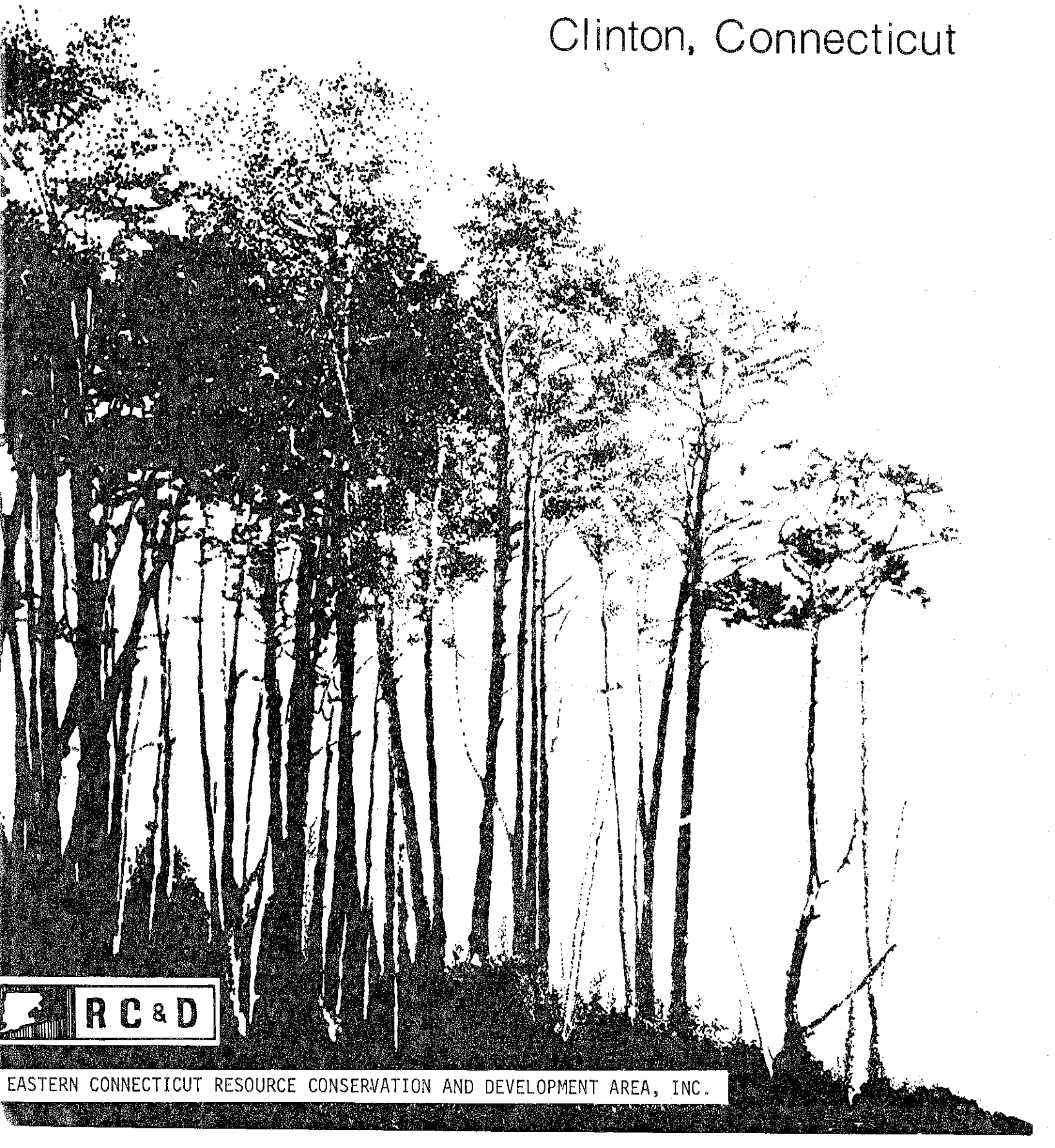
Environmental Review Team Report

Fox Hill

Clinton, Connecticut



R C & D

EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

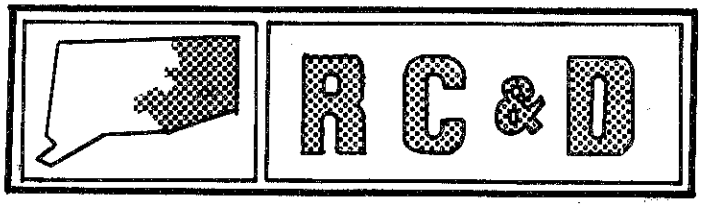
Environmental Review Team Report

on

Fox Hill

Clinton, Connecticut

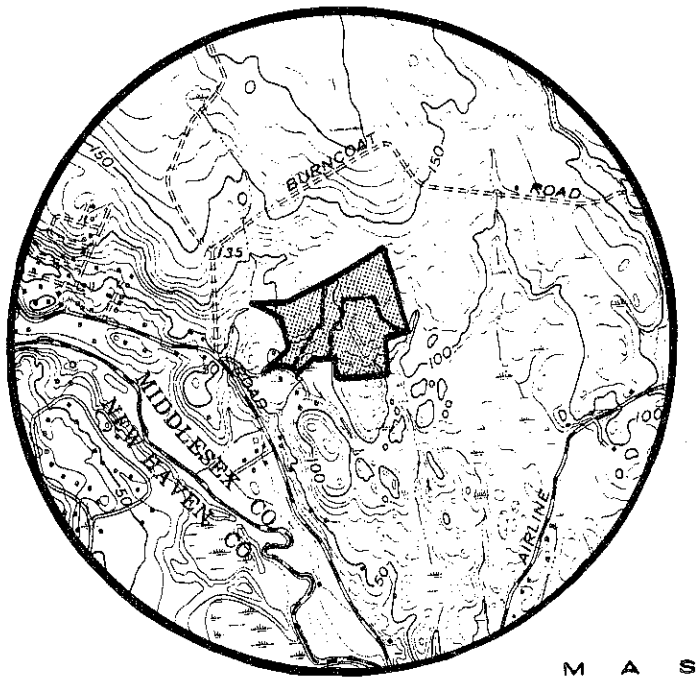
June 1982



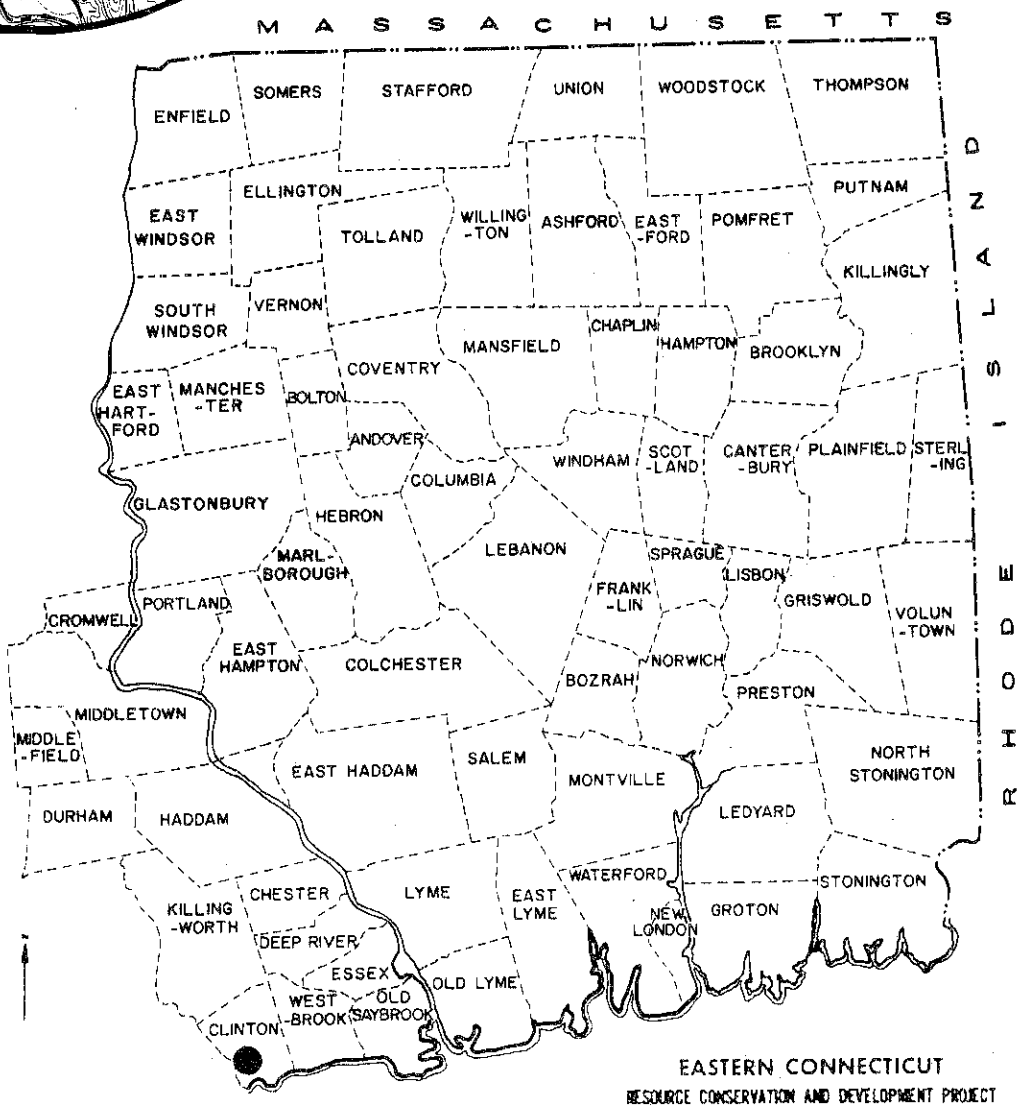
eastern connecticut resource conservation & development area

environmental review team
139 boswell avenue
norwich, connecticut 06360

Location of Study Site



FOX HILL
CLINTON, CONNECTICUT



EASTERN CONNECTICUT
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT

ENVIRONMENTAL REVIEW TEAM REPORT
ON
FOX HILL
CLINTON, CONNECTICUT

This report is an outgrowth of a request from the First Selectman of Clinton to the Middlesex 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: Tom Ladny, Soil Conservationist, SCS; Mike Zizka, Geologist, Connecticut Department of Environmental Protection, DEP; Tim Hawley, Forester, DEP; Andy Petracco, Recreation Specialist, DEP; and Jeanne Shelburn, ERT Coordinator, Eastern Connecticut RC&D Area.

The Team met and field-checked the site on Tuesday, April 27, 1982. 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 Clinton. 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.

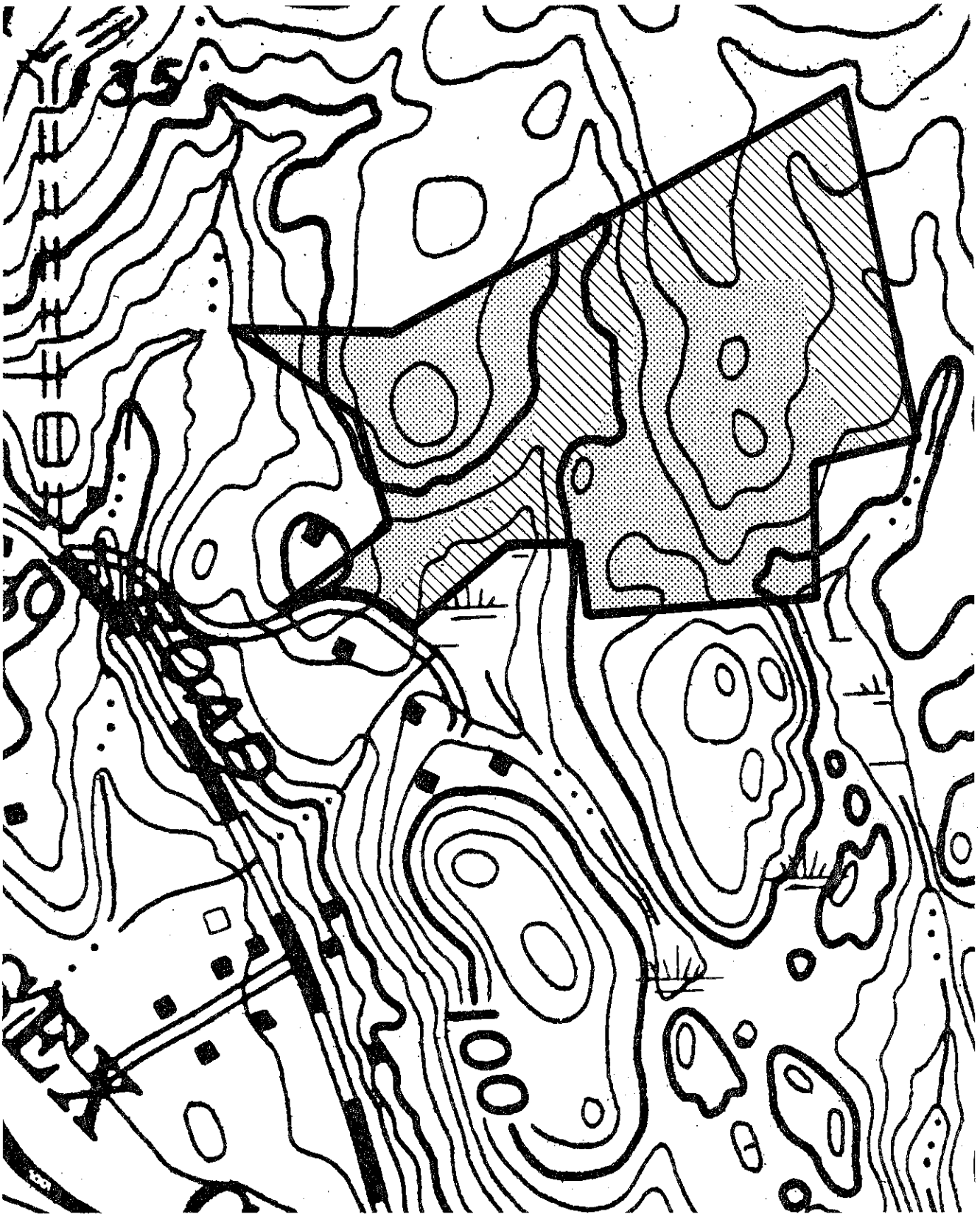
The Eastern Connecticut RC&D Area Committee hopes you will find this report of value and assistance in making your decisions on this particular site.

If you require any additional information, please contact: Ms. Jeanne Shelburn, Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, 139 Boswell Avenue, Norwich, Connecticut 06360, 889-2324.

Topography

0 330'
scale

N



INTRODUCTION

The Eastern Connecticut Environmental Review Team was asked to prepare a natural resource inventory for the Clinton Land Trust. The site is approximately 10 acres in size and is located on Fox Hill in a small subdivision on the northern side of Deerfield Drive near the Hammonassett River. Access to the site is provided by a road running through the subdivision and ending in a cul-de-sac.

ENVIRONMENTAL ASSESSMENT

GEOLOGY

The Fox Hill parcel comprises two narrow wetland areas and a relatively flat upland area between them. The upland areas within the subdivision proper are very rocky, but the open-space upland apparently has deeper soils. There were several open test pits on or near the open-space parcel on the day of the field review. These should be filled as soon as possible as they may pose a safety hazard.

The overburden in the upland area is till, a glacial sediment. The till consists of a nonsorted mixture of clay, silt, sand, gravel, and boulders. These materials were collected, transported, and redeposited by an ice sheet more than 12,000 years ago. The general texture of the till on the property is sandy, very stony, and loose. Where the till is deepest, however, it may become very compact at depths of 3 to 5 feet.

In the wetland areas, a thin mixture of decayed organic material, sand, and silt overlies till. These sediments are particularly thin in the eastern wetland.

Bedrock was not seen in the open-space area but it was prominently exposed in other parts of the subdivision tract. The rock is a poorly lineated crystalline formation composed primarily of the minerals plagioclase, quartz, hornblende, and biotite.

HYDROLOGY

The two wetland areas on the site carry intermittent stream flows. The western wetland drains southwestward, passing under Deerfield Drive and River Road, and entering Hammonasset River about 1,600 feet away from the site. The eastern wetland drains southward through a narrow, rocky course. The intermittent flows pass under River Road and enter Hammonasset River about 4,500 feet south of the parcel. Because the two wetlands on the site are narrow, they have a very limited value in flood-flow and erosion control. They may, however, have a more significant ecological significance.

The site is not believed to contain any especially significant groundwater resources.

Surficial Geology

0 330'
SCALE

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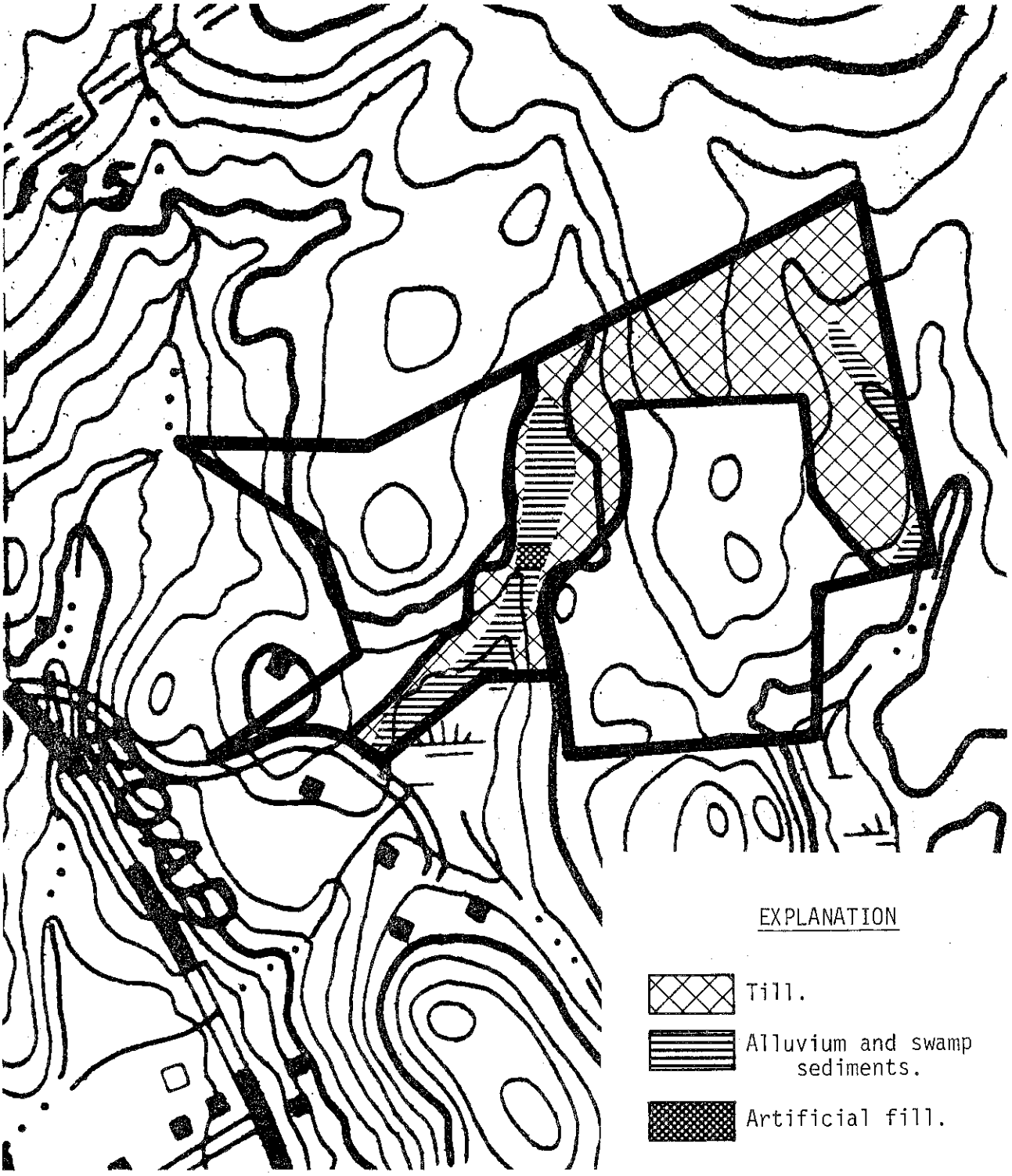

Drainage Areas

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scale

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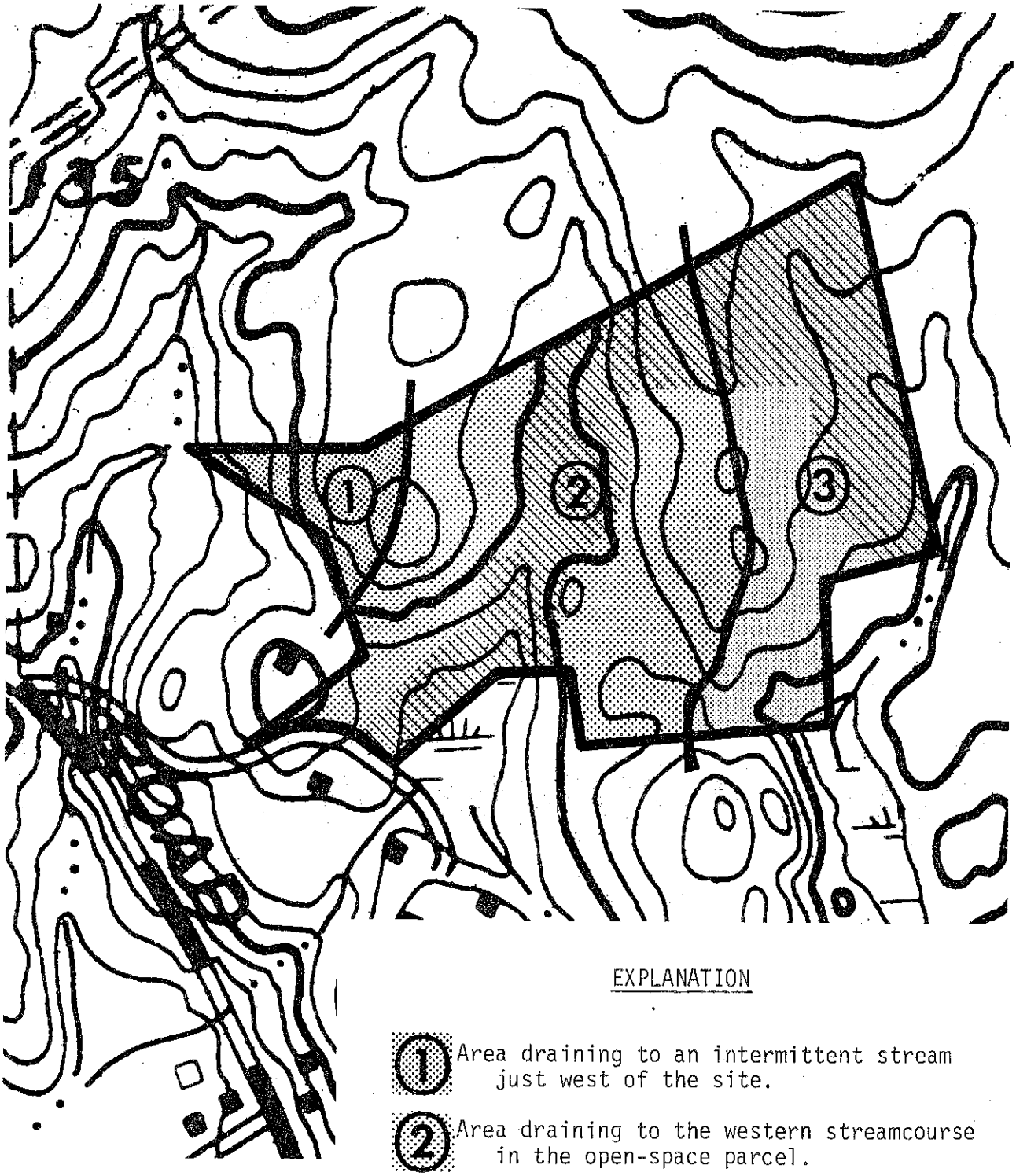

EXPLANATION

1. Area draining to an intermittent stream just west of the site.
2. Area draining to the western streamcourse in the open-space parcel.
3. Area draining to the eastern streamcourse in the open-space parcel.

SOILS

A detailed soils map of this site is included in the Appendix to this report, accompanied by a chart which indicates soils limitations for various urban uses. As the soil map is an enlargement from the original 1,320 feet/inch scale to 330 feet/inch, the soil boundary lines should not be viewed as absolute boundaries, but as guidelines to the distribution of soil types on the site. The soil limitation chart indicates the probable limitations for each of the soils for on-site sewerage, buildings with basements, buildings without basements, streets and parking, and landscaping. However, limitations, even though severe, do not preclude the use of the land for development. If economics permit large expenditures for land development and the intended objective is consistent with the objectives of local and regional development, many soils and sites with difficult problems can be used. The soils map, with the publication Soil Survey, Middlesex County, Connecticut, can aid in the identification and interpretation of soils and their uses on this site. Know Your Land: Natural Soil Groups for Connecticut can also give insight to the development potentials of the soils and their relationship to the surficial geology of the site.

This open space parcel consists of approximately 4.5 acres of Leicester, Ridgebury and Whitman (Lg) soil complex, and 2.2 acres of Paxton-Montauk (PdB). The Lg complex is nearly level to sloping, poorly drained soils in drainage ways and depressions of glacial till uplands. This soil complex is defined as a wetland soil, and as such, is poorly suited to cultivation or developments.

The PdB soils are very stony and have slopes ranging from 3 to 8 percent. They are located on drumlins and till plains of glaciated uplands. Subsoil drainage is slow to very slow; thus the water table is artificially perched much of the year. It is poorly suited to cultivation, but has a fair potential for development. Because of the soil characteristics and limitations, areas such as this are best left as open space for recreation, wildlife habitat or woodland.

WILDLIFE

This open space can best be described as a wet upland-woodland habitat. The predominant woody plants are spicebush, red maple and black gum, in the soils mapped as Lg. It has fair potential for establishing wild herbaceous plants, coniferous and hardwood trees, and shallow water areas. Naturally, wetland plants will do well.

The PdB soil has good potential for growing wild herbaceous plants, hardwood and coniferous trees and plants, and is best suited to management for woodland habitat. Red, black, and white oaks are the dominant hardwoods.

As a unit, the Fox Hill open space has the greatest potential for management as woodland habitat. Primarily, planting trees and shrubs that provide food and cover would be most advantageous. The wildlife attracted to these areas would include ruffed grouse, woodcock, thrushes, woodpeckers, songbirds, squirrels, raccoons and deer. The trees and shrubs that are attractive to this type of wildlife include autumn olive, gray dogwood and silky dogwood, highbush cranberry and highbush blueberry, hemlock, Norway spruce and white spruce, and red cedar and white cedar.

Presently, the spicebush and oaks provide a fall food supply, and the habitat will benefit greatly by the addition of cover and additional food sources.

PLANT COMMUNITIES

The 10-acre "Fox Hill" parcel is located on the north side of Deerfield Drive near the Hammonasset River, in Clinton, Connecticut, and within the Eastern Coastal ecoregion. The Environmental Review Team was asked to provide recommendations for recreational uses and also a resource inventory for the open space area. A list of plants found on the site is included in the Appendix to this report.

Because the site contains moderate slopes and wetlands, it is unsuitable for most structures and recreational facilities. Perhaps a small area in the southeastern section, which is fairly level and dry, could be used for tennis courts or a small building. The site could also be used for nature study as it contains an interesting collection of wetland and woodland plants.

FOREST RESOURCES

The open space is predominately hardwood swamp occupied by red maple, black gum, yellow birch, and shagbark hickory. The principle understory species are spicebush, blueberry and azalea. Poison ivy, false-hellebore, ferns and mosses are the principle groundcover species.

Tree density and quality is typically variable. Most of the trees are five to eleven inches in diameter and there is an average of twenty cords per acre. Where the trees are crowded, continued mortality can be expected due to competition. Half of the trees may increase in value over the next ten years.

There are about two acres of upland where the overstory is primarily oak and tulip. The understory consists of beech, viburnum, and dogwood.

About half of the parcel is accessible only from adjacent building lots. The long boundary of the open space with developed sites will diminish the value of the open space for aesthetics and wildlife.

The wet nature of the soil will severely limit the harvesting of forest products on most of the site.

Management Recommendations:

The subdivision plan should be re-drawn so that the narrow strips of wetland are included in adjacent building lots. Owners of these individual lots will be much better able to manage the land than any one owner, because of the limitation on access imposed by the site. Lot boundaries could be re-drawn to leave a 10-acre open space with at least a 25% reduction in the length of boundary between open space and developable land. This would increase the aesthetic and wildlife values of the open space and reduce management costs. A large common boundary between Cockaponset State Forest and the open space would benefit both the state and the town.

Vegetation

0 330'
scale

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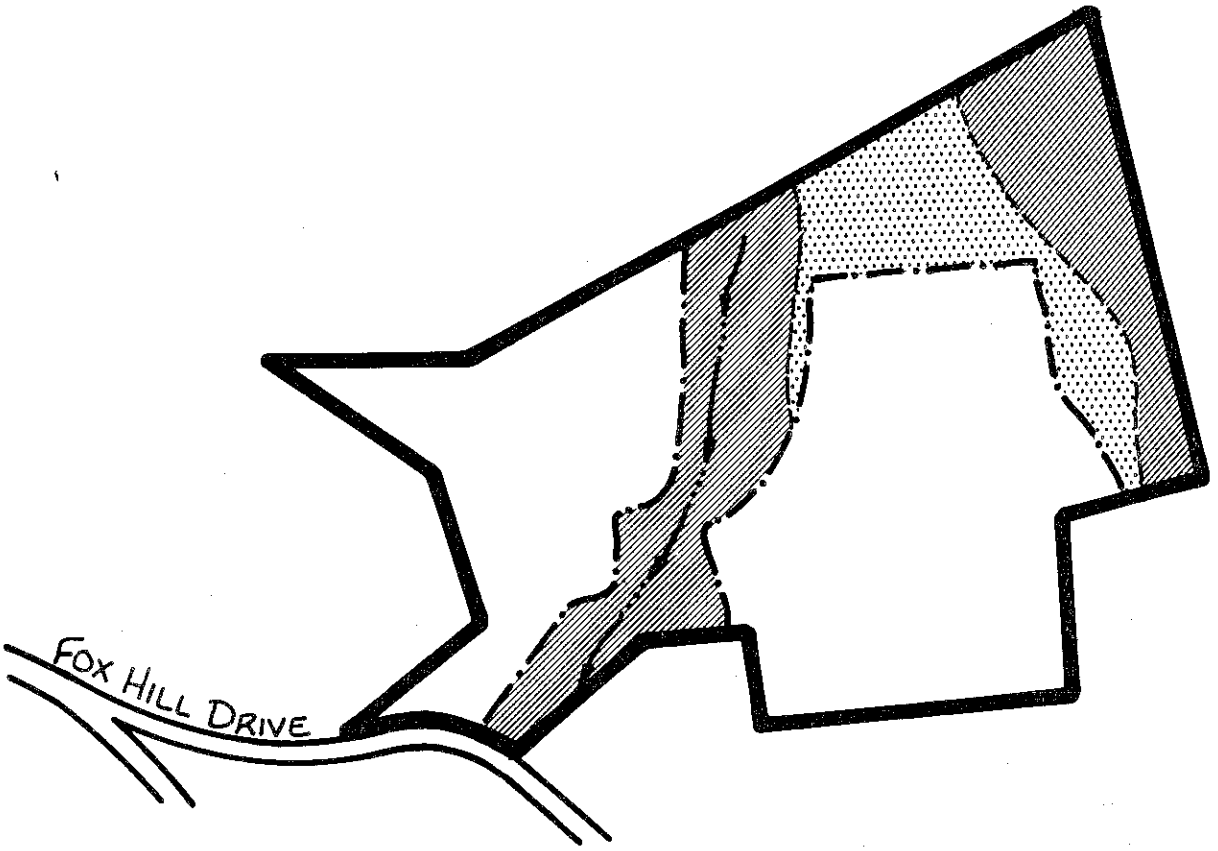

EXPLANATION

- Road
- Site Boundary
- Open Space Boundary
- Upland Hardwoods
- Hardwood Swamp

The boundary of the open space parcel should be marked. Aluminum nails, driven in three-fourths of their length, should be used if signs are attached to trees.

Accessible parts of the open space which are overcrowded should be thinned. White pine, hemlock, or Norway spruce should be planted at 8 x 8 foot spacing in clumps to contain vines and improve conditions for wildlife.

RECREATION POTENTIAL

The Fox Hill land trust parcel is located adjacent to a new housing development on a cul-de-sac. It is largely wetland with very limited recreation potential as a result. If crossings can be established in the wetter areas, it may be possible to establish foot trails within the designated space.

A possible option is the expansion of trails onto a 17.5 acre parcel of state forest which abuts the land trust property to the east and south. It may be desirable to provide limited vehicular access to the state forest piece via the open space (land trust) parcel, thereby enhancing the resource management (e.g. - wood extraction) potential. Selective tree cutting would in turn provide tote roads or log skidding trails which could become a part of a trail system to the mutual benefit of the users and resource managers. If a road is proposed for crossing wetland, it should be designed so as to cause minimal disruption to the wetland and be in accordance with the conditions of P.A. 155. Coordination of these considerations should be through the DEP since the state land involved is a part of the Cockaponset State Forest.

From a usage standpoint, passive recreation is all that is projected on the land trust component whether or not planning is tied into the adjacent state-owned land. The wetland nature of the property precludes the possibility of any heavy use facilities being constructed.

Trail related activities possible are: hiking, jogging, nature study (e.g., birdwatching, plant identification, identification of geological formations), cross-country skiing and snowshoeing and mushroom and berry collection.

A possibility for consideration by the Land Trust is the printing of a handout leaflet listing the parcels owned by the trust and some information about each one. That information might include a historical account tracing traditional uses of the land, patterns of ownership, landforms contained and possibly geologic events leading to their present state and predominate flora and fauna. Information provided would have to be a synaptic overview since a handout leaflet cannot be more than that. Such information could conceivably be of benefit to classes studying the natural sciences in the local schools. These classes may even be able to do more of an indepth study of the land trust lands with supplemental information available (via cross-referencing in the handout leaflet) to those interested in further investigation.

Appendix

Soils

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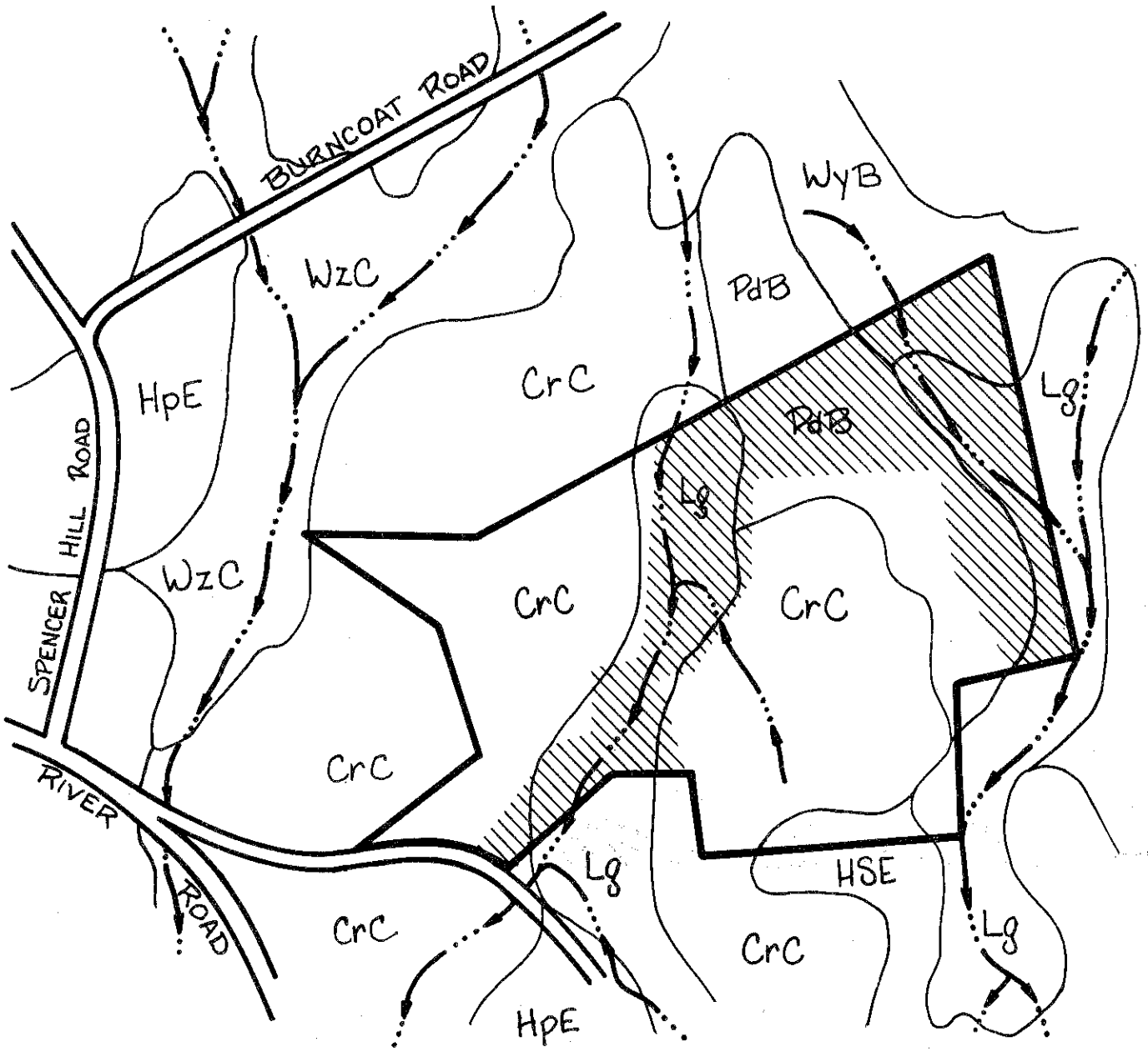
SCALE



Site Boundary

Open Space Area

FOX HILL OPEN SPACE
CLINTON, 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
Charlton-Hollis	CrC	12.25	55%	Slope, stones	2	2	2	2
Hollis-Rock Outcrop	HSE	.5	2%	Depth to bed-rock	3	3	3	3
Leicester, Ridgebury Whitman	Lg	4.75	21%	Wetness	3	3	3	3
Paxton-Montauk	PdB	4.25	19%	Slow perc, Large stones	3	2	2	2
Woodbridge	WyB	.75	3%	Seasonal wetness	3	3	3	3
		22.50	100%					

LIMITATIONS: 1=Slight; 2=Moderate; 3=Severe

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.

PLANT INVENTORY

FERNS AND FERN ALLIES

Lycopodium flabelliform	Ground Pine
Lycopodium lucidulum	Shining Clubmoss
Lycopodium obscurum	Tree Clubmoss
Onoclea sensibilis	Sensitive Fern
Polystichum acrostichoides	Christmas Fern
Dryopteris marginalis	Marginal Shield-fern
Dotrychium virginianum	Rattlesnake Fern

HERBS

Veratrum viride	False Hellebore
Anemone quinquefolia	Wood Anemone
Geranium maculatum	Wild Geranium
Viola cucullata	Marsh Blue Violet
Viola blanda	Sweet White Violet
Symplocarpus foetidus	Skunk-cabbage
Maianthemum canadense	Wild Lily-of-the-Valley
Mitchella repens	Partridge-berry
Pyrola rotundifolia	Round-leaved Pyrola
Panax trifolius	Dwarf Ginseng
Fragaria virginiana	Wild Strawberry
Epifagus virginiana	Beech-drops
Erythronium americanum	Trout Lily
Trillium cernuum	Nodding Trillium
Arisaema triphyllum	Jack-in-the-Pulpit
Impatiens capensis	Touch-me-not
Caltha palustris	Marsh-Marigold

SHRUBS AND VINES

Lindera benzoin	Spice Bush
Toxicodendron radicans	Poison Ivy
Clethra alnifolia	Sweet Pepperbush
Smilax rotundifolia	Common Greenbrier
Virburnum acerfolium	Maple-leaved Viburnum
Viburnum cassinoides	Wild Raisin
Rubus Spp.	Blackberry
Potentilla sp.	Cinquefoil

TREES

Quercus alba	White Oak
Quercus rubra	Red Oak
Quercus velutina	Black Oak
Betula lutea	Yellow Birch
Fagus grandifolia	Beech
Acer rubrum	Red Maple
Cornus florida	Flowering Dogwood
Amelanchier canadensis	Common Juneberry
Carya glabra	Pignut
Carya ovata	Shagbark Hickory

TREES, continued

Sassafras albidum	Sassafras
Platanus occidentalis	American sycamore
Taxus canadensis	American Yew

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.