ENVIRONMENTAL REVIEW TEAM REPORT
ON
MONO POND
COLUMBIA, CONNECTICUT

OCTOBER, 1975

Project CPA-CT-01-00-1037

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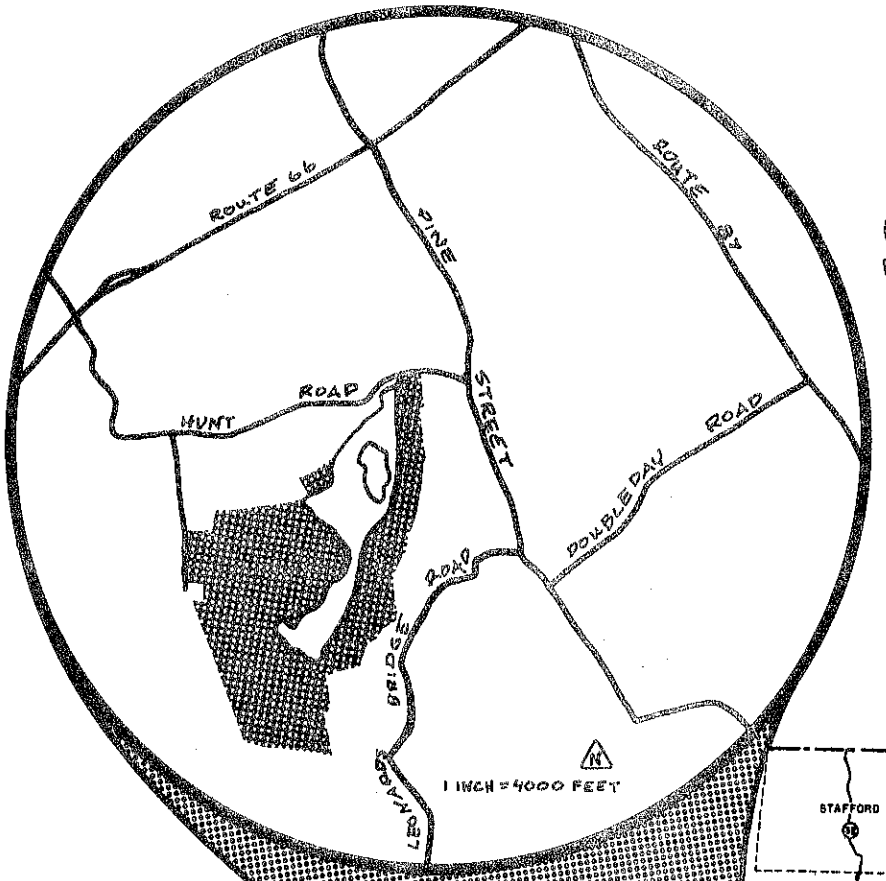
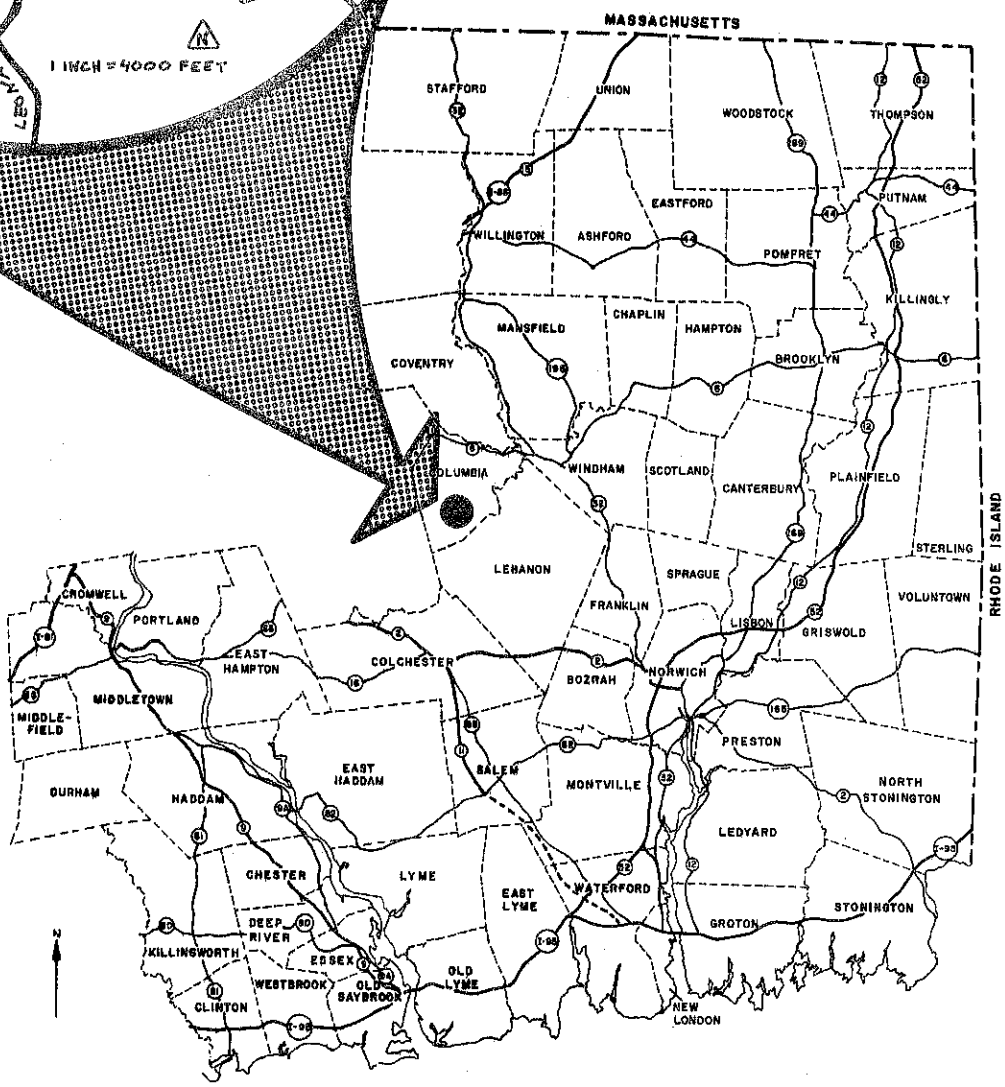
EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT PROJECT
Environmental Review Team
139 Boswell Avenue
Norwich, Connecticut 06360

LOCATION OF STUDY SITE



MONO POND
Columbia, Connecticut



EASTERN CONNECTICUT
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT

ENVIRONMENTAL REVIEW TEAM REPORT
ON
MONO POND
COLUMBIA, CONNECTICUT

This report is an outgrowth of a request from the Columbia Conservation Commission and Planning and Zoning Commission, with the approval of the landowner, to the Tolland County Soil and Water Conservation District (S&WCD). The S&WCD referred this request to the Eastern Connecticut Resource Conservation and Development (RC&D) Project Committee for their consideration and approval as a project measure. The request was approved and the measure reviewed by the Environmental Review Team (ERT).

The soils of the site were mapped by a soil scientist of the United States Department of Agriculture (USDA) Soil Conservation Service (SCS). Reproductions of the soil survey, a table of soils limitations for certain land uses, and a topographic map showing the Mono Pond property boundaries were forwarded to all members of the Team prior to their review of the site.

The Team that field-checked the property consisted of the following personnel: Donald Summers, District Conservationist, SCS; Dean Rector, Soil Scientist, SCS; Sidney Quarrier, Geologist, Connecticut Department of Environmental Protection (DEP); Huber Hurlock, Forester, DEP; Charles Phillips, Fisheries Biologist, DEP; Joseph Risigo, Wildlife Biologist, DEP; Malcolm Shute, Sanitarian, Connecticut Department of Health; Lester Barber, Regional Planner, Windham Regional Planning Agency; and Linda Simkanin, ERT Coordinator, Eastern Connecticut RC&D Project.

The Team met and field-reviewed the site on Thursday, July 10, 1975. Reports from each Team member were sent to the ERT Coordinator for review and summarization.

This report is not meant to compete with private consultants by supplying site designs or detailed solutions to development problems. This report identifies the existing resource base and evaluates its significance to the proposed development and also suggests considerations that should be of concern to the developer and the Town of Columbia. The results of this Team action are oriented toward the development of a better environmental quality and the long-term economics of the land use.

The Eastern Connecticut RC&D Project Committee hopes you will find this report of value and assistance in making your decisions on this particular site.

If you require any additional information, please contact: Miss Linda M. Simkanin, Environmental Review Team Coordinator, Eastern Connecticut RC&D Project, 139 Boswell Avenue, Norwich, Connecticut 06360, 889-2324.

INTRODUCTION

The proposed Mono Pond development is located on a 450-acre tract of land which includes Mono Pond. The property is located about 1 1/2 miles south of the junction of Connecticut Routes 66 and 87. Undeveloped woodlands surround the site, with some single-family homes along Hunt Road near the north boundary of the site. As no development plans existed for the property, the Environmental Review Team was requested to evaluate the site for various possible uses, which include single-family homes, Planned Unit Development (PUD), elderly housing, and possible recreational use of the pond.

For purposes of evaluation, the site has been divided into three areas, based on their soil types, and they are: ledge-shallow to bedrock; stony upland till-shallow to hardpan; and wetland. These areas are shown on the map on page 4 The wetland soils include poorly and very poorly drained soils which are generally unsuited for development. The stony upland till soils - shallow to hardpan - are the most suitable soils for development on the site, although steep slopes will impose difficulties in design and construction, and hardpan areas will limit placement of waste disposal systems. The ledgy soils are generally shallow to bedrock with steep slopes and many bedrock outcrops or exposures, and impose severe development limitations, although pockets of deep, well-drained soils can exist within the area which are suitable for development. A detailed table summarizing the practical development limitations for each soil type is provided in the Appendix of this report.

This report will present a detailed description of the soils, geology, wildlife, and other natural characteristics of the Mono Pond property, followed by an evaluation of the different aspects of development as they relate to the natural resources. Consideration will also be given to the compatibility and suitability of the site for the various potential land uses mentioned above. Recommendations will generally vary according to the three soil type areas described above.

EVALUATION

TOPOGRAPHY AND GEOLOGY

The Mono Pond property includes approximately 335 acres of land that surrounds and drains into Mono Pond. The pond itself has an area of approximately 103 acres, and there is an 11 acre steep, rocky island in the northern half of the pond. At the northern end of the pond, there is a man-made dam and spillway. The east bank of the pond is formed by a relatively smoothly sloping hillside. The western banks of the pond are more irregular in shape and slope, and a portion of the southern terminus of the pond is marshy and stream-fed. The bulk of the property extends to the west and south of the pond. (Refer to the topography map on the next page for property boundary locations.)

Topography

The Mono Pond site is situated in the eastern upland section of Connecticut, approximately six miles southwest of Willimantic. Geologically, the site is typical of glaciated southern New England, with a thin covering of sediments laid down over the consolidated bedrock. The topography of the site varies considerably: there are low-lying, wet marsh areas; gently sloping hillsides; moderate to steep slopes, some with bedrock outcrops; and a partially open-water lake.

General areas of steep (greater than 15%) and moderate (8-15%) slopes are highlighted on the topography map. It should be noted that these areas of steep and moderate slopes are closest to the lake. Rock is at or near the surface in the areas where the slopes are steepest.

Bedrock Geology

The Mono Pond site is underlain by gray colored gneisses and schists. The bedrock exposures or outcrops (places where bedrock is visible at the surface) are also highlighted on the topography map. The largest area of concentration of bedrock outcrops is on hill #669, on the west bank of the pond, although outcrops exist along other portions of the western bank, and on the island. (See BEDROCK GEOLOGIC MAP OF THE COLUMBIA QUADRANGLE by George Snyder, U.S.G.S. Map GQ-592, 1967 for further bedrock geology information.)

Bedrock is significant in the areas where it is near the surface. In these areas construction and development can be expensive, and disposal of septic wastes through conventional subsurface disposal systems may be difficult. In addition, domestic water supply will presumably have to be supplied from bedrock wells.

Surficial Geology

Although the surficial geology of the site has not been mapped, sandy glacial till, bedrock, boulder concentrations, and poorly drained swamp soils are the major ground materials and conditions. As mentioned, hill #669 has numerous bedrock outcrops; to the west of the hill is a swampy area that drains both north and south; to the west of the swampy area is a slope which leads up to the road. This slope has areas of well-drained soils, poorly drained soils and bouldery

TOPOGRAPHY

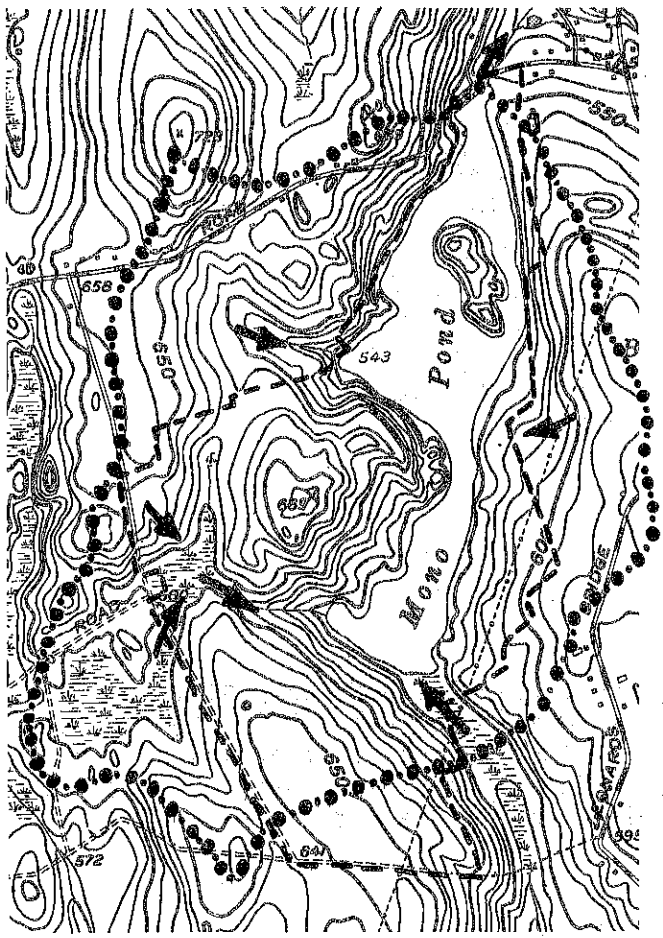
BEDROCK OUTCROPS

MODERATE SLOPES 8-15%

STEEP SLOPES 15% OR GREATER

SITE BOUNDARY

1 INCH = 2000 FEET



DRAINAGE AREA

SITE BOUNARY

BOUNDARY OF DRAINAGE AREA

DIRECTION OF FLOW

1 INCH = 2000 FEET

areas. The hills in general contain some areas of well-drained soils, but numerous till samples taken over portions of the site revealed boulder concentrations and poorly drained areas especially on the lower portions of the slopes and in areas near the lake.

Thus, considerable variability concerning drainage and soil texture exists. There are local areas that are poorly drained on the slopes of hills, and this restricted drainage is presumably caused by the nearby presence of hard, compact till material or by bedrock being close to the land surface. Similar areas of restricted drainage and boulder concentration exist around the pond. Steep slopes, rocky soils, and local poorly drained areas will present some potential problems for development of land on the western side of the pond.

Mono Pond

The Mono Pond area appears as a large swampy area and a small pond on the 1890 topographic map. The present pond is man-made. The dam which established the present water levels was probably put in some time after 1900. The present lake has an area of approximately 103 acres and has a drainage area of about 882 acres. (Refer to the drainage map on the preceding page.) A major part of the drainage for the pond comes out of the swampy area that lies at the southwest end of Wells Wood Road. The pond itself appears to be quite shallow especially at the southern end, although no specific information on water depths was available. While the team was at the site, large areas of the southern end of the pond were covered with lily pads and other fresh water marsh vegetation. In some areas shrubs were growing some distance out into the pond area.

The present lake has an area of approximately 103 acres and has a drainage of about 882 acres or about 1.2 square miles. (Refer to the drainage map on the preceding page.) Average surface runoff in this drainage area is about 1.8 cubic feet per second (cfs) per square mile. Thus, average flow into the pond should be something like 2.16 cfs or about 1.38 million gallons per day (mgd). The drainage basin is underlain mostly by till materials and summer low flows drop to very small volumes. Summer discharges into the pond could be something like 0.1 cfs per square mile. This would be about 77,000 gallons per day flowing into the lake from surface water for conditions of a 2 year, 30 day low flow. This inflow would probably cease altogether during real drought conditions. During dry conditions water levels in the lake are maintained by the inflow of groundwater. During the summer months evaporation off of the lake's surface would be approximately 300,000 gallons per day and this must be made up by inflow of ground and surface water if the lake levels are maintained. Ground water inflow may be something in the order of 300,000 to 400,000 gallons per day. Land development in the drainage basin will tend to alter the amount and quality of groundwater flow into the pond.

The lake has a restricted water budget which will be altered by land development in the drainage basin. A more detailed study should be made of the water budget before lake engineering or land development is planned especially if the quality of the lake is an important development consideration.

How will dredging affect Mono Pond?

As has been indicated above, Mono Pond has a limited amount of water available. Dredging would probably not affect the general water budget. Water depths would be greater, summer water temperatures might be lower in the deeper parts of the pond. The lake would still be very short of water in the summer months. It is strongly recommended that a lake ecologist be retained to accurately describe the existing lake systems and to predict the actual changes that would occur after dredging.

The most probable effect of dredging to downstream areas is from sediment that could be washed downstream. The specific amount of this as a problem would depend on the type of material dredged, the method of dredging, the location of the area being dredged relative to the course of through-flowing water, and the amount of through-flowing water at the time of dredging. It is suggested that dredging could be accomplished during the summer months of low water flow and there would be little sediment carried to downstream areas.

Insufficient data is available to determine if dredging is practical or feasible. Probing at the south end of the lake indicates that there is no significant thickness of muck at that local area. It also indicates that the bottom is quite bouldery. Conditions may be different in other parts of the pond. Removal of 5 feet of material over 80 acres of pond would involve the movement of something like 600,000 yards of material. A wetlands permit would be required for such dredging. After the thickness and material characteristics of the bottom are systematically determined by drilling or some form of subsurface testing, then the feasibility of excavation and of disposal of the material could be evaluated. It is strongly recommended that dredging not be seriously considered or permitted until a considerable amount of data is gathered about the thickness and physical characteristics of the material to be dredged. The economics of dredging can only be evaluated after testing is done and possible methods of excavation and disposal are identified.

SOILS

A detailed soils map of the Mono Pond property is given in the Appendix to this report. As the map is an enlargement from the original 1,320'/inch scale to 1,000'/inch, the soil boundary lines shown should not be viewed as absolute boundaries, but rather as guidelines to the distribution of soil types on the property. The soils map, along with the report, Soil Survey, Tolland County, Connecticut (USDA, SCS, 1966), can serve as an educational tool regarding the identification and interpretation of soils. The natural soil group is also given for each soil. A booklet, Know Your Land, Natural Soil Groups for Connecticut, published by SCS and the Connecticut Cooperative Extension Service, provides a clear explanation of the natural soil groups.

With the examination of the soils map, and the accompanying charts indicating general soils limitations for various land uses (also found in the Appendix), a correlation between the soils and the surficial geology can be seen. Soils in Natural Soil Group A are terrace soils underlain by water deposited beds of sand and gravel (stratified drift). Soils in Group C are upland soils that were formed in areas of till, and are commonly found on the tops and sloping sides of hills or

drumlins. The C soils are usually stony, and are underlain by compact glacial till, or hardpan, at 16 to 36 inches below the land surface. Group D soils are typically found on steep side slopes and narrow ridge tops and are characterized by stoniness and shallow depths to bedrock. Group F soils are usually found in swampy areas, consist of deep peat and muck deposits with a year-round high water table.

The physical characteristics of the site together with the natural processes operating within an area, create situations which can be beneficial or problematic to the proposed development. In addition to the geologic data, soil classifications provide a good indicator of the suitability of an area for development. For purposes of discussion and evaluation, this site has been divided into three areas on the basis of soil types and related characteristics. (These areas are shown on the soil types map on the next page.)

The wetland soil areas account for approximately 45 acres of poorly and very poorly drained soils which consist of deep peat and muck deposits and which exemplify a year-round high water table. Typically the A-3b, C-3b, and F-1 soils are found where the topography is low and relatively flat as compared to the surrounding land, and water draining from upland areas collects in, and may cover the surface of these low-lying areas.

The "D" group, or ledgy or shallow to bedrock soil areas cover about 157 acres of the site. The bedrock is typically less than two feet below the land surface, with numerous bedrock outcrops (or exposed rock surfaces) found in the central portion of the site, along the western shore of Mono Pond, and on the major hilly portion of the site. Within this region it should be understood that there can be pockets of deep soil which, if found, can provide acceptable locations for development, or at least individual house sites. These pockets can tend to be difficult and costly to locate, and may be widely spaced as the site contains areas of very steep slopes as well as irregular topography.

The stony upland soils underlain by hardpan comprise roughly 133 acres of the site. Permiability above the hardpan is moderate but the pan drastically reduces percolation. Septage problems may arise during the wet season when the pan restricts the downward movement of excess water in the soil. In those times, excess rain water, that from spring thaws, or septage effluent absorption fields will move rapidly downslope over the surface of the pan. An overload of nutrients or pollutants into Mono Pond could pose serious problems to that aquatic environment. In addition, the till commonly is quite stony which adds difficulty when excavating for basements and on-site waste disposal systems. Development problems on the site can also be related to areas of steep slope, especially when it exceeds 15 percent. Soils C-2a, C-2b, and C-3b exhibit seasonal high water tables; the other Group C soils on the site do not exhibit high water tables during any part of the year, and permiability ranges from slow to very slow in the sub-soil.

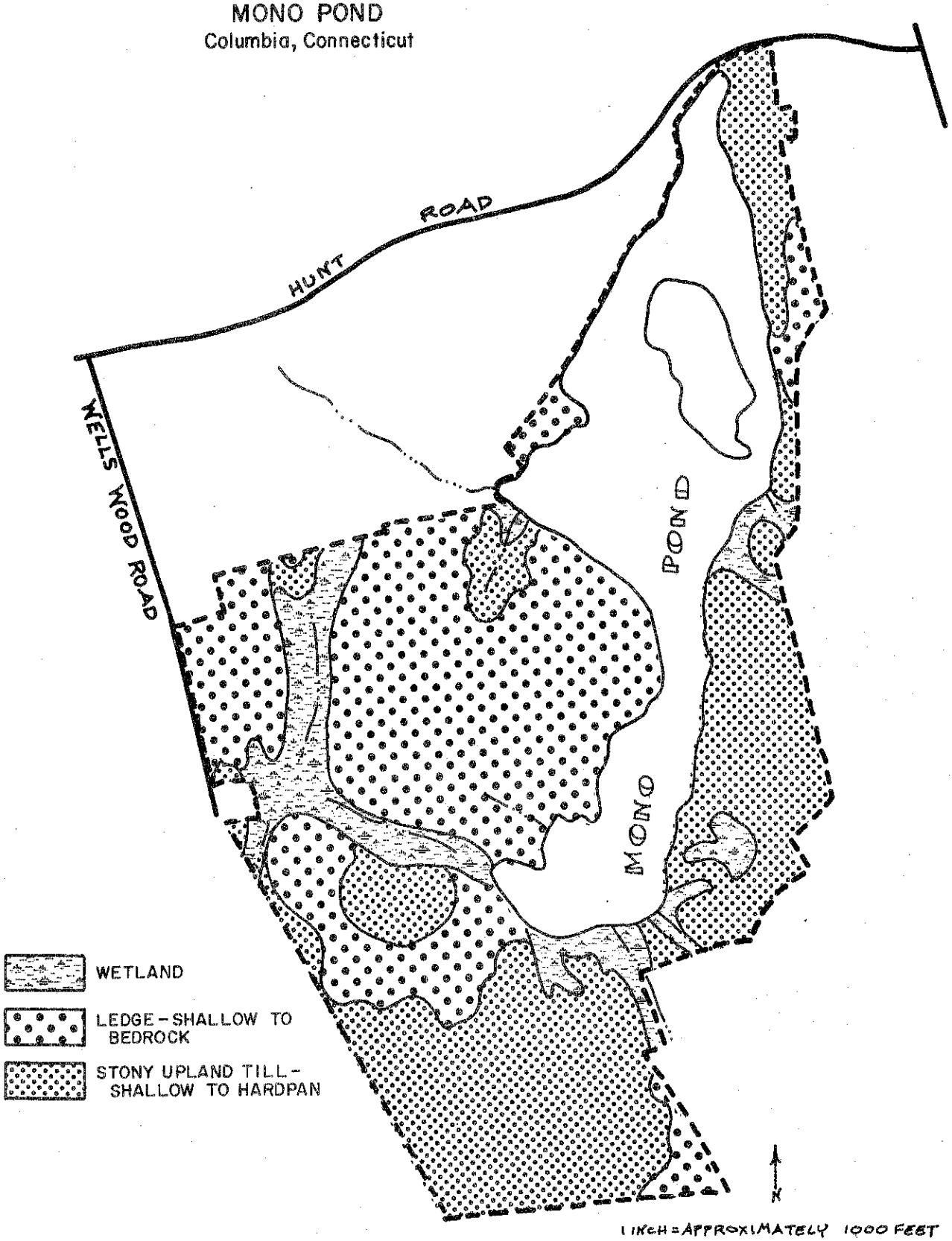
FISH AND WILDLIFE

From a fisheries and wildlife viewpoint, Mono Pond and surrounding property lends itself best to passive forms of recreation such as canoeing, fishing, hiking, and picnicking. Although one small area in the pond might be dredged for swimming, the daily flow rate through the pond will only support small numbers of swimmers. During the summer swimming season, at least 1,000 gallons flow per day is needed

SOIL TYPES

MONO POND

Columbia, Connecticut



per swimmer; Mono Pond did not appear to have this kind of flow when visited by the Team during July. A detailed examination of seasonal flow rates is desirable to determine what kind of swimming public Mono Pond might serve.

Mono Pond represents primarily a panfish fishery - including such species as perch, calico or rock bass, bullheads, catfish, or sunfish. The southern half of the pond presently appears to possess good habitat qualities for migrant waterfowl. Indications from the dispersion of existing aquatic vegetation suggests that the bottom fertility is increasing to support vegetative types which will enhance waterfowl nesting and brood habitat.

Dredging will not significantly benefit the fish population; in addition, it will drastically reduce the quality of existing waterfowl habitat by limiting, if not eliminating desired species of aquatic vegetation. Any development on adjoining land may be detrimental to forest wildlife types as well as aquatic and wetland forms. Abundant signs of deer and grouse populations were noted on the site, with special concentrations along the southwest shores.

It is the recommendation of the fish and wildlife investigators that the Mono Pond property be preserved as a natural area permitting passive forms of recreation such as fishing, canoeing, hiking, picnicking, or birdwatching. It is further felt that if the site is developed for residential use, run-off from roads or driveways, or pollutants from individual on-site sewerage systems due to the peculiar drainage characteristics of the soils of the site, may pose serious pollution threats to the pond system.

FORESTRY

Most of the site's acreage is in an overstocked forest condition with wide variations in percent of quality trees. Forest management costs would be less than timber sale revenues where intermediate or regenerative harvests would be desirable to gain maximum growth and vigor on quality, healthy trees. In the western portion of the property, half of the volume of trees are declining value trees and should be clear-cut of everything over 2" diameter and followed by planting tulip-popular 20' x 20' stands. The cost of felling low vigor or small trees just meets the timber sale minimum value. If this is done, the residual volume should triple in ten years. Maximum sale revenue should be about $1,700.

If a residential development is going to occur in the area, it would be desirable to eliminate hazardous trees and salvage material from roads and house lot acreage. This would have to be done at least a year before actual construction work began. Volume varies, but thinnings will yield at least 1,500 board feet per acre, and roadways about 3,000 board feet per acre.

WATER SUPPLY

The site is well-removed from any source of public water currently existing in the Windham Region and is well-removed from any projected water proposed in the Region as well. With the exception of a small portion of the town along Route 6 on the Willimantic city line, none of the Town of Columbia is recommended for

water and sewer service in either the regional water plan or the State Plan of Conservation and Development.

Water supply, then, would have to be provided from on-site bedrock wells. No specific information suggests that this would be unusually expensive or difficult. However, the possibility always exists that problems could be encountered in finding a suitable supply from bedrock wells. It is recommended that necessary wells be drilled rather early in the development process to insure an available water supply.

WASTE DISPOSAL

Sewage disposal, like water retrieval, would have to be developed on-site. Sewers neither exist, nor are planned for Columbia in any of the existing Regional or State Plans. The hill area to the west of the central part of the pond presents waste disposal problems related to both the presence of bedrock, steep slopes, and poorly drained swampy areas.

200 house units would have a daily sewage waste flow of something in the order of 50,000 gallons per day. This is equal to the volume of surface water flowing into the pond during summer low flows. Although proper treatment would take care of certain waste problems, the pond as a whole would be getting a large new volume of nutrients from any waste water discharged into the ground or surface of the drainage basin. A lake ecologist should evaluate whether the additional supply of nutrients when combined with the low flows would create stagnant algae-producing conditions.

Construction densities should therefore reflect a well considered judgement as to what densities would be safe for long term, indefinite, functioning of on-site septic tanks. Serious failure of septic tanks would seriously affect the quality of the lake, the development's prime attraction, and potentially require a very expensive extension of sewer service to the site, if such extension would prove to be even remotely economically feasible. Subsurface waste disposal is more feasible on the hill to the southwest of the pond. The soils here are better drained and rock is not outcropping on the surface.

ROADS AND UTILITIES

Continued subdivision of land in this section of town will ultimately require the upgrading of the affected existing town roads. The proposed development would of course contribute to that need, and if developed at anything close to the densities permitted in the current zoning ordinance (one unit per acre) the impact would be substantial. The likely phasing of any development and the actual reduced densities likely to be feasible on the site will of course much reduce the immediate impact of any proposed development although the development will contribute to the essential need to upgrade the adjacent existing roads over time.

The location of the site, well-removed from major arteries, suggests that high or higher densities than permitted under existing zoning might be inappropriate at this location.

AESTHETICS AND PRESERVATION

The site possesses a number of intrinsic qualities which should play an important part in the shaping of any ultimate development scheme. The lake is of course the preeminent one. Careful consideration will have to be given to any proposal which might alter the natural character of the shoreline. While "urban" modification of a waterside can be attractive and a visual asset, uncontrolled private alteration of the shore front can severely damage the existing visual environmental quality of the lake. Major private alteration of the shore front should be minimized, with most changes limited to community facilities such as community docks, etc. Where private lots front on the lake, regulations should encourage the retention of the "natural" character of the lake edge. The eastern shore, where development potential is apparently limited by physical characteristics and ownership patterns would be well suited for community, pond-oriented uses.

The site is marked by a number of fine stone walls which any developed site plan should retain and exploit. The steep slopes and marked drainage patterns on the site, if the site is sensitively developed, present a strong design determinant. Both of these features suggest that standard lot-by-lot subdivision would be unable to take advantage of the variety inherent in the site. Flexibility in the zoning requirements would allow much more desirable matching of any proposed development to the site.

Clustering to attached townhouse densities would probably protect most effectively the greatest portion of the site. However, the feasibility of any form of clustering will have to be determined by careful analysis of the capabilities of the site for on-site septic disposal. Current zoning only allows a 20% reduction in acre lot bulk regulations and only allows such reduction with the presence of public water and sewer.

COMPATIBILITY OF SURROUNDING LAND USES

Scattered residential homes, one subdivision, some agriculture, and woodland characterize the land uses surrounding the proposed site. None of the area is committed to permanent open space uses, so with continuing growth, the area is likely to see more subdivision activity in large developments or scattered lots of about acre size. The proposed uses for the Mono Pond site would be compatible with this trend. Substantial clustering of development on the site would permit the retention of some of the varied, rural quality characteristics of the area now.

ALTERNATIVE LAND USES

The pond appears to have wildlife development potential, and with alteration, the pond could provide some passive recreational possibilities in the form of fishing and boating. The surrounding land would have good potential for park development in association with the pond for "nature" oriented activities. With limited public open space ownership in the town the site would be a fine open space addition.

CONCLUSIONS

The Mono Pond property is dominated by steep slopes, rocky soils, and local poorly drained areas. These natural conditions present severe and very severe limitations to various aspects of development such as on-site sewerage, basements, landscaping, and streets and parking. Roughly 90%, or 300 acres, of the site is fraught with these potential limitations. (See ACREAGE OF SOILS LIMITATIONS chart in the Appendix of this report.) One or more of these conditions cover enough of the area that moderate intensities of development would require very careful site planning and in certain areas extensive site engineering if development were possible at all. Waste disposal could present particular problems, especially since poorly functioning systems would have a greater adverse impact on the pond. The hill to the southwest offers better potential for general development. The better drained soils, more gentle slopes, less rock, and fewer swampy areas provide fewer potential problems. However, the lower slopes facing the foot of Mono Pond and the flatter land right next to the pond had numerous poorly drained areas and/or were covered with concentrations of boulders. The area near the pond itself at the southern end would present potential development difficulties.

At the present time the pond and the surrounding land seems to provide a productive shallow lake environment. The water budget for the pond is sufficient to maintain the existing lake and its systems, but the restricted flow of water to and through the pond raises questions about the potential for a swimming recreational lake type of land use. A less intensive water oriented development community might be possible. Development of the land around the lake, dredging of the lake, and other such activities would affect the lake system itself but would probably not affect downstream areas or downstream wetland systems if reasonable care is taken. If the lake is the recreational core for a proposed development, then a detailed study should be made to provide a better model of its systems.

The prospect of dredging and land development present a double change to the lake system. A thorough study of the lake would be needed to determine the effects of each and both on the lake. Dredging of the pond would totally alter what is now a productive wetland system by disruption and some destruction of fish and waterfowl habitats. Systematic testing of present depths and the character of the bottom should be done to evaluate the feasibility of dredging. With this information a lake ecologist could then attempt to predict the character of a new lake system. Boulders at the bottom of the south end of the lake suggest the need for a complete bottom survey.

Since the land surrounding the lake on the west side is not well suited for intense development due to local areas of rock exposure, poor drainage, steep slopes, and boulder concentrations, the hill area to the southwest may offer the best potential for general development. Some kind of clustering of residential units may be most suitable. As the pond is relatively shallow, whether it is dredged or not, sediment washed in during the land development process should be carefully watched. Careful control should be used to minimize the potential for erosion.

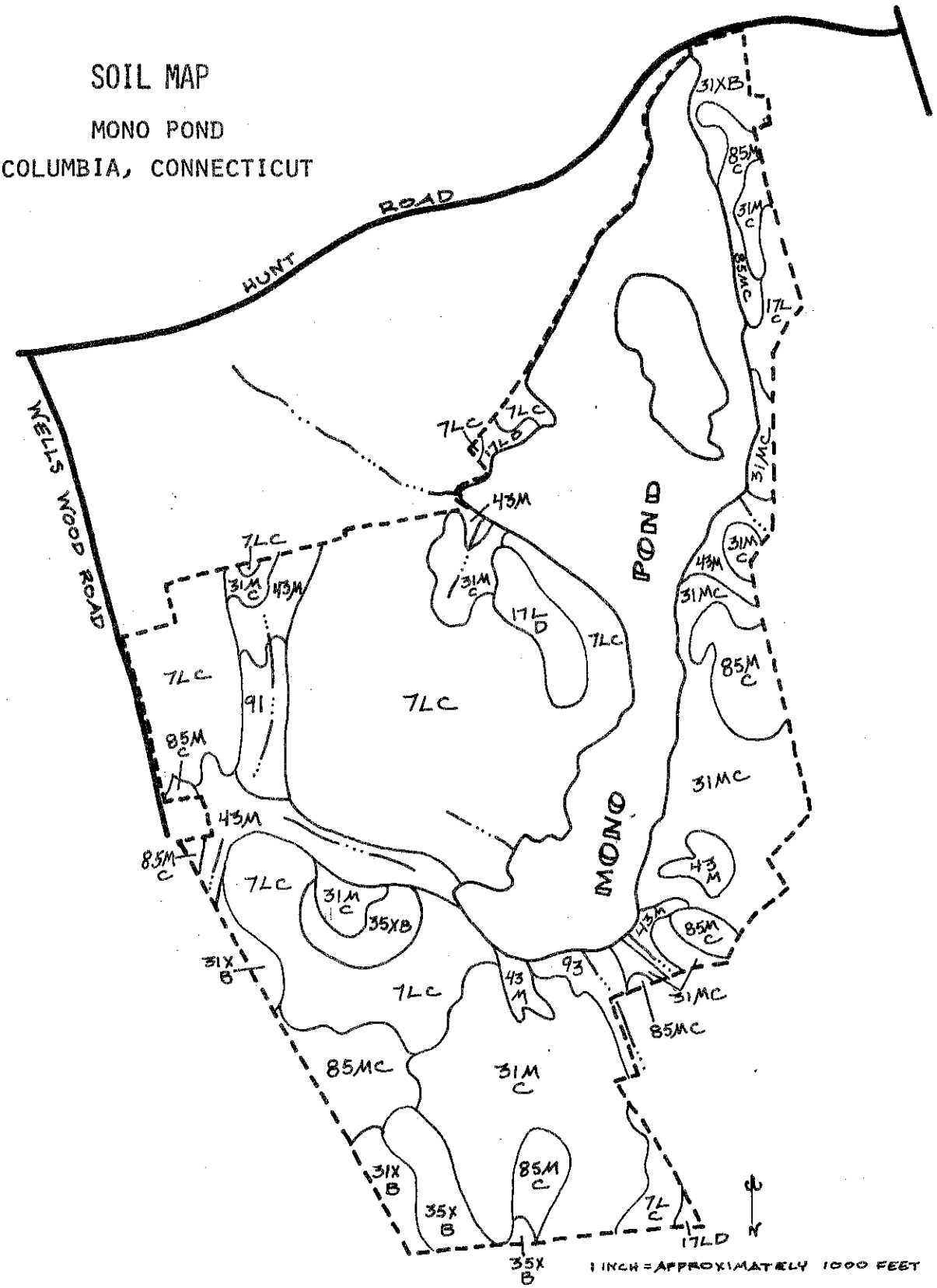
With regard for the excellent wildlife habitat qualities at Mono Pond, the suggestion from three of the Team members that Mono Pond and surrounding land be designated as a passive recreation open space parcel for the Town of Columbia should also be considered.

APPENDIX

SOIL MAP

MONO POND

COLUMBIA, CONNECTICUT



Prepared by: UNITED STATES DEPARTMENT OF AGRICULTURE,
Soil Conservation Service.

ADVANCE COPY, SUBJECT TO CHANGE. *OCTOBER, 1975*

SOILS LIMITATIONS CHART FOR MONO POND, COLUMBIA, CONNECTICUT

Natural Soil Group*	Mapping Symbols	Acres	Percent of Total Acres	Land Use Limitations For:** On-Site Sewage	Basements	Landscaping	Streets and Parking	Principal Limiting Factor
A-3b	91	7	2	4	4	4	4	High water table, unstable organic material
C-1a	35XB	13	4	3	2	2	2	Stoniness
C-1c	85MC	33	10	2	2	3	3	Stoniness,slope 3-15%
C-2a	31XB	15	4.5	3	2	2	2	Seasonal highwater table, stoniness
C-2b	31MC	72	21.5	3	3	3	3	Seasonal highwater table, stoniness
C-3b	43M	33	10	4	4	4	4	High water table
D-1	7LC	141	42	3	3	3	3	Shallow to bedrock
D-1	17LC	5	1.5	3	3	3	3	Shallow to bedrock
D-2	17LD	11	3	3	3	3	3	Shallow to bedrock, slopes 15-35%
F-1	93	5	1.5	4	4	4	4	High water table, unstable organic material
TOTAL:		335	100.0					

* Refer to Know Your Land, Natural Soil Groups for Connecticut, Soil Conservation Service, USDA Connecticut Cooperative Extension Service, for further explanation of the natural soil groups.

** Limitations: 1-slight; 2-moderate; 3-severe; 4-very severe.

ACREAGE SUMMARY OF SOILS LIMITATIONS

Total Acres = 335	Slight		Moderate		Severe		Very Severe	
	Acres	%	Acres	%	Acres	%	Acres	%
On-Site Sewerage	-	-	33	10	257	76.5	45	13.5
Basements	-	-	61	18.5	229	68	45	13.5
Landscaping	-	-	28	8.5	262	78	45	13.5
Streets and Parking	-	-	28	8.5	262	78	45	13.5