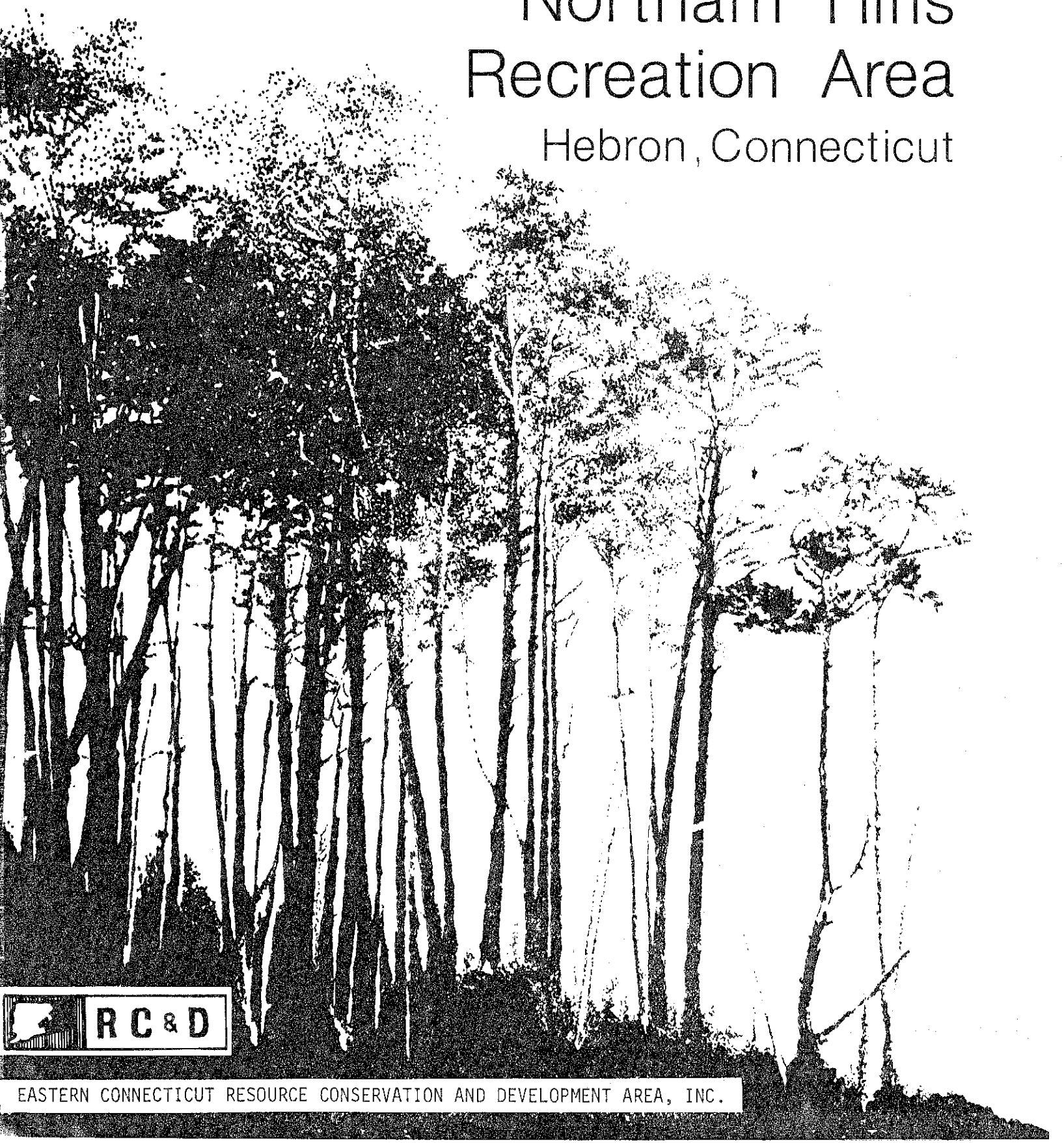
Environmental Review Team Report

Northam Hills Recreation Area

Hebron, Connecticut



RC&D

EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

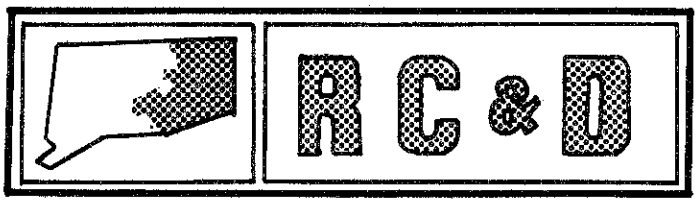
Environmental Review Team Report

on

Northam Hills Recreation Area

Hebron, Connecticut

August 1980

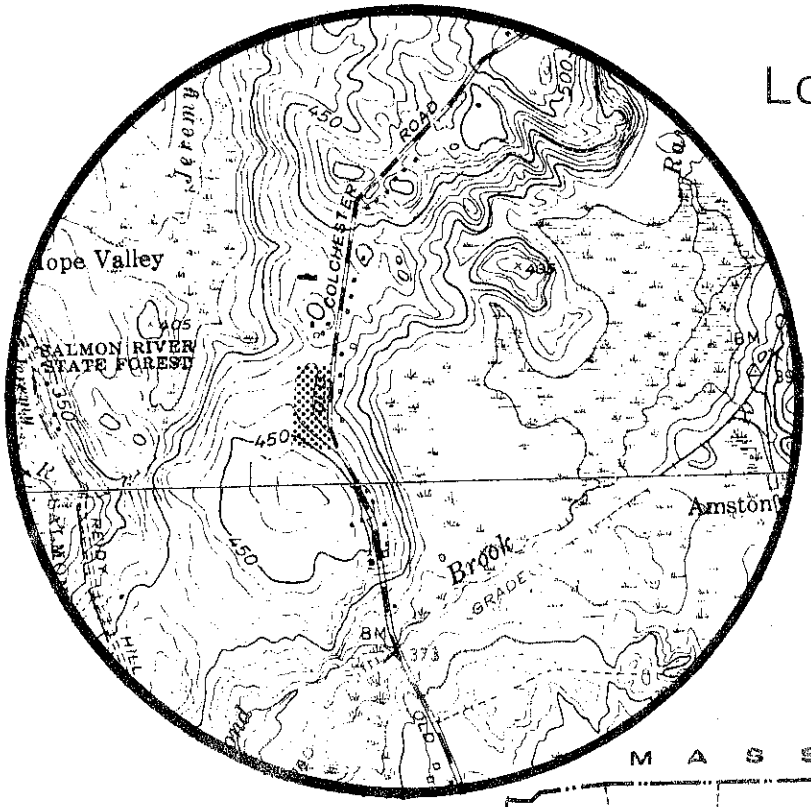


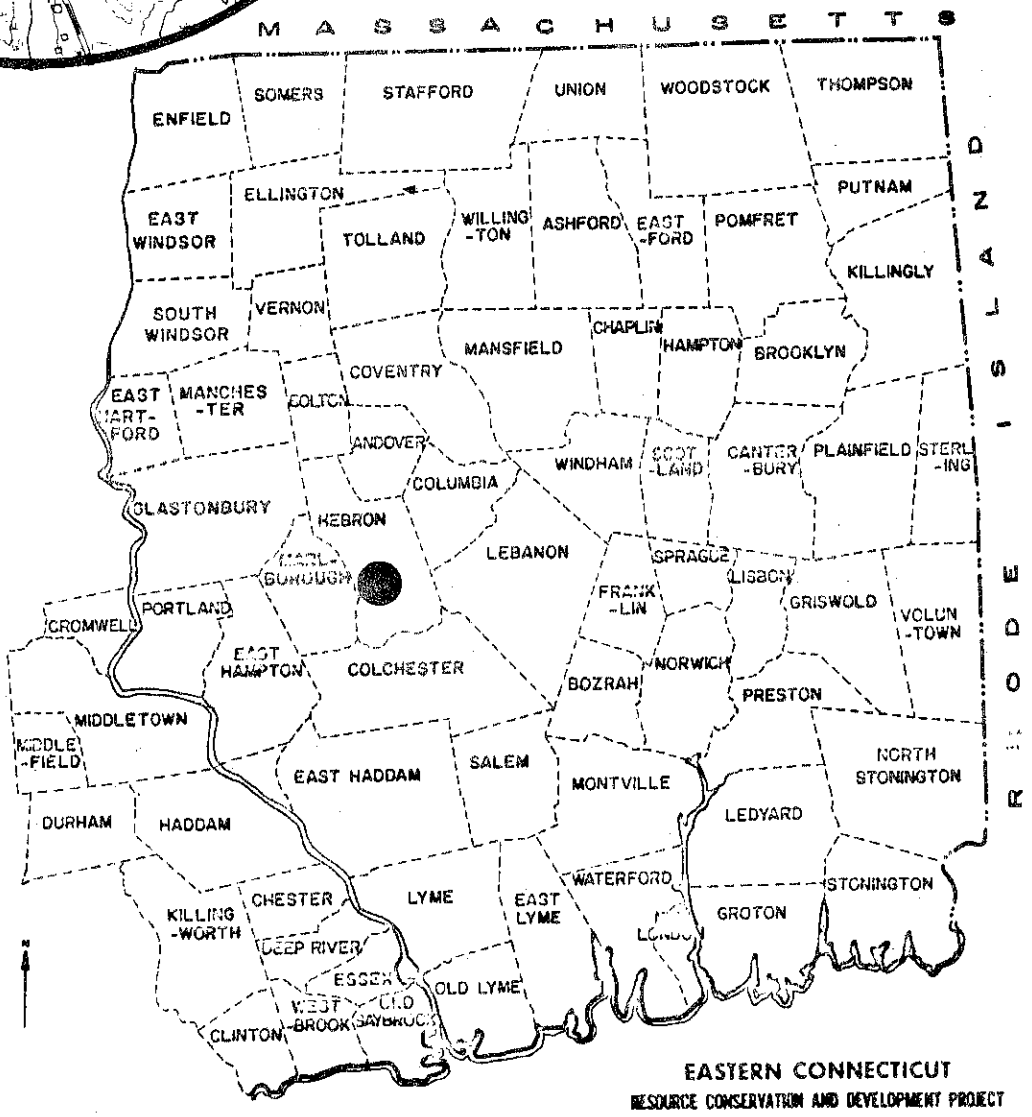
eastern connecticut resource conservation & development area

environmental review team
139 boswell avenue
norwich, connecticut 06360

Location of Study Site

Northam Hills Recreation Area
Hebron, Connecticut





ENVIRONMENTAL REVIEW TEAM REPORT
ON
NORTHAM HILLS RECREATION AREA
HEBRON, CONNECTICUT

This report is an outgrowth of a request from the First Selectman of Hebron 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) Area Executive Committee for their consideration and approval. The request was approved and the measure was reviewed by the Eastern Connecticut Environmental Review Team (ERT).

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

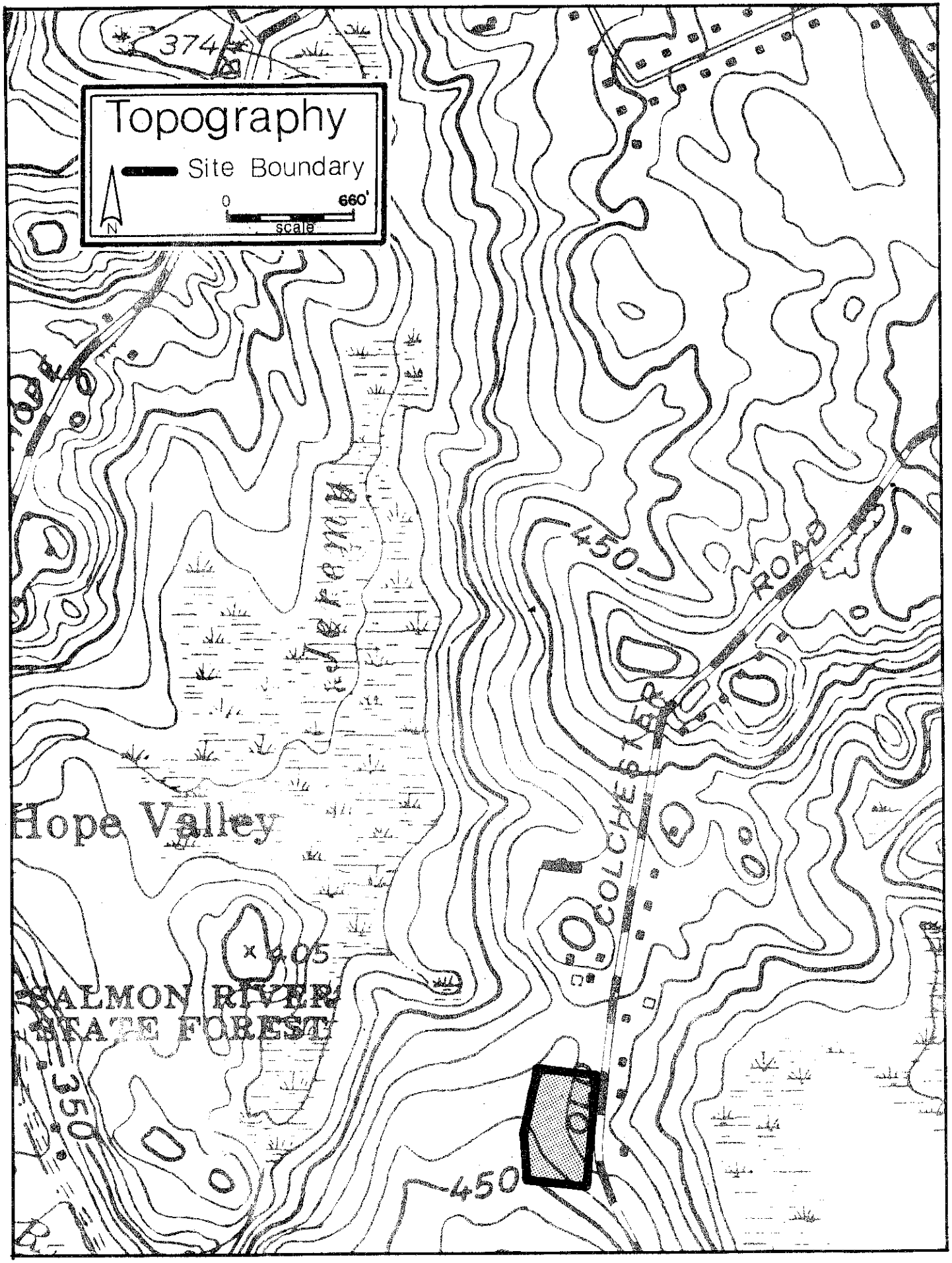
The ERT that field-checked the site consisted of the following personnel: Joseph Neafsey, District Conservationist, SCS; Rob Rocks, Forester, Connecticut Department of Environmental Protection (DEP); Michael Zizka, Geologist, DEP; Andy Petracco, Recreation Specialist, DEP; Chuck Phillips, Fisheries Biologist, DEP; and Jeanne Shelburn, ERT Coordinator, Eastern Connecticut RC&D Area.

The Team met and field checked the site on Thursday, May 15, 1980. Reports from each contributing 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. As requested by the Town, this report, which identifies the existing resource base of the Northam Hills Recreation Area, shall constitute the environmental assessment portion of the Town's open space application for Federal Department of the Interior, Heritage Conservation and Recreation Service funds to assist in the development of this property.

The Eastern Connecticut RC&D Area Committee hopes that this report will be of value and assistance in making any decisions regarding this particular site.

If you require any additional information, please contact: Ms. Jeanne Shelburn, Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, 139 Boswell Avenue, Norwich, Connecticut, 889-2324.


Topography
Site Boundary
0
660'
scale
N
374
450
ROAD
Hope Valley
SALMON RIVER
STATE FOREST
450

DESCRIPTION OF THE PROPOSAL

The Eastern Connecticut Environmental Review Team was asked to review a 3± acre parcel in the town of Hebron for establishment of a ballfield and picnic area. The town is applying for Heritage Conservation and Recreation Service development funding.

The site is located on Old Colchester Road, several miles south of the Hebron central business district. It is in an area of rapid development, primarily large lot (1-3 acre) subdivisions. The site was at one time two lots of the proposed Northam Hills subdivision which surrounds the parcel. The site has been partially cleared. Approximately 2 acres of the parcel is in open field, the remainder is a wooded wetland with red maple and highbush blueberry as the dominant species. Soils in this area have a seasonal high water table.

The town intends to develop one ballfield in this area with associated parking and sanitary facilities. Picnicking has also been considered for the remainder of the site.

DESCRIPTION OF THE ENVIRONMENT

PRESENT/PAST LAND USE

This site is presently an open field. It appears to have been cleared at one time for use in an adjacent subdivision. There is little evidence to indicate former use for agricultural purposes, but it could conceivably have been used for pasture land.

SOCIO-ECONOMIC CONDITIONS

Hebron is expected to experience a moderate rate of growth during the next 20 years. Population projections range from 7,250 in 1995 to 7,500 in the year 2000. Numbers of dwelling units will grow from 2,408 in 1995 to 2,500 in the year 2000. Most residents are employed in the city of Hartford, as industrial and retail employment opportunities within the town are limited.

TRANSPORTATION ROUTES

This site is located on Old Colchester Road, several miles south of the Hebron central business district. The road is narrow, but in fairly good repair. The site is located in a generally dense residential area, several large subdivisions abut the parcel, so access by foot or bicycle is not inconceivable.

SURFACE/SUBSURFACE GEOLOGIC CONDITIONS

In the following description of the geology of the parcel, the geologic terms "till," "alluvium," "schist," and "gneiss" are used. Till is a glacial sediment

composed of rock particles and fragments of widely varying sizes and shapes. The rock materials were accumulated by an ice sheet as it overrode preexisting soils and bedrock outcrops, scraping and scouring the surface. The sediment was redeposited directly from the ice by being either plastered onto the glaciated surface or let down gently as the ice wasted. Till is variable in texture, ranging from stony, sandy, and gravelly to silty and tightly compact.

Alluvium is a sediment deposited by modern streams in channels or on floodplains. The floodplain sediment is usually thinly layered, reflecting different periods of deposition during successive floods. Textures vary from coarse to fine, depending upon the energy of the stream at a particular area and during a particular flood. Sand and silt are the predominant components, with gravel occasionally being found in and near the stream channel. Organic material (partially decayed vegetation) is also found in some parts of these deposits.

Schist is a crystalline rock in which platy, flaky, or elongate minerals have become aligned to form distinct layers. This structure gives the rock a slabby appearance and often allows the rock to be easily split along the layers.

Gneiss is a crystalline rock in which thin layers of elongate minerals, which are often dark-colored, alternate with layers of rounder or blockier minerals, which are usually light-colored. This structure gives the rock a banded appearance and does not produce the distinct parting surfaces that are typical of schists.

This site contains a granular till underlain by a hard, compact till. The upper till on this parcel had a matrix of medium to coarse sands and was quite friable. No bedrock outcrops were observed, and the records from test pits previously dug on the site suggest that the till is at least 10 feet thick. The underlying bedrock is interpreted to be a fine-grained, gray-black to gray-green unit consisting of interlayered biotite schist, biotite-hornblende schist, and calc-silicate rock with minor, layered, coarse biotite gneiss. No economically valuable mineral deposits are believed to be present.

SOILS

Two soil types, the Sutton series and the Leicester, Ridgebury and Whitman series are typical of this parcel.

Sutton fine sandy loam, 3-8% slopes (SvB), is a moderately well drained soil with a seasonal high water table. Surface drainage is moderate and the moisture holding capacity of this soil is high. There is a moderate risk of erosion on unprotected slopes. The soil has a moderate fertility rating, grasses and legumes will need applications of lime and fertilizer.

Leicester, Ridebury, Whitman very stony complex (Lg) is a poorly drained, nearly level to gently sloping series. Stones and wetness are its major limitations to development. Surface runoff is slow to medium and internal drainage is slow. A perched fluctuating water table above the fragipan is at or near the surface for 7 to 9 months of the year. The soil has low erosion potential and low fertility in an undrained condition. Activities in this soil type are regulated under P.A. 155.

WATER RESOURCES

This tract contains a very small wet area, one acre or less in size. The remainder of the site is relatively dry, but it is subject to seasonally high groundwater levels. The property is located on the topographic divide between Raymond Brook and Jeremy River; drainage flows both eastward and westward. No defined streams or ponds are present on the site. Bedrock would be the most likely source for on-site water supplies. There is a somewhat greater chance for objectionably high concentrations of iron or manganese to occur in groundwater derived from this parcel because of the nature of the underlying bedrock. Proper filtration methods should solve any such problems.

WILDLIFE

The area probably provides limited food cover and water for indigenous species of birds and small mammals. Weeds and grasses provide habitat for insects which along with seeds provide majority of food available in the area. No rare or endangered species appear to utilize the parcel. General quality of habitat is low.

VEGETATION

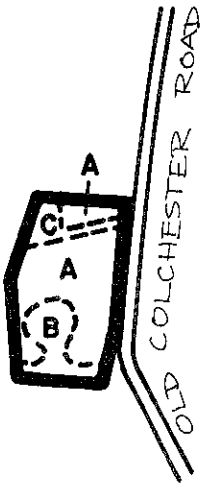
Vegetation types typical of this parcel are described as follows:

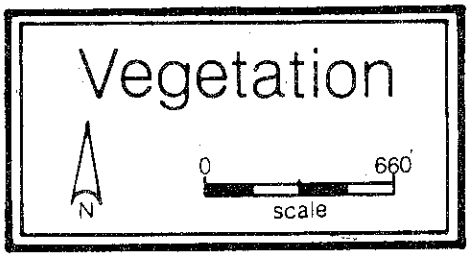
Type A. (Open Fields.) Grasses are the dominant form of vegetation. Wild flower and weed species are also present, they include; golden rod, clover, cinquefoil, violets, buttercup, wild strawberry, bluets, wild parsnip and woodbetony.

Type B. (Hardwood Swamp.) Sapling to pole size red maple in clumps are present along with scattered white ash and yellow birch in these stands. The dense understory present in all of these areas is made up of highbush blueberry, maleberry, spice-bush, swamp azalea and arrowwood. Ground cover is made up of skunk cabbage, false hellebore, sensitive fern, cinnamon fern, Christmas fern, trout lily, Solomon's seal, violets, trillium, Jack-in-the-pulpit, horse tails, mosses, tall meadow-rue, tussock sedge and sphagnum moss.

Type C. (Mixed Hardwoods.) This fully-stocked stand is made up of medium quality pole to sawtimber size red oak, white oak and red maple, with scattered sugar maple and white ash. Highbush blueberry, witch hazel, blue beech, arrowwood and hardwood tree seedlings are present in the understory. Club moss, Canada Mayflower, hayscented fern and grasses dominate the ground cover in this stand.

Location of these various communities is shown on the accompanying vegetation map.





LEGEND

- Road
- Abandoned Railroad
- Stream
- River
- Property Boundary
- Vegetation Type Boundary
- Pond
- Parking Area

VEGETATION TYPE DESCRIPTIONS*

TYPE A. Open Fields.

TYPE B. Hardwood Swamp.

TYPE C. Mixed hardwoods.

* Seedling Size = trees less than 1 inch in diameter at 4 1/2 feet above the ground (d.b.h.)
Sapling Size = trees 1 to 5 inches in d.b.h.
Pole Size = trees 5 to 11 inches in d.b.h.
Sawtimber Size = trees 11 inches and greater in d.b.h.

ENVIRONMENTAL IMPACT

EFFECT ON LAND USE

This project will have no appreciable effect on land use in the area.

EFFECT ON SOCIO-ECONOMIC CONDITIONS

This proposal should not significantly effect socio-economic conditions within the town or the region. There may be a slight rise in the tax rate to allow for the maintenance of the property, however, this could be reduced or eliminated by a slight fee charged to park users.

EFFECT ON TRANSPORTATION ROUTES

This project will have a minor effect on transportation routes to and from the site. As this property will be used primarily for ballfields, it can be expected that traffic density will be heaviest during scheduled game times. At other times of day, the site will probably not generate significant amounts of traffic.

EFFECT ON WATER RESOURCES

Usage of the parcel for the suggested recreational activities should not noticeably affect the quality or quantity of surface waters or of groundwater. The greatest potential for problems would arise if septic systems were to be established on the site. This parcel is subject to seasonally high groundwater conditions. Improperly designed or installed septic systems may be occasionally flooded, allowing inadequately purified leachate to enter the groundwater or possibly to be discharged to the surface downgradient of the leaching field.

The potential problems cited above are by no means restricted to recreational uses; indeed, other types of development on the site might be expected to generate substantially greater risks to local water quality. In addition, proper engineering of septic systems and allowance for appropriate separating distances between leaching fields and wells would reduce the probability of significant water-quality deterioration or well contamination to a negligible level.

EFFECT ON WILDLIFE

Construction of recreation facilities will eliminate habitat for certain forms of wildlife. With proper landscaping and management, the area could provide food for many birds and small mammals that can tolerate human intrusion. The small size of the parcel will make most impacts negligible.

EFFECT ON VEGETATION

The baseball field proposed for development on this parcel will have little

if any impact on the vegetation of the area. Tree and vegetation clearing will be minimal because the majority of this parcel is presently open field.

MITIGATING MEASURES

Proper landscaping and management could enhance the area for local forms of wildlife. Fruiting shrubs and trees and a variety of grass and legume species planted on the edges of playing fields and around the perimeter of the parcel and parking areas could be utilized to improve the value of the area.

A sediment and erosion control plan for the construction phase and a storm water management plan can minimize non-point source pollution or water problems if implemented and properly maintained.

ALTERNATIVES TO THE PROPOSED ACTION

Construction of ballfields only, or a soccer field only, would eliminate the need to drain and fill the small wetland on the site. The wetland could be developed into a pond.

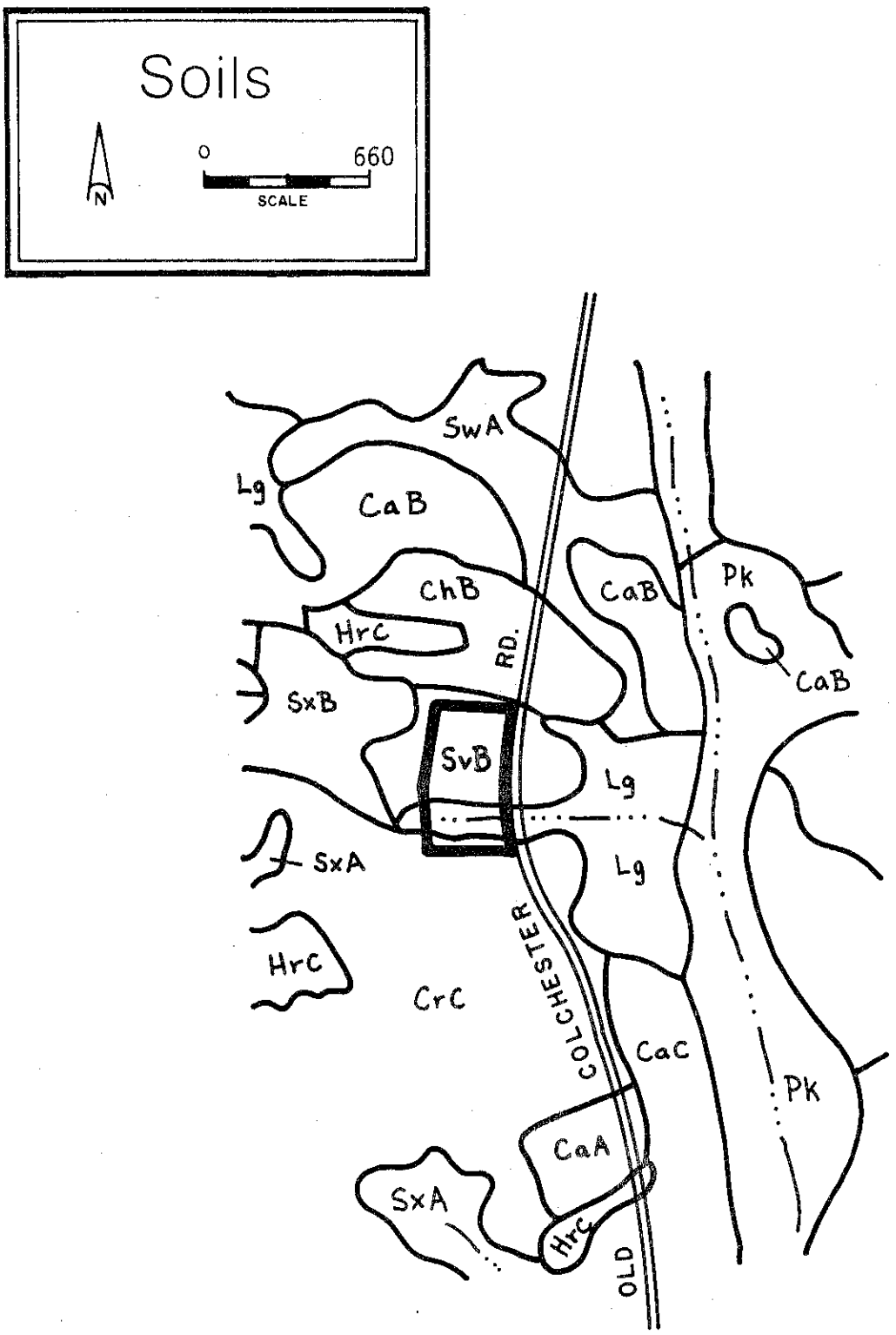
The only other alternative is no action. The parcel was disturbed (regrading, construction of a storm sewer, some fill placed in wetland) during construction of the nearby subdivisions. No action would result in the area slowly reverting to a brush and woodland in time.

RECREATION POTENTIAL

This tract is planned to be developed as a ballfield. It is a small parcel of which a portion is wetland. Optimal use of available space is therefore important to enhancing the options for recreational development and use. Regulated wetland comprises a large part of the southern section, imposing limits on the types of use possible there. Installation of a small picnic area in the southwest corner of the tract on the sloped portion adjacent to the wetland may be feasible but wetland restrictions preclude intensive development of the southern part of the site. Continued mowing of the field along the western side of the tract would at least provide an open field play area during dry periods.

The northern part of the parcel will be occupied by the baseball field. The northern (stone wall laneway) and eastern (along Old Colchester Road) limits of the tract adjacent to the ballfield are the areas where parking seems most feasible. Depending on how much, if any, of the laneway is used for parking, a portion of it may be available for a small picnic area. Removal of a portion of the stone wall would be necessary for either of these uses. Chemical or pit-type toilets could provide for sanitary needs and can be located near the parking or picnic areas. A shaded site for the toilets would be preferable. Some thinning of the young trees growing in the laneway would enhance site usability. The volume of trees to be thinned is small and may not enable production of wood chips for on site use.

Appendix


Soils
N
0
660
SCALE
SwA
Lg
CaB
ChB
HrC
RD.
SxB
SvB
SxA
HrC
CrC
COLCHESTER
OLD
CaB
Pk
CaB
Lg
Lg
CaC
Pk
CaA
SxA
HrC

RECREATION SITES
HEBRON, CONNECTICUT

PROPORTIONAL EXTENT OF SOILS AND THEIR LIMITATIONS FOR CERTAIN LAND USES

Soil Series	Soil Symbol	Approx. Acres	Percent of Acres	Principal Limiting Factor	Urban Use Limitations*				
					On-Site Sewage	Buildings with Basements	Streets & Parking	Land-Scaping	Play-grounds
Charlton	CrC	1		Slope	2	2	2	2	2
Leicester**	Lg	2		Wetness	3	3	3	3	3
Sutton	SvB	3		Wetness, slope	3	3	2	1	2

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

** Regulated Wetland Soil Under PA 155.

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 development. 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 of 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.

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 activities. 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 (889-2324), Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, 139 Boswell Avenue, Norwich, Connecticut 06360.