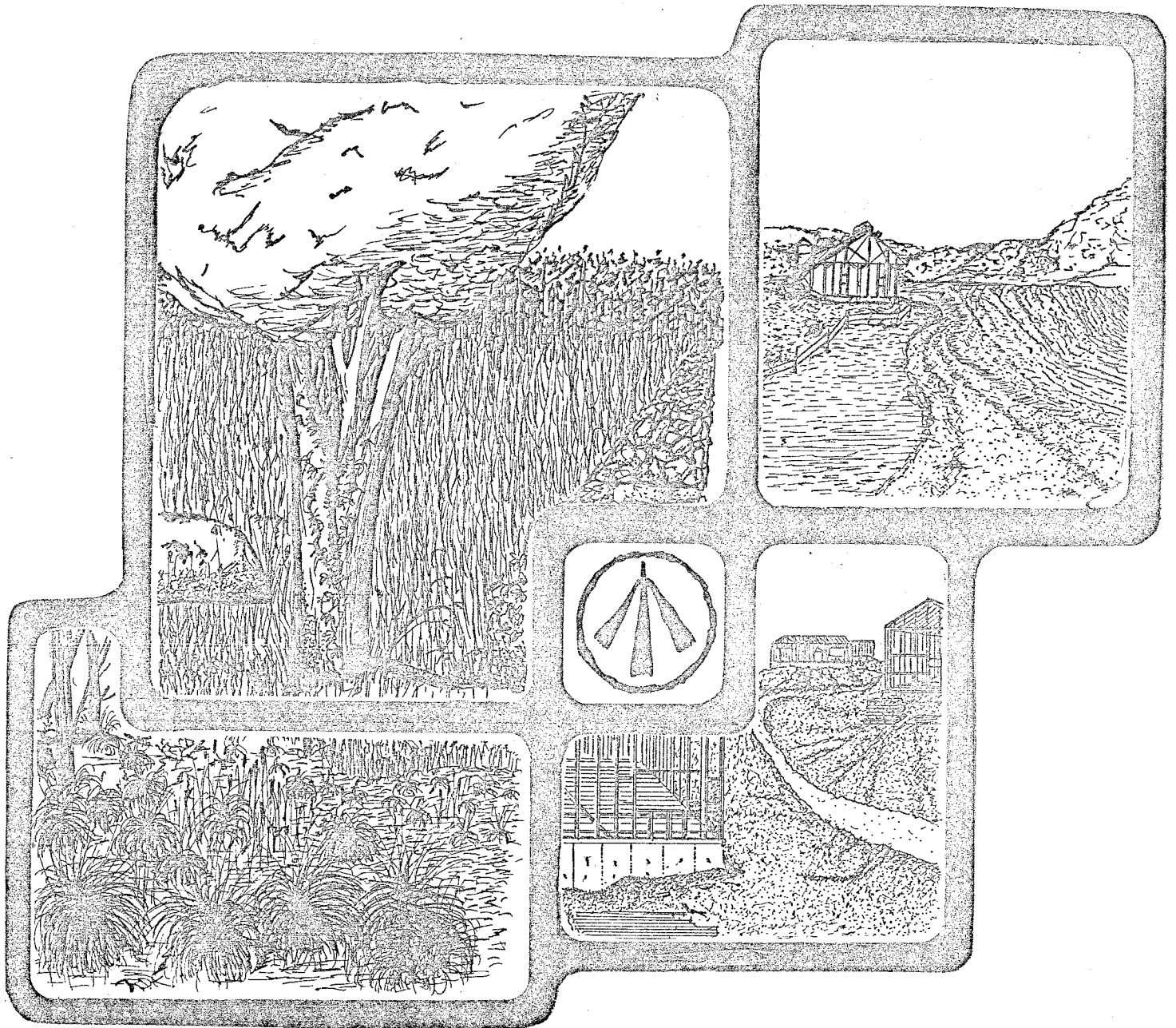


# ENVIRONMENTAL REVIEW TEAM REPORT



## WEPAWAUG CONSERVATION AREA

ORANGE, CONNECTICUT

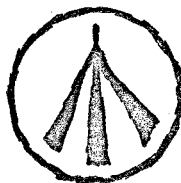
KING'S MARK

RESOURCE CONSERVATION & DEVELOPMENT AREA

KING'S MARK  
ENVIRONMENTAL REVIEW TEAM REPORT

WEPAWAUG CONSERVATION AREA  
ORANGE, CONNECTICUT

JUNE, 1983



King's Mark Resource Conservation and Development Area  
Environmental Review Team  
Sackett Hill Road  
Warren, Connecticut 06754

## ACKNOWLEDGMENTS

The King's Mark Environmental Review Team operates through the cooperative effort of a number of agencies and organizations including:

### Federal Agencies

U.S.D.A. Soil Conservation Service

### State Agencies

Department of Environmental Protection

Department of Health

University of Connecticut Cooperative Extension Service

### Local Groups and Agencies

Litchfield County Soil and Water Conservation District

New Haven County Soil and Water Conservation District

Hartford County Soil and Water Conservation District

Fairfield County Soil and Water Conservation District

Northwestern Connecticut Regional Planning Agency

Valley Regional Planning Agency

Central Naugatuck Valley Regional Planning Agency

Housatonic Valley Council of Elected Officials

Southwestern Regional Planning Agency

Greater Bridgeport Regional Planning Agency

Regional Planning Agency of South Central Connecticut

Central Connecticut Regional Planning Agency

Capitol Regional Council of Governments

American Indian Archaeological Institute

Housatonic Valley Association

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### FUNDING PROVIDED BY

State of Connecticut

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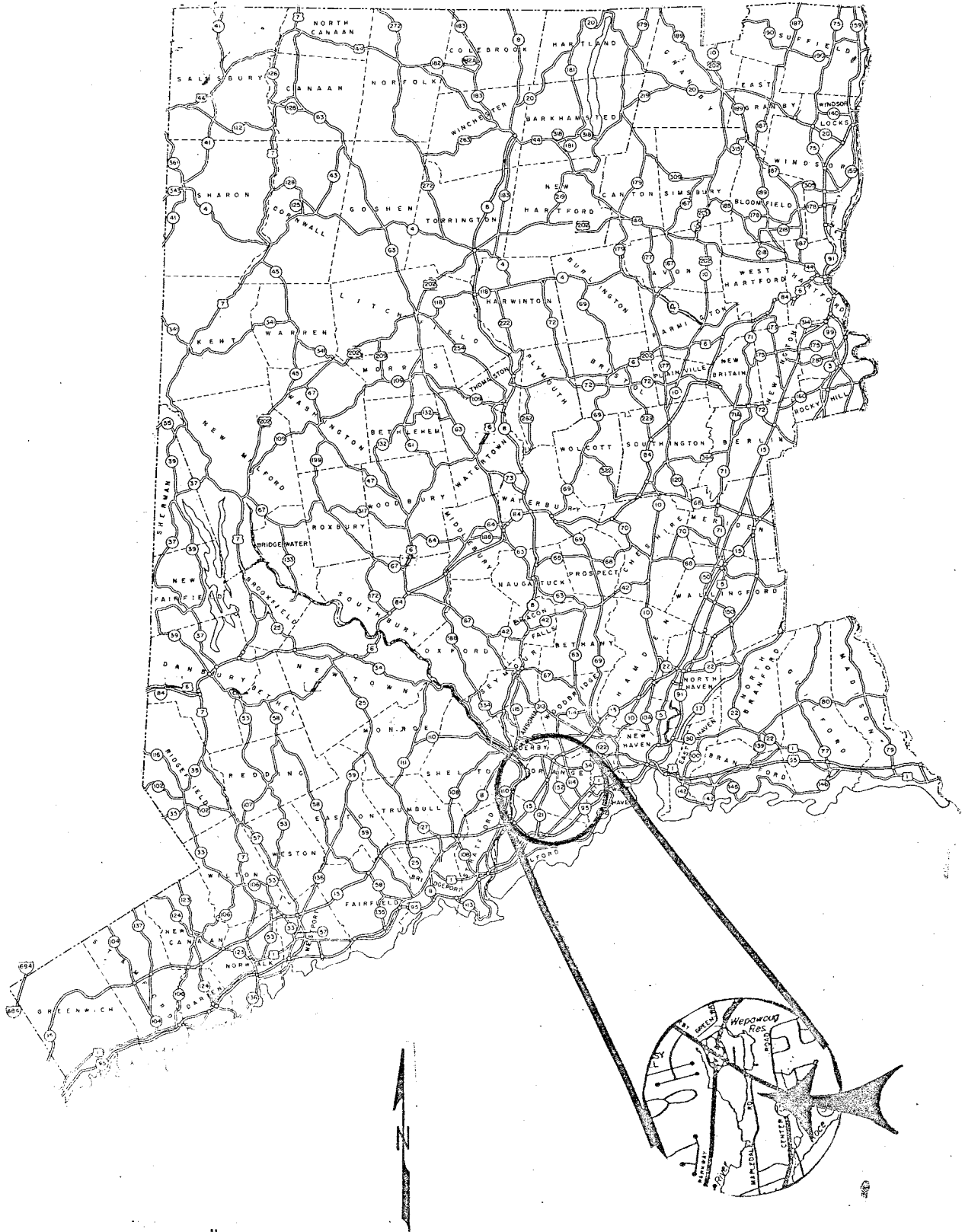
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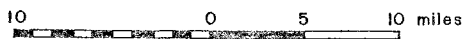
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# LOCATION OF STUDY SITE



SCALE: 1" = 10 miles



ENVIRONMENTAL REVIEW TEAM REPORT  
ON  
WEPAWAUG CONSERVATION AREA  
ORANGE, CT

I. INTRODUCTION

The preparation of this report was initiated by the Orange Conservation Commission. The Conservation Commission is responsible for the management of the Wepawaug Conservation Area--a 36 acre tract of town owned land in the north-central part of town.

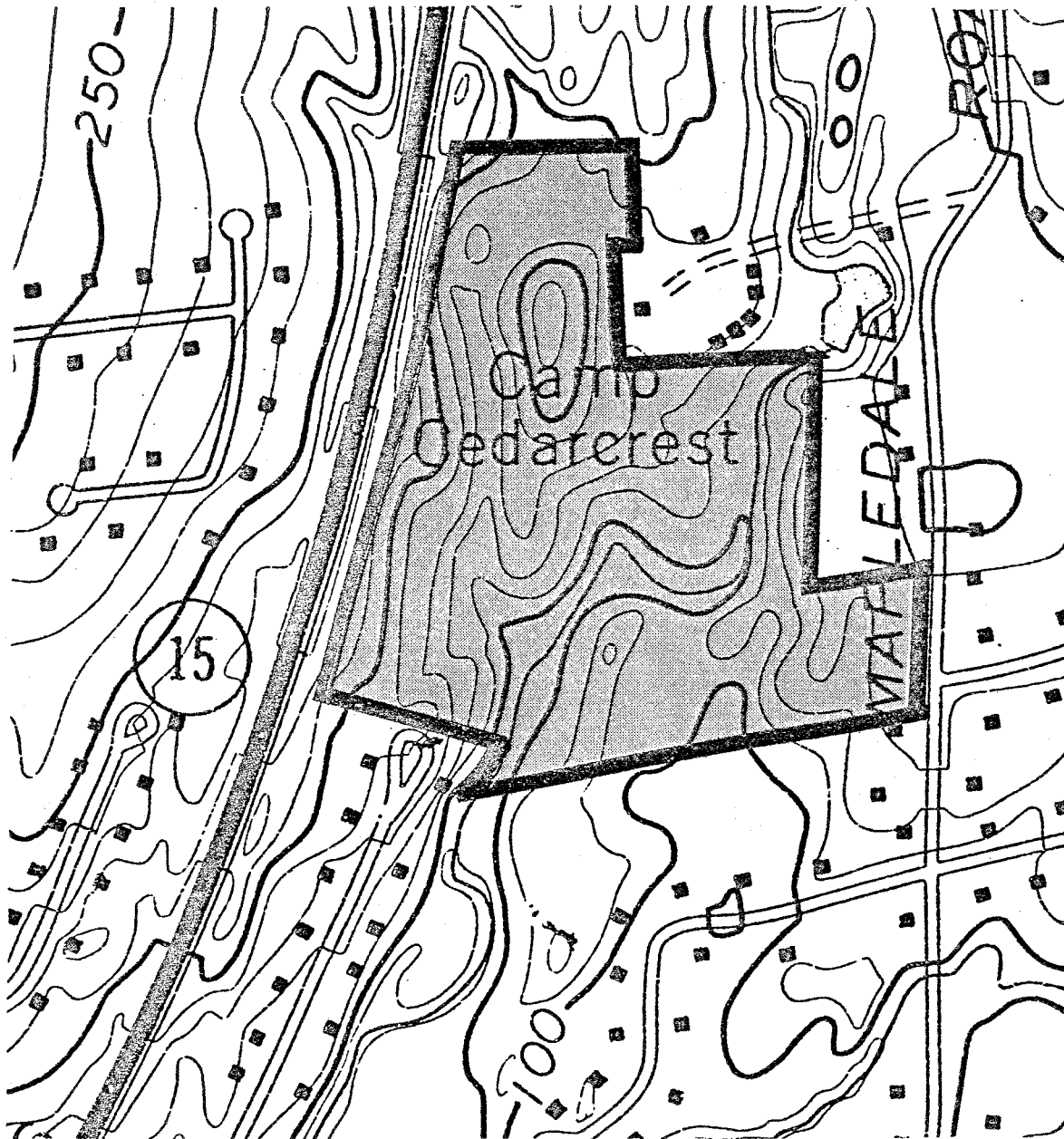
As shown in Figure 1, the Wepawaug Conservation Area is characterized by a diverse topography of slight to steep slopes. The land is mostly wooded and undeveloped, with the exception of a few recreational trails winding through the property. Wepawaug River flows southerly through the central portion of the site. Access to the site is available from the east off Mapledale Road and from the south off Riverside Drive. Land use surrounding the site is predominantly residential although Camp Cedarcrest abuts the northern border of the property. As can be seen from Figure 1, the Wilbur Cross Parkway (Rt. 15) forms the western border of the property.

The Orange Conservation Commission is interested in improving the Wepawaug Conservation area for wildlife and passive recreation. The Commission requested the King's Mark Environmental Review Team to: 1) provide a natural resource inventory of the area, and 2) discuss the opportunities and limitations of the site for forest management, passive recreation and wildlife habitat management. The King's Mark Executive Committee considered the town's request, and approved the project for review by the team.

The ERT met and field reviewed the site on February 23, 1982. Team members participating on the project included:

Brant Burz.....	Wildlife Biologist.....	Connecticut Dept. of Environmental Protection
Frank Indorf.....	District Conservationist.....	U.S.D.A. Soil Conservation Service
Bob Orciari.....	Fishery Biologist.....	Connecticut Dept. of Environmental Protection
Andy Petracco .....	Recreation Planner.....	Connecticut Dept. of Environmental Protection
Don Smith.....	Forester.....	Connecticut Dept. of Environmental Protection
Bill Warzecha.....	Geohydrologist.....	Connecticut Dept. of Environmental Protection

Figure 1  
TOPOGRAPHIC MAP



Scale 1"=50'

Prior to the field review day, each team member was provided with a summary of the proposed study, a checklist of concerns to address, a topographic map, a soils map, and a soils limitation chart. During the ERT's field review, team members met with representatives from the Orange Conservation Commission and walked the property. Following the field review, individual reports were prepared by each team member and forwarded to the ERT Coordinator for compilation and editing into this final report.

This report presents the team's findings. The report identifies the natural resource base of the site and discusses opportunities and limitations for land management. All conclusions and final decisions with regard to future land use rest with the Orange Conservation Commission. It is hoped the information contained in this report will assist the Commission in making environmentally sound decisions.

\* \* \* \* \*



## II. TOPOGRAPHY AND GEOLOGY

As shown in Figure 1, land elevations on the property range from 100' above mean sea level in the southern section of the parcel to 160 feet above mean sea level in the northwestern section of the parcel. The steepest slopes on the property occur in the western portion of the parcel between the Wilbur Cross Parkway and the Wepawaug River. Slopes in this area range between 10-15% and are steepest in the vicinity of the bedrock knobbed hill in the northwest section of the property. The eastern section of the property gently slopes (at 5%) westward from Mapledale Road to the middle section of this area. From the middle section to the Wepawaug River slopes become more moderate (10-15%).

The Wepawaug Conservation Area is located within the Ansonia topographic quadrangle. The bedrock (QR-23) and surficial geologic map (GQ-403) of that quadrangle have been mapped by Crawford E. Fritts and Richard Foster Flint, respectively. Both maps are available at the Natural Resource Center, Department of Environmental Protection in Hartford.

As shown in Figure 2, two types of surficial geologic material (i.e. that material overlying bedrock) are present on the site. East of Wepawaug River, the deposits are ice-contact stratified drift. Ice-contact stratified drift consists of stratified, poorly sorted sand, gravel and silt materials that were deposited in streams or other bodies of water in contact with melting glacier ice. The thickness of the sand and gravel deposits in this area range from 10' throughout the western and central sections to greater depths (10-40') throughout the eastern sections.

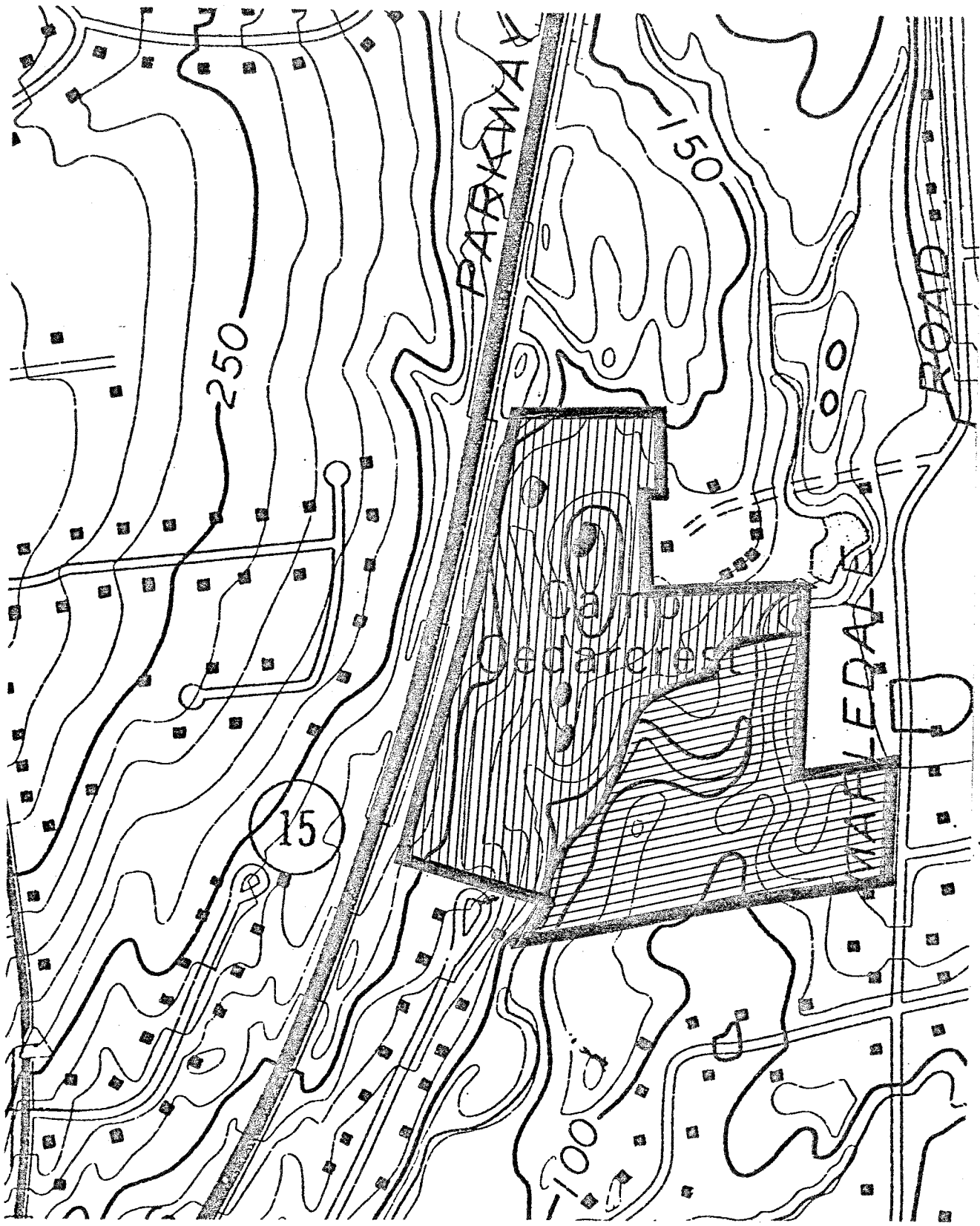
The land west of Wepawaug River has a small deposit of stratified drift in the eastern portion of the area, however it consists mainly of till deposits throughout the remainder. Till is a compact, unsorted sediment deposited by glacial ice. It contains rock particles and fragments of various sizes and shapes ranging from clay size up to boulder size. Due to numerous bedrock exposures observed throughout the western portion of this site, it would seem likely that till deposits are predominantly less than 10 feet thick in this area.

Bedrock underlying the surficial material throughout the site and cropping out at various points in the western half is the Wepawaug Schist formation. Factors which likely contributed to the bedrock outcropping on this site include: 1) glacial erosion, which scrapped and scoured the surface of the preglacial topography, subsequently exposing bedrock and 2) natural erosion, which over the past eight to ten thousand years stripped away the thin layers of till deposited by the glacier exposing underlying bedrock, especially at higher elevations.




The Wepawaug Formation is a rather nonresistant rock described as an inter-layered medium light gray to dark gray schist and medium to dark gray quartz rich gneiss. Schist is defined as a crystalline metamorphic rock (rocks that have been geologically altered by high temperature and pressures) in which platy or flaky minerals have aligned to form thin layers or slabs in the rock. This structure gives the rock a slabby appearance and often allows the rock to be easily split along layers. Gneiss is also a crystalline metamorphic rock in which thin layers of elongate minerals, that are often dark colored, alternate with layers of rounder minerals which are usually light colored. These alternating layers of minerals give the rock a banded appearance. Unlike schists, however, gneisses do not produce splitting along the edges.

Figure 2

# SURFICIAL GEOLOGY



Scale  
1" = 500'

-  ICE CONTACT STRATIFIED DRIFT
-  TILL
-  BEDROCK OUTCROPPING

The bedrock outcropping on the Wepawaug site, while not uncommon in this part of Connecticut, does provide diversity in the landscape and enhances the recreational potential offered by the property.

### III. SOILS

A soils map of the Wepawaug Conservation Area, prepared by the U.S.D.A. Soil Conservation Service, is included in the Appendix of this report. Basically there are five (5) soil series located on the property. A brief description of the soils and their capabilities for passive recreation and wildlife habitat management follows.

#### A. Soil Descriptions

##### Agawam soils (map symbols: AfB, AfC)

The Agawam soils are deep and well drained. They have a dark brown fine sandy loam surface layer. The subsoil is dark brown fine sandy loam over a yellowish brown gravelly sand substratum. Permeability is moderately rapid and runoff is medium.

These soils have good potential for paths and trails. The soil conditions are favorable for the establishment, vigorous growth and reproduction of a wide variety of climatically adapted grasses, legumes, wild herbaceous plants, hardwood trees and coniferous plants. Growth rates and seed production on these soils are above average. These soils can provide good openland and woodland wildlife habitat.

##### Charlton soils (map symbols CfD, CrC)

The Charlton soils are deep and well drained. They have a dark brown fine sandy loam surface layer. The subsoil is dark brown to light olive brown sandy loam over a grayish brown gravelly fine sandy loam substratum. Permeability is moderate and runoff is rapid. The majority of these soils in this area have a slope of less than 20 percent.

These soils have a good to fair potential for paths and trails. The fair rating occurs on soils with slopes in excess of 15 percent. The potential for woodland wildlife habitat management is fair and poor for openland wildlife habitat management. These potentials are due to the number of stones on the soil surface which would interfere with seeding operations.

##### Hollis soils (map symbol: HpE)

The Hollis soils are shallow and somewhat excessively drained. The surface layer is a very dark brown fine sandy loam. The subsoil is dark brown fine sandy loam resting on hard unweathered schist. Permeability is moderately rapid and runoff is rapid. The majority of these soils in this area have a slope of less than 20 percent.

These soils have good to fair potential for paths and trails. The fair potential occurs on soils with slopes in excess of 15 percent. The Hollis soils have a poor potential for openland or woodland wildlife habitat management due to their shallow depths to bedrock.

Leicester soils (map symbol: Lc)

The Leicester soils are deep and poorly drained. They have a black fine sandy loam surface over a grayish brown to brown, mottled fine sandy loam subsoil underlain by a dark yellowish brown fine sandy loam substratum. Permeability is moderate and runoff is slow.

These soils are located on the north edge of the property and are saturated with water to within 6 inches of the surface. They have very poor potential for paths due to wetness and possible ponding of water on the soil surface. These soils have a fair rating for openland, woodland and wetland wildlife habitat management. These soils have good potential for development of a pond.

Podunk soils (map symbol: Ps)

The Podunk soils are deep and moderately well drained. They have a very dark grayish brown surface layer. The subsoil is brown fine sandy loam over a yellowish brown sand substratum. Permeability is moderately rapid and runoff is slow.

This soil is located along the Wepawaug River and has only a fair potential for paths and trails due to its frequency of flooding. Its potential for woodland habitat management is good and fair for openland habitat management.

**B. Erosion**

All the soils have stable surface layers with a slight to moderate hazard of erosion. However, severe erosion problems can develop if the paths are not properly maintained. Surface runoff from rain and snow melt should be diverted off the trails where necessary to avoid creating water scoured channels. The only area erosion presently appears to be a problem is on the path entering the conservation area from the parking lot on Mapledale Road. The ruts should be filled in and runoff diverted off the trail. A mixture of Kentucky 31 tall fescue and Redtop should be planted along the path's borders where the water is diverted off the trail.

Overall, the soils are well suited for walking trails. Further trail development, if desired, should avoid the steeper slopes and the wet area on the north side of the property.

There are other possibilities for this area. For example, a pond could be developed in the wetland area.

Consideration should be given to preparing a resource conservation plan for this site. The New Haven County Soil and Water Conservation District is available to assist the Commission in drawing up the conservation plan. The plan would describe the necessary conservation measures that are applicable to this area and would provide a permanent record for the site.

#### IV. HYDROLOGY AND WATER SUPPLY

The site lies entirely within the watershed of the Wepawaug River. The river flows in a southerly direction through the middle of the property. All surface runoff created within the site ultimately drains into the Wepawaug. There is an unnamed tributary of the river which emanates from a wetland area in the northwestern corner of the site. Several small brooks, which are probably a result of surface runoff and drainage created by Rt. 15 empty into this unnamed tributary.

Since no development is proposed within the site, there will be little potential for any increases in runoff from the site. However, should the town decide to develop any portions of the site, it is recommended that potential runoff and erosion problems be addressed prior to development.

The flood prone area bordering the Wepawaug River has been identified in a map prepared by the Federal Insurance Administration. A reproduction of part of that map, which identifies the approximate boundaries for a 100 and 500 year flood, is included in this report as Figure 3. A 100-year flood is a flood with a 1% chance (i.e. 1 chance in 100) of occurring in any given year. A 500-year flood is very rare in that it has only 1 chance in 500 of occurring in any given year.

Although this site has access to public water supply mains, the town may wish to utilize an on-site well should a need for water arise. Based on information from the Water Resources Bulletin #27, the eastern half of the site lies within an area underlain by stratified drift deposits. These deposits are inferred to be capable of yielding moderate to very large amounts of water (50-2000 gallons per minute). Since there is no suitable surficial geologic deposit available to serve as a water supply aquifer in the western half of the site, a well drilled into bedrock would probably be most reliable in this section of the property. Yields from bedrock based wells depend on the number and size of water-bearing fractures intersected. Due to the irregular distribution of fractures in bedrock, the yield of a well drilled at any particular place cannot be predicted. Nevertheless, the Water Resources Bulletin #27 indicates that 95% of the metamorphic bedrock wells in the Quinnipiac River basin are capable of yielding 1 gallon per minute or more.

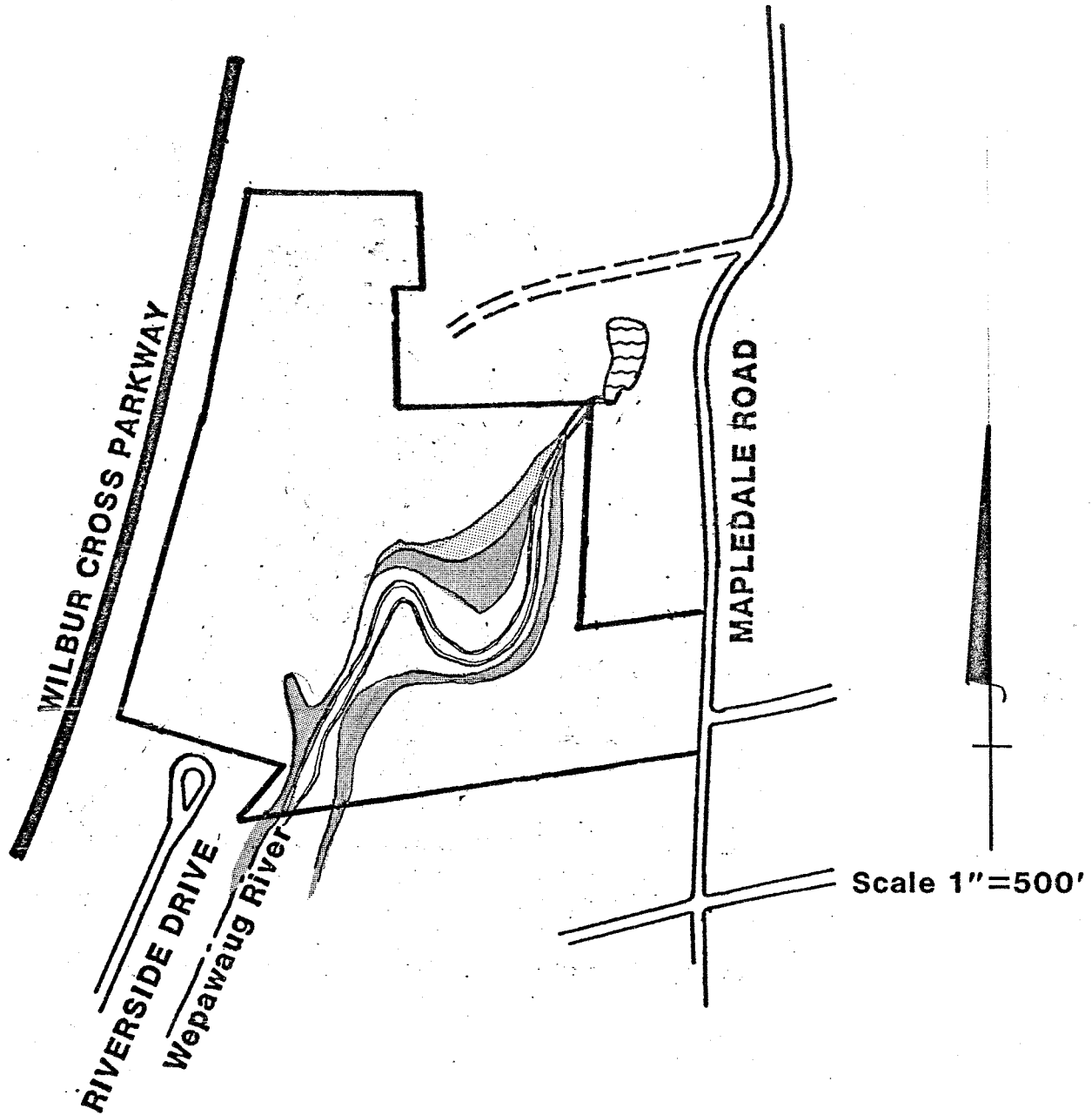
To conclude, the eastern portion of the site has the most potential for producing a high yielding well. Nevertheless, the western portion could probably provide enough water for the envisioned passive recreational uses of the site (e.g. a hand pumped well for drinking water).

#### V. FISHERIES

The Wepawaug River flowing through the Wepawaug Conservation Area is a high quality trout stream which the Connecticut Department of Environmental Protection annually stocks with 9-12" brook, brown, and rainbow trout. Trout fishing in the Conservation Area should be excellent from opening day through May. Limited fishing should be available in the fall since the quality of

Figure 3

# FLOOD HAZARD BOUNDARY MAP



- Approximate boundaries of the Wepawaug Conservation Area
- Approximate boundaries for a 100-year storm (dark shaded areas)
- Approximate boundaries for a 500-year storm (light shaded areas)

this section should be sufficient to allow some stocked trout to survive through the summer. Natural reproduction of trout would be negligible.

Other species of fish present in the Conservation Area river stretch would include blacknose dace, longnose dace, creek chub, tessellated darter, white sucker and American eel.

The day of the Environmental Review Team's field review, a number of wind-thrown trees were observed in the river channel. Several representatives from the town questioned whether or not the fallen trees should be removed. In the opinion of the Team's biologist, the trees in the river should be removed to lessen the potential of streambank erosion in this area. The Wepawaug River has good protective vegetative cover in this area and the fallen trees in the stream are not needed for trout habitat. In addition, removing the fallen trees will enhance the aesthetics of the area.

## VI. FORESTRY

### General Comments

The individual forest stands discussed in this report vary widely in their potential for forest management. Forest management, as used in this report, refers to the manipulation of forest vegetation, usually through the cutting of trees or the planting of trees to bring about, maintain or improve certain desirable forest conditions.

When properly prescribed and executed, forest management practices will increase the production of forest products, improve wildlife habitat, improve forest aesthetics and enhance the overall condition of the woodland. Without sound management there is no control over the quality of these conditions. Specific management opportunities are outlined for each vegetation type within each parcel. For more detailed information a public service forester with DEP or a private forester should be contacted.

Thinning harvests are prescribed in stands where trees are declining in health and vigor due to over crowding. These thinnings are designed to reduce competition between residual trees for space, sunlight, water and nutrients. Only trees that are of poor quality, damaged, or in direct competition with high quality trees should be removed during these thinnings. Stands once thinned should become more stable, healthy and less susceptible to damage caused by insects, disease and adverse weather conditions.

In all cases where thinnings are being conducted, the thinning should be done under the supervision of a professional forester. Trees to be removed should be marked and volumes of cordwood tallied, if necessary. Should the thinning provide a saleable product, the sale should be accomplished under the terms of a contract with full payment received in advance and a performance bond of 10-15% of the total sales price held.

Where no management practices are discussed, the vegetation is healthy as is. These areas should be reevaluated for future management needs at approximately 10 year intervals.

Areas such as the hardwood swamp which have little potential for forest management are also noted in the vegetation type descriptions. These areas have little or no value for timber production, however their value for wildlife habitat and nature study is high.

From a resource management and maintenance stand point, it would be advisable to have the boundaries of the site clearly marked.

### Stand Descriptions and Management Suggestions

As shown in the accompanying stand map, nine differing vegetative types exist on the property.

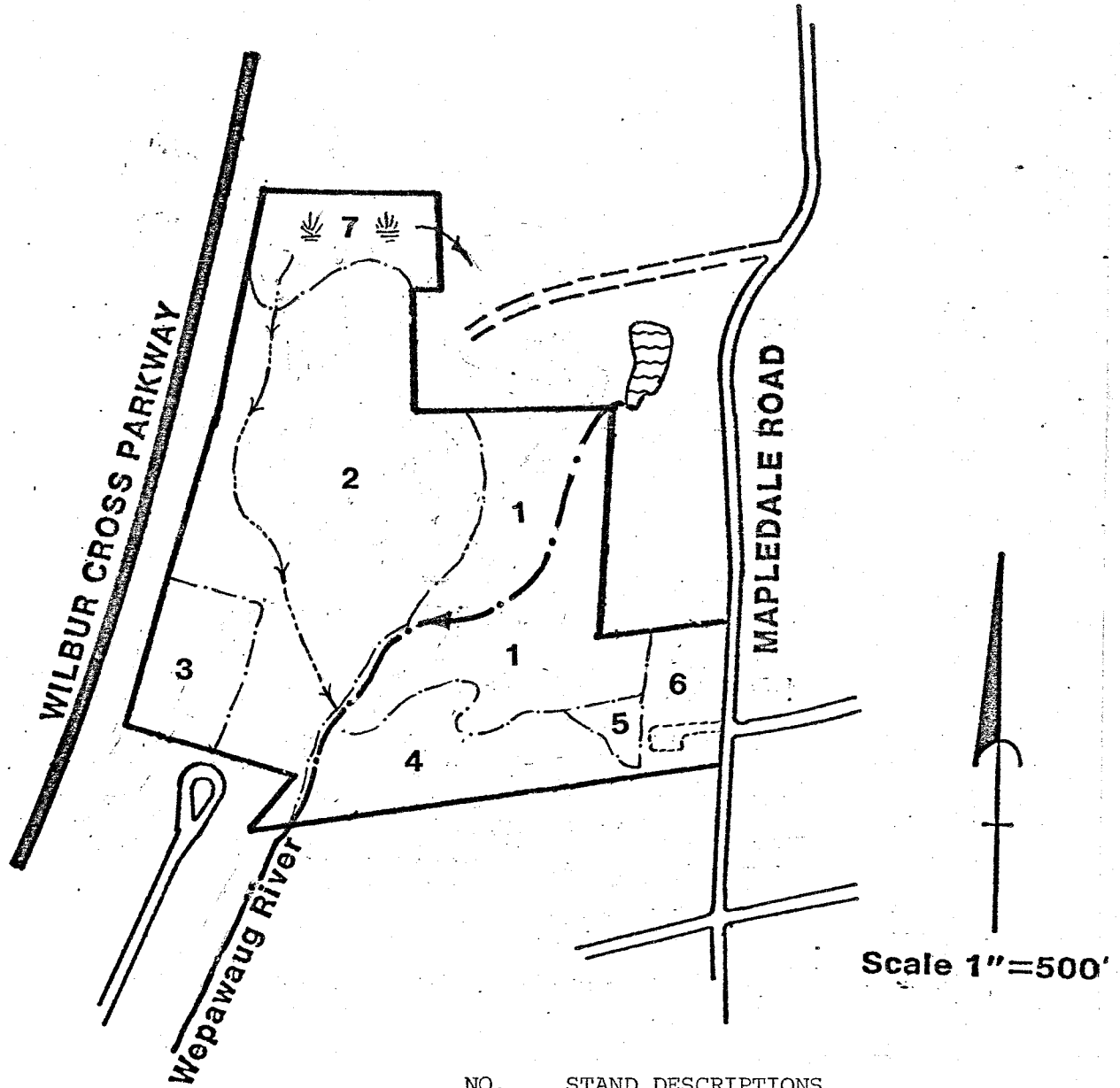
TYPE 1. HEMLOCK, 7.1 ACRES This type is composed of fair quality pole to sawlog-sized hemlock with scattered red oak, ash, yellow poplar, beech and black birch. Stocking levels are uniformly high. Due to the dense canopy, the understory and ground cover are, in many places, non-existent. Where understory can be found, it generally consists of maple-leaved viburnum or scattered black birch seedlings. Ground cover consists of grasses in the more open areas. The trees in this stand are crowded and in need of release from competition. Removal of groups of the poorer quality trees, along with some of the dead and downed material would serve to effect this release. Openings created in this manner would allow sunlight to reach the forest floor, thereby stimulating regeneration. Most of the removed material could be utilized as firewood. Brush and slash could, for aesthetic reasons, be piled in piles about 5-6 feet high, with a log or stump set under the center of the pile to keep an open space in the pile for wildlife usage. The results would be a more vigorous forest, establishment of much needed regeneration, and supplementation of some of the wildlife habitat.

TYPE 2. MIXED HARDWOODS, 13.8 ACRES This type is composed of good quality black birch, hickory, red oak, red maple, beech and sugar maple sawtimber. Stocking levels are high throughout. The understory is somewhat open and composed of sapling to pole-sized black birch, and red maple, some maple-leaved viburnum, and ironwood. Spicebush can be found in the wetter areas near drainages. Ground cover observed includes Christmas fern, grape, poison ivy, partridge berry, winter-berry, and barberry. Trees in this area are crowded and declining in vigor. Given the aesthetic values of the property, it might be best not to initiate a commercial intermediate selection harvest at this time, although it is needed. A satisfactory approach might be a cull tree removal program whereby the diseased and deformed material, some of the dead and all of the hazardous situations are removed. This material could be utilized as firewood. The removal of this material will only serve to thin the stand partially. Those in charge of administration should realize that approximately 10 years hence a meaningful harvest will be needed to fully thin the stand and maintain a healthy vigorous forest.

TYPE 3. MIXED HARDWOODS, (OLD FIELD GROWTH), 3.1 ACRES This area is a field abandoned 15-20 years ago. This understocked area is occupied by sapling sized black cherry, red oak, gray birch, and red maple, with eastern red cedar



# Figure 4 VEGETATION TYPE MAP



LEGEND:

- STAND BOUNDARY
- ← . . . RIVER
- STREAM
- - - - - INTERMITTENT STREAM
- ☙ SWAMP

NO.	STAND DESCRIPTIONS	AREA
1	HEMLOCK (pole-sawtimber)	7.1
2	MIXED HARDWOOD (small sawtimber)	13.8
3	MIXED HARDWOOD (old field growth)	3.1
4	HEMLOCK/HARDWOOD (pole-sawtimber)	4.6
5	OLD FIELD (cedar w/saplings)	0.8
6	OPEN FIELD	2.4
7	HARDWOOD SWAMP (poles)	2.1

scattered throughout. Shrub species include staghorn sumac, barberry, gray-stemmed dogwood, and some multiflora rose. Ground cover consists of grasses, goldenrod, and poison ivy.

TYPE 4. HEMLOCK/HARDWOOD, 4.6 ACRES This area is fully stocked with medium quality pole to sawtimber-sized hemlock, oak, hickory, black birch, beech, and sugar maple. The understory here is composed of saplings of the same species with some maple-leaved viburnum and winterberry present. Ground cover found includes Christmas fern, poison ivy, and some club moss. The recommendations presented in Type 2 would apply here as well.

TYPE 5. OLD FIELD, 0.8 ACRES This type is heavily populated with eastern red cedar, almost to the exclusion of other species. The understory, such as it is, is composed of red maple and black birch saplings, as well as suppressed, smaller cedars. The ground cover includes grasses, club moss, gray-stemmed dogwood, and poison ivy. Management here should be aimed at releasing the high wild-life value cedar by eliminating those hardwoods which are competing with them. Smaller, suppressed cedars may be removed, as well.

TYPE 6. OPEN FIELD, 2.4 ACRES This area consists of various grasses, golden rod, poison ivy, dewberry, and mosses. Scattered throughout are shrub species such as winterberry, staghorn sumac, and gray stemmed dogwood with occasional eastern red cedar, red oak, black cherry, apple, and red maple saplings.

TYPE 7. HARDWOOD SWAMP, 2.1 ACRES This area is overstocked with sapling to pole-sized red maple and scattered ash. The understory consists of spicebush, highbush blueberry, silky dogwood, and winter berry. Ground cover consists of tussock sedge, sphagnum moss, club moss, and skunk cabbage. A high watertable and the nature of the soils here limits the management possible.

## VII. WILDLIFE

The Wepawaug Conservation Area may be divided into three major wildlife habitat types. These include:

- 1) Openland/brushland (+3 acres corresponding to vegetation types 5 & 6)
- 2) Wetland (+5 acres, which includes the Wepawaug River lands, two intermittent tributaries, and a hardwood swamp - vegetation map type 7) and
- 3) Forestland of various successional stages.

Evaluating the existing habitat and management potential of a comparatively small site such as this one is difficult without specific management goals or consideration of the surrounding lands. This is especially true when considering species such as turkeys--which may range in a + 30 square mile area to meet their seasonal needs, or ruffed grouse which utilize + 100 acres for their home range.

After evaluating the Wepawaug Conservation area, the Team's wildlife biologist believes the property can best be managed if efforts are taken to create and maintain an overall upland wildlife management area. This can be accomplished by

implementing the following:

- 1) Creating and maintaining a couple of long, irregular shaped openings of 1 to 2 acres in size. Openings should be arranged in an east to west direction for maximum sunlight. A possible scheme would be to put one opening in type 2 (see Figure 4), and the other in type 4 bordering along the old field (type 5). The openfield (type 6) on this site should be mowed periodically to maintain its value for wildlife.
- 2) Piling brush along the "edges" of openings for rabbits and other small mammals (6-8 brush piles/acre should be adequate).
- 3) Constructing blue bird boxes at the edges of openings.
- 4) Creating and maintaining evergreen cover of young age (10-20 years old) for wildlife. This could be implemented within the hemlock stand bordering the field on Mapledale Road.
- 5) Encouraging existing food and cover species such as vines, snag/den trees, blueberry bushes and apple trees.

When cutting any cordwood or sawtimber, efforts should be made to:

- a. Leave a minimum of 5 to 7 snag or den trees for cavity nesting wildlife.
- b. Leave vines wherever possible as a food supply for wildlife.
- c. Encourage apple and other fruit trees by removing the surrounding and overcrowding trees. Following this release cut, wait one year to allow for tree vigor, then prune and fertilize.
- d. "Mast trees" (those producing nuts) such as oaks, beech and hickory should be encouraged whenever possible. Mature sawtimber size mast trees are the nut/food producers for wildlife such as squirrels, deer, turkeys, grouse and others.
- e. Although no aspen clumps were observed during the team's review of the property, aspen clumps could be established and managed for a diversity of age classes. Aspen produces excellent habitat for ruffed grouse and woodcock.
- f. When cordwood or sawtimber cutting, a buffer strip of 100' should be left along the river (and its tributaries) to help stabilize the soils in the area.

It should be recognized that for optimum wildlife habitat potentials, vegetation in several different successional stages should be encouraged. The greater the diversity of vegetation, the greater the diversity of wildlife.

During the Team's field review, a few white footed deer mice tracks in the snow were observed, along with woodpeckers, and some noticeable deer browse.

Food and nesting areas for wildlife appear to be in limited supply on this site. Planting a "buffer bunch" available through the D.E.P. along with providing numerous types of nesting cavities (artificial) would be of value.

If any future wildlife related questions arise, the town is encouraged to contact the Western District Wildlife Biologist at 567-4258.

#### VIII. RECREATION POTENTIAL

The 36 acre conservation area managed by the Orange Conservation Commission is diverse in landform and offers good opportunities for the passive recreational pursuits sought for the property. It is predominantly wooded with the Wepawaug River flowing through the hills and patches of flood plain. A small (approximately two to three acre) reverting field offers the only open (non-wooded) portion at the properties gated entrance and along Mapledale Road.

A trail network on the property is being expanded by local volunteers and affords users the chance to see most of the property with a short walk through. The abutting Camp Cedarcrest is apparently using the property as evidenced by a trail head located at the common boundary. The properties boundaries are not clearly defined, making for some difficulty in comprehensive planning and management of the tract. Encroaching use by landowners abutting the property is a possibility when there is uncertainty about borders. It is suggested that the boundaries be located and clearly marked to minimize the risk of encroachment and possible improper use from either side.

Some work has been done to reduce erosion potential, via the installation of waterbars, on one stretch of trail. The trail network is fairly well laid out although the few accesspoints from surrounding properties increases the chances for trespass onto private property from Wepawaug. Close-looping trails and providing a map of the conservation area with possibly numbered stations in conjunction with clearly marked boundaries would help reduce inadvertent trespass. Ongoing maintenance of existing trails and locating new trail legs along the contours of hills to avoid sharp gradients would help minimize the erosion potential from the combined forces of foot traffic and water runoff.

Additional opportunities for education in the natural sciences (e.g. botany, geology) could be exploited by establishing an educational trail with the aforementioned numbered stations cross-keyed to a handout leaflet or map at the tracts' entrance. Identification of plants and the forces at work on the property (e.g. plant diseases and insect pests and mechanical damage from wind and flood) can help illustrate why the woodland is the way it is. The dynamics of the river, which are accentuated at times of flood and which help to shape the land and its plant and animal inhabitants, can also be illustrated.

Some trail related uses which the property lends itself to include:

- 1) Hiking
- 2) Nature Study - including bird watching
- 3) Snowshoeing- the topography precludes cross country skiing
- 4) Jogging
- 5) For access to the Wepawaug River by fishermen

Off-road parking can be provided on the tract inside the gated access point. A parking area for 12 - 16 cars immediately behind the existing gate should be ringed by boulders and new gate installed where the access road leaves the parking lot. Removal of the present gate would eliminate the need for opening and closing the gate on a daily basis but would, on the other hand, enable overnight use of the parking lot. Patrol would be necessary to prevent unwanted overnight use. Installation of two pit-type toilets near the parking area would meet the needs of visitors. The open field provides the option for active recreation use and group camping although it is assumed that these uses are not desired. Retention of the open field character by periodic mowing would enhance the wild-life habitat potential.

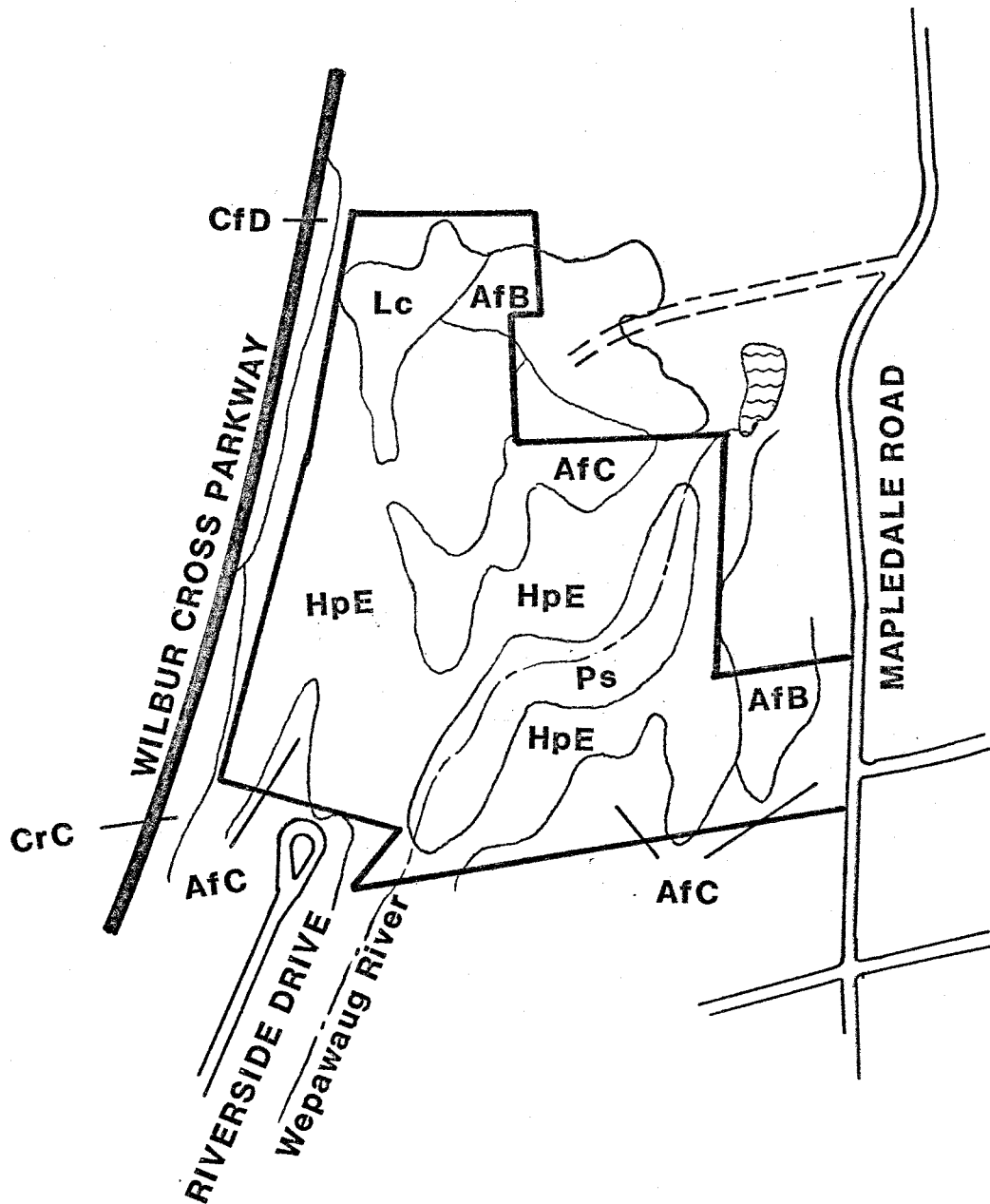
Fishing in the Wepawaug River is an attraction the property offers. Tree cutting should be limited along the streambelt to ensure adequate quality, cool water which is needed for good trout habitat.

The Conservation Area is seen, then, as being well-suited to meeting the intended uses as well as offering the opportunity for study of the natural sciences which could be of benefit to local schools. The Orange Conservation Commission is encouraged to develop and implement a comprehensive management plan for the property.

\* \* \* \* \*

**APPENDIX**

# SOILS MAP



## NOTES:

- Soil boundary lines derived from smaller scale map (1"=1320') and should not be viewed as precise boundaries but rather as a guide to the distribution of soils on the property.

• Adapted from New Haven County Soil Survey, USDA-SCS

\*SOILS LIMITATION CHART -- WEPAWAUG CONSERVATION AREA - ORANGE, CONNECTICUT

MAP SYMBOL	SOIL NAME	CAMP AREAS	PICNIC AREAS	PLAYGROUNDS	PATHS & TRAILS
AfB	Agawam fine sandy loam, 3-8% slopes	Slight	Slight	Moderate;	Slight
AfC	Agawam fine sandy loam, 8-15% slopes	Moderate; Slope	Moderate; Slope	Severe; Slope	Slight
CfD	Charlton fine sandy loam, 15-25% slopes	Severe; Slope	Severe; Slope	Severe; Slope	Moderate; Slope
CrC	Charlton-Hollis fine sandy loams, 3-15% slopes	Severe; Large stones	Severe; Large stones	Severe; Large stones	Severe; Large stones
HpE	Hollis-Charlton fine sandy loams, 15-35% slopes	Severe; Slope Large stones	Severe; Slope Large stones	Severe; Slope Large stones	Severe; Slope Large stones
Lc	Leicester fine sandy loam	Severe; Wetness	Severe; Wetness	Severe; Wetness	Severe; Wetness
Ps	Podunk fine sandy loam	Severe; Floods	Severe; Floods	Severe; Floods	Moderate; Floods

SLIGHT LIMITATION: indicates that any property of the soil affecting use of the soil is relatively unimportant and can be overcome at little expense.  
MODERATE LIMITATION: indicates that any property of the soil affecting use can be overcome at a somewhat higher expense.  
SEVERE LIMITATION: indicates that the use of the soil is seriously limited by hazards or restrictions that require extensive and costly measures to overcome.

EXPLANATION OF RATING SYSTEM:

\*Ratings based upon U.S.D.A. Soil Conservation Service criteria.



WILDLIFE HABITAT POTENTIALS

\* Potential as habitat for:

MAP SYMBOL	SOIL NAME	OPENLAND WILDLIFE	WOODLAND WILDLIFE	WETLAND WILDLIFE
AfB	Agawam fine sandy loam, 3-8% slopes	Good	Good	Very poor
AfC	Agawam fine sandy loam, 3-8% slopes	Good	Good	Very poor
CfD	Charlton fine sandy loam, 15-25% slopes	Fair	Good	Very poor
CrC	Charlton-Hollis fine sandy loams, 3-15% slopes	Poor	Poor-Fair	Very poor
HpE	Hollis-Charlton fine sandy loams, 15-35% slopes	Poor	Poor-Fair	Very poor
Lc	Leicester fine sandy loam	Fair	Fair	Fair
Ps	Podunk fine sandy loam	Fair	Good	Poor

\* Ratings based upon U.S.D.A. Soil Conservation Service criteria.

## ABOUT THE TEAM

The King's Mark Environmental Review Team (ERT) is a group of environmental professionals drawn together from a variety of federal, state, and regional agencies. Specialists on the team include geologists, biologists, foresters, climatologists, soil scientists, landscape architects, recreation specialists, engineers, and planners. The ERT operates with state funding under the aegis of the King's Mark Resource Conservation and Development (RC&D) Area - a 47 town area in western Connecticut.

As a public service activity, the team is available to serve towns and developers within the King's Mark Area --- free of charge.

### 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 the review of a wide range of significant activities including subdivisions, sanitary landfills, commercial and industrial developments, and recreation/open space projects.

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 official of a municipality or the chairman of an administration agency such as planning and zoning, conservation, or inland wetlands. Requests for reviews should be directed to the Chairman of your local Soil and Water Conservation District. This request letter must include a summary of the proposed project, a location map of the project site, written permission from the landowner/developer 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 King's Mark RC&D Executive Committee, the team will undertake the review. At present, the ERT can undertake two reviews per month.

For additional information regarding the Environmental Review Team, please contact your local Soil Conservation District Office or Richard Lynn (868-7342), Environmental Review Team Coordinator, King's Mark RC&D Area, P.O. Box 30, Warren, Connecticut 06754.