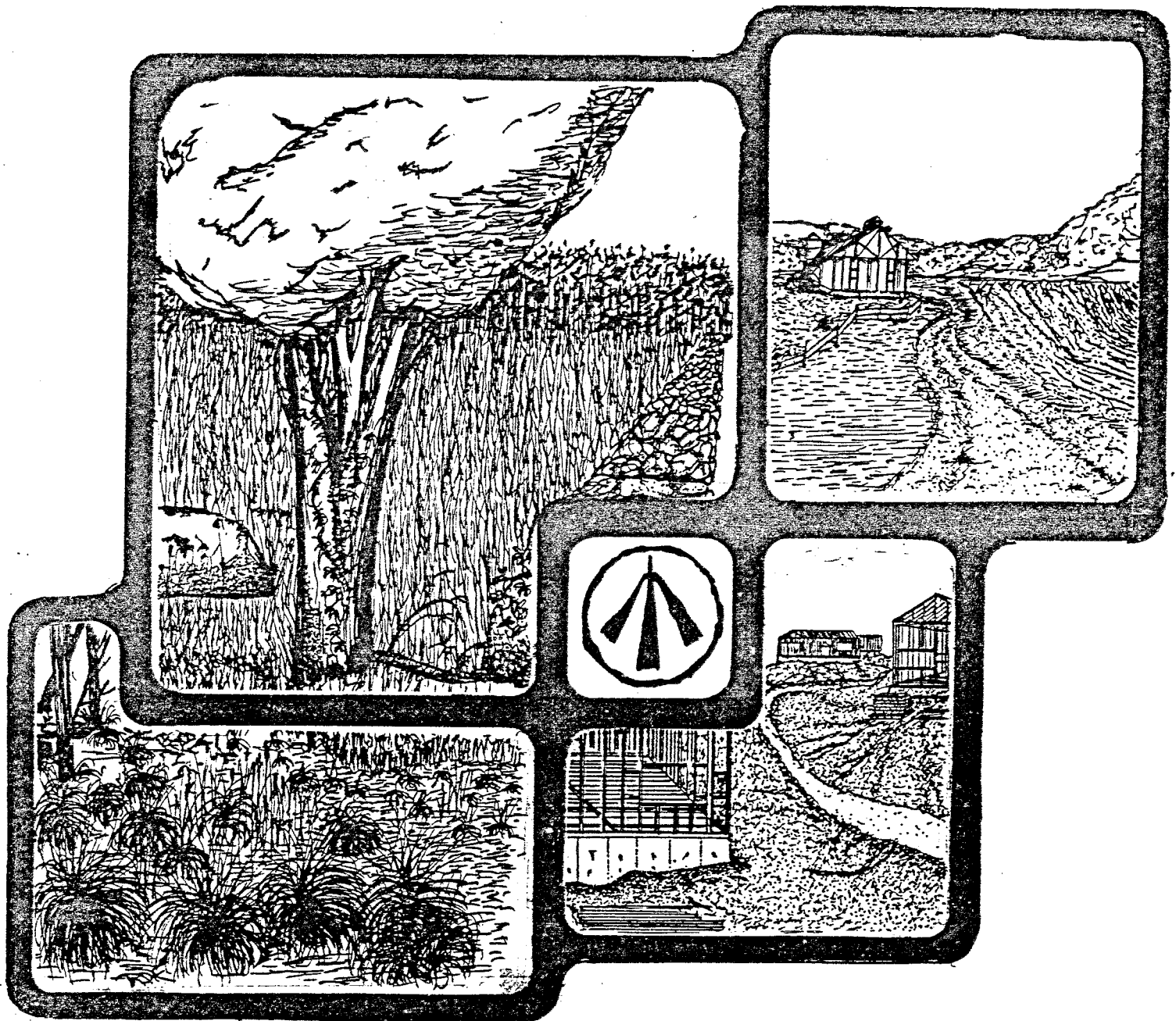


# ENVIRONMENTAL REVIEW TEAM REPORT

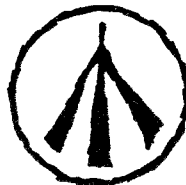


## BALD ROCK TRACT BETHEL, CT

KING'S MARK  
RESOURCE CONSERVATION & DEVELOPMENT AREA

**KING'S MARK  
ENVIRONMENTAL REVIEW TEAM REPORT**

**BALD ROCK TRACT  
BETHEL, CT  
OCTOBER 1984**



**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

Department of Transportation

### 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

American Indian Archaeological Institute

Housatonic Valley Association

x x x x x

### FUNDING PROVIDED BY

State of Connecticut

### POLICY DETERMINED BY

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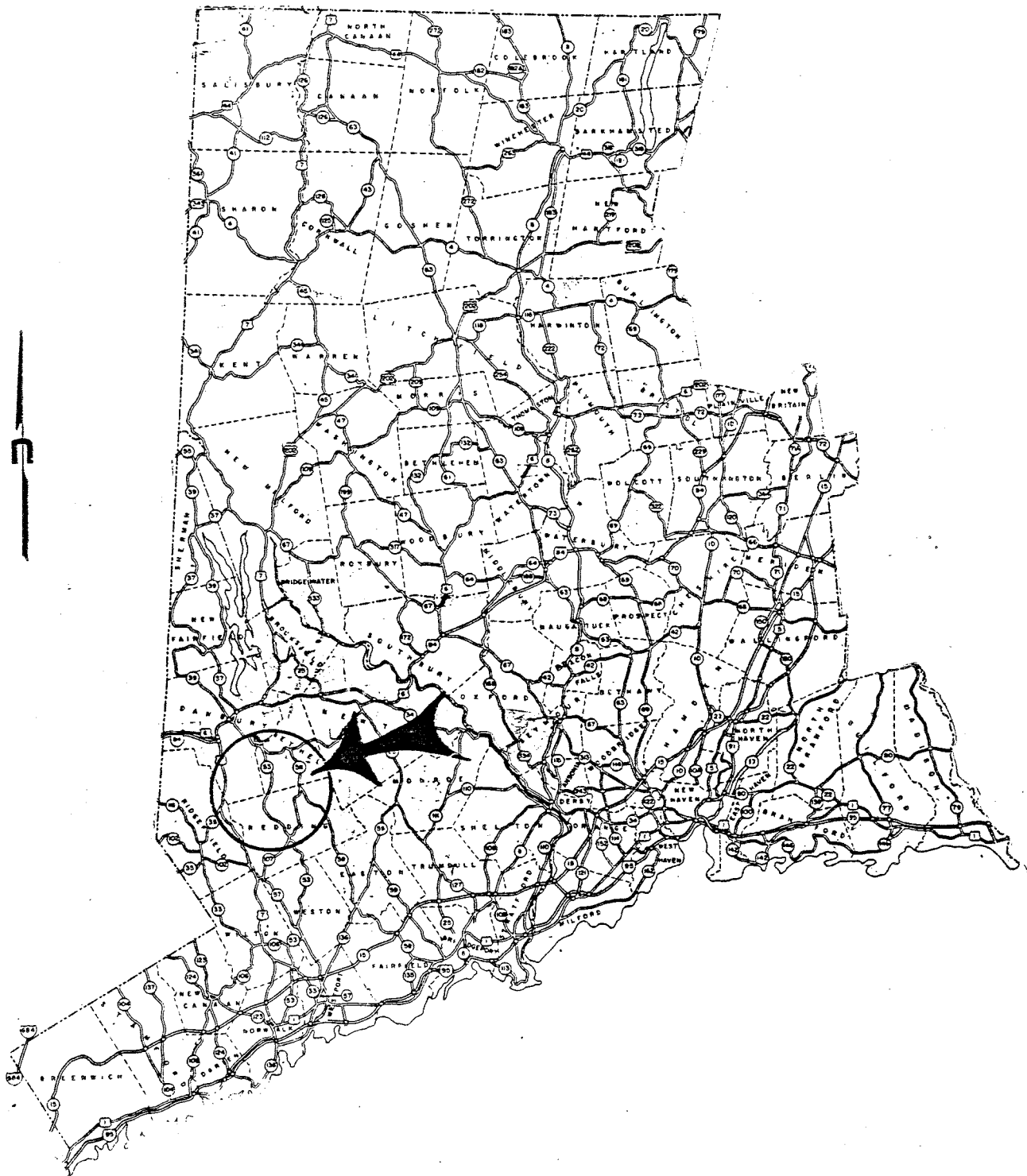
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# LOCATION OF STUDY SITE



Scale 1" = 10 miles

10 0 5 10 miles

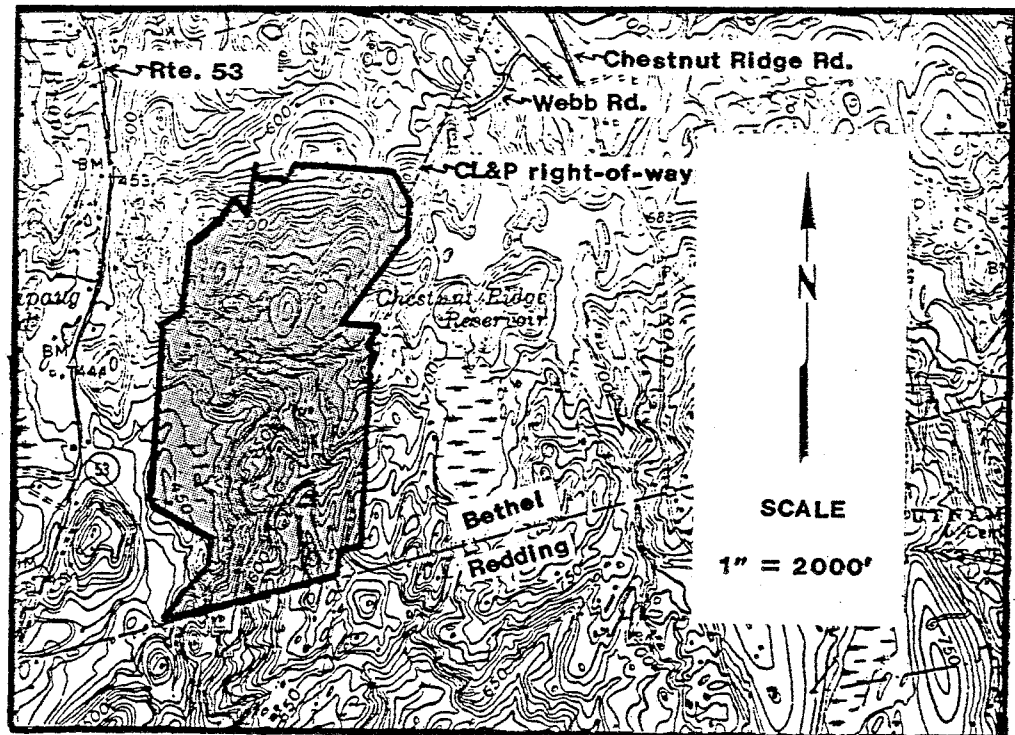
# BALD ROCK TRACT

## I. INTRODUCTION

The preparation of this report on the Bald Rock Tract was requested by the Bethel First Selectman and Conservation Commission.

The Bald Rock Tract is  $\pm$  158 acres in size and located in the southwestern quarter of town between Turkey Plain Road (Rte. 53) and Chestnut Ridge Road. The land is owned by the Town of Bethel and consists primarily of steeply sloping wooded land (see Figure 1). Access to the site is available via a CL & P right-of-way which abuts the eastern edge of the property. The CL & P right-of-way is accessible from the north at the terminus of Webb Road.

**Figure 1**      **Topography**



The Bethel Conservation Commission is interested in preparing a management plan for the Bald Rock Tract. To assist them in the preparation of this plan, this ERT study was requested. The ERT was asked to provide a natural resource inventory of the site and to discuss opportunities and limitations for forest management, wildlife management, and passive recreational use. This information was requested to assist the Town in developing a long-term management plan for the property.

The King's Mark Executive Committee considered the town's request, and approved the project for review by the team.

The ERT met on July 25, 1984 to field review the site. Team members participating on this review included: Marc Beroz, Soil Scientist, U.S.D.A. Soil Conservation Service (SCS); Paul Rothbart, Wildlife Biologist, CT Department of Environmental Protection (DEP); Richard Lynn, ERT Coordinator, King's Mark Resource Conservation and Development Area (RC & D Area); David Thompson, District Conservationist, U.S.D.A. SCS; Don Smith, Forester, CT DEP; William Warzecha, Geohydrologist, CT DEP.

Prior to the review day, each team member was provided with a summary of the proposed study, a checklist of concerns to address, a soils map, and a topographic map of the area. The day of the field review, team members met with representatives from the town 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 property and discusses opportunities and limitations for land management. All conclusions and final decisions with regard to future land use rest with the Town of Bethel. It is hoped the information contained in this report will assist the town in making environmentally sound decisions.

If any clarification of this report is required, please contact Richard Lynn (868-7342), Environmental Review Team Coordinator, King's Mark RC & D Area, Sackett Hill Road, Warren, Connecticut 06754.

\* \* \* \* \*

## II. HIGHLIGHTS

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1. The geology of the site appears to be best suited for passive recreational uses such as hiking trails and/or crosscountry skiing. Because of the rough and rugged terrain characterizing most of the site, there would probably be little opportunity for active recreational uses or other types of development. If trails are constructed, wet areas should be avoided. (p. 8)
2. The site contains 6 differing vegetative types. Despite the rugged topography, much of the site has potential for forest management, and consideration should be given to developing a forest management plan for the property. (p. 13)
3. While the deed acreage for the property totals 158 acres, the total acreage found in scaling off of the Town Assessor's maps comes to 186 acres. This 15% difference is substantial and should be rectified via conducting a perimeter survey. (p. 13)
4. In order to protect the property from trespass and theft (both accidental and willful), the boundaries around the property should be located, brushed out, clearly identified, and posted. (p. 13)
5. In the course of field inspection, several old woods roads were encountered. All of these roads could be brushed out and rebuilt economically to provide recreational trails and accommodate emergency forest fire control equipment. (p. 14)
6. It appears that the main point of access to these roads might well have to be from the CL & P right-of-way and Water Department property. Consideration should be given, however, to seeking access from the western boundaries which are much closer to a paved road. (p. 14)
7. The Bald Rock Tract may be divided into three major wildlife habitat types. These are mixed hardwoods, wetlands, and open land. Opportunities exist for enhancing wildlife habitat on the site, and are discussed in the text of this report. (p. 17)
8. Presently small game hunting and a special controlled deer hunt occur on the site. These activities should be encouraged in the opinion of the Team's wildlife biologist. (p. 18)
9. Passive recreational use and enjoyment of the site can be dramatically improved through the creation and maintenance of a trail network on the property. A trail system at the Bald Rock tract will not require any new support services. The informal parking facility at the terminus of Webb Road is adequate, and access via the CL & P right-of-way is great. Creating trails at Bald



Rock could also act as a catalyst in initiating an expanded regional trail network in this area. (p. 19)

10. To conclude, the Bald Rock tract has excellent potential for passive recreational use. With judicious trail development, the site can provide an attractive area for hiking, nature study, and "backpack" camping. Opportunities also exist for forest management and wildlife habitat improvement. (p. 22)

### III. TOPOGRAPHY AND GEOLOGY

With the exception of the swampy area in the western limits and flat-topped hills in the northern limits, the site is characterized by a rough and rugged terrain. Numerous bedrock exposures, precipitous rock escarpments, surface boulders, and seasonal drainageways are present on the site. The difference in elevation from the highest point on the site (830 feet above mean sea level), which is in the northcentral part, to the lowest point (440 feet above mean sea level), which occurs at the surface of the wetlands in the western limits, is approximately 90 feet. A huge "Bald Rock" in the southern limits, for which the site is named, affords hikers a panoramic view to the west.

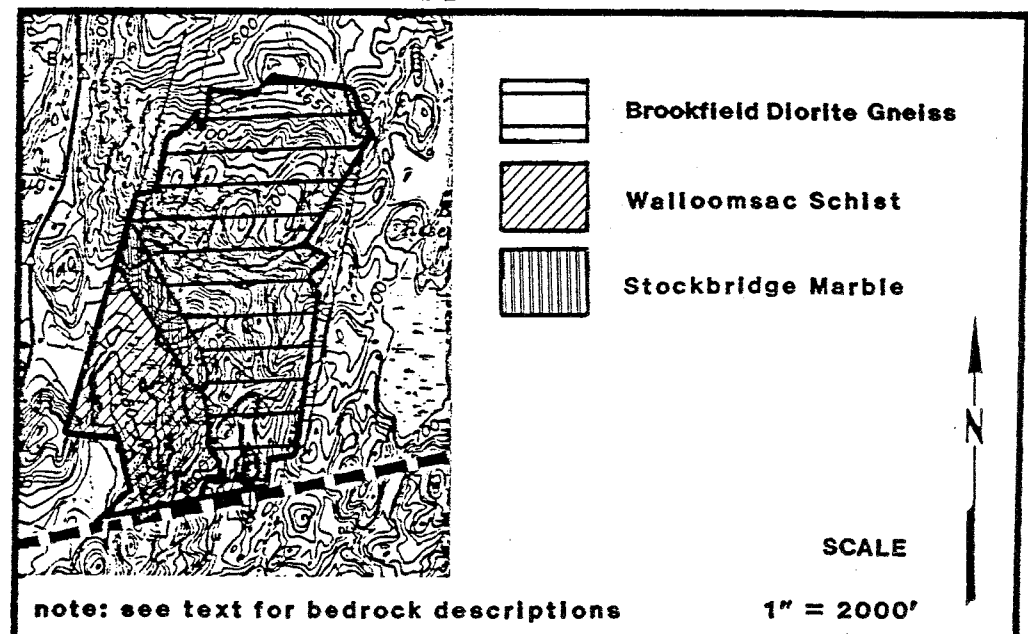
Based on the Bethel topographic quadrangle, the only watercourse on the site is an intermittent stream which traverses the property in the central portion. The stream flows westward through the wetlands in the western limits en route to a small pond located on the east side of Route 53. At least one other small stream was observed on the site during the ERT's field review.

The "Bald Rock Tract" is located entirely within the Bethel quadrangle. Neither surficial or bedrock geologic maps for the quadrangle have been published to date. There is preliminary surficial geologic information available for review purposes at the Department of Environmental Protection's Natural Resource Center in Hartford. The Preliminary Bedrock Geological Map of Connecticut by John Rodgers was also referenced in the preparation of this report.

#### Bedrock Geology

According to Rodger's map, referenced above, three rock units underlie or crop out within the parcel. They include the Brookfield Diorite Gneiss, the Stockbridge Marble, and the Walloomsac schist (see Figure 2).

**Figure 2**      **Bedrock Geology**



The dominant rock type found on the parcel is the Brookfield Diorite Gneiss. This rock consists of a dark and light, commonly speckled and banded, medium to coarse-grained gneiss composed of the minerals plagioclase, biotite, hornblende, and generally quartz and potassium feldspar. Bedrock outcrops and surface boulders throughout the eastern and central parts of the site are studded with many large potassium feldspar crystals. These crystals are clearly visible on the surface of outcrops and surface boulders, including "Bald Rock". This is mainly due to the more resistant nature of the feldspar crystals to weathering than the surrounding minerals that make up the gneissic rock in which they have formed.

The next most abundant rock type found within the parcel is the Walloomsac schist. This rock consists of a dark, fine-grained schist composed of the minerals quartz, albite, and commonly garnet and staurolite or sillimanite. These rocks underlie or crop-out in the western parts of the parcel.

The final rock unit found on the site is the Stockbridge marble. It underlies or crops out in a lens-shaped area which cuts through the central part of the site in a northwest-southeast direction. The rock consists of a white to gray dolomitic (containing the mineral dolomite) marble.

All of the above rocks (i.e., schists, gneisses and marbles) are metamorphic rocks. The term "metamorphic" refers to rocks which were altered at one time by tremendous heat and pressure deep within the earth's crust. The Brookfield Diorite Gneiss and Walloomsac schist formations were created during the Ordovician geologic period (465-510 million years ago). Rocks in the Stockbridge marble unit are even older; they bridge the Ordovician-Cambrian geologic period which was some 490 to 530 million years ago.

"Gneisses" are rocks in which thin bands of platy, flaky or elongate minerals alternate with layers of more granular minerals. This structure resulted from the intense heat and pressure which the rocks were subjected to when they were deep within the earth's crust. In "schists", the alignment of elongate or flaky minerals is spread throughout, giving the rock a slabby or well-layered structure. Because of this structure, the rock can easily be split along the layers. A "marble" is a rock which was formed in some fashion from a pre-existing dolomite limestone or calcite limestone through metamorphic processes. Marble formed chiefly by recrystallization of the dolomite or calcite minerals. As a result, the rock marble is commonly coarser-grained than the original limestone. As mentioned earlier, marbles are commonly white to gray, which is due to the presence of the minerals calcite and/or dolomite. However, they may take on various tones of green, brown, red, mixed colors, etc., depending upon the accessory minerals found in the rock. Depth to bedrock on the parcel probably ranges from zero, in outcrop areas, to not more than 10 feet at various points in between outcrops. The

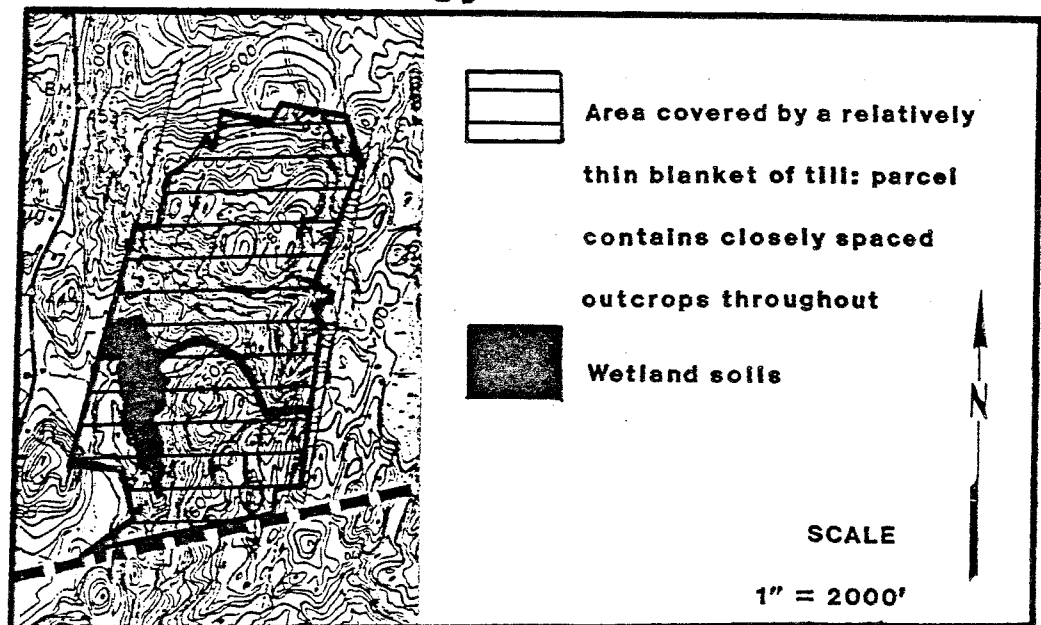
metamorphic rocks on the site may yield good mineral specimens to the interested rock hound.

### Surficial Geology

Overlying bedrock on most of the site is a relatively thin blanket of unconsolidated sediments of glacial origin. These sediments, which are referred to as till, consist of rock particles and fragments of various shape and sizes. The rock particles and fragments were chipped, plucked, or abraded from pre-existing bedrock outcrops or soils as the ice sheet advanced over Connecticut one or more times during the last million years or more. This material became incorporated into the ice and was redeposited directly onto the land surface without subsequent reworking by glacial meltwater. The upper 3-5 feet of till are normally stony, loose or only moderately compact. At greater depths, however, the till may become siltier, tightly compact and less stony.

Two good examples of glaciation can be seen within the parcel. One is the smooth surface of "Bald Rock" which is indicative of the bulldozing action created by the former ice sheet. The other is the presence of large and small surface boulders (boulder trains) strewn about the parcel. These boulders were deposited directly by the glacial ice.

## Figure 3 Surficial Geology



"Swamp deposits" are another type of surficial geologic material found on the property. These sediments overlie till and/or bedrock mainly in the western limits of the property. They consist largely of decomposed organic material interlayered with sand, silt, and gravel which were deposited in wet depressional areas. In addition, there are

seasonally wet areas which parallel intermittent drainage channels throughout the parcel. Areas covered by "swamp deposits" are referred to as wetlands. Wetland areas serve many valuable hydrological and ecological purposes. They act as natural runoff retention basins reducing downstream flood flows during storms. They trap sediments from upstream areas. They change water quality through biochemical processes, often resulting in cleaner water. They also serve as habitat for many species of animals and plants. For these and other reasons, wetland fillings and/or modifications should be avoided where possible.

In this regard, team members observed on the review day that a road had been constructed across a small stream in the Connecticut Light and Power's right-of-way which traverses the property in a north-south direction. It appears the road was constructed without a culvert which has resulted in a "damming" effect to the stream. Surface water ponding is visible on the south side of the road. From a hydrology and safety standpoint, the town and/or CL & P should consider the placement of a properly-sized culvert (or other suitable drainage way) under this section of the road. Without such provisions, the stream could potentially overtop the road during periods of heavy rainfall. If this were to happen, the road could become washed out. This would result in increased erosion and sedimentation of the stream and would also preclude use of the road for access.

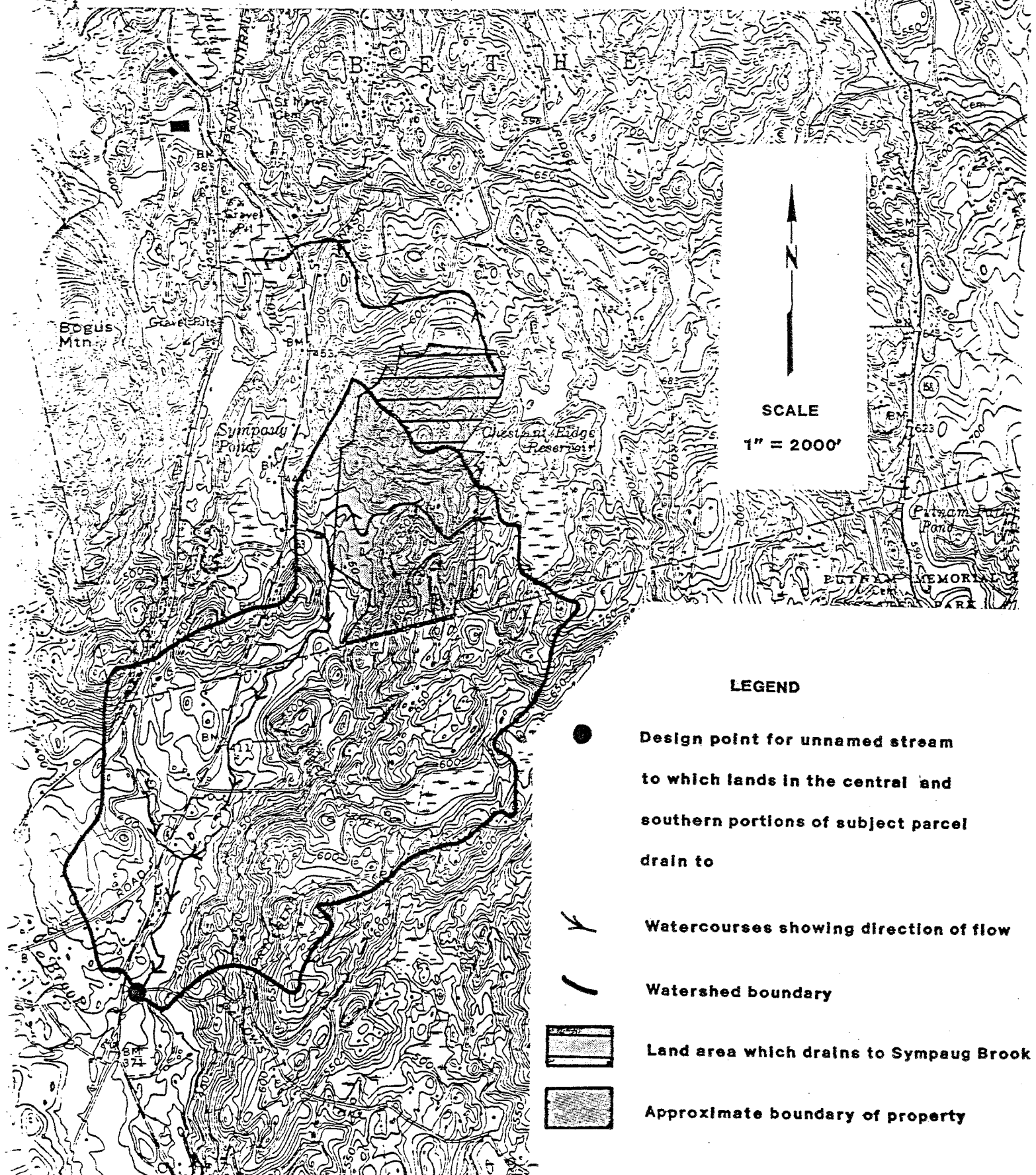
The geology of the site appears to be best suited for passive recreational uses such as hiking trails and/or crosscountry skiing. Because of the rough and rugged terrain characterizing most of the site, there would probably be little opportunity for active recreational uses or other types of development. If trails are constructed, wet areas should be avoided.

## **IV. HYDROLOGY**

Surface runoff on the site can be divided into three areas. The largest portion of the parcel, which comprises approximately 132 acres in the southern and central parts, lies in the watershed of an unnamed tributary to Saugatuck River. Surface runoff for approximately 50 acres in the northern part of the parcel drains generally northward to an unnamed tributary of Sympaug Brook. A relatively small area, which comprises 2 acres, in the eastern limits of the site, drains eastward toward Chestnut Ridge Reservoir.

Surface water and groundwater drainage within the site flows generally downslope toward local discharge points, such as intermittent drainage channels, streams, etc. The water is then transported via these channels towards the major watercourse which drains the respective watershed area. As mentioned earlier, wetland areas tend to parallel these drainage channels.

# FIGURE 4 WATERSHED BOUNDARY MAP



If there is a desire for a recreational water supply on the site, the only aquifer that is likely to be capable of supplying the parcel is the underlying metamorphic and/or carbonate bedrock. Wells drilled in bedrock generally supply small but reliable yields of groundwater. However, since the yield of a given well depends upon the number and size of water-bearing fractures that it intersects, and since the distribution of fractures in bedrock is irregular, there is no practical way of predicting the yield of a well drilled in any specific location.

Of the 734 bedrock-based wells surveyed for Connecticut Water Resources Bulletin No. 21, 90 percent yielded 2 gallons per minute or more, 50 percent yielded 7 gallons per minute or more, and 2 percent yielded 80 gallons per minute or more. The yields for a well or wells tapping the carbonate bedrock (marble) may be slightly higher than those tapping the metamorphic bedrock (i.e., Brookfield Diorite Gneiss and Walloomsac schist). For example, bedrock-based wells surveyed which tapped carbonate rock yielded 2.5 gallons per minute 90 percent of the time compared to the 2 gallons per minute for wells tapping the metamorphic rocks (Source: Connecticut Water Resources Bulletin No. 21).

Water quality should be generally satisfactory on the site. There is a chance that elevated iron and/or manganese levels may be found in the water, however. This is mainly attributed to the iron and manganese rich minerals found in the rocks. Several filters are available to remove these constituents from the water if necessary.

## **V. SOILS**

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Figure 5 is taken from the Soil Survey Report of Fairfield County, Connecticut. The symbols on the map identify map units. Each map unit has a unique composition of soils. Areas with the same symbol have the same composition.

Map Units HrE and Rp - These map units consist primarily of Hollis soils and rock outcrops. The soil and rock are so intermingled on the ground that they cannot be separated on the map. Slopes range from 3 to 45 percent but are steeper in some places of the Rp areas. Stones and boulders cover up to 25 percent of the soil surface.

The Hollis soils are shallow and somewhat excessively drained. Typically they are fine sandy loam over hard bedrock at depths of 10 to 20 inches.

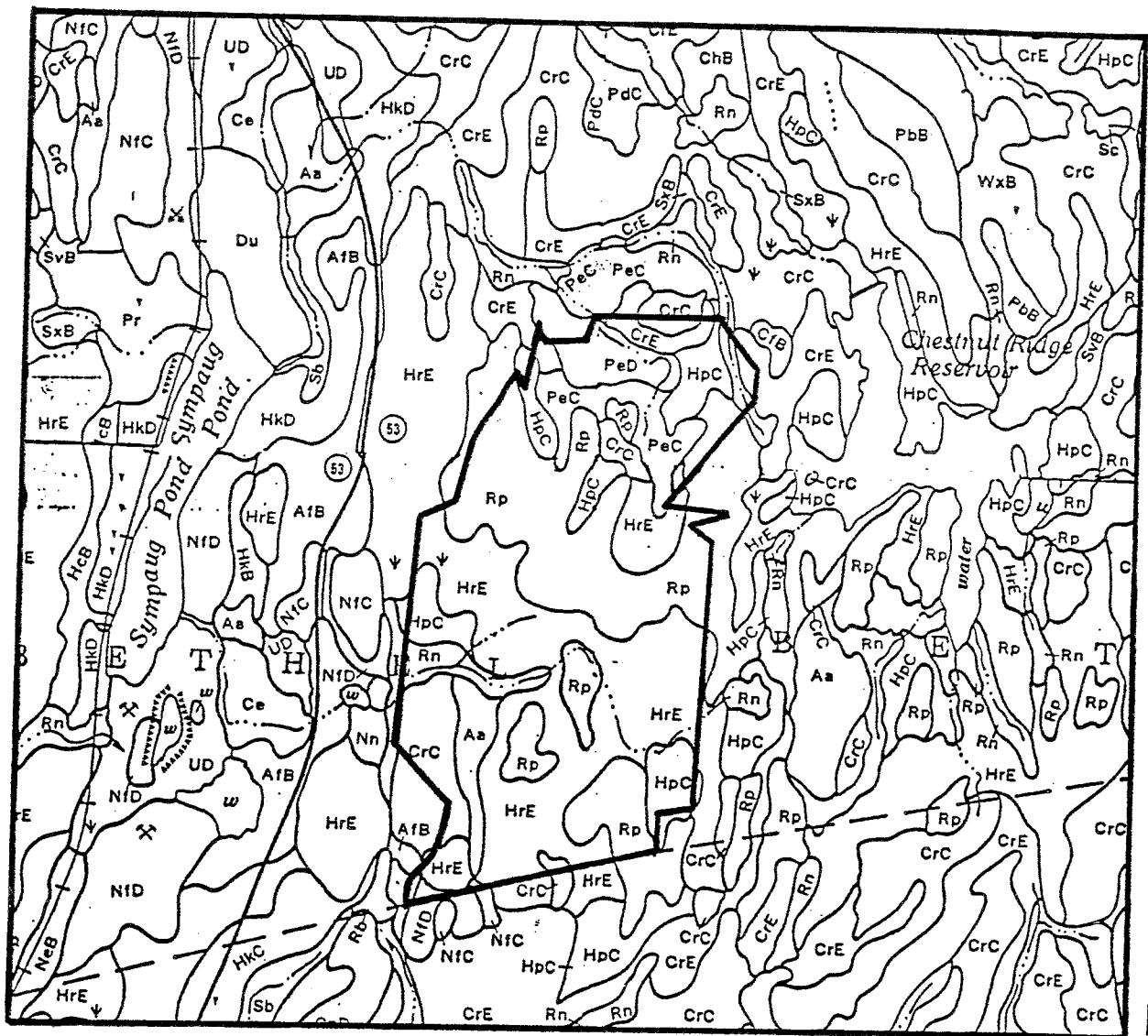
The Rp areas are composed of bedrock exposures and about 30 percent Hollis soils.

The HrE areas are composed of bedrock exposures, about 40 percent Hollis soils and a lesser amount of deeper soils.

Wet soils occur in both these map units immediately adjacent to the stream channels.

These map units have severe limitations for hiking trails due to their steep slopes. With careful planning

# FIGURE 5 SOILS MAP



SCALE

note: see text for soil descriptions

1" = 1320'



trails can be developed that will provide challenging hiking and scenic views. The routes will be steep. Marginal camping spots may be found in this area where the slopes are more level and there is adequate space between the stones and boulders. These spots are few and far between, however.

Map Units CrC, CrE and HpC - These map units are composed of 2 kinds of soils that are so intermingled on the ground that they cannot be separated on the map. Slopes range from 3 to 15 percent on CrC and HpC and 15 to 45 percent on CrE. Stones and boulders cover up to 5 percent of the soil surface.

One soil named Charlton is very deep and well drained. It has fine sandy loam textures to a depth of 60 inches or more. Charlton makes up about 50 percent of the soils in map units CrC and CrE, and about 20 percent of the soils in HpC.

The other soil is named Hollis. It has the same characteristics as the Hollis soils described above in the description of HrE and Rp.

The CrC and HpC map units are well suited for hiking trails. They have fair potential for camping areas; their major limitation is slope.

The CrE map unit has poor potential for trails and camp areas due to steep slopes.

Map Unit Aa - This map unit is composed of Adrian soils on 0 to 1 percent slopes. These soils are very deep and very poorly drained. Adrian soils have an organic surface layer 16 to 50 inches thick overlying sands and gravels to a depth of 60 inches or more. These soils have a water table at or near the surface for most of the year.

These soils are poorly suited for hiking trails and camp areas due to wetness. Trails crossing this area will be muddy or inundated with water.

Map Unit Rn - This map unit consists of Leicester soils on 0 to 3 percent slopes. Stones and boulders cover up to 35 percent of the soil surface. Leicester soils are very deep and poorly drained. They have a water table at or near the soil surface for most of the year. These soils have fine sandy loam textures to a depth of 60 inches or more.

These soils are poorly suited for trails or camp sites due to wetness. Trails crossing the area should be designed to allow hikers to walk on the surface stones.

Map Unit PeC - This map unit is composed of Paxton soils on 3 to 15 percent slopes. Stones and boulders cover up to 35 percent of the soil surface.

The Paxton soils are very deep and well drained. Typically they have fine sandy loam textures to a depth of 60 inches or more. A consolidated layer called hardpan has its upper surface at a depth of about 25 inches.

This soil has good potential for hiking trails. Camp areas are limited due to surface stones and slope.

Map Unit PeD - This map unit is the same as PeC except for slope. Slopes here are 15 to 35 percent.

This soil can provide challenging hiking trails on steep slopes. The area has poor potential for camping spots due to steep slopes and surface stones.

Map Units NfC, NfD and Nn - These map units cover a very small area in the southwest corner of the property. The NfC and NfD units are composed of Nellis and Farmington soils. These soils are so intermingled on the ground that they cannot be separated on the map. The Nellis soils are moderately deep (20-40") and well drained. The Farmington soils are shallow and somewhat excessively drained.

The NfC map unit on slopes of 3 to 15 percent has good potential for hiking trails and fair potential for camping sites.

The NfD map unit has slopes of 15 to 35 percent. It has fair to poor potential for hiking trails and camping areas due to steepness of slope.

The Nn map unit is composed of Ninegret soils on 0 to 5 percent slopes. These soils are very deep and moderately well drained. This soil has good potential for trails and camp areas.

## **VI. FORESTRY**

The Bald Rock Tract is characterized by a torturous topography and is entirely forested. The site contains 6 differing vegetative types which are discussed below.

While the deed acreage for the property totals 158 acres, the total acreage found in scaling off of the Town Assessor's maps comes to 186 acres. This 15% difference is substantial and should be rectified via conducting a perimeter survey.

Aside from the general management recommendations set forth for each vegetative type, there are certain land management concerns which should be addressed for good land stewardship. In order to protect the property from trespass and theft (both accidental and willful), the boundaries around the property should be located, brushed out, clearly identified, and posted. Similarly, the property should be afforded protection from fire and users of the property should be afforded emergency vehicle access when necessary. Where feasible, small, deep waterholes with capacities of 500 to 1000 gallons should be developed where old woods roads encounter wetlands. These waterholes would then become a source of water to be used in the control of forest fires. It appears feasible to install a sizeable (10,000 gallon approximately) waterhole in the central portion of the

property immediately adjacent to the old woods road described in Stand #3.

In the course of field inspection, several old woods roads were encountered and those of particular utility are noted in Figure 6. All of these roads could be brushed out and rebuilt economically to provide recreational trails are accommodate emergency forest fire control equipment. Access could be controlled by the installation of locked metal gates on these roads. These roads would also provide access for emergency medical care units, as well, to service injured hikers. Additionally, this sort of access greatly encourages use of the property by physically handicapped and elderly people.

It appears that the main point of access to these roads might well have to be from the CL & P right-of-way and Water Department property. Consideration should be given, however, to seeking access from the western boundaries which are much closer to a paved road.

Stand #1. Oak Ridge, 28 acres - This area is characterized by shallow, droughty soils and frequent exposure of ledge. Site quality here is very poor. The overstory found consists of poor quality scarlet oak, chestnut oak, red maple, and beech of pole to small sawlog size. The understory consists of mountain laurel, dogwood sassafras, and viburnum. The groundcover generally consists of grasses, lowbush blueberry, huckleberry, poison ivy, and some green-briar.

Management here should be of low priority. When management activities occur, the aim of management should be to convert this type into a softwood or softwood/hardwood type which can better utilize the minimal amounts of water and nutrients found here.

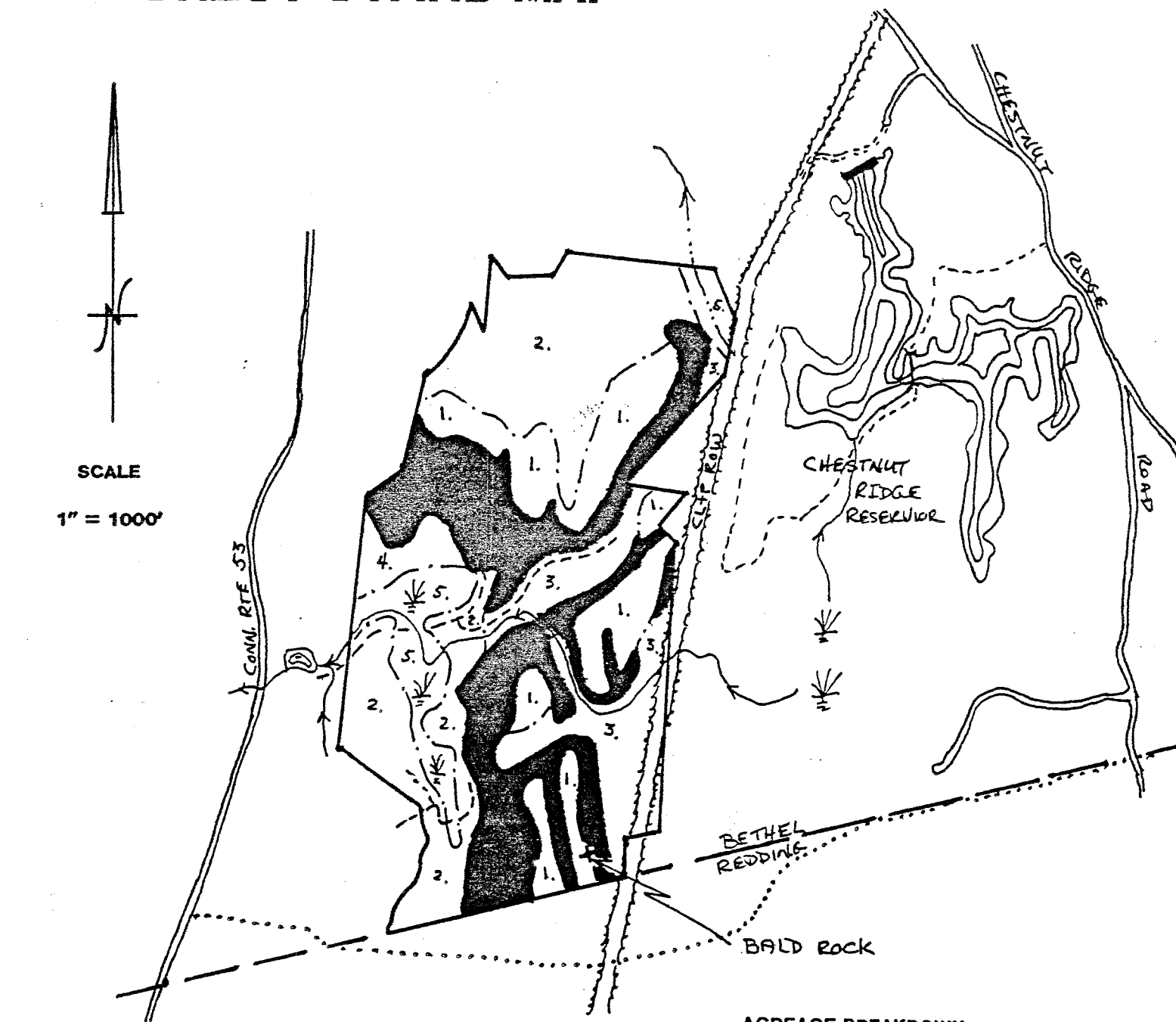
Stand #2. Oak/Mixed Hardwood, 56 acres - This well-stocked stand is composed of good quality, large pole to small sawlog-sized scarlet oak, chestnut oak, white oak, black oak, red oak, red maple, hickory, beech, black birch, sugar maple, aspen and ash trees. These trees are growing at a fair rate on a medium quality growing site and are approximately 40-60 years old.

The understory species encountered include maple-leaved viburnum, mountain laurel, witchhazel, and saplings of black birch, beech, and red maple.

The ground cover here includes grasses (scattered), a variety of ferns in the damper areas, and hardwood reproduction of red maple and black birch.

Access may be a problem to the northernmost portion of this stand and may preclude meaningful management. Regardless, as the density of the stand varies somewhat, there is considerable area which would benefit from an intermediate harvest of the poorest quality stems. This may not yield enough sawtimber to interest a logger but may attract the interest of firewood cutters. Contact with a professional forester (either public or private) should be established

# FIGURE 6 FOREST STAND MAP



note: All boundaries and  
acreages derived therefrom  
are based upon Bethel  
assessor's maps

LEGEND	
	Road
	Trail
	Stand Boundary
	Wetland
	Stream
	Vernal Stream
	Waterbody
	Forest Edge

ACREAGE BREAKDOWN		
STAND #	ACRES	DESCRIPTION
1.	28	Oak Ridge
2.	56	Oak/Mixed Hardwoods
3.	24	Mixed Hardwoods
4.	5	Mixed Hardwood (poles)
5.	14	Wetland
	60	Inaccessible/Inoperable
	187	acres total

to set up and conduct this operation when the time comes.

Stand #3. Mixed Hardwoods, 29 acres - This over stocked stand is composed of good quality, small sawtimber-sized red oak, sugar maple, yellow poplar, hickory and black birch. These trees are growing at a moderate rate on a good quality growing site and are approximately 60-80 years old.

The understory species encountered include maple-leaved viburnum, spicebush in the wettest areas, and scattered sapling growth. In places, a dense overstory limits the understory and ground cover vegetation.

The ground cover here includes assorted ferns, spicebush reproduction, scattered grasses, and virginia creeper.

This area appears to be in need of an intermediate harvest. Further examination by a professional forester (as in Stand #2] is necessary. Access to the southeastern portion of the stand may be feasible from the CL & P right-of-way. The central portion of the stand can certainly be accessed by an old woods road entering the property from the central western boundary. Access to this area may also be had from the CL & P right-of-way provided the old woods road can be found to extend that far.

Stand #4. Mixed Hardwood, 5 acres - This well stocked stand is composed of good quality, pole-sized sugar maple stems with a few ash and oak scattered throughout. These trees are growing at a good rate on a good quality growing site and are approximately 30-40 years old.

The understory is sparse in many areas due to a dense crown cover. In other areas the understory is similar to that found in Stand #2.

The ground cover here is similar to that in Stand #2 but virginia creeper and poison ivy can be found here, as well.

Although certainly not critical at this point, the overstory here could use some thinning to encourage continual vigorous growth of the best stems. Access here may be a problem but may be feasible via a spur off of the old woods road mentioned in Stand #3.

Stand #5. Wetland, 14 acres - This under stocked swampy area is composed of scattered fair quality, pole to small sawlog-sized red maple, ash, white oak, hickory, and black birch. These trees are growing at a moderate rate on a moderate quality growing site and are approximately 40-60 years old.

The understory species encountered include heavy spicebush growth, which, at times, limits ground cover.

The ground cover here includes skunk cabbage, assorted ferns, and hummocks of grass.

Management similar to that outlined for Stand #2 would seem most feasible. Seasonally high water tables here may limit the operation of wheeled harvesting equipment except during deep winter frost periods and summer drought. Access is via that described for Stand #3.

Inaccessible/Inoperable, 60 acres - These areas are characterized by steep slopes, generally composed of ledge, boulders, stone, and small pockets of soil. Occasionally, small plateau-like areas can be found which contain better than average soils. Available moisture and nutrients range from relative abundance at the base of these slopes to extremely poor conditions at the crest of slopes.

Vegetative cover on these areas varies widely, depending on the conditions found in any particular spot. In general, these slopes are covered with mature stems, due largely to the inaccessibility of the area, which precludes any harvesting activity.

It is strongly recommended that these areas be left intact. Topography prevents meaningful management, anyway, and soils here will be very sensitive to erosion.

## **VII. WILDLIFE**

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The Bald Rock Tract may be divided into three major wildlife habitat types. These are mixed hardwoods, wetlands, and open land.

Mixed Hardwoods - This habitat type is dominated by a red oak-maple composition with white oak, beech, tuliptree, black birch, and witchhazel present. Understory vegetation consists of dense pockets of mountain laurel, sassafras, grape, viburnum, poison ivy, and ferns.

Steep rocky terrain provide many oak ridges principally consisting of chestnut oak within this habitat type. Several locations are inaccessible to machines and to many hikers as well.

Wildlife frequenting such habitat are deer, turkey, rabbits, squirrels, fox, raccoon and numerous non-game species.

Wetlands - The wetland habitat consists of seasonally flooded hardwood forest. There is one perennial stream that traverses the property and is associated with the wetland habitat.

The hardwood type is dominated by yellow birch, maple and white oak. The understory is diverse with skunk cabbage, spicebush, sweet pepperbush, sphagnum moss, ferns, and grasses being abundant.

Wildlife utilizing such sites are woodcock, woodpeckers, raccoon, deer, songbirds, and numerous amphibians and reptiles.

Open Land - This habitat type consists of a CL & P powerline right-of-way that abuts the property for approximately .75 miles. Vegetation is a brush type consisting of dogwood, alder, maple, sumac, oak, sassafras, and mountain laurel. The understory consists of herbaceous vegetation, grape viburnum, blueberry, and ferns.

This area is located within the mixed hardwood type and provides habitat diversity essential to numerous wildlife species such as deer, woodcock, turkey, raccoon and various non-game species.

Discussion - Due to the steep rocky terrain the site has low potential for commercial development. It is best suited for recreational activities such as hiking, photography, birding and hunting. Presently small game hunting and a special controlled deer hunt occur on the site. These activities should be encouraged in the opinion of the Team's wildlife biologist.

To actively encourage wildlife on the site, consideration should be given to the following:

1. Create diversity of habitat by making small irregularly shaped openings ( $\frac{1}{4}$  to 1 acre) located in an east to west direction (to obtain maximum sunlight). This will encourage fruit producing shrubs valuable to many types of wildlife. Edges of openings should be feathered (gradually blended into forest type). Openings should be mowed every three to five years.
2. Pile brush along edges of openings for small mammals and birds.
3. Maintain 5-7 snag trees per acre to provide nesting and escape cover for numerous wildlife species.
4. Leave a buffer strip (100 + feet) of natural vegetation around wetland to help filter and trap silt and sediments.
5. If small groups of apple exist, they should be released and followed up with pruning.
6. Powerline right-of-way should be maintained as a low shrub type by mechanical control every three to seven years. If herbicides are used, fall application should be encouraged. This will lessen adverse impact on feeding birds.
7. Through cordwood sales, the powerline right-of-way could be expanded along with creating a feathered edge. Follow-up with bluebird box installation.
8. The wetland site could have pothole development by blasting or mechanical means. This will create waterfowl habitat and benefit numerous non-game species.
9. If a timber harvest is planned, these practices should be followed:
  - a. Encourage mast producing species (oak, hickory, beech).

- b. Leave 5-7 snags per acre.
- c. Exceptionally tall trees are utilized by raptors and should be encouraged.
- d. Trees with vines should be encouraged.
- e. Create small openings with feathered edges.
- f. Create brush piles.

For any further wildlife related assistance, the town is encouraged to contact the Western District DEP Headquarters at 485-0226.

## VIII. RECREATIONAL TRAIL DEVELOPMENT

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As mentioned previously in this report, due to the rugged topography and limited access available for this property, consideration should be given to restricting future use of the property to passive recreational uses such as hiking, nature study, and primitive camping.

Passive recreational use and enjoyment of the site can be dramatically improved through the creation and maintenance of a trail network on the property.

Trails offer a most effective means of access to remote areas with minimum disturbance; they can bring people of all ages in direct contact with the environment. Trails offer first hand opportunities for walking, for observing and for quiet contemplation. Trails are designed to lure people by presenting a continuous sequence of sensuous elements to peak your imagination and to whet your curiosity. Trails give rise to fantasies in which capricious tales become real and legendary characters become companions.

Trails satisfy an important recreational need for a surprisingly large segment of the population. Connecticut's outdoor recreation plan provides a perspective of their importance.

*"Walking for pure pleasure is second only to driving in the annual rate of participation; more time is spent in nature walks than in organized hiking but devotees of the latter activity are unquestionably among the most vocal of the groups exerting pressure for expansion of facilities serving their favorite recreational activity."*

The creation of a trail system at Bald Rock will allow people to expand their pursuits of educational, scientific, cultural and recreational interests. Specifically, a trail system will introduce people to a harsh landscape crudely landscaped during the glacial age where there are vivid examples of the glacier's colossal force, of its enormous impact, and of the processes that have transformed the rubble into a characteristically New England landscape.



A trail system at the Bald Rock tract will not require any new support services. The informal parking facility at the terminus of Webb Road is adequate, and access via the CL & P right-of-way is great (see Figure 7).

The coincidence of the improved CL & P access road, the interest in increased utilization of the Bald Rock area, and the budding interest in a town-wide trail system is certainly opportune. This access road can provide multi-purpose benefits, i.e., emergency access, cross country skiing, handicapped access and possibly, in the long term, equestrian use.

From a regional aspect, the CL & P right-of-way offers a ready made arterial corridor from the school complex on Whittlessey Drive to the Redding town line.

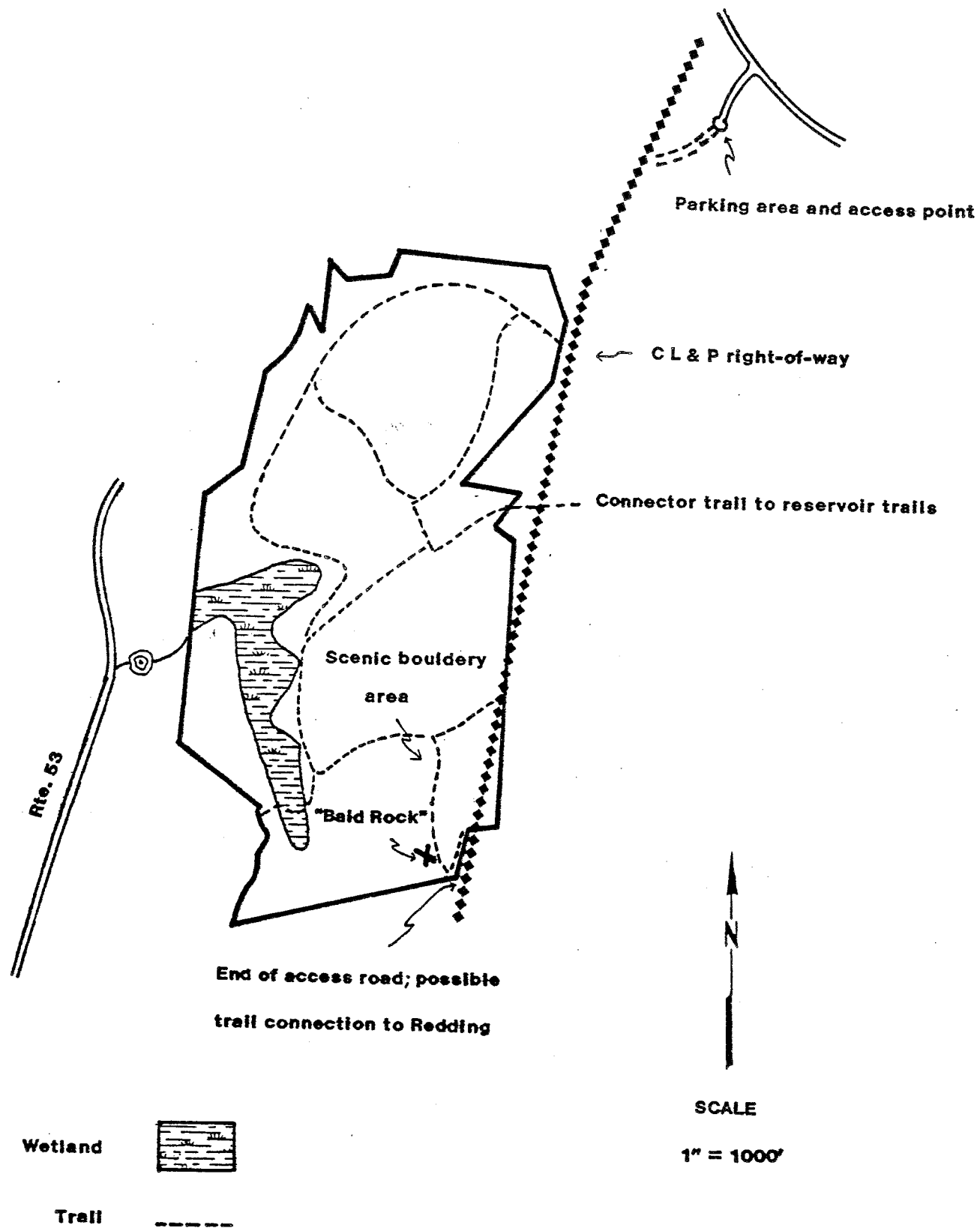
Creating trails at Bald Rock could act as a catalyst in initiating two regional, arterial routes - one from the Redding town line to the center of Bethel, the other via Terre Haute to Danbury. The Bald Rock trail system would provide the shunt.

Ancillary trails could expand the system by providing connections to Putnam Memorial Park, Huntington State Park, Saugatuck Falls, Wooster Mountain State Park and Overlook Park. The potential is there waiting to be exploited.

Figure 7 presents a conceptual trail network for the property. Access to the trails would be available from the east off the CL & P right-of-way. In designing and constructing trails, the following guidelines should be followed:

1. Trails should follow the existing contours as much as possible to minimize grades. This will keep trail erosion to a minimum and reduce trail requirements for erosion and sediment control. It will also facilitate trail use by the handicapped and elderly.
2. All trees, shrubs and fallen timber should be removed for a distance of 2 feet each side of the trail centerline. Stumps should be cut close to the ground. All protruding limbs should also be removed for a distance of 2 feet each side of the trail centerline. Where other than foot traffic is planned, protruding limbs should be removed to a height of 10 feet. Limbs removed should be cut off as close to the trunk as possible.
3. All undesirable material such as soil high in organic matter, stumps and large stones should be removed from the tread area of the trail.
4. The trail surface should be finished to a uniform firm surface and be free of loose material.

# FIGURE 7 CONCEPTUAL TRAIL NETWORK



An excellent reference on trail construction and maintenance is the Appalachian Mountain Club's "Field Guide to Trail Building and Maintenance" (available from the AMC at 5 Joy Street, Boston, Massachusetts, 02108 for \$6.95).

To conclude, the Bald Rock Tract has excellent potential for passive recreational use. With judicious trail development, the site can provide an attractive area for hiking, nature study, and "backpack" camping.

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# 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.