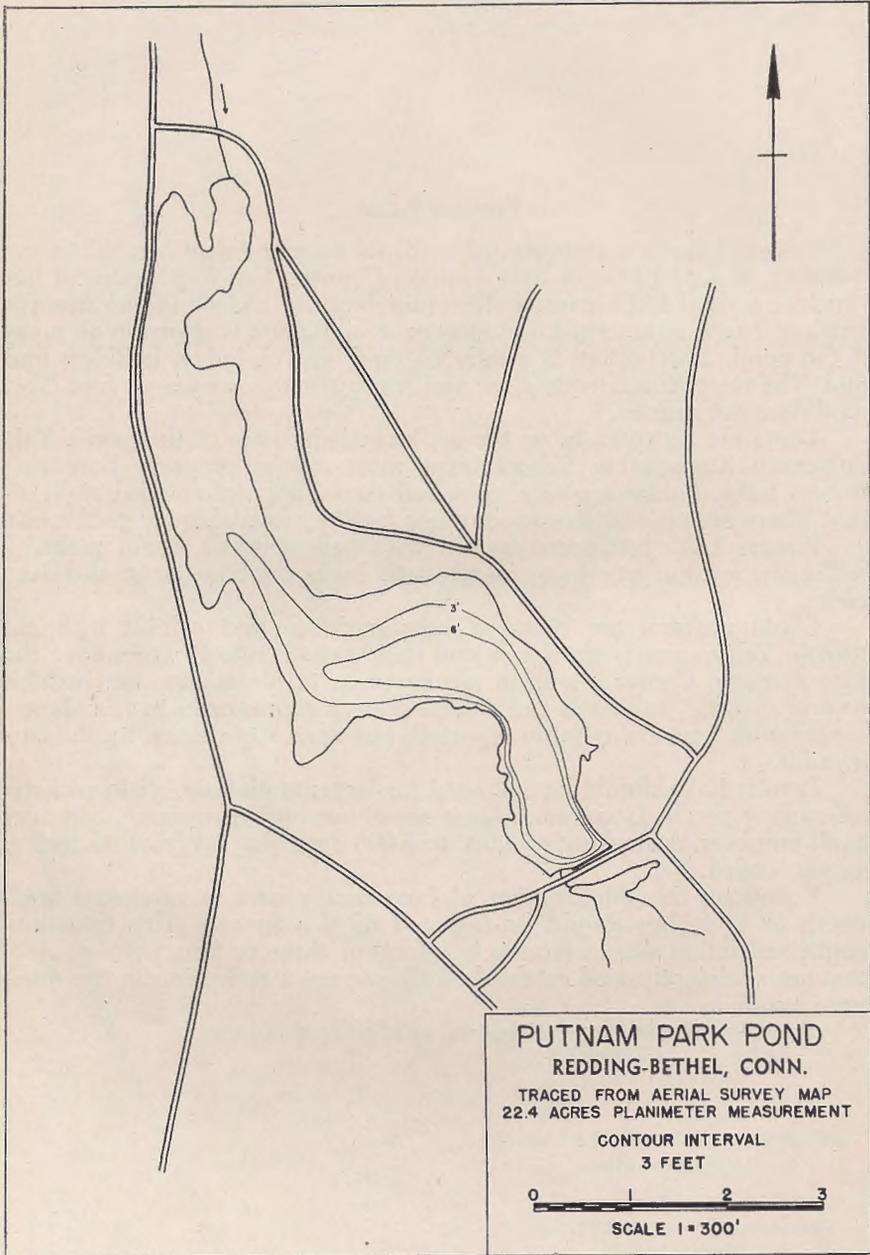
Powers Lake has been stocked with yellow perch, chain pickerel, bullheads, smallmouth bass, largemouth bass, rainbow trout and lake trout.

Chain pickerel are common in abundance and exhibit excellent growth. Yellow perch are scarce and their growth rate is well above the state average. Common sunfish are common in abundance and exhibit average growth. Bullheads and golden shiners are common in abundance. Largemouth bass are reliably reported, but none were taken by the survey unit.

Powers Lake should be managed for largemouth bass, chain pickerel and yellow perch. Largemouth bass are either absent or present in very small numbers. A stocking of 4,000 to 5,000 fingerling largemouth bass is recommended.

Following the introduction of largemouth bass, a minimum legal length of 14 inches should be imposed on this species. This minimum length restriction should remain in effect for three or four years or until bass are sufficiently well established to warrant a reduction in the minimum length.

No other special regulations are needed at this time.



PUTNAM PARK POND

Putnam Park Pond, a small artificial pond of 22 acres, is located in Fairfield County in the townships of Redding and Bethel. The low dam is constructed of earth and stone and is in good condition. The bottom is of sand, gravel, boulders and mud. Submerged and emergent vegetation is abundant in all areas of the pond. The water is clear and normally very transparent. The shoreline is mostly wooded. The pond has a maximum depth of 8 feet and an average depth of 3.5 feet.

There are no cottages or boat liveries on the shores of this pond. A public right-of-way in Putnam Memorial Park assures access to the pond. Picnic facilities are available in this state park.

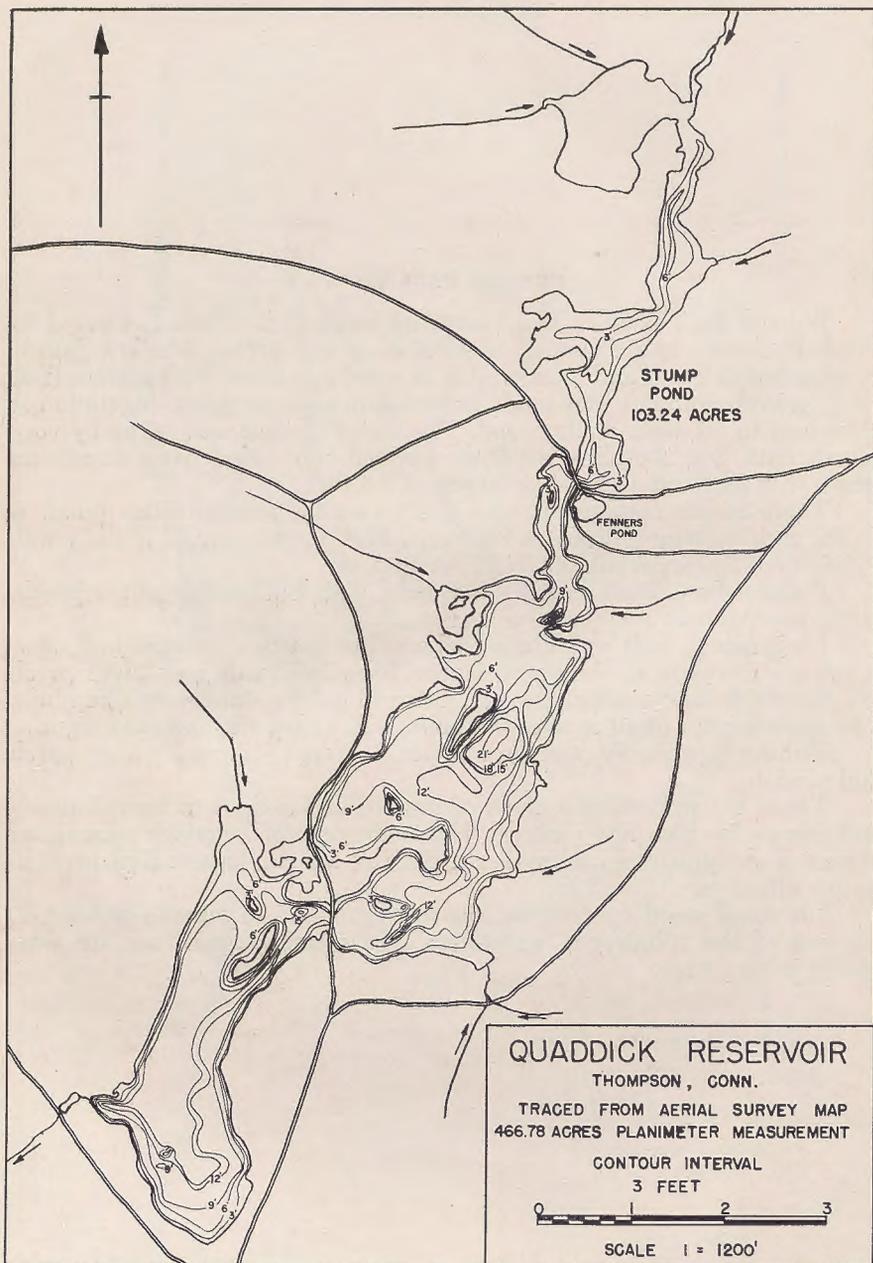
Putnam Park Pond has been stocked with bullheads, yellow perch, white perch, chain pickerel and lake trout.

Largemouth bass and chain pickerel are scarce to common. Yellow perch are common to abundant. Calico bass, bullheads and white perch are present, but scarce. Common sunfish and golden shiners are abundant. The growth rates of all species are poor, well below the state averages.

Fishing is probably poor for all species except for small yellow perch and sunfish.

There are sufficient numbers of panfish and shiners to furnish excellent forage for bass and pickerel. However, aquatic vegetation furnishes excessive escape cover and makes it difficult for the bass and pickerel to forage effectively.

Chemical weed control work is recommended to remove at least 50 percent of the submerged vegetation. No special regulations are warranted at this time.



QUADDICK RESERVOIR

Quaddick Reservoir is located in Windham County in the township of Thompson. It is natural in origin, but the level has been raised several feet by an earthen dike and a masonry dam. The reservoir has a surface area of 466.8 acres, a maximum depth of 25 feet and an average depth of 6.4 feet. This impoundment has three distinct basins, each separated from the other by a causeway and road. Submerged and emergent vegetation is scarce in most areas of the lower and middle basins. There are dense growths of submerged vegetation in the upper shallow basin (Stump Pond). The pond bottom is mostly of sand, rubble and swampy ooze. Transparency is reduced to approximately six feet by a dark, tea-colored stain.

Public access to this water is provided through Quaddick State Park. There are several cottages on the shores of this impoundment, but these are far less numerous than on most Connecticut lakes.

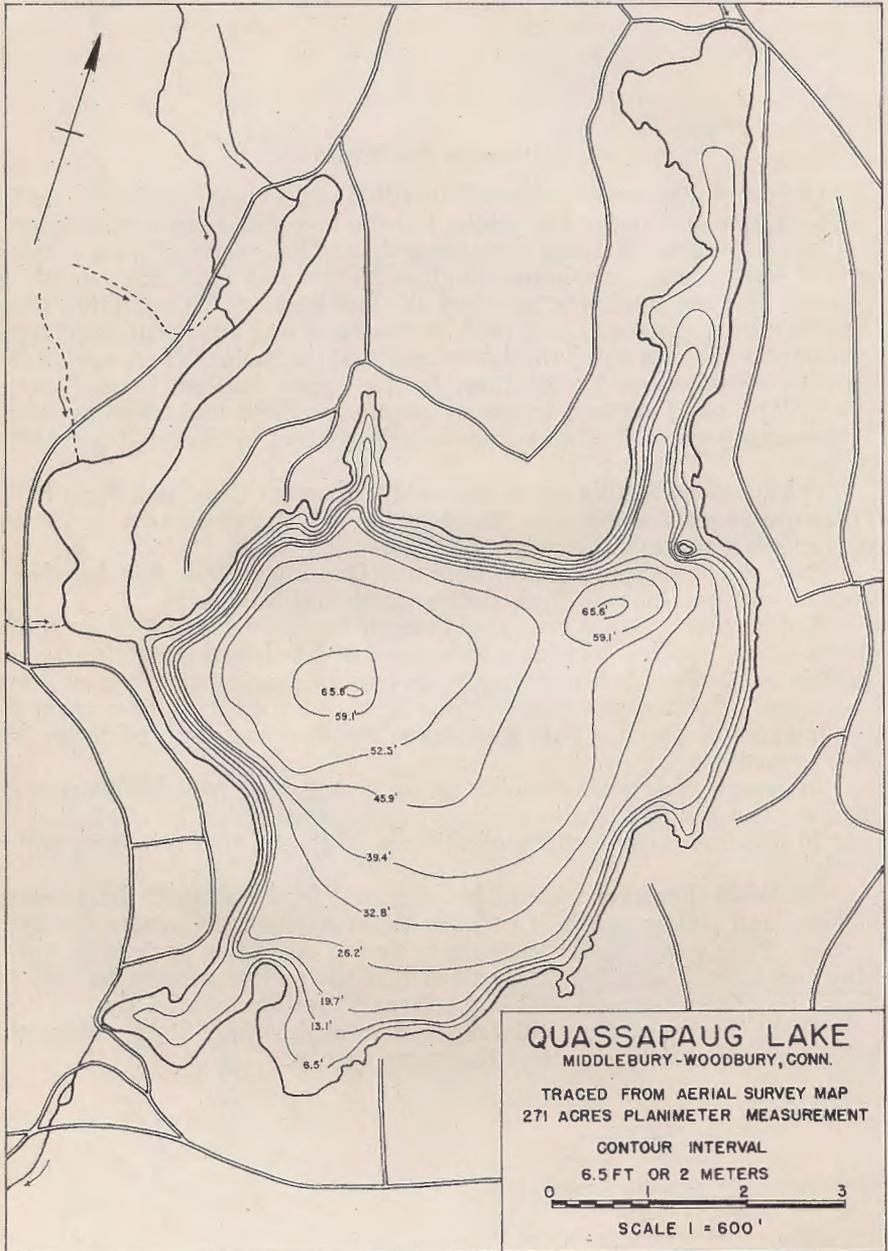
Past stocking records indicate that Quaddick Reservoir has been stocked with smallmouth bass, yellow perch and bullheads.

Yellow perch, calico bass and bluegill sunfish are common in abundance. These species grow at a slow rate, well below the state averages. Sunfish and bullheads are also common in abundance. Chain pickerel are scarce and exhibit about-average growth rates. Largemouth bass are present, but scarce. Too few bass were taken by the survey unit to determine their growth rate.

In general, this pond provides rather poor fishing with below-average success. The scarcity of fish and poor growth rates can be attributed in part to the low basic fertility of this reservoir and to fluctuating water levels.

Quaddick Reservoir should be managed for largemouth bass, chain pickerel and yellow perch. It is desirable to reduce or eliminate the fluctuation of the water level, particularly during spawning periods in April, May and June. There is little that can be done to increase the fertility of the water. This impoundment is too large to fertilize artificially.

There is no need for special regulations at this time. State-wide regulations are adequate to protect the game species.



QUASSAUG LAKE

Quassapaug Lake is located in Litchfield and New Haven Counties in the townships of Woodbury and Middlebury. This 271-acre lake is natural in origin, but has had its level raised by the construction of a low earthen and masonry dam. The maximum depth of this body of water is 65 feet and the average depth is 28.5 feet. The bottom in shoal areas in the main basin is of rock, sand and gravel. The bottom in the deeper areas and in the two large shallow coves is mostly of mud and swampy ooze. Aquatic vegetation is scarce in the main basin. The two shallow coves at the northern and southwestern ends of the pond support luxuriant growths of submerged and emergent vegetation. The pond is thermally stratified and the deepest waters are deficient in dissolved oxygen. The water is very clear and transparency exceeds 15 feet. Bottom food production is high in the shallow coves and average or below average in the main basin. The shoreline is mostly wooded.

Shoreline development is extensive and there are numerous cottages and summer homes around the lake. Access to the lake is limited to boat liveries and privately operated boat mooring areas. Picnic and swimming facilities are available for a fee in the privately operated amusement park at the southeastern end of the lake.

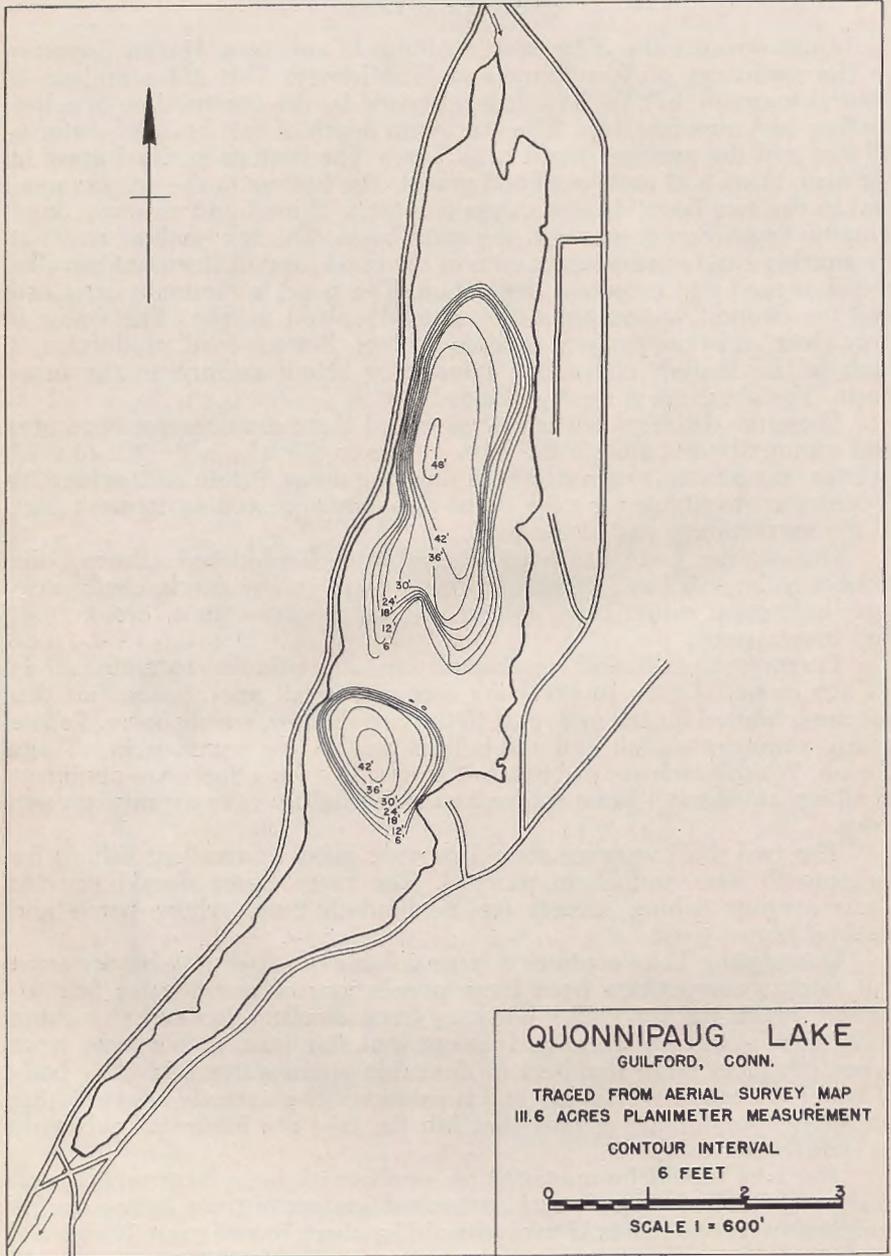
Quassapaug Lake has been stocked with land-locked salmon, lake trout, smallmouth bass, largemouth bass, carp, yellow perch, chain pickerel, bullheads, calico bass, golden shiners, rainbow trout, brook trout and brown trout.

Largemouth bass and smallmouth bass are common to abundant in all age classes. Chain pickerel are common in all age classes, but this species is limited for the most part to the two shallow, weedy coves. Yellow perch, common sunfish and red-bellied sunfish are common in all age classes. White perch are present, but scarce. Golden shiners are abundant in all age classes. All game fish and panfish exhibit above-average growth rates.

The two shallow coves should provide good to excellent fishing for largemouth bass and chain pickerel. The main basin should provide above-average fishing success for smallmouth bass, yellow perch and stocked brown trout.

Quassapaug Lake contains a large volume of water suitable for trout but intense competition from large populations of warm-water fish adversely affects the survival of hatchery trout. Reclamation and restocking with trout would be warranted except that this lake, unlike most trout lakes, produces large numbers of desirable warm-water fish. This body of water is close to Waterbury and is subjected to extremely heavy fishing pressure. Many of the anglers that fish the lake are interested primarily in warm-water fish.

The lake should be managed for smallmouth bass, largemouth bass, chain pickerel and yellow perch. A limited amount of trout fishing can be supplied by yearly plants of two-year-old hatchery brown trout. No special regulations are needed at this time.



QUONNIPAUG LAKE

Quonnipaug Lake is located in New Haven County in the township of Guilford. It is natural in origin, but the level has been raised approximately four feet by a masonry and concrete dam. The lake has a surface area of 111.6 acres, a maximum depth of 48 feet and an average depth of 13.6 feet. It is fed by two very small brooks and bottom springs. The bottom in the shallow areas at the northern and southern ends of the lake is of mud and swampy ooze. Elsewhere the bottom is mostly of sand and gravel. The shallow areas at the northern and southern ends of the lake are almost completely choked with submerged and emergent vegetation. The waters of this impoundment are thermally stratified and well supplied with dissolved oxygen at all depths. The eastern shoreline is mostly wooded. Route 77 parallels the western shore.

Shoreline development is moderate; there are numerous cottages on the shores of the lake. Access is provided through a boat livery at the southwestern end of the lake.

Quonnipaug Lake has been stocked with land-locked salmon, pike-perch, largemouth bass, salmon, chain pickerel, yellow perch, calico bass, bullheads, sunfish, shiners, rainbow trout, brook trout and brown trout.

Chain pickerel, largemouth bass, yellow perch and red-bellied sunfish are scarce. Bluegill sunfish and common sunfish are abundant. Bullheads are common in abundance. Land-locked alewives are present and common. The growth rates of chain pickerel, largemouth bass and yellow perch are well above average. Bluegill sunfish and common sunfish exhibit symptoms of stunting, and their growth rates are well below average.

Fishing for largemouth bass, chain pickerel and yellow perch is probably poor, with below-average success.

Quonnipaug Lake contains a considerable volume of cold, well-oxygenated water suitable for trout; however, an appreciable area of the pond is not suitable for trout during extended periods of warm weather. The area unsuitable for trout includes the shallow, weedy sections at the northern and southern ends of the lake and these sections are either unfishable or very difficult to fish. The greatest angler satisfaction can be obtained if this lake is reclaimed with rotenone and restocked with trout only. At the time of reclamation, all tributary streams that flow into the lake should also be treated in order to obtain a complete kill and to reduce the possibility of reinfestation by warm-water fish.

If reclamation is carried out, as recommended, the use of fish, either dead or alive, as bait should be prohibited.

RAINBOW RESERVOIR

Rainbow Reservoir is artificial in origin and was formed by the construction of a large concrete dam across the Farmington River at Rainbow. This large impoundment is located in Hartford County in the township of Windsor. It has a surface area of 234.5 acres, a maximum depth of 50 feet and an average depth of 18.6 feet. The bottom is of sand, gravel, rock and mud. Dense growths of submerged vegetation occur in most shallow areas. There is considerable emergent vegetation in shoreline areas. A dense algal bloom reduces transparency to approximately three feet. These waters are above average in fertility. The shoreline is mostly wooded.

This impoundment is owned by the Stanley Tool Company and is open to public fishing. Shoreline development is low. There are very few cottages on the shores of the reservoir. There are no boat liveries or picnic or swimming facilities available.

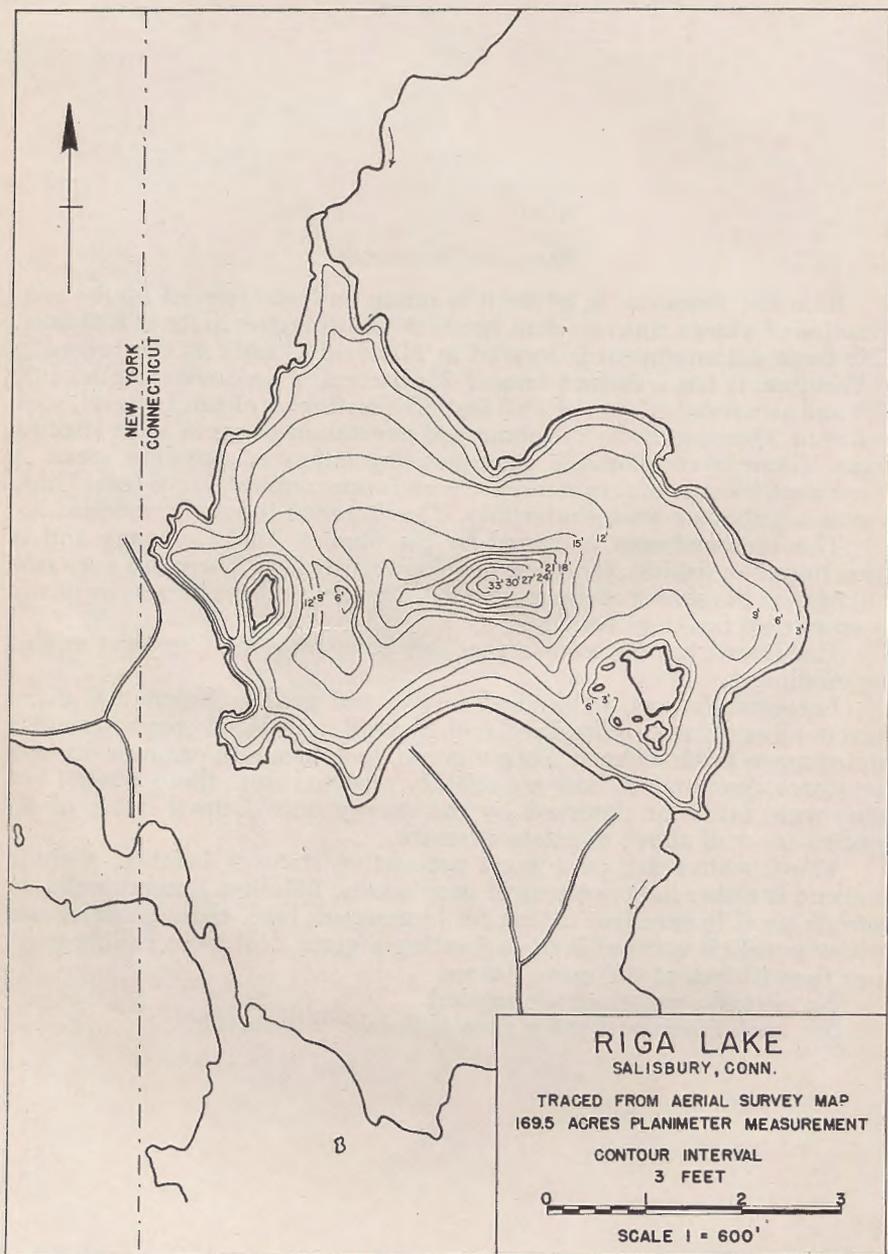
The Board has no records that fish have ever been stocked in this impoundment.

Largemouth bass, red-bellied sunfish and golden shiners are abundant in all age classes. Chain pickerel, bluegill sunfish and common sunfish are common in abundance. Yellow perch, rock bass and common suckers are scarce. Smallmouth bass are reliably reported from these waters, but none were taken or observed by the survey unit. Growth rates of all species are well above the state averages.

These waters are in a good productive state of balance. Fishing pressure is rather light because of poor access. Rainbow Reservoir should provide good to excellent fishing for largemouth bass, chain pickerel and yellow perch. It is capable of supporting a great deal more fishing pressure than it does at the present time.

No special regulations are needed.

See back cover pocket for map of Rainbow Reservoir.



RIGA LAKE

Riga Lake is located in Litchfield County in the township of Salisbury at an altitude of 1,750 feet. It is natural in origin, but has had its level raised by an earthen and masonry dam. The lake has a surface area of 169.5 acres, a maximum depth of 35 feet and an average depth of 9.6 feet. The bottom in shoal areas is of gravel, coarse boulders and broken ledge. There is some submerged vegetation present, but this is scarce. The water is very clear and transparency exceeds 15 feet. These waters are well below average fertility. The water level is subject to considerable fluctuation. The lake is fed by bottom springs and Monument Brook. The waters of Riga Lake are completely wind mixed; there is no thermal stratification and the bottom waters approach 75 degrees F. during the summer months. The shoreline is well wooded.

Riga Lake is privately owned and accessible only by a private right-of-way. Shoreline development is very light. There are no public facilities available.

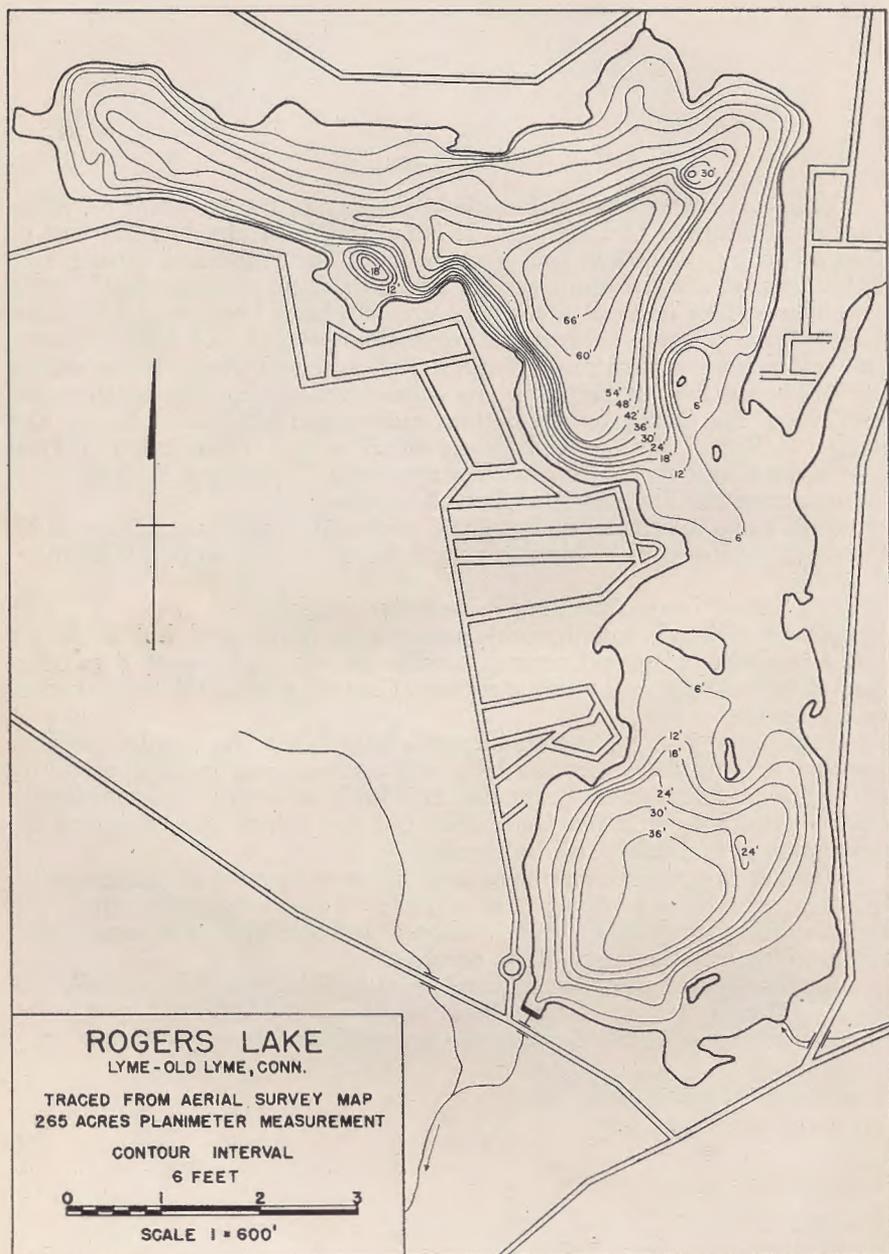
The Board has no stocking records for this lake.

Chain pickerel, smallmouth bass, yellow perch and bullheads are scarce in all age classes. Common sunfish are more abundant than other species, but are scarce by any standard. Growth rates are below average for all species.

Riga Lake is a typical smallmouth bass lake. The fertility level is low and it is unlikely that the lake will ever support large numbers of fish. All available data indicate that this body of water is supporting as great a poundage of fish as is possible, but that a high percentage of the production is in sunfish and bullheads.

Fishing pressure is very light and the growth rates of game species are poor. For these reasons, it is doubtful if corrective regulations can aid in shifting production from bullheads and sunfish to the more desirable smallmouth bass and yellow perch.

Artificial enrichment with commercial fertilizers could raise the fertility level and the production. This would be a costly and continuing expense and is not justified under the present low fishing pressure.

**ROGERS LAKE**

Rogers Lake is located in Middlesex County in the townships of Lyme and Old Lyme. It is natural in origin, but the level has been raised

approximately four feet by a concrete and masonry dam across the outlet. It has an area of 264.9 acres, a maximum depth of 66 feet and an average depth of 20.1 feet. The lake is composed of two distinct basins separated by a band of shallow water. Submerged vegetation is abundant in shoal areas. The bottom is composed of mud, sand, gravel and rubble. The water is clear and transparency exceeds 10 feet. The lake is thermally stratified and all but the very deepest waters are well supplied with dissolved oxygen.

There are numerous cottages on the well-wooded shores of this impoundment. Boats are available for hire at a livery at the southern end of the lake. Public access is provided through a state-owned right-of-way, boat launching area and parking area on the eastern shore of the lake.

Rogers Lake has been stocked with yellow perch, chain pickerel, bullheads, calico bass, sunfish, rock bass, largemouth bass, smallmouth bass, golden shiners, striped bass, lake trout, land-locked salmon and brown trout.

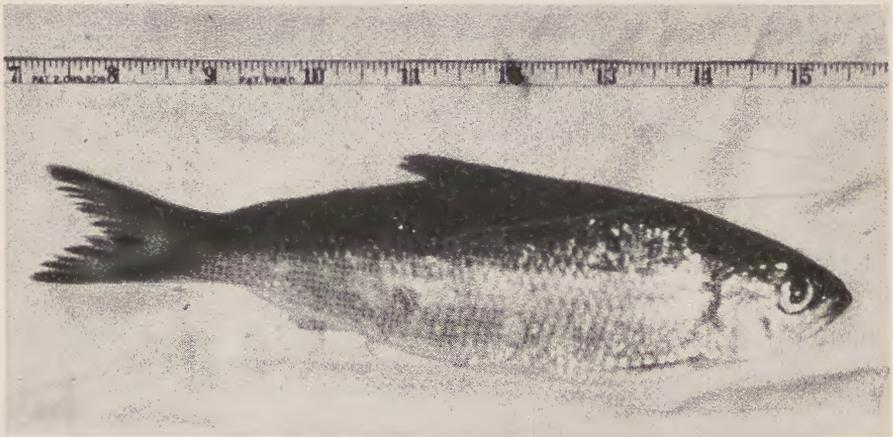
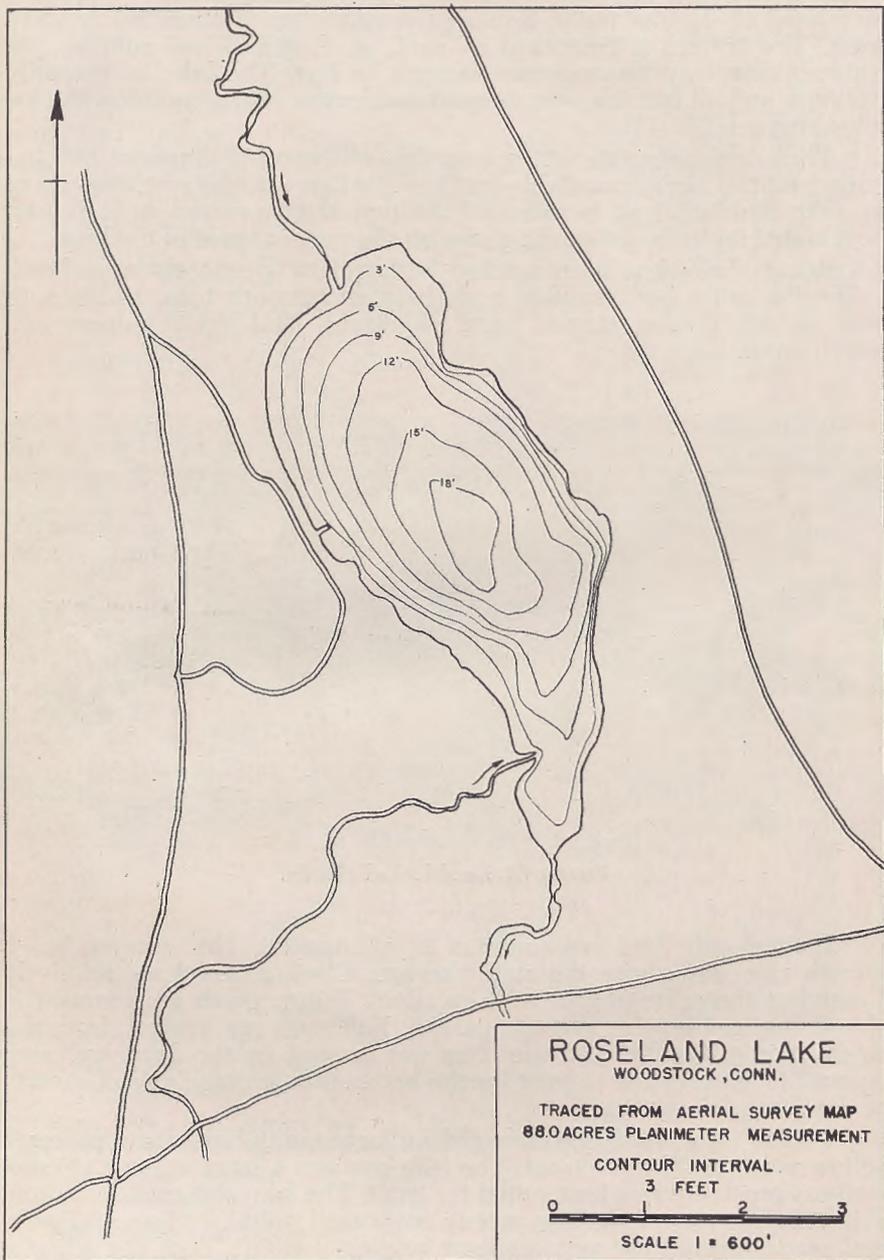


FIGURE 64. Land-locked alewife.

Largemouth bass are common in abundance. This species has a growth rate well above the state average. Chain pickerel are relatively scarce but their rate of growth is excellent. Yellow perch are common in abundance and exhibit average growth. Bullheads are present, but relatively scarce. Land-locked alewives are present in the lake and may account to some extent at least for the better-than-average rate of growth of the game fish species.

Rogers Lake should be managed for largemouth bass, chain pickerel, yellow perch and brown trout. The lake contains a large volume of cold, well-oxygenated water best suited for trout. The lake also contains a considerable quantity of shallow, weedy cover well suited for bass and pickerel management. The present light angling pressure does not warrant reclamation of this lake at this time. Until the time that angling pressure increases considerably, trout fishing can be maintained by put-and-take stocking of two-year-old brown trout.

No special regulations are needed at this time.



ROSELAND LAKE

Roseland Lake is located in Windham County in the township of Woodstock. It has a surface area of 88 acres, a maximum depth of 20 feet and an average depth of 10 feet. This lake is natural in origin and is fed by Muddy Brook, Mill Brook and surface runoff. The water in the deepest area is thermally stratified. The bottom waters are deficient in dissolved oxygen. The lake bottom is mostly of sand, gravel, rubble and swampy ooze. Submerged and emergent vegetation is scarce in most areas.

Shoreline development is light and there are only a few cottages on the shores of this lake. The shoreline is mostly wooded. Public access is provided through a boat livery. The Putnam Fish and Game Club has made its launching area and parking area available to fishermen as long as the privilege is not abused.

Roseland Lake has been stocked with smallmouth bass, yellow perch, largemouth bass, chain pickerel, bullheads, sunfish, calico bass, golden shiners and brown trout.

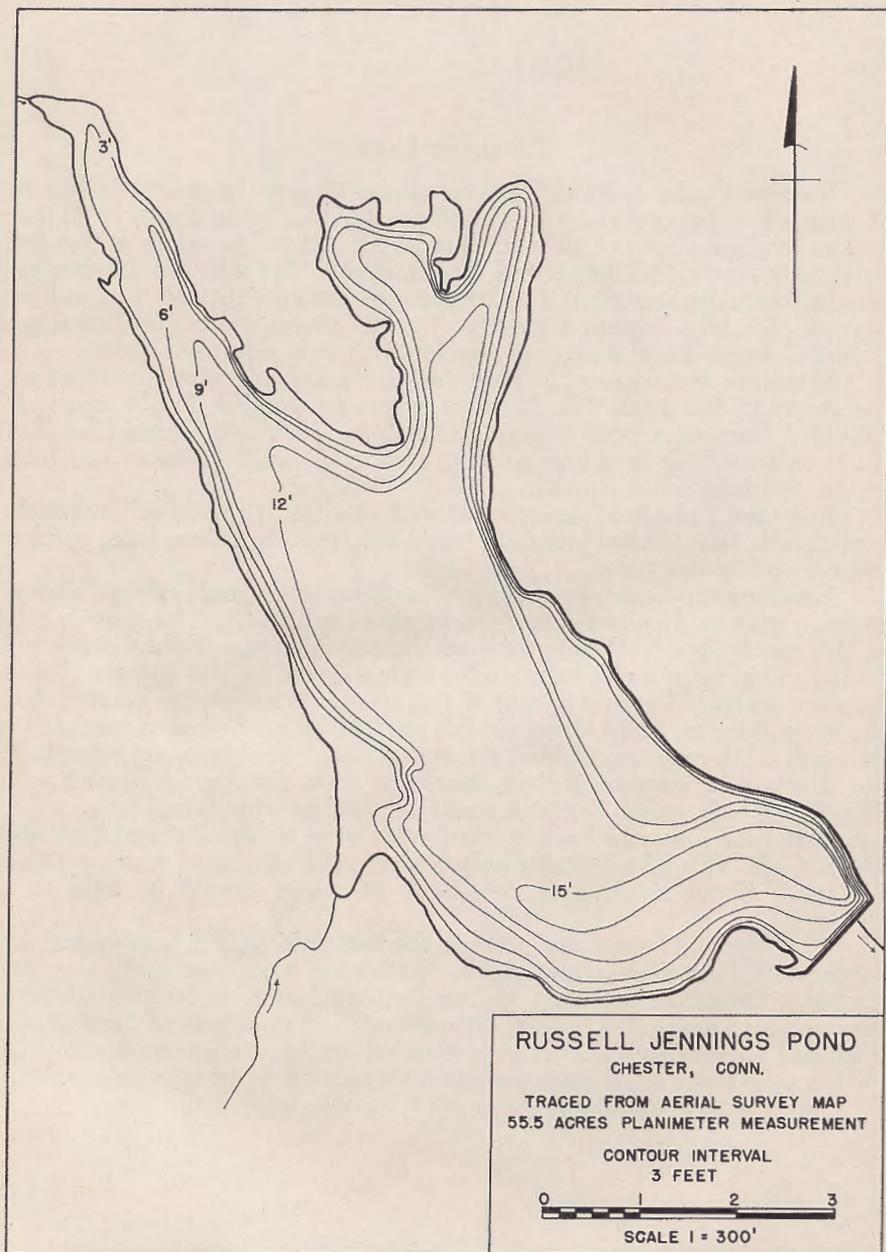
Largemouth bass are common in abundance and exhibit above-average growth. Chain pickerel are present, but scarce. The growth rate of this species is slightly greater than the state average. Yellow perch are scarce and grow at a rate equal to the state average for this species. Calico bass are scarce. The growth rate of this species is somewhat greater than the state average. Red-bellied sunfish are abundant. Common sunfish are common in abundance. Golden shiners and bridled shiners are abundant.

Fishing for largemouth bass should be good. Fishing for panfish such as yellow perch, calico bass and sunfish should provide fair fishing.

Roseland Lake has been stocked with trout by the Putnam Fish and Game Club. This lake contains only a very small volume of water suitable for trout. Trout stocking in this body of water should be held to a minimum.

This body of water can provide the best fishing if it is managed for largemouth bass and yellow perch. Sunfish are abundant and these fish probably constitute the most serious limiting factor on largemouth bass production. Local anglers, property owners and members of the Putnam Fish and Game Club can assist in controlling the sunfish populations by raking over nests or by salting nests with sodium hydroxide pellets.

No special regulations are needed for this lake at this time.



RUSSELL JENNINGS POND

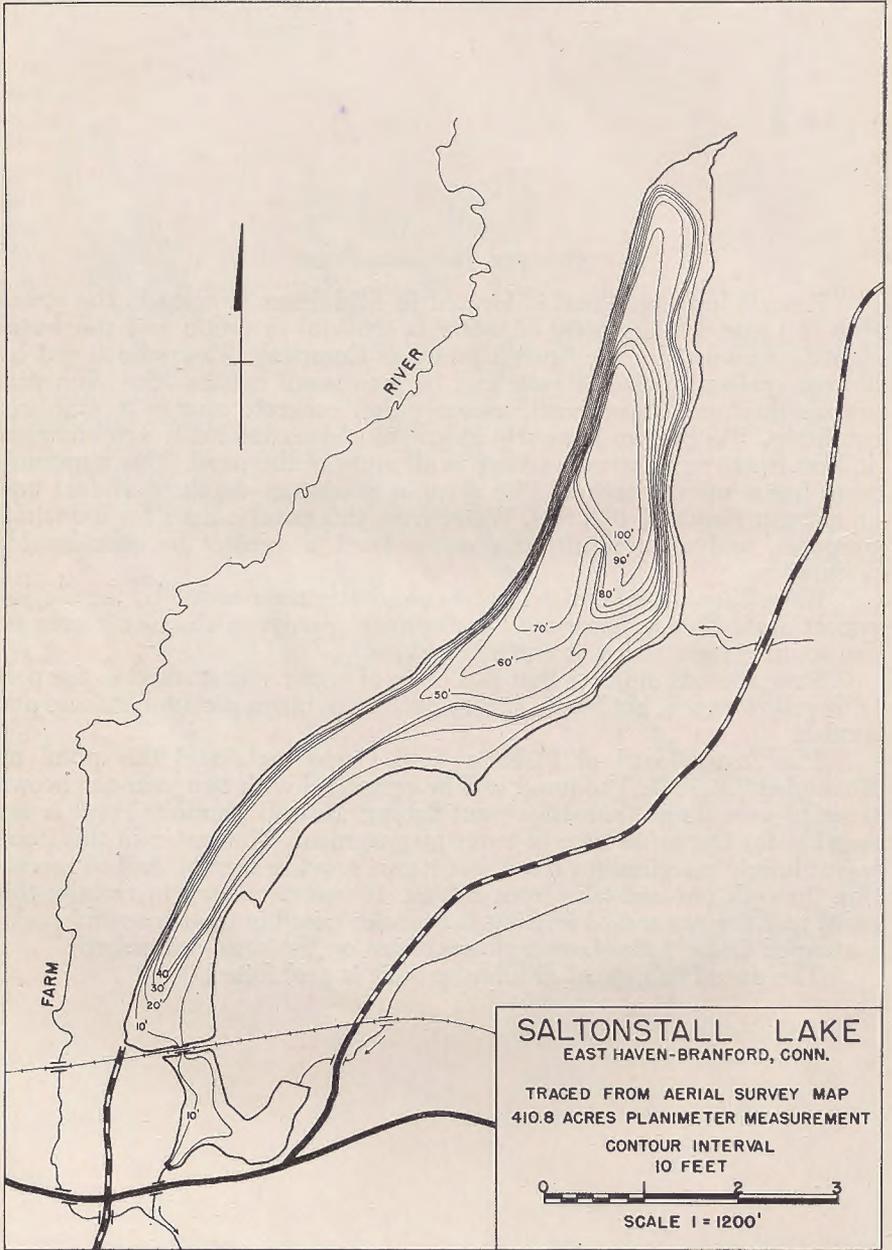
Russell Jennings Pond is located in Middlesex County in the township of Chester. This body of water is artificial in origin and the water rights are owned by the Russell Jennings Company. The pond is fed by bottom springs, surface runoff and by two small brooks. The dam that creates this pond is of earth, masonry and concrete and is in excellent condition. The bottom is mostly of gravel and coarse rubble. Submerged and emergent vegetation is scarce in all areas of the pond. This impoundment has a surface area of 55.5 acres, a maximum depth of 17 feet and an average depth of 10.3 feet. Water from this pond is used for industrial purposes, and as a result, the water level is subject to considerable fluctuation.

Russell Jennings Pond is almost completely surrounded by the Cockaponset State Forest. Shoreline development, except in the picnic area on the southwestern shore, is entirely lacking.

State records indicate that this body of water was stocked in the past with yellow perch, bullheads, largemouth bass, chain pickerel, shiners and sunfish.

The State Board of Fisheries and Game reclaimed this pond on November 18, 1957. The pond will be restocked with two-year-old brown trout to provide put-and-take trout fishing. Russell Jennings Pond is not suitable for the usual type of trout management. The water in this pond is just barely marginal for trout, but it can provide a great deal of recreation through put-and-take trout fishing. It was necessary to reclaim this pond and the watershed feeding it to make possible the successful reclamation of Cedar Lake farther downstream on the same watershed.

The use of fish, dead or alive, as bait is prohibited.



LAKE SALTONSTALL

Lake Saltonstall is a water supply reservoir for New Haven. It is located in New Haven County in the townships of East Haven and Branford. This reservoir is natural in origin—with the level raised. The dam is of earth and concrete and is in excellent condition. It is fed by bottom springs, two small brooks and by pipeline from the Farm River. The bottom in shallow areas is of sand, gravel, coarse rubble, boulders and mud. Shallow shoreline areas have dense growths of submerged vegetation. The lake is thermally stratified and the waters are abundantly supplied with dissolved oxygen at all depths. This reservoir covers an area of 410.8 acres, has a maximum depth of 108 feet and an average depth of 40.7 feet. The surface elevation of the lake is 20 feet above sea level and the bottom is 88 feet below sea level. The water is relatively clear and transparency exceeds 12 feet. The water level fluctuates moderately. The shoreline is wooded.

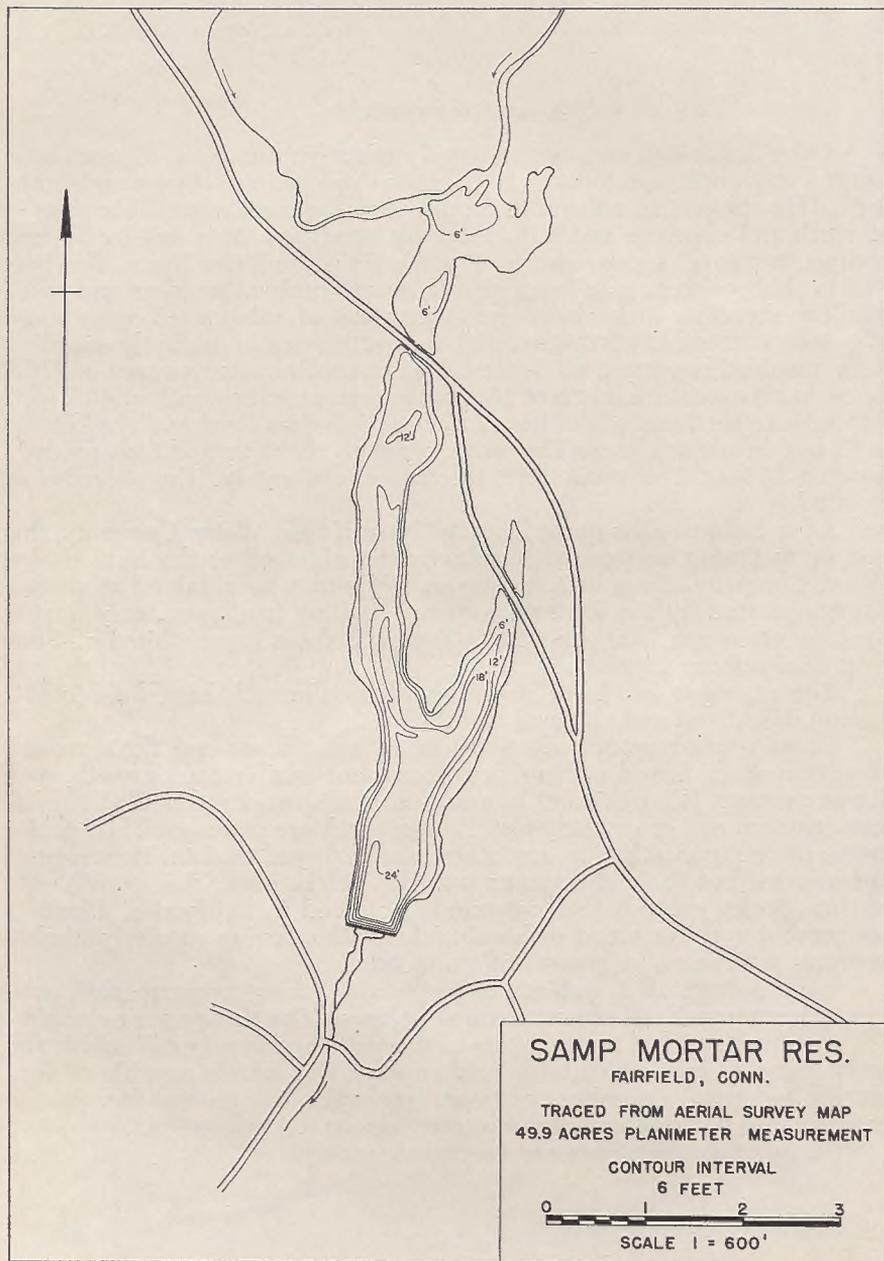
Lake Saltonstall is owned by the New Haven Water Company and is open to fishing by permit. Permits can be obtained at the New Haven Water Company offices in New Haven. Boats may be obtained at a small livery operated by the Water Company. Angling is allowed only during the hours between 7:00 a.m. and 6:00 p.m. Fishing is prohibited on Sundays and holidays.

The reservoir has been stocked with smallmouth bass, land-locked salmon, lake trout and rainbow trout.

Largemouth bass are abundant in all age classes and their growth rate is excellent. Chain pickerel are scarce, but exhibit good growth, well above average. Bluegill sunfish, common sunfish and red-bellied sunfish are abundant and grow fairly fast. Yellow perch are common. This species grows more rapidly than in any other lake surveyed to date. Brown trout are present, but their abundance was not determined. The growth rate of this species exceeds that commonly obtained in hatcheries. Alewives are present and presumed to be abundant. This forage species probably accounts for the rapid growth of game fish.

Lake Saltonstall is subject to very light fishing pressure and, as a result, has reached an almost natural balance. The three species of sunfish are abundant, but the numbers of these are apparently still within the limits imposed by the available food supply. This lake is capable of supporting far greater numbers of trout, but under the present low fishing pressure the stocking of hatchery trout cannot be warranted.

No special regulations are needed or anticipated.



SAMP MORTAR RESERVOIR

Samp Mortar Reservoir is an artificial impoundment located in Fairfield County in the township of Fairfield. The dam is of concrete and is in excellent condition. The reservoir has a surface area of 49.9 acres, a maximum depth of 26 feet and an average depth of 10.9 feet. The bottom is of sand, gravel and mud. The water is clear and transparency exceeds 10 feet. The pond is thermally stratified and the cool bottom waters are deficient in dissolved oxygen.

This reservoir is privately owned and angling is restricted to residents. Shoreline development is moderate; there are several cottages present. The shoreline is mostly wooded.

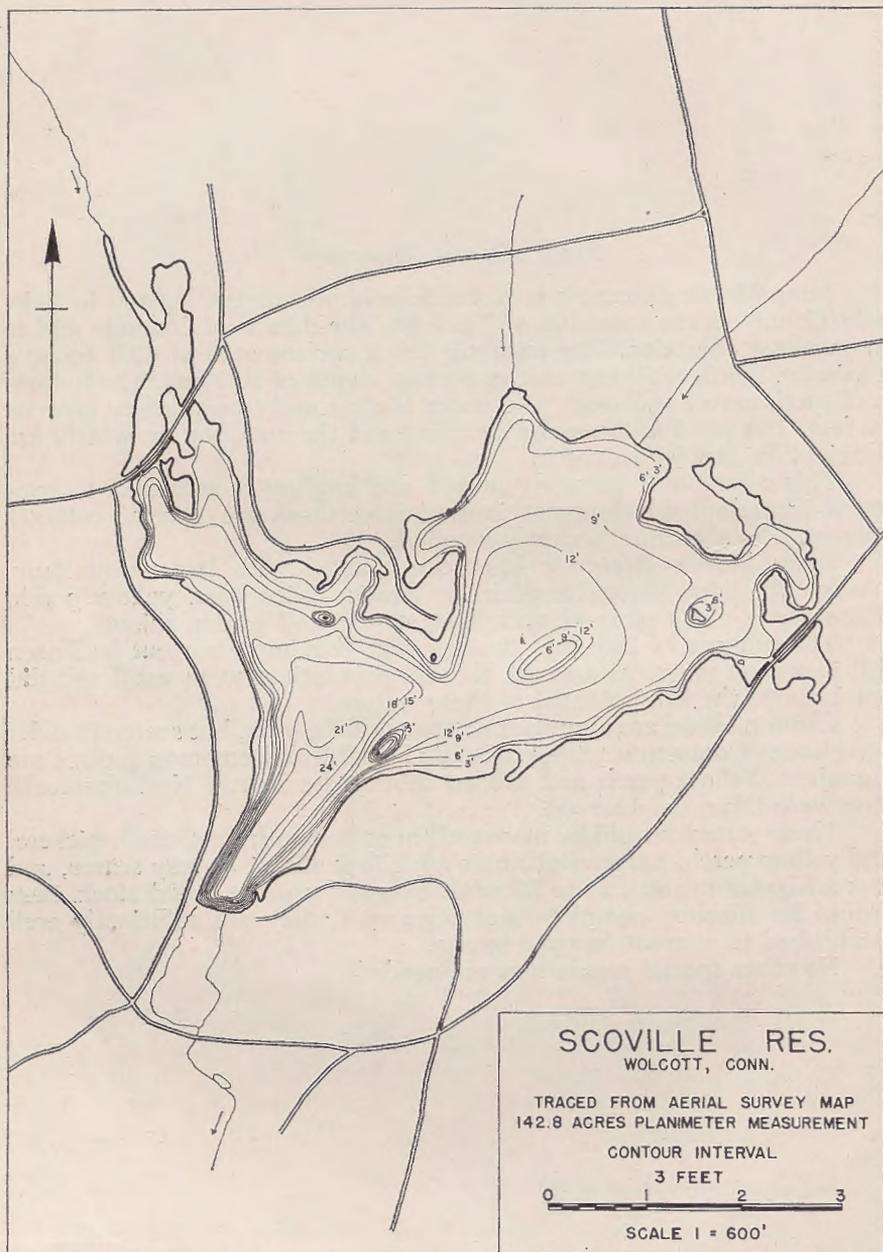
Samp Mortar Reservoir has been stocked with largemouth bass, smallmouth bass, bluegill sunfish, bullheads, calico bass, yellow perch, white perch, chain pickerel, rock bass, sunfish and golden shiners.

The summer of 1954 was the first time this impoundment had been full in several years. As a result, the fish populations were small and did not indicate the full potential of these waters.

Chain pickerel are abundant as young-of-the-year, but scarce in older age classes. Common sunfish, red-bellied sunfish and common suckers are abundant. Yellow perch and golden shiners are scarce. No largemouth bass were taken or observed.

These waters should be managed for largemouth bass, chain pickerel and yellow perch. Largemouth bass are either absent or very scarce, and it is advisable to stock 25 to 50 adult bass to furnish a brood stock. Bass should be afforded complete protection until they are sufficiently well established to warrant an open season.

No other special regulations are needed.



SCOVILLE RESERVOIR

Scoville Reservoir is owned by the Scoville Manufacturing Company of Waterbury and is used to supply water for industrial purposes. It is located in New Haven County in the township of Wolcott. This impoundment has a surface area of 142.8 acres, a maximum depth of 27 feet and an average depth of 9.1 feet. It is artificial in origin. The dam is constructed of concrete and is in excellent condition. The bottom of the impoundment is of sand, gravel and rubble. Submerged and emergent vegetation is scarce in all areas of the pond. The water is clear and the transparency normally exceeds 10 feet. The reservoir is thermally stratified and the cool waters are deficient in dissolved oxygen. The water level fluctuates severely, and at times the impoundment is drawn down as much as 12 feet.

Fishing is restricted to employees of the Scoville Manufacturing Company. There are no cottages on the shores of the reservoir. The shoreline is mostly wooded.

Scoville Reservoir has been stocked with largemouth bass, smallmouth bass, white catfish, yellow perch, chain pickerel, sunfish, brook trout, brown trout and rainbow trout.

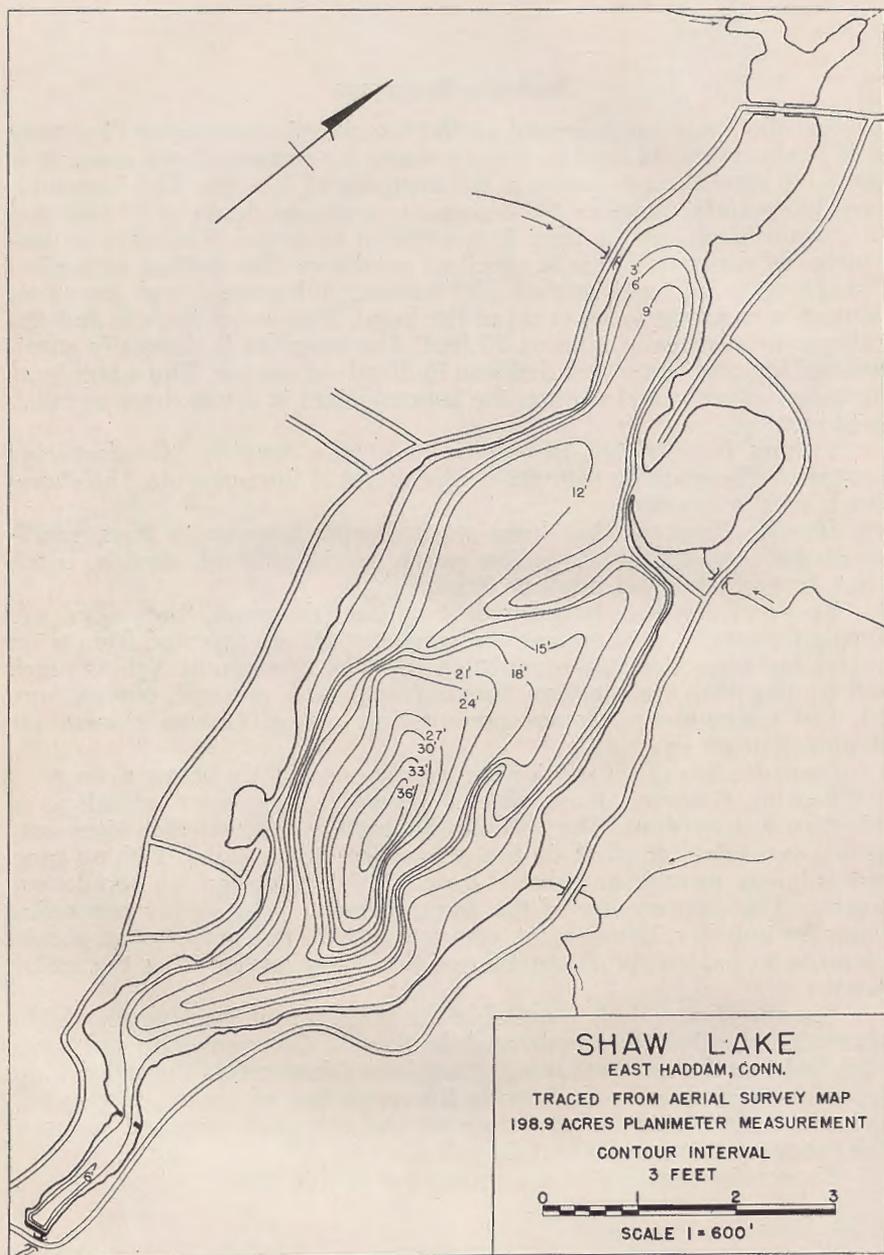
Young-of-the-year largemouth bass are abundant, but older age classes are much less abundant. Smallmouth bass are reported from these waters, but none were taken or observed by the survey unit. Yellow perch and white catfish are common. Brown trout, chain pickerel, bluegill sunfish and common sunfish are present, but scarce. Golden shiners are abundant in all age classes.

Growth rates of all species are average or slightly below average.

Scoville Reservoir is capable of producing a greater poundage of fish than it now does. The extreme fluctuation of the water level may have a great deal of effect on the production in this pond. Fishing pressure is below average, and should have little effect on the fish populations present. The primary use of this impoundment is to supply processing water for industry. Every effort, compatible with this priority use, should be made to reduce the fluctuation of the water level during the spring months.

Scoville Reservoir is unsuitable for trout. Trout stocking should be discontinued unless the members of the Scoville Company Fish and Game Club feel that the small recovery of hatchery fish warrants the rather large expenditure of club funds. Scoville Reservoir can, of course, supply put-and-take trout fishing during the spring and very early summer, but most trout that are not caught by July will die.

No special regulations are warranted at this time.



SHAW (Hayward) LAKE

Shaw Lake is located in Middlesex County in the township of East Haddam. It is natural in origin and the level has been raised. The lake has a surface area of 189.9 acres, a maximum depth of 37 feet and an average depth of 10 feet. The shoreline is mostly wooded. Submerged and emergent vegetation is abundant, but is confined mostly to the shoal areas. The water is stained a dark, tea color and transparency is reduced to approximately five feet. The lake is thermally stratified. The deeper water that is cool enough for trout is devoid of dissolved oxygen.

There are numerous cottages on the shores of this impoundment. Public access is provided through a state-owned right-of-way, boat launching area and parking area. The use of motor-driven craft is prohibited.

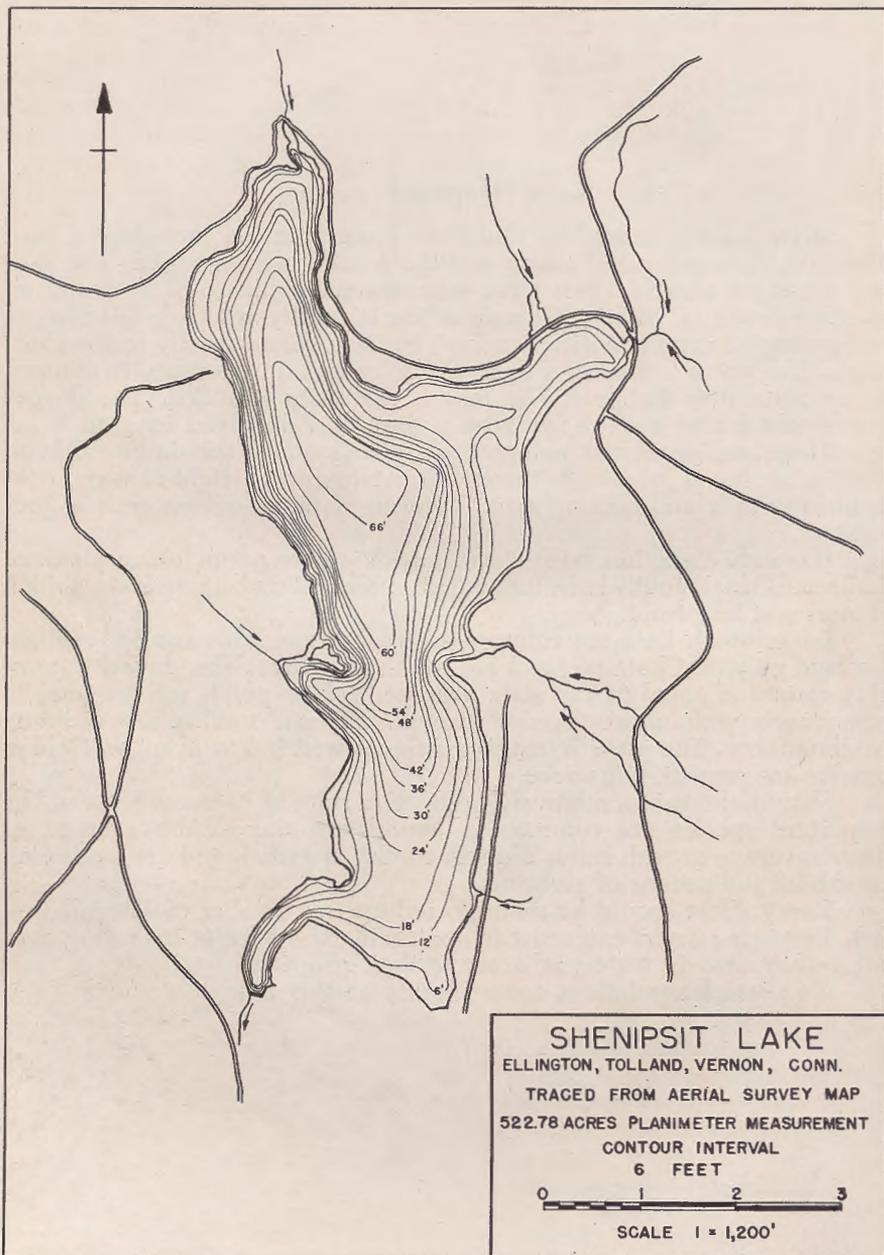
Hayward Lake has been stocked with yellow perch, chain pickerel, bullheads, smallmouth bass, largemouth bass, calico bass, sunfish, golden shiners and lake trout.

Largemouth bass are common in abundance. This species exhibits average growth. Chain pickerel are relatively scarce. The growth rate of this species is equal to the state average. Yellow perch are common in abundance with above-average growth. Bluegill sunfish are common in abundance. The growth of this species is well below average. Golden shiners are present, but scarce.

Shaw Lake is in a relatively productive state of balance. Most of the important species are common in abundance and exhibit average or above-average growth rates. Bluegill sunfish are small and are beginning to exhibit indications of stunting.

Every effort should be made to reduce the number of bluegill sunfish. Property owners can assist in controlling this species by raking over all sunfish nests in waters adjacent to their property.

No special regulations are necessary at this time.



SHENIPSIT LAKE

Shenipsit Lake is located in Tolland County in the townships of Vernon, Ellington and Tolland. It is natural in origin, but the level has been raised several feet to create greater water-holding capacity. Water from this lake is used to supply power and process water for mills in Rockville and is also used to supply drinking water for the city of Rockville. The resulting impoundment has a surface area of 522.8 acres, a maximum depth of 68 feet and an average depth of 30 feet. The bottom is composed of sand, gravel, boulders, ledge and mud. Submerged and emergent vegetation is scarce in all areas of the lake. The water is clear and the transparency exceeds 10 feet. This lake is thermally stratified, and all but the deepest waters are well supplied with dissolved oxygen.

Shoreline development is light, but there are a few cottages on the well-wooded shores of this lake. Public fishing is allowed in this impoundment, but there are no public facilities available.

Shenipsit Lake has been stocked in the past with land-locked salmon, rainbow trout, lake trout, smallmouth bass, catfish, yellow perch, sunfish, largemouth bass, smelt, chain pickerel, calico bass, bullheads and shiners.

Brown trout, smelt, yellow perch, chain pickerel, largemouth bass, smallmouth bass, bluegill sunfish, common sunfish, bullheads, golden shiners and fallfish are present in this lake. All species are scarce and, in general, the growth rates are below the state averages.



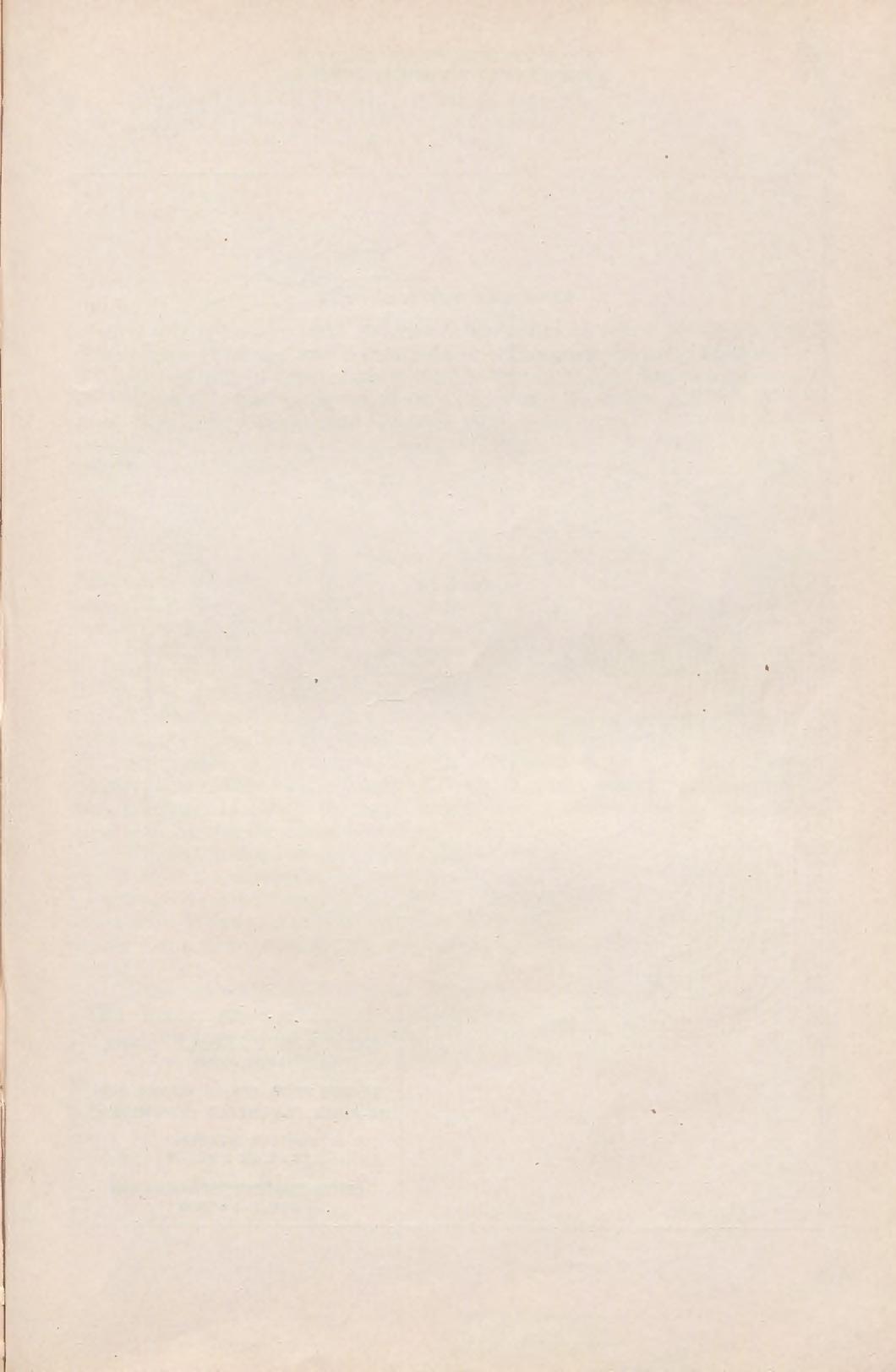
FIGURE 65. Electro-fishing, sampling brown trout reproduction, Meacham's Brook, Tolland.

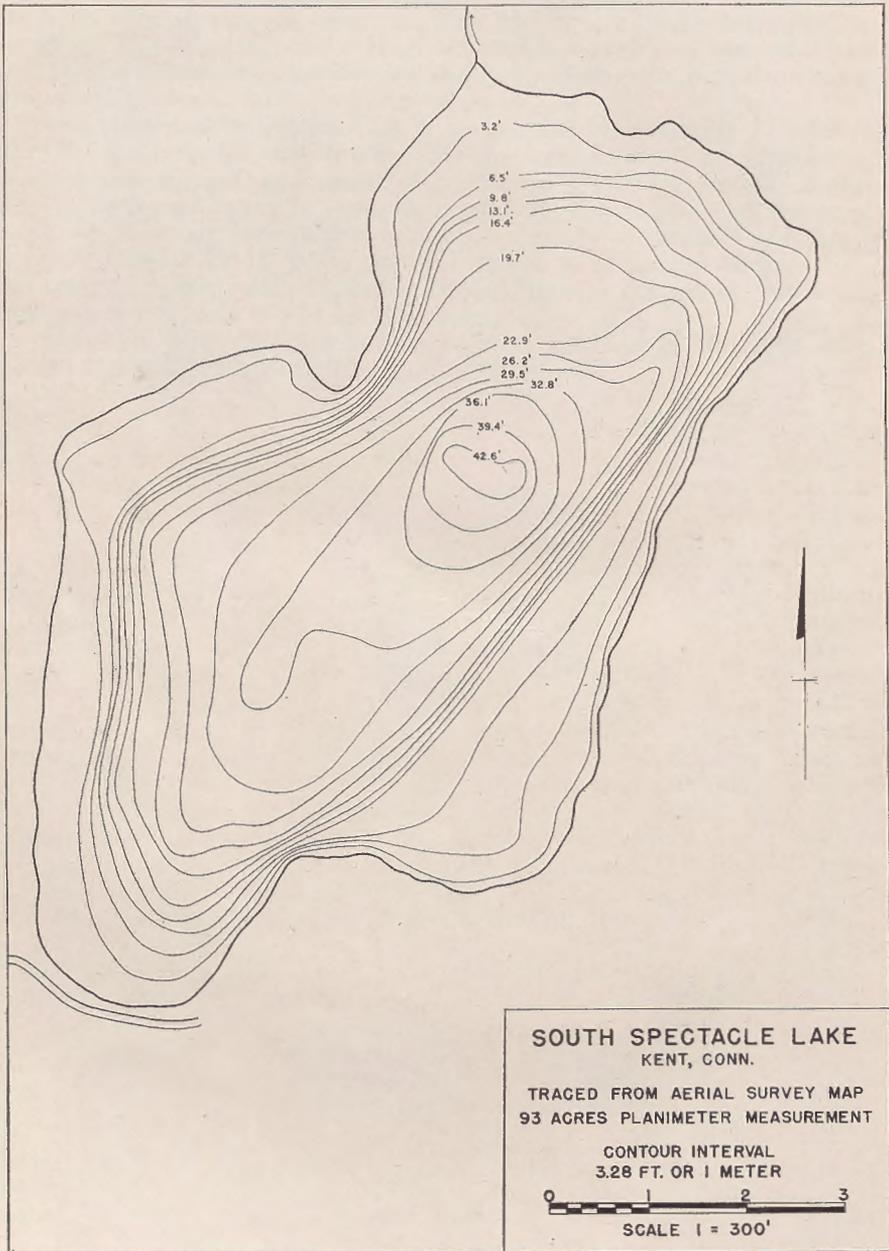
A few skillful anglers that are well acquainted with this lake take occasional trophy-sized largemouth bass and brown trout. Most anglers have below-average success in this lake.

Shenipsit Lake contains a large volume of cold, well-oxygenated water best suited for trout management. This impoundment could serve the greatest number of people and more fully utilize its multiple-use purposes if it could be reclaimed and then restocked with trout. Rotenone has been used to reclaim reservoirs that supply drinking water with no ill effects. In one case in New England, water was drawn from the lake to supply a tuberculosis sanitorium and even during the actual reclamation work there was no curtailment of water use.

If reclamation is not feasible, it would still be desirable to remove all of the fish from the inlet brook. This brook contains a large population of grass pickerel and, as a result of predation by this species, the reproduction of brown trout is seriously curtailed. Reclamation of the inlet brook at five-year intervals would be necessary to control the grass pickerel population. In years that the brook is reclaimed it would be necessary to restock with fingerling brown trout to replace the naturally reproduced fish that would be destroyed.

Some stocking of adult brown trout is justified in this lake even though it is subjected to limited fishing pressure.





SOUTH SPECTACLE LAKE

South Spectacle Lake is located just south of North Spectacle Lake, and waters from the south lake feed into the north lake. South Spectacle Lake is natural in origin and is mainly spring fed. It has a surface area of 93 acres, a maximum depth of 44 feet and an average depth of 19.1 feet. Submerged vegetation is scarce in all areas of the lake. Encroaching semi-aquatic shrubs and emergent vegetation are abundant along the northern and northwestern shores. The bottom in the shoal areas is mostly of sand and gravel. In the deeper areas, the bottom is of mud and swampy ooze. Bottom food production is low. The lake is thermally stratified and the deepest waters are deficient in dissolved oxygen.

There is a state-owned walk-in right-of-way at the northern end of the lake. This property does not lend itself to development for automobile use. Shoreline development is low. There are a few cottages and one large camp on the eastern and southeastern shores.

South Spectacle Lake has been stocked with land-locked salmon, smallmouth bass, lake trout, chain pickerel, yellow perch, calico bass, bullheads, golden shiners and sunfish.

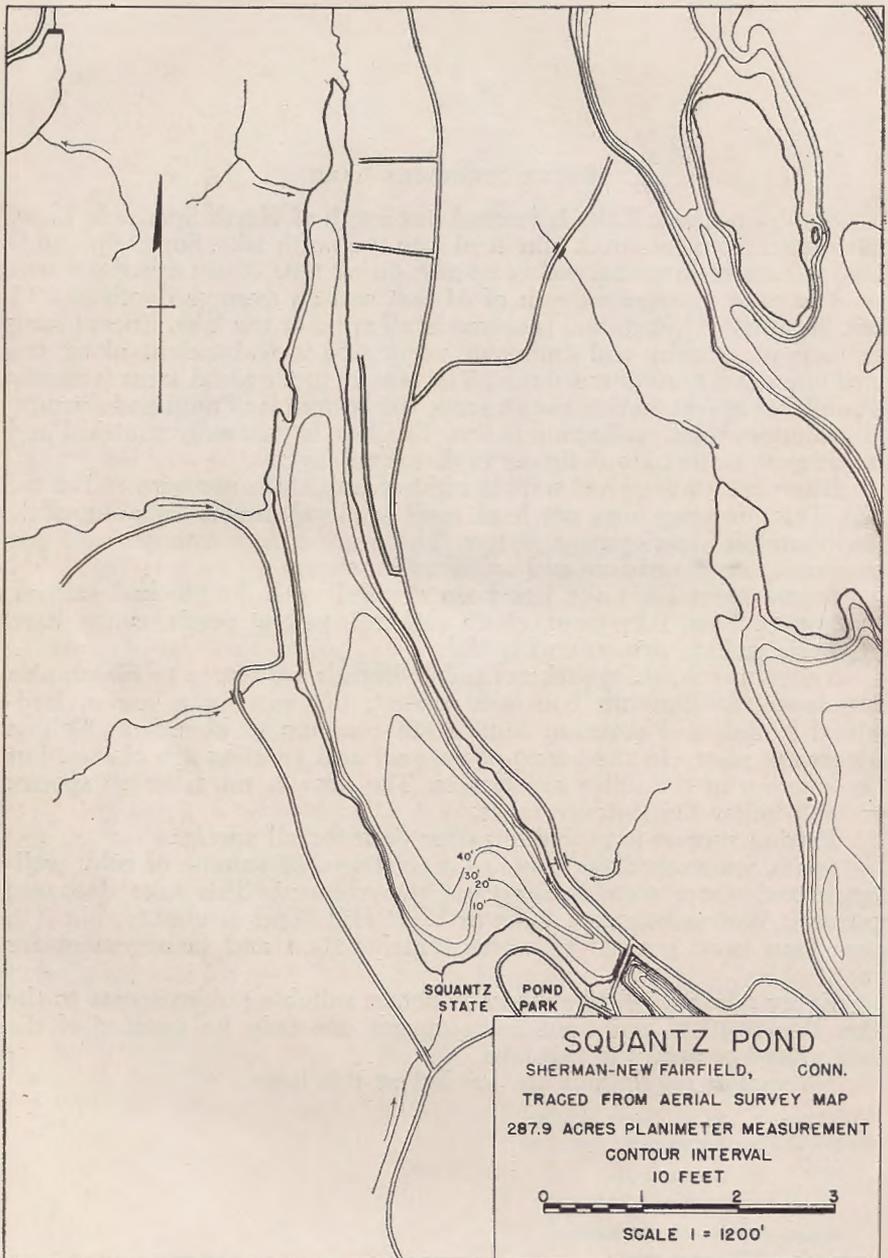
Yellow perch, chain pickerel and bullheads are scarce to common in abundance. Smallmouth bass are present, but extremely scarce. Red-bellied sunfish and common sunfish are common to abundant. Golden shiners are scarce in the young-of-the-year and yearling age classes, but are common in the older age classes. The growth rates for all species are well below the state averages.

Fishing success is probably rather poor for all species.

South Spectacle Lake contains a considerable volume of cold, well-oxygenated water suitable for trout management. This lake does not approach Wononskopomuc Lake or West Hill Pond in quality, but it is more than good enough to warrant reclamation and management for trout.

Every effort should be made to obtain suitable public access to the lake. Reclamation and trout management can only be justified if the public has free access to this lake.

No special regulations are needed at this time.



SQUANTZ POND

Squantz Pond is part of Candlewood Lake. It is separated from the main body of the lake by Route 39. This small section of Candlewood Lake was natural in origin and its level was raised when the main lake was flooded. It is fed by small brooks and water backed up from the main lake. Squantz Pond is located in the townships of New Fairfield and Sherman. It has a surface area of 288 acres, a maximum depth of 47 feet and an average depth of 22.9 feet. The bottom in shoreline areas is of rocks, ledge and coarse gravel. In the shallow upper end of the basin, the bottom is mostly of mud and silt. There is a considerable quantity of submerged and emergent vegetation in the shallows, particularly in the upper end near the inlet of Steigs Brook. The pond is thermally stratified and, during the summer, the waters below 25 feet are deficient in dissolved oxygen.

Picnic, swimming and boat launching facilities are available in Squantz Pond State Park at the southwestern end of the pond. There are numerous cottages present. Boats are available for rental at one livery. The shoreline is mostly wooded.

Squantz Pond was studied separately from Candlewood Lake because it differs in physical and chemical qualities from the main lake. In addition, the composition of the fish population appears to be unlike that found in Candlewood.

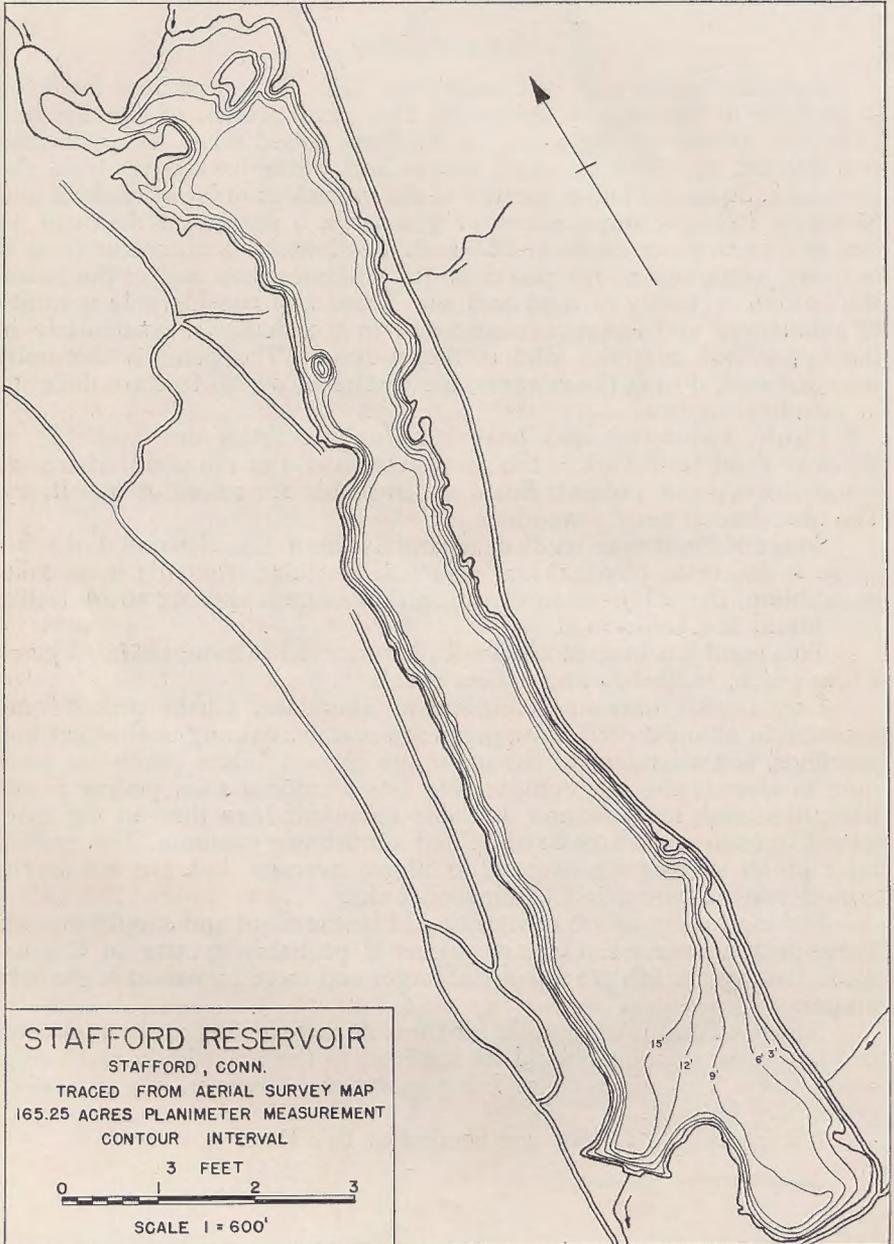
This pond has been stocked with land-locked salmon, chain pickerel, white perch, bullheads and yellow perch.

Largemouth bass are common to abundant. Chain pickerel are common in abundance. Yellow perch are scarce as young-of-the-year and yearlings, but abundant in the older age classes. White perch are common in abundance, but considerably less abundant than yellow perch. Bluegill sunfish are common, but less abundant here than in the main lake. Common sunfish and red-bellied sunfish are common. The growth rates of all species are average or above average, but are below the growth rates attained in Candlewood Lake.

Fishing for the above species should be excellent and should provide above-average success. Fishing success is probably greater in Candlewood Lake as the fish are somewhat larger and more abundant in the lake proper.

Squantz Pond is unsuitable for trout during the hot summer months, and any trout stocking should be confined to the main body of Candlewood Lake. The warm-water fish populations, however, are in a good productive balance.

No special regulations are needed at this time.



STAFFORD RESERVOIR

Stafford Reservoir is located in Tolland County in the township of Stafford. This artificial impoundment has a surface area of 165.2 acres, a maximum depth of 16 feet and an average depth of 9.5 feet. It was formed by the construction of a stone and masonry dam across Furnace Brook. The reservoir is fed by three small brooks and surface runoff. The water level fluctuates considerably due to drawdown for industrial purposes. The bottom is of sand, coarse rubble, boulders and mud. Submerged and emergent vegetation is scarce in all areas. The waters of this pond are completely mixed and thermal stratification does not take place. This body of water is very infertile.

Most of the shoreline is well wooded and there are numerous cottages present. This impoundment is open to the public for fishing, but there are no facilities available for public use.

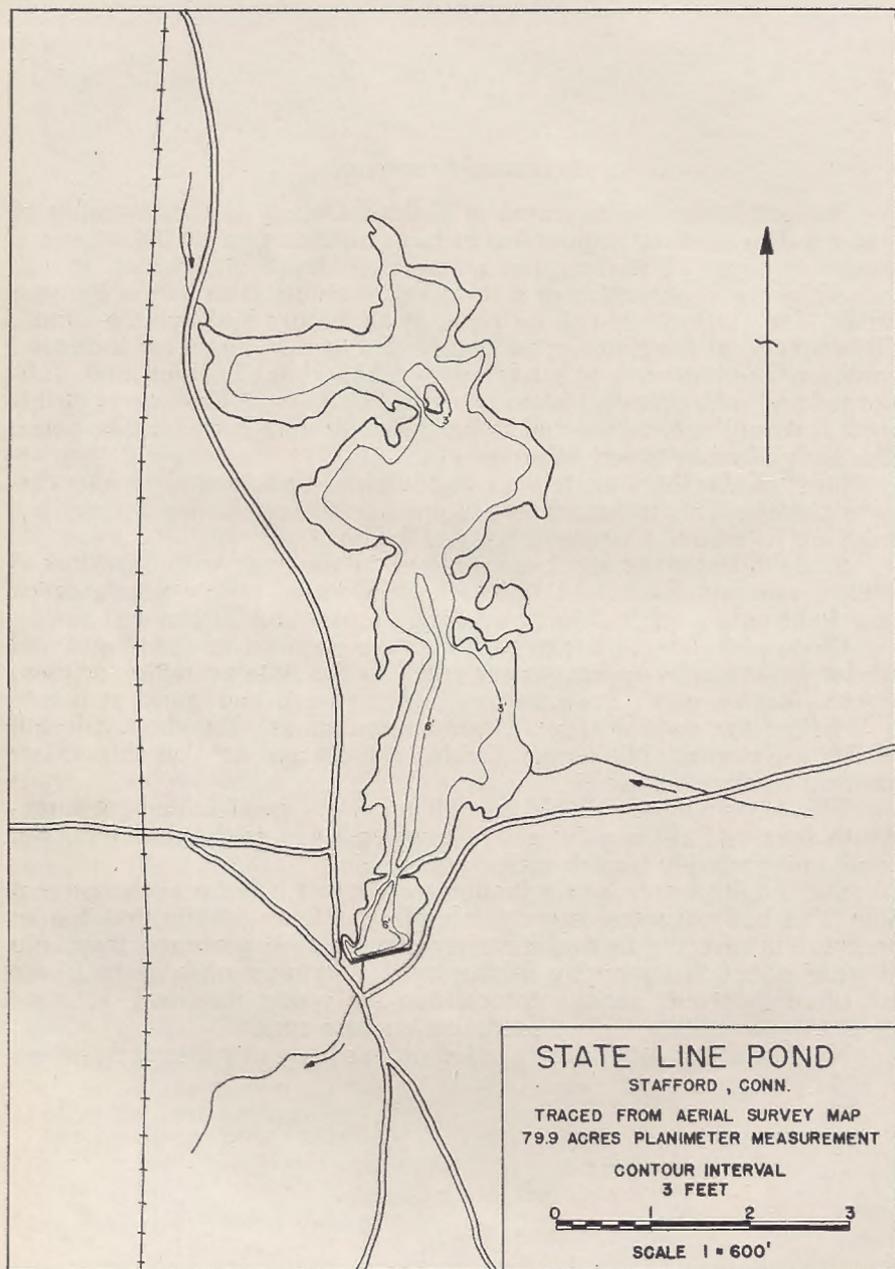
Stafford Reservoir has been stocked in the past with land-locked salmon, rainbow trout, lake trout, chain pickerel, yellow perch, calico bass, bullheads, sunfish, shiners, smallmouth bass and largemouth bass.

Chain pickerel and largemouth bass are common in abundance and exhibit growth rates approximately equal to the state averages for these species. Yellow perch are common in abundance and grow at a rate well below the state average. Common sunfish are abundant. Bluegill sunfish are present, but scarce. Golden shiners and bridled shiners are common in abundance.

This impoundment should furnish relatively good fishing for largemouth bass and chain pickerel. Yellow perch are fairly abundant, but small, and probably furnish rather poor fishing.

Stafford Reservoir is in a productive state of balance at the present time. This body of water is quite infertile and there is little that can be done to improve the fishing. Property owners and sportsmen may help to some extent in improving fishing by destroying sunfish nests. These fish often constitute serious competition for young bass and, in some cases, they constitute serious predation on bass eggs.

No special regulations are needed on this body of water at this time.



STATE LINE POND

State Line Pond is a shallow, artificial impoundment in the township of Stafford in Tolland County. It is privately owned and has a surface area of 79.9 acres. The pond has a maximum depth of 8 feet and an average depth of 3.1 feet. It is impounded by a low earthen and masonry dam across the Middle River. The pond bottom is composed mostly of sand and mud. Submerged and emergent vegetation is very abundant in all areas of the pond. The surrounding land is almost entirely wooded. Thermal stratification does not take place. The waters of this pond are completely mixed.

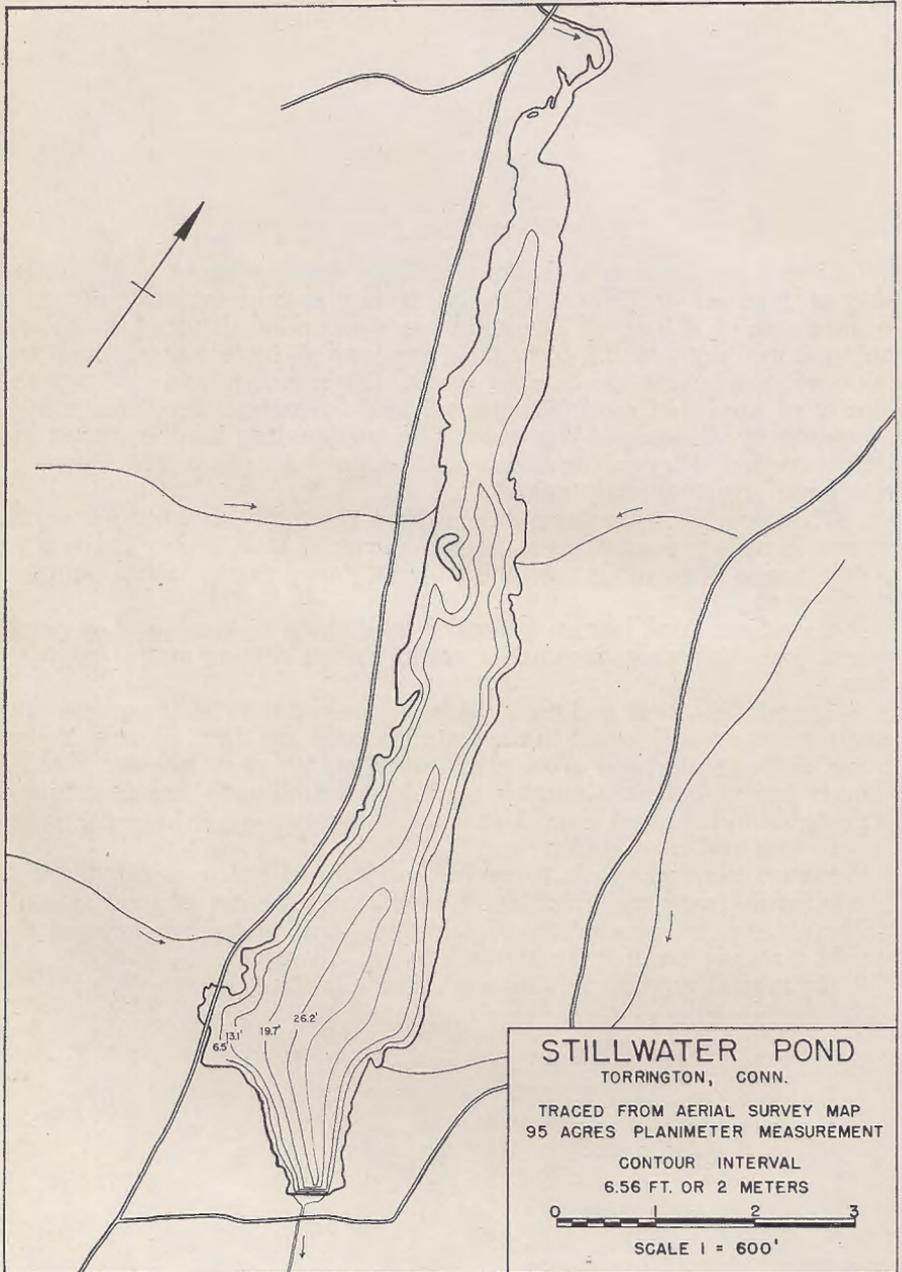
This pond is open to public fishing through the courtesy of the owner. Boats are available for hire at one small boat livery. There is no public access point other than the State Highway that parallels the pond on the west.

State Line Pond has been stocked with chain pickerel, yellow perch, calico bass, bullheads, common sunfish, golden shiners and largemouth bass.

Largemouth bass and chain pickerel are common in abundance and grow at rates nearly equal to the state averages for these species. Yellow perch are common and grow at a rate slightly below average. Golden shiners are abundant. Common sunfish and bullheads are common in abundance. This pond should provide above-average fishing for largemouth bass and chain pickerel.

State Line Pond is in a productive state of balance. All desirable species of fish are quite abundant. Growth rates are not as good as could be hoped for, but are satisfactory. A reduction in the numbers of fish would certainly result in an increase in growth rates.

No special regulations are needed at this time.



STILLWATER POND

Stillwater Pond is located in Litchfield County in the township of Torrington. It is very close to metropolitan Torrington, and is subject to heavy fishing pressure. The pond has a surface area of 95 acres, a maximum depth of 26 feet and an average depth of 11.7 feet. This impoundment is artificial in origin, and was formed by the construction of a concrete and masonry dam across the west branch of the Naugatuck River. The bottom in shallow shoreline areas is of gravel, rubble and rocks. In the deeper areas, the bottom is of mud and silt. There is considerable submerged and emergent vegetation in the shallows. Elsewhere such vegetation is scarce. The fertility level and bottom food production is low. Water from this impoundment is used for industrial processing and the water level is subject to considerable fluctuation. The shoreline is mostly wooded.

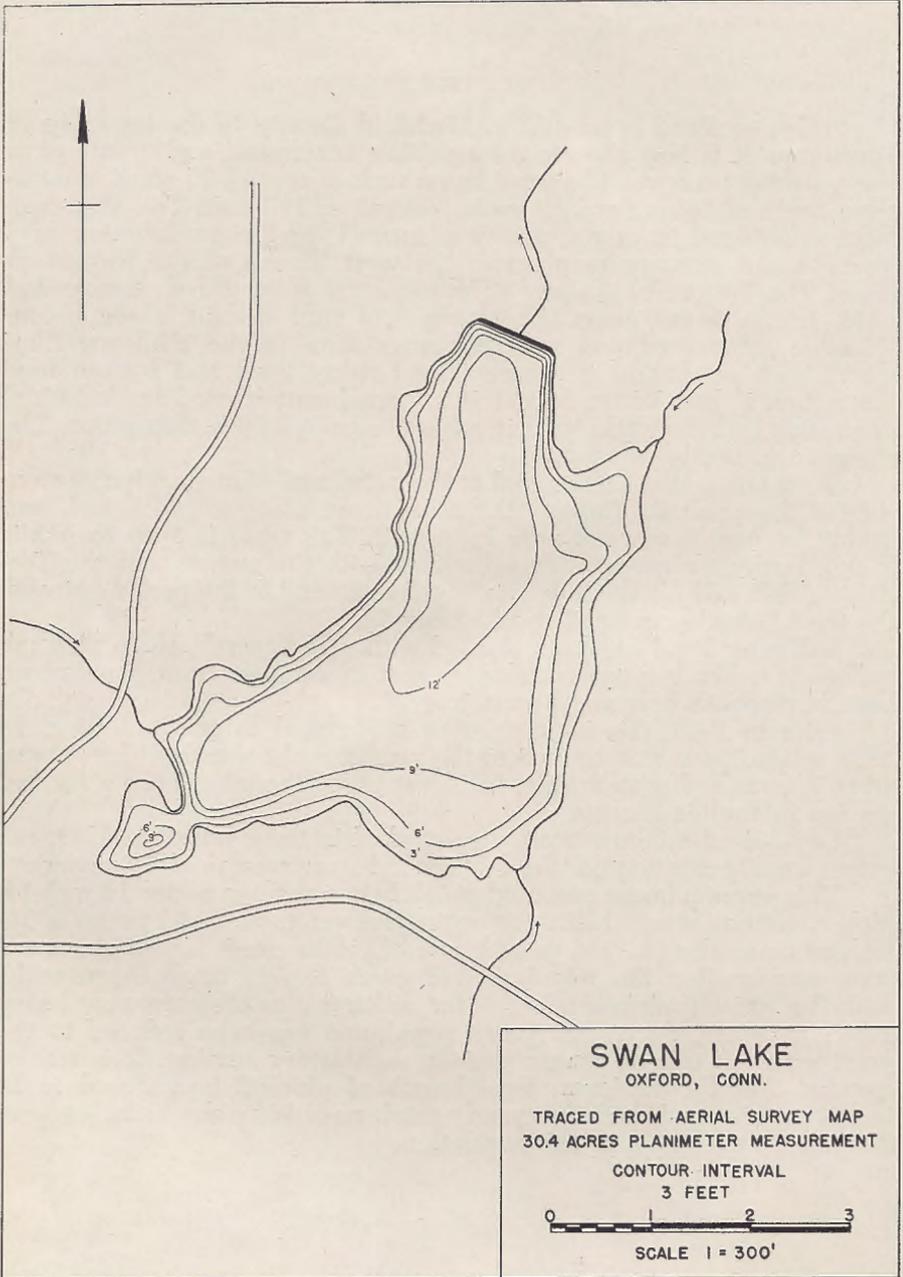
Boats are available for rental at the patrolman's home on the western side of the pond on Route 72. Fishing from shore is prohibited, and fishing by boat is allowed only by permit. This pond is open to public fishing through a cooperative agreement with the owners and the Torrington Fish and Game Club. Angling is restricted to the period between the third Saturday in April and October 31.

Stillwater Pond has been stocked with yellow perch, chain pickerel, bullheads, calico bass, golden shiners, sunfish, rainbow trout, smallmouth bass, largemouth bass and brown trout.

Prior to 1933, this impoundment was closed to public fishing. In 1933, when it was first opened to the public, and for a few years thereafter, it furnished good fishing. In recent years, there has been a marked decline in angling success.

Legal-sized rainbow trout were stocked in these waters in 1938, but only a small percentage of the fish stocked were recovered by anglers.

This impoundment provided much better angling under 12 and 14-inch minimum length limits for chain pickerel than it did under a 16-inch minimum length. The growth rate of yellow perch is well above the state average, but the population of perch is very small. Apparently, with the 16-inch minimum length for pickerel plus the extremely heavy fishing pressure, the yellow perch population has been reduced to the point where it can no longer provide satisfactory angling. It is recommended that the minimum legal length of pickerel be reduced to 12 inches in this pond, and that yearly catch records be checked closely to determine the success of this regulation.



SWAN LAKE (Moose Hill Pond)

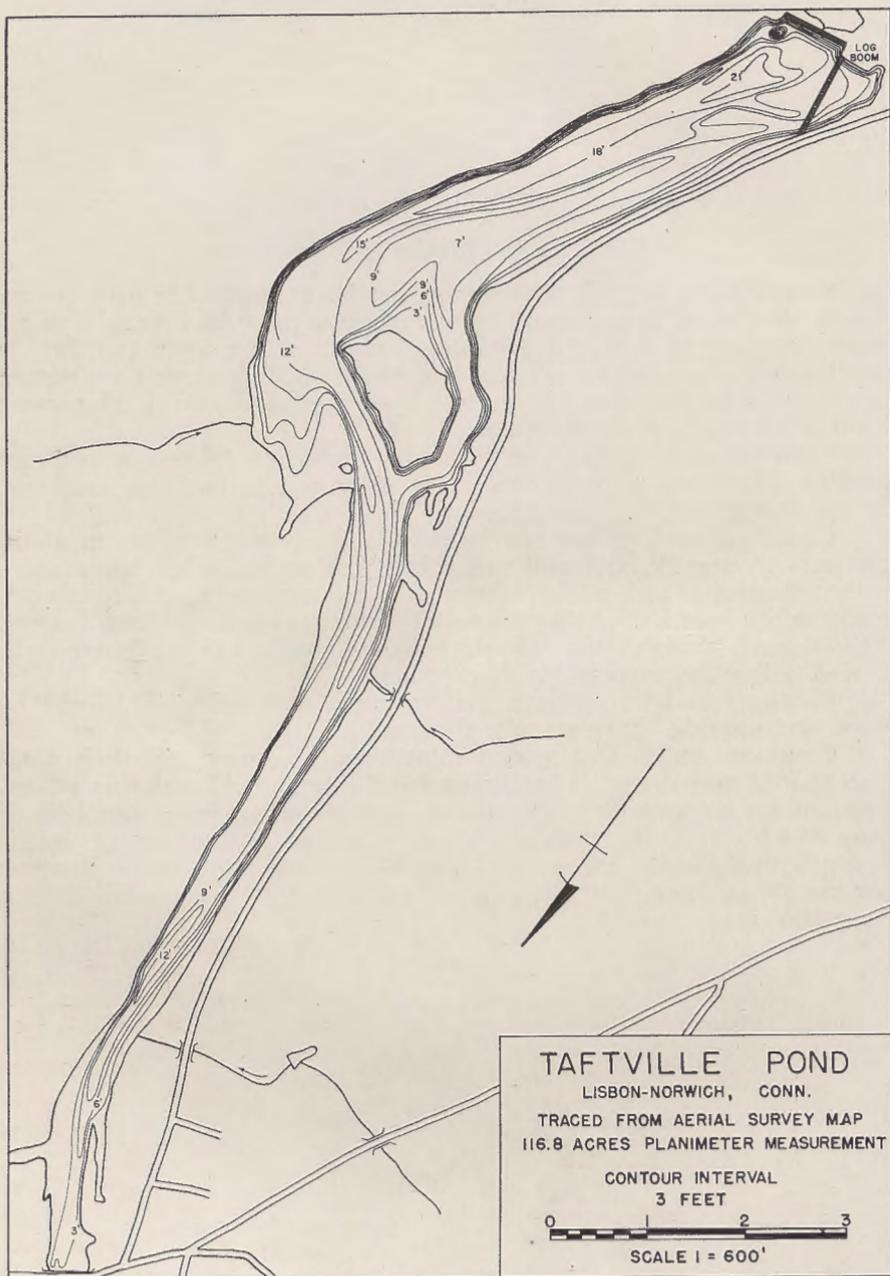
Swan Lake is a small artificial impoundment located in New Haven County in Oxford township. It has a surface area of 30.4 acres, a maximum depth of 13 feet and an average depth of 8.1 feet. The dam is constructed of masonry and is in fair condition. Submerged vegetation is abundant in all areas. The bottom is of mud and gravel. The water level is subject to slight fluctuation.

Shoreline development is high and there are numerous cottages present. There are no boat liveryies or other public facilities available. Motor-driven boats are prohibited.

Chain pickerel, yellow perch and bullheads are common in abundance. Largemouth bass and calico bass are scarce in all age classes. Common sunfish and golden shiners are abundant in all age classes. Largemouth bass and chain pickerel exhibit above-average growth rates. Yellow perch growth is equal to the state average and calico bass growth is well below the average for this species.

Fishing for chain pickerel, yellow perch and bullheads should be good and provide above-average success.

Common sunfish and golden shiners are abundant and their numbers should be reduced. A minimum legal length of 14 inches is recommended for largemouth bass. This should result in greater numbers of bass which should, through predation, utilize large numbers of sunfish and golden shiners as forage. This regulation should not remain in effect for more than three years unless a recheck of the fish population justifies its continuance.



TAFTVILLE POND

Taftville Pond is located in New London County in the townships of Lisbon and Norwich. It is artificial in origin and was formed by impounding the Shetucket River. The dam is of concrete and is in good condition. This impoundment has a surface area of 116.8 acres, a maximum depth of 21 feet and an average depth of 8.5 feet. Submerged and emergent vegetation is scarce in all areas of the pond. The bottom is of sand, gravel, rubble and mud. Considerable industrial and domestic pollution enters the reservoir from the Shetucket River. A dense algal bloom reduces transparency to less than three feet. The waters of this impoundment are completely mixed from top to bottom and thermal stratification does not take place.

The shoreline is partly wooded. Shoreline development is light, with only a few cottages present. There are no boat liveries, public rights-of-way or other facilities available for public use.

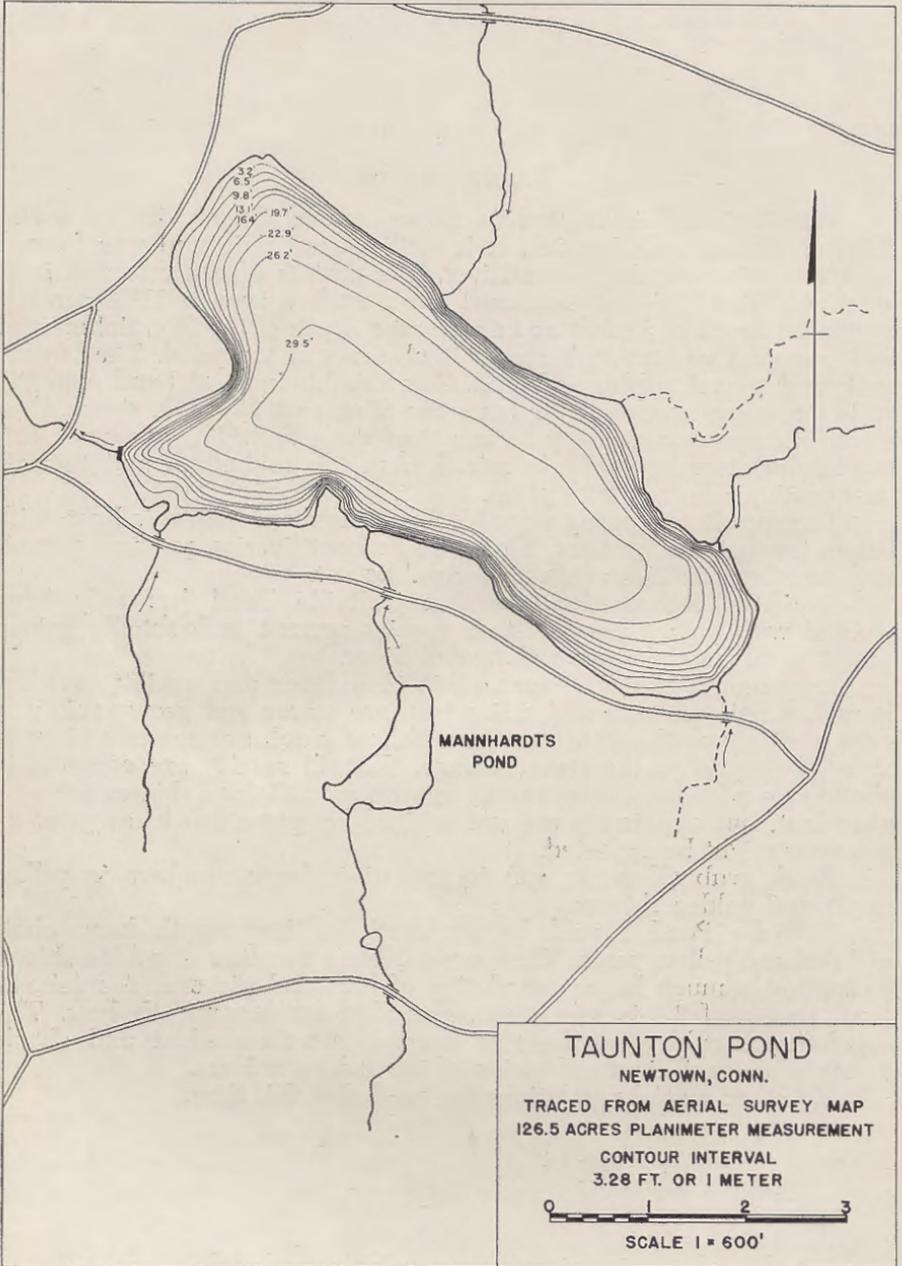
Available records indicate that Taftville Pond has only been stocked with yellow perch. Other species present undoubtedly gained access to the pond from the Shetucket River.

Largemouth bass are common in abundance and exhibit excellent growth. Chain pickerel and calico bass are scarce and grow rapidly at rates well above the state averages. Yellow perch are scarce and grow at a rate equal to the state average. Bluegill sunfish are common in abundance with an above-average growth rate. Golden shiners are very abundant, but apparently are not utilized by game fish to as great an extent as might be expected.

Black grub (*Neascus, sp.*) is present in large numbers in yellow perch and golden shiners.

Taftville Pond should be managed for largemouth bass, chain pickerel and yellow perch. There are sufficient numbers of golden shiners to support a much larger population of bass and pickerel. A minimum legal length of 14 inches is recommended for largemouth bass. This regulation should allow bass to become more abundant and should result in more efficient utilization of the golden shiners.

No other special regulations are needed at this time.



TAUNTON POND

Taunton Pond is natural in origin, with the level raised slightly by a low concrete dam. It is located in Fairfield County in the township of Newtown and is used to supply drinking water for Newtown. This 126-acre pond has a maximum depth of 29.5 feet and an average depth of 21.5 feet. Most of the water that feeds this reservoir comes from bottom springs. The bottom is of boulders, rubble and gravel. Submerged and emergent vegetation is scarce in all areas of the pond. The water is very clear and transparency exceeds 15 feet. The pond is thermally stratified and the deeper waters are deficient in dissolved oxygen. Plankton and bottom food production are low. The shoreline is mostly wooded.

Shoreline development is low; there are a few cottages present. Public fishing is prohibited. Limited fishing is allowed by permit of the Newtown Water Company, and boats are available for rental from one livery. The status of fishing in these waters has varied from time to time. At one time, public fishing was allowed and a permit was unnecessary.

Taunton Pond has been stocked with land-locked salmon, small-mouth bass, white perch, yellow perch, salmon, chain pickerel, bullheads, largemouth bass, lake trout, calico bass, shiners, rainbow trout and brown trout. Most of the stocking was done by the Board during the time this pond was open to public fishing. Some of the stocking has been done by the Newtown Fish and Game Club.

Largemouth bass, yellow perch, common sunfish, bluegill sunfish and red-bellied sunfish are common in abundance. Chain pickerel and bullheads are scarce. Smallmouth bass are present, but very scarce. White perch are abundant. Brown trout are present, but scarce. Carp are present, but their abundance was not determined. Largemouth bass, chain pickerel, common sunfish, bluegill sunfish and red-bellied sunfish exhibit average growth rates. White perch growth is considerably below average, but much better than in 1951. Yellow perch growth is excellent and faster than in 1951.

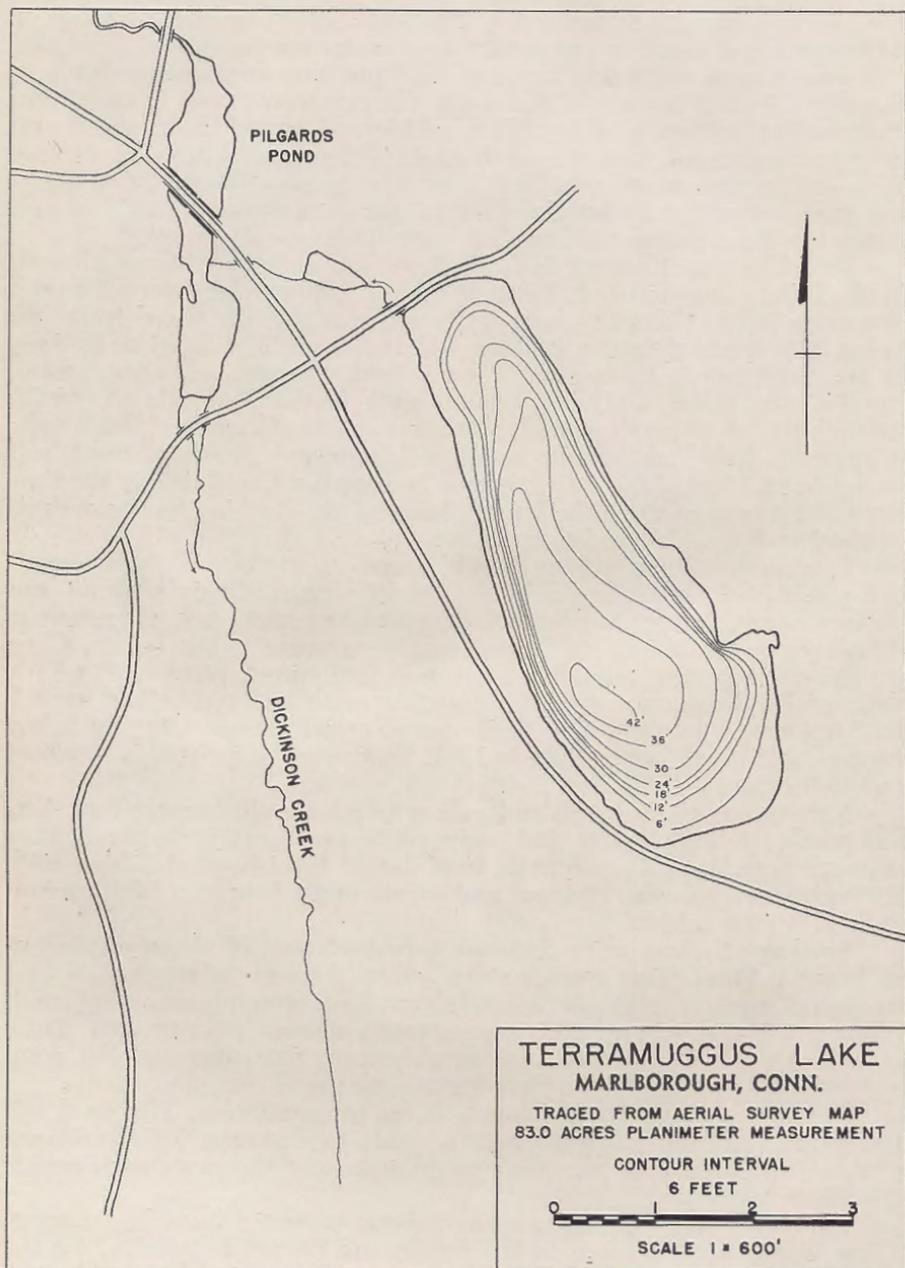
Fishing for white perch and yellow perch should be excellent. Yellow perch are large in size and while white perch are fairly small, they are very numerous. Largemouth bass should furnish good fishing with above-average success. Pickerel and smallmouth bass can be expected to furnish poor fishing.

Smallmouth bass were once an important part of the sport fishery in Taunton Pond. This species suffers from a severe infestation of bass tapeworm and, as a result, reproduction has been almost eliminated. White perch and yellow perch were severely stunted prior to 1951. Their growth rates have improved considerably since that time and the pond is rapidly approaching a very productive balance.

Various species of sunfish are still far too numerous. The local fish and game club and residents may be able to decrease the abundance of these fish by raking over their nests or salting the nests with pellets of sodium hydroxide.

Taunton Pond contains a small volume of water suitable for trout. These waters are not open to the public and cannot be stocked by the Board. Due to the limited fishing pressure and expected low catch rate, it is doubtful if stocking by the local fish and game club can be warranted if viewed on the basis of economy.

No special regulations are needed at this time.



TERRAMUGGUS LAKE

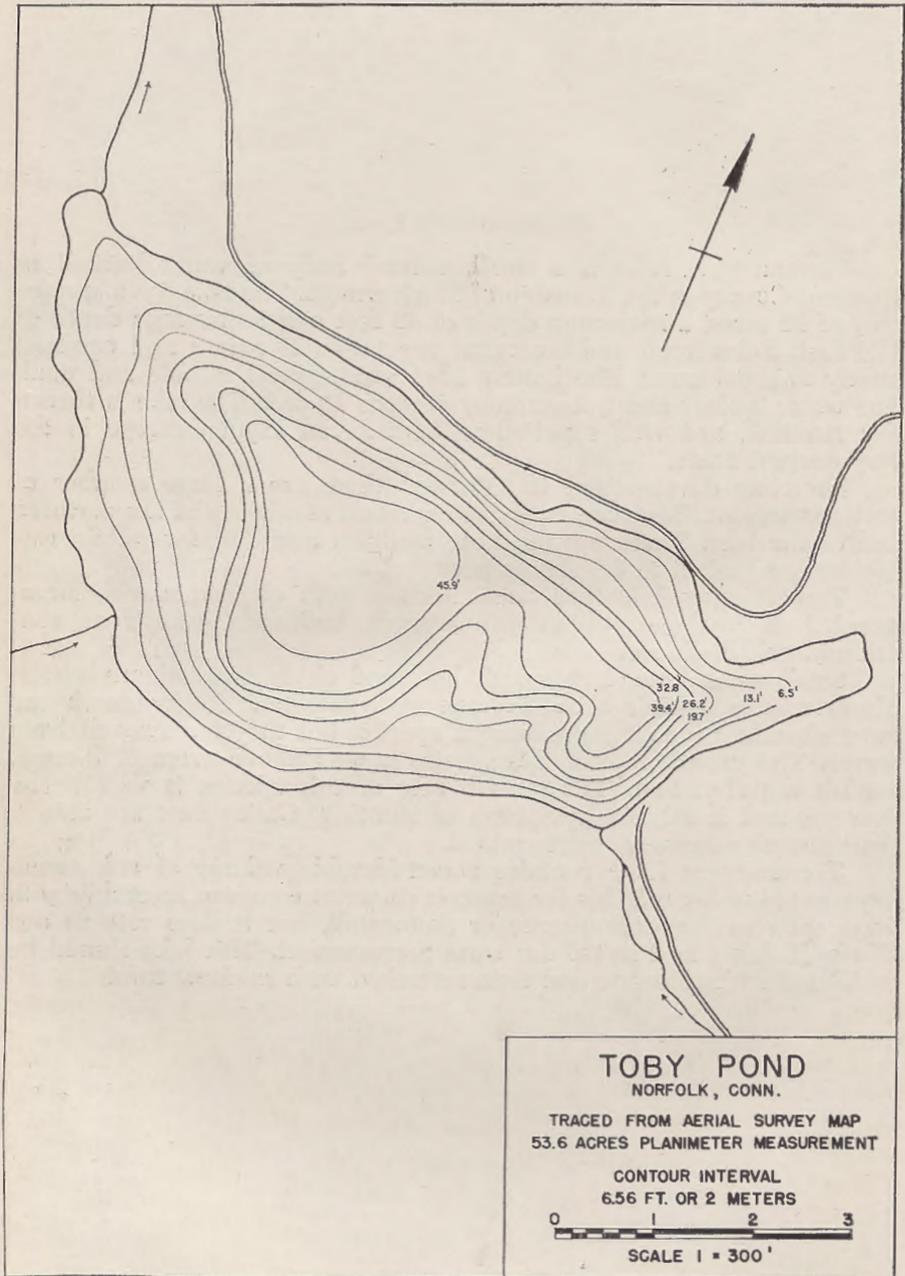
Terramuggus Lake is a small, natural body of water located in Hartford County in the township of Marlborough. The lake has a surface area of 83 acres, a maximum depth of 43 feet and an average depth of 21.4 feet. Submerged and emergent vegetation is scarce and confined mostly to shoal areas. The bottom is of sand, gravel, rubble and mud. The water is clear and transparency exceeds 10 feet. The lake is thermally stratified and well supplied with dissolved oxygen except in the very deepest areas.

Shoreline development is high and there are a large number of cottages present. Boats are available for rental at a livery at the northern end of the lake. There are no other facilities available for public use. Motors are limited to 3.3 horsepower.

Terramuggus Lake has been stocked with chain pickerel, largemouth bass, smallmouth bass, yellow perch, bullheads, calico bass, sunfish and golden shiners.

Smallmouth bass, largemouth bass and chain pickerel are scarce. These species exhibit above-average growth rates. Yellow perch are more abundant than the predaceous species, but they too are relatively scarce. The growth rate of this species is well above average. Bluegill sunfish are abundant. The growth rate of this species is well below average, and it exhibits symptoms of stunting. Calico bass are scarce; their growth rate was not determined.

Terramuggus Lake contains a considerable volume of cold, well-oxygenated water suitable for trout. It does not compare favorably with lakes such as Wononskopomuc or Saltonstall, but it does rate as one of the 20 lakes best suited for trout management. This lake should be reclaimed with rotenone and then restocked with rainbow trout.



TOBY POND

Toby Pond is natural in origin, but has had its level raised slightly by the construction of a low concrete dam. The dam is in poor condition and during periods of dry weather the water drops to the natural pond level. The pond has a surface area of 53.6 acres, a maximum depth of 49 feet and an average depth of 24 feet. It is located in Litchfield County in the township of Norfolk. The shoreline and the bottom in shallow areas are mostly rocky, with scattered sand and gravel sections. In the deeper sections, the bottom is mostly silty ooze. Some submerged vegetation is present in shallow areas. The fertility level and bottom food production are low. The pond is thermally stratified and all but the deepest waters are abundantly supplied with dissolved oxygen.

Shoreline development is low; only a few cottages are present on the well-wooded shores of this pond. A private right-of-way provides excellent access to the water, but this is not open to the public.

Toby Pond has been stocked with smallmouth bass, chain pickerel, yellow perch, bullheads, smelt and golden shiners. It is reliably reported that the pond was also once stocked with land-locked salmon and brook trout, and that these fish provided fair fishing for two or three years after they were stocked.

Largemouth bass, smallmouth bass, chain pickerel, yellow perch and golden shiners are present, but are very scarce in all age classes. Common sunfish are more abundant than the above-mentioned species, but are scarce by normal standards. The growth rates of all species are poor.

At the present time, these waters are providing very poor fishing.

Toby Pond contains a large volume of cold, well-oxygenated water, suitable for trout. The water has a very low basic fertility and this is a serious limiting factor in the production of warm-water fish. Low basic fertility is not a serious factor in producing trout. These waters should be reclaimed with rotenone and should then be restocked with rainbow trout or brook trout. This pond should be capable of producing a yearly catch of 3,000 to 4,000 trout.

Reclamation of these waters and management for trout cannot be justified unless a public access point can be obtained. Private ownership of all the land around this pond effectively bars public use.

TOLLAND MARSH POND

Tolland Marsh Pond is a small, shallow pond in Tolland County in the township of Tolland. Due to the shallowness, the irregular shoreline and the quantity of emergent and brushy vegetation, this pond was not mapped by the survey unit. It is artificial in origin and was formed by the construction of a small masonry dam and earthen dike across the Skungamaug River. The pond bottom is mostly of mud and swampy ooze. There are numerous floating or semi-floating islands on this impoundment. These islands are covered with shrubs such as buttonbush. The water is stained a dark, tea color and transparency is considerably reduced. Thermal stratification does not take place.

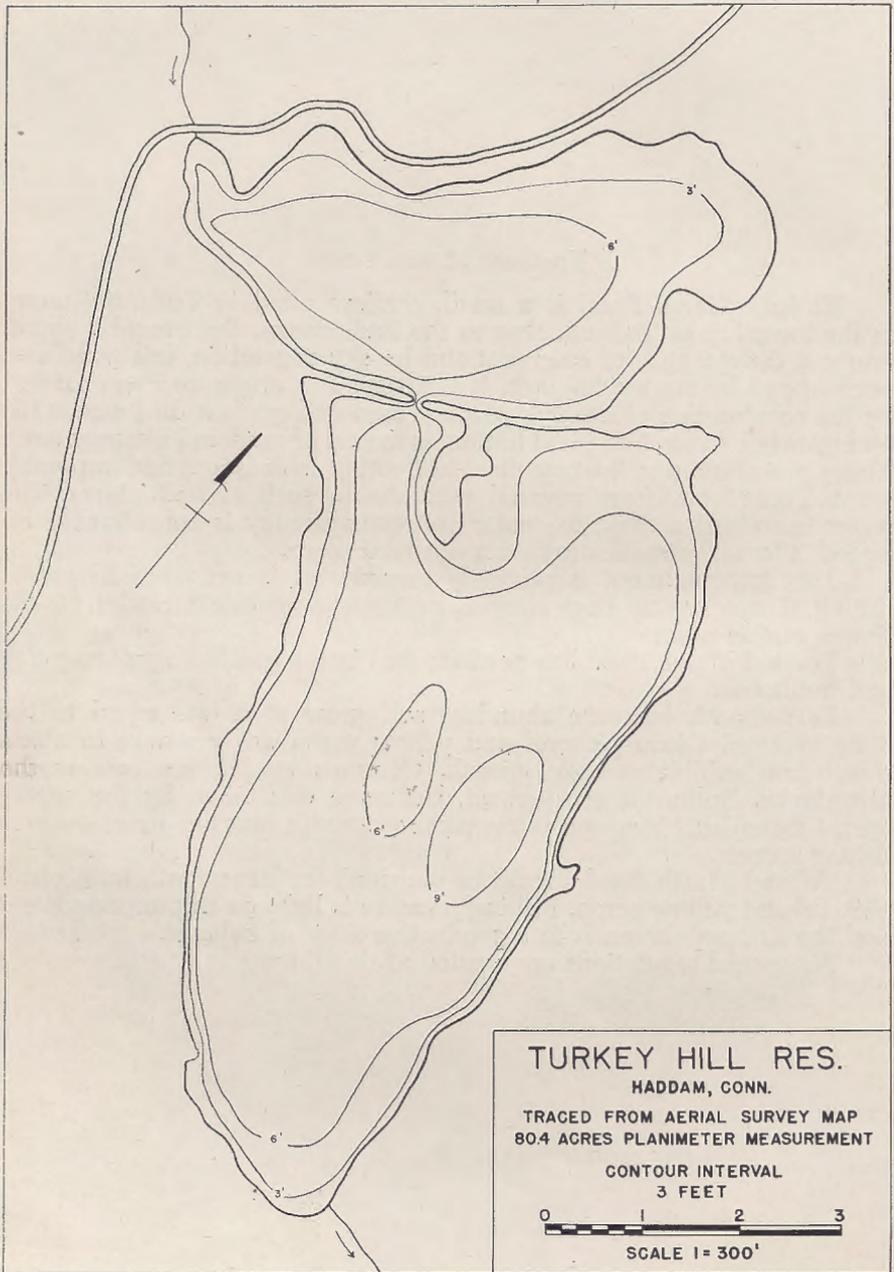
This impoundment is privately owned and is not open to public fishing. There are no boat liveries, cottages or public facilities on the shores of this pond.

Tolland Marsh Pond has been stocked in the past with yellow perch and bullheads.

Largemouth bass are abundant and grow at a rate equal to the state average. Chain pickerel and yellow perch are common in abundance and exhibit average growth. Common sunfish are common in abundance. Bullheads are present, but none was taken by the survey unit. Largemouth bass and chain pickerel should provide above-average fishing success.

Tolland Marsh Pond should be managed for largemouth bass, chain pickerel and yellow perch. Fishing pressure is light on this impoundment and the fish population is in a productive state of balance.

No special regulations are needed at this time.



TURKEY HILL RESERVOIR

Turkey Hill Reservoir is artificial in origin. It is located in Cockaponset State Forest in Middlesex County in the township of Haddam. The impoundment, entirely surrounded by state forest lands, is privately owned and the water is used for industrial purposes. The water level is subject to severe fluctuation and at times the reservoir is almost dry. It has a surface area of 80.4 acres, a maximum depth of 10 feet and an average depth of 5.7 feet. These waters are fed by Great Brook and springs. The bottom in shallow areas is of gravel, rubble and boulders. In deeper areas, the bottom is of mud and silt. Submerged vegetation is abundant, particularly in the shallows. The water is stained a dark, tea color and transparency is reduced to approximately 18 inches. The shoreline is mostly wooded. The dam, of earthen and masonry construction, is in excellent condition.

There is no shoreline development. There are no cottages or boat liverys present. Although this body of water is privately owned, it is open to public fishing.

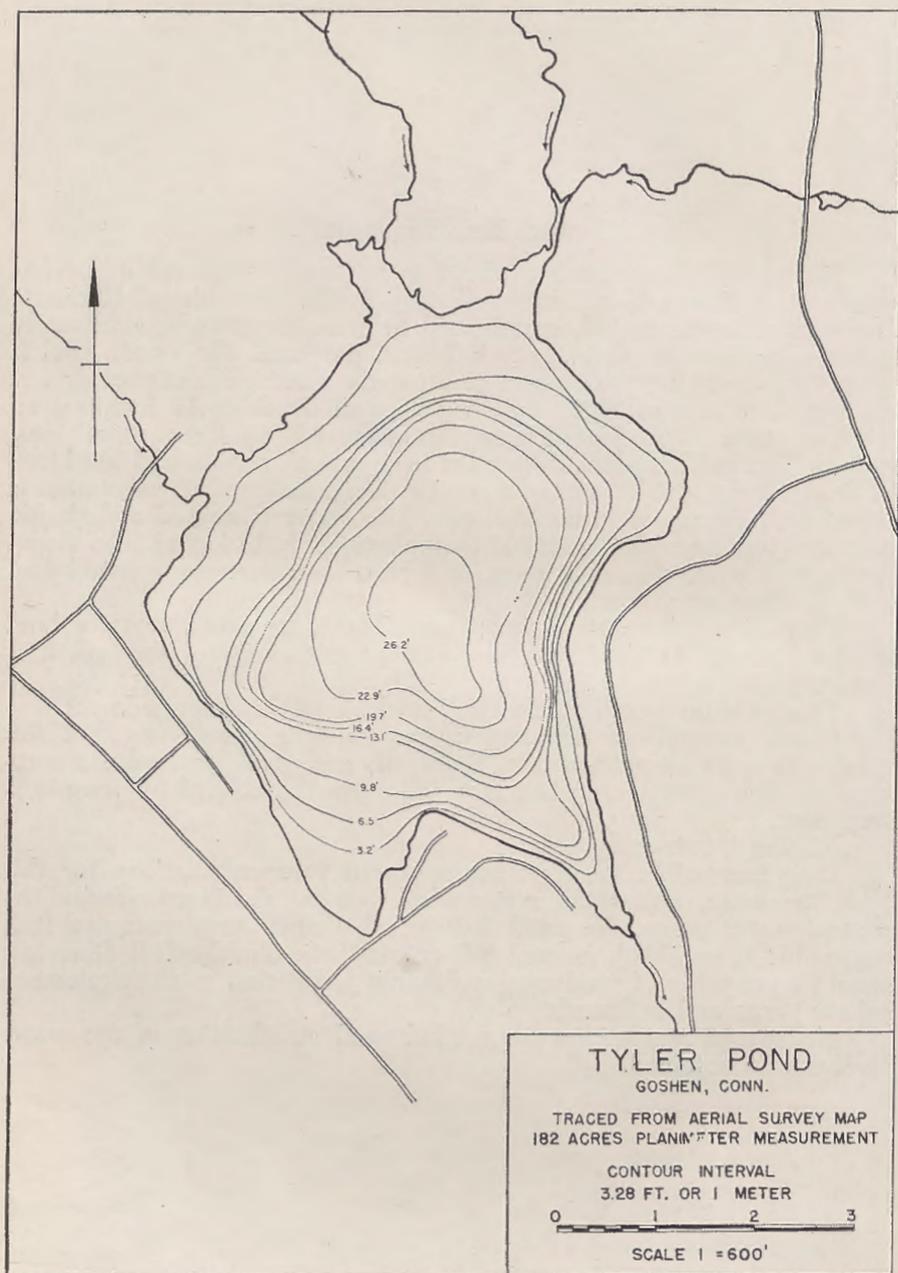
There are no records of any fish stocking in this impoundment.

Chain pickerel are common in the younger age classes, but fish greater than 10 inches are rare. Bullheads and grass pickerel are common. Golden shiners are abundant. The growth rates of all species is very poor.

Fishing is extremely poor.

It is impossible to make management recommendations for this body of water, unless the water level can be stabilized. Under the present water usage, the pond is emptied almost every year and it is impossible to establish normal fish populations. Turkey Hill Reservoir should be capable of producing a fishable population of chain pickerel, yellow perch and bullheads.

No special regulations are needed until stabilization of the water level can be obtained.



TYLER POND

Tyler Pond is located in Litchfield County in the township of Goshen. It is natural in origin, and the level has been raised slightly by the construction of a masonry dam. The pond has a surface area of 182 acres, a maximum depth of 26.2 feet and an average depth of 12.1 feet. It is fed by springs, small brooks and by West Side Pond Brook and Tyler Pond Brook. The shoreline is rocky, with considerable marginal vegetation. Submerged vegetation is abundant, particularly in the shoal areas. The bottom varies considerably and is of rock, sand, gravel, mud and swampy ooze. There is a large floating bog at the northern end of the pond. Bottom food production is good. Thermal stratification does not take place in this pond.

Shoreline development is moderate, and there are numerous cottages on the shores of this pond. Access to Tyler Pond is provided through a boat livery, and a state-owned right-of-way, parking area and boat launching area.

Tyler Pond has been stocked with yellow perch, pike-perch, chain pickerel, bullheads, golden shiners, common suckers, smallmouth bass, calico bass, sunfish, land-locked salmon, rainbow trout and brown trout.

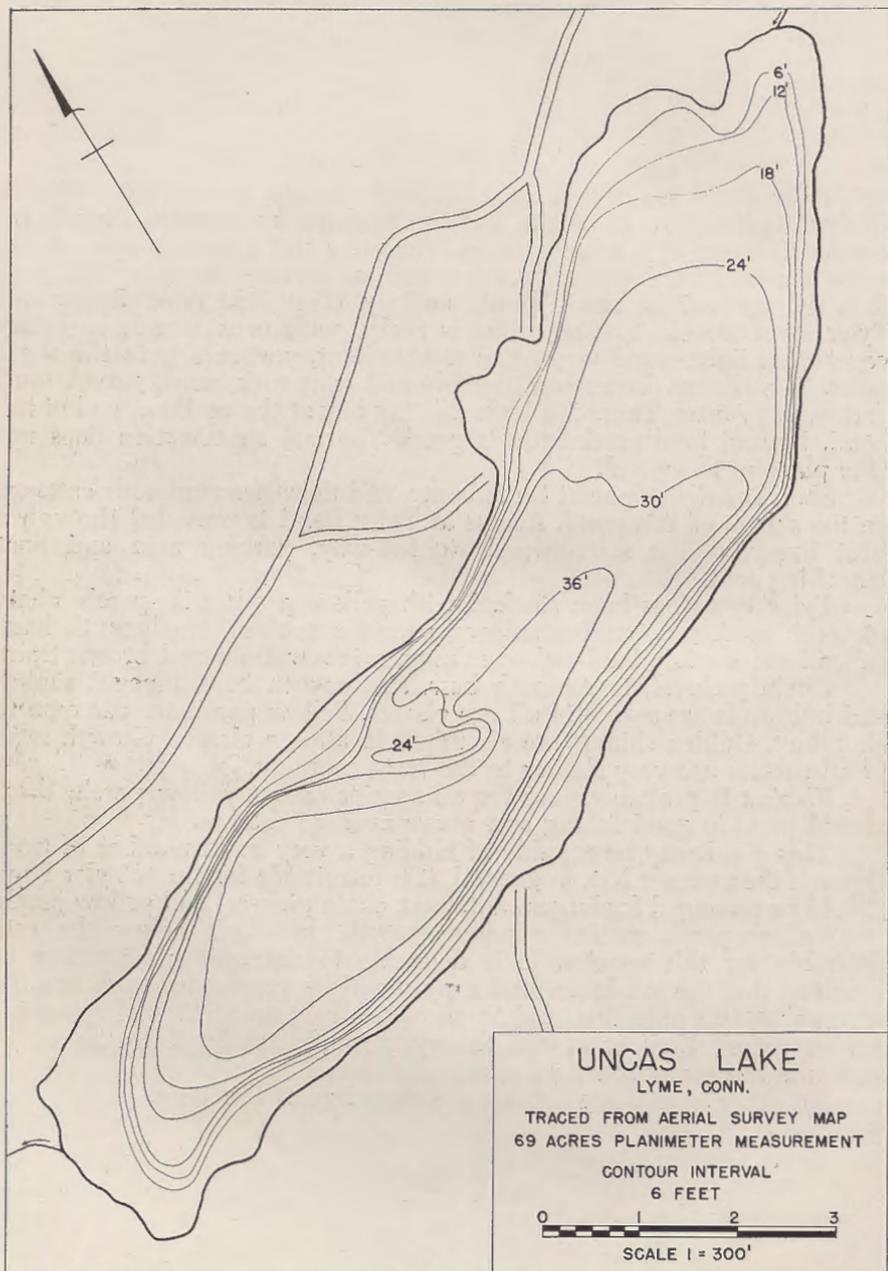
Chain pickerel, largemouth bass, smallmouth bass, bluegill sunfish and bullheads are scarce in all age classes. Yellow perch are common to abundant. Golden shiners are abundant in all age classes. Growth rates of all species are very similar to the state averages.

Fishing is probably poor for all species except yellow perch; these should provide good fishing and above average catches.

This pond may be capable of holding a very small number of trout through the summer but, in general, it is unsuitable for trout. Tyler Pond should be managed for largemouth bass, chain pickerel and yellow perch.

Yellow perch exhibit average growth, but well below the rate desirable for this species. It is desirable to decrease the number of perch so that the available food supply will be greater for each fish. To accomplish this objective, and to allow the bass an additional spawning season before they enter the fishery, a minimum legal length of 14 inches is recommended for largemouth bass.

No other special regulations are necessary at this time.



UNCAS LAKE (Hog Pond)

Uncas Lake is a small, deep, natural body of water in the Nehantic State Forest. It is located in New London County in the township of Lyme. The lake has a surface area of 69 acres, a maximum depth of 40 feet and an average depth of 22.2 feet. Submerged and emergent vegetation is scarce in all areas of the pond. The bottom is mostly of sand, gravel and rubble. The water is clear and transparency exceeds ten feet. The pond is thermally stratified and all but the deepest waters are well supplied with dissolved oxygen.

The water rights to this pond are owned by the State Board of



FIGURE 66. Carp removed from Uncas Lake, Lyme.

Fisheries and Game. There are a few cottages on private land on the southeastern shoreline. Public access is provided over a state-owned road, parking area and boat launching area. There are no boats available for rental on this pond.

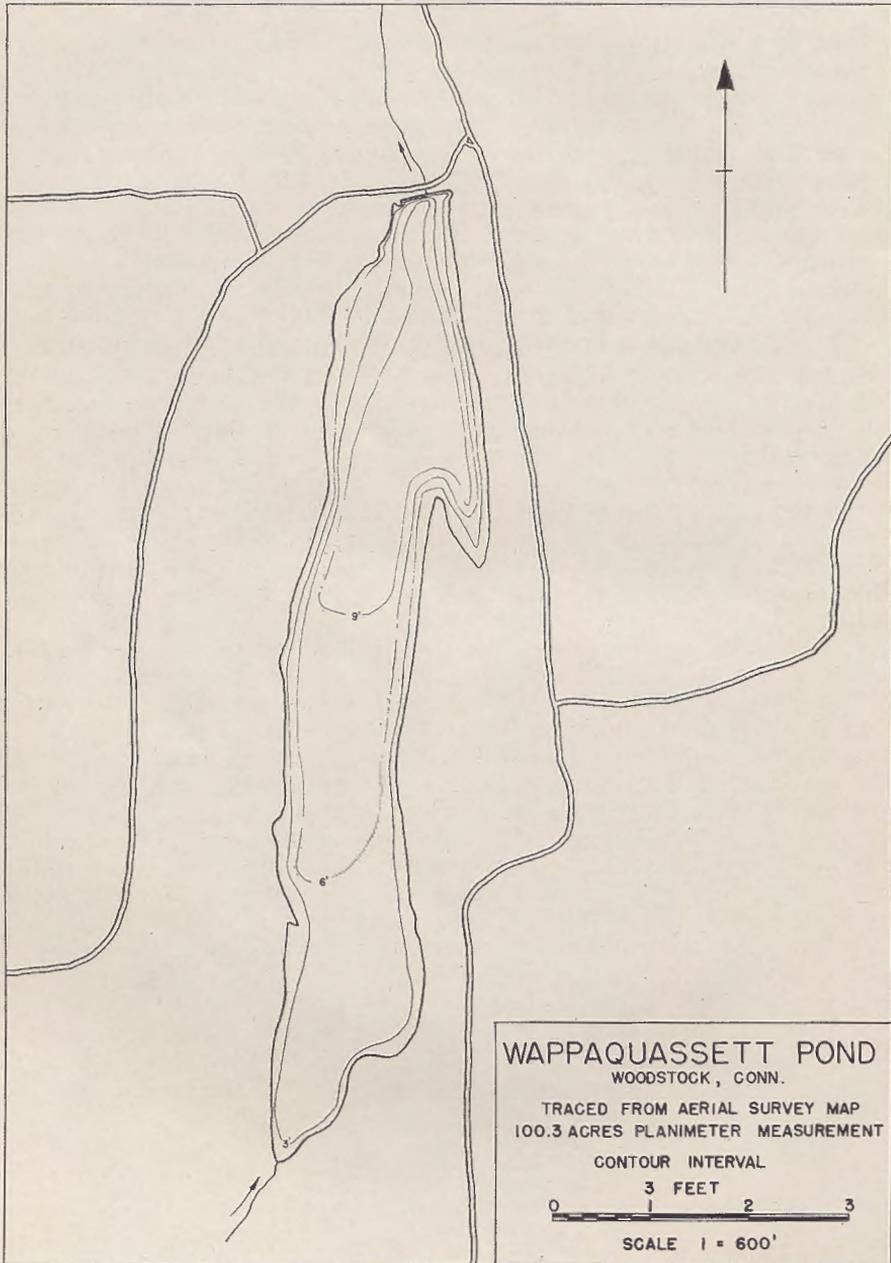
Prior to reclamation, Hog Pond had been stocked with yellow perch, smallmouth bass, land-locked salmon, lake trout, brook trout, brown trout and rainbow trout.

Uncas Lake was reclaimed in the fall of 1956. All species of warm-water fish were scarce at the time of reclamation. In addition to yellow perch, smallmouth bass and the usual other warm-water species, three large carp of 10 to 15 pounds were killed during the reclamation operation.

Hog Pond was restocked late in the fall of 1956 with yearling brown trout and rainbow trout. In addition, two-year-old brown trout and rainbow trout were stocked in the pond prior to the opening of the 1957 fishing season.

On the opening day of the 1957 trout season, the catch of trout from Uncas Lake was over 2.5 fish per angler. This catch was considerably better than the state-wide catch of 0.77 trout per angler. (These catch records were from the Conservation Officer's check.)

Smallmouth bass brood stock and sea-run alewife brood stock were planted in the lake during May of 1957. These fish were stocked in an attempt to establish a "two-story" fish population in a reclaimed lake. It is hoped that the brown trout and rainbow trout will occupy the deeper, cold water and the smallmouth bass will occupy the warmer, shallow water. If the alewives become established, they should furnish ideal forage for the smallmouth bass and brown trout. This type of management is entirely experimental and may prove unsatisfactory.



WAPPAQUASSETT POND

Wappaquassett Pond is located in the township of Woodstock in Windham County. It is artificial in origin and was impounded by the construction of an earthen and masonry dam across a small tributary to Mill Brook. This impoundment has a surface area of 100.3 acres, a maximum depth of 11 feet and an average depth of 5.8 feet. The pond bottom is composed mostly of sand, coarse rubble, boulders and mud. Submerged and emergent vegetation is scarce in all areas. The waters of this pond are completely mixed from top to bottom.

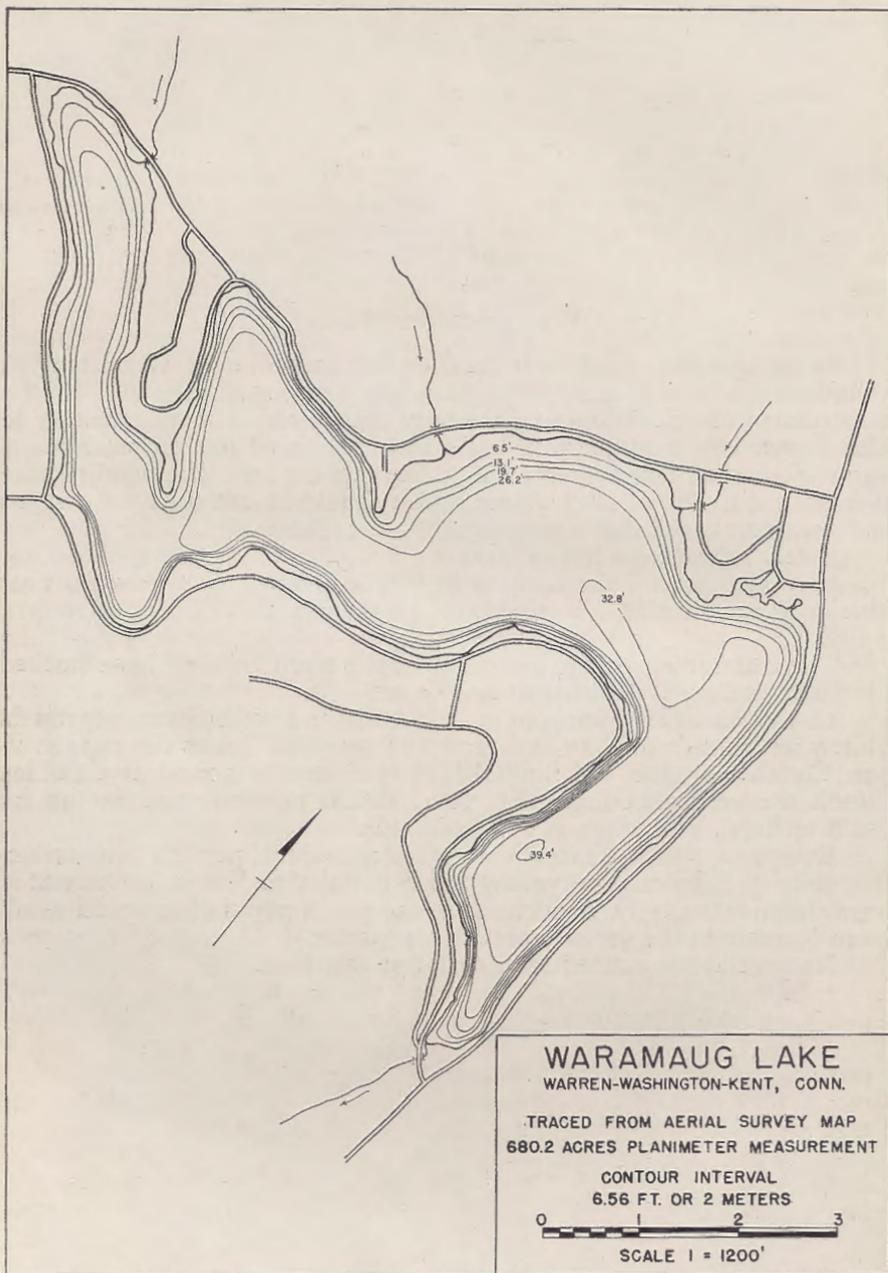
Wappaquassett Lake is open to public fishing. There are no boat liveries or other facilities available for public use. Shoreline development is light.

There are no records to indicate that this pond has ever been stocked by the State Board of Fisheries and Game.

Chain pickerel are common in abundance and exhibit average growth. Yellow perch are abundant and grow at a rate well below the state average. Common sunfish and bullheads are common in abundance. Golden shiners are very abundant. This pond should provide good fishing for chain pickerel, yellow perch and bullheads.

Except for the poor growth of yellow perch, this pond is in a productive state of balance. The yellow perch population should be harvested much more intensively. A decrease in the perch population would result in an increase in the growth rate of this species.

No special regulations are needed at this time.



WARAMAUG LAKE

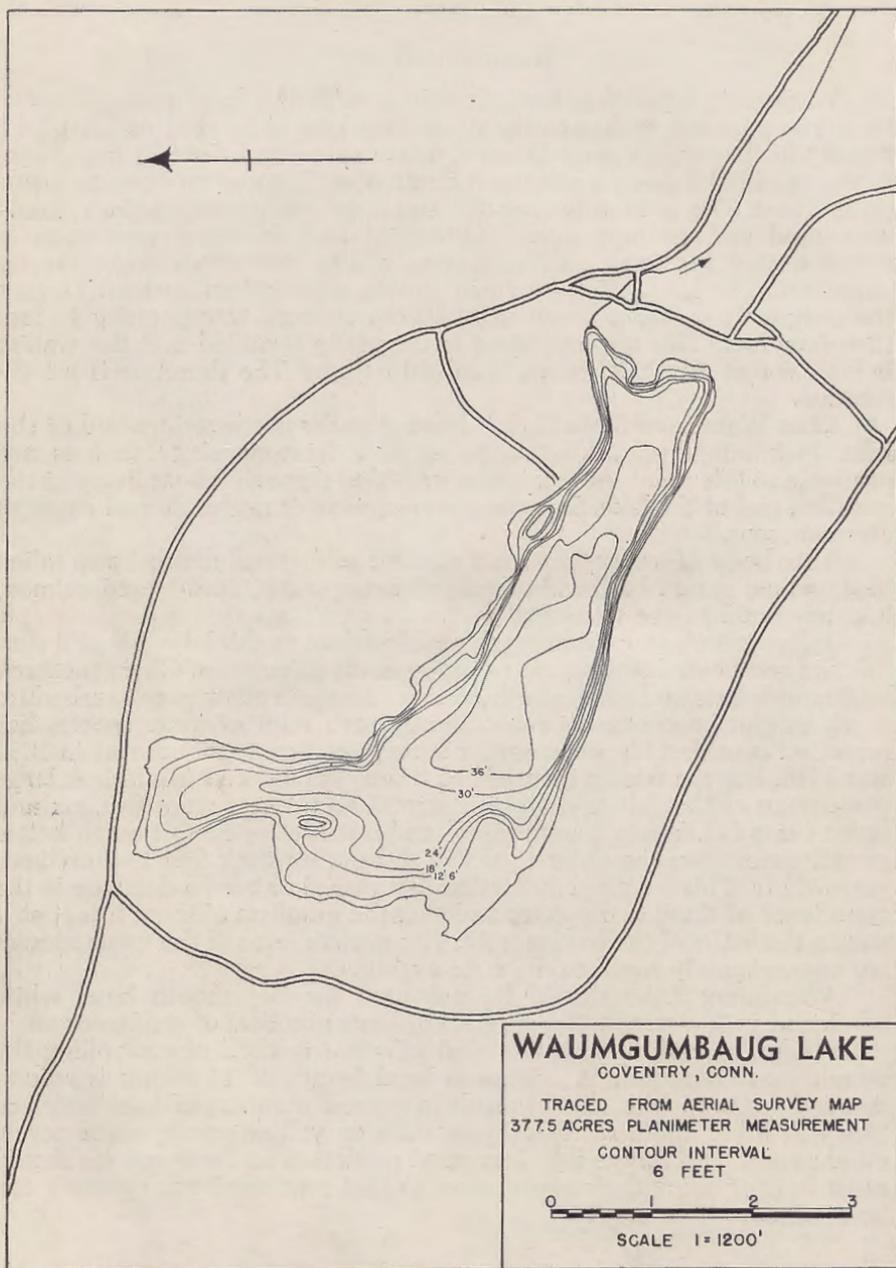
Waramaug Lake is natural in origin, with the level raised slightly by a low concrete and masonry dam. This lake is located in Litchfield County in the townships of Warren, Washington and Kent. It has a surface area of 680.2 acres, a maximum depth of 40 feet and an average depth of 22.1 feet. The bottom is variable, and is of sand, gravel, rubble, boulders, mud and swampy ooze. Submerged and emergent vegetation is scarce except for small localized areas where submerged vegetation is abundant. The lake is fed by small brooks and bottom springs. During the summer months, a dense algal bloom reduces transparency to less than four feet. This impoundment is thermally stratified and the waters below 20 feet are deficient in dissolved oxygen. The shoreline is mostly wooded.

Lake Waramaug State Park is located at the northwestern end of the lake. Swimming, picnicking, camping and boat-mooring facilities are available at this point. Access is also provided through a boat livery at the southern end of the lake. Shoreline development is moderate and cottages are numerous.

This body of water has been stocked with smallmouth bass, calico bass, yellow perch, bullheads, chain pickerel, smelt, land-locked salmon, lake trout and rainbow trout.

Yellow perch and white perch are abundant in this lake. Bluegill sunfish and red-bellied sunfish are common in all age classes. Chain pickerel, largemouth bass and smallmouth bass are scarce. Yellow perch and white perch exhibit good growth rates. The growth rates of these species has increased considerably since earlier surveys of this impoundment in 1939 and 1948, but are nearly identical to those encountered in 1952. A large percentage of the fish taken in the experimental nets were five, six and seven years old. Young perch of two and three years exhibit much better growth rates than the older-aged fish did during their first two or three years of life. This is a good indication that there has been a decrease in the abundance of these two species and that the numbers of these fish is now within the limits of the food supply. The growth rates of the game species are approximately equal to the state averages.

Waramaug Lake should be managed for largemouth bass, white perch and yellow perch. The survival of large numbers of predaceous fish, such as largemouth bass, is the most effective method of controlling the populations of panfish. A minimum legal length of 14 inches is recommended for bass. This should result in greater numbers of bass which in turn will bring about increased predation on yellow perch, white perch, other panfish and forage fish. Increased predation on these species should assist in controlling their abundance, so that continued good growth can be attained.



WAUMGUMBAUG LAKE (Coventry Lake)

Waumgumbaug Lake is located in Tolland County in the township of Coventry. This lake, more commonly known as Coventry Lake, has a surface area of 377.5 acres, a maximum depth of 40 feet and an average depth of 28.9 feet. It is natural in origin, but the level has been raised several feet by a low earthen and masonry dam. The lake is fed by surface runoff and bottom springs. In the shoal areas the bottom is of sand, gravel, rubble and boulders. In the deeper areas, the bottom is mostly of mud. Submerged and emergent vegetation is scarce in all parts of the lake. The water is clear, and transparency exceeds 10 feet. Thermal stratification of the waters takes place, and the deeper waters are deficient in dissolved oxygen.

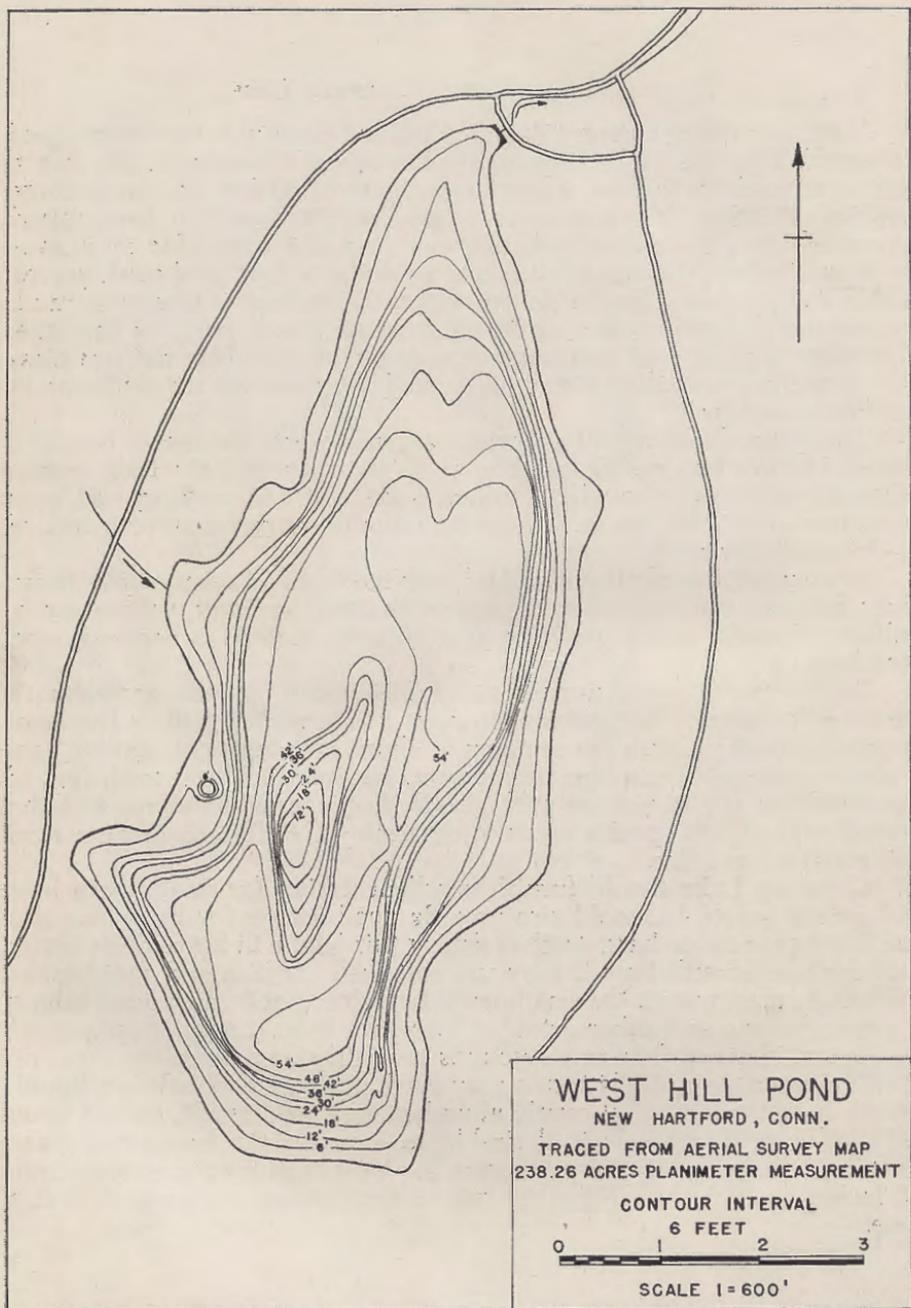
Shoreline development is extensive and there are many cottages, summer homes and permanent homes on the shores of the lake. Public access for fishing is provided through a state-owned parking and boat launching area. The use of outboard motors is restricted to residents of the town of Coventry.

Coventry Lake has been stocked with land-locked salmon, lake trout, chain pickerel, smallmouth bass, pike-perch, rainbow trout, yellow perch, bullheads, smelt, white perch, golden shiners, sunfish, calico bass and rock bass.

Yellow perch are abundant and exhibit good growth. Smallmouth bass are abundant. This species grows at a rate slightly below the state average. Bluegill sunfish are common in abundance and their growth rate is above average. Calico bass are present, but scarce. The growth rate of this species is slightly above average. Chain pickerel are scarce and the growth rate of this species was not determined. Bullheads are common and reach a large size.

Coventry Lake should furnish excellent fishing for smallmouth bass and yellow perch. It should also provide good fishing for bullheads and fair fishing for calico bass. Anglers fishing this lake will have much better luck for smallmouth bass if they use soft-shell crayfish and helgramites for bait. In most waters the smallmouth bass does not furnish good fishing if plugs, spoons and other artificial lures are used. Large, trophy-sized smallmouth bass of four to six pounds are fairly numerous.

Waumgumbaug Lake is in a very productive state of balance. Smallmouth bass are somewhat overly abundant and, as a result, do not grow as rapidly as desired. It is desirable to increase the harvest of bass. This can be accomplished by reducing the legal limit for this species from 12 inches to 10 inches. No other special regulations are needed at this time.



WEST HILL POND

West Hill Pond is potentially one of the best trout ponds in the state. It is located in Litchfield County in the township of New Hartford. These waters are natural in origin, but the water level has been raised by a low earthen and masonry dam. The pond has a surface area of 239 acres, a maximum depth of 59 feet and an average depth of 31.8 feet. The bottom is of sand, gravel and rubble. Submerged vegetation is scarce and confined mostly to below the zone of wave action. The water is clear and transparency exceeds 26 feet. These waters are fed mainly by bottom springs. The fertility level is average for the region. This impoundment is thermally stratified, and the deep waters are abundantly supplied with dissolved oxygen. Water from West Hill Pond is used for industrial purposes and the water level is subject to considerable fluctuation. The shoreline of the pond is well wooded.

Access to these waters is guaranteed by a state-owned right-of-way. Boats are also available at a livery near the state right-of-way. Fishing from shore, docks or floats is prohibited except with written permission of the property owner involved. Outboard motors are restricted to 7½ horsepower and all motor-driven craft must be registered with the town clerk. Fishing is limited to the period from the third Saturday in April through October 31, during the hours from 6:00 a.m. to 10:00 p.m. prevailing time.

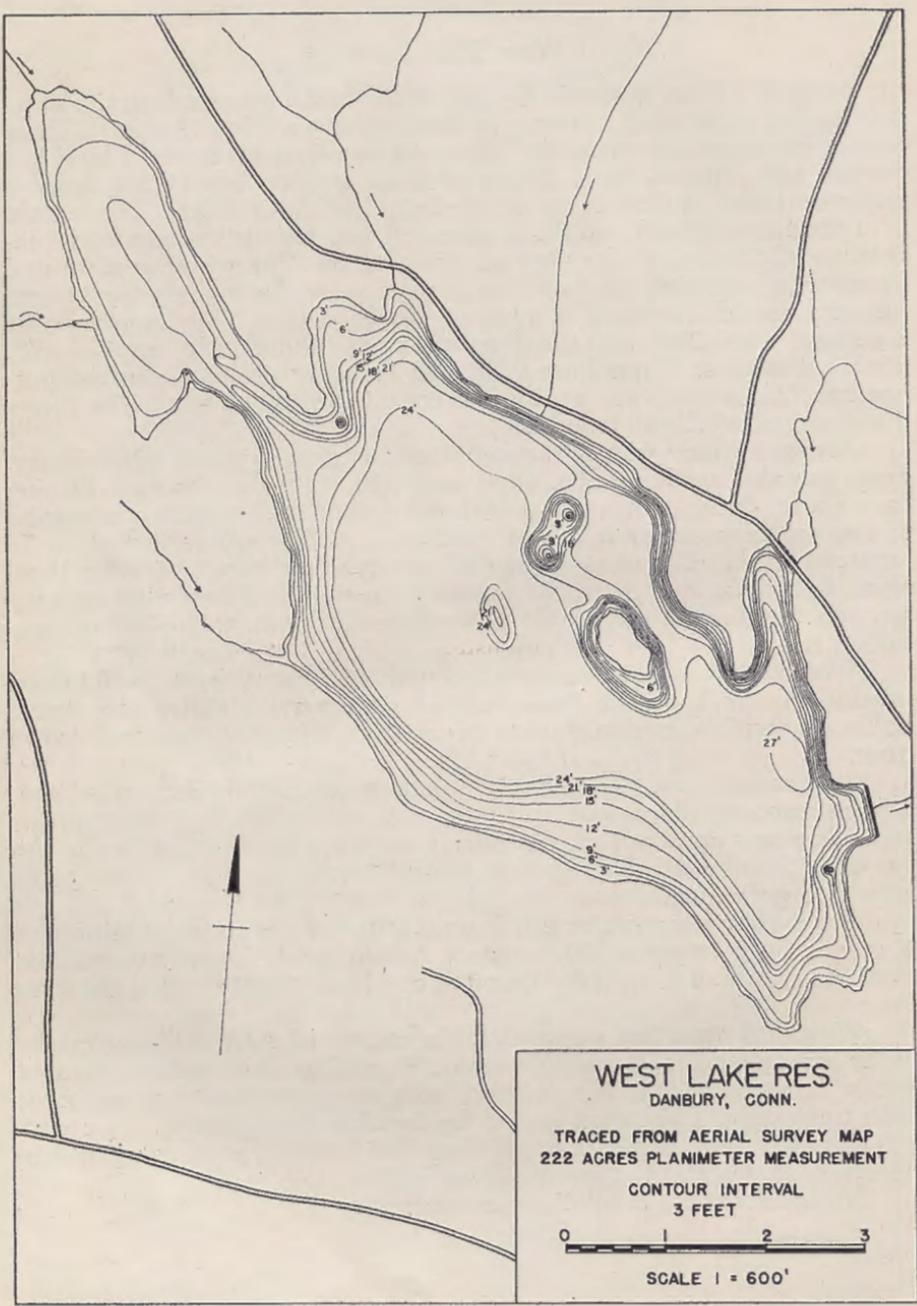
West Hill Pond has been stocked with smallmouth bass, land-locked salmon, lake trout, catfish, chain pickerel, yellow perch, calico bass, smelt, bullheads, sunfish, golden shiners, brook trout, rainbow trout and brown trout.

Smallmouth bass, yellow perch, common sunfish and red-bellied sunfish are scarce in all age classes. Chain pickerel, bullheads, golden shiners and calico bass are reported, but none were taken or observed by the survey unit. Smallmouth bass growth is well below average. Yellow perch growth is well above average.

Fishing for warm-water fish is poor. Most of the angling satisfaction is supplied by two-year-old hatchery brown trout. Very few holdover trout are caught. The bulk of the catch consists of trout stocked the same year.

West Hill Pond has a considerable volume of cold, well-oxygenated water best suited for trout management. This lake can furnish the greatest angler satisfaction if it is reclaimed with rotenone and then restocked with trout only. This pond should be capable of producing an annual catch of more than 10,000 trout. If West Hill Pond is reclaimed, it will be necessary to prohibit the use of fish as bait.

No other special regulations are necessary.



WEST LAKE RESERVOIR

West Lake Reservoir is one of the impoundments used to supply water to Danbury. It is located in Fairfield County in the township of Danbury. The water of this reservoir is impounded by an earthen and concrete dam. The reservoir covers an area of 222 acres, has a maximum depth of 27 feet and an average depth of 16.7 feet. The bottom is of sand, gravel and rubble. Submerged and emergent vegetation is scarce in all sections of the lake. The water is clear and the transparency exceeds 15 feet. The reservoir is thermally stratified and the deeper waters are deficient in dissolved oxygen. The shoreline is well wooded, except for the northeastern section which is open.

This reservoir is owned by the Danbury Water Company. The policy regarding fishing in these waters varies from time to time. West Lake Reservoir has been open to fishing by permit. These permits are obtained from the water company. Shoreline development is absent. There are no cottages or boat liveryes on the shores of this reservoir.

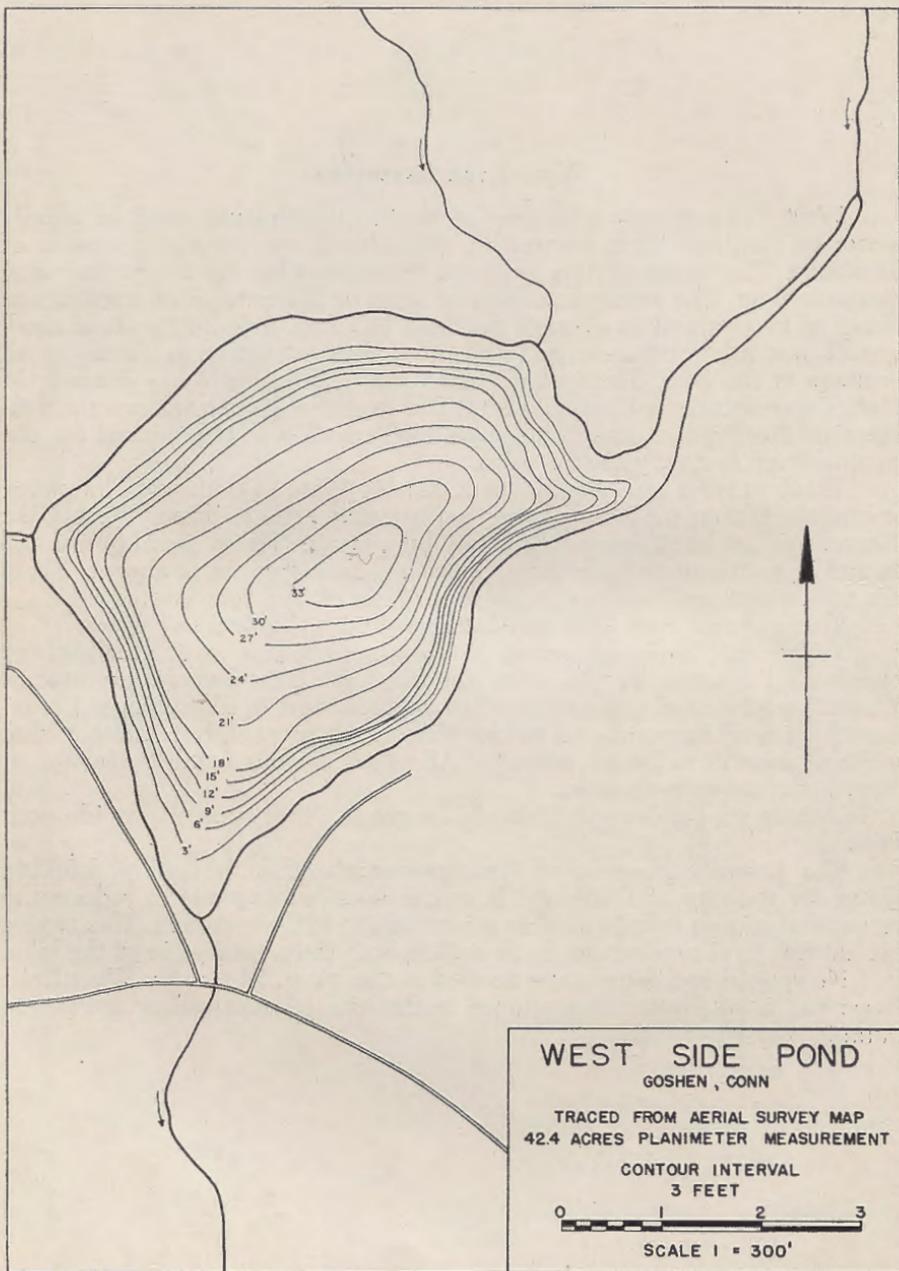
There are no records of any fish stocking in this body of water.

Yellow perch are abundant in young-of-the-year and yearling age classes and common in the older age classes. Chain pickerel are scarce. Bluegill sunfish and common sunfish are common in abundance. Large-mouth bass, white perch and golden shiners are present, but scarce. Chain pickerel growth is below average. All other species exhibit average or above-average growth rates.

Fishing for yellow perch should be good. Other species provide poor fishing.

The primary purpose of this impoundment is to supply drinking water for the city of Danbury. It would be advantageous to reduce the amount of copper sulfate used to control algae in these waters. This would benefit fish food production, but conflicts with the primary use of the lake.

No special regulations are needed at this time. Fishing in West Lake Reservoir is of limited importance under the present policy governing potable water supplies.



WEST SIDE POND

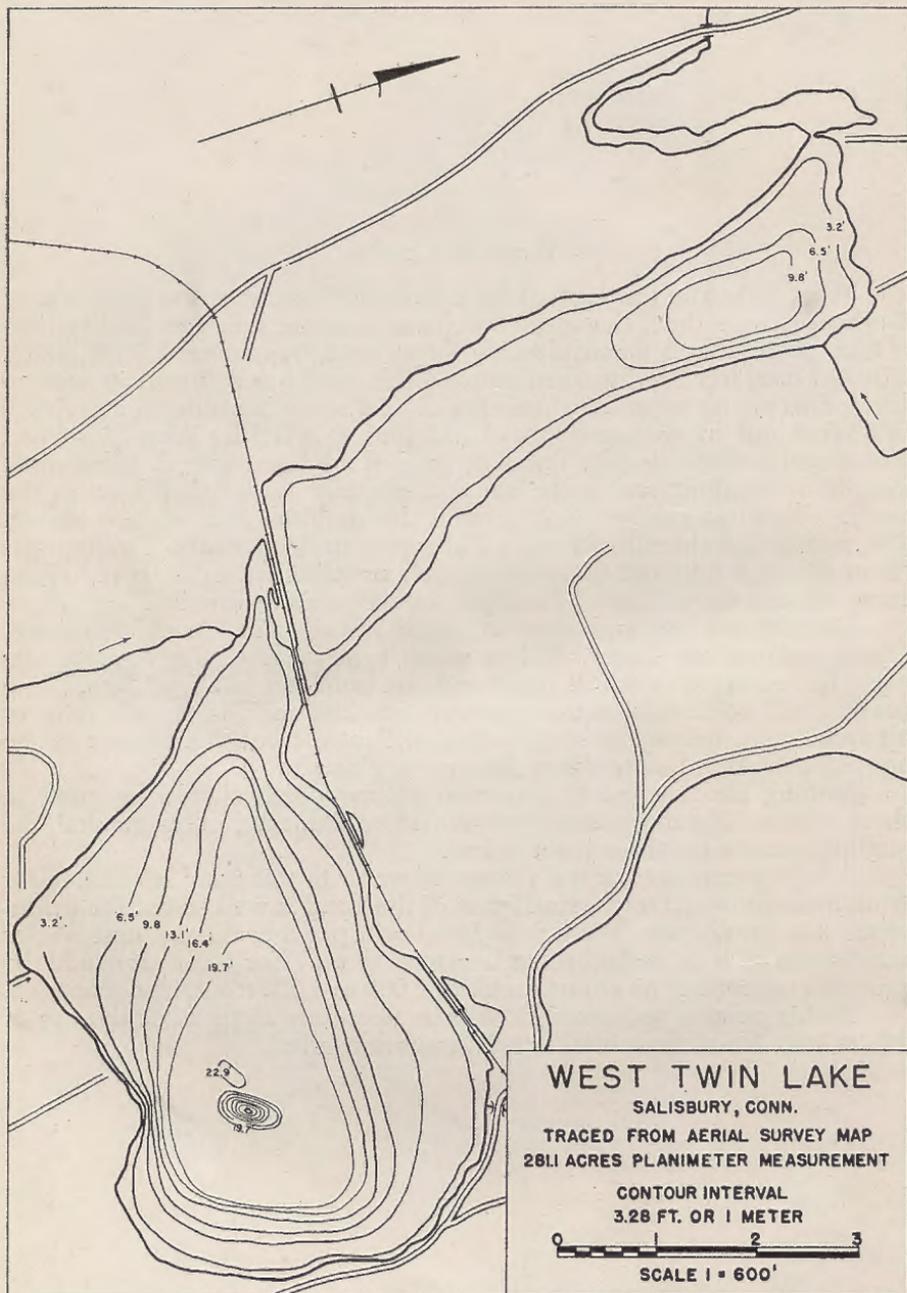
West Side Pond is located in Litchfield County in the township of Goshen. At one time, the water level was three or four feet higher than it is at present, and a considerably larger area was covered with water. The old dam has been washed out and the pond has assumed its natural level. This pond covers a surface area of 42.4 acres, has a maximum depth of 33 feet and an average depth of 15.1 feet. It is fed by West Side Pond Brook and bottom springs. The bottom is of mud and gravel. Submerged vegetation is abundant in the shoal areas, but scarce elsewhere in the pond. There is a shallow shelf around the southern and western shores. The rest of the shoreline drops off abruptly to deep water. The pond is thermally stratified and the water is well supplied with dissolved oxygen except in the deepest area. The shoreline is partially wooded.

Largemouth bass and common sunfish are abundant in all age classes. Chain pickerel are scarce. Yellow perch are scarce in the younger age class, but common as adults. Bullheads are common in abundance. Chub suckers and golden shiners are present, but scarce. The growth rates of all species are below the state averages. Brown trout are present in the age class stocked, but holdover fish are very scarce.

Fishing for largemouth bass and yellow perch should be good in these waters. Hatchery trout provide some fishing, but in general the angling success for these trout is low.

A high percentage of the volume of water in this pond is suitable for trout management. Only a small part of the pond is well suited for warm-water fish production. West Side Pond will provide the greatest angler satisfaction if it is reclaimed and managed only for trout. It could be expected to produce an annual catch of 2,000 to 4,000 trout, if so managed.

If this pond is reclaimed, it will be necessary to prohibit the use of fish as bait. No other special regulations are needed.



WEST TWIN LAKE

West Twin Lake is separated from East Twin Lake by two narrow causeways over which pass a dirt road and a single-track railroad. Unlike East Twin Lake, this body of water is relatively shallow and is not suitable for trout. It has a surface area of 281.1 acres, a maximum depth of 23 feet and an average depth of 8.7 feet. These waters are natural in origin, but the level has been raised slightly. The lake is fed by springs, very small brooks and water from East Twin Lake. There is considerable marginal vegetation along the shoreline. Submerged and emergent vegetation is abundant. The bottom varies considerably in different areas, and is of rock, rubble, sand, gravel, mud and swampy ooze. The water is hard, and high in carbonates. Bottom food organisms are abundant at all depths. The water is clear and the transparency exceeds 20 feet. The shoreline is mostly wooded.

Shoreline development is light and there are few cottages present. Boat liveryes, picnic and swimming areas and other public facilities are absent. Public access is provided only by boat from East Twin Lake but this is impossible during very dry summers.

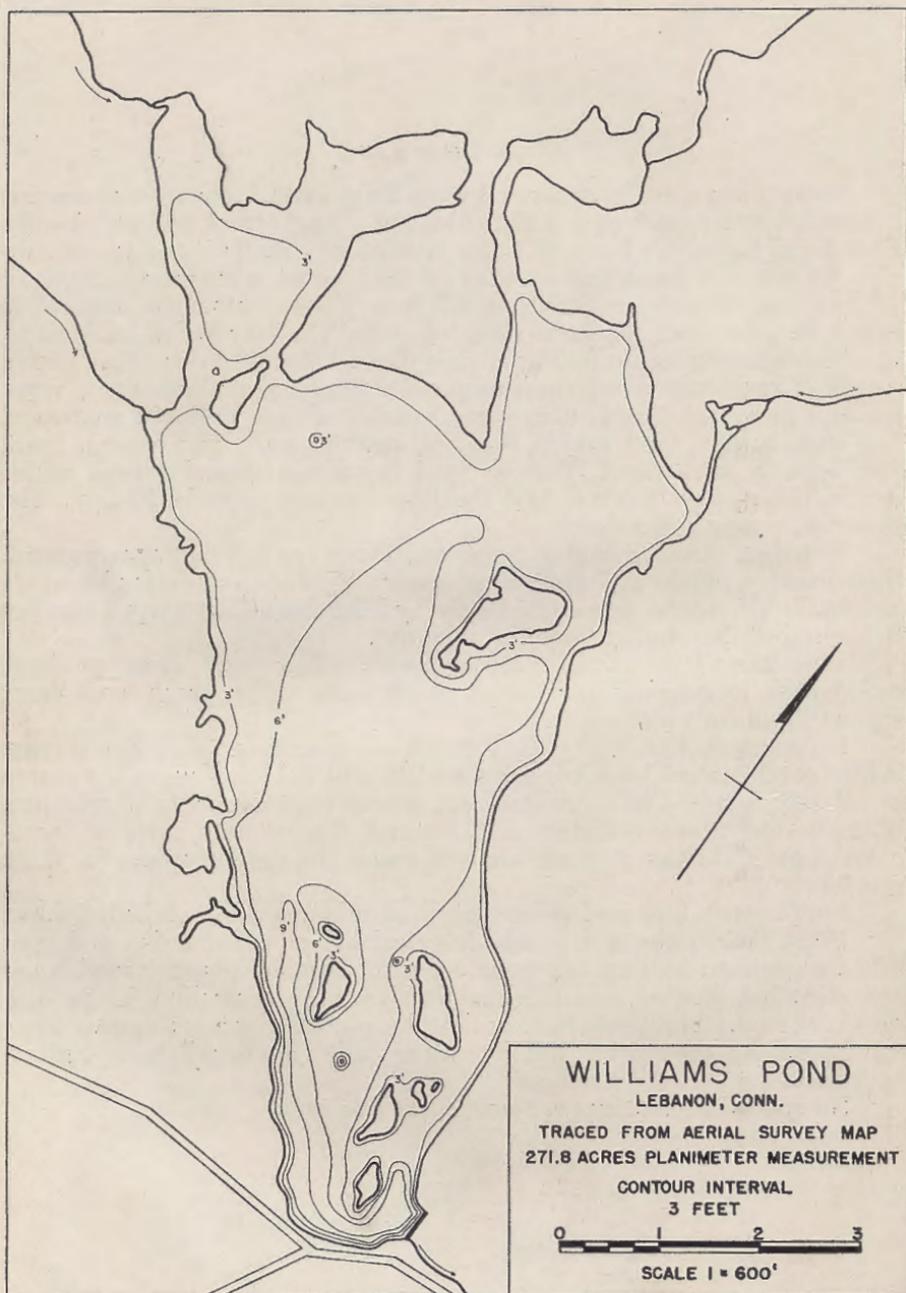
West Twin Lake has been stocked with yellow perch, chain pickerel, calico bass, largemouth bass, smallmouth bass, white perch, rock bass, shiners, bullheads and sunfish.

Largemouth bass and yellow perch are abundant in all age classes. White perch, calico bass, common sunfish and golden shiners are scarce in all age classes. Chain pickerel are scarce to common in abundance. Bluegill sunfish are abundant and stunted. The growth rates of largemouth bass and chain pickerel are well above the state averages for these species.

Largemouth bass and yellow perch should provide excellent fishing.

West Twin Lake is in good biological balance. Game fish and panfish are common and exhibit excellent growth rates. Bluegill sunfish are abundant but stunted, and this species should be controlled. Local residents are in the best position to undertake control measures against these fish by raking over nests and by salting nests with pellets of sodium hydroxide.

No special regulations are needed at this time.



WILLIAMS POND

Williams Pond is a large, shallow, privately owned impoundment. It is artificial in origin and located in New London County in the township of Lebanon. The pond has a surface area of 271.8 acres, a maximum depth of 10 feet and an average depth of 4.5 feet. Submerged vegetation is abundant in all areas of the pond. Emergent vegetation is scarce and confined to the shoal areas. The bottom is mostly of gravel and rubble, overlain in the deeper areas with silty ooze. A dense algal bloom reduces transparency to two feet. Thermal stratification of the water does not take place in this pond. This body of water is subject to severe fluctuation. At times, drawdown is nearly complete.

There are several cottages on the well-wooded shores of this pond, but shoreline development is, in general, relatively light. Access is provided through a small, state-owned right-of-way for boat launching. The pond is open to public fishing under a cooperative agreement between the owner and the State Board of Fisheries and Game.

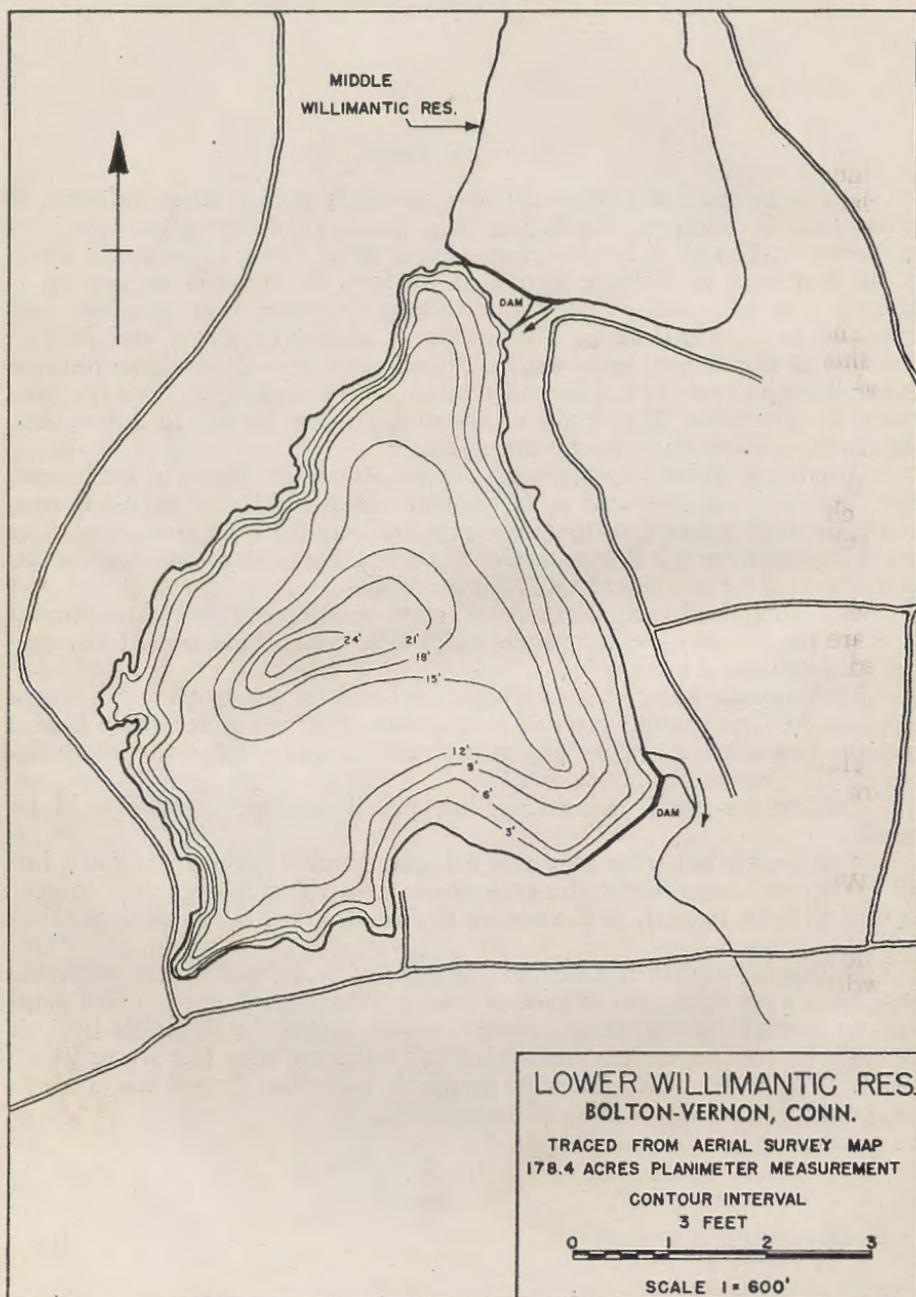
Williams Pond has been stocked with smallmouth bass, largemouth bass, chain pickerel, yellow perch, bullheads, calico bass, rock bass, sunfish and golden shiners.

Largemouth bass, chain pickerel and yellow perch are common in abundance. The growth rates of these three species are excellent. Calico bass are present, but scarce. The growth rate of this species was not determined. Bullheads are abundant.

Fishing for bass, pickerel, yellow perch and bullheads should be good.

The growth rates for all game fish and panfish species are good, but all are erratic. Apparently, the variation in growth rates from year to year is due, at least in part, to the severe drawdown that takes place periodically.

Williams Pond is in a productive state of balance. Normal statewide regulations are adequate to protect and maintain the fishery in this pond and no special regulations are needed at this time. It is desirable to limit drawdown so that at least one-third of the pond area has water at all times. If at all possible, complete or nearly complete drawdown, such as has occurred in the past, should be avoided.



LOWER WILLIMANTIC RESERVOIR (Lower Bolton Pond)

Lower Willimantic Reservoir is a state-owned pond of 178.4 acres located in Tolland County in the townships of Bolton and Vernon. It has a maximum depth of 26 feet and an average depth of 11.3 feet. The original pond basin was natural, but the water level has been raised with a dam of concrete, masonry and earth. The bottom varies considerably from one area to another and is made up of sand, gravel, coarse rubble and boulders in the shallows, and mud and swampy ooze in the deeper sections. Submerged and emergent vegetation is scarce, and is confined to the shallows. Water transparency is considerably reduced by a dark, tea-colored stain. This impoundment is fed by overflow from Middle Willimantic Reservoir. Thermal stratification of the water does not take place.

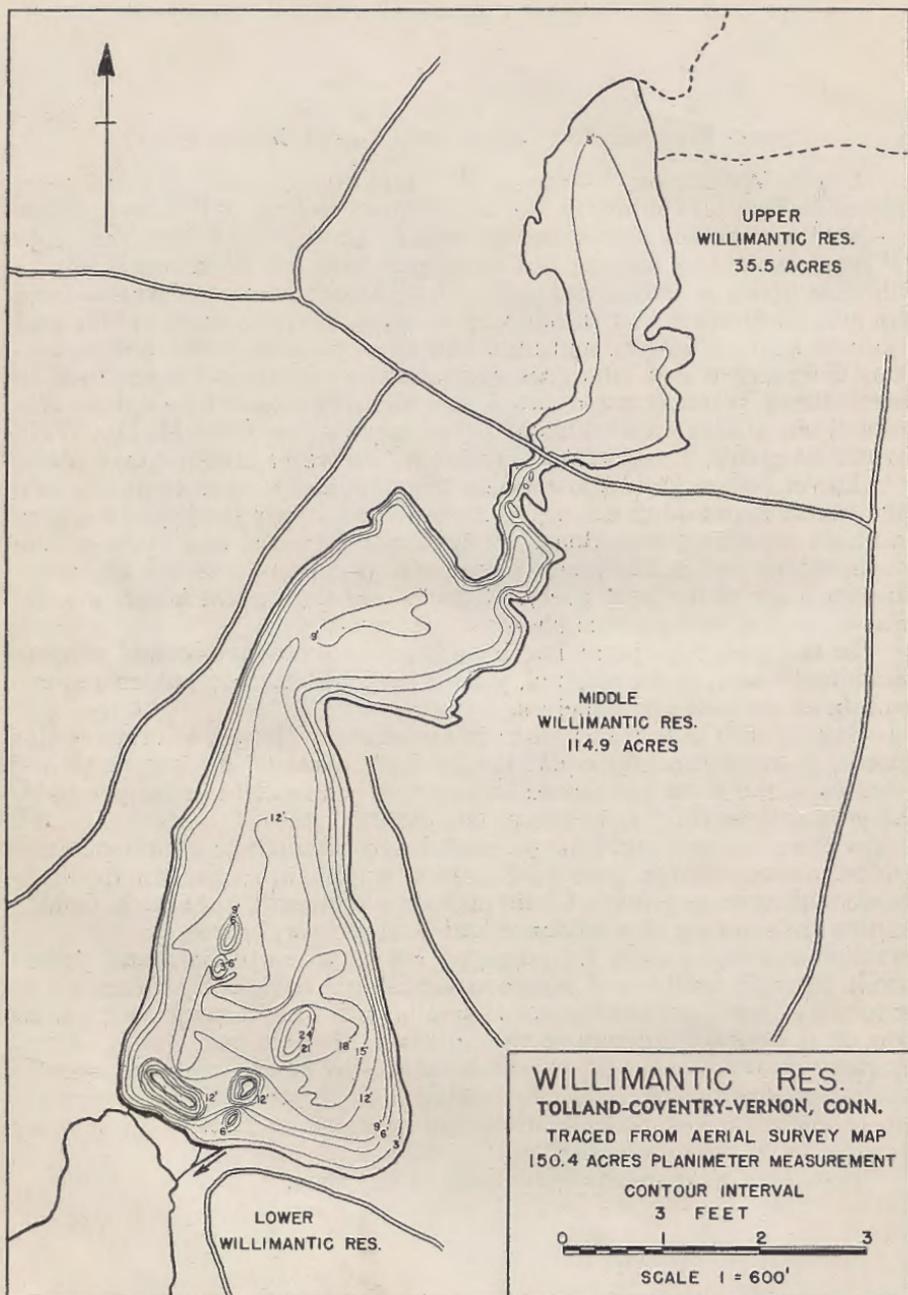
Lower Bolton Pond is owned by the state and is open to public fishing. Access is provided through a state-owned access road, parking area and boat launching area. Boats are available for rental at a livery on the southwestern end of the pond. Picnic and swimming facilities are available for a fee at the boat livery. Cottages and permanent homes are numerous on the well-wooded shores of this pond.

In the past, this pond has been stocked with land-locked salmon, smallmouth bass, chain pickerel, yellow perch, bullheads, golden shiners, sunfish, calico bass and alewives.

Smallmouth bass are common in abundance. The growth rate of this species is approximately equal to the state average. Yellow perch are common in the older age classes and extremely abundant in the young-of-the-year and yearling age classes. The growth rate of this species is well below the state average. Bluegill sunfish are common in abundance and exhibit above-average growth. Common sunfish are common in abundance with average growth. Chain pickerel are present, but scarce. Golden shiners are common in abundance and bullheads are scarce.

Bolton Pond should be managed for smallmouth bass and yellow perch. Bluegill sunfish and common sunfish are sufficiently numerous to seriously affect the reproduction of smallmouth bass through nest predation. It is desirable to reduce the numbers of these two sunfish. Local property owners can assist in sunfish control by raking over the nests or by dropping pellets of sodium hydroxide in the nests. Both of these methods of control result in the death of the eggs and eventually bring about a reduction in the numbers of adult sunfish.

No special regulations are needed at this time.



MIDDLE WILLIMANTIC RESERVOIR (Middle Bolton Pond)

Middle Willimantic Reservoir is an artificial impoundment located in Tolland County in the township of Vernon. This state-owned body of water has a surface area of 114.9 acres, a maximum depth of 26 feet and an average depth of 9.8 feet. Submerged and emergent vegetation is abundant in the shallow shoreline areas. Elsewhere in the pond, aquatic vegetation is scarce. The pond bottom is variable and is composed of sand, gravel, rubble and boulders overlain with swampy ooze. Thermal stratification of the waters in this pond does not take place.

Access to this pond is provided through a state-owned right-of-way located between the upper and the middle ponds. There are several cottages on the shoreline of this pond but, in general, shoreline development is low.

Middle Bolton Pond has been stocked with yellow perch, chain pickerel, smallmouth bass, bullheads, common sunfish, calico bass and golden shiners.

Yellow perch are common in abundance. The growth rate of this species is below average. Largemouth bass and smallmouth bass are either very scarce or absent from the waters of this pond. Chain pickerel are present, but scarce. The growth rate of this species was not determined. Golden shiners, common sunfish and bullheads are common in abundance.

Middle Bolton Pond should furnish fair fishing for panfish and poor fishing for game fish.

This pond is probably best suited for largemouth bass. Lower Bolton Pond is a relatively good smallmouth bass pond and it is undesirable to stock largemouth bass in the pond immediately above it. Largemouth bass are present in very small numbers in this group of ponds and, in time, will probably become firmly established in one or more of the three ponds making up the Willimantic Reservoir system. If this occurs and they do not become established in the middle pond, it will then be desirable to stock this pond with 50 to 75 adult largemouth bass.

No special regulations are needed at this time.

UPPER WILLIMANTIC RESERVOIR (Upper Bolton Pond)

Upper Willimantic Reservoir is a small, shallow, artificial impoundment. It has a surface area of 35.5 acres, a maximum depth of 5 feet and an average depth of 2.5 feet. Upper Bolton Pond is state-owned and located in the townships of Vernon and Coventry in Tolland County. The pond is almost completely choked with submerged and emergent vegetation. The pond bottom is mostly of swampy ooze. Thermal stratification does not take place in this body of water.

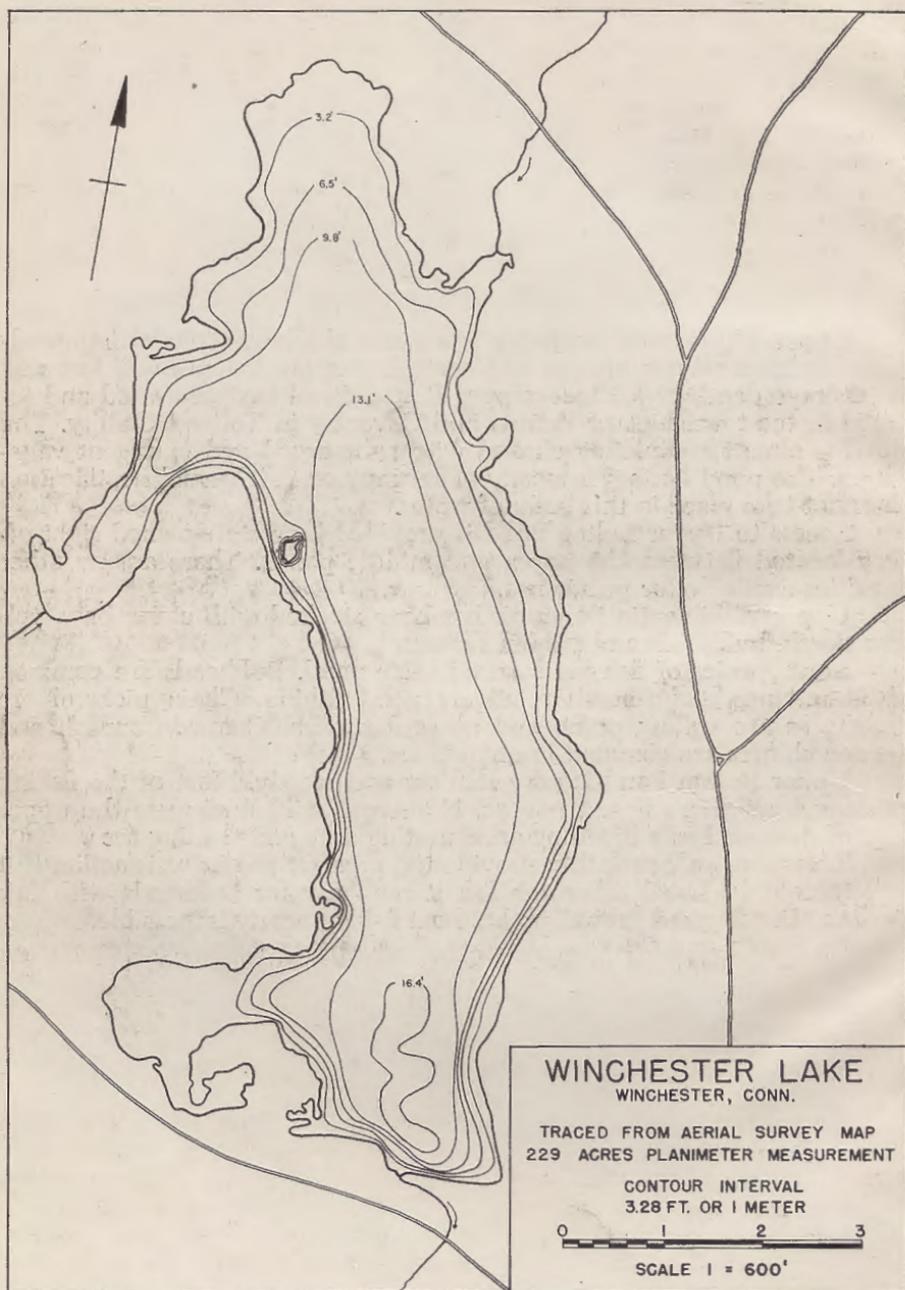
Access to Upper Bolton Pond is provided by a state-owned right-of-way located between the upper and middle ponds. There are no other facilities available for public use.

Upper Willimantic Reservoir has been stocked with calico bass, yellow perch, bullheads and golden shiners.

Most species of fish are scarce in this pond. Bullheads are common in abundance and furnish relatively good fishing. Chain pickerel are scarce, as are yellow perch and bluegill sunfish. Common sunfish and golden shiners are common in abundance.

Upper Bolton Pond is very shallow and weedy. Most of the fishing is done from shore near the dam. Numerous wild ducks use the upper end of this pond as a breeding area, nesting area and feeding area.

This pond will probably provide the greatest angler satisfaction if it is left as it is. Local fishermen fish it regularly for bullheads with fair success. Dense weed growth makes boat fishing nearly impossible.



WINCHESTER LAKE

Winchester Lake is artificial in origin. The dam is of earthen and masonry construction, and is in excellent condition. At the time this lake was formed, the basin was not cleared of trees and shrubs. The basin was flooded and then the trees were cut above the ice level the following winter. As a result of this operation, there are many stumps and dead trees still standing. This lake is in Litchfield County in the township of Winchester. It has a surface area of 229 acres, a maximum depth of 16 feet and an average depth of 13 feet. Luxuriant growths of submerged vegetation cover most of the lake bottom. The bottom is of coarse gravel, boulders and mud. Water transparency is reduced to approximately four feet by a dark, tea-colored stain. Water from this lake is used for industrial



FIGURE 67. Winchester Lake showing the trees left when lake was flooded.

purposes and, as a result, the lake level fluctuates moderately. The shoreline is almost entirely wooded.

These waters are privately owned, but are open to public fishing through a cooperative agreement between the owners and the Torrington Fish and Game Club. Access is provided through a boat livery sponsored by the Torrington Fish and Game Club. Fishing is allowed by permit and shore fishing is prohibited. Angling is limited to the hours between 6:00 a.m. and 10:00 p.m., during the period from the third Saturday in April through October 31.

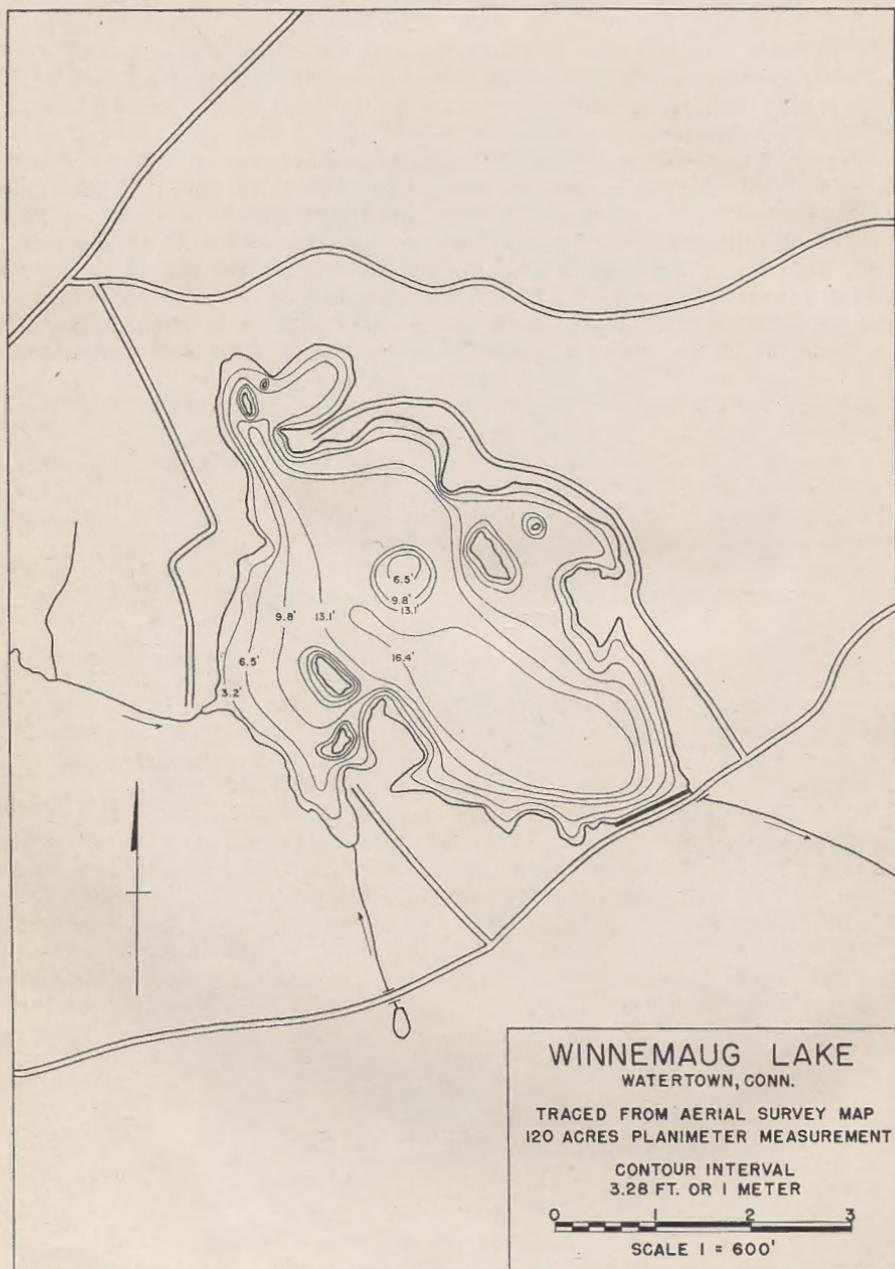
Winchester Lake has been stocked with yellow perch, bullheads, sunfish, calico bass, chain pickerel and largemouth bass.

Yellow perch are common to abundant. Chain pickerel and common

sunfish are scarce. Largemouth bass, calico bass and bullheads are common in abundance. Golden shiners are abundant. The growth rates of chain pickerel and yellow perch are poor. Largemouth bass and calico bass exhibit very good growth rates.

Yellow perch, bullheads and golden shiners are too abundant for the available food supply and, as a result, do not attain satisfactory growth. Chain pickerel have been given special protection in these waters for several years, but have not gained in abundance. As a result, this species is not capable of controlling the populations of panfish and forage fish. Largemouth bass are increasing in numbers and if given additional protection, under a 14-inch minimum legal length, should become sufficiently abundant to effectively control the number of panfish and forage fish.

Due to the abundance of stumps, standing trees, brush and submerged vegetation, these waters are difficult to fish. The skilled angler willing to expend a little extra effort should have excellent fishing for largemouth bass and calico bass in Winchester Lake.



LAKE WINNEMAUG (Wattles Pond)

Lake Winnemaug is located in Litchfield County in the township of Watertown. It is artificial in origin and the dam is constructed of earth and masonry. Wattles Pond, as it is often called, has a surface area of 120 acres, a maximum depth of 16.5 feet and an average depth of 7.9 feet. It is fed by very small brooks and bottom springs. Submerged and emergent vegetation is abundant, particularly in the shallow shoreline areas. The pond bottom is of rocks, sand and coarse gravel. There are numerous emergent stumps in the northern end of the pond. The waters are above average in fertility. There is no thermal stratification of the water in this lake. Water from Lake Winnemaug is used for industrial purposes and the lake level is subject to severe seasonal fluctuation.

This body of water is privately owned but is open to public fishing. Access is provided through a boat livery at the southwestern end of the lake. Public swimming facilities are available for a fee. Shoreline development is moderate and cottages are numerous.

Lake Winnemaug has been stocked with yellow perch, chain pickerel, bullheads, calico bass, sunfish, smallmouth bass, largemouth bass and golden shiners.

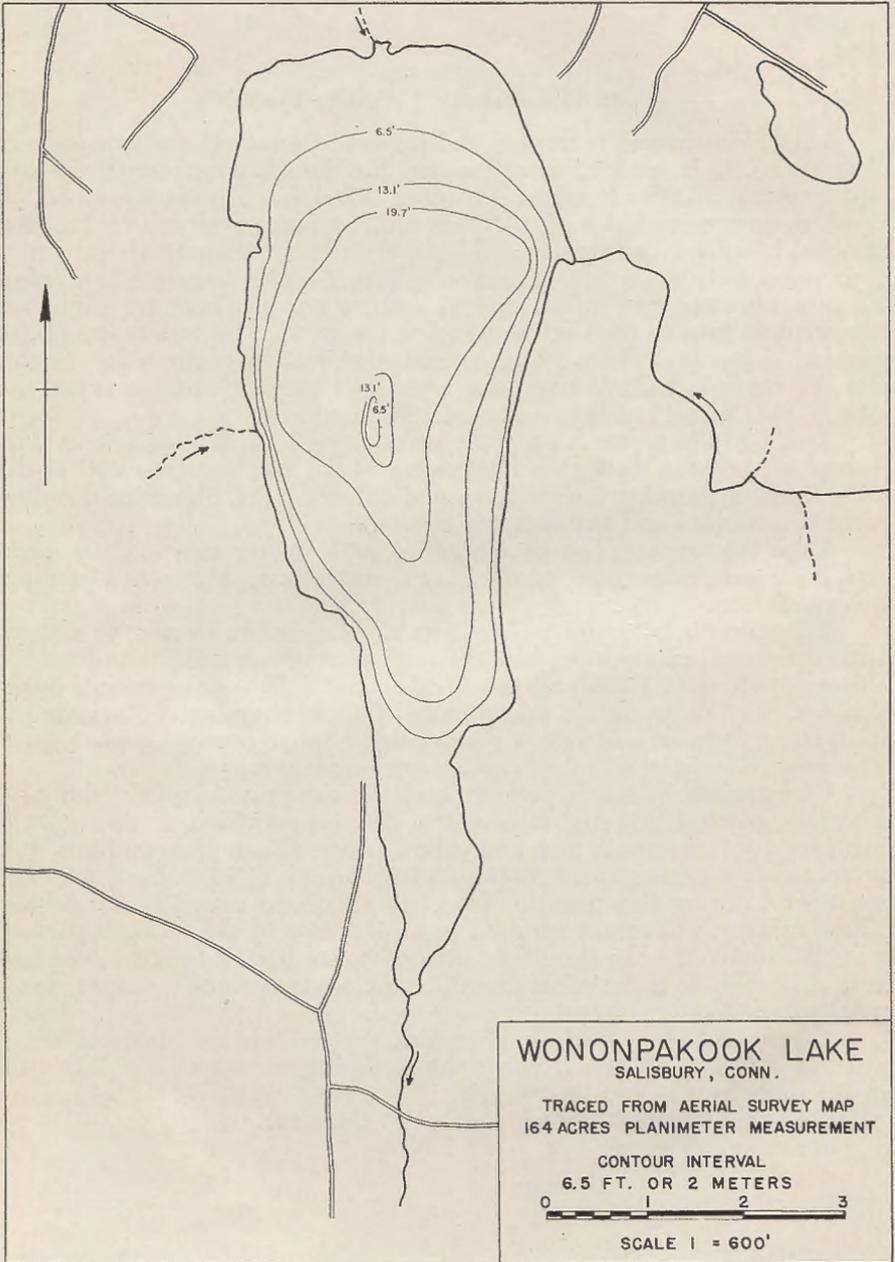
Largemouth bass and yellow perch are common in all age classes. Chain pickerel, calico bass, bluegill sunfish, common sunfish and golden shiners are scarce. Carp and tench (a carp-like fish) are present, but it was not possible to obtain an estimate of their abundance. Largemouth bass, chain pickerel and yellow perch exhibit above-average growth rates. The growth rates of all other species are below average.

Largemouth bass and yellow perch should provide good fishing.

The greatest angling satisfaction can be provided if this lake is managed for largemouth bass and yellow perch. Chain pickerel have been protected in this lake with a minimum legal length of 16 inches for several years, and during this time the lake has also been closed to ice fishing. These measures have not resulted in an increase in the pickerel population. Winnemaug Lake should be opened to ice fishing to aid in the harvest of panfish. It is desirable to reduce the fluctuation of the water level, particularly during the spring.

If carp and tench become abundant, reclamation may become advisable. In this eventuality, it would be desirable to restock the lake with largemouth bass and yellow perch.

No special regulations are needed at this time.



WONONPAKOOK LAKE (Long Pond)

Wononpakook Lake is natural in origin, with the level raised by an earthen and masonry dam. The dam is in poor repair and the drawdown mechanism is no longer in operating condition. This lake is located in Litchfield County in the township of Salisbury. Long Pond, as it is commonly called, has a surface area of 164 acres, a maximum depth of 24.5 feet and an average depth of 11.5 feet. It is fed by very small brooks and surface drainage. The shoreline is partially wooded. Submerged and emergent vegetation is abundant. The bottom is of coarse gravel, rock and mud. Copper sulfate has been used extensively in these waters to control algae.

Shoreline development is only moderate. There are several cottages and two large camps on the shores of the lake. Outboard motors are limited to three horsepower.

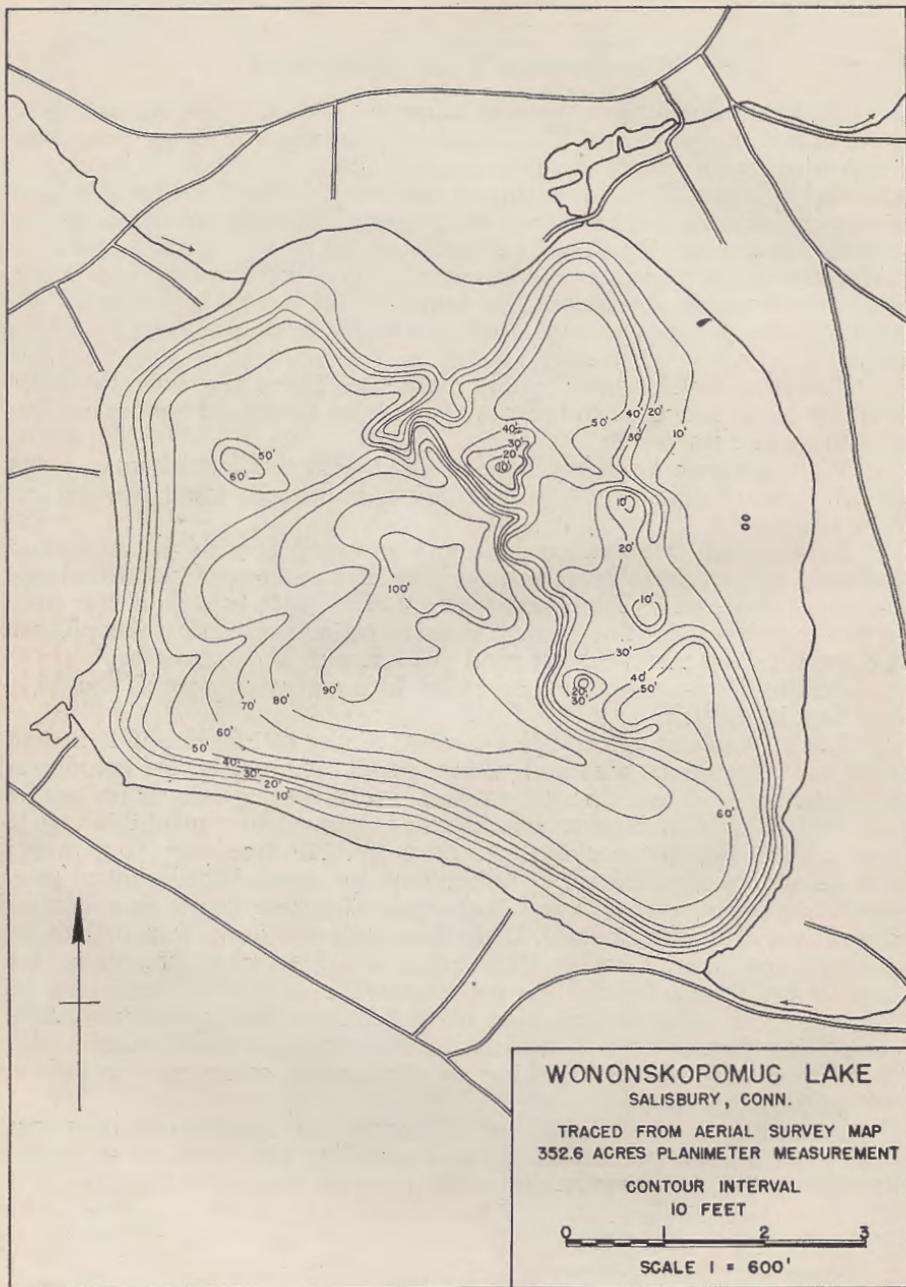
Wononpakook Lake has been stocked with smallmouth bass, largemouth bass, chain pickerel, yellow perch, bullheads, smelt, sunfish and calico bass.

Largemouth bass, calico bass and common sunfish are abundant. Yellow perch, golden shiners and chub suckers are common in abundance. Chain pickerel and bullheads are scarce. Largemouth bass growth is equal to the state average. The growth rates of calico bass and chain pickerel are poor. Yellow perch exhibit good growth, well above average.

Fishing for largemouth bass, calico bass and yellow perch should be excellent in this lake.

Long Pond can provide the greatest angler satisfaction if it is managed for largemouth bass and yellow perch. The growth of submerged vegetation is so dense, that it furnishes excessive escape cover for panfish and forage fish. Chemical treatment was employed to control this vegetation in 1956, but the resulting increase in fertility from decaying vegetation caused an algal bloom of nuisance proportions. Weed control treatments should be discontinued. There may be some merit in controlled drawdown of the water level. If the lake is drawn down four or five feet during September, October, November and December, the game fish, panfish and forage fish will be concentrated in a smaller area. This will allow the game fish to forage on other fish more easily and may aid in controlling the numbers of panfish and forage fish. In addition, controlled drawdown may aid in checking or eliminating submerged vegetation within the exposed area.

A minimum legal length of 14 inches for largemouth bass may, through increased predation, aid in controlling the numbers of panfish and forage fish. No other special regulations are needed at this time.



WONONSKOPOMUC LAKE

Wononskopomuc Lake has a surface area of 352.6 acres, a maximum depth of 108 feet and an average depth of 36.3 feet. It is located in Litchfield County in the township of Salisbury and is natural in origin with the level raised slightly. The dam is of earthen and masonry construction and is in good condition. This lake resembles East Twin Lake in many of its characteristics, but the water is more transparent and submerged vegetation may be found growing in depths as great as 40 feet. The lake is thermally stratified and even the deepest water is well supplied with dissolved oxygen.

Lakeville Lake, as it is commonly known, is controlled by the town of Salisbury. Shoreline development is very light and there are only a few



FIGURE 68. Trout stocking at Wononskopomuc Lake, Salisbury.

cottages on the shores of the lake. Access to these waters is provided through a town-operated boat livery and boat launching area in the town-owned park at the northeastern end of the lake in the village of Lakeville.

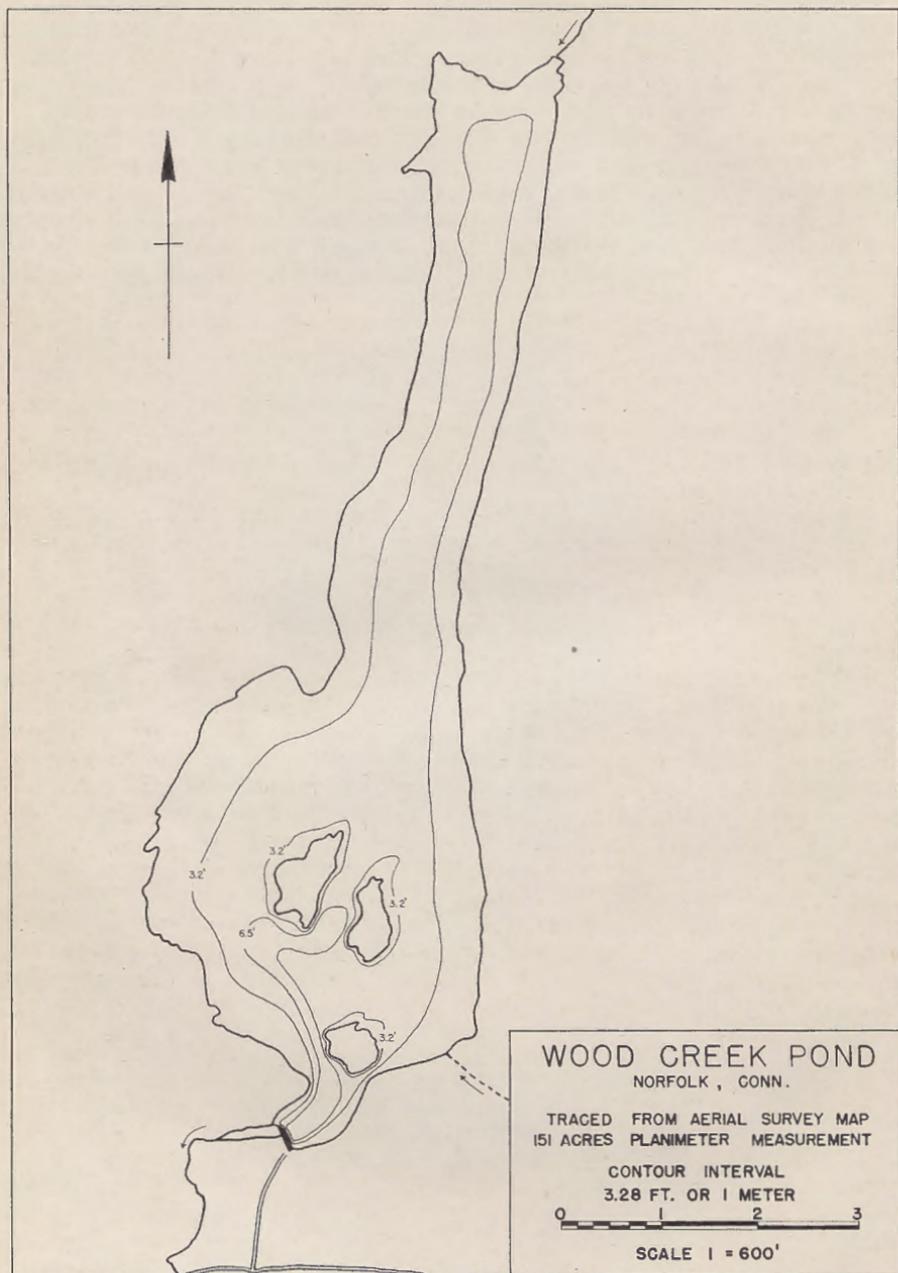
Wononskopomuc Lake has an extensive stocking history and has been stocked in the past with chain pickerel, yellow perch, bullheads, smelt, smallmouth bass, golden shiners, sunfish, calico bass, land-locked salmon, lake trout, golden trout, rainbow trout, brook trout, brown trout and round whitefish.

Largemouth bass, smallmouth bass, chain pickerel, yellow perch, red-bellied sunfish, common sunfish, golden shiners and lake trout are present, but scarce. Rainbow trout, brown trout and brook trout are common in the age class stocked, but are scarce in holdover age classes. The

growth rates of all warm-water fish are average or below average. Trout growth is excellent.

Fishing in this lake is poor. A great many trout are caught, but on the average, only one trout is caught for every six hours of angling. The catch per hour of warm-water fish is considerably less and, on the average, more than fifty hours are required to catch one of these fish.

Wononskopomuc Lake contains an extremely large volume of water suitable for trout management. This lake can produce the greatest angler satisfaction if it is reclaimed and then restocked with rainbow trout. Over the past three years, this lake has produced a yearly catch of about 6,000 trout. If the lake is reclaimed and stocked only with rainbow trout, it can be expected to produce a yearly catch of 20,000 to 25,000 trout. After reclamation, the use of fish as bait would be prohibited.



WOOD CREEK POND

Wood Creek Pond is owned by the state and is open to public fishing. It is located in Litchfield County in the township of Norfolk. The pond has a surface area of 151 acres, a maximum depth of 8 feet and an average depth of 4 feet. It is artificial in origin, and the dam is constructed of earth and concrete. The dam and spillway section were completely rebuilt in 1952. The pond bottom is of rocks, mud and swampy ooze. Emergent vegetation is very abundant. There are numerous tree stumps in the water. The shoreline is entirely wooded.

Access to the pond is provided by a state-owned right-of-way passable for cars. Parking and boat launching facilities are available for public use near the dam.

Wood Creek Pond has been stocked with chain pickerel, yellow perch, bullheads, calico bass, sunfish, golden shiners, smallmouth bass and largemouth bass.

This pond was drawn down for nearly a year while the old log spillway was replaced, a control gate installed and the dike repaired and reseeded. Apparently, due to the extended drawdown, game fish and panfish were relatively scarce. Largemouth bass, chain pickerel, yellow perch, common sunfish, calico bass and bullheads are present in sufficient numbers to re-populate the pond. All species were scarce at the time of the survey. Growth rates are above average for all species.

Wood Creek Pond will furnish the greatest angler satisfaction if it is managed for largemouth bass, chain pickerel and yellow perch. A minimum legal length of 14 inches is recommended for largemouth bass. This extra protection for bass should result in greater numbers of bass and increased predation on panfish and forage fish. Due to the extremely abundant escape cover, large numbers of game fish will be necessary to keep the panfish and forage fish under control and prevent stunting.

WOODRIDGE POND

Woodridge Pond is located in Hartford County in the township of West Hartford. It is artificial in origin. The dam is constructed of earth. The pond is fed by surface runoff and springs. It has a surface area of 27.9 acres, a maximum depth of 6 feet and an average depth of 3.3 feet. The bottom is mostly of mud and swampy ooze. Submerged vegetation is extremely abundant. These "water weeds" almost completely choke the pond and make fishing and boating very difficult. The shoreline is well-wooded. The water is stained a dark, tea color and transparency is considerably reduced.

Shoreline development is extensive and there are numerous permanent homes on the shores of the pond. This pond is not open to public fishing. Use of the pond is restricted to residents and members of the Ridgewood Association.

The State Board does not have any stocking records for this pond.

Largemouth bass and calico bass are common in abundance. Bluegill sunfish are abundant. Common sunfish and bullheads are relatively scarce. Chain pickerel are reported from this pond, but none was taken or observed by the survey unit. Largemouth bass growth is slightly above average. All other species exhibit below-average growth rates.

Woodridge Pond contains large numbers of sizable bass, but dense growths of submerged vegetation make fishing difficult. As a result of the dense vegetation, fishing is probably poor except for the skilled angler.

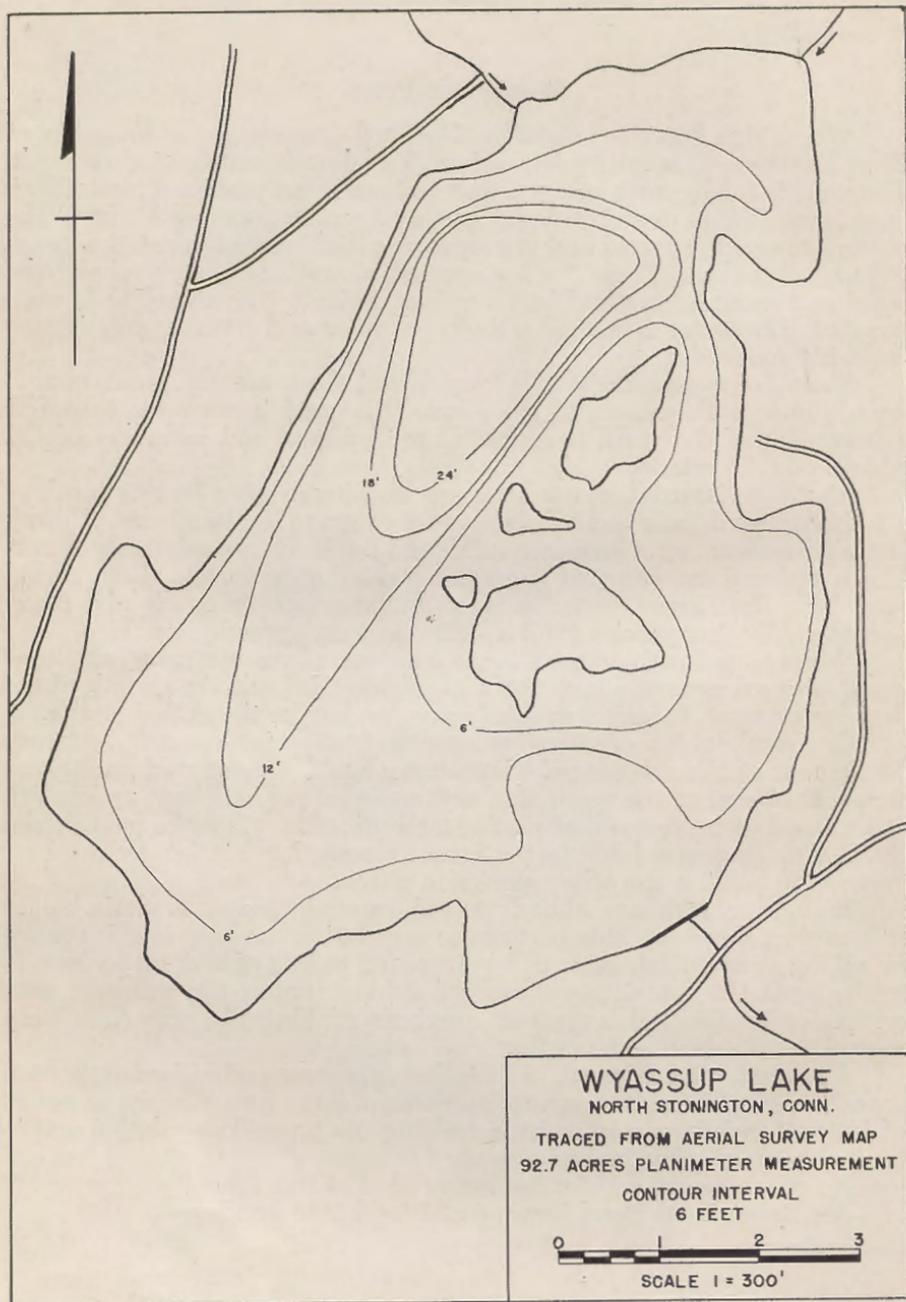
Chemical control of the submerged vegetation is a necessity. At least 50 percent of the submerged vegetation should be removed each year. Removal of part of the vegetation will make fishing and boating less difficult. In addition, removal of part of the vegetation will make panfish and forage fish more available to the bass. Increased predation by the bass may aid in holding the other species in check.

Bluegill sunfish are abundant and stunted, and it is desirable to reduce their numbers. Members of the association can help in this control by raking over sunfish nests or by dropping pellets of sodium hydroxide in the nests. An association-sponsored fishing contest for children, with prizes for catching the greatest numbers of bluegills, may also help control the numbers of bluegills.

A minimum legal length of 14 inches is recommended for largemouth bass. This should result in greater numbers of large bass. Greater numbers of 12-to-14 inch bass may assist in holding the bluegill population within the limits imposed by the food supply.

No other special regulations are needed at this time.

See Buena Vista Pond for map of Woodridge Pond.



WYASSUP LAKE

Wyassup Lake is located in New London County in the township of North Stonington. This small pond has a surface area of 92.7 acres, a maximum depth of 28 feet and an average depth of 8.9 feet. It is natural in origin with the level raised slightly by a small earthen and masonry dam. The bottom is mostly of sand, gravel, rubble and boulders. Submerged and emergent vegetation is scarce and confined mostly to the shoal areas. The water is quite clear and transparency normally exceeds 10 feet. This impoundment is thermally stratified and the bottom waters are deficient in dissolved oxygen. The water level fluctuates considerably.

There are several cottages on the shores of the lake, but shoreline development is light. Public access is provided through a state-owned parking area and boat launching ramp.

Wyassup Lake has been stocked with rainbow trout, largemouth bass, chain pickerel, yellow perch, smallmouth bass, bullheads, calico bass, shiners, sunfish, white perch and brown trout.

White perch, yellow perch and bullheads are common. Calico bass and chain pickerel are scarce. Smallmouth bass are present, but are quite scarce. The growth rates for all species are relatively poor and below average.

Wyassup Lake is best suited for smallmouth bass and yellow perch management. At the present time, the small population of smallmouth bass is infested with the bass tapeworm and reproduction is very seriously reduced because of this infestation.

It is recommended that this lake be reclaimed. The lake can then be restocked with catfish, land-locked alewives and a disease-free strain of smallmouth bass from Coventry Lake.

No special regulations are needed at this time.

Since the above material was set in type, this pond has been reclaimed with an application of rotenone and will be managed for warm-water fishing.

LAKE ZOAR

Lake Zoar is located in New Haven and Fairfield Counties in the townships of Oxford, Monroe, Newtown and Southbury. It is artificial in origin and was formed by the construction of a large concrete dam across the Housatonic River. This dam is in excellent condition and is used to impound water to generate electricity. Shoal areas are severely limited by the steep slope of the shoreline and are very scarce, except in the extreme northern end of the lake. The bottom is mostly of rock, broken ledge and boulders. Submerged vegetation is abundant in the shoal areas, but scarce elsewhere. Water transparency is greatly reduced by a dense algal bloom. Lake Zoar is extremely fertile due to domestic pollution and sewage plant effluents from towns above the lake. The lake has a surface area



FIGURE 69. Obtaining data from fish samples.

of 975 acres, a maximum depth of 75 feet and an average depth of 24.6 feet. It is thermally stratified, but this stratification varies from day to day due to heavy drawdown.

Lake Zoar is privately owned, but is open to public fishing. Shoreline development is limited because of the precipitous terrain around the lake. Access is provided through boat liveries. At the present time, there is no public boat launching area on the lake.

Lake Zoar has been stocked with pike-perch, yellow perch, white perch, chain pickerel, calico bass, bullheads, golden shiners, smallmouth bass and sunfish.

Largemouth bass, smallmouth bass, white perch and yellow perch are abundant in all age classes. Calico bass are abundant in the younger age classes, but are scarce in the adult age classes. Bluegill sunfish are

abundant in shoal areas, but are scarce in the deeper water. Common sunfish, red-bellied sunfish, rock bass, bullheads, common suckers, chub suckers and golden shiners are present but scarce. Chain pickerel are extremely scarce. Carp are present, but their abundance was not determined. Largemouth bass, smallmouth bass, white perch and yellow perch growth rates are excellent. Other species exhibit above-average growth rates.

Lake Zoar should provide excellent fishing for largemouth bass, smallmouth bass, yellow perch and white perch. Bass are more abundant in this lake than in any other lake or pond checked by the survey unit. Fishing pressure is comparatively light, and the harvest of game fish and panfish from this lake is only a small percentage of the amount that could be safely harvested. A greater harvest of these fish is essential if they are to be utilized before they are lost to the angler through old age and death.

This impoundment should be opened to fishing on an unlimited basis. The present harvest of game fish and panfish is so small that all seasons, size limits and daily limits can be removed without endangering the fish populations. If such a regulation is enacted, a close check of the abundance and growth of the various species should be kept so that corrective measures, if needed, can be taken in time to preserve the excellent fishing.

See back cover pocket for map of Lake Zoar.

CLASSIFICATION OF LAKES AND PONDS
According to Availability of Public Access

Name of Water	Public Access Present			Desirability of Acquisition			Believed Unavailable
	De-veloped	Unde-veloped	Unsatis-factory	High-est	Moder-ate	Low-est	
Alexander Lake				x			x
Alvia Chase Res.					x		
Amos Lake	x						
Andersons Pond					x		
Andover Lake				x			x
Ashland Pond					x		
Aspinook Pond					x		
Avery Pond		x					
Babcock Pond				x			x
Ball Pond	x						
Bantam Lake				x			
Barkhamsted Res.				x			x
Bashan Lake				x			
Batterson Pk. Pd.	x						
Beach Pond	x						
Beachdale Pond			x				
Beardsley Pk. Pd.	x						
Beaver Dam Lake							x
Beseck Lake				x			
Bigelow Pond		x					
Billings Lake	x						
Black Pond Middlefield-Meriden	x						
Black Pond-Woodstock	x						
Bolton Notch Pond		x					
Breakneck Pond		x					

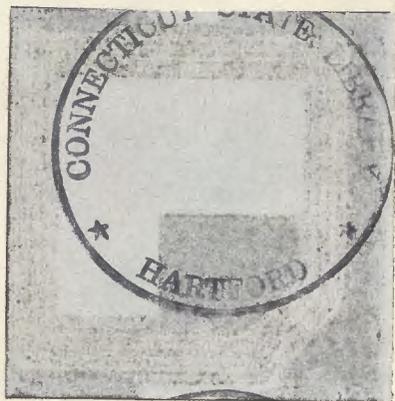
<i>Name of Water</i>	<i>Public Access Present</i>			<i>Desirability of Acquisition</i>			<i>Believed Unavailable</i>
	<i>De-veloped</i>	<i>Unde-veloped</i>	<i>Unsatis-factory</i>	<i>High-est</i>	<i>Moder-ate</i>	<i>Low-est</i>	
Buena Vista Pond				x			x
Burr Pond		x					
Candlewood Lake				x			
Cedar Lake	x						
Cedar Pond				x			
Cedar Swamp Pond				x			
Chamberlain Pond					x		
Compensating Res.				x			
Lake Compounce						x	x
Cream Hill Pond				x			x
Crystal L. - Middletown					x		
Crystal Lake Ellington-Stafford	x		x		x		
Crystal Pond					x		
Danielson Mill Pd.						x	
Dodge Pond	x						
Dog Pond	x						
Dooley Pond	x						
Doolittle Pond				x			x
Dunham Mill Pond					x		x
Eagleville Lake					x		
East Twin Lake		x	x	x			
Fitchville Pond					x		
Five Mile Pond					x		
Lake Forest				x			x
Lake Gaillard				x			x
Gardner Lake				x			
Glasgo Pond					x		
Great Hill Pond					x		

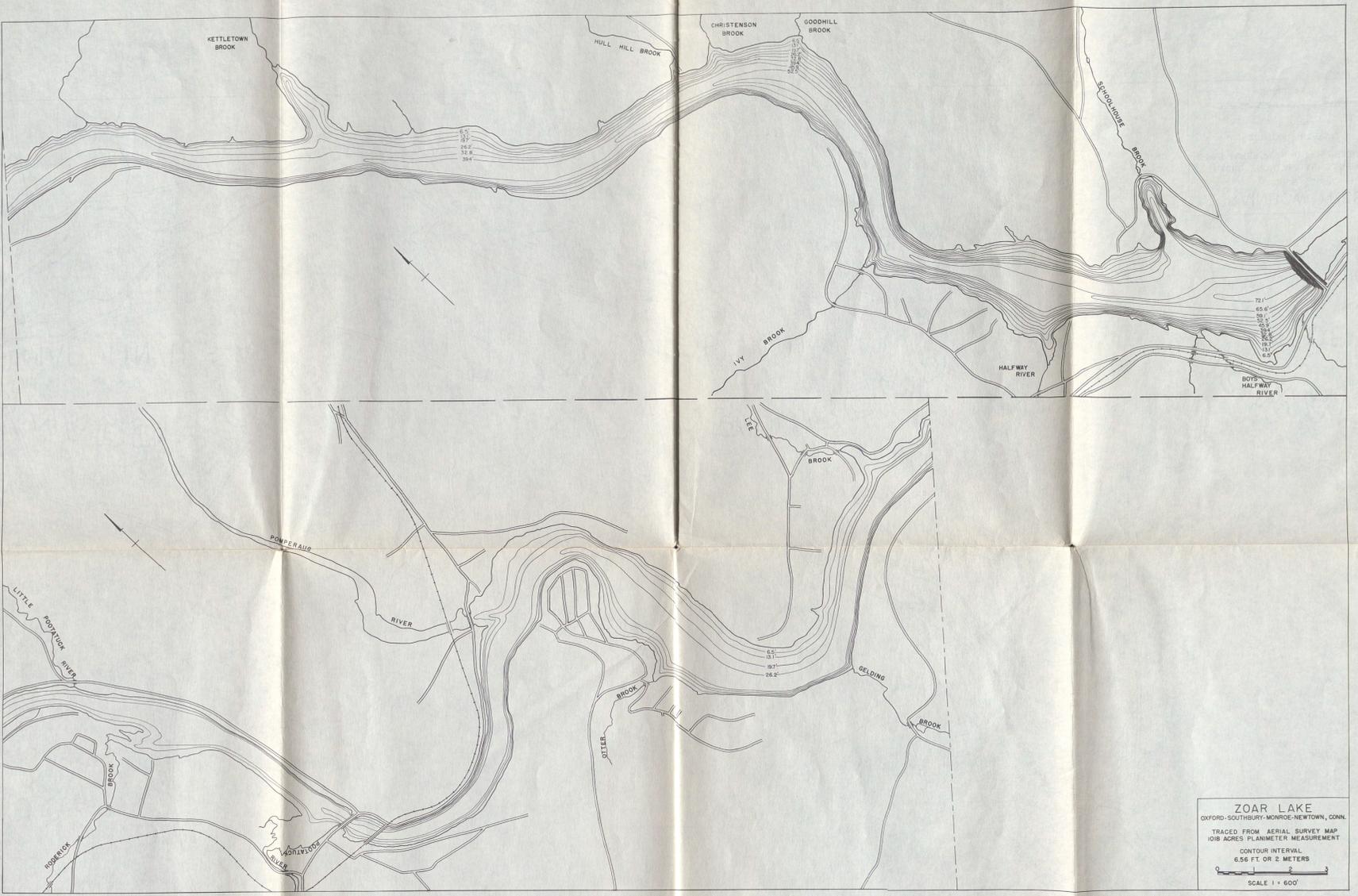
<i>Name of Water</i>	<i>Public Access Present</i>			<i>Desirability of Acquisition</i>			<i>Believed Unavailable</i>
	<i>De-veloped</i>	<i>Unde-veloped</i>	<i>Unsatis-factory</i>	<i>High-est</i>	<i>Moder-ate</i>	<i>Low-est</i>	
Green Falls Res.		x					
Halls Pond		x	x				
Hampton Res.		x					
Hartland Pond							x
Hatch Pond		x	x				
Hidden Lake					x		
Higganum Reservoir		x	x				
Highland Lake				x			
Hitchcock Lakes				x			
Holbrook Pond	x						
Hopeville Pond		x					
Lake Housatonic				x			
Howells Pond		x					
Killingly Res.					x		
Knowlton Pond					x		
Lake of Isles				x			
Lantern Hill Pond		x	x				
Laurel Lake		x	x				
Lake Lillinonah				x			
Linsley Pond				x			
Little Pond	x						
Long Meadow Pond-Bethlehem					x		x
Long Meadow Pond-Middlebury				x			
Long Pond-Ledyard-N. Stonington	x						
Long Pond-Thompson					x		
Mamasasco Lake				x			

Name of Water	Public Access Present			Desirability of Acquisition			Believed Unavailable
	De-veloped	Unde-veloped	Unsatis-factory	High-est	Moder-ate	Low-est	
Manitook Lake				x			
Margerie Res.					x		x
Mashapaug Lake	x						
Middle Res.					x		
Mohawk Pond	x						
Moodus Res.				x			
Moosup Pond				x			
Mt. Riga Lake					x		
Mt. Tom Pond		x	x	x			
Mudge Pond	x						
New City Pond					x		
North Farms Res.		x					
Northfield Pond			x				
North Spectacle Lake				x			
Norwich Pond	x						
Nystroms Pond			x				
Old Marsh Pond					x		
Oxoboxo Pond					x		
Pachaug Pond			x	x			
Packer Pond						x	
Pameacha Pond						x	
Paper Mill Pond					x		
Park Pond					x		
Pataganset Lake		x					
Peat Works Pond		x					
Pickerel Lake	x						
Pine River Res.				x			x
Lake Pocotopaug				x			

<i>Name of Water</i>	<i>Public Access Present</i>			<i>Desirability of Acquisition</i>			<i>Believed Unavailable</i>
	<i>De-veloped</i>	<i>Unde-veloped</i>	<i>Unsatis-factory</i>	<i>High-est</i>	<i>Moder-ate</i>	<i>Low-est</i>	
Powers Lake	x						
Putnam Park Pond			x				
Quaddick Res.	x						
Quassapaug Lake							x
Quonnipaug Lake				x			
Rainbow Res.				x			
Riga Lake					x		
Rogers Lake	x						
Roseland Lake	x			x			
Russell Jennings Pd.	x						
Lake Saltonstall				x			x
Samp Mortar Res.					x		x
Scoville Res.				x			x
Shaw Lake	x						
Shenipsit Lake				x			x
South Spectacle Lake			x	x			
Squantz Pond	x		x	x			
Stafford Res.					x		
State Line Pond					x		
Stillwater Pond			x				
Swan Lake				x			
Taftville Pond					x		
Taunton Pond				x			x
Terramuggus Lake				x			
Toby Pond				x			
Tolland Marsh Pond					x		
Turkey Hill Res.		x					
Tyler Pond	x						

<i>Name of Water</i>	<i>Public Access Present</i>			<i>Desirability of Acquisition</i>			<i>Believed Unavailable</i>
	<i>De-veloped</i>	<i>Unde-veloped</i>	<i>Unsatis-factory</i>	<i>High-est</i>	<i>Moder-ate</i>	<i>Low-est</i>	
Uncas Lake	x						
Wappaquassett Pond					x		
Waramaug Lake		x	x	x			
Waumgumbaug Lake	x		x	x			
West Hill Pond	x			x			
West Lake Res.				x			
West Side Pond	x						
West Twin Lake				x			
Williams Pond				x			
Lower Willimantic Res.	x						
Middle Willimantic Res.	x						
Upper Willimantic Res.		x					
Winchester Lake				x			
Lake Winnemaug				x			
Wononpakook Lake				x			
Wononskopomuc Lake		x					
Wood Creek Pond	x						
Woodridge Pond				x			
Wyassup Lake	x						
Lake Zoar		x	x	x			

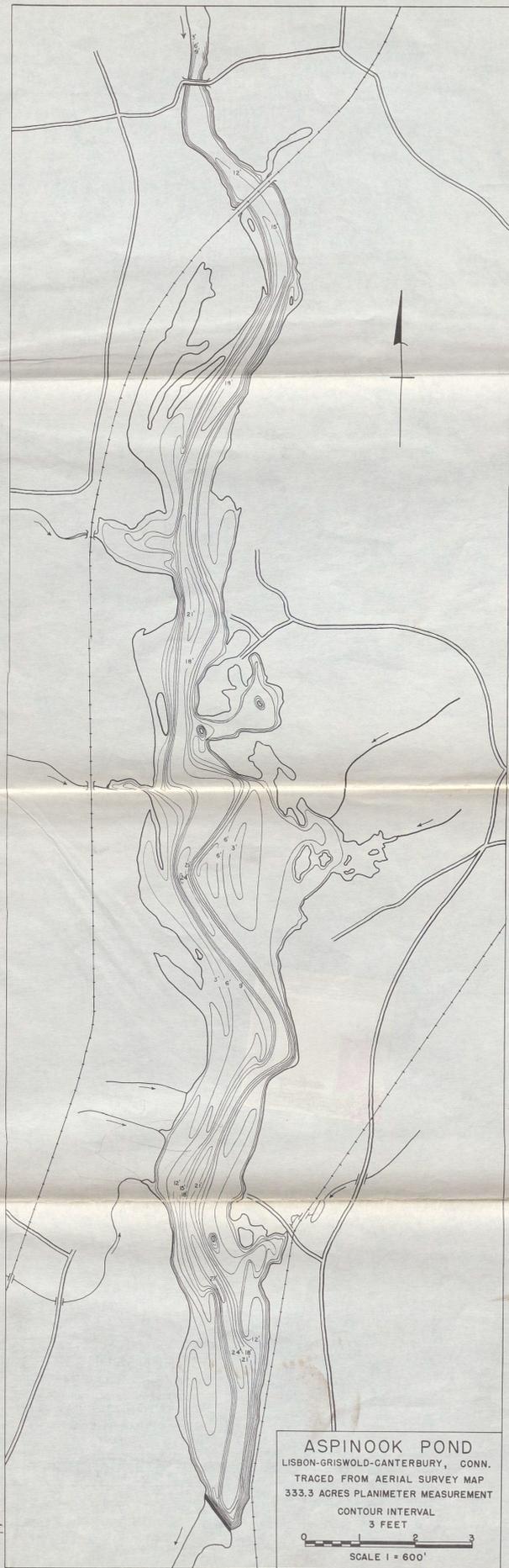




ZOAR LAKE
 OXFORD-SOUTHURRY-MONROE-NEWTOWN, CONN.
 TRACED FROM AERIAL SURVEY MAP
 1018 ACRES PLANNIMETER MEASUREMENT
 CONTOUR INTERVAL
 6.56 FT. OR 2 METERS
 0 1 2 3
 SCALE 1" = 600'



COMPENSATING RES.
 BARKHAMSTED-NEW HARTFORD, CONN.
 TRACED FROM AERIAL SURVEY MAP
 387 ACRES PLANNIMETER MEASUREMENT
 CONTOUR INTERVAL
 5 FEET
 0 1 2 3
 SCALE 1" = 600'



Ref
 Conn Dec
 F53
 fs
 map

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