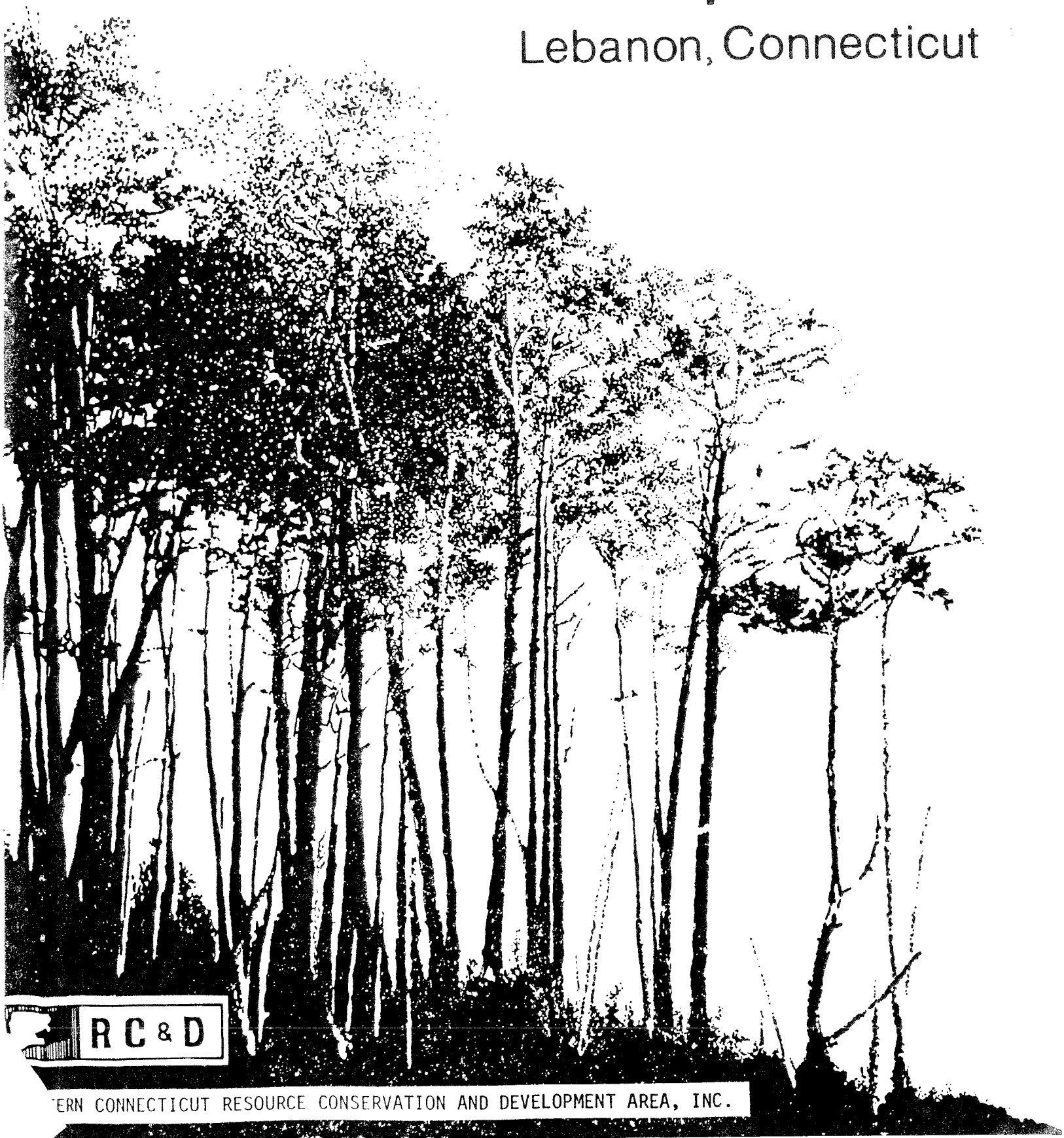
Environmental Review Team Report

Camp Laurel

Lebanon, Connecticut



R C & D

'ERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

Environmental Review Team Report

Camp Laurel

Lebanon, Connecticut

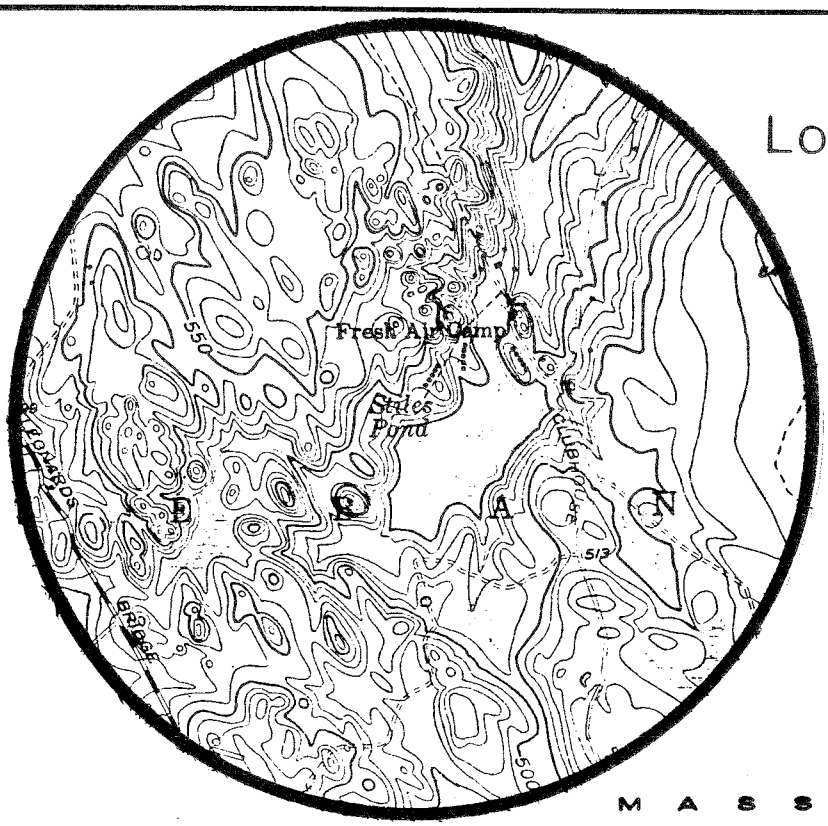
June 1984

Eastern Connecticut Resource Conservation & Development Area

Environmental Review Team
PO Box 198
Brooklyn, Connecticut 06234

Location of Study Site

CAMP LAUREL
LEBANON, CONNECTICUT



ENVIRONMENTAL REVIEW TEAM REPORT
ON
CAMP LAUREL
LEBANON, CONNECTICUT

This report is an outgrowth of a request from the First Selectman of Lebanon to the New London County Soil and Water Conservation District (S&WCD). The S&WCD referred this request to the Eastern Connecticut Resource Conservation and Development (RC&D) Area Executive Committee for their consideration and approval as a project measure. The request was approved and the measure reviewed by the Eastern Connecticut 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 map as well as a topographic map of the site were distributed to all ERT participants prior to their field review of the site.

The ERT that field checked the site consisted of the following personnel: Liz Rodgers, Soil Conservationist, Soil Conservation Service (SCS); July Wilson, Biologist, Department of Environmental Protection (DEP); Bill Warzecha, Geologist, (DEP); Pete Merrill, Forester, (DEP); Meg Reich, Regional Planner, Windham Regional Planning Agency; Paula Pendleton, Sanitarian, State Department of Health; and Jeanne Shelburn, ERT Coordinator, Eastern Connecticut RC&D Area.

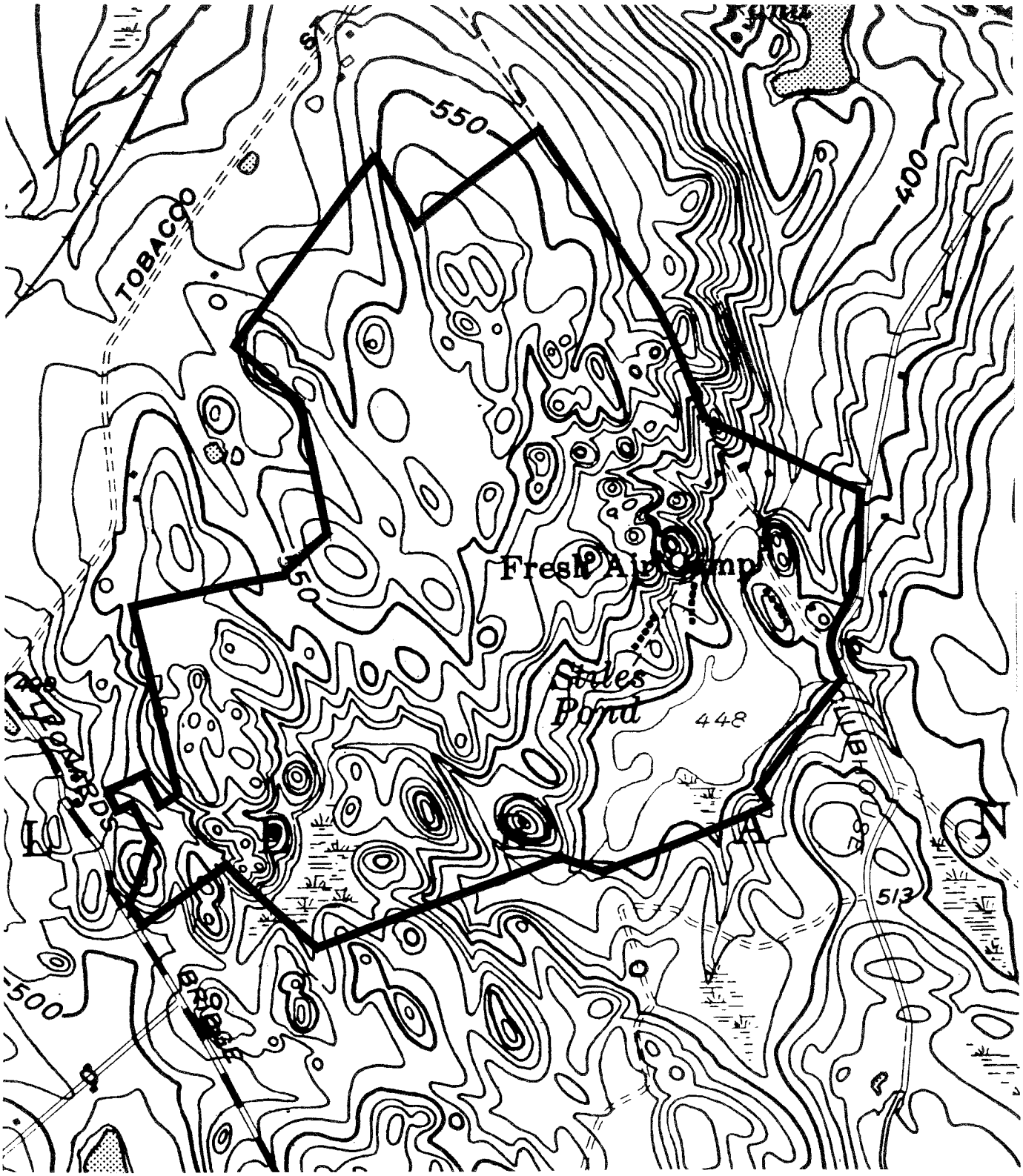
The Team met and field checked the site on Thursday, February 16, 1984. Reports from each Team member were sent to the ERT Coordinator for review and summarization for the final report.

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 Lebanon. 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: Ms. Jeanne Shelburn, Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, P.O. Box 198, Route 205, Brooklyn, Connecticut 06234, 774-1253.

Topography	Site Boundary	0 1000' scale	N



INTRODUCTION

The Eastern Connecticut Environmental Review Team was asked to prepare a natural resource inventory for Camp Laurel in Lebanon. The Camp is approximately 380 acres in size and is located on the east side of Leonards Bridge Road, south of the railroad right-of-way. The property is presently in the private ownership of the Connecticut Trails Council of Girl Scouts.

The major camping facility is located on the perimeter of Stiles Pond, a small waterbody on the property. This developed area consists of a large building which houses kitchen/dining facilities, an infirmary and a variety of cabins, tent platforms, and pit toilet buildings. Possible expansion to accommodate an additional 100 campers is being considered.

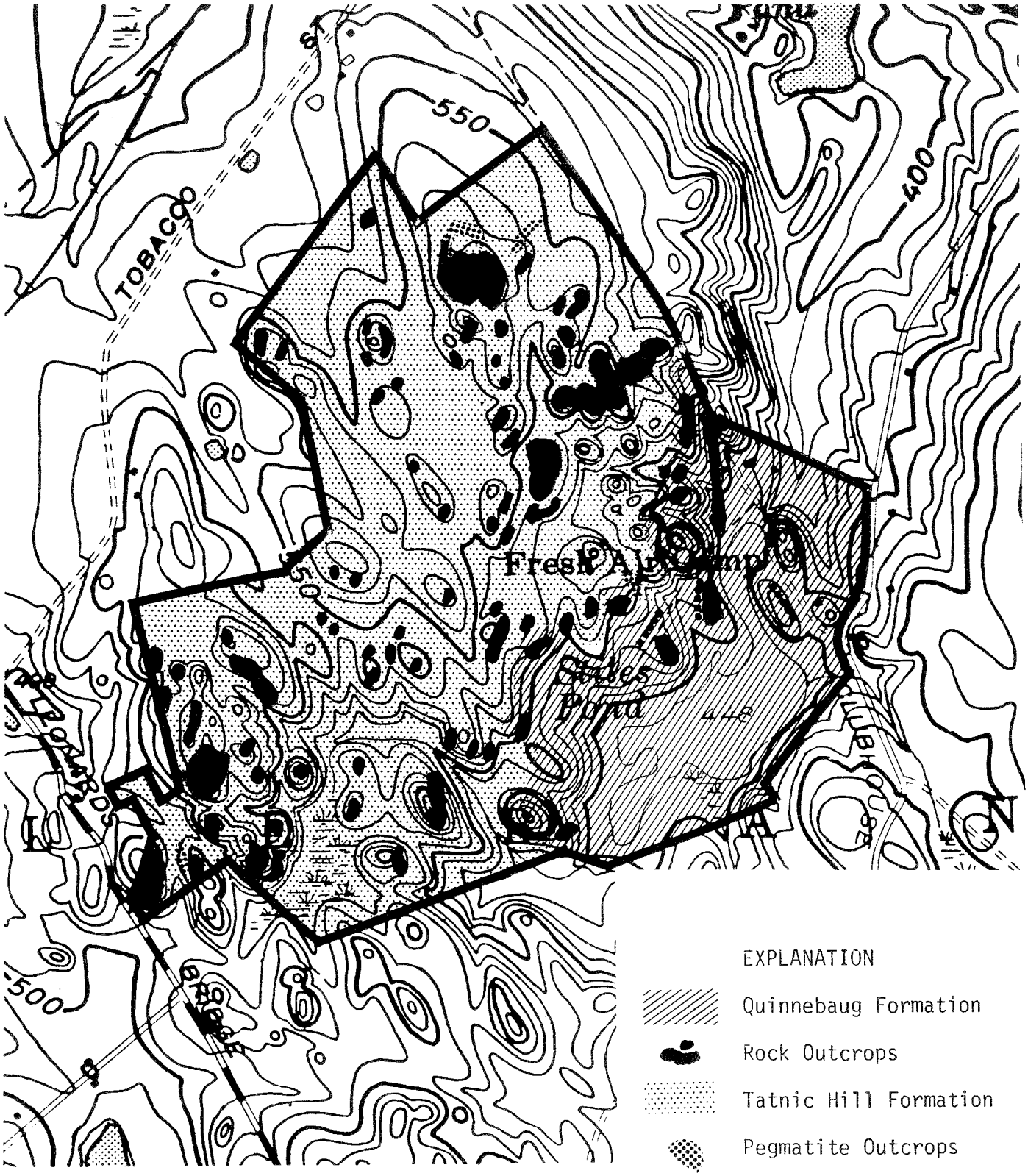
The following sections of this report discuss in detail the Team's evaluation of the natural resource base of this site and the limitations to development caused by these natural features. The Team hopes that this information will be helpful in preparing a master plan for the future of the Camp and for use in natural resource education programs which the Camp may conduct.

Bedrock Geology

0 1000'
scale

N

Information adapted from USGS Report GQ-592.



ENVIRONMENTAL ASSESSMENT

TOPOGRAPHY

The Camp Laurel Girl Scout Camp consists of an irregularly shaped parcel of land ±380 acres in size and is located in western Lebanon. It is bordered to the east by Clubhouse Road, to the north by Tobacco Street and to the northeast by Leonards Bridge Road.

Camp Laurel has a varied, interesting topography. Most of the parcel is characterized by a rough and rugged terrain which is controlled primarily by the underlying bedrock. It is composed generally of widely varying slopes that range from gentle to steep; numerous bedrock outcrops, large boulders, and seasonal drainage swales. The steepest slopes are associated mostly with the rock outcrop areas. The flattest slopes are found in the northern sections of the property. Seasonally wet areas, which are designated by the symbol Rn and Rd (Ridgebury, Leicester and Whitman Soils) on the accompany soils map are scattered throughout the parcel. Areas which are wet most of the year are designated by the symbol Ce (Carlisle muck) and comprise the swampy area west of Stiles Pond. Stiles Pond, which is ±18 acres in size when filled to capacity, is located in the southern parts of the campground. Maximum and minimum elevations on the site are 570 feet and 410 feet above mean sea level, respectively.

GEOLOGY

Camp Laurel is located in the Columbia topographic quadrangle. The United States Geological Survey has published a bedrock map for the quadrangle (GQ-592 by George Snyder). An open-file map of the surficial geology of the Columbia quadrangle is available for inspection at the Natural Resources Center of the Department of Environmental Protection in Hartford.

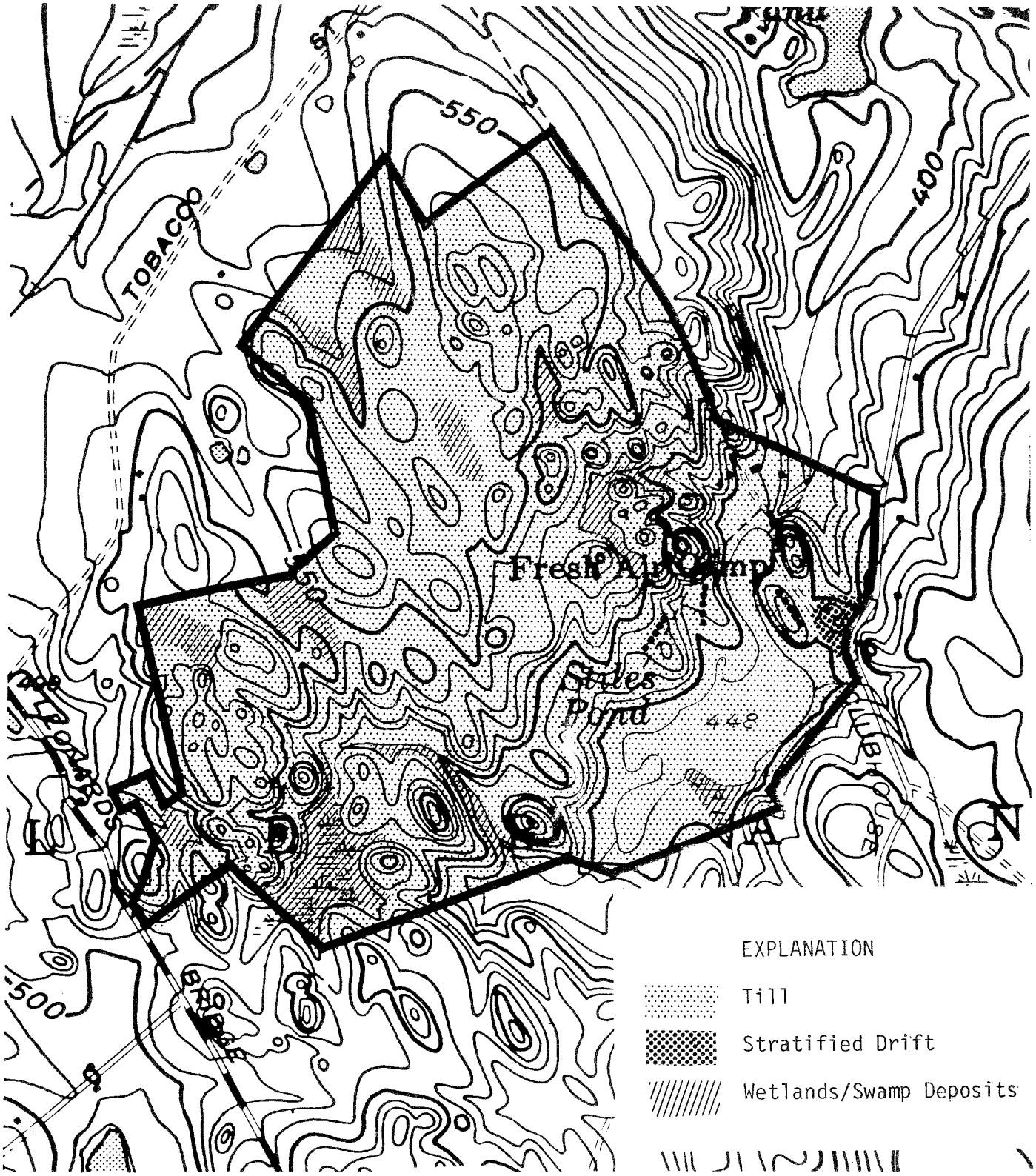
Two major formations, the Quinebaug Formation and Tatnic Hill Formation (Lower member), comprise most of the bedrock on and near the campground. The Quinebaug Formation, which outcrops and/or underlies the eastern part of the campground is a gray to dark gray, medium grained, well layered gneiss composed of the minerals quartz, feldspar, biotite, and hornblende. The term "gneiss" indicates the rock is metamorphic (has been altered by tremendous heat and pressure deep within the earth's crust). It contains alternating bands of elongate minerals and more rounded minerals. The Lower member of the Tatnic Hill Formation, which underlies or crops out in the central and western parts of the campground, consists of a gray to dark gray medium to coarse grained schist composed of the minerals biotite, garnet, silliminite and kyanite. "Schist" is also a metamorphic rock whose platy, flaky, or elongate minerals have become aligned to form surfaces of relatively easy parting (splits easily in layers). In a few locations within the campground, lenses of medium to coarse grained granitic rocks, called "pegmatites," intrude the formations mentioned above. These rocks are very rich in the minerals quartz, oligoclase, microcline, and biotite.

Surficial Geology

0 1000' scale

N

Information adapted from the unpublished Surficial Geologic Map for the Columbia Quadrangle (USGS) and the Soil Survey for New London County, Connecticut.



Close examination of the bedrock outcrops within the campground may yield interesting minerals for ambitious rock-hounds.

The Quinebaug Formation and Tatnic Hill Formation (Lower member) rocks were deposited during the Ordivician geologic period approximately 425-500 million years ago. Metamorphism of the rocks occurred during a series of crustal movements known as the "Acadian Orogeny." The series of events culminated about 360 million years ago. Further deformation and faulting (fracturing of the bedrock) occurred during the Alleghenian Orogeny, which ended about 220 million years ago. The pegmatite rocks mentioned above intruded the Formations as a hot, liquid magma which subsequently solidified, during the lower Devonian geologic period approximately 405 million years ago.

Overlying bedrock on most of the site is a blanket of unconsolidated sediments of glacial origin. As the ice sheet advanced over Connecticut one or more times, it scraped, scoured and chipped rock outcrops and abraded pre-existing soils, incorporating the rock particles into the ice mass. These particles were later plastered against bedrock hills and knobs as it began to advance, or were let down gently from the ice as it began to melt. The nonsorted, nonstratified accumulation of rock fragments that resulted contains a wide range of sizes and shapes. It is collectively known as till. Locally, till is commonly called "hardpan." This is due to compact zones encountered at depth in the soil which makes excavation with hand tools difficult. Till covers most of the entire site.

In the area of the "Northeast Workbase" and "Ranger's House," deposits of sand and gravel may be found. These materials, known as stratified drift, were washed out of and away from the receding ice sheet by meltwater streams. Based on visual inspection of this area, the sand and gravel has been excavated in the past. According to a Girl Scout representative, the material was used throughout the campground as a base for interior roads and hiking trails.

Overlying the till in the southwest part of the campground are swamp deposits. "Swamp deposits" consist of dark, fine-grained soils rich in decayed organic material. They are delineated as Ce (Carlisle muck) on the accompanying soils map. Seasonally wet areas, including regulated wetland soils, are found scattered throughout the site. These experience high ground water tables during the Spring or during periods of precipitation. They are delineated by the symbol Rn (Ridgebury, Leicester, and Whitman soils) and Rd (Ridgebury soils).

On the day of the review, a Girl Scout official asked Team members to comment on the feasibility of installing an on-site septic system in the northern portions of the property to serve toilet and shower facilities. Because of a shallow bedrock condition in this area and because of development limitations associated with till based soils (compact soil layer at depth, stoniness and high groundwater table), it appears the installation of a conventional septic system would be unlikely. It may be possible that an engineered septic system could overcome the above mentioned limitations. However, detailed soil testing including deep pits, percolation tests would be required in the desired leaching field location in order to determine its suitability for subsurface sewage disposal.

SOILS

Soil series typical of this site include the Canton-Charlton series, the Carlisle series, the Charlton-Hillis series, the Hollis-Charlton-rock outcrop series, the Paxton-Montauk series, the Ridgebury series, the Ridgebury-Leicester-Whitman complex, the Sutton series, the Woodbridge series and the Woodbridge-Rainbow series. These are described in detail below.

(CbB) - Canton and Charlton fine sandy loams, 3 to 8 percent slopes

These gently sloping, well drained soils are on glacial till upland hills, plains, and ridges. Areas of this unit consist of either Canton soil or Charlton soil, or both. These soils were mapped together because there are no major differences in use and management. Permeability of the Canton soil is moderately rapid in the surface layer and subsoil and rapid in the substratum. The available water capacity is moderate. Runoff is medium. This soil warms up and dries out rapidly in the spring. Unless limed, the soil is strongly acid or medium acid.

Permeability of the Charlton soil is moderate or moderately rapid. The available water capacity is moderate. Runoff is medium. The soil warms up and dries out rapidly in the spring. Unless limed, the soil is strongly acid or medium acid.

(CcB) - Canton and Charlton very stony fine sandy loams, 3 to 8 percent slopes

These gently sloping, well drained soils are on glacial till upland hills, plain, and ridges. Stones and boulders cover 1 to 8 percent of the surface. These soils were mapped together because there are no major differences in use and management. Permeability of the Canton soil is moderately rapid in the surface layer and subsoil and rapid in the substratum. The available water capacity is moderate. Runoff is medium. This soil warms up and dries out rapidly in the spring. The soil is strongly acid or medium acid.

Permeability of the Charlton soil is moderate or moderately rapid. The available water capacity is moderate. Runoff is medium. This soil warms up and dries out rapidly in the spring. It is strongly acid or medium acid.

(CcC) - Canton and Charlton very stony fine sandy loams, 8 to 15 percent slopes

These sloping, well drained soils are on glacial till upland hills, plains, and ridges. Stones and boulders cover 1 to 8 percent of the surface. These soils were mapped together because there are no major differences in use and management. Permeability of the Canton soil is moderately rapid in the surface layer and subsoil and rapid in the substratum. The available water capacity is moderate. Runoff is rapid. The soil warms up and dries out rapidly in the spring. It is strongly acid or medium acid.

(CdD) - Canton and Charlton extremely stony fine sandy loams, 15 to 35 percent slopes

These moderately steep to steep, well drained soils are on glacial till upland hills, plains, and ridges. Stones and boulders cover 8 to 25 percent of the surface. Permeability of the Canton soil is moderately rapid in the surface layer and subsoil and rapid in the substratum. The available water capacity is moderate. Runoff is very rapid. The Canton soil warms up and dries out rapidly in the spring. It is strongly acid or medium acid.

Permeability of the Charlton soil is moderate or moderately rapid. The available water capacity is moderate. Runoff is very rapid. The Charlton soil warms up and dries out rapidly in the spring. It is strongly acid or medium acid.

(Ce) - Carlisle muck

This nearly level, very poorly drained soil is in pockets and depressions of flood plains, stream terraces, outwash plains, and glacial till uplands. Slopes range from 0 to 2 percent. The Carlisle soil has a high water table near or above the surface for most of the year. Permeability is moderately rapid. The available water capacity is high. Runoff is very slow. The soil is strongly acid through slightly acid.

(CrC) - Charlton-Hollis fine sandy loams, very rocky, 3 to 15 percent slopes

This gently sloping to sloping complex consists of somewhat excessively drained and well drained soils on glacial till uplands. Rock outcrops cover up to 10 percent of the surface. Stones and boulders cover 1 to 8 percent of the surface. The soils of this complex are so intermingled on the landscape that it was not practical to separate them in mapping at the scale used. Permeability of the Charlton soil is moderate or moderately rapid. Charlton soil warms up and dries out rapidly in the spring. It is strongly acid or medium acid.

Permeability of the Hollis soil is moderate or moderately rapid above the bedrock. The available water capacity is low. Runoff is medium or rapid. Hollis soil warms up and dries out rapidly in the spring. It is strongly acid or medium acid.

(CrD) - Charlton-Hollis fine sandy loams, very rocky 15 to 45 percent slopes

This moderately steep to steep complex consists of somewhat excessively drained and well drained soils on glacial till uplands. Rock outcrops cover up to 10 percent of the surface. Stones and boulders cover 1 to 8 percent of the surface. Permeability of the Charlton soil is moderate or moderately rapid. The available water capacity is moderate. Runoff is rapid or very rapid. Charlton soil warms up and dries out rapidly in the spring. It is strongly acid or medium acid.

Permeability of the Hollis soil is moderate to moderately rapid above the bedrock. The available water capacity is low. Runoff is rapid or very rapid. Hollis soil warms up and dries out rapidly in the spring. It is strongly acid or medium acid.

(HrC) - Hollis-Charlton-Rock outcrop complex, 3 to 15 percent slopes

This gently sloping to sloping complex consists of somewhat excessively drained and well drained soils and rock outcrop on glacial till uplands. Stones and boulders cover 1 to 8 percent of the surface. The soils and rock outcrop in this complex are so intermingled on the landscape that it was not practical to separate them in mapping at the scale used.

Permeability of the Hollis soil is moderate or moderately rapid above the bedrock. The available water capacity is low. Runoff is medium or rapid. Hollis soil warms up and dries out rapidly in the spring. It is strongly acid or medium acid.

Permeability of the Charlton soil is moderate or moderately rapid. The available water capacity is moderate. Runoff is medium or rapid. Charlton soil warms up and dries out rapidly in the spring. It is strongly acid or medium acid.

(HrD) - Hollis-Charlton-Rock outcrop complex, 15 to 45 percent slopes

This moderately steep to very steep complex consists of somewhat excessively drained and well drained soils and rock outcrop on glacial till uplands. Stones and boulders cover 1 to 8 percent of the surface. These soils and rock outcrop in this complex are so intermingled on the landscape that it was not practical to separate them in mapping at the scale used.

Permeability of the Hollis soil is moderate or moderately rapid above the bedrock. The available water capacity is low. Runoff is rapid or very rapid. Hollis soil warms up and dries out rapidly in the spring. It is strongly acid or medium acid.

Permeability of the Charlton soil is moderate or moderately rapid. The available water capacity is moderate. Runoff is rapid or very rapid. Charlton soil warms up and dries out rapidly in the spring. It is strongly acid or medium acid.

(PdB) - Paxton and Montauk very stony fine sandy loams, 3 to 8 percent slopes

These gently sloping, well drained soils are on drumloidal, glacial till, upland landforms. Stones and boulders cover 1 to 8 percent of the surface. These soils were mapped together because there are no major differences in use and management. Permeability of the Paxton soil is moderate in the surface layer and subsoil and slow or very slow in the substratum. The available water capacity is moderate. Runoff is medium. Paxton soil warms up and dries out rapidly in the spring. Unless limed, it is strongly acid or medium acid.

Permeability of the Montauk soil is moderate or moderately rapid in the surface layer and subsoil and slow or moderately slow in the substratum. The available water capacity is moderate. Runoff is medium. Montauk soil warms up and dries out rapidly in the spring. Unless limed, it is strongly acid or medium acid.

(Rd) - Ridgebury fine sandy loam

This nearly level, poorly drained soil is on drumloidal, glacial till, upland landforms. The Ridgebury soil has a seasonal high water table at a depth of about 6 inches. Permeability is moderate or moderately rapid in the surface layer and subsoil and slow or very slow in the substratum. The available water capacity is moderate. Runoff is very slow or slow. Ridgebury soil warms up and dries out slowly in the spring. Unless limed, it is strongly acid through slightly acid.

(Rn) - Ridgebury, Leicester, and Whitman extremely stony fine sandy loams

These nearly level, poorly drained and very poorly drained soils are in drainageways and depressions of glacial till upland hills, ridges, plains, and drumloidal landforms. Stones and boulders cover 8 to 25 percent of the surface. These soils were mapped together because there are no major differences in use and management. The Ridgebury soil has a seasonal high water table at a depth of about 6 inches. Permeability is moderate or moderately rapid in the surface

layer and subsoil and slow or very slow in the substratum. The available water capacity is moderate. Runoff is very slow or slow. Ridgebury soil warms up and dries out slowly in the spring. It is strongly acid through slightly acid.

The Leicester soil has a seasonal high water table at a depth of about 6 inches. Permeability is moderate or moderately rapid. The available water capacity is moderate. Runoff is very slow or slow. Leicester soil warms up and dries out slowly in the spring. It is very strongly acid through medium acid.

The Whitman soil has a high water table at or near the surface for most of the year. Permeability is moderate or moderately rapid in the surface layer and subsoil and slow or very slow in the substratum. The available water capacity is moderate. Runoff is very slow, or the soil is ponded. Whitman soil warms up and dries out very slowly. It is very strongly acid through slightly acid.

(SxB) - Sutton extremely stony fine sandy loam, 0 to 8 percent slopes

This nearly level to gently sloping, moderately well drained soil is on upland glacial till plains, hills, and ridges. Stones and boulders cover 8 to 25 percent of the surface. The Sutton soil has a seasonally high water table at a depth of about 18 inches. Permeability is moderate or moderately rapid. The available water capacity is moderate. Runoff is slow or medium. Sutton soil warms up and dries out slowly in the spring. It is strongly acid or medium acid in the surface layer and subsoil and strongly acid through slightly acid in the substratum.

(SwB) - Sutton very stony fine sandy loam, 0 to 8 percent slopes

This nearly level to gently sloping, moderately well drained soil is on upland glacial till plains, hills, and ridges. Stones and boulders cover 1 to 8 percent of the surface. The Sutton soil has a seasonal high water table at a depth of about 18 inches. Permeability is moderate or moderately rapid. The available water capacity is moderate. Runoff is slow or medium. Sutton soil warms up and dries out slowly in the spring. It is strongly acid or medium acid in the surface layer and subsoil and strongly acid through slightly acid in the substratum.

(WxB) - Woodbridge fine sandy loam, 3 to 8 percent slopes

This gently sloping, moderately well drained soil is on drumloidal, glacial till, upland landforms. The Woodbridge soil has a seasonal high water table at a depth of about 18 inches. It has moderate permeability in the surface layer and subsoil and slow or very slow permeability in the substratum. The available water capacity is moderate. Runoff is medium. This soil warmsup and dries out slowly in the spring. Unless limed, it is strongly acid through slightly acid in the substratum.

(WyB) - Woodbridge very stony fine sandy loam, 0 to 8 percent slopes

This nearly level to gently sloping, moderately well drained soil is on drumloidal, glacial till, upland landforms. Stones and boulders cover 1 to 8 percent of the surface. The Woodbridge soil has a seasonal high water table at a depth of about 18 inches. Permeability is moderate in the surface layer and subsoil and slow or very slow in the substratum. The available water capacity is moderate. Runoff is medium. This Woodbridge soil warms up and dries out slowly in the spring. It is strongly acid or medium acid in the surface layer and subsoil and strongly acid through slightly acid in the substratum.

(WzC) - Woodbridge and Rainbow extremely stony soils, 3 to 15 percent slopes

These gently sloping and sloping, moderately well drained soils are on drumloidal, glacial till, upland landforms. Stones and boulders cover 8 to 25 percent of the surface. The Woodbridge soil has a seasonal high water table at a depth of about 18 inches. Permeability is moderate in the surface layer and subsoil and slow or very slow in the substratum. The available water capacity is moderate. Runoff is medium or rapid. Woodbridge soils warm up and dry out slowly in the spring. They are strongly acid or medium acid in the surface layer and subsoil and strongly acid through slightly acid in the substratum.

The Rainbow soil has a seasonal high water table at a depth of about 18 inches. Permeability is moderate in the surface layer and subsoil and slow or very slow in the substratum. The available water capacity is high. Runoff is medium or rapid. Rainbow soils warm up and dry out slowly in the spring. They are strongly acid or medium acid.

Trail Construction and Management

There is a trail system at Camp Laurel which will be expanded in the future. Most of the on-site soils have either slight or moderate limitations for this use (see appendix for limitations chart); however, three of the soils--Carlisle Muck (Ce), Ridgebury (Rd), and Ridgebury, Leicester and Whitman (Rn)--have severe limitations for trail use because of wetness. These three soils are designated wetland soils and regulated under P.A. 155.

When trails are designed, provisions should be made to reduce erosion and runoff. Disturbed areas should be vegetated as soon as practical after construction. If soil or climatic conditions preclude the use of vegetation and protection is needed, non-vegetative means such as mulches or gravel may be used. Adequate drainage should be provided. A raised or elevated trail may be needed for wet sites. Ideally, trails should require little or no cutting and filling, have moderate slopes and few or no stones or boulders on the surface. The Soil Conservation Service is available to provide technical assistance with the design of a trail system.

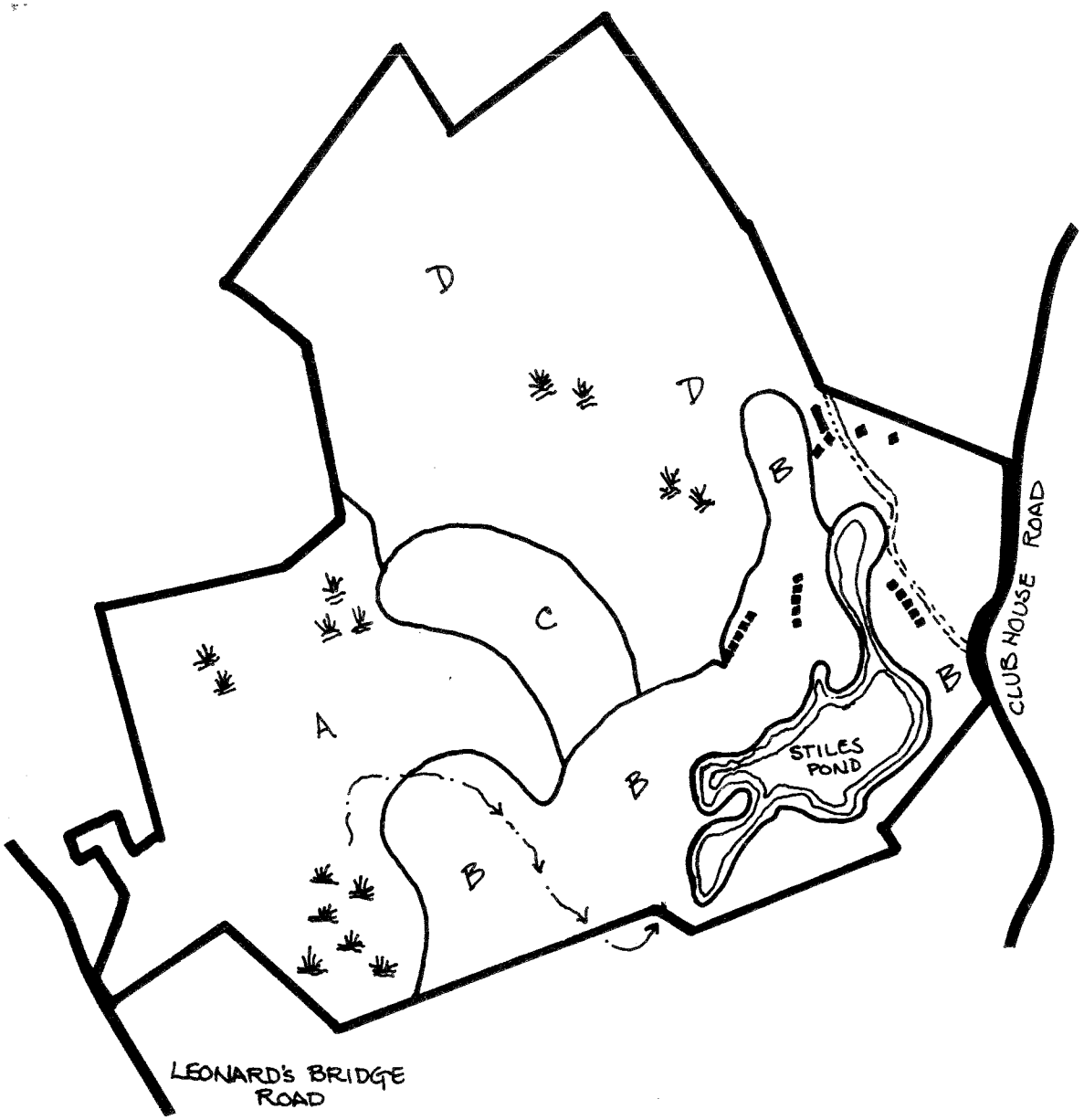
Soil characteristics should be taken into consideration when locating septic systems (see appendix for limitations chart). Permeability, a high water table, depth to bedrock, and flooding will affect absorption of the septic effluent; while large stones and bedrock interfere with installation. Ground water can become polluted if highly permeable sand, gravel, or fractured bedrock is less than four feet below the base of the absorption field, if slope is excessive, or if the water table is near the surface.

VEGETATION

Vegetation on this site has been divided into four sections as described below. Management suggestions are also included in a following section should treatment be desired in the future.

Section A: This is an area of rough topography typified by rock outcroppings, shallow-droughty soils and steep slopes with low areas of poor drainage between the ridges. The dominate tree species is scarlet oak with a mixture of white

Vegetation


0
1000'
scale
N
D
D
B
C
A
B
B
B
STILES POND
CLUB HOUSE ROAD
LEONARD'S BRIDGE ROAD

oak and black oak also. Red maple is prevalent in both the overstory and as seedlings and saplings. There are occasional stems or groves of black birch, large toothed and trembling aspen and pignut hickory. The understory is composed of azaleas, huckleberry, some greenbriar, and seedlings of scarlet oak, white oak, red mpale, and black birch. The poorly drained areas usually have a main overstory of red maple with occasional yellow birch, black gum, and brown ash. The understory is dominated by spice bush and sweet pepperbush. Blueberry bushes, witch hazel, azaleas, and seedlings of red maple, black birch and yellow birch are also evident.

Section B: These are the lower slopes nearer the pond. The ground has a constant but more gentle slope than in Section A. The growing sites are much better and, therefore, the trees are larger. The main overstory is red oak and white oak, with American beech, black birch, yellow birch, pignut hickory, tulip poplar, basswood, and red maple. The stand is so well stocked that there is little understory, but there are maple-leaved viburnam, azalea, and seedlings of black birch, red maple, and beech present.

In the eastern portion of this section there is a predominance of sugar maple both in the overstory and in the understory.

Section C: This area has noticeable smaller and younger trees. The area was either cut or burned over 30 to 40 years ago, making it about half the age of the other stands. The species composition is not too different from that of Section B. The overstory contains red oaks and white oaks with black birch, red maple, tulip poplar, American beech, and white ash. The light understory is the same maple-leaved viburnam, azalea, and green briar plus seedlings and saplings of red maple, black birch and beech.

Section D: This is the largest area and has the most variety. This area, in general, encompasses the top of a large flat ridge. There are bedrock outcroppings and shallow droughty soils; there are areas of poor drainage between, but most of the area is a fairly good growing site.

The bedrock outcrops are dominated by scarlet oak and white oaks with some red maple and black birch. The understory contains pignut hickory, white oak, scarlet oak, red maple, and American chestnut with patches of huckleberry. The poorly drained areas are dominated by red maple and are in combination with scarlet oak. The understory is usually a dense stand of sweet pepperbush, with some spicebush and highbush cranberry. Some areas also have a noticeable component of sassafras and/or aspen (mostly large toothed).

The better sites have more red oak and less white oak. There is also some mountain laurel, witch hazel, and maple-leaved viburnam on these better sites.

The present use of this parcel for cluster camp sites is not, in general, detrimental to the tree growth. Some of the trees within the tenting sites have been mechanically damaged, but the soil on the sites has been severely compacted. To rejuvenate these sites, one of two things should be done. The first choice is to relocate the site a short distance away from the central bathhouse; the second choice would be to mulch the site heavily with wood chips and remove the damaged trees as they became a potential hazard. The one problem with the heavy mulch is the potential for an escaped camp fire to smolder undetected in this heavy organic ground covering; but the cover will prevent excessive run-off and damage to the exposed tree roots.

Management Practices

Section A: Most of this area is a poor growing site being either too dry or seasonally too wet. Most of the stands are just beginning to get into the sawlog size, that is the larger trees are 12 inches or more in diameter. Stand density is good being only slightly overstocked.

The Team Forester recommends a fuelwood harvest that would (1) remove the dead trees; (2) thin some of the stands by removing only the diseased or deformed trees; and (3) create some small clear cuts where removal of the dead or damaged trees would cause the stand to be overly thinned. Natural access for equipment is from Leonards Bridge Road.

Section B: This is a much better site, the soils and conditions for tree growth are better, the trees are bigger, of better quality and more desirable species, but they are of the same general age as the rest of the area.

In managing forest stands one should manage for age or rotation by species composition and by stand density, not by tree size. Even though there are many trees of sawlog size in this area, it is young enough so that cuttings in this area should be limited to, at most, a very light individual timber tree selection to be followed by a cordwood sale to remove the tops and many of the smaller undesirable trees.

Section C: This is a pole size stand (most of the trees are under 12 inches in diameter) with some very stony areas. It is a much better site than Section A, but should be thinned at the same time. In general, the stand is more dense than Section A and would definitely get some real benefit from a thinning. Growth on the residual trees should increase because this is a better site.

Section D: This section should be broken down into two general areas. First, the area behind the dining hall. It is a northeast slope and a very good site. There is red oak and sugar maple growing on this slope which are indicators of good to excellent growing sites. There are a few scattered trees that could be cut for sawlogs, but the Team Forester feels strongly that this area should be thinned by removing firewood. Any large trees that are showing decay would be better left for wildlife den trees. Most of the dead trees in this area have been cut for camp fuelwood but trees causing hazardous conditions along trails should be felled.

The top of the slope is quite variable in site quality. The patchwork of sites would take time to map out, but in general, there are two applicable management projects for the area. Most of the area needs some thinning but long range management should be considered before cutting is strated. On the tops of the dry knolls, the aim should be to raise a combination of white pine and hardwoods. The first thinning should be aimed at opening the stand enough to allow the white pine seedlings enough light to get started; however, only that area that can be planted in a two-year period should be harvested. Any more than that and the sprout growth will get ahead of the planted trees.

The low areas can either be thinned very lightly to maintain the present growth rate of the better trees, or the area can be managed as a fuelwood production area. This would mean clear cutting strips or patches and depending on the sprout growth to regenerate the stand.

The areas of good growth should be thinned to remove the poorest trees so that the growth will be concentrated on the better trees that are left. This would be strictly a fuelwood harvest. No sawlog size trees would be cut.

These are general recommendations. The service of a State Forester will be available to enlarge any practical recommendations or to mark small areas or sales. However, their time is limited and large scale sales would have to be handled by a private consultant.

WILDLIFE

Camp Laurel, located in Lebanon, offers year round camping to approximately 250 Girl Scouts, with much more limited use occurring during the winter and fall. Cabins and platforms (primitive sites) are found within the hardwood forest area and along the pond's edge. Most of the 380 acres of the property is covered by mature hardwood forest. The only open areas surround the main buildings, located near the entrance and an area at the northern tip of Stiles Pond. A large portion of Stiles Pond is owned and used for recreation by Camp Laurel. Stiles Pond drains into Exeter Brook. Much of the area's terrain is hilly with rocky outcroppings.

Pond/Wetland Area: Stiles Pond has a very rocky bottom except in the upper end (southern) where the bottom is a soil sand combination. A large part of the shoreline is rocky. The water in the pond is lowered and raised to control nuisance aquatic weeds.

Although the inspection was done during the winter, there is little evidence of emergent vegetation growth in the upper end of the pond. This factor combined with the lack of aquatic weeds limits the natural productivity of the pond and thus its usefulness to wildlife. There is little growth along the shoreline that provides food, cover or nesting sites. Mature trees grow to the edge of the water, which offer little cover, food or nesting sites to aquatic or semi-aquatic animals and other wildlife.

There is a wetland area located west of the farthest campsites. This wetland contains greenbriar (Smilax glauca), catbriar (Smilax rotundifolia), arrowood (Viburnum recognitum), and sweet pepperbush (Clethra alnifolia), sassafras (Sassafras albidum), sugar maple (Acer saccharum), and hophornbeam (Ostrya virginiana). Small scattered wet areas are found in the area even at higher elevations. The wetland area provides important habitat for species such as songbirds, raccoons, deer and rabbits. The small scattered wet areas are important because they are scattered through the area and thus help diversify the area.

The hardwood forest which covers most of the area is composed of an overstory of mature white oak and red oak (Quercus alba, Q. rubra), white ash (Fraxinus americana), basswood (Tilia americana) and sugar maple and hop hornbeam.

The understory is composed of American beech (Fagus grandifolia), black birch (Betula lenta), black cherry (Prunus serotina), hemlock (Tsuga canadensis) arrowood, laurel (Kalmia latifolia), sassafras and buttonbush (Cephalanthus occidentalis). The understory is light to medium. Thick growth occurs in the wetter areas.

Where enough sunlight hits the forest floor, the groundcover includes ferns along with running pine and princess pine.

There are only a few snag trees, which provide insects and nesting sites for birds, such as woodpeckers and cavities for mammals, such as squirrels.

Management Recommendations

Increasing the number of habitat types or diversity is important to wildlife. By increasing diversity the amount of "edge" or area where two cover types meet is also increased. "Edge" is also important to wildlife because it provides a variety of vegetative species to wildlife for food, cover and nesting.

Landscaping: Landscaping, with wildlife needs in mind, around the buildings would provide valuable habitat for some species of wildlife. Shrub and tree species valuable to wildlife for food, cover and nesting sites should be planted in a varying arrangement around the buildings. Useful species include flowering dogwood (Cornus florida), silky dogwood (Cornus amomum), autumn-olive (Elaegnus umbellata), American cranberry bush (Virurnum trilobum), honeysuckle (Lonicera spp.), crabapple (Malus spp.) and many others. There is a lack of these types of species of shrubs that provide food and cover to wildlife in the area. This would not only improve the wildlife habitat, but would also improve the aesthetics of the campground. Trees and shrubs already present around the primitive campsites should be encouraged and not cut. These areas around buildings can provide habitat for some species of wildlife, especially songbirds. Because of the close proximity of these plantings to the buildings, it presents a good opportunity for people to observe wildlife.

Some of the open areas not used for recreational purposes should be allowed to grow up in a grassy stage. They should then be mowed every other year which would maintain the grassy stage. These areas would be useful to wildlife for cover, nesting and feeding.

Clearcuts/Shelterwood Cuts: Where slope and soil type permit, small clearcuts should be made. This would allow sprouting of hardwood species and increase ground cover, which would provide more food and cover to wildlife such as rabbits and deer. Some clearcuts could be allowed to regenerate and reach maturity thus replacing the forest that is presently mature and which will decline in coming years. Other small clearcuts should be maintained by periodic cutting every 5 years so that there is a constant supply of browse.

Shelterwood cuts would selectively remove some of the better timber trees while leaving behind mature seed trees (trees which will reproduce). This would also benefit wildlife by opening up the forest floor to sunlight and thus increasing ground cover, sprouting and shrub growth. The mature oak trees would provide mast (food) for wildlife.

The few snag trees available should be left when undertaking any forestry cutting operation. It is especially important in this area since there are so few snag trees. To increase the available snag trees a number of low quality timber trees could be girdled. This would provide future snag trees for wildlife.

Pond/Pond Edge Development: Undeveloped areas around the pond should remain undeveloped to provide habitat for wildlife. This area provides some nesting, feeding and cover sites for many species of wildlife. The existing edge offers only minimal amounts of these factors. Presently these edge areas provide limited amounts of food, cover and nesting sites.

Areas of mature trees along the edge of the pond should be cut to encourage growth of shrubs and groundcover. This would create an important bush/shrub edge area between the mature forest and pond edge. This area would then be very attractive to wildlife because it would provide food, cover and nesting sites.

Emergent vegetation would also be favored because of increased sunlight due to cutting. The presence of emergent vegetation and a brushy/shrubby edge would greatly increase the attractiveness of the pond to wildlife.

The narrow edge of trees found between the pond and the road on the eastern side should remain and be enlarged if possible. It not only provides a buffer area for wildlife between the road and pond, but it also helps maintain the banks of the pond and minimizes erosion.

The overall site not provides fair to good habitat for some species of wildlife. With habitat management the area could be made more attractive to wildlife and also aesthetically more attractive to campers, providing the chance for campers to see wildlife. Evidence of wildlife's presence would enhance the overall camper experience.

WATER RESOURCES

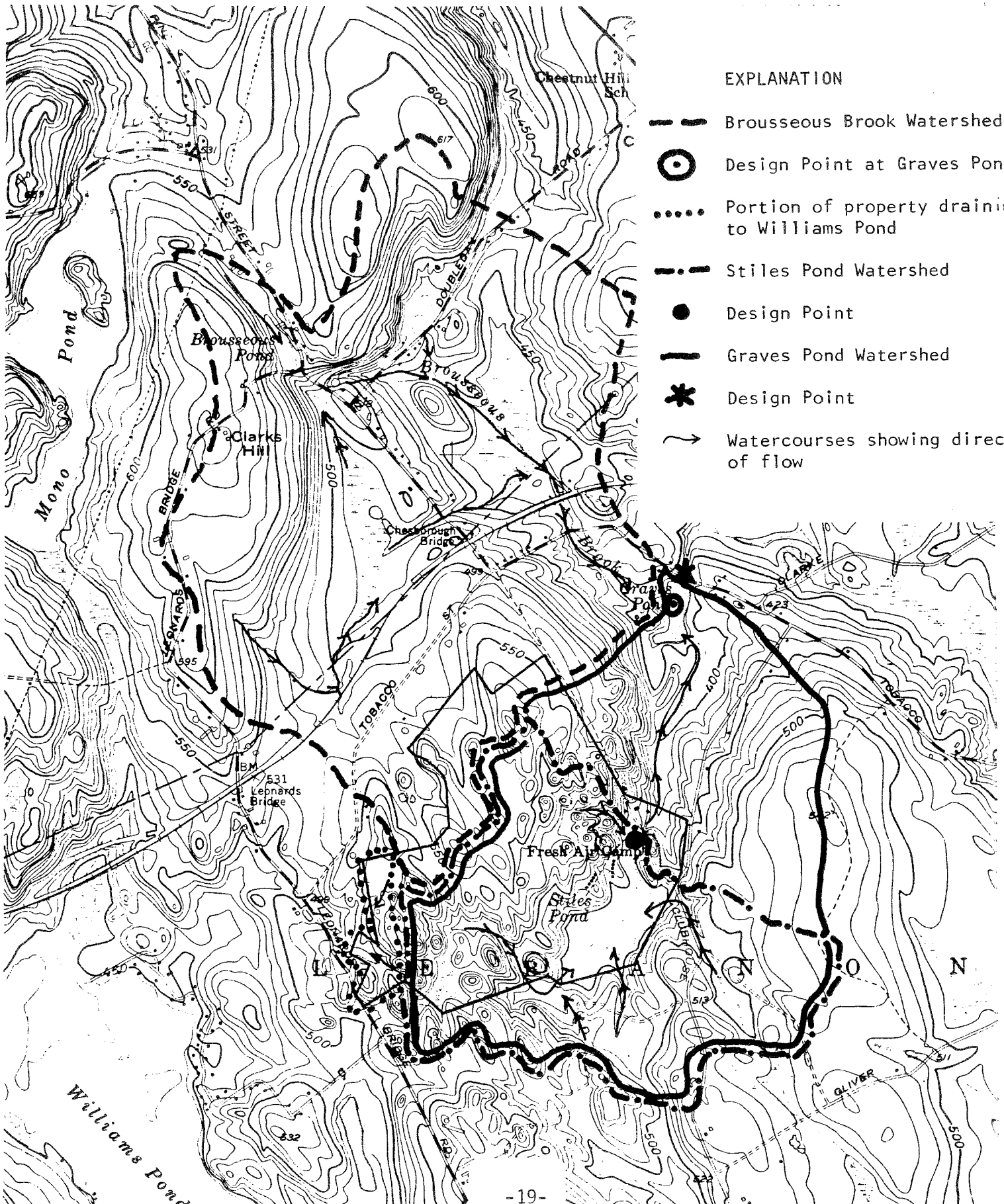
Stiles Pond, which is located in the southeastern part of the campground is the major surface water body found within the parcel. The pond is controlled by a gate valve on the northern end of the pond. Surface runoff in the central and southern portions of the site drains to Stiles Pond mainly by sheetflow and/or intermittant drainage swales. The flow patterns of various local watercourses are irregular and are controlled primarily by the bedrock structure.

The outer lying areas of the campground are drained largely by sheetflow and/or intermittent drainage channels either to Williams Pond on the west, an unnamed tributary of Brousseous Brook to the north or the outlet stream for Stiles Pond to the northeast. (See Watershed Drainage Area/Boundary Map.)

The major streamcourses found on the site include an unnamed inlet stream to Stiles Pond at the southern end and the outlet stream for the Pond on the northern end. The outlet stream for Stiles Pond flows generally northward for about 3,500 feet and ultimately discharges into Graves Pond.

Bedrock appears to be the site's principal groundwater supply resource. Bedrock transmits water by means of an interconnected system of fractures. The amount and natural quality of water withdrawn from a bedrock well depends upon the number and size of water-bearing fractures that the well intersects, and on the minerology of the rock formations through which the fractures pass. Most wells drilled in bedrock can achieve sustainable yields of 3 gallons per minute (gpm) or more without penetrating more than 300 feet of rock. A yield of 3 gpm

Drainage Areas



should adequately meet the domestic needs of an average family. Based on well information supplied to Team members by the Connecticut Trail Council of Girl Scouts, Inc., it is indicated that two drilled wells, 300 feet and 400 feet deep, which tap the underlying bedrock are yielding 75 gpm and 16 gpm, respectively.

Although coarse-grained stratified drift is often capable of affording high yields to individual wells, the thickness of the stratified drift in Camp Laurel seems inadequate for more than a small and perhaps unreliable yield.

PLANNING CONCERNS

Relationship to Regional/Town Plan/Zoning

Regional Plan

The WRPA Regional Growth and Preservation Guide Plan indicates Camp Laurel in the Historic-Land Preserve District, as an existing resource already preserved via its ownership. The assumption that its ownership by the Connecticut Trails Council automatically preserves this area in open space use for an extended period of time may no longer be accurate given the recent consideration by the Boy Scouts organization to divest themselves of certain land holdings.

The regional plan's intention is to recommend that this area is worthy of preserving in an open space use. At the present time, the Connecticut Trails Council's recent investment in a new dining hall and interest in expanding and improving the camp indicates camp use is intended to be maintained for a number of years.

Town Plan/Zoning

The proposed land use map of the Comprehensive Plan of Development for the Town of Lebanon, prepared in 1965, recommended much of the area around Stiles Pond for a Lake District. The plan recommended zoning regulations for better control of the seasonal development around many of the lakes in town, including Stiles Pond. This district was generally proposed for the area within 500 feet of high water level, but in certain areas the boundaries defining these lake areas were to recommend to be roads and property lines.

Lebanon's current zoning map includes the area generally within 500 feet of Stiles Pond (to the north, west and south, and to Clubhouse Road on the east) as within the Lake Zoning District. Additional Camp Laurel property outside the Lake District (L) falls in the Rural Agricultural Residence Zoning District (RA).

Seasonal dwellings or camps on a minimum 12,000 sq. ft. lot, are allowed in the L zone.

"Private camps, lodges, and community houses" are specifically permitted in the RA zone (Section 4.2a.8), as are Clubs and Clubhouses (Sec. 4.2.9.13).

"Recreational camp sites" may be permitted by special exception under Section 4.2.b.12).

Relevant definitions from Section 2.2 of Lebanon's zoning regulations are as follows:

> Camp, Hunting Lodge. A building used for short periods of time solely for recreational purposes. No camp or hunting lodge shall be considered a dwelling.
>
> Club or Lodge. An organization of persons incorporated pursuant to the provisions of the membership corporations law or the benevolent orders law, which is the owner, lessee or occupant of an establishment operated solely for a recreational, social, patriotic, political, benevolent or athletic purpose, but not for pecuniary gain and includes the establishment so operated. A club shall cater only to its members or guests accompanying them. A member of a club is a person, who, either as a charter member or admitted in agreement with the by-laws of the club, has become a bone fide member thereof, who maintains his membership by the payment of his annual dues in a bona fide manner in accordance with the by-laws, and whose name and address are entered in the list of membership.
>
> Occupancy, Seasonal. The living in and housekeeping in a dwelling for the period from May 1 to November 1 only, except that the dwelling may be occupied for an additional 30 days between November 2 and April 30.

"Recreational camp sites" are not defined but these regulations seem to apply to tent and trailer campgrounds available to the public, and would not seem to be applicable to Camp Laurel--a private camp.

Since Camp Laurel was established prior to the adoption of zoning regulations in the Town of Lebanon (1962), the uses of land and structures which existed prior to zoning may, in some cases, be nonconforming. (See Section 6.1 of the Lebanon Zoning Regulations.)

Since permitted uses in the Lake District are limited, new development within 500 feet of Stiles Pond will be limited by the Lake District regulations as well as by the regulations which apply to nonconforming uses.

Expansions of existing uses/structures or creation of new ones within the Lake District may require approval from the Lebanon Zoning Board of Appeals in accordance with Section 6.1 of the zoning regulations.

Most of the undeveloped sections of Camp Laurel are within the RA District, however, where private camps are allowed. New or expanded uses there will generally not require special types of zoning approval.

'Seasonal occupancy' of dwellings in the Lake Zone at Camp Laurel is not currently an issue. If, however, winter camping programs are greatly expanded in the future, the 30 day limit on occupancy between November 2 and April 30 may become a limitation within that small part of the camp that is in the Lake District.

None of the camp's property falls within the Special Flood Hazard Area Zoning District.

Surrounding Land Use

The area surrounding Camp Laurel is rural and sparsely developed in residential uses along Clubhouse Road. Woodland, open space, and occasional farms form the bulk of the surrounding land use.

Site Design

The camp is currently developed with the major camp buildings (infirmary, dining hall/program center, camp office, etc.) centralized above the northern tip of Stiles Pond with platform tent sites, cabins, and stables to the west and southwest in clusters arranged like satellites. Swimming and boating activities are located along the upper northwest edge of the pond.

Future expansion of the camp should be encouraged to continue in this core/satellite type of development within the physical and environmental constraints of the site.

New satellite camping areas could continue to provide the "wilderness" outdoor experience they have in the past by being remote from other camp clusters. Such satellite camp areas could also, if carefully sited and developed, minimize environmental impacts. If small clusters are developed alongside existing trails, the amount of soil exposed could be minimized, thus reducing soil erosion and sedimentation.

The 'core' area of the camp can accommodate a relatively limited amount of expansion due to physical constraints. Steep slopes rise to the north and west of the core, while the camp's boundary is but a short distance to the northeast of the core. The pond is to the south, and soils and slopes to the east present severe limitations for septic systems. The core, in fact, is situated on one of only two small areas within the entire camp with soils which have 'slight' limitations for septic systems. These are CbB (Canton, Charlton) and CcB (Canton, Charlton) soils found at the northernmost tip of the pond and about 2,000 feet (0.4 miles) west-southwest of the northern tip of the pond, or core of the camp.

Virtually all the other soils on the camp property present moderate to severe limitations for septic systems, although small pockets of suitable soils may exist on which to site the shower/toilet facility which is being considered, or other buildings which might require a septic system.

Roads/Traffic

Access to Camp Laurel is via Clubhouse Road--a town road with sparse residential development along the road's frontage. Clubhouse Road can be reached via Connecticut State Route 207, or via Route 87 and Tobacco Street. All these roads provide adequate access to the camp.

The Windham Regional Planning Agency's Regional Transportation Plan, however, recommends the intersection of Route's 87 and 289 for improvement since a high number of accidents have occurred there. Route 207, between Hoxie Road #2 and

Briggs Road needs drainage improvements, and Route 207 between Kick Hill Road and Hoxie Road is characterized by a series of hazardous curves and knolls which need improvement. Some vehicles whose destination is Camp Laurel may travel these routes. Drainage improvements to Route 207, between Hoxie Road #2 and Briggs Road, are scheduled in the Connecticut Master Transportation Plan 1984 for 1987-94.

Since the camp is a seasonal one, there is very little traffic generated in the off-season except that of the caretaker and service vehicles. During the times when the camp is in use, traffic is also light, again generally the caretaker, delivery and service vehicles, and non-resident staffers except for those few days when campers arrive and depart. Traffic then is "heavy" on the routes leading to the camp.

For the few days a year this situation occurs, it cannot be considered a traffic problem, but perhaps a source of inconvenience for local residents. To add facilities to accommodate another 100 campers, as is envisioned, would add to the traffic on these few days a year by as few as perhaps 25 vehicles or as many as 100 vehicles.

If mitigation measures are deemed necessary to reduce this occasional heavy traffic situation, the most effective measures could be taken by the camp's administrators in asking parents to carpool their campers and send more than one camper per vehicle to minimize traffic, and to assign staggered arrival and departure hours to spread peak traffic volumes over a number of hours.

SERVICES TO SUPPORT DEVELOPMENT

This seasonal camp requires few services to support its expansion to accommodate another 100 campers. No educational, government, commercial or employment services are needed other than fire and police protection. Recreation is provided within the camp. Road maintenance of Clubhouse Road and other roads providing access to the camp is another service the camp requires.

Expansion to accommodate an additional 100 campers should not require significantly more fire, police, or road maintenance services than currently provided.

Note

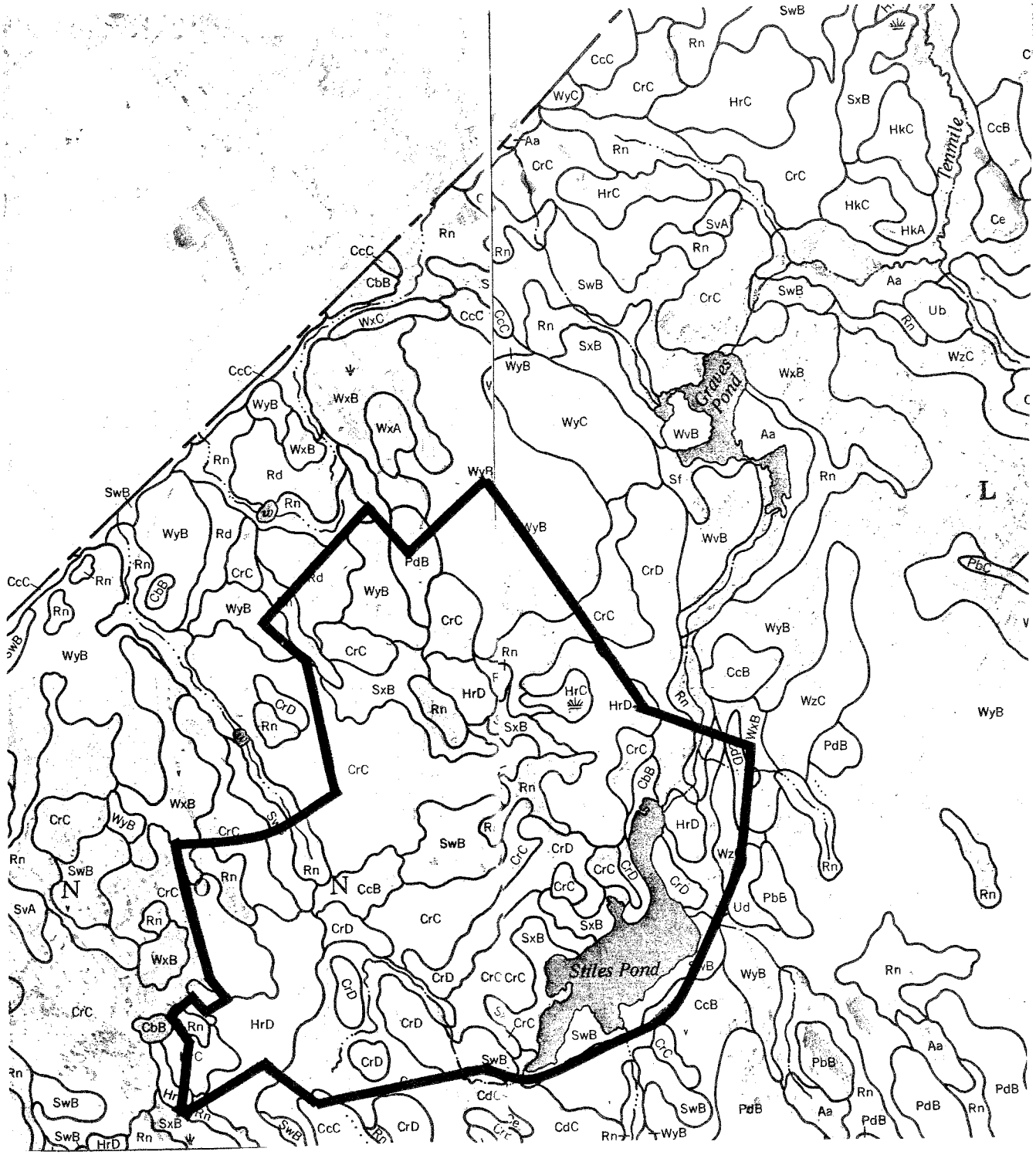
Dam registration is required by July 1, 1984. (See Appendix B)

Appendix

Soils

0 1320'
scale

N



	SYMBOL	NAME
*	CbB	Canton and Charlton fine sandy loams 3-8 percent slope
	CcB	Canton and Charlton very stony fine sandy loams 3-8 percent slope
	CcC	Canton and Charlton very stony fine sandy loams 8-15 percent slope
	CdD	Canton and Charlton extremely stony fine sandy loams 15-35 percent slope
**	Ce	Carlisle muck
	CrC	Charlton-Hollis fine sandy loams, very rocky, 3-15 percent slopes
	CrD	Charlton-Hollis fine sandy loams, very rocky, 15-45 percent slopes
	HrC	Hollis-Charlton-Rock outcrop complex, 3 to 15 percent slope
	HrD	Hollis-Charlton-Rock outcrop complex, 15 to 45 percent slope
	PdB	Paxton and Montauk very stony fine sandy loams, 3 to 8 pereent slope
**	Rd	Ridgebury fine sandy loam
**	Rn	Ridgebury, Leicester, and Whitman extremely stony fine sandy loams
	SxB	Sutton extremely stony fine sandy loam, 0-8 percent slope
	SwB	Sutton very stony fine sandy loam, 0-8 percent slope
*	WxB	Woodbridge fine sandy loam 3 to 8 percent slope
	WyB	Woodbridge very stony fine sandy loam 0 to 8 percent lsope
	WzC	Woodbridge and Rainbow extremely stony soils 3-15 percent slopes

* - Prime farmland as defined by the U.S. Department of Agriculture
** - Wetland soils regulated under P.A. 155

INTERPRETATIONS FOR NATURAL RESOURCE INVENTORY
CAMP LAUREL
CONNECTICUT TRAILS COUNCIL OF GIRL SCOUTS

SOIL MAP SYMBOL AND SOIL NAME	DWELLINGS WITHOUT BASEMENTS	LOCAL ROADS AND STREETS	LAWNS & LANDSCAPING	SEPTIC	WOODLAND WILDLIFE	WETLAND WILDLIFE	CAMP AREA	PICNIC AREA	PATHS & TRAILS
CbB - *									
Canton	Slight	Slight	Slight	Slight	Good	Very poor	Slight	Slight	Slight
Charlton	Slight	Slight	Slight	Slight	Good	Very poor	Slight	Slight	Slight
CcB -									
Canton	Slight	Slight	Moderate:large stones	Slight	Good	Very poor	Moderate:large stones	Moderate:large stones	Slight
Charlton	Slight	Slight	Moderate:large stones	Slight	Good	Very poor	" "	" "	Slight
CcC -									
Charlton	Moderate:slope	Moderate:slope	Moderate:slope, large stones	Moderate:slope	Good	Very poor	Moderate slope large stones	Moderate slope, large stones	Slight
Canton	Moderate:slope	Moderate:slope	" "	" "	Good	" "	" "	" "	Slight
CdD -									
Canton	Severe:slope	Severe:slope	Severe:slope	Severe:slope	Fair	Very poor	Severe slope, large stones	Severe slope large stones	Moderate, slope
Charlton	" "	" "	" "	" "	"	" "	" "	" "	" "
Ce - **									
Carlisle	Severe:ponding, low	Severe:ponding low strength, frost action	Severe,ponding excess humus	Severe:ponding	Poor	Good	Severe: ponding, excess humus	Severe: ponding, excess humus	Severe: ponding excess humus

SOIL MAP SYMBOL AND SOIL NAME	DWELLING WITHOUT BASEMENTS	LOCAL ROADS AND STREETS	LAWNS & LANDSCAPING	SEPTIC	WOODLAND WILDLIFE	WETLAND WILDLIFE	CAMP AREA	PICNIC AREA	PATHS TRAILS
CrC -									
Charlton	Moderate:slope	Moderate:slope	Moderate:slope, large stones	Moderate slope	Good	Very poor	Moderate slope	Same	Slight
Hollis	Severe-depth to bedrock	Severe:depth to rock	Severe-thin layer	Severe, depth to rock	"	Very poor	large stones Severe:depth to rock	Same	"
CrD -									
Charlton	Slope	Severe:slope	Severe:slope	Severe:slope	Good	Very poor	Severe: slope	Severe: slope	Moderate: slope
Hollis	Severe:slope,depth to rock	Severe:slope,depth to rock	Severe:slope, thin layer	Severe:slope	"	"	Severe: slope to rock	Severe:slope to rock	Moderate: slope
HrC -									
Hollis	Severe:depth to rock	Severe:depth to rock	Severe:depth to rock	Severe: depth to rock	Poor	Very poor	Severe: depth to rock	Severe: depth to rock	Slight
Charlton	Moderate:slope	Moderate:slope	Moderate:slope	Moderate: slope	Good	Very poor	Moderate: slope,large stones	Moderate: slope, large stones	Moderate: slope
Rock outcrop	—	—	—	—	--		Severe:slope	Severe:slope	

SOIL MAP SYMBOL AND SOIL NAME	DWELLINGS WITHOUT BASEMENTS:	LOCAL ROADS AND STREETS	LAWNS & LANDSCAPING	SEPTIC	WOODLAND WILDLIFE	WETLAND WILDLIFE	CAMP AREA	PICNIC AREA	PATHS & TRAILS
Hrd -									
Hollis	Severe:slope,depth to rock	Severe:slope, depth to rock	Severe:slope, thin layer	Severe:slope, depth to rock	Same as HrC	"	Severe: slope	Severe: slope depth	Moderate: slope
Charlton			Severe:slope	Severe:slope			depth to rock	to rock	Moderate: slope
Rock outcrop	Severe:slope	Severe:slope					Severe: slope	Charlton: severe: slope	--
							---	--	
PdB -									
Paxton	Moderate wetness	Moderate,frost action,wetness	Moderate,large stones	Severe,percs slowly	Good	Very poor	Moderate: percs slowly, large stones	Moderate: large stones	Slight
Montauk	" "	" "	" "	" "	Good	Very poor	" "	" "	"
Rd - **									
Ridgebury	Severe-wetness	Severe:wetness, frost action	Severe wetness	Severe,percs slowly, wetness	Fair	Good	Severe: wetness	Severe: wetness	Severe: wetness
Rn - **									
Ridgebury	Severe-wetness	Severe-wetness, frost action	Severe wetness	Severe:percs slowly,wetness	Fair	Fair	Severe-large stones, wetness	same	Severe-wetness
Leicester	" "	" "	" "	Severe-wetness	Fair	"	Severe- " "	same	Severe-wetness
Whitman	Severe-wetness	Severe-frost action, ponding	Severe-ponding	Severe-percs slowly,ponding	Fair	"	Severe-large stone, ponding	same	Severe-ponding

SOIL MAP SYMBOL AND SOIL NAME	DWELLINGS WITHOUT BASEMENTS	LOCAL ROADS AND STREETS	LAWNS & LANDSCAPING	SEPTIC	WOODLAND WILDLIFE	WETLAND WILDLIFE	CAMP AREA	PICNIC AREA	PATHS & TRAILS
SxB - Sutton	Moderate:wetness	Moderate:frost action,wetness	Moderate:wetness large stones	Severe-wetness	Fair	Very poor	Severe: large stones	Severe: large stones	Moderate: wetness
SwB - Sutton	Moderate:wetness	Moderate:frost action,wetness	Moderate:large stones, wetness	Severe, wetness	Good	Very poor	Moderate: large stones, wetness	Moderate: large stones wetness	Moderate: wetness
WxB - * Woodbridge	Moderate:wetness	Severe:frost action	Moderate:wetness	Severe: percs slowly, wetness	Good	Very poor	Moderate: percs slowly wetness	Moderate: percs slowly, wetness	Moderate-wetness
WyB - Woodbridge	Moderate:wetness	Severe:frost action	Moderate:large stones, wetness	Severe:percs slowly,wetness	Good	Very poor	Moderate: wetness,large stones,percs slowly	Same	Moderate wetness
WzC - Woodbridge	Moderate:slope, wetness	Severe:frost action	Moderate:slope large stones, wetness	Severe:percs slowly,wetness	Good	Very poor	Severe: large stones	same	Moderate-wetness
Rainbow	"	"	"	"	"	" "	"	"	

** Wetland soils regulated under P.A. 155
* - Prime Farmland as defined by the U.S. Department of Agriculture

SOIL INTERPRETATIONS FOR URBAN USES

The ratings of the soils for elements of community and recreational development uses consist of three degrees of "limitations:" slight or no limitations; moderate limitations; and severe limitations. In the interpretive scheme various physical properties are weighed before judging their relative severity of limitations.

The user is cautioned that the suitability ratings, degree of limitations and other interpretations are based on the typical soil in each mapping unit. At any given point the actual conditions may differ from the information presented here because of the inclusion of other soils which were impractical to map separately at the scale of mapping used. On-site investigations are suggested where the proposed soil use involves heavy loads, deep excavations, or high cost. Limitations, even though severe, do not always preclude the use of land for devel opment. If economics permit greater expenditures for land development and the intended land use is consistent with the objectives of local or regional development, many soils and sites with difficult problems can be used.

Slight Limitations

Areas rated as slight have relatively few limitations in terms of soil suitability for a particular use. The degree of suitability is such that a minimum o time or cost would be needed to overcome relatively minor soil limitations.

Moderate Limitations

In areas rated moderate, it is relatively more difficult and more costly to correct the natural limitations of the soil for certain uses than for soils rated as having slight limitations.

Severe Limitations

Areas designated as having severe limitations would require more extensive and more costly measures than soils rated with moderate limitations in order to overcome natural soil limitations. The soil may have more than one limiting characteristic causing it to be rated severe.

Legal Notice

Public Notice on the Registration of Dams or Similar Structures

The Commissioner of Environmental Protection pursuant to Section 22a-409 of the Connecticut General Statutes as amended by Public Act 83-38 of the June session has adopted Section 22a-409-1 of the regulations of Connecticut State Agencies.

This regulation requires the owners of a dam or similar structure (including dikes, weirs, incompletely breached dams and any barrier which is capable of impounding or controlling the flow of water) to register with the Commissioner on a form prescribed by him by July 1, 1984. The Commissioner requests that the owners of completely breached dams register at no cost, to allow removal of these dams from the state's files.

The registration form is available at the Town Clerk's offices in the town where a dam is located and also may be obtained from the Water Resources Unit of the D.E.P., Room 215, State Office Building, Hartford, CT 06106, phone, 566 7244. A fine of up to $500 per day may be levied on dam owners for not complying according to Section 22a 407 of the Connecticut General Statutes.

Dated March 19, 1984.

John W. Anderson
Deputy
Commissioner

3 26; 4 18

About the Team

The Eastern Connecticut Environmental Review Team (ERT) is a group of professionals in environmental fields drawn together from a variety of federal, state, and regional agencies. Specialists on the Team include geologists, biologists, foresters, climatologists, soil scientists, landscape architects, archeologists, recreation specialists, engineers and planners. The ERT operates with state funding under the supervision of the Eastern Connecticut Resource Conservation and Development (RC&D) Area.

The Team is available as a public service at no cost to Connecticut towns.

PURPOSE OF THE TEAM

The Environmental Review Team is available to help towns and developers in the review of sites proposed for major land use activitis. To date, the ERT has been involved in reviewing a wide range of projects including subdivisions, sanitary landfills, commercial and industrial developments, sand and gravel operations, elderly housing, recreation/open space projects, watershed studies and resource inventories.

Reviews are conducted in the interest of providing information and analysis that will assist towns and developers in environmentally sound decision-making. This is done through identifying the natural resource base of the project site and highlighting opportunities and limitations for the proposed land use.

REQUESTING A REVIEW

Environmental reviews may be requested by the chief elected officials of a municipality or the chairman of town commissions such as planning and zoning, conservation, inland wetlands, parks and recreation or economic development. Requests should be directed to the Chairman of your local Soil and Water Conservation District. This request letter should include a summary of the proposed project, a location map of the project site, written permission from the landowner allowing the Team to enter the property for purposes of review, and a statement identifying the specific areas of concern the Team should address. When this request is approved by the local Soil and Water Conservation District and the Eastern Connecticut RC&D Executive Council, the Team will undertake the review on a priority basis.

For additional information regarding the Environmental Review Team, please contact Jeanne Shelburn (774-1253), Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, P.O. Box 198, Brooklyn, Connecticut 06234.