

KING'S MARK ENVIRONMENTAL REVIEW TEAM



REPORT FOR

BIRD PEAK SUBDIVISION

SALISBURY,
CONNECTICUT

King's Mark Resource Conservation and Development Area, Inc.

BIRD PEAK SUBDIVISION

SALISBURY, CONNECTICUT

Environmental Review Team Report

Prepared by the King's Mark Environmental Review Team
of the King's Mark Resource Conservation
and Development Area, Inc.

Wallingford, Connecticut

for the

Salisbury Planning and Zoning Commission

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 Planning and Zoning Commission and the Town. The results of the Team action are oriented toward the development of a better environmental quality and long-term economics of the land use. The opinions contained herein are those of the individual Team members and do not necessarily represent the views of any regulatory agency with which they may be employed.

MAY 1989

ACKNOWLEDGMENTS

The King's Mark Environmental Review Team Coordinator, Nancy Ferlow, would like to thank and gratefully acknowledge the following Team members whose professionalism and expertise were invaluable to the completion of this study:

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I would also like to thank Susan Anderson, Secretary of the King's Mark Environmental Review Team for assisting in the completion of this report.

Finally, special thanks to Elizabeth Hall, Planning and Zoning Enforcement Officer, Len Stewart, Planning and Zoning Commission, Curtis Rand, Conservation Commission, Dale O. Mitchell, owner and J. Michael Sconyers, attorney for their cooperation and assistance during this environmental review.

EXECUTIVE SUMMARY

Introduction

The Salisbury Planning and Zoning Commission requested that an environmental review be conducted on Bird Peak, a site proposed for subdivision development. The 397-acre site is located in the east central section of Salisbury near the New York State Border. The site contains hardwood forest with several areas of wetlands and a lake. A small stream drains the lake in the north central portion of the site and flows off-site. Several intermittent streams and small wetlands are also found on the site. Most of the site contains steep slopes, including Bird Peak and the side of Thorpe Mountain. Access to Camp Sloane currently runs through the property. Access rights will be maintained for the camp. Portions of the site are in the watershed for Lakeville Reservoirs 1 and 2, part of the BHC system.

The developer proposes to build 28 houses, 3,900 feet of new Town road and 2,550 feet of private road. Most of the lots are clustered around the proposed roads. Lot L-23, the largest lot, extends north along the side of Thorpe Mountain. Except for 1 or 2 house sites, Lot L-23 will be protected by conservation easements given to the Salisbury Land Trust. The steepest slopes and the stream corridor will also be protected with conservation easements. The subdivision will be served by on-site septic systems and wells.

The review process consisted of 4 phases: 1) inventory of the site's natural resources; 2) assessment of the resources; 3) identification of resource problem areas; and 4) presentation of planning and land use guidelines. Based on the review process, specific resources, areas of concern, development limitations and development opportunities were identified.

Location, Zoning and Land Use

The site abuts the New York State Border. Land use in the vicinity includes low density residential and undeveloped, wooded land. The proposed road will follow the existing woods road for the most part. The site is zoned RR-1 which allows 80,000 square foot minimum lots.

Topography

Mapping data indicates that bedrock is at or near the ground surface throughout the site. Site terrain is controlled by the underlying bedrock and is generally rough and rugged. Important topographic features include Bird Peak and Maltby Pond. Maximum and minimum elevations are 1,700 and 970 feet above mean sea level, respectively. The subdivision should be laid out so that buildings, roads and driveways avoid the steepest areas. If buildings are constructed on steep slopes, foundations should be designed to prevent slope failure. Blasting will probably be needed for foundations and roads. Rock cuts can minimize site grading in steep areas because rock is generally stable along steep cuts. This will depend on the structure of the rock. If the layering in the rock dips sharply toward the cuts, the

rock may slide. A geotechnical study should be considered for the site. E&S control will be an important aspect of the plan. The potential exists for the houses built on the highest points to be struck by lightning.

Geology

Bedrock underlying the site consists of the Everett Formation and a subunit of the Walloomsac formation. These rocks meet at an inactive fault in the western part of the site. Overlying the bedrock is glacial till. Texture of the till ranges from sandy and loose to silty and compact. The sandier version of till is found in areas that are shallow to bedrock. The compact till is found in the areas of deeper bedrock. The compact layer is a design constraint for septic systems and foundations. According to the plans, wetlands were identified by a soil scientist. This person should sign the plans to confirm the location of the wetlands.

Water Supply

The site will be served by wells drilled into the bedrock. Well depth is likely to range between 150 and 300 feet. The local schist is not a prolific aquifer, but some wells in the area have reported higher than normal yields. The productivity may be related to the fault zone. There is no practical way of predicting well yields without drilling. The wells should be located on the high side of the lots away from potential sources of pollution. The Health District sanitarian must inspect and approve all wells. Well locations and the 75-foot radius are shown on the plans except for Lot L-27. The well for Lot L-24 is located far from the house and should be moved closer. The annual groundwater usage should not exceed the annual recharge for the site. The water may contain high levels of iron and manganese. Suitable treatment filters may be required. Groundwater in the western parts is classified GA. Groundwater which drains toward the reservoirs is classified GAA.

Sewage Disposal

Extensive subsurface exploration has been performed on the site. Shallow to bedrock soils, seasonally high watertables and steep slopes will be the major obstacles for on-site sewage disposal. A good profile of the bedrock is needed to ensure that each leaching field has an adequate separating distance. Leaching systems need to be 18-inches above the maximum groundwater table. Hardpan soils have seasonally high groundwater levels. The septic systems may need to be raised and/or have curtain drains installed to protect them from the groundwater. Leaching fields should not be placed on steep slopes of near substantial cuts to prevent partially treated effluent from leaking out of the slope or cut. A minimum setback of 50 feet is recommended in these areas. A 75-foot setback is required from wells. Concerns with steep slopes include break out at the downslope fill line, danger in operating heavy equipment and E&S control problems. Further subsurface testing will be needed on some lots. the applicant should demonstrate that each proposed septic system meets the Public Health Code.

The Public Health Code requires that subsurface disposal systems be 50 feet from any watercourse and 100 feet from a public water supply reservoir. It does not

address setbacks from wetlands. The Torrington Area Health District requires a 75-foot setback from streams. This should be adequate for the protection of water quality. Greater separation distances are desirable, where possible. Permeability testing could be used to determine if the effluent will meet drinking water standards by the time it reached the wetland boundary.

Hydrology

The western half of the site drains to the unnamed outlet stream for Maltby Pond which ultimately flows to Kelsey Brook. The eastern parts of the site drain to Lakeville Reservoirs 1 and 2. Maltby Pond may also drain east during times of high water. Surface waters have not been classified by the DEP, but are assumed to be Class A for the western parts and Class AA for the eastern parts. Subdivision of the property will increase runoff from the site. A stormwater management plan should be prepared to address the impacts of post-development runoff. A comprehensive E&S control plan should also be designed and implemented to minimize impacts to the wetlands and watercourses. The condition of the dam for Maltby Pond is unknown. The DEP Bureau of Water Management Flood Control Section should be contacted.

Soil Resources

The major soil limitations for the site are wetland soils, soils that are shallow to bedrock, seasonal perched watertables on hardpan soils and steep slopes. The limitations do not preclude development, but indicate the need for precise planning. Septic systems will need to be engineered to function properly.

Erosion and Sediment Control

The E&S control plan is basically adequate. Recommendations include incorporating the E&S control plan directly onto the site plans, providing additional silt fencing, maintaining all E&S controls until construction is complete and installing and maintaining controls properly.

Wetland Considerations

The proposed road will cross a watercourse in 2 places. Some minor filling of wetlands will take place as part of road construction. There do not appear to be any impacts to the lake, but the dam may need maintenance or repair. The major concerns are erosion and sedimentation and possible septic system failure. The wetland crossings should not pose any long-term impacts provided E&S controls are implemented. Snow removal techniques should be studied for impacts to water quality. Significant amounts of fill will be imported for septic systems. A comprehensive sequencing plan should be considered for septic system fill. The stormwater management system should be examined carefully. Deed restrictions for limiting vegetation cutting should be considered. Alternative site designs could be considered.

Wildlife Considerations

The site is covered by mixed hardwood forest and stands of hemlock. The site provides good to excellent forest habitat enhanced by wetlands and waterbodies. The rocky outcroppings and ridges support vegetation and animals not found in other habitats. The remoteness of the habitat is valuable for interior species. Large blocks of habitat are important areas to preserve. Ridgetop plants grow under harsh conditions and are sensitive to disturbance. Isolated rocky outcrops also serve as nesting sites for ravens. Wetlands and waterbodies are important habitat types to consider for preservation. As with any development, the impact on wildlife will be negative. The site will be broken-up with the construction of roads and driveways and habitat will be lost to lawns and landscaping. The less tolerant species will be driven from the site, and the more tolerant species could become a nuisance. Wetlands are important to wildlife and should be protected. If wetlands must be crossed, large box culverts or bridges are preferred because they preserve the substrate of the brook and allow a travel path. Ridgetops are fragile areas and easily disturbed. Habitat over 1,200 feet should be protected from overuse. Clustering the homes on areas close to the road will benefit wildlife. As proposed, most of the development will occur on 132 acres. Many of the houselots are small, augmenting the negative impacts. However, the remaining acreage will have little development, preserving the habitat value. Deed restrictions preventing further subdivision or disturbance should be considered. Conventional developments do not lend themselves to wildlife management. Whatever the combination of habitats, setting aside an island of open space is least desirable to wildlife. Open space should have natural travelways into and out of the development.

Threatened and Endangered Plant and Animal Species

According to the Natural Diversity Data Base, there is a population of Potentilla tridentata, a Threatened species, on the summit of Bird Peak.

Archaeological Resources

Upland areas in Salisbury were used as occupation sites for the Algonkian Indians. Archaeologically sensitive areas include lake shores and areas around large wetlands. The knolls adjacent to the wetland on Thorpe Mountain may contain archaeological resources. These areas are proposed for conservation easements. Steep slopes between the 1,250 and 1,450 contours may also be sensitive. Rock shelters may be present. Archaeological surveys are recommended if the development is approved.

Planning Considerations

The site is wooded and contains small streams and steep slopes. It is considered remote because there are no adjacent homes or other structures. The Maltby Pond dam is a concern because houses and roads will be built downstream. The site is located in an RR-1 zone which requires 2-acre lots. A small portion of the site may be located in the Mount Riga zone which requires 3-acre lots. Subdivision regulations state that the lots should be able to support structures without danger

and that dead end streets should not be of "excessive length" or exceed a 10% grade. Commission members must determine if the length of the road is excessive. Under wet or icy conditions, a long road with grades exceeding 10% raises public safety concerns. The subdivision regulations enable Commission members to require areas for open space. Open space with lake access is desirable. The State Plan designates the area as Rural Land and Conservation Area. Designation as a Conservation Area is due to existing and future public water supply. Recommended minimum lot size for water supply watersheds is 2 acres. The Regional Plan identifies the site as Rural Area. Although 65% of the site will be undeveloped, the subdivision will change the area's character. Clustering the houses is a planning alternative. The Town Regulations must be changed to apply this option.

Traffic Considerations

Traffic generated by the subdivision should not adversely impact the existing road system. The proposed road will encounter steep topography and ledgerock. Recommendations include keeping grades under 10% except for short stretches with a maximum grade of 12%, using the excavated rock on-site, using underdrains and using wider curb cuts on steep driveways.

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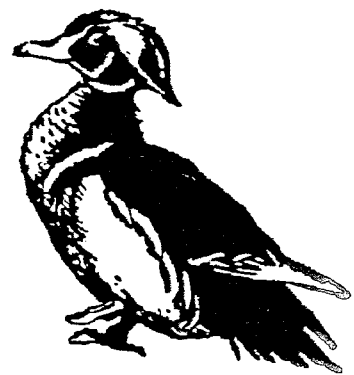
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INTRODUCTION



INTRODUCTION

The Salisbury Planning and Zoning Commission requested that an environmental review be conducted on Bird Peak, a site proposed for subdivision development. The site is located in east central Salisbury near the New York State Border. Access is provided by Belgo Hill Road and Indian Orchard Road.

The 397-acre site contains hardwood forest with several areas of wetlands and a lake. A small stream drains the lake in the north central portion of the site and flows off-site. Several intermittent streams and small wetlands are also found on the site. Most of the site contains steep slopes, including Bird Peak and the side of Thorpe Mountain. Access to Camp Sloane currently runs through the property. Access rights will be maintained for the camp. Portions of the site are in the watershed for Lakeville Reservoirs 1 and 2, part of the Bridgeport Hydraulic Company (BHC) system.

The developer proposes to build 28 houses with lot sizes ranging from 2.017 to 243.278 acres, 3,900 feet of new road which will be built to Town standards and 2,550 feet of private roads. Most of the lots will be clustered around the proposed roads. Lot L-23 includes 243.278 acres and extends north along the side of Thorpe Mountain. Except for 1 or possibly 2 house sites, Lot L-23 will be protected by conservation easements given to the Salisbury Land Trust. The steepest slopes and the stream corridor will also be protected with conservation easements. The subdivision will be served by on-site septic systems and wells.

The purpose of this review is to inventory and assess existing natural resources and discuss the impacts of development. This environmental information will assist the Town in guiding conservation and development in this area. Specific objectives include:

- 1) Assess the hydrological and geological characteristics of the site, including geological development limitations and opportunities;
- 2) Determine the suitability of the site to support on-site septic systems and wells;
- 3) Determine the suitability of existing soils to support planned development;
- 4) Discuss soil erosion and sedimentation concerns;
- 5) Assess the impact of development on wetlands and watercourses;
- 6) Assess the impact of development on wildlife, including alternatives for consideration;
- 7) Assess planning and land use issues; and
- 8) Assess traffic and access issues.

THE ERT PROCESS

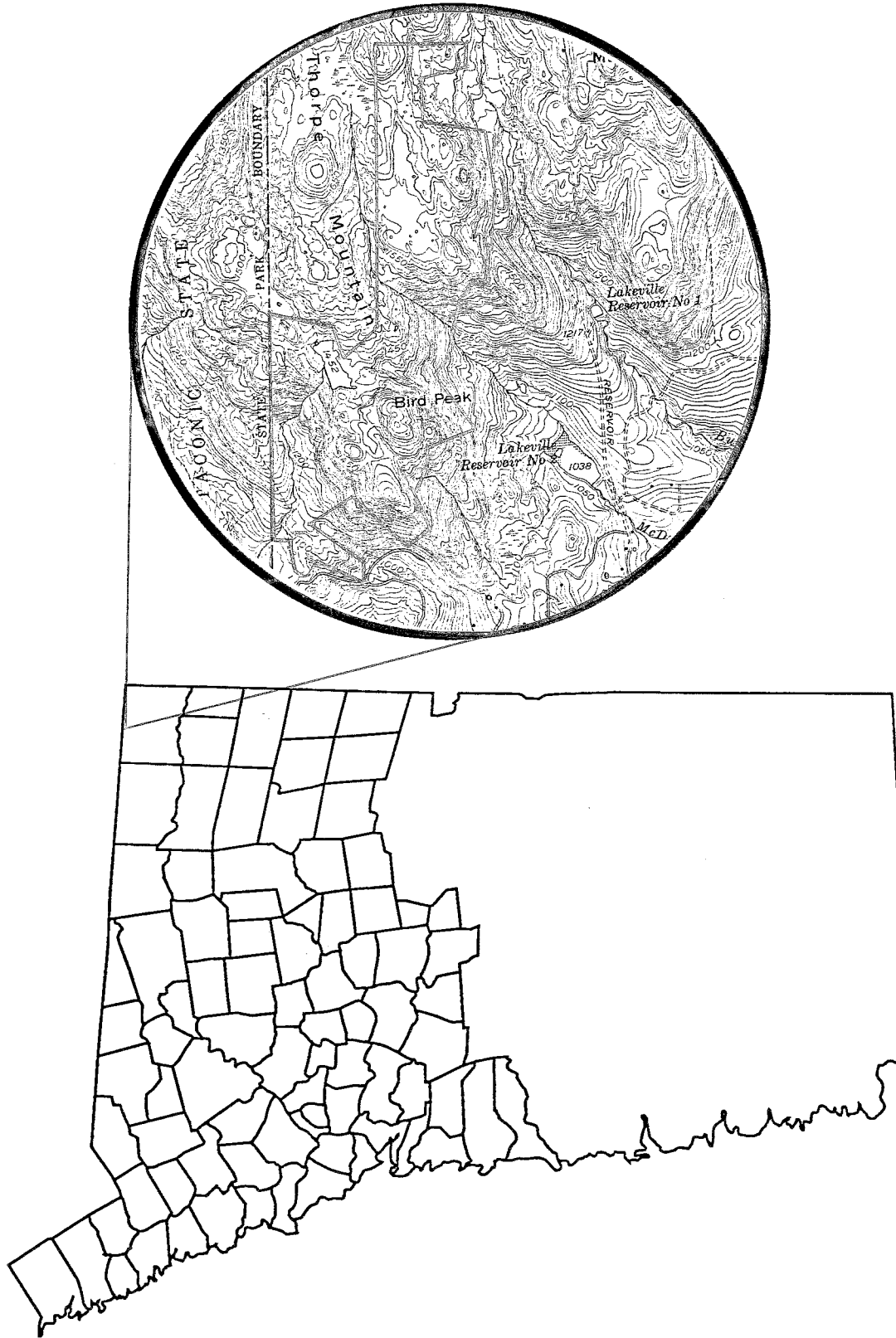
Through the efforts of the Salisbury Planning and Zoning Commission, the developer's representative and the King's Mark ERT, this environmental review and report was prepared for the Town. This report primarily provides a description of on-site natural resources and presents planning and land use guidelines. The review process consisted of 4 phases:

- 1) Inventory of the site's natural resources (collection of data);
- 2) Assessment of these resources (analysis of data);
- 3) Identification of resource problem areas; and
- 4) Presentation of planning and land use guidelines.

The data collection phase involved both literature and field research. The ERT field review took place on March 14, 1989. Field review and inspection of the proposed development site proved to be a most valuable component of this phase. The emphasis of the field review was on the exchange of ideas, concerns or alternatives.

Figure 1

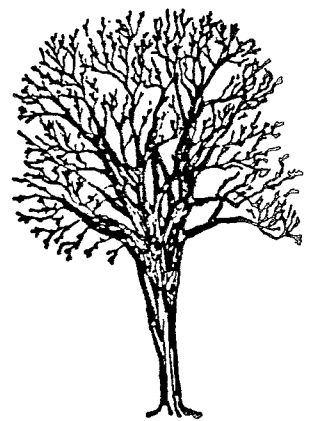
LOCATION OF STUDY SITE



Mapped data or technical reports were also perused, and specific information concerning the site was collected. Being on-site also allowed Team members to check and confirm mapped information and identify other resources.

Once Team members had assimilated an adequate data base, they were able to analyze and interpret their findings. The results of this analysis enabled the Team members to arrive at an informed assessment of the site's natural resource development opportunities and limitations. Individual Team members then prepared and submitted their reports to the ERT Coordinator for compilation into the final ERT report.

PHYSICAL CHARACTERISTICS



LOCATION, ZONING AND LAND USE

The proposed subdivision site, approximately 397 acres in size, encompasses parts of Thorpe Mountain and Bird Peak in western Salisbury. The site abuts the New York State Border to the west, private, undeveloped lands to the north, BHC land to the east and Indian Orchard Road to the south. The water company land to the east of the site is contiguous with Lakeville Reservoirs 1 and 2, which service the Litchfield Division (Lakeville System) of the BHC. This area has been preserved as open space because it serves as water supply land.

Land use in the vicinity of the site consists of low density residential to the south and undeveloped, wooded lands to the west, east and north. In places, the proposed road, which will connect the site with Indian Orchard Road, follows an existing "woods" road that extends to and beyond Maltby Pond (a.k.a. Bird Lake) in the central parts.

The site is located in a Rural Residential or RR-1 zone which allows residential lots that are a minimum of 80,000 square feet (approximately 2 acres). Each of the proposed lots is 2 acres or greater in size.

TOPOGRAPHY

Geologic and soil mapping data indicates that bedrock is at or near (10 feet or less) ground surface across the site. Therefore, the bedrock structure has strongly influenced the shape of the land forms and the drainage patterns on the parcel. The summit of Bird Peak, approximately 1,530 feet above mean sea level, occurs in the east central parts of the site. Bird Peak, as well as other vantage points to its southwest, offers scenic vistas to the south and west. Lots L-21-L-24 encompass the peak tops, and houses are proposed to be constructed on or near the top of the peaks.

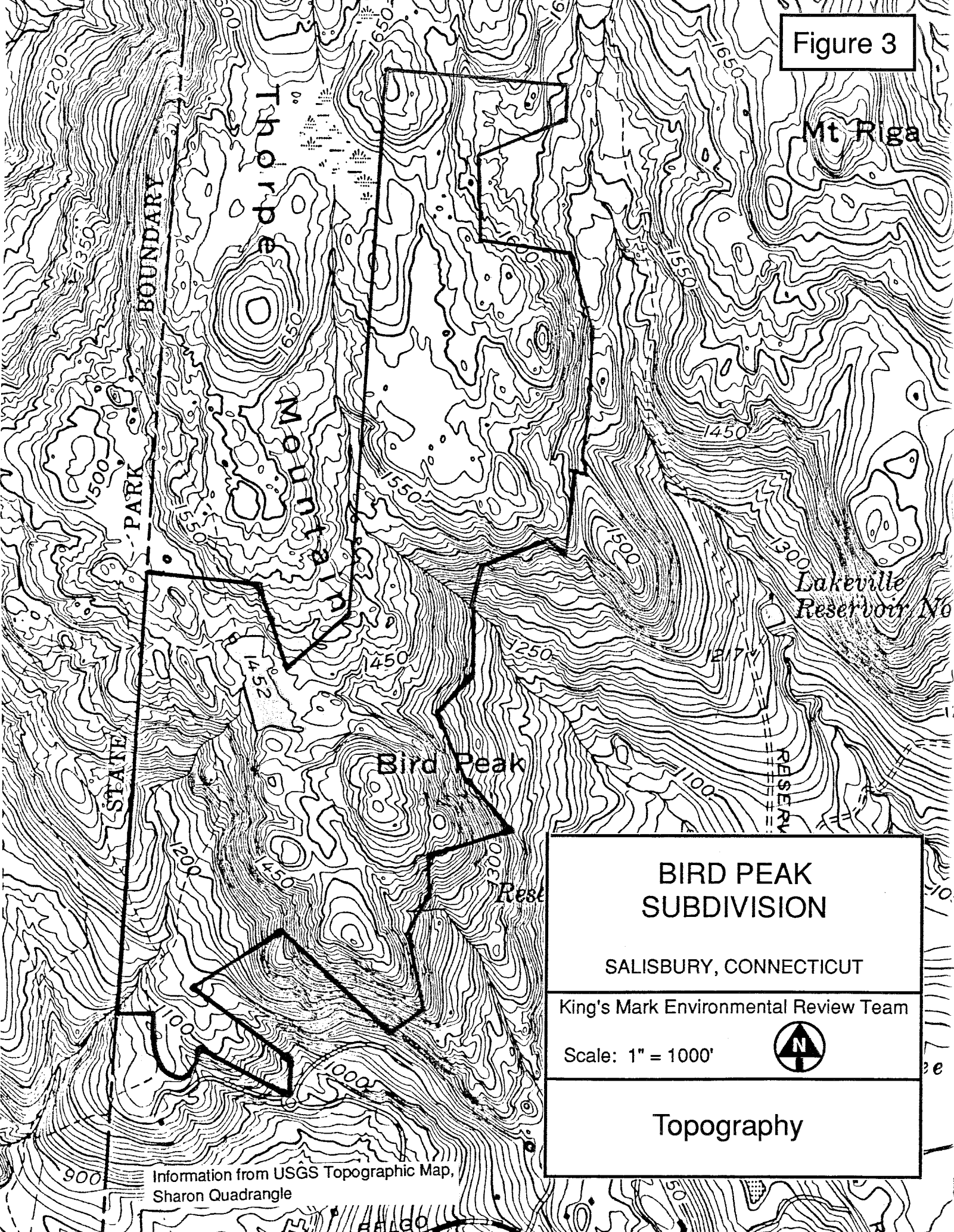
The highest peak, approximately 1,700 feet above mean sea level, occurs at the northern limit of the site. Maltby Pond, the 6-acre surface water impoundment in the central parts, is another important topographic feature of the site.

Site terrain is controlled by the underlying bedrock and, in general, is rough and rugged. Soil mapping data indicates that slopes range between 8% and 35%. Approximately half of the site contains slopes that are gentle to moderately steep (8-15%), while the other half is characterized by steep slopes (25-35%). In places, Lots L-22-L-24 contain precipitous or vertical cliffs. The steepest slopes occur in the southern parts, west and south of Bird Peak and on Lot L-23.

Maximum and minimum elevations on the site are approximately 1,700 feet above mean sea level (northern limits) and 970 feet above mean sea level (Lot L-1), respectively (see Figure 3).

The proposed subdivision should be laid out so that buildings, roads and driveways avoid the steepest areas. If buildings are constructed on steep slopes, special attention must be given to foundation design and slope retention studies to ensure that slope failure does not occur. In order to comply with Town road and driveway grade requirements and to reduce the need for extensive "cut" and "fills," new access roads and driveways should be laid out to cross slopes and conform to the topographic contours rather than crossing perpendicular to the steep, hilly areas on the site. The widespread presence of shallow to bedrock soils across the site indicates that difficult excavations may be necessary for roads, driveways and house foundations. Due to the nature of the bedrock underlying the site, blasting will probably be required in most places where bedrock is encountered. However, rock cuts for roadways may minimize site grading in steep areas, because rock is generally stable along nearly vertical slopes, while soil slopes usually cannot exceed 2:1. This will depend upon the structure and dip of the layering in the rock with respect to the road cut. Where deep cuts occur, especially if the layering in the rock

Figure 3



Mt. Riga

STATE PARK BOUNDARY

BIRD PEAK

BIRD PEAK

Bird Peak

Lakeville Reservoir No. 1

BIRD PEAK SUBDIVISION

SALISBURY, CONNECTICUT

King's Mark Environmental Review Team

Scale: 1" = 1000'



Topography

Information from USGS Topographic Map, Sharon Quadrangle

dips steeply towards the road and is weak, there is a chance that blocks of ledgerrock may slide onto the road. Therefore, if deep cuts are required, geotechnical studies should be conducted to determine rock structure, and wide road troughs should be considered in these areas.

Because the site is characterized by moderate to steep slopes and soils that may contain fine-grained sediments such as silt, fine sand and clay, erosion and sediment (E&S) control may be difficult. Any development that occurs on the site should be accompanied by a comprehensive E&S control plan.

Houses are proposed on top of some of the highest points on the site, including Lots L-21, L-22 and L-24. The potential for houses and/or people to be struck by lightning exists. As the leading end of lightening channels makes its way to the ground, it seeks out high points to hit. The houses proposed for Lots L-21, L-22 and L-24 may be favorable targets, especially if they are isolated in unprotected areas. Therefore, steps be taken to ensure that buildings are protected by means of well-designed systems of lightning rods.

GEOLOGY

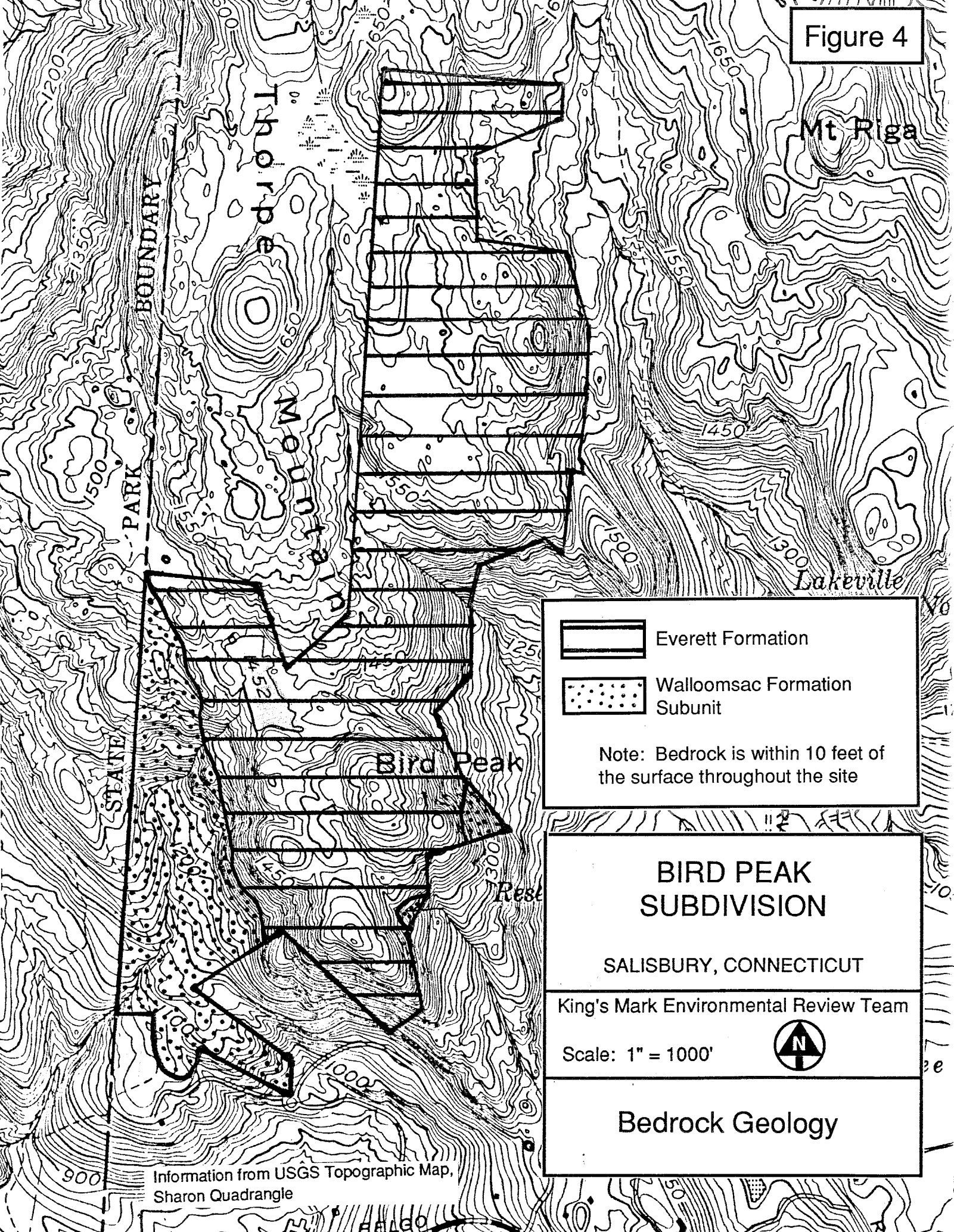
The site is located entirely in the Sharon topographic quadrangle. A bedrock geologic map (QR-38, 1979, by Robert M. Gates) for the quadrangle has been published by the Geological and Natural History Survey of Connecticut. No surficial geologic map has been published for the quadrangle, but there is preliminary surficial geologic information available at the Department of Environmental Protection (DEP) Natural Resource Center in Hartford. The Soil Survey of Litchfield County, the unpublished Surficial Materials Map of Connecticut (Stone, 1985) and subsurface data compiled for on-site sewage disposal exploration by the applicant were also referenced.

Gates (1985) identifies 2 bedrock formations underlying the site. They are the Everett Formation and a subunit of the Walloomsac Formation (see Figure 4). The principal contact between the 2 bedrock formations, which trends north-south, occurs in the west central parts of the site. East of the contact, approximately 80% of the site is underlain by the Everett Formation. In general, the Everett Formation is described as a gray, rusty-weathering, fine- to medium-grained schist. The primary minerals contained in the rock are quartz, muscovite and chlorite. Near the contact, the rock commonly contains garnet. Because of the high mica (chlorite and muscovite) content, the rock is recognizable by its flaky, layered structure and silvery sheen.

West of the contact and in 2 small areas southeast of Bird Peak, the site is underlain by the Walloomsac Formation subunit. Most of the development will occur over this rock unit. The rock is described as a dark, fine-grained schist. It contains the minerals quartz, muscovite, biotite and plagioclase. The rock tends to be flaggy (i.e., splits easily into layers). Schists are metamorphic rocks (rocks which have been noticeably altered by high pressures and/or temperatures) in which thin bands of aligned, elongate or flaky minerals are predominant, and the alignment is particularly strong.

The Cambrian aged (505-570 million years old) Everett Formation rock is comprised of deep oceanic sediments which were subsequently metamorphosed into solid rock. The Walloomsac Formation rocks are younger than the Everett Formation, having been deposited during the Ordovician geologic period (approximately 437-505 million years ago). The Walloomsac Formation rock was derived from oceanic sediments deposited on an ocean shelf. The contact of the bedrock units represents a geologic boundary known as the Taconic allocthon fault that separates old Proto-North America (Continental Plate) and the Iapetos Oceanic Plate. This fault is a structural feature that formed during the geologic past and is

Figure 4



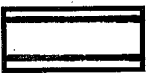
STATE PARK BOUNDARY

Thorp Mountain

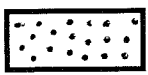
Mt. Riga

Lakeville

Bird Peak



Everett Formation



Walloomsac Formation Subunit

Note: Bedrock is within 10 feet of the surface throughout the site

**BIRD PEAK
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Scale: 1" = 1000'



Bedrock Geology

Information from USGS Topographic Map, Sharon Quadrangle

no longer experiencing active movement. This fault marks the place where rocks from 2 different geologic terranes were pushed together by plate movements approximately 250-500 million years ago. The Everett Formation rocks were either thrust over as "hard-rock" or slid by gravitational forces as "soft-rock" (partially consolidated) onto the Walloomsac Formation subunit rocks. Therefore, the Everett Formation rock is an erosional feature that was moved from a far distant point and is allocthonous.

The unconsolidated material overlying bedrock on the site consists of a thin blanket (generally 10 feet or less) of glacial sediment called till (see Figure 5). Till was deposited directly from an ice sheet onto the bedrock surface. Because the ice indiscriminately collected and transported rock particles and fragments of widely ranging sizes as it advanced through the region, the till is a non-sorted mixture of clay, silt, sand, gravel and boulders. The texture of the till is variable, ranging from sandy and loose to silty and tightly compact. The western parts of the site, which are covered by the Bernardston soils, contain till that becomes very compact at a depth approximately 2 feet below the surface. The till on the remainder of the site is stony and loose, but relatively shallow.

The compact nature of the till in the western parts of the site is an important design constraint with respect to on-site sewage disposal. The compact till zone will restrict the movement of water from the surface into and through the ground. This results in a seasonally high watertable which affects the ability of the soil to accept septic tank effluent. The shallow to bedrock soils on the site are also an important design constraint for on-site sewage disposal.

The presence of a seasonally high watertable indicates that building footing drains should be utilized around all foundation walls to keep basements dry.

According to the site plan, wetlands on the site were identified in the field by a soil scientist. However, station numbers and the name of the soil scientist are not

shown on the plan. The Inland Wetland Commission should require the applicant to provide a plan map with the field delineated boundaries and station numbers shown. The soil scientist who performed the field work should review and sign a statement on the map(s) certifying that the information is substantially correct. The certification statement should be similar to:

"The wetland soils on this site were identified in the field using the criteria required by Connecticut P.A. 72-155 as amended by Connecticut P.A. 73-571, Connecticut P.A. 87-338 and Connecticut P.A. 87-533. The boundaries of these soils and of identified watercourses are accurately represented on the plot plan."

The Inland Wetland Commission and/or Town staff should then arrange to meet with the applicant and the soil scientist to review these boundaries in the field and compare field conditions to the information submitted, especially in areas where alterations to the wetlands, detention basins and stormwater discharge are proposed.

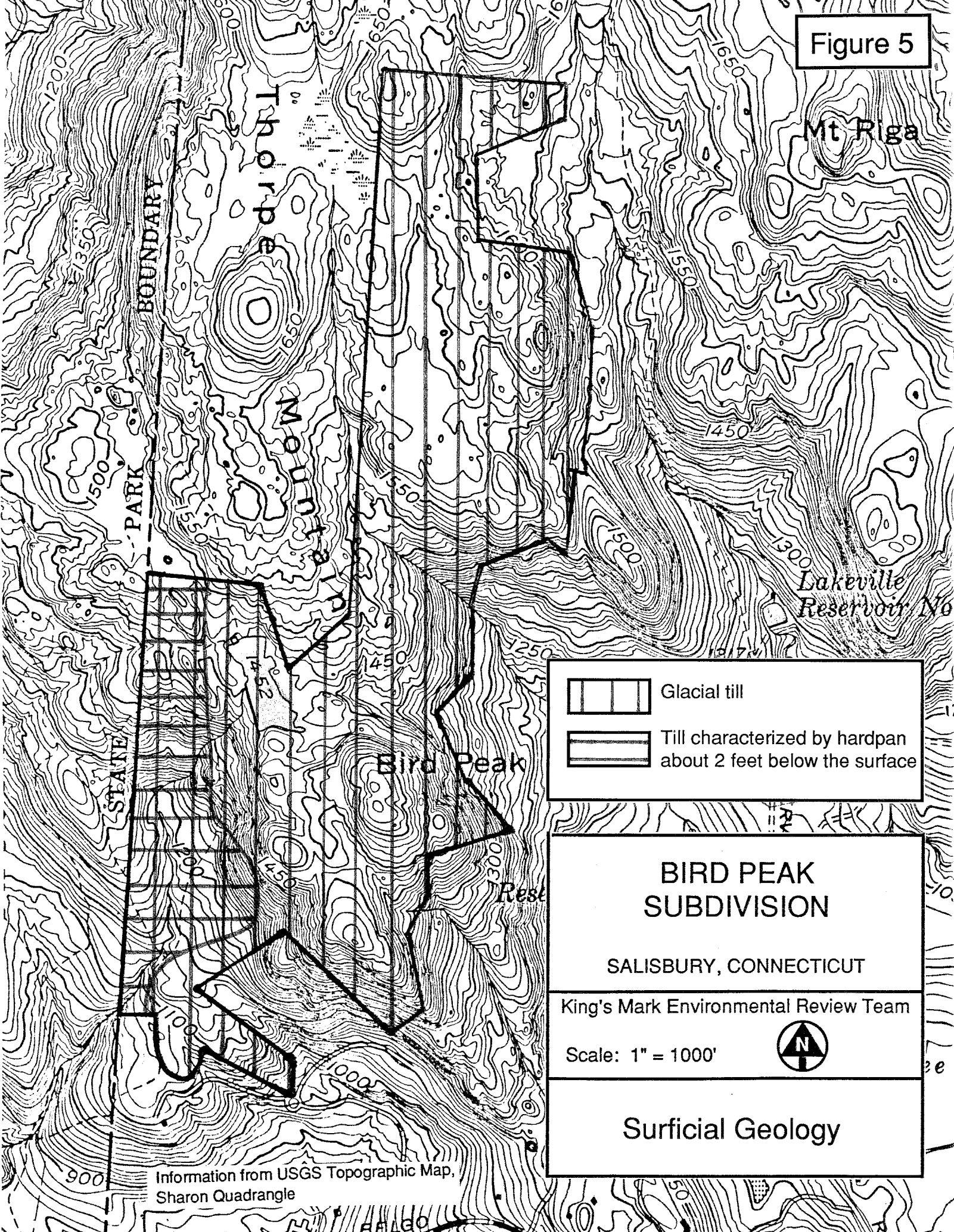
The principal wetland soils occur southwest of the dam that impounds Maltby Pond and parallels its outlet stream. There is also a wetland pocket where Indian Orchard Road becomes Bird Lake Road.

WATER SUPPLY

The water supply for the proposed subdivision will consist of drilled wells tapping the underlying crystalline metamorphic rock. Each building lot will be served by an individual well that is cased with steel pipe firmly into solid rock and completed as an open borehole in the metamorphic bedrock.

Well depth is likely to range between 150 feet and 300 feet. The local schist rock is not a prolific aquifer, but a review of domestic water supplies in the vicinity of the site indicate that some higher than normal yields (2-3 gallons per minute) have been obtained from the local bedrock. According to the well drilling reports, some of the

Figure 5



STATE PARK BOUNDARY
Thorpe Mountain

Mt. Riga

Lakeville Reservoir No. 1

Bird Peak



Glacial till



Till characterized by hardpan about 2 feet below the surface

BIRD PEAK SUBDIVISION

SALISBURY, CONNECTICUT

King's Mark Environmental Review Team

Scale: 1" = 1000'



Surficial Geology

Information from USGS Topographic Map, Sharon Quadrangle

high yielding wells reportedly tapped a zone of weathered rock at a depth of approximately 300 feet. This productive well zone may be related to the Taconic allocthon fault or shear zone. Well completion reports for bedrock wells serving 2 homes located on Indian Orchard Road and several on Reservoir Road less than a mile east of the site were reviewed. Table 1 shows the yield and well depth of the wells surveyed. The wells were drilled between 1970 and the present. Wells ranged in depth from 140 feet to 525 feet. Well yields were reported to range from 1-40+ gallons per minute.

Table 1

Summary of Domestic Water Supply Wells
 Drilled on Indian Orchard Road and Reservoir Road,
 Salisbury, Connecticut
 (Note: All wells reportedly tap the underlying bedrock)

<u>Well</u>	<u>Total Depth of Well (ft)</u>	<u>Well Yield (gpm)</u>
Indian Orchard Road		
1	300	20
2	325	25
Reservoir Road		
1	140	12
2	320	40+
3	290	3.5
4	300	1.5
5	345	1
6	525	1.75
7	280	4
8	445	5
9	200	40
10	310	40
11	257	12

Yields from bedrock wells depend upon the number and size of water-bearing fractures intersected by the wells. Density and size of fractures in different bedrock zones vary widely, but they generally occur within the first few hundred feet of the surface. Because the distribution of fractures in bedrock is irregular, there is no

practical way, outside of extensive geological testing, of predicting the yield of a well without drilling.

Every effort should be made to locate wells on a relatively high portion of the lot, properly separated from the sewage disposal systems or any other potential pollutants (e.g., road drainage, curtain drain pipe, etc.) and in a direction opposite the expected groundwater movement. Special attention should focus on the lots requiring pump systems. The orientation of the septic system relative to the well and groundwater flow is a very important consideration.

All wells should be cased with steel pipe into the underlying bedrock and properly installed in accordance with all applicable State Public Health Code and Connecticut Well Drilling Board regulations to provide adequate protection of the quality of bedrock water. In addition, the Health District sanitarian must inspect and approve well locations. Well locations and their respective 75-foot sanitary radius (this radius assumes the pump capacity of the well is under 10 gallons per minute) are shown on all lots except Lot L-27. Also, the well for Lot L-24 is far removed from the proposed house. Because of the shallow to bedrock soils and the cost for digging a 4-foot deep water line trench, this well should be moved closer to the dwelling.

Because lot sizes are relatively large (2 acres or more) and because approximately 95% of the renovated domestic wastewater will percolate downward to recharge the underlying bedrock via on-site sewage disposal systems (emphasizing the need for careful septic system design, installation and maintenance), the annual groundwater usage for the site should not exceed annual groundwater recharge. If the underlying bedrock is fractured and capable of transmitting water to drilled wells, the bedrock aquifer should adequately meet the water demands of the proposed subdivision. Additionally, 2-acre lots should allow for separating distances of 200 feet between neighboring wells. If this is attained, each well has approximately 2 acres

of recharge or 595 gallons per day. This assumes a recharge rate of approximately 8 inches per year for an upland till-covered site. It is estimated that a family of 5 uses approximately 375 gallons per day or 75 gallons per person per day.

According to Water Resources Bulletin No. 21 (Upper Housatonic River Basin), the Everett Formation and Walloomsac Formation subunit which underlie the site contain high concentrations of iron and manganese which may affect the quality of water drawn from the bedrock. Both formations are associated with the Old Salisbury iron district, where small bodies of ore were once mined. Suitable treatment filters may be required for domestic water supplies developed in the subdivision to combat elevated iron and manganese levels. The federally recommended limits of iron and manganese in drinking water are 0.3 ppm and 0.05 ppm, respectively. Higher levels may stain laundry, utensils and plumbing fixtures and impart a metallic taste to the water. The limits of iron and manganese are based largely on aesthetic and taste considerations.

Groundwater beneath the western half of the site is classified as GA which means it is suitable for private drinking water supplies without treatment. Groundwater in the eastern parts of the site, which drain to the Lakeville Reservoir, is classified by the DEP as GAA which means it is within a public water supply watershed and is presumed suitable for direct human consumption.

SEWAGE DISPOSAL

Extensive subsurface exploration of the site for on-site sewage disposal has been performed by Joseph A. Peltier, P.E. This work involved the excavation of 242 deep test holes which, in general, encountered a topsoil zone approximately 6 inches thick, a subsoil zone that has a fine sandy loam texture approximately 1.5-2.0 feet thick and then glacial till (hardpan) or ledge. Texture of the till on the site is

variable, as confirmed by deep test hole data. In general, the shallow to bedrock areas are characterized by stony, loose (non-compact) till, and where the till is deeper (>5 feet), it typically becomes quite compact. Shallow to bedrock soils, seasonally high watertable conditions and steep slopes will be the major obstacles for on-site sewage disposal.

Many deep test holes were excavated to a relatively shallow bedrock surface, where a weathered bedrock surface was encountered. To ensure that an adequate profile of the bedrock surface is properly ascertained on each lot, 3-5 deep test holes should be excavated in the proposed leaching field areas, particularly where bedrock is exposed or encountered at shallow depths. Because the bedrock surface may undulate indiscriminately across a particular lot, the prescribed 4-foot separation distance between the bottom of the leaching trenches and the bedrock surface may not be adequately maintained. The State Public Health Code requires the bottoms of leaching systems to be at least 4 feet above bedrock. However, local ordinances may require greater separating distances. Therefore, a sufficient number of test holes should be excavated in the active and reserve leaching areas for lots characterized by shallow to bedrock conditions. The burden of "proof" is on the applicant to demonstrate that the leaching field area can be improved for on-site sewage disposal, including placing the proper fill material, compacting it and testing it for on-site sewage disposal.

Most of the site (western parts) contains Bernardston soils. These soils typically have a high watertable due to the presence of a shallow (approximately 2 feet in depth) compact soil zone or hardpan. Because of its relatively low permeability, the hardpan perches groundwater during wet times of the year. Groundwater and/or mottling was commonly noted within the hardpan layer and at higher elevations in some holes, indicating a widespread seasonal high watertable condition. The State Public Health Code requires the bottom areas of leaching systems to be at least 18

inches above the maximum groundwater table. Deep test holes indicate that most septic systems must be filled and raised at the most suitable locations on each lot to protect them from the seasonally high watertable condition. Most systems will be large and should be spread out over the contours. Also, consideration should be given to the installation of curtain drains. Curtain drains are located upgradient from the leaching system to intercept the seasonal groundwater table, preventing groundwater from rising up into the leaching system and impairing its hydraulic capacity. Curtain drains may be used in conjunction with building footing drains. Drain outlets should be properly protected (i.e., rip-rapped and located where they do not interfere with septic systems, water supply wells or neighboring properties). The curtain drains could be discharged to the storm drainage system, but it is not known if catch basins are proposed.

The placement of leaching fields on steep slopes should be avoided, particularly in areas that require substantial cuts, (i.e., driveways, roads, etc.). Partially treated septic tank effluent may travel on top of the hardpan or bedrock and bleed out at the cut embankment, resulting in a public health hazard condition. Because the site is characterized by steep slopes and because of Town road and driveway requirements, the potential for substantial cuts is likely in some areas. A minimum setback of 50 feet is recommended for cut areas. However, every effort should be made to increase the separation distance. Theoretically, a 75-foot setback, which is the required separation distances between septic systems and water supply wells (assuming the well yields less than 10 gallons per minute), will ensure that the water quality is properly renovated by the time it reaches the cut. This underscores the need for proper septic system design, installation and maintenance. Other concerns regarding the construction of septic systems on steep slopes in fill or hillsides include:

- 1) The potential for septic tank effluent to flow downhill and break out at the lower end of the fill;
- 2) The potential for heavy equipment to tip over, posing a hazard to operators working on the septic systems; and
- 3) The potential for E&S control problems.

Despite the number of deep test holes excavated on the site to date, the presence of steep slopes and unfavorable subsurface conditions indicate that more testing will be required on some lots, especially those characterized by shallow to bedrock soils. Also, most, if not all, septic systems will need to be engineered. No approval should be granted for the subdivision until the applicant can demonstrate that each of the proposed lots meets the minimum soil standards set forth in Section 19-13-B103e(a)(3) of the State Public Health Code. The process should be a coordinated effort between the design engineer and the Torrington Area Health District.

Portions of Lots L-21-L-23 may drain to a public water supply reservoir, Lakeville Reservoir 1 or 2. Section 19-13-B32, Sanitation of Watersheds, (a-i), addresses the protection of surface and groundwater quality from sewage disposal systems and storm drainage systems in public water supply watersheds (see Appendix A).

The State Public Health Code requires that subsurface sewage disposal systems be separated 50 feet from any open watercourses and 100 feet from public water supply reservoirs. The Public Health Code does not address setbacks from wetlands. The Torrington Area Health District, including the Town of Salisbury, requires a 75-foot setback between septic systems and intermittent and/or permanent streamcourses. A separation of 75 feet is the same distance required of domestic water supply wells yielding under 10 gallons per minute from any portion of a septic system. This is to ensure that the septic tank effluent will be properly renovated by the soil component to meet drinking water standards by the time it reaches the well. Proper design, installation and maintenance of each septic system is paramount. A

75-foot setback between septic systems and wetland boundaries should be adequate for protection of surface water quality on the site, but greater separation distances are desirable, where practicable. Permeability testing of the soil on critical lots (e.g., lots with tributaries to the reservoirs) could be utilized to determine whether or not the effluent will meet drinking water standards by the time it reaches the wetland boundary. The renovation of bacteria, viruses, phosphates and nitrates is especially important.

HYDROLOGY

Surface runoff within the site can be divided almost in half. Due to the site's hydrogeology, groundwater flow generally mimics surface flow. Approximately 129 acres in the western half of the site, which includes most of the lots in the proposed subdivision, drains to the unnamed outlet stream for Maltby Pond, a 6-acre impoundment located in the central parts of the site (see Figure 6). Once it leaves the property, the stream flows into a small unnamed pond in New York State, re-enters Connecticut in a large wetland south of Belgo Hill Road and ultimately flows into Kelsey Brook, a Connecticut/New York streamcourse.

The remaining acreage (approximately 275 acres) drains via intermittent streams, perennial streams or drainageways to Lakeville Reservoir 1 or 2, both of which are active public water supply reservoirs. The principal outlet for Maltby Pond discharges on the west side of pond, but the pond may also drain on the east side via a drainageway to the unnamed, inlet stream for Lakeville Reservoir 2.

Surface waterbodies on the site have not been classified by the DEP. Nevertheless, surface waters that flow to Kelsey Brook (western parts of the site) are considered Class A water resources by default. Class A water resources may be suitable for drinking, recreational or other uses and may be subject to absolute

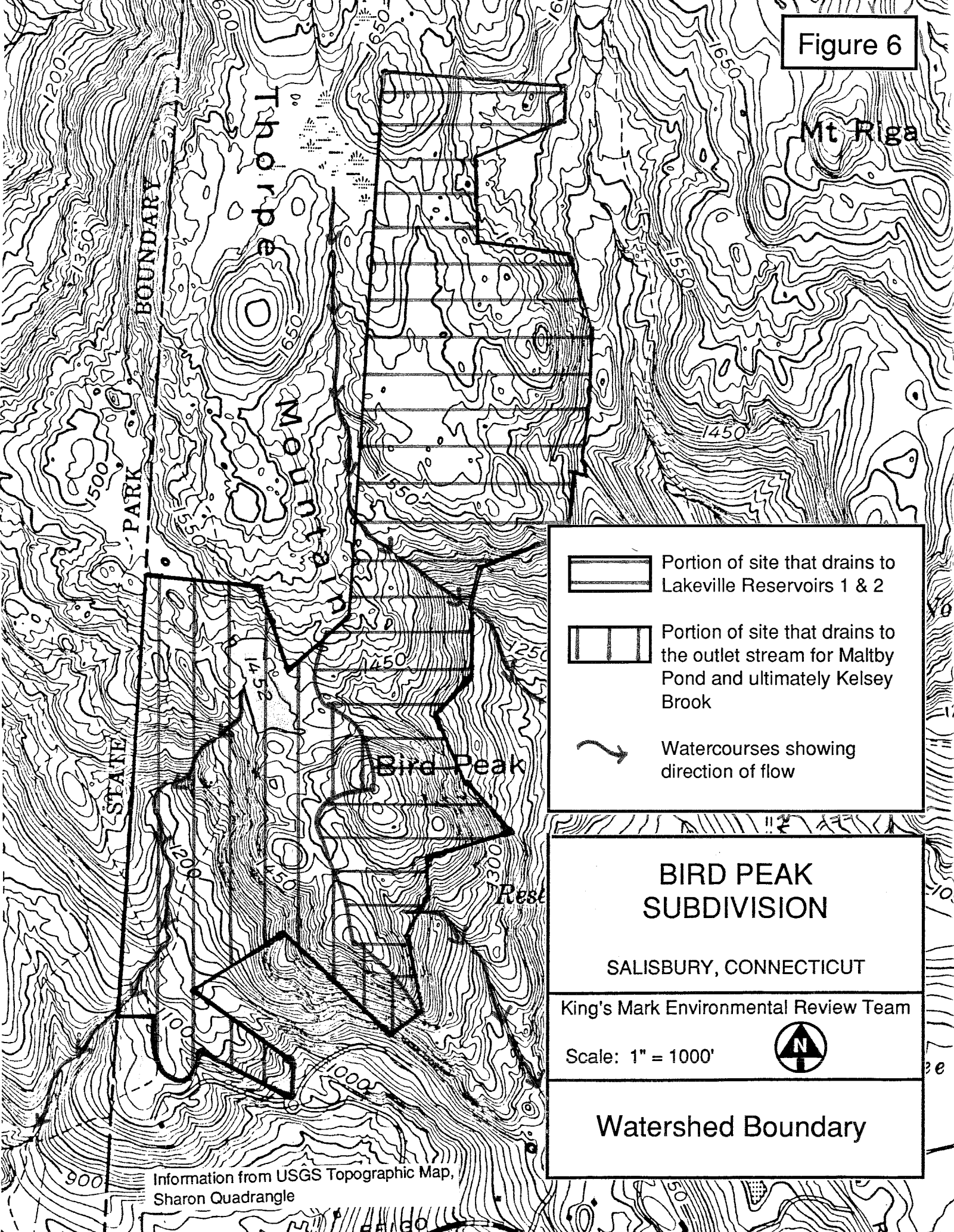
restrictions on the discharge of pollutants, although certain discharges may be allowed. Surface waters that drain to Lakeville Reservoir 1 and 2 (eastern parts of the site) are designated as Class AA water resources which means the land area is located within a public water supply reservoir. Class AA water resources are regulated similarly to Class A water resources.




Subdivision of the property as planned will increase runoff from the site. In order to thoroughly assess the impacts of post-development runoff, the applicant should prepare a stormwater management plan. This information was not available. The plan should include all pre- and post-development runoff calculations as required by Town regulations. The Connecticut Guidelines for Soil Erosion and Sediment Control should be used as a guide.

Once the stormwater management plan has been completed, Town officials should evaluate the effects of post-development runoff on flooding and streambank erosion/surface water degradation. A narrative report, which states the initial conditions and storm frequencies to be analyzed, should accompany the plan. A summary table showing the pre-development, post-development and design system peak discharges for all design frequencies should also be included. An examination of existing and proposed downstream culverts is warranted. Also, if detention basins are required to avoid net increases in peak flows discharging from the site, this information should be included in the stormwater management plan.

Due to the site topography, necessary grading for the new roads, driveways and foundations and till soils that may have a high silt and fine sand content, measures should be taken to minimize the potential adverse environmental impacts to wetlands and/or surface water as a result of erosion and sedimentation. This can be accomplished by producing a comprehensive E&S control plan to be enforced by the Town.

Figure 6




	Portion of site that drains to Lakeville Reservoirs 1 & 2
	Portion of site that drains to the outlet stream for Maltby Pond and ultimately Kelsey Brook
	Watercourses showing direction of flow

**BIRD PEAK
SUBDIVISION**

SALISBURY, CONNECTICUT

King's Mark Environmental Review Team

Scale: 1" = 1000' 

Watershed Boundary

Information from USGS Topographic Map, Sharon Quadrangle

During the construction period, control measures, including silt fences, haybales, temporary/permanent sediment basins which permit settling time for suspended solids, anti-tracking devices and minimizing land disturbance, should be used to minimize the potential for environmental damage to wetlands and surface waters on- and off-site.

The physical condition of the dam impounding Maltby Pond in the central parts is unknown. The DEP Bureau of Water Management Flood Control Section (Dams) should be contacted to determine if the dam is registered and if any information exists regarding its physical condition. The potential impacts to downstream areas, including the proposed subdivision, that would be inundated by a dam break should be determined.

SOIL RESOURCES

The soils within the proposed Bird Peak Subdivision site include Alluvial, Bernardston, Charlton, Hollis, Leicester and Rock Land. These soils are described below:

- 1) Alluvial land (Am) soils are inland wetland soils. Wetness, poor filtration, caving of cut banks and flooding are the major limitations for development.
- 2) Bernardston (Bg) soils are well-drained with a dense layer (hardpan) at approximately 24 inches in depth. This hardpan can cause engineering limitations for, but not limited to, septic systems. Wetness, slow percolation, hardpan, slope, low strength and large stones are the major limitations for development. Cut slopes are likely to have seeps flowing out during wet periods, and subsurface drainage may be required. The soil layers above the hardpan are friable, moderately permeable and have high available moisture capacity.
- 3) Charlton (Ca) soils are deep, well-drained soils. Permeability is moderate to moderately rapid in the surface layer and subsoil. Runoff is a hazard on this soil. Slope is the major limitation for development.

- 4) Hollis (Ho) soils are well-drained or excessively drained, steep and very shallow to shallow over bedrock. Slope and shallow depth to bedrock are the major limitations for development.
- 5) Leicester (Lg) soils are inland wetland soils. Wetness and frost action are the major limitations for development.
- 6) Rock land (Rh) soils occur in areas where exposed bedrock occupies more than 50% of the surface. Slopes are gentle to hilly or steep. Data for development limitations are not available.

Additional information for these soils is available within the Soil Survey for Litchfield County (1970) and from Soil Science and Environmental Services, Cheshire, CT, which conducted on-site field investigations.

The soil limitations do not preclude development. However, they do indicate the need for precise planning and review of proposed project components. In some cases, the cost may greatly exceed the benefits.

Septic system, and in particular septic tank absorption fields, may require precise engineering plans to function properly within the proposed locations. This is particularly important in areas with conditions such as, but not limited to, slopes of 15% and greater, percolation rates exceeding 30 minutes per inch, a seasonal high watertable less than 3 feet below the soil surface, a depth to bedrock less than 72 inches and soils which flood frequently as a result of streams or watercourses overflowing their banks. Frequently is defined as at least once every 2 years. Periodic field inspection and documentation during construction may be necessary to insure compliance and project success.

EROSION AND SEDIMENT CONTROL

The E&S control plan associated with the proposed subdivision is basically adequate. However, additional comments and recommendations include:

- 1) The complete E&S control plan should be incorporated **directly** onto the site plan. The E&S plan for this subdivision is contained within a separate document. Separate documents may not always accompany on-site inspections to monitor compliance of E&S measures.
- 2) Provide **additional** silt fencing at the following locations associated with wetlands or wetland crossings:
 - a) The junction of Indian Orchard and Brook Roads and Lots L-6, L-8, and L-9;
 - b) Indian Orchard Road and Lot L-15; and
 - c) Bird Lake Road and Lots L-24 and L-25.
- 3) Retain and maintain silt fencing adjacent to and within wetlands until all construction activities within these areas are completed and the disturbance has been completely stabilized.
- 4) Indicate **directly** onto the plan items such as, but not limited to:
 - a) Construction entrances;
 - b) Locations of stockpiled topsoil;
 - c) Seeding information such as seed mixture, lime and fertilizer requirements, mulch quantities, mulch techniques and seeding dates;
 - d) Person(s) responsible for implementing and maintaining the E&S plans; and
 - e) E&S control details.
- 5) The E&S control plan shall be consistent with information contained within the Connecticut Guidelines for Soil Erosion and Sediment Control (1985, revision 1988).
- 6) The recommended dates for establishing **permanent** vegetation include:

April 15 through June 15
August 15 through September 15
- 7) The key to successful E&S control is proper installation and maintenance. This is extremely important when considering the existing or potential E&S hazards associated with steep slopes and wetlands protection.

BIOLOGICAL RESOURCES



WETLAND CONSIDERATIONS

Site and Project Description

The 397-acre mountainside site is located on Bird Peak in Salisbury. The site is forested and has several woods roads which have been used in the past during logging activities. Much of the site contains significant slopes greater than 15%. Several watercourses, small wetland pockets and a small lake exist on the site. Most of the drainage from the developed area of the site will flow west into New York State.

Impacts and Recommendations

The proposed roadways will require 2 crossings of a watercourse which runs through the site from north to south. Some minor filling of wetlands will also occur as part of the roadway construction. There do not appear to be any impacts to the small lake. However, inspection of the dam revealed that some repair and maintenance activities may be necessary. The major impacts/concerns associated with the subdivision include the potential for serious erosion and sedimentation problems as well as possible septic system failure. Significant earth moving activities will be required for nearly every facet of development on this site due to the steep slopes and soil characteristics. Therefore, stabilization of the cut and fill areas and maintenance of E&S controls will be crucial in mitigating impacts.

Comments and recommendations include:

- 1) The crossings proposed should not present any significant long-term impacts to the wetlands, provided a proper and well-maintained E&S control plan is implemented. The Commission should consider what types of snow removal techniques will be used (i.e., salt, sand, etc.) and consider restrictions for the types and/or amounts of materials which should be used.
- 2) The applicant proposes to import significant amounts of fill material for the construction of septic systems. The Commission should consider establishing a comprehensive sequencing plan which would specify the quantities of fill to be imported, location of placement or storage, times

when fill may be brought on the site and the type, location and maintenance of E&S controls to be used. All other earth moving activities associated with this subdivision should have similar comprehensive sequencing plans.

- 3) The Commission should carefully examine the stormwater management system proposed for the site. All discharge structures should use some form of energy dissipater in addition to riprap to reduce and control velocities of collected stormwater. Additionally, a system with a greater number of discharge points may reduce the volumes of collected water at any 1 discharge point and will spread discharged water over a broader area of the natural slope. The Commission should have an engineer examine any flow increases which may be proposed within the existing watercourses and the potential for increased erosion and sedimentation within the stream corridor.
- 4) Deed restrictions or conservation easements should be placed on all lots to limit and control the removal of vegetation and landscaping activities. Restricting these activities is essential for aesthetics and controlling slope stability.
- 5) The site has obvious constraints due to the steep slopes and shallow soils. Although the applicant proposes a relatively small number of building lots with respect to the overall size of the site, alternative designs and densities should be considered.

WILDLIFE CONSIDERATIONS

Description of Area/Habitats

The 397-acre site includes the top of Bird Peak and its associated ridges. The majority of the site is covered by mixed hardwood forest, but there are some dense stands of hemlock. The site also contains several brooks, wetlands and a small man-made lake. The site contains very steep terrain, including rocky ridges and outcroppings characteristic of the very northwest corner of Connecticut at higher elevations.

Wildlife habitat is the complex of vegetative and physical characteristics that provide for all the requirements of wildlife, including food, shelter, resting, nesting and escape cover, water and space.

Generally, the greater the habitat diversity and degree of interspersed of various habitat types, the greater the variety of wildlife there is using an area. Other factors play important roles in determining the value or quality of an area, including location, degree of isolation, diversity within a habitat type and quality and productivity of the habitats, etc.

The site provides good to excellent forest habitat which is greatly enhanced by the presence of stream, wetland and open water habitat. The numerous rocky outcroppings and ridgetops support vegetation and animals not found in other areas. The site is fairly undisturbed or isolated by Connecticut standards and is contiguous with large expanses of forestland. In addition, the site is located in an area of the State where development has been minimal, and the surrounding land offers a variety of habitats, increasing its value to wildlife, especially for species requiring some degree of isolation from people.

Large acreages of unbroken forest habitat are very important for some species, particularly certain types of birds known as "interior species." These birds breed and nest in the interior of forest areas and may require tracts of forest as large as 200 acres. Large blocks of undisturbed and unbroken forestland are disappearing in Connecticut because of development, and these types of areas are important to preserve.

A wide variety of wildlife species is expected to utilize the site to serve all their needs, while many other species find it a place to meet some requirements. These species include deer, ruffed grouse, weasel, raccoon, beaver, otter, fox, coyote, bobcat, hawks, owls, warblers, sparrows, juncos, chickadees, reptiles and amphibians. Appendix B is a complete list of the potential species that could occur on the site.

Forestland: A major portion of the site is covered by mixed hardwood forest with scattered stands of hemlock and some scattered white pine (deciduous woodland and coniferous woodland). Much of the forest is dominated by oaks, hickory and

hemlock, while other areas are dominated by beech, birch and maple. White pine, black, white and yellow birch, ash, sugar and red maple are also found on the site.

In some areas, there is a fairly thick understory consisting of winterberry, holly, sugar maple, oak, birch, blueberry, moose maple and laurel. In some areas, the laurel dominates the understory, creating dense cover. These areas offer cover to some species of wildlife, but their usefulness is much more limited than softwood or evergreen cover.

The areas of hemlock increase diversity within the hardwood forest and provide important year-round cover for species such as turkey, grouse and various songbirds. Stands of hemlocks are preferred nesting sites for some species, including the veery and junco. The winged seeds produced by the hemlock are readily sought by red squirrel, pine siskin and chickadees.

Some of the ridgetops are characterized by rocky outcroppings dominated by sparse grass and an overstory of oak trees. These grassy areas with an open understory are preferred brood areas for turkeys. The ridgetops at higher elevations have less grass and more lichens and moss covering the rocks. Bear or scrub oak, stunted pitch pine, sugar maple, white birch and blueberry dominate these areas. Ridgetop-type habitat is easily degraded through overuse by people. The plant life must grow under very harsh conditions and is not very resilient to disturbance. These isolated rocky ridgetops with their rocky outcroppings can provide nest sites for birds such as the raven whose southern range is just beginning to extend into northwest Connecticut. Ridgetops also function as travel corridors for wildlife.

The snag trees (dead trees) are a source of insects which serve as food for many wildlife species, including woodpeckers and chickadees. Den trees (trees with cavities) can serve as a nesting sites for birds such as owls and swallows and denning places for mammals such as squirrels and raccoons.

Wetlands: Because wetlands increase the habitat diversity of an area and offer a variety of food and cover to wildlife, they are important areas to consider for protection. Acre for acre, wetlands and their associated riparian zones exceed all other land types in wildlife productivity. In addition to their value as wildlife habitat, wetlands serve other valuable functions, including water recharge, sediment filtering, flood storage, etc. For these reasons, the development of, filling in and/or crossing of wetlands should be avoided or limited whenever possible.

The largest area of wetland on the site is the beaver flowage area, a forested area currently dammed by beaver, according to the landowner. This area is relatively isolated and is located in the northern part of the property. Beaver flowages (palustrine forested wetland) typically offer a variety of habitat for a number of species, including otter, muskrat, waterfowl, wading birds, brown creeper, swallows and woodpeckers.

The brooks on the site are characterized by rock, ledge and gravel substrate and are fast moving (riverine upper perennial wetland) with the exception of the brook that is dammed by beaver. In some areas, the brooks are well-shaded with hemlocks and hardwoods. These rocky fast moving streams located in forestland provide habitat for a variety of species. The spring salamander, a relatively uncommon amphibian because its range just extends into this area of the State, is known to inhabit these types of streams. Various birds nest in the thick growth along the streams.

Streams can act as corridors for wildlife to travel within the site and to and from the site. Streams are often easier to travel along, especially in the winter. Streams can also offer a variety of food items such as fish and various invertebrates. Many species of wildlife utilize some or all of these wetland/stream corridors, including mink, otter, beaver, fox and coyote.

The man-made lake (lacustrine open water) offers open water habitat for a variety of species to utilize. The lake is an area for some reptiles and amphibians to breed in and perhaps lay eggs in. For a few waterfowl, the lake is a good place to stopover during migration and may even offer nesting sites, although cover is limited. Mammals such as the otter and raccoon utilize ponds and streams as places to hunt for fish and invertebrates. Wading birds such as the heron might also use this area to feed in.

These wetland areas and riparian zones are important areas of habitat for a variety of species because they provide a diversity of vegetation which offers a variety of food and cover.

Wildlife Habitat/Recommendations

As with any development, the impact on wildlife habitat will be negative. The impact at this site will probably be fairly marked, because homes and disturbance will be increased in an area that is "isolated" in Connecticut terms. Portions of the site will be broken-up and lost in the construction of homes, roads and walkways. Additionally, habitat will be lost where cover is cleared for lawns and landscaping. Another impact is the increased human presence, vehicular traffic and a number of free roaming dogs and cats. This could drive the less tolerant species from the site, even in areas where there has been no physical change. The value of the area for habitat will correspondingly decrease as the amount of development in the area increases.

Certain species which are adaptable man's activities may increase, and associated nuisances may occur. Typical species which can become a nuisance include pigeons, starlings and raccoons. Species sensitive to man's presence or changes made at the site will either move away or perish. Deer will probably be a common occurrence in the subdivision and in the backyards of residents. New residents should understand that successfully growing gardens or certain

ornamental shrubs will probably require repellents which have only limited effectiveness and fencing which can be unsightly.

Wetlands: Because wetlands are important to wildlife and because wetlands are limited in quantity and continue to dwindle on an almost daily basis in the State of Connecticut, it is always preferable to chose the option or path of development that least impacts wetlands. The value of wetlands increases as the quantity diminishes. A buffer of at least 100 feet, where possible, is recommended around any wetland to preserve its value and use by wildlife.

Many of the houselots have the brook running through them. There should be a buffer of at least 100 feet between the brook and any development, including lawns, to preserve wildlife habitat values. Ideally, all wetlands (riparian zones) now encompassed in the houselots should be part of the open space or under deed restriction to prevent their degradation. The deed restriction or covenant should prohibit any use of or change to any wetlands/riparian zone within houselots.

If wetlands must be crossed, large box culverts or bridges are preferred to round aluminum or cement culverts. This preserves the substrate of the brook and allows for natural travel of fish and invertebrates, even during low water flows. Most species of wildlife using brooks and wetlands as habitat and to travel along will not be greatly impeded by a large cement box culvert or bridge through which they can see daylight on the other side. A small round or squash culvert represents a small, usually dark and restricted area that the animal will have to enter. In this situation, some species might prefer to cross up and over the road.

Ridgetops: The plant communities found on the ridgetops, which provide habitat for some species of wildlife, are fairly fragile. This plant life grows under harsh conditions, and the soil, if there is any, is usually thin and held in place only by the plants. These areas can be easily degraded by overuse. Ridgetop habitat over

1,200 feet is limited in the State and should be protected from overuse such as off trail hiking, horseback riding and encroachment from development.

Design of the Development: The least impact to wildlife and wildlife habitat occurs when the least amount of land is broken-up with homes, roads, driveways and lawns. This can be accomplished by clustering the homes close to the development that has already occurred on Indian Orchard Road. This will leave a great portion of the site undeveloped and undisturbed, thus benefiting wildlife habitat.

As proposed, most of the development will be confined to the southwestern portion of the site on approximately 132 acres of land. With the exception of Lot L-23, lots range in size from 2 acres to 29 acres. However, 17 lots are 4 acres or less. Small houselots (less than 8-10 acres) augment the negative impacts of development on wildlife habitat. The impact to wildlife habitat on the 132 acres will be significant. A portion of undisturbed forestland will be broken-up with homes, driveways, roads and increased human disturbance. However, because only 1 or 2 houselots have been proposed for the remaining 243 acres, some of the site's value to wildlife will be preserved. If Lot L-23 were re-subdivided into smaller lots, the negative impacts to wildlife habitat will increase. If the house or houses were set further into the interior of Lot L-23, the impact to wildlife habitat would be greater, because the disturbance factor would be greater. Some deed restriction should be placed on Lot L-23 to prevent future subdivision and placement of the house in the interior of the houselot.

Conventional development with small houselots does not lend itself to wildlife management. The best opportunity for control of deer is through hunting which is impractical with small houselots because shooting near houses is restricted. Hunting could be permitted in larger open space areas.

Open Space Areas: Whatever type or combination of types of areas are set aside, setting aside an "island of open space" surrounded by development is the least desirable for wildlife. Open space areas should be connected and, ideally, should be connected with open space areas outside of the development site. The open space area should have natural travel pathways for wildlife (i.e., streams, valleys and ridgetops) to enter and exit to other open space areas outside the development. The open space area is more valuable to wildlife if not traversed by roads which may impede the movement of wildlife. Setting aside a combination of habitat types in conjunction with wetlands is desirable.

In a small but heavily developed State like Connecticut where available habitat continues to decline on a daily basis, it is critical to maintain and enhance, where possible, existing wildlife habitat.

In planning and constructing a development, there are measures that should be considered to minimize adverse impacts on wildlife (see Appendix C). Despite of these measures, wildlife habitat will increasingly be adversely impacted as the amount of development increases on a site.

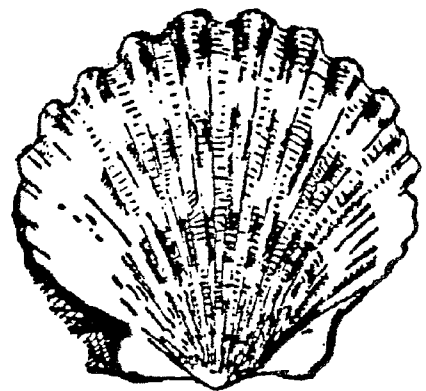
THREATENED AND ENDANGERED PLANT AND ANIMAL SPECIES

According to the Natural Diversity Data Base information, there is a population of Potentilla tridentata (Three-toothed Cinquefoil) on the summit of Bird Peak. This species is proposed as Threatened in Connecticut according to criteria established in Connecticut PA 89-224 "An Act Establishing a Program for the Protection of Endangered and Threatened Species" (see Appendix E).

Natural Diversity Data Base information includes all information regarding critical biologic resources available at the time of the request. This information is a compilation of data collected over the years by the Natural Resources Center's

Geologic and Natural History Survey and cooperating units of DEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultation with the Data Base should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of and locations of habitats of concern, as well as enhance existing data. New information is incorporated into the Data Base as it becomes available.

ARCHAEOLOGICAL RESOURCES



ARCHAEOLOGICAL RESOURCES

More than 10,000 years ago, Algonkian Indian peoples began to inhabit the Housatonic River Valley and its tributaries in northwestern Connecticut. Although the prehistoric archaeological record of Salisbury is not well documented, isolated surface finds and local collections demonstrate that Native Americans settled there for thousands of years before the seventeenth century began.

Upland areas in Salisbury, in addition to the river corridor, were used for occupation sites. Archaeologically sensitive spaces include the shores of large freshwater lakes, landforms around wetlands and the valleys of Salmon Creek and Moore Brook. Although there are no known sites in the development area, the knolls adjacent to the small wetland on Thorpe Mountain may contain archaeological resources. These sites are expected to be small and would not be disturbed because they are located on lands protected by proposed conservation easements.

The steep slopes between the 1250 and 1450 contour intervals, characteristic of the southern part of the development area, may also be archaeologically sensitive. Rockshelter sites beneath overhangs or adjacent to bedrock outcrops may be present on Lots L-12-L-20. Similar sites are known from the steep slopes which border the valley of Salmon Creek east of the center village of Salisbury. If such sites exist on Bird Peak, they will be disturbed as roads, septic systems and houses are built for the development.

Initial archaeological surveys of the southern section of the proposed subdivision should be undertaken if the development is approved. The Office of State Archaeology (State Museum of Natural History, University of Connecticut) can provide technical assistance to local agencies and developers interested in initiating a study.

LAND USE AND PLANNING CONSIDERATIONS



PLANNING CONSIDERATIONS

Surrounding Land Use and Local Zoning Considerations

The area surrounding the site is characterized by single-family homes at a rural residential density. The site is accessed by Indian Orchard Road, a short road containing houses on fairly large lots, fields and woodlands.

The site is wooded and contains small streams and steep slopes. The site is considered remote because there are no adjacent homes or other structures. Adjacent property is owned by a camp and used for hiking, overnight camping and swimming in the summer. Lands to the east are owned by the BHC and form part of the public water supply watershed for the Lakeville Reservoir which serves more than half of all Town residents.

A small dam exists on the western shore of Maltby Pond. There is concern for the public health and safety of any homes and roads that may be downgradient in the event of a dam failure.

The site is located in the RR-1 zone, requiring 2-acre building lots. A small portion of the site may be located in the Mount Riga Zone, requiring 3-acre building lots (scale of the map made this determination difficult).

Section 3.4 of the Salisbury Subdivision Regulations states that lots shall be of such character that they can be used for building purposes without endangering the health and safety of the public or the occupants.

Subdivision requirements state that new dead end streets shall not be of "excessive length" and should not exceed a 10% grade. The Commission members must determine if the length of the proposed road is excessive. The grade requirement may not be met in all portions of the proposed plan. The steepness and remoteness of the site emphasize the need for caution in setting a road length. Liability for emergency rescue and fire protection will rest with the Town. Although

the proposed subdivision may be contemplated as a "seasonal" or "second-home" retreat, the Town cannot prevent occupancy year-round. Under wet or icy conditions, a long road with grades exceeding 10% raises public safety concerns.

Open Space Provisions

Section 3.6 of the Salisbury Subdivision Regulations enable Commission members to require the allocation of suitable areas for parks and playgrounds to be shown on the plan and dedicated for public use or the common use of the future residents. Open space with lake access, enabling swimming and non-motorized boating, is desirable. The plan shows an open space area which has lake access.

State and Regional Plans

The State Policies Plan for the Conservation and Development of Connecticut, 1987-1992 designates the site as Rural Land and Conservation Area. According to the State Plan, Rural Land has "no outstanding single character which warrants inclusion in either a development or conservation classification." The State Action Strategy for Rural Land areas includes:

"Avoiding support of structural development forms and intensities which exceed on-site carrying capacity for water supply and sewage disposal on a permanent basis, which are inconsistent with open rural character or conservation values of adjacent areas and which are more appropriately located in Rural Community Centers."

The State Plan designation of Conservation Area is due to the presence of existing and potential future public water supply sources and to the presence of inland wetlands and ridgelines (see Water Supply section for water supply watershed and water quality goals). The State goal for Class AA surface water and GAA groundwater resources is to preserve their quality for use as potential public water supplies. A portion of the site drains into the existing public water supply of the BHC.

The DEP recommended minimum lot size in public water supply watersheds is 2 acres for homes served by individual on-site wells and septic disposal systems. Since the site is within the RR-1 zone, the 2-acre minimum lot size has already been addressed by the developer. However, lots smaller than 8-10 acres in size may have a negative effect on wildlife habitat (see Wildlife Considerations section).

The Northwestern Connecticut Regional Plan of Development Physical Resources Map identifies portions of the site as having shallow to bedrock soils and/or slopes greater than 15%. The site is considered a Rural Area, because it is not within a Village. The Plan's goal for such areas is:

"Rural Area Goal: to preserve and conserve areas within the region that are of environmental, historic, archaeologic and cultural significance and to encourage development occurring outside of village centers to be environmentally sound and consistent with the region's rural landscape."
(p. 18)

The proposed subdivision will place 28 homes on a previously uninhabited and undeveloped mountain slope. Although approximately 65% of the site will be left undeveloped, the proposed subdivision will change the area's character. The challenge to the Town and the developer is allowing orderly development that will protect the public health, safety and welfare, considering the site's steep slopes and general remoteness, public water supply protection concerns and aspects of the dam.

Site Planning Alternatives

Clustering homes or placing homes closer together on the site's most suitable portions is a planning alternative that could be considered for this site. In theory, clustering allows for protection of areas unsuitable for development or environmentally sensitive areas.

To apply cluster housing on this site, the following is necessary:

- 1) Amend the Town Regulations to allow clustering without public sewer or water.
- 2) Require a 2-acre lot size for lots draining into the Lakeville Reservoirs.
- 3) Avoid slopes over 10% to the fullest extent possible for roads and septic fields (see Appendix F).
- 4) Design lot size and configuration to meet the Town's 150-foot setback from watercourses wherever possible (see Appendix G).

The density of the proposed subdivision must be carefully evaluated. The proposed subdivision could be re-designed to accommodate 28 lots in a clustered plan. Major changes to Town regulations may not be timely for a single project. The Town may not wish to "set a precedent" on this site that may cause problems if applied to other subdivision sites.

TRAFFIC CONSIDERATIONS

Traffic generated by the proposed subdivision should not adversely impact the existing roadway system. The total trips generated will be approximately 225, with approximately 50 trips occurring during the peak hours. The rural nature of the subdivision may reduce the total trip making. If the Town requires a detailed traffic analysis, the applicant should provide it.

The roadway system in the proposed subdivision will encounter steep topography, rock that will require excavation and soils that, in cuts, will require stabilization.

- 1) Maximum grades should not exceed 10%, except for short stretches (less than 1,000 feet) with a maximum grade of 12%, to facilitate the safe movement of emergency and fuel delivery vehicles. Side slopes of embankments may be reduced by using rock fill, retaining walls or other accepted embankment design techniques.

- 2) Rock excavation for roadway should not present a significant concern because the excavated rock can be utilized on-site. If the quantity of excavated rock is over 15,000 cubic yards, crushing on-site may be considered with the material utilized on-site for structural or specification material, such as sub-base or foundation backfill.
- 3) Underdrains will be necessary in both earth and rock cuts to ensure the longevity of the pavement.
- 4) Driveway curb cuts for steeper driveways should have a wider than normal radius to provide for safe ingress and egress.

APPENDICIES



Appendix A: Sanitation of Watersheds

SANITATION OF WATERSHEDS

Sec. 19-13-B32. Sanitation of Watersheds. Unless specifically limited, the following regulations apply to land and watercourses tributary to a public water supply including both surface and ground water sources.

- (a) As used in this section, "sewage" shall have the meaning found in section 19-13-B20(a) of the public health code: "Toxic metals" shall be arsenic, barium, cadmium, chromium, lead, mercury and silver and the salts thereof; "high water mark" shall be the upper limit of any land area which water may cover, either standing or flowing, at any time during the year and "watershed" shall mean land which drains by natural or man-made causes to a public drinking water supply intake.
- (b) No sewage disposal system, cesspool, privy or other place for the deposit or storage of sewage shall be located within one hundred feet of the high water mark of any reservoir or within fifty feet of the high water mark of any stream, brook, or watercourse, flowing into any reservoir for drinking purposes.
- (c) No sewage disposal system, cesspool, privy or other place for the deposit or storage of sewage shall be located on any watershed, unless such facility is so constructed that no portion of the contents can escape or be washed into the stream or reservoir.
- (d) No sewage shall be discharged on the surface of the ground on any watershed.
- (e) No stable, pigpen, chicken house or other structure where the excrement of animals or fowls is allowed to accumulate shall be located within one hundred feet of the high water mark of a reservoir or within fifty feet of the high water mark of any watercourse as above mentioned, and no such structure shall be located on any watershed unless provision is made in a manner acceptable to the commissioner of health services for preventing manure or other polluting materials from flowing or being washed into such waters.
- (f) No toxic metals, gasoline, oil or any pesticide shall be disposed of as a waste into any watercourse tributary to a public drinking water supply or to any ground water identified as supplying a public water supply well.
- (g) Where fertilizer is identified as a significant contributing factor to nitrate nitrogen occurring in excess of 8 mg/l in a public water supply, fertilizer application shall be made only under current guidelines established by the commissioner of health in cooperation with the state commissioner of

agriculture, the college of agriculture of the University of Connecticut and the Connecticut agricultural experiment station in order to prevent exceeding the maximum allowable limit in public drinking water of 10.0 mg/l for nitrite plus nitrate nitrogen.

- (h) Where sodium occurs in excess of 15 mg/l in a public drinking water supply, no sodium chloride shall be used for maintenance of roads, driveways or parking areas draining to that water supply except under application rates approved by the commissioner of health, designed to prevent the sodium content of the public drinking water from exceeding 20 mg/l.
- (i) The design of storm water drainage facilities shall be such as to minimize soil erosion and maximize absorption of pollutants by the soil. Storm water drain pipes, except for crossing culverts, shall terminate at least one hundred feet from the edge of an established watercourse unless such termination is impractical, the discharge arrangement is so constructed as to dissipate the flow energy in a way that will minimize the possibility of soil erosion, and the commissioner of health finds that a discharge at a lesser distance is advantageous to stream quality. Special precautions shall be taken to protect stream quality during construction.

Appendix B: Species List by Habitat for Litchfield County

CONNECTICUT SPECIES DATABASE
WILDLIFE BUREAU
WESTERN DISTRICT HEADQUARTERS

SPECIES LIST BY HABITAT FOR LITCHFIELD COUNTY

SPECIES	D	C	U	R	L	P
	W	W	P	W	W	O
Marbled Salamander	X					
Jefferson Salamander	X					X
Blue-spotted Salamander			X			X
Spotted Salamander	X		X			X
Red-spotted Newt	X					
Northern Dusky Salamander			X			X
Redback Salamander		X				
Slimy Salamander	X	X				
Four-toed Salamander						X
Northern Spring Salamander	X	X	X			X
Northern Two-lined Salamander	X	X				X
Eastern Spadefoot	X	X				
American Toad	X	X				
Fowler's Toad	X	X				X
Northern Spring Peeper	X	X	X			X
Wood Frog	X	X				X
Northern Leopard Frog			X			X
Pickerel Frog			X			
Common Snapping Turtle						X
Stinkpot						X
Spotted Turtle			X	X		
Wood Turtle	X					X
Eastern Box Turtle	X	X				X
Five-lined Skink	X					
Northern Water Snake			X			
Northern Brown Snake	X	X	X			X
Northern Redbelly Snake	X	X				X
Eastern Garter Snake	X	X	X			X
Eastern Ribbon Snake	X	X	X			X
Eastern Hognose Snake	X	X				X
Northern Ringneck Snake	X	X				
Eastern Worm Snake	X	X	X			X
Northern Black Racer	X	X				X
Eastern Smooth Green Snake	X					X
Black Rat Snake	X					X
Eastern Milksnake	X	X				X

SPECIES	D	C	R	L	P
	W	W	U	M	F
Northern Copperhead	X				X
Timber Rattlesnake	X	X			X
Pied-billed Grebe				X	
American Bittern				X	
Least Bittern				X	
Great Blue Heron			X		
Green-backed Heron (Green)			X	X	X
Black-crowned Night Heron			X	X	X
Canada Goose				X	
Wood Duck			X	X	X
American Black Duck			X	X	X
Mallard			X	X	X
Blue Winged Teal				X	
Common Merganser			X		
Hooded Merganser				X	X
Turkey Vulture	X		X		X
Osprey				X	
Northern Harrier (Marsh Hawk)			X	X	X
Sharp-shinned Hawk	X	X			
Cooper's Hawk	X				X
Goshawk	X	X			
Red-shouldered Hawk	X				X
Broad-winged Hawk	X	X			
Red-tailed Hawk	X	X			X
Ruffed Grouse	X				
Common Moorhen (Common Gallinule)			X		
Herring Gull				X	
Mourning Dove	X	X			
Black-billed Cuckoo	X	X			
Yellow-billed Cuckoo	X	X			X
Screech Owl	X	X			
Great Horned Owl	X	X			X
Barred Owl	X	X			X
Long-eared Owl	X	X			X
Northern Saw-whet Owl	X	X			X
Whip-poor-will	X				
Ruby-throated Hummingbird					X
Belted Kingfisher				X	X
Red-headed Woodpecker	X				X
Downy Woodpecker					X
Hairy Woodpecker	X	X			X
Northern Flicker	X	X			
Pileated Woodpecker	X	X			X

SPECIES	D	C	R	L	P
	W	W	U	M	F
Wood Pewee	X				
Least Flycatcher	X				
Eastern Phoebe	X	X			
Great Crested Flycatcher	X				X
Tree Swallow					X
Blue Jay	X	X			
Common Crow	X	X			
Common Raven			X		
Black-capped Chickadee	X	X			X
Tufted Titmouse	X				X
Red-breasted Nuthatch		X			
White-breasted Nuthatch	X				
Brown Creeper	X	X			X
House Wren					X
Winter Wren		X			X
Blue-gray Gnatcatcher	X		X		X
Veery	X				X
Swainson's Thrush	X	X			
Hermit Thrush		X			X
Wood Thrush	X				X
American Robin	X				
Golden-crowned Kinglet		X			
Cedar Waxwing	X	X			X
Solitary Vireo		X			
Yellow Throated Vireo	X		X		X
Warbling Vireo	X				
Red-eyed Vireo	X				
Golden-winged Warbler	X				
Nashville Warbler	X				X
Yellow Warbler			X		
Magnolia Warbler		X			
Black-throated Blue Warbler	X				
Yellow-rumped Warbler (Myrtle)		X			
Black-throated Green Warbler		X			
Blackburnian Warbler	X	X			X
Pine Warbler		X			
Cerulean Warbler	X		X		
Black-and-white Warbler	X				
American Redstart	X		X		
Worm-eating Warbler	X				
Ovenbird	X	X			
Northern Waterthrush					X
Louisiana Waterthrush			X		X

SPECIES	D	C	R	L	P
	W	W	U	M	F
Common Yellowthroat			X		
Canada Warbler	X	X	X		X
Scarlet Tanager	X				X
Rose-breasted Grosbeak			X		
Indigo Bunting			X		
Northern Junco		X	X		
Brown-headed Cowbird	X	X			
Northern Oriole (Baltimore)			X		
Purple Finch		X			
Pine Siskin		X			
Evening Grosbeak		X			
Virginia Opossum	X		X		X
Masked Shrew	X	X			X
Water Shrew			X		X
Smoky Shrew	X		X		
Long-tailed Shrew	X	X			
Short-tailed Shrew	X	X	X		
Hairy-tailed Mole	X				
Star-nosed Mole			X		
Snowshoe Hare	X	X			
Little Brown Myotis			X		X
Silver-haired Bat	X	X			X
Eastern Pipistrelle	X	X	X		X
Red Bat	X	X		X	
Hoary Bat	X	X		X	
Eastern Cottontail	X	X			X
New England Cottontail	X	X			X
Grey Squirrel	X				
Red Squirrel	X	X			
Southern Flying Squirrel	X				
Beaver			X		
Deer Mouse		X			
White-footed Mouse	X	X	X		
Boreal Red-backed Mouse	X	X			
Meadow Vole			X		X
Woodland Vole	X				
Southern Bog Lemming	X				
Woodland Jumping Mouse	X	X	X		
Porcupine	X	X			
Gray Fox	X				X
Black Bear	X	X			X
Raccoon			X		
Long-tailed Weasel			X		

SPECIES	D	C	R	L	P
	W	W	U	M	F
Mink			X		X
Fisher	X	X			X
River Otter			X		X
Bobcat	X	X			X
White-tailed Deer	X	X			X

Habitat selections for Litchfield County

DW	Deciduous Woodland
CW	Coniferous Woodland
RUP	Riverine Upper Perennial Wetland
LMW	Lacustrine Limnetic Wetland
PFO	Palustrine Forested Wetland

Appendix C: Suggestions for Maintaining Wildlife Requirements

SUGGESTIONS FOR MAINTAINING WILDLIFE REQUIREMENTS

- 1) Maintain a 100-foot (minimum) wide buffer zone of natural vegetation around all wetland/riparian areas to filter and trap silt and sediments and to provide some habitat for wildlife.
- 2) Utilize natural landscaping techniques (avoiding lawn and chemical runoff) to lessen acreage of habitat lost and possible wetland contamination.
- 3) Stonewalls, shrubs and trees should be maintained along field borders.
- 4) Early successional stage vegetation (i.e., field) is an important habitat type and should be maintained if possible.
- 5) During land clearing, care should be taken to maintain certain forest wildlife requirements:
 - a) Encourage mast producing trees (i.e., oak, hickory, beech). A minimum of 5 oaks/acre, 14 inches dbh or greater, should remain.
 - b) Leave 5 to 7 snag/den trees per acre because they are used by birds and mammals for nesting, roosting and feeding.
 - c) Exceptionally tall trees, used by raptors as perching and nesting sites, should be encouraged.
 - d) Brush debris from tree clearing should be piled to provide cover for small mammals, birds, amphibians and reptiles.
 - e) Shrubs, vines and trees which produce fruit should be encouraged (or can be planted as part of the landscaping in conjunction with the development), especially those that produce fruit which persists through the winter (winterberry). See Appendix D for a list of suggested shrub and tree species that can be encouraged and/or planted to benefit wildlife.

Appendix D: Suitable Planting Materials for Wildlife Food and Cover

SUITABLE PLANTING MATERIALS FOR WILDLIFE FOOD AND COVER

Herbaceous/Vines	Shrubs	Small Trees
Panicgrass	Sumac	Hawthorn
Timothy	Dogwood	Cherry
Trumpet creeper	Elderberry	Serviceberry
Grape	Winterberry	Cedar
Birdsfoot trefoil	Autumn olive	Crabapple
Virginia creeper	Blackberry	
Switchgrass	Raspberry	
Lespedeza	Honeysuckle	
Bittersweet	Cranberrybush	
Boston ivy		

Appendix E: An Act Establishing a Program for the Protection of Endangered and Threatened Species

Substitute House Bill No. 7136

PUBLIC ACT NO. 89-224

AN ACT ESTABLISHING A PROGRAM FOR THE PROTECTION OF ENDANGERED AND THREATENED SPECIES.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. (NEW) The general assembly finds that certain species of wildlife and plants have been rendered extinct as a consequence of man's activities and that other species of wildlife and plants are in danger of or threatened with extinction or have been otherwise reduced or may become extinct or reduced because of destruction, modification or severe curtailment of their habitats, exploitation for commercial, scientific, educational, or private use or because of disease, predation or other factors; that such species are of ecological, scientific, educational, historical, economic, recreational and aesthetic value to the people of the state, and that the conservation, protection and enhancement of such species and their habitats is of state-wide concern. Therefore the general assembly declares it is a policy of the state to conserve, protect, restore and enhance any endangered or threatened species and essential habitat.

Sec. 2. (NEW) As used in this act:

(1) "Department" means the department of environmental protection;

(2) "Conserve" and "conservation" mean to use all methods and procedures necessary to maintain or increase the populations of any endangered or threatened species to the point at which the provisions of this act are no longer necessary, including, but not limited to, all activities associated with resources management, such as research, census, monitoring, regulation and law enforcement, habitat acquisition, restoration and maintenance, propagation, live trapping, transplantation and regulated taking;

(3) "Wildlife" means all species of invertebrates, fish, amphibians, reptiles, birds and mammals which are wild by nature and parts thereof;

(4) "Plants" means any member of the plant kingdom and parts thereof;

Substitute House Bill No. 7136

(5) "Native" means any species indigenous to this state;

(6) "Species" means any species, subspecies, or variety of animal or plant, and includes any distinct population segment of any animal or plant;

(7) "Endangered species" means any native species documented by biological research and inventory to be in danger of extirpation throughout all or a significant portion of its range within the state and to have no more than five occurrences in the state, and any species determined to be an "endangered species" pursuant to the federal Endangered Species Act;

(8) "Threatened species" means any native species documented by biological research and inventory to be likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range within the state and to have no more than nine occurrences in the state, and any species determined to be a "threatened species" pursuant to the federal Endangered Species Act, except for such species determined to be endangered by the commissioner in accordance with section 4 of this act;

(9) "Species of special concern" means any native plant species or any native nonharvested wildlife species documented by scientific research and inventory to have a naturally restricted range or habitat in the state, to be at a low population level, to be in such high demand by man that its unregulated taking would be detrimental to the conservation of its populations or has been extirpated from the state;

(10) "Endangered Species Act" means the Endangered Species Act of 1973, Public Law 93-205, as amended from time to time;

(11) "Take" or "taking" mean to capture, collect, destroy, harm, hunt, kill, pursue, shoot, trap, snare, net, possess, transport, remove, sell or offer for sale, export or import or to attempt to engage in any such conduct or any act of assistance to any other person in taking or attempting to take such native wildlife and native plants whether or not such act results in capture or collection;

(12) "Essential habitat" means the geographic area which contains those physical or biological features which are identifiable and have been demonstrated as being decisive to the continued

Substitute House Bill No. 7136

existence of any endangered or threatened species and includes, but is not limited to, significant areas used for courtship, mating, and other reproductive activities, rearing of young, feeding and shelter of endangered and threatened species;

(13) "Destruction or adverse modification of essential habitat" means any activity that significantly alters, pollutes, impairs, degrades, damages, destroys or otherwise reduces the ability of the habitat to sustain populations of endangered or threatened species;

(14) "Threaten the continued existence" means to engage in any action that reduces appreciably the likelihood of the survival and recovery of an endangered or threatened species in the wild by reducing the reproduction, numbers, or distribution of such species;

(15) "Occurrence" means a population of a species breeding and existing within the same ecological community and capable or potentially capable of interbreeding with other members of that species within that community.

Sec. 3. (NEW) There is established a program for the protection of endangered and threatened species. The commissioner may conduct investigations of wildlife and plants in order to develop information relating to population, distribution, habitat needs, limiting factors, essential habitats, and other biological and ecological data to determine conservation and management measures necessary for their continued ability to sustain themselves successfully.

Sec. 4. (NEW) (a) The commissioner shall adopt regulations, in accordance with the provisions of chapter 54 of the general statutes, establishing procedures for determining whether any native species is endangered, threatened or of special concern. In making such determination, the commissioner shall consider: (1) The destruction or threatened destruction, modification or curtailment of the habitat of the species; (2) overutilization of the species for commercial, recreational, scientific, educational or private purposes; (3) disease, predation or competition affecting the species; (4) the inadequacy of existing regulatory mechanisms to affect the continued existence of the species within the state; or (5) other natural or man-made factors affecting the continued existence of the species within the state.

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(b) Not later than one year from the effective date of this act, the commissioner shall adopt regulations, in accordance with the provisions of chapter 54 of the general statutes, listing native wildlife and native plants that he has determined to be endangered or threatened species or species of special concern. Not later than two years from the effective date of this act, the commissioner shall so adopt regulations to identify, where biologically feasible, essential habitats for endangered and threatened species.

(c) The commissioner shall adopt regulations in accordance with the provisions of chapter 54 of the general statutes to establish criteria to be included in a petition pursuant to section 4-174 of the general statutes to add or remove a species from the list of endangered or threatened species or species of special concern or to add or remove an area identified as an essential habitat for such species.

Sec. 5. (NEW) The commissioner shall review at least every five years, the designation of species as endangered, threatened or of special concern, and areas identified as essential habitats to determine whether he should: (1) Add or remove any species from the list of endangered or threatened species or species of special concern; (2) change the designation from one category to another; (3) add or remove any area from the list of essential habitats for endangered or threatened species. The review of species that are listed as endangered by the United State Department of Interior shall be conducted, to the extent practicable, in conjunction with the periodic year review process of the Department of Interior pursuant to the Endangered Species Act.

Sec. 6. (NEW) (a) The commissioner may adopt regulations, in accordance with the provisions of chapter 54 of the general statutes, to treat a species not listed as endangered or threatened pursuant to section 4 of this act as an endangered or threatened species if he finds that: (1) Such species so closely resembles a species listed as endangered or threatened that enforcement personnel would have substantial difficulty in attempting to differentiate between it and the listed species; (2) the effect of such substantial difficulty is an additional threat to the endangered or threatened species; and (3) treatment of the unlisted species as an endangered or threatened species would substantially

Substitute House Bill No. 7136

facilitate enforcement and further the policy stated in section 1 of this act.

(b) The regulations may include a provision to allow a person to conduct an activity which affects a species that resembles an endangered or threatened species if the person can demonstrate to the commissioner that the activity does not affect the endangered or threatened species.

Sec. 7. (NEW) (a) The commissioner may acquire for and on behalf of the state, essential habitat, or interests therein, for the conservation of endangered, threatened, or species of special concern by gift, lease, purchase, exchange, condemnation or any other method of acquiring real property or an interest therein.

(b) The commissioner may enter into agreements with federal agencies, or political subdivisions of this state or other states, or with individuals or private organizations for administration and management of any program established and utilized for the conservation of endangered and threatened species and for management of any area identified as essential habitat for such species pursuant to section 4 of this act.

Sec. 8. (NEW) (a) Each state agency, in consultation with the commissioner, shall conserve endangered and threatened species and their essential habitats, and shall ensure that any action authorized, funded or performed by such agency does not threaten the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat designated as essential to such species, unless such agency has been granted an exemption as provided in subsection (c) of this section. In fulfilling the requirements of this section, each agency shall use the best scientific data available.

(b) Each state agency responsible for the primary recommendation or initiation of actions on land or in aquatic habitats which may significantly affect the environment, as defined in section 22a-1c of the general statutes, shall ensure that such actions are consistent with the provisions of sections 1 to 10, inclusive of this act and shall take all reasonable measures to mitigate any adverse impacts of such actions on endangered or threatened species or essential habitat. The secretary of the office of policy and management shall consider the consistency of such proposed actions with the provision of

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sections 1 to 10, inclusive, of this act in determining whether or not an environmental impact evaluation prepared pursuant to section 22a-1b of the general statutes satisfies the requirements of sections 22a-1a to 22a-1h, inclusive, of the general statutes and regulations adopted pursuant to said sections.

(c) If the secretary of the office of policy and management, in consultation with the commissioner, determines that a proposed action violates subsections (a) or (b) of this section and there are no feasible and prudent alternatives the state agency may apply to the commissioner for an exemption. The commissioner may grant an exemption after considering the following factors: (1) The agency did not make an irreversible or irretrievable commitment of resources after initiation of consultation with the department that forecloses the opportunity for formulating and implementing feasible and prudent alternatives, (2) the benefits of the action clearly outweigh the benefits of alternative courses of action, consistent with conserving the species or its essential habitat, and such action is in the public interest, (3) the action is of regional or state-wide significance, and (4) the agency plans to take reasonable mitigation and enhancement measures necessary and appropriate to minimize the adverse impacts of the action upon the species or essential habitat, including, but not limited to, live propagation, transplantation, and habitat acquisition and improvement.

(d) If the secretary of the office of policy and management, in consultation with the commissioner, determines that a proposed action would not appreciably reduce the likelihood of the survival or recovery of an endangered or threatened species, but would result in the incidental taking of such species, the commissioner shall provide the state agency with a written statement that: (1) Specifies the impact of such incidental taking on the species; (2) specifies feasible and prudent measures and alternatives that shall be implemented as part of the proposed project in order to ensure that the action does not appreciably reduce the likelihood of the recovery of the species; and (3) sets forth terms and conditions including, but not limited to, reporting requirements to ensure compliance with this subsection. Any taking that is in compliance with the measures and alternatives

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specified pursuant to this subsection shall not be prohibited by sections 1 to 10, inclusive, of this act.

Sec. 9. (NEW) (a) Except as otherwise provided in section 8 of this act, it is unlawful for (1) any person to wilfully take any endangered or threatened species on or from public property, waters of the state or property of another without the written permission of the owner on whose property the species occurs; (2) any person, including the owner of the land on which an endangered or threatened species occurs, to wilfully take an endangered or threatened species for the purpose of selling, offering for sale, transporting for commercial gain or exporting such specimen; (3) any state agency to destroy or adversely modify essential habitat designated pursuant to section 4 of this act, so as to reduce the viability of the habitat to support endangered or threatened species or so as to kill, injure, or appreciably reduce the likelihood of survival of the species.

(b) Nothing in sections 1 to 10, inclusive, of this act or any regulation adopted pursuant to said sections shall prohibit a person from performing any legal activities on his own land that may result in the incidental taking of endangered or threatened animal and plant species or species of special concern.

(c) Nothing in sections 1 to 10, inclusive, of this act, or any regulations adopted pursuant to said sections shall prohibit any action authorized pursuant to an exemption or permit provided for by the federal Endangered Species Act or in any regulation adopted under said act, or permit any action prohibited by the Endangered Species Act or by any regulation adopted under said act.

(d) Nothing in sections 1 to 10, inclusive, of this act, or any regulations adopted pursuant to said sections shall prohibit transportation through this state of any endangered or threatened species in accordance with the terms of any permit issued under the laws of another state provided the person in possession of an endangered or threatened species can prove legal possession of the species.

(e) The commissioner may prohibit, in an emergency, the taking of any state species of special concern threatened with undue depletion from overutilization of the species for

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commercial, recreational, scientific, educational or private purposes.

Sec. 10. (NEW) If the commissioner or his duly authorized agent finds that any person is conducting any activity or maintaining a facility or condition which is in violation of section 9 of this act, the commissioner shall issue a written order by certified mail to such person to cease immediately such activity or to correct such facility or condition. Within ten days of the issuance of such order the commissioner shall hold a hearing to provide the person an opportunity to be heard and show cause why the order should not remain in effect. The commissioner shall consider the facts presented at the hearing and within ten days of the completion of the hearing notify the person by certified mail that the original order remains in effect, that a revised order is in effect, or that the order has been withdrawn. The original order shall be effective upon issuance and shall remain in effect until the commissioner affirms, revises or withdraws the order. The issuance of an order pursuant to this section shall not delay or bar an action pursuant to section 26-40c of the general statutes as amended by section 15 of this act.

Sec. 11. Section 22a-2 of the general statutes is repealed and the following is substituted in lieu thereof:

(a) There shall be a department of environmental protection which shall have jurisdiction over all matters relating to the preservation and protection of the air, water and other natural resources of the state. Said department shall be under the direction of a commissioner of environmental protection who shall be appointed in accordance with the provisions of sections 4-5 to 4-8, inclusive.

(b) As used in this chapter and chapters 263, 268, 348, 360, 440, 446d, 447, 448, 449, 452, 462, 473, 474, 474a, 476, 477, 478, 479, [and] 490 AND SECTIONS 1 TO 10, INCLUSIVE, OF THIS ACT, except where otherwise provided, "commissioner" means the commissioner of environmental protection or his designated agent. The commissioner of environmental protection shall have the authority to designate as his agent (1) any deputy commissioner to exercise all or part of the authority, powers and duties of said commissioner in his absence, (2) any deputy commissioner or any employee, assistant or agent employed pursuant to

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section 22a-4 to exercise such authority of the commissioner of environmental protection as he delegates for the administration or enforcement of any applicable statute, regulation, permit or order, except the authority to render a final decision, after a hearing, assessing a civil penalty under section 22a-6b, (3) the commissioner of public safety and any local air pollution control official or agency to exercise such authority as the commissioner of environmental protection delegates for the enforcement of any applicable statute, regulation, order or permit pertaining to air pollution, except the authority to render a final decision, after a hearing, assessing a civil penalty under said section 22a-6b, and (4) any municipal police department the authority to enforce the provisions of chapters 268 and 490.

(c) As used in this chapter, and chapters 263, 268, 348, 360, 440, 446d, 447, 448, 449, 452, 462, 473, 474, 474a, 476, 477, 478, 479, [and] 490 AND SECTIONS 1 TO 10, INCLUSIVE, OF THIS ACT, except where otherwise provided, "person" means any individual, firm, partnership, association, syndicate, company, trust, corporation, municipality, agency or political or administrative subdivision of the state, or other legal entity of any kind.

Sec. 12. Section 23-5c of the general statutes is repealed and the following is substituted in lieu thereof:

The commissioner shall establish a system of natural area preserves [not to exceed ten thousand acres in the aggregate] and shall have responsibility for selection, care, control, supervision and management of all natural area preserves within the system to the extent of the interest held by the state, and shall maintain such preserves in as natural and wild a state as is consistent with educational and scientific purposes. IN ESTABLISHING SUCH SYSTEM, THE COMMISSIONER SHALL CONSIDER AS A PRIORITY THE ACQUISITION OF AREAS IDENTIFIED AS ESSENTIAL HABITATS OF ENDANGERED AND THREATENED SPECIES PURSUANT TO THE PROGRAM ESTABLISHED UNDER SECTION 3 OF THIS ACT. The commissioner, alone or in cooperation with individuals or other public bodies, including the federal government, may conduct inventories of areas within the state that may prove worthy of inclusion within a system of natural area preserves, and may gather and

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disseminate information concerning inventoried areas, or natural area preserves under his control. The commissioner may promulgate regulations under the provisions of section 23-4, and shall prepare and publish rules for the management of each designated natural area preserve.

Sec. 13. Section 23-74 of the general statutes is repealed and the following is substituted in lieu thereof:

There is hereby created the recreation and natural heritage trust program to: (1) Acquire land that represents the ecological diversity of Connecticut, including natural features such as riverine, montane, coastal and geologic systems or other natural areas, on behalf of the state, in order to ensure the preservation and conservation of such land for recreational, scientific, educational, cultural and aesthetic purposes, (2) acquire land of unusual natural interest as additions to the system of parks, forests, wildlife and fishery management areas, natural areas and dedicated natural area preserves in the state for the beneficial use and enjoyment of the public, [and] (3) ACQUIRE LAND IDENTIFIED AS ESSENTIAL HABITAT FOR ENDANGERED AND THREATENED SPECIES PURSUANT TO THE PROGRAM ESTABLISHED UNDER SECTION 3 OF THIS ACT AND (4) establish a stewardship account to provide for the maintenance, protection and management of lands acquired pursuant to the provisions of sections 23-73 to 23-80, inclusive, and of the species that inhabit them.

Sec. 14. Section 23-75 of the general statutes is repealed and the following is substituted in lieu thereof:

(a) The commissioner of environmental protection shall acquire land by purchase, gift or devise for the purposes set forth in section 23-74. The title to any land acquired pursuant to sections 23-73 to 23-80, inclusive, shall be vested in the state. In determining whether sites shall be acquired, the department shall consider whether the site is: (1) Identified as having high priority recreation, forestry, fishery, wildlife or conservation value and as being consistent with the state comprehensive plan for outdoor recreation and the state plan of conservation and development; (2) a prime natural feature of the Connecticut landscape, such as a major river, its tributaries and watershed, mountainous territory,

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an inland or coastal wetland, a significant littoral or estuarine or aquatic site or any other important geologic feature; (3) habitat for native plant or animal species listed as threatened or endangered or of special concern in the data base OR PURSUANT TO THE PROGRAM ESTABLISHED UNDER SECTION 3 OF THIS ACT, PARTICULARLY AREAS IDENTIFIED AS ESSENTIAL HABITAT FOR SUCH SPECIES; (4) a relatively undisturbed outstanding example of a native ecological community which is now uncommon; or (5) threatened with conversion to incompatible uses. In acquiring a site that has been identified as having a high priority recreation value, the department shall give priority to sites near population centers.

(b) No site shall be acquired which has not been evaluated by the department, through the data base, to determine if threatened or endangered species or species of special concern inhabit or use the site or to determine if the site is of special ecologic quality or has other outstanding natural values as a community of living things.

Sec. 15. Section 26-40c of the general statutes is repealed and the following is substituted in lieu thereof:

Any officer or agent authorized by the commissioner of environmental protection or any state police officer or any police officer of any town shall have authority to execute any warrant to search for and seize any goods, merchandise or any threatened or endangered species POSSESSED, sold or offered for sale in violation of [subsection (b) of section 26-40e] SECTION 9 OF THIS ACT or any property or item used in connection with a violation of said section. Such goods, merchandise, threatened or endangered species or property shall be held pending proceedings in any court of proper jurisdiction. Upon the conviction of any person charged with a violation of [subsection (b) of section 26-40e] SECTION 9 OF THIS ACT the goods, merchandise or threatened or endangered species seized in connection therewith under the provisions of this section shall be forfeited and [either] RETAINED BY THE COMMISSIONER OR offered to a recognized institution for scientific or educational purposes, or destroyed. ALL COSTS INCURRED BY THE STATE SHALL BE ASSESSED AGAINST THE VIOLATOR.

Sec. 16. Section 26-40d of the general statutes is repealed and the following is substituted in lieu thereof:

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The commissioner [of environmental protection] may permit, under such regulations as he may adopt [pursuant to] IN ACCORDANCE WITH THE PROVISIONS OF chapter 54, the transfer, sale, offering for sale, or delivery of any threatened or endangered species [or, subspecies listed pursuant to subsection (c) of section 26-40e for zoological, educational and scientific] OR ANY ACTIVITY OTHERWISE PROHIBITED UNDER SECTIONS 1 TO 10, INCLUSIVE, OF THIS ACT, FOR SCIENTIFIC, EDUCATIONAL, BIOLOGICAL OR ZOOLOGICAL purposes, and for the propagation of [such] threatened and endangered species in captivity for preservation purposes, unless such transfer, sale, offering for sale, [or] delivery OR ACTIVITY is prohibited by any federal law or regulation.

Sec. 17. Section 26-40f of the general statutes is repealed and the following is substituted in lieu thereof:

Any person WHO COMMITS, TAKES PART IN OR ASSISTS IN violating section 26-40c, 26-40d or [26-40e] SECTION 9 OF THIS ACT OR THE REGULATIONS ADOPTED PURSUANT TO SAID SECTIONS shall be fined not more than one thousand dollars or imprisoned not more than six months or both for each offense. [and the hunting, trapping, taking, killing, maiming, importing, transporting, exporting, possessing, selling or offering for sale of each threatened or endangered species or part thereof shall be deemed to be a separate offense.] Any employer requiring or encouraging its employees to violate said sections shall be fined not more than ten thousand dollars or imprisoned not more than one year or both. THE TAKING OF EACH ENDANGERED OR THREATENED PLANT OR WILDLIFE SPECIES OR SPECIMEN OR PART THEREOF SHALL BE DEEMED TO BE A SEPARATE OFFENSE.

Sec. 18. (NEW) Notwithstanding the provisions of sections 1-15, 1-19 and 1-19a, the commissioner of environmental protection may withhold from disclosure to any person maps and records that disclose the location of any essential habitat or that disclose the location of any threatened species, endangered species, or species of special concern, upon determination that disclosure of such information to such person would create an unacceptable risk of destruction of, or harm to, such habitat or species. Prior to disclosure of any maps or records to any person, the commissioner may impose any reasonable conditions including the condition that the person

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to whom the information is disclosed furnish the commissioner with security in an amount and kind sufficient to guarantee that such person shall not destroy or harm, or cause to be destroyed or harmed, any such habitat or species. Any person whose request for disclosure has been denied shall be afforded the opportunity for a hearing to establish that (1) the requested information should be disclosed because disclosure would not create an unacceptable risk of destruction of, or harm to, such habitat or species and (2) the unreasonableness of any condition imposed, including the amount or kind of any security to be established. Any hearing or other proceeding pursuant to this section shall be held in accordance with the provisions of chapter 54 of the general statutes.

Sec. 19. (NEW) There is established a natural area preserves advisory committee which shall consist of seven members. Three members shall be employees of the department of environmental protection and shall serve at the pleasure of the commissioner of environmental protection, one of whom the commissioner shall designate as chairman of the committee, and four members shall be appointed by the governor from persons with an interest in the preservation of lands in natural condition for scientific and educational purposes. Members appointed by the governor shall serve for four years. The governor shall fill any vacancy among his appointees for the remainder of the unexpired term. The committee shall meet semiannually and may meet more often upon the call of the chairman. The members of the committee shall receive no compensation for their services as such but may be reimbursed for necessary expenses in connection with the performance of their duties. The natural area preserves advisory committee shall advise the commissioner of environmental protection relative to the administration of sections 23-5a to 23-5i of the general statutes, inclusive, and shall cooperate with the commissioner (1) in the establishment of standards for the acquisition, maintenance and operation of natural area preserves within the system; (2) in making periodic state-wide surveys to determine the availability of that land which should be designated as a natural area preserve; (3) in recommending the acquisition of specific lands or interests in lands which are suitable for natural area preserves; (4) in preparing and

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disseminating literature and other materials to inform the public with respect to the natural area preserve program; (5) in consulting and cooperating with conservation and naturalist groups and organizations in the acquisition and maintenance of natural area preserves.

Sec. 20. (NEW) If the commissioner of environmental protection determines that trade in Connecticut of raw elephant ivory or products manufactured or derived from elephant ivory contributes to the extinction or endangerment of elephants, he shall adopt regulations in accordance with the provisions of chapter 54 of the general statutes to regulate such trade.

Sec. 21. Sections 24-2a and 26-40e of the general statutes are repealed.

Sec. 22. This act shall take effect from its passage.

Certified as correct by

Legislative Commissioner.

Clerk of the Senate.

Clerk of the House.

Approved _____, 1989

Governor, State of Connecticut.

Appendix F: Torrington Area Health District Correspondence

Torrington Area Health District

1116 Litchfield Street / Torrington, CT 06790

Telephone 489-0436 / 482-9787

James B. Rokos
M.S., M.P.H.
Director of Health

Gilbert A. Roberts
B.A., R.S.
Director of Environmental Health

March 8, 1990

Mr. Joe Peltier
32 Glendale Rd.
Enfield, CT 06082

RE; BIRD PEAK SUBDIVISION, SALISBURY

Dear Joe:

Weather conditions have been such that I have not had an opportunity to conduct field evaluation on the above noted subdivision proposal. However, I do have a number of comments based on preliminary review of the maps and data submitted which perhaps could be addressed at this time.

1. Our subdivision requirements ask that a preliminary driveway location be shown on the map.
2. Perk hole locations are not shown on the map. The perk hole location and number should be shown on the map.
3. There are a number of septic systems (primary and/or reserve) which are located less than 150 ft. from major or intermittent watercourses. These areas are regulated by the Salisbury Conservation Commission. In the past, new subdivisions have always maintained a 150 ft. buffer from the septic system to a watercourse. I don't believe the Commission has ever been approached with similar proposals for new construction. It is the policy of the Torrington Area Health District (T.A.H.D.) not to entertain subsurface sewage disposal layouts within wetland/watercourse regulated areas without prior approval of the local regulating agency. I suggest you meet with the Salisbury Conservation Commission relative to this matter to determine their position on this issue. I should also point out the T.A.H.D. regulations with respect to the 75 ft. watercourse setback requirement do not differentiate between seasonal or intermittent watercourses and major streams. No variances are granted with respect to new subdivisions. This poses some problems with Lots # L13 and 14 where septic systems are shown less than 75 ft. from an intermittent stream.

I should also point out that if approved, Lot #15 would require an easement across the driveway adjoining the septic site.

8. Additional test holes: As I indicated at the time of initial testing, when shallow bedrock is encountered in a subdivision such as this, septic area will almost always require additional test holes to confirm site suitability on some lots. After Map preparation for example Lot #18 has two test pits (Ledge at 76 inches) in the corner of the reserve area but none in the primary. Lot #9 has one test hole 50 inches deep at the corner of the primary; adjacent holes have ledge less than 48 inches. Both lots will require additional deep test pits. A final determination of the extent of additional testing required will be made following field evaluation.
9. Additional design work: I am somewhat uncomfortable with a few of the septic layouts proposed. Although the lots are large in total land size, the actual tested areas available for disposal on some sites is severely limited by steep slopes, ledge rock outcrops or very irregular contours. For example: Lot #18 has very significant differences in elevations (± 6 ft.) along the hydraulic plane of the septic layout as well as slopes approaching 50%. I am not convinced that a septic system could really be installed in configuration shown. The house site appears very questionable due to steep slopes. There are a few lots such as this where an accurate determination of site suitability cannot be made on the basis of a 1-100 scale blocked type septic layouts and additional detail i.e. trench configuration, fill contours etc. may have to be provided at a larger scale for proper elevation. It could also be that field evaluation shows that feasibility is much less complicated than that anticipated from the subdivision map layout.

Appendix G: Correspondence from Peter Oliver

CONSERVATION COMMISSION



TOWN OF SALISBURY
CONNECTICUT

16 April 1990

Nancy Ferlow
ERT Coordinator
King's Mark Environmental Review Team
322 North Main Street
Wallingford, Connecticut 06492


Re: Proposed Subdivision of Dale Mitchell at Bird Peak

Dear Ms. Ferlow:

The Conservation Commission has directed the undersigned to write this letter in order to insure that King's Mark is aware of the inland/wetland and water courses regulation that specifies that septic systems installed within 150' of a water course are deemed to be a regulated activity. On the proposed plans submitted by Mr. Mitchell, Lots 5,7,8,10 and 18 all indicate a lesser distance than 150' from a water course. It is being represented by Mr. Mitchell that the soils available at those locations are adequate and appropriate for septic systems to be installed. It would be most appreciated if King's Mark could affirm that the specific locations would not pose any environmental threat in view of the shallow depth to bedrock and the relatively high water table.

We appreciate your cooperation in this issue.

Sincerely yours,



Peter K. Oliver
Administrator

PKO/jc
cc Dale Mitchell

NOTES

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, soil scientists, foresters, climatologists, landscape architects, recreational 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 - an 83-town area serving western Connecticut.

As a public service activity, the Team is available to serve towns and/or developers within the King's Mark RC&D Area - free of charge.

Purpose of the Environmental Review Team

The Environmental Review Team is available to assist towns and/or developers in the review of sites proposed for major land use activities. For example, the ERT has been involved in the review of a wide range of significant land use activities including subdivisions, sanitary landfills, commercial and industrial developments and recreational/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 site and highlighting opportunities and limitations for the proposed land use.

Requesting an Environmental Review

Environmental Reviews may be requested by the chief elected official of a municipality or the chairman of an administrative agency such as planning and zoning, conservation or inland wetlands. Environmental Review Request Forms are available at your local Soil and Water Conservation District and through the King's Mark ERT Coordinator. This request form must include a summary of the proposed project, a location map of the project site, written permission from the land owner/developer allowing the Team to enter the property for purposes of review and a statement identifying the specific areas of concern the Team should investigate. When this request is approved by the local Soil and Water Conservation District and King's Mark RC&D Executive Committee, the Team will undertake the review. At present, the ERT can undertake approximately two (2) reviews per month.

For additional information regarding the Environmental Review Team, please contact your local Soil and Water Conservation District or Nancy Ferlow, ERT Coordinator, King's Mark Environmental Review Team, King's Mark RC&D Area, 322 North Main Street, Wallingford, Connecticut 06492. King's Mark ERT phone number is 265-6695.