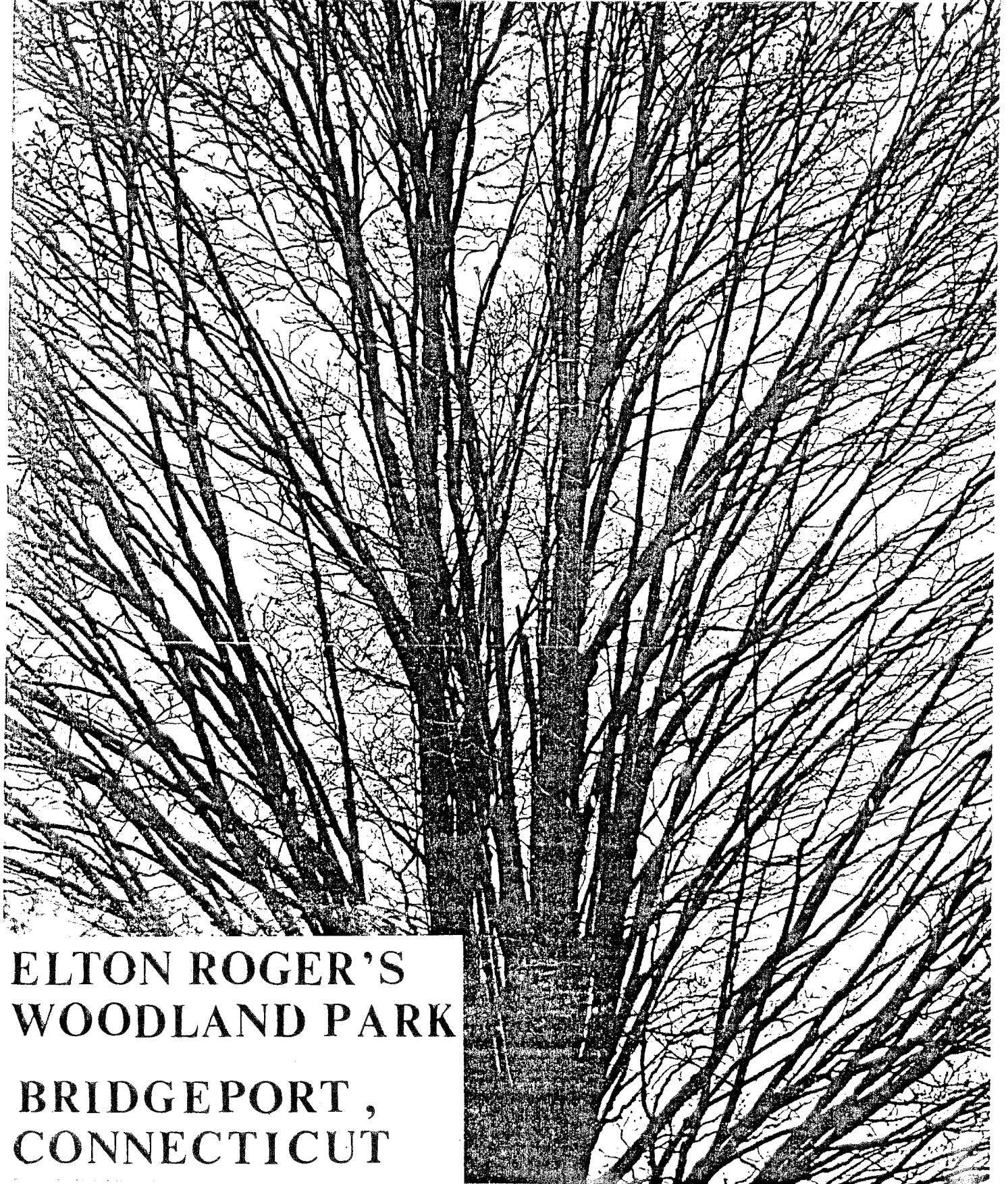


ENVIRONMENTAL REVIEW TEAM REPORT



**ELTON ROGER'S
WOODLAND PARK
BRIDGEPORT,
CONNECTICUT**



KING'S MARK RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

ELTON ROGER'S WOODLAND PARK

BRIDGEPORT, 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

Bridgeport Department of Parks and Recreation

NOVEMBER 1986

ACKNOWLEDGEMENTS

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

- * William Warzecha, Geohydrologist
Department of Environmental Protection
- * Don Smith, Forester
Department of Environmental Protection
- * Paul Rothbart, Wildlife Biologist
Department of Environmental Protection
- * Joseph Hickey, State Park Planner
Department of Environmental Protection
- * Shirley Rasmussen, Comprehensive Planner
Greater Bridgeport Regional Planning Agency

I would also like to thank Janet Jerolman, Cartographer of the King's Mark Environmental Review Team for assisting in the completion of this report.

Finally, special thanks to the following people for their cooperation and assistance during this environmental review: Paul Macciocca, Director of Parks and Recreation, City of Bridgeport, Phillip Handy, Assistant Superintendent of Parks, City of Bridgeport, Paula Zeraw, Housatonic Girl Scout Council, Donald Thomas, Fairfield County Boy Scout Council, Michael Nidoh, Bridgeport Planning Department, William McCann, Stratford Conservation Department, Kenneth Placko, Fairfield Conservation Department, and Gilbert Standley, Trumbull Parks Department.

EXECUTIVE SUMMARY

The Director of Parks and Recreation of the City of Bridgeport requested that an environmental review be conducted on Elton Roger's Woodland Park, a 74-acre undeveloped city park. The park is located in the northwestern section of Bridgeport, near the Trumbull town line. Primary access to the property is off Frenchtown and Old Town Roads.

The park is primarily characterized by woodland and wetland communities. Numerous primitive trails crisscross the site. These are mainly used by motorcross dirt bikes. Relief is relatively flat to moderate, with steep slopes occurring in the western and northwestern parts of the park. Intermittent streams flow through the park as well.

Man has also influenced the park. An electrical transmission line crosses the park, with a substation located at the western edge of the property. An earthen dam is also present. The park is surrounded by single-family residential and condominium development. No formal parking or access points exist.

* * * * *

The City of Bridgeport is proposing to develop this park into a passive recreational area with nature trails, a camping site, and a small nature center. The ERT was asked to: (1) provide a natural resource inventory and assessment of the site; (2) discuss opportunities and limitations of the proposed development; (3) discuss forest and wildlife management opportunities; and (4) discuss the recreational development potential of the site. This information will assist the city in developing a long-term management strategy for the park.

* * * * *

PHYSICAL CHARACTERISTICS

Geology

The geology of the park appears to be best suited for passive, non-intensive recreational uses such as hiking trails, perhaps jogging and/or cross country skiing. Because of the rough and rugged terrain characterizing most of the site, there would probably be little opportunity for active recreational uses such as playing fields. If new trails are constructed, wet areas should be avoided unless they are bridged or boardwalks constructed.

Depth to bedrock is quite shallow (i.e., probably less than five feet) throughout most of the property. A few swampy areas containing wetland vegetation occupies the site as well. These wetlands comprise the bottom of the former Ox Stream Reservoir (now drained), an approximately four acre marsh in the central portions, and a red maple swamp in the southern limits of the site.

From a geological development standpoint, it appears that the flat, less rocky and rough areas in the southern parts of the park would be most favorable for the development of camping facilities.

Sanitary Facilities for Proposed Camping Areas

If a camp site was constructed, it is likely there would be a need for a dry vault privy or privies in the immediate area for sanitary facilities. Based on visual observations, topographic conditions, and soil mapping, it appears that rough terrain and shallow bedrock conditions will be the main obstacles to overcome in terms of locating privies in the southern parts of the site.

Hydrology

The park lies almost entirely within the Horse Tavern Brook watershed. A small area of the park in the eastern limits along Frenchtown Road drains eastward. It is ultimately routed to Lake Forest.

The availability of public water supply lines to the park precludes the need for development of an on-site well. However, if there was a desire to develop an on-site well for the park, the only aquifer that is likely to be capable of supplying water is the underlying metamorphic rock.

* * * * *

BIOLOGICAL RESOURCES

Wetlands

Two wetland types have been identified: (1) permanent to seasonally flooded red maple swamp and (2) open water/shrub swamp. Because of their moderately large size, these wetlands have an important role in regulating stream flows. During periods of heavy rainfall or snowmelt, these areas store surface water temporarily, releasing water more slowly than would otherwise be the case, thereby reducing the peak flood flows in Horse Tavern Brook and other downstream watercourses. Other natural wetland functions include sediment retention, cleansing surface water through biochemical processes, and wildlife habitat.

Forests

A considerable amount of thinning for firewood could be done to reduce overcrowding and to improve the overall health of the forest. Numerous severely damaged, deformed, or diseased trees were observed, some in such a condition as to constitute a hazard to park visitors. Removal of these trees will improve safety for park visitors while removing possible sources for the spread of disease.

These thinnings and salvage harvests should be conducted only as part of an integrated management program based on a forest management plan. To embark on a tree cutting program without an overall plan to follow will result in an inconsistent and ineffective cutting pattern which will have few specific benefits in any particular area and may in fact result in damage to the forest resource in certain areas.

Wildlife Resources

The park contains three primary wildlife habitats. They are: (1) mixed hardwood forest; (2) wetlands; and (3) openland. These habitat areas provide food, cover, water and shelter for a variety of wildlife species including white-tailed deer, squirrels, raccoon, opossum, chipmunks, and numerous bird species.

The park provides good overall vegetation diversity, and in a heavily populated area like Bridgeport, it provides both necessary wildlife habitat and excellent environmental educational opportunities.

* * * * *

PLANNING CONSIDERATIONS

Land Use History

From 1875 until the 1930s, Elton Roger's Woodland Park was owned by Bridgeport Hydraulic Company. During this period, Ox Stream Reservoir occupied about 15 acres in the northwestern portion of the site. After Bridgeport Hydraulic sold the property, there was a substantial amount of earth-moving activity in preparation for a residential subdivision which was never built. In the early 1970s, the City of Bridgeport purchased the parcel, using funds from the Federal Land and Water Conservation Fund. Since that time, the park has never been developed for recreational use. At one time, the park was used by Boy Scouts for overnight camping, but concern about open campfires put an end to this use. The development of softball fields was also proposed for the site.

Recreational and Open Space Needs

At the present time, there are no nature study areas located within the city. However, the experience of other towns suggests that an in-town nature study area would be a great asset. An in-town study area provides better access and an opportunity to develop a scientific understanding of a familiar local environment.

A need expressed by both Boy Scout and Girl Scout Councils is for a campsite which scouts can hike to or take a bus to. Elton Roger's Woodland Park is in a good location for such a camping facility.

Potential Park Development Impacts

Use of the park by school groups on weekdays and by Scouts on weekends will increase the noise level in the park to some extent. However, the number of persons using the park at any one time can be

controlled by instituting a permit system or similar scheduling procedure. In addition, vegetation and topography of the park have a great potential to attenuate sound. If campgrounds and trails are located so as to maximize this buffering effect, noise should not be noticeable outside the park.

To control the amount of smoke and to minimize the danger of setting fire to the woods, fires should be allowed only in designated areas. These areas should be located at a suitable distance from residential areas and well designed and maintained to insure fire safety.

It is not expected that development of a campground and/or nature study area would add significantly to traffic volumes.

Recreational Development Considerations

Regarding the physical character of Elton Roger's Woodland Park, it is clear that nearly all of its area has severe to very severe recreational development and use limitations in terms of rock outcrop, shallow to bedrock soils, occasional steep slopes, or poorly-drained, even boggy soil. Therefore, intensive park development may be extremely, if not prohibitively expensive, and thus unwise from a cost-benefit standpoint. The park should thus be maintained as an undeveloped, low intensity use area, and this is precisely the type of use which Bridgeport needs and wishes for Elton Roger's Woodland Park.

Recreational Management Alternatives

Develop a single access off Old Town Road. This should involve an off-road parking lot screened from the homes on the north side of Old Town Road. It is encouraged that the proposed second parking lot on Frenchtown Road not be pursued at this time. It will be difficult enough to win neighborhood acceptance of even one parking lot, and a park of this size could well be serviced by one lot at which management control could more readily be enforced.

A small nature center associated with the parking lot/access could be considered, but it is advised that the parking lot first be built during the initial stages of park development.

Improve the public image of the park through removal of existing trash as well as policing and solicitation of neighborhood cooperation to discourage further trashing.

Consider the feasibility of discontinuing and gating a section of Kaechele Road behind the substation to forestall trashing in this isolated location where the trashing problem is the most acute.

Develop an internal system of nature trails, taking advantage of the various points of interest and with access to the trail system only from the proposed parking lot/nature center location to foster appropriate usage and management control.

Consider developing a primitive youth camp area, located in a relatively level and well-drained area and situated as far away as possible from neighbors to minimize likely problems of trespassing into private backyards.

Consider the possibilities presented by the existing dam in terms of diversifying the habitat or use potential of the park such as developing a shallow pond with some visual and fishing amenities or developing it as a wildlife habitat area.

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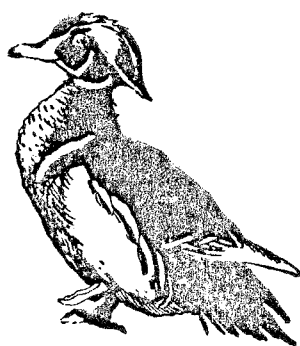
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INTRODUCTION



INTRODUCTION

Introduction

The Director of Parks and Recreation of the City of Bridgeport requested that an environmental review be conducted on Elton Rogers Woodland Park, a 74-acre undeveloped city park. The park is located in the northwestern section of Bridgeport, near the Trumbull town line. Primary access to the property is off Frenchtown and Old Town Roads (Figure 1).

Description of the Environment

The park is primarily characterized by woodland and wetland communities. Numerous primitive trails crisscross the site. These are mainly used by motorcross dirt bikes. Relief is relatively flat to moderate, with steep slopes occurring in the western and northwestern parts of the park. Intermittent streams flow through the park as well.

Man has also influenced the park. An electrical transmission line crosses the site, with a substation located at the western edge of the property. An earthen dam is also present on the site. The park is surrounded by single-family residential and condominium development. No formal parking or access points exist (Figure 2).

Proposed Development Plans

The City of Bridgeport is proposing to develop this park into a passive recreational area with nature trails, a camping site, and a small nature center (Figure 3). The ERT was asked to: (1) provide a natural resource inventory and assessment of the site; (2) discuss opportunities and limitations of the proposed development; (3) discuss forest and wildlife management opportunities; and (4) discuss the recreational development potential of the site. This information will assist the city in developing a long-term management strategy for the park. Therefore the objectives of this ERT were:

- (1) Inventory and assess the natural resources occupying the park.
- (2) Identify areas most suitable for the proposed recreational development.
- (3) Provide guidelines to minimize any environmental impact from the proposed development.

Figure 1

LOCATION OF STUDY SITE

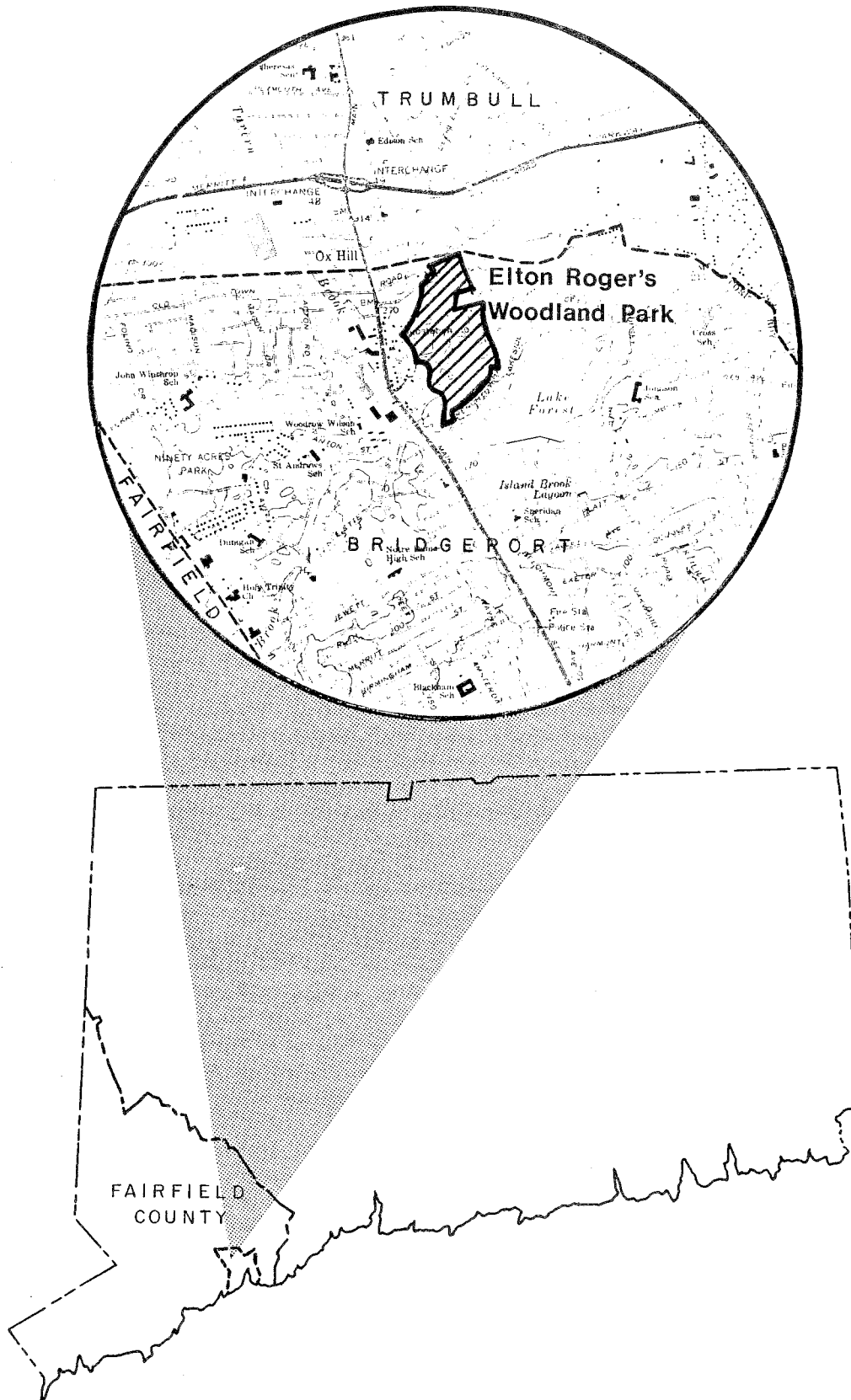


Figure 2

ELTON ROGER'S
WOODLAND PARK
BRIDGEPORT, CONNECTICUT

EXISTING
CONDITIONS

King's Mark Environmental Review Team

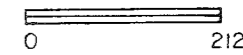


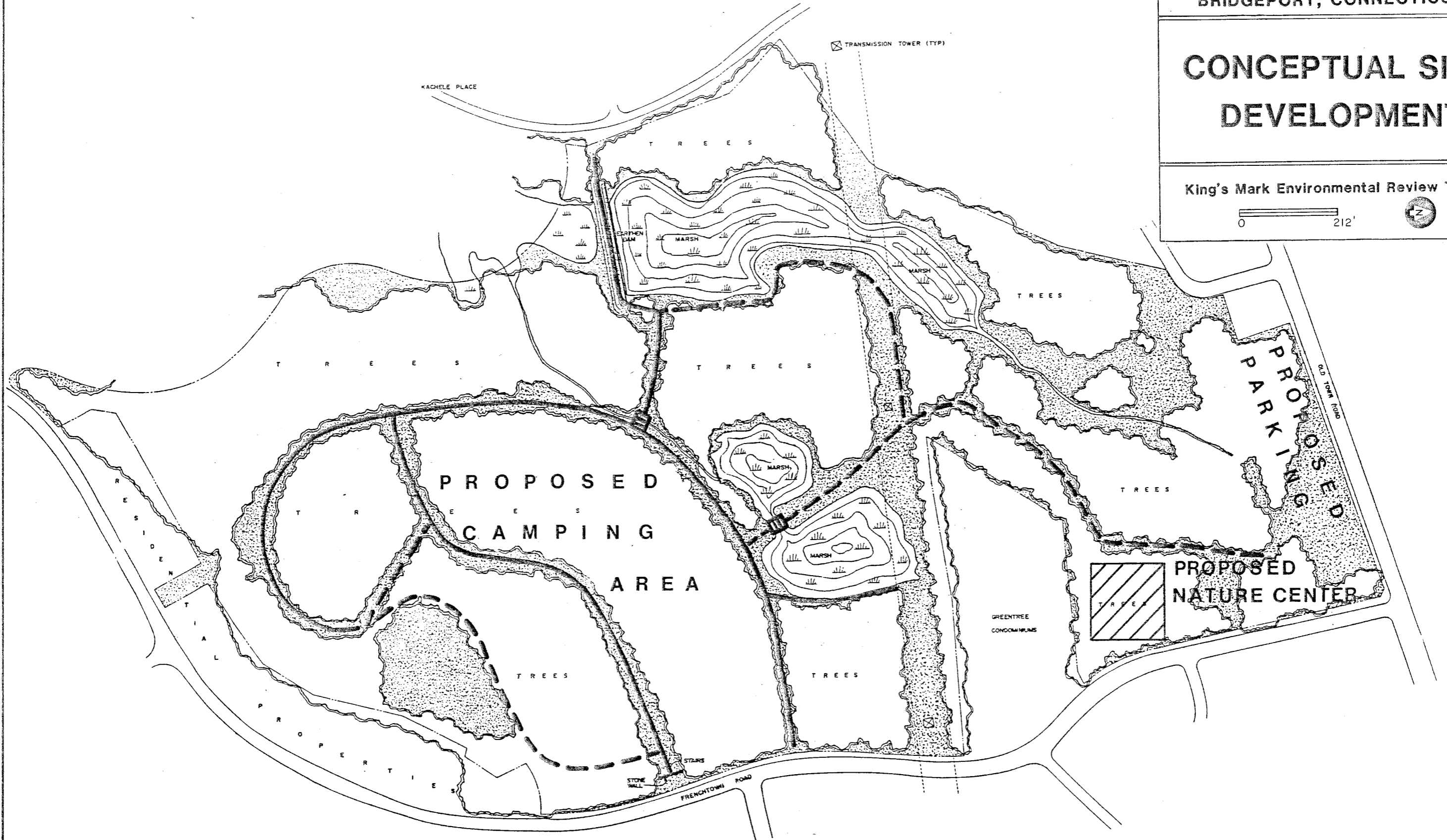
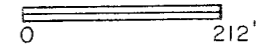
Figure 3

- EXISTING TRAILS
- - - - - PROPOSED TRAILS

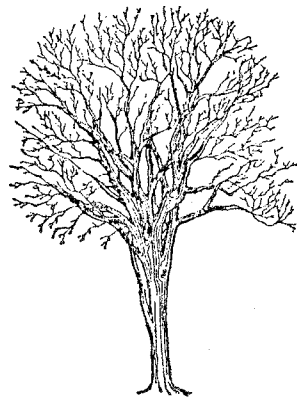
**ELTON ROGER'S
WOODLAND PARK
BRIDGEPORT, CONNECTICUT**

**CONCEPTUAL SITE
DEVELOPMENT**

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PHYSICAL CHARACTERISTICS



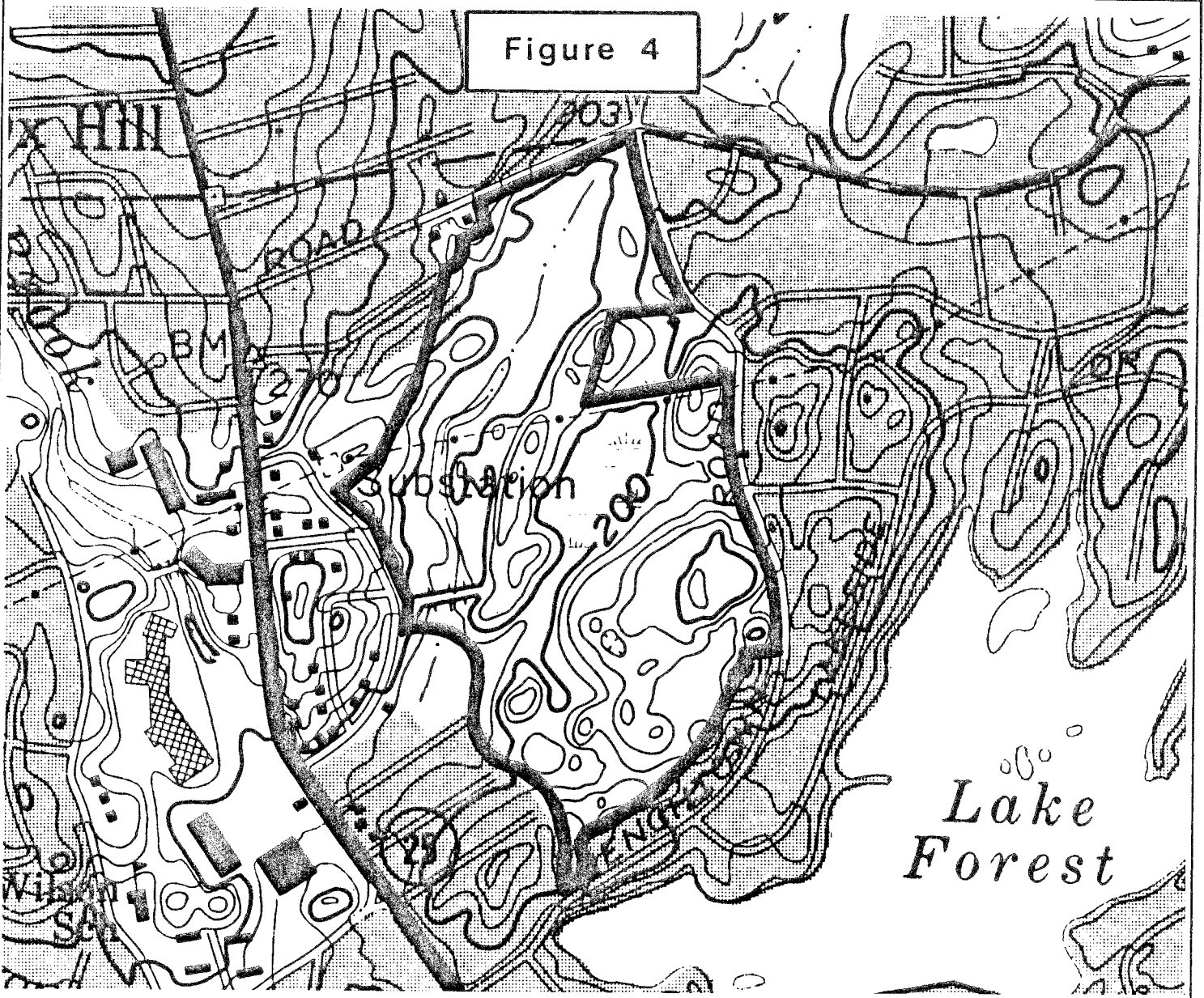
Geology

Elton Roger's Woodland Park is located in the Bridgeport topographic quadrangle. The Connecticut Geological and Natural History Survey has published a bedrock map of the quadrangle (Map QR-24, by William Patrick Crowley, 1968). No surficial geologic map for the quadrangle has been published to date. The Team's Geologist referenced the Soils Survey for Fairfield County, Connecticut (1981) for this section of the report.

Bedrock Geology

Bedrock outcrops extensively throughout upland parts of the site. Crowley identifies the major rock type of the site as two subunits of the Trap Falls Formation. The first subunit called the Shelton Facies of the Trap Falls Formation underlie the northern and central parts of the site (Figure 5). These rocks which weather very light tan consist of a medium grained gneiss composed mainly of the minerals muscovite and garnet. The presence of abundant muscovite, a silvery, flaky mineral on the rock gives its surface a lustrous sheen. The term "gneiss" indicates that the rock is metamorphic (i.e., has been altered by tremendous heat and pressure within the earth's crust). It is characterized by alternating bands of elongate minerals and more rounded minerals. This rock unit is also interlayered with medium- to coarse-grained biotite and muscovite schist, fine- to medium-grained biotite-plagioclase quartz gneiss, and tough, fine-grained calc-silicate rock (i.e., rock composed largely of calcium silicate minerals). "Schists" are also metamorphic, but characteristically contain platy, flaky or elongate

Figure 4



**ELTON ROGER'S
WOODLAND PARK
BRIDGEPORT, CONNECTICUT**

TOPOGRAPHY

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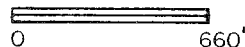
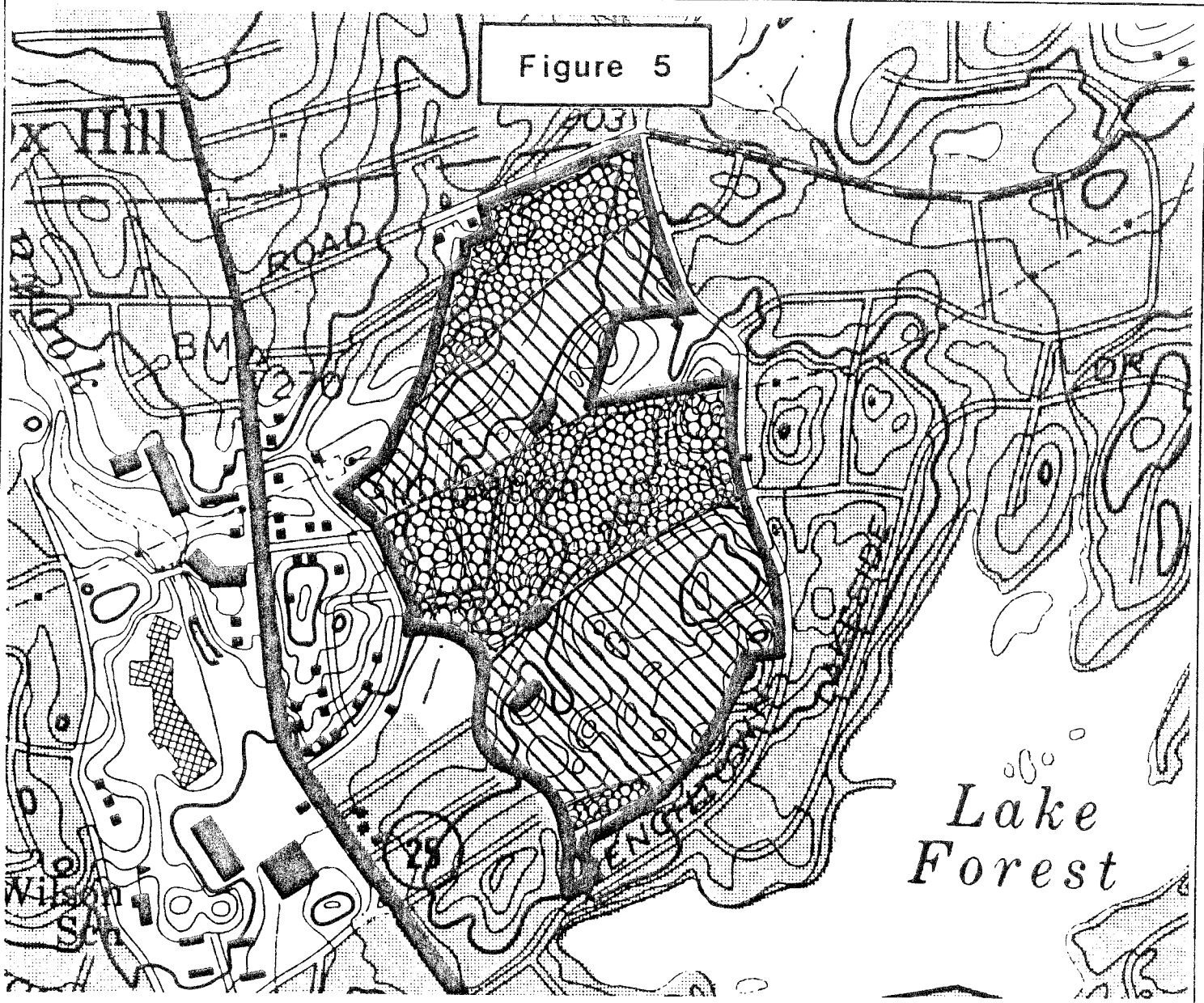


Figure 5



TRAP FALL FORMATION (Shelton facies)



TRAP FALL FORMATION

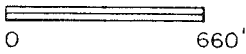


AMPHIBOLITES

**ELTON ROGER'S
WOODLAND PARK
BRIDGEPORT, CONNECTICUT**

BEDROCK GEOLOGY

King's Mark Environmental Review Team



minerals which have become aligned to form surfaces of relatively easy parting.

The other subunit within the Trap Falls Formation found on the site consists largely of a rusty weathering coarse-grained schist composed of the minerals tourmaline, biotite, quartz, plagioclase, garnet, and muscovite. It also is interlayered with thin layers of finer grained biotite-plagioclase-quartz gneiss, fine- to medium-grained biotite and muscovite schist, and mica-quartz-feldspar gneiss. Isolated zones of "amphibolite" rocks are found within the latter subunit. Amphibolites are another type of metamorphic rock which is composed mainly of dark-colored minerals of the amphibole group, such as hornblende, tremolite, and actinolite.

A brief outline of the geologic history of the quadrangle area indicates that the bedrock originated as oceanic sediment and volcanic material. The Trap Falls Formation rocks were deposited during the Ordovician geologic periods (approximately 505-438 million years ago). Metamorphism of the rocks occurred during a series of crustal movements known collectively as the Acadian Orogeny. This series of events culminated about 330 million years ago. Further deformation and faulting (i.e., fracturing of the bedrock) occurred during the Allegheny Orogeny. These series of events culminated about 330 million years ago.

No mineral deposits of commercial value by today's standard can be ascribed to the rocks underlying the site. However, as mentioned earlier, the rock on the site was used as building stone to construct the foundation of the dam on the site. Also, garnets which may be found as large crystals in the rock beneath the site has been used as

an abrasive. Close examination of the bedrock outcrops within the park may yield collector quality minerals for ambitious rock hounds.

Surficial Geology

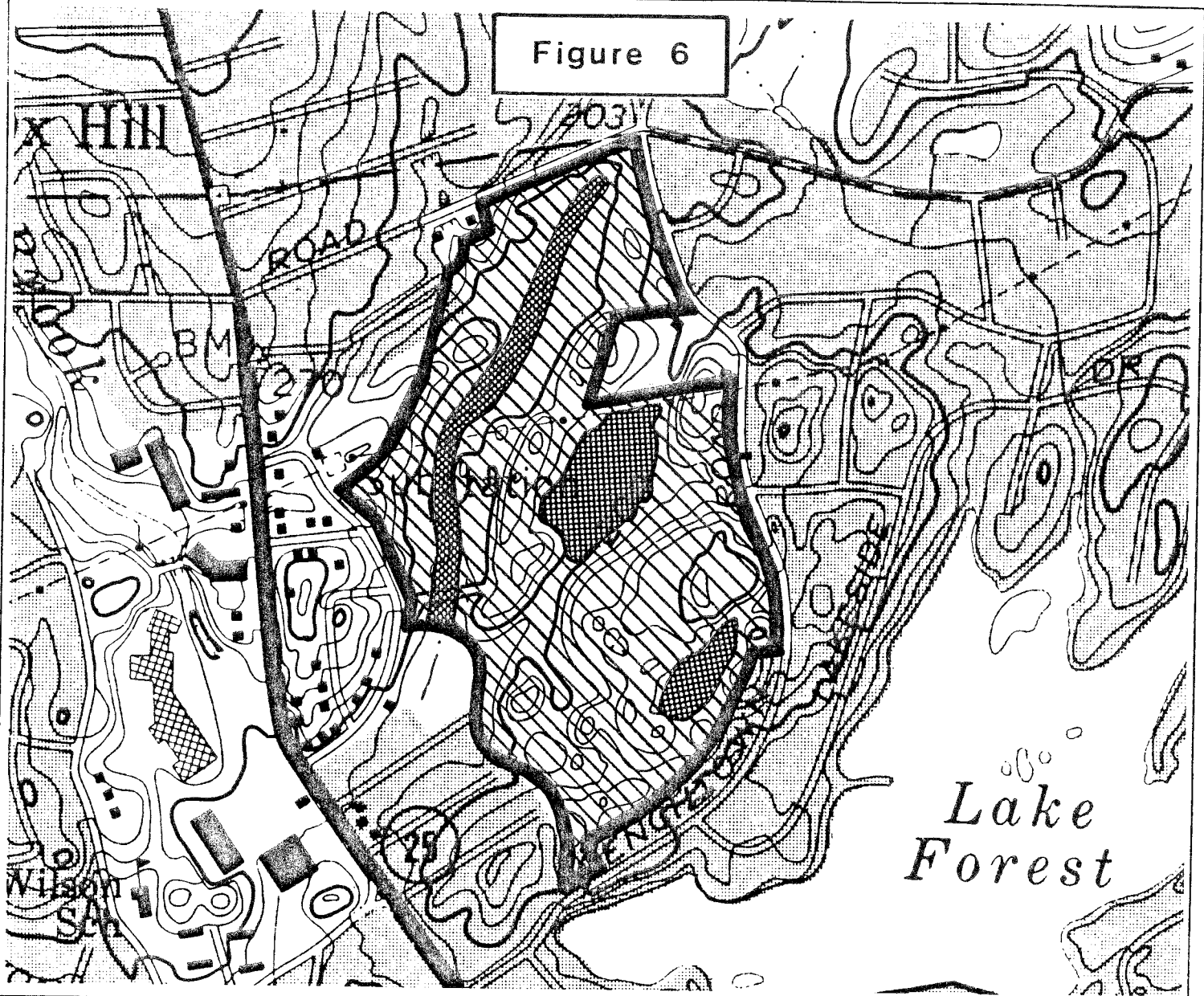
Depth to bedrock is quite shallow (i.e., probably less than five feet) throughout most of the property. Overlying bedrock on most of the site is a blanket of unconsolidated sediments of glacial origin. As ice advanced over Connecticut one or more times during the last million years or more, it scraped and chipped bedrock outcrops and bulldozed pre-existing soils, incorporating the rock particles into the ice mass. These particles were later plastered against bedrock ridges and knobs by the ice as it continued its advance, or were let down gently from the ice as it began to waste away. The non-sorted accumulation of rock fragments that resulted contains a wide range of sizes and shapes, and is known as till (Figure 6).

A few swampy areas containing wetland vegetation occupies the site. These wetlands comprise: (1) the bottom of the former Ox Stream Reservoir (now drained) which stretches across the northwest corner; (2) an approximately four acre marsh in the central portions; and (3) a red maple swamp in the southern limits of the site (see Figure 6).

Water is at or near the surface throughout most of the year in these areas. These swampy areas are comprised mainly of a mixture of silt, sand, clay, and organic materials. Seasonally, wet areas parallel the intermittent streamcourses on this site.

Because of their moderately large size, the aforementioned swampy areas have an important role in regulating stream flows. During periods of heavy rainfall or snowmelt, these areas store surface

Figure 6



TILL SOILS

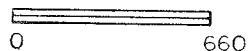


WET SOILS

**ELTON ROGER'S
WOODLAND PARK
BRIDGEPORT, CONNECTICUT**

**SURFICIAL
GEOLOGY**

King's Mark Environmental Review Team



conditions will be the main obstacles to overcome in terms of locating privies in the southern parts of the site. However, there is a chance that some deeper pockets of soil may exist in these areas. Dry vault privies should be constructed with adequate storage space for excreta, a fly tight vault with a screened vent to the outside air, and self-closing seat cover. Also, they should be constructed so as to permit ready cleaning; therefore, access to a potential privy site by heavy equipment should be kept in mind.

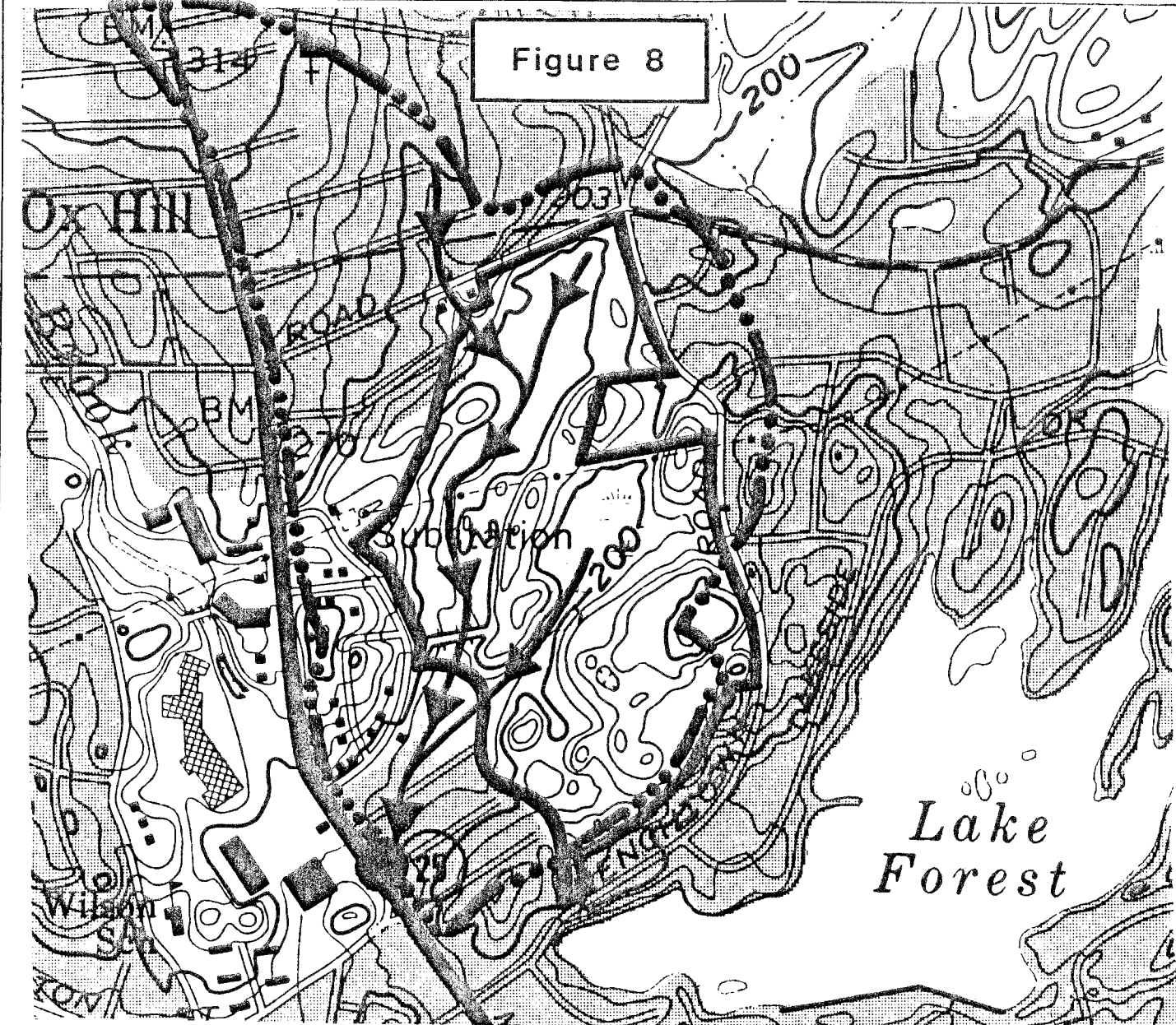
A building which would house a nature center is being considered by city officials in the northern limits of the site along Old Town Road. The area being considered is a filled area, identified in Figure 7 as udorthents. The availability of public sewer and water lines in Old Town Road preclude the need for on-site sewage disposal and water supply.


Hydrology

Elton Roger's Woodland Park lies almost entirely within the Horse Tavern Brook watershed. A small area of the park in the eastern limits along Frenchtown Road drains eastward. It is ultimately routed to Lake Forest (Figure 8). According to the publication The City As A Park (1973), the outlet for the former Ox Stream Reservoir in the northwestern part of the site was routed via an aqueduct into Lake Forest in the late 1800s.

The availability of public water supply lines to the site precludes the need for development of an on-site well. However, if there was a desire to develop an on-site well for the park, the only aquifer that is likely to be capable of supplying water is the

Figure 8




 WATERSHED BOUNDARY AND
 RESPECTIVE POINT OF OUTFLOW
 FOR THE STREAMCOURSE THAT
 DRAINS THE PARK AT ITS
 INTERSECTION WITH MAIN STREET


 WATERCOURSES SHOWING DIRECTION
 OF FLOW

**ELTON ROGER'S
WOODLAND PARK
BRIDGEPORT, CONNECTICUT**

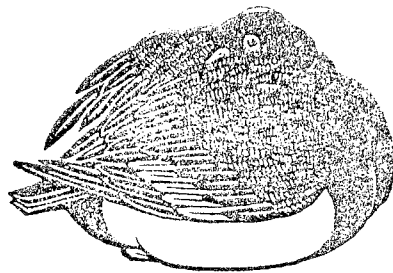
**WATERSHED
BOUNDARY**

King's Mark Environmental Review Team



underlying metamorphic rock. Wells drilled in bedrock generally supply small but reliable yields of groundwater. However, since the yield of a given well depends upon the number and size of water-bearing fractures that it intersects and since the distribution of fractures in bedrock is irregular, there is no practical way of predicting the yield of a well drilled in any significant location.

BIOLOGICAL RESOURCES



BIOLOGICAL RESOURCES

Forestry Resources

Given the comprehensive nature of the 1973 publication The City As A Park, the Team forester can add very little to enhance the information contained therein. While the report is 13 years old, the basic forest types identified and described have barely changed. The principles and ecological relationships remained constant and the recommendations presented still apply. Therefore, only a brief description of the vegetative characteristics of the study area is included in this ERT report (see Wildlife Habitat Types Section).

Forest Management Considerations

While the 1973 report is detailed and complete, it cannot be regarded as a true "forest management plan." Such a plan would extend into the area of actual vegetative manipulation. Based on Bridgeport's goals for owning this land, the forest management plan and report would not only identify and describe the various vegetative types but, for each type, would propose detailed forest management activities to be completed within the 10-year life span of the plan. These management activities, such as reinforcement plantings of appropriate species, thinnings to stimulate regeneration, or clearing to enhance aesthetic values would be designed to maximize the values which Bridgeport believes are important on this parcel. The plan would contain a summary of these activities, with an approximate schedule for accomplishment, as well.

Such a plan is the logical next step for the forest resources of the City of Bridgeport. However, the first and most important considerations in the preparation of a detailed forest management plan will be both the short and long-term goals of ownership the city has for the park. Careful deliberation is warranted and a firm concensus should be arrived at prior to initiating work on a forest management plan.

The gathering of the additional data required to support the recommendations within such a plan, and the drafting and compilation of a plan for an area of this size and complexity requires an investment of time and personnel beyond the capabilities of the ERT program. For this reason, the following options for city action are proposed:

- (1) The city may contact the Connecticut Department of Environmental Protection (DEP), Bureau of Forestry and request such assistance as they may be able to render towards formulation of a management plan. The appropriate field office is located at 627 Amity Road, Bethany, CT 06525. Telephone: 393-0723.
- (2) The city may contract with a private professional forester to gather data and formulate a comprehensive forest management plan. The forester would certainly be expected to utilize the findings of the other disciplines contained within this report in anticipating future demands on the forest resource. Of prime importance to the forester will be the goals of ownership the city has for its forestlands. The city may seek the advice of the DEP, Bureau of Forestry in locating professional foresters and in setting plan standards.

A general impression of the park indicates that a considerable amount of thinning for firewood could be done to reduce overcrowding and to improve the overall health of the forest. Numerous severely

damaged, deformed, or diseased trees were observed, some in such a condition as to constitute a hazard to park visitors. Removal of these trees will improve safety for park visitors while removing possible sources for the spread of disease. However, these thinnings and salvage harvests should be conducted only as part of an integrated management program based on the forest management plan proposed above. To embark on a tree cutting program without an overall plan to follow will result in an inconsistent and ineffectice cutting pattern which will have few specific benefits in any particular area, and may in fact result in damage to the forest resource in certain areas.

Wildlife Resources

Introduction

Based on the ERT field review and a report titled The City As A Park (1973), wildlife habitats present in the park are mixed hardwood forest, wetlands, and openland (Figure 9). For detailed listings of vegetation refer to the 1973 report and Appendices A and B.

Wildlife Habitat Types

Mixed Hardwood Forest

This wildlife habitat type consists of a variety of hardwood species including red oak, white oak, red maple, sugar maple, black

birch, yellow birch, gray birch, beech, ash, hickory, aspen, tulip, and cherry. There are some scattered conifers such as white pine, cedar, and hemlock. Understory vegetation is diverse including species such as ragweed, poison ivy, barberry, honeysuckle, grape, Virginia creeper, viburnum, dogwood, sassafras, elderberry, greenbrier, sweet fern, spicebush, pepperbush, and various grasses and herbaceous species.

Wildlife typically frequenting such habitats include white-tailed deer, squirrels, raccoon, chipmunks, woodpeckers, bluejay, robins, cardinal, tufted titmouse, black-capped chickadee, and various other non-game species (i.e., voles, shrews, white-footed mice).

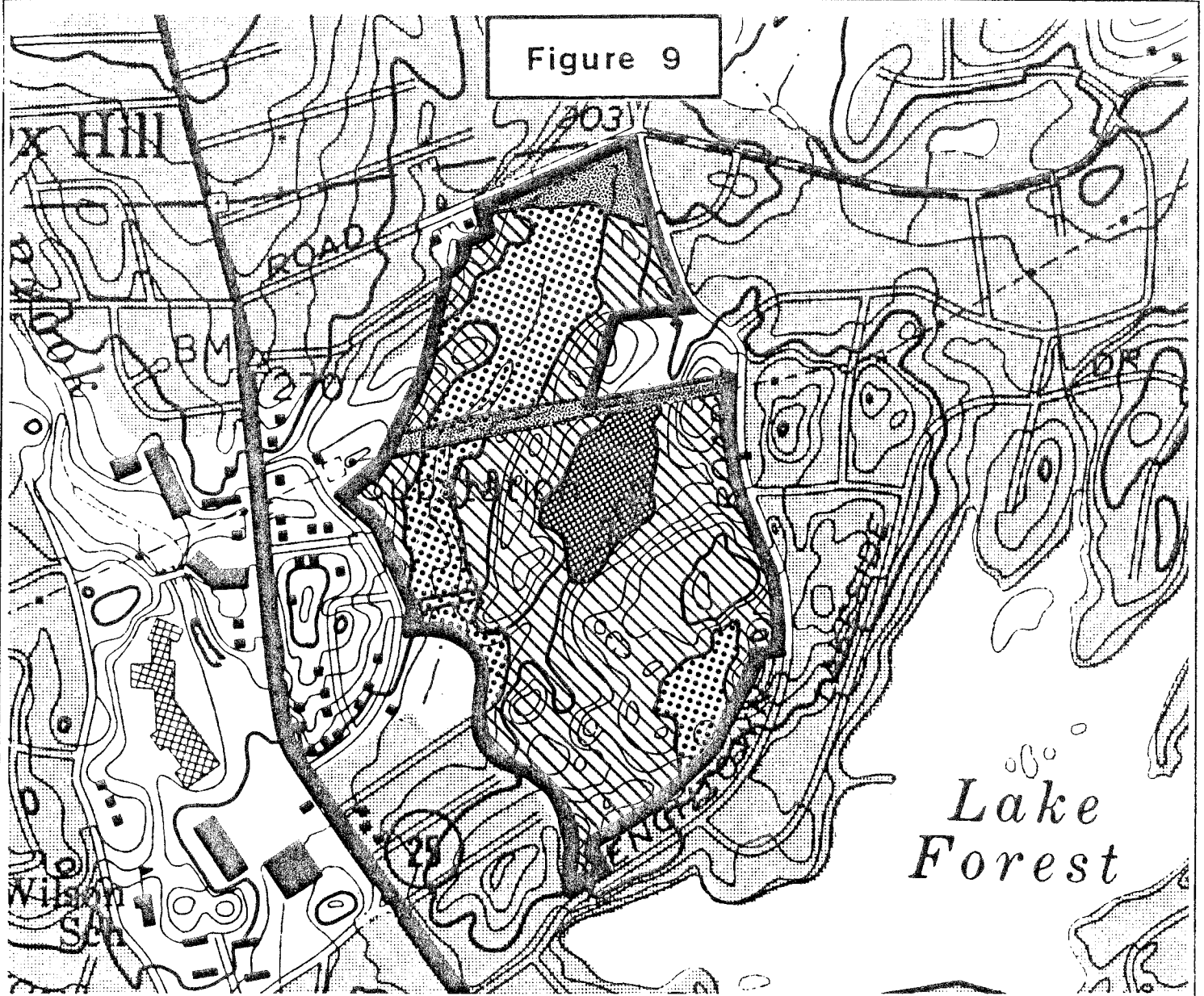
Wetlands

Wetland types include permanent to seasonally flooded red maple swamps (previously mapped as marshland and red maple swamp) and open water/shrub swamp (previously mapped as Eastern Swamp). The red maple swamps are dominated by red maple along with birch, willow, alder, silky dogwood, spicebush, pepperbush, sensitive fern, and skunk cabbage. Small open water pockets contain phragmites, cattail, dogwood, and duckweeds.

The open water/shrub swamp is characterized by standing water and vegetation such as buttonbush, alder, willow, red maple, silky dogwood, purple loosestrife, duckweeds, skunk cabbage, cattail, arrowhead, sedges, and rushes.

Wildlife utilizing such habitat is quite diverse including woodpeckers, kingbirds, kingfishers, flycatchers, swallows, cedar waxwings, great blue herons, green herons and night herons, mallards,

Figure 9



OPEN LAND



UPLAND - MIXED HARDWOOD



PERMANENT TO SEASONALLY
FLOODED RED MAPLE SWAMP

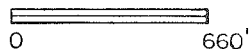


OPEN WATER / SHRUB SWAMP

**ELTON ROGER'S
WOODLAND PARK
BRIDGEPORT, CONNECTICUT**

WILDLIFE HABITATS

King's Mark Environmental Review Team



black duck, woodcock, muskrat, beaver, otter, skunk, raccoon, mink, white-tailed deer, woodchuck, and numerous amphibians and reptiles.

Openland

This habitat type consists of one small reverting field along Old Town Road and an early successional vegetation zone along the powerline right-of-way which transects the park. Although the small reverting field does have wildlife value, its best use, as proposed, would be as a parking/access area to the park.

The powerline right-of-way is a very valuable wildlife zone because it creates a diversity of habitat types. This diversity consists of different vegetative species, different structural heights, and the creation of edge (i.e., where two or more vegetative types meet).

Vegetation within this area consists of oak, dogwood, alder, blueberry, sumac, grape, birch, buttonbush, blackberry, raspberry, dewberry, and various grasses and herbaceous species.

Wildlife utilizing such habitats include white-tailed deer, grouse, rabbits, woodcock, meadowlarks, sparrows, cedar waxwings, raccoon, raptors, and many other non-game species. In addition to providing specific habitat requirements, right-of-ways also serve as excellent wildlife travel corridors between various habitat types.

Discussion

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

habitat. The following practices will help to improve conditions within the various wildlife habitat types.

Forestland Guidelines

- (1) Create a diversity of habitat by making small (i.e., 1/4 to 1 acre) openings in an east to west direction in order maximize sunlight. This will encourage fruit-producing shrubs valuable to many wildlife species.
- (2) Pile brush along edges of openings to create cover for birds and small mammals.
- (3) Encourage mast producing trees (i.e., oak, beech, hickory).
- (4) Leave 5 to 7 snags (dead trees) per acre for their food and nesting value.
- (5) Trees with vines (i.e., berry producers) should be encouraged.
- (6) Exceptionally tall trees used by raptors for perching and nesting sites should be encouraged.
- (7) Planting of white pine seedlings within openings and as underplantings to increase amount and distribution of conifer cover.

Wetland Guidelines

- (1) Leave buffer strips (i.e., 100 ft.) of natural vegetation along wetland areas to help filter or trap silt and sediments.
- (2) Seasonally flooded red maple swamps should be managed per forestland guidelines.
- (3) Place wood duck nesting boxes within the various wetland areas.
- (4) Refer to the City As A Park report for discussion on wetland values.
- (5) Due to the extensive residential development below the old dam site, a through engineering study would be necessary prior to any consideration of re-impounding water. A more practical method for providing valuable open water areas would be to develop small "kettle" or "pot" holes and scatter them throughout the park in suitable areas.

Openland Guidelines

- (1) Place bluebird nesting boxes along edges of right-of-way.
- (2) Widen right-of-way area to encourage shrubs and also to create a feathered edge transition zone between forest and powerline (i.e., feathered edges is the gradual blending of trees, shrubs, and grass).
- (3) Woody vegetation should be controlled and thinned if possible.

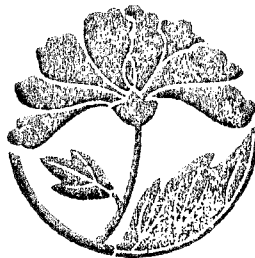
Environmental Education

- (1) A well marked trail system should be established along with an accompanying informational brochure. This will allow interested individuals as well as organized groups to have an educational opportunity. If wildlife or forestry management practices are conducted (i.e., thinnings, openings, plantings, bluebird boxes, wood duck boxes), they should be discussed in the brochure. The trail should also include visits to all the major wildlife habitat types found in the park.
- (2) Youth groups could be encouraged to conduct various wildlife habitat improvement projects such installing wood duck nesting boxes and bluebird nesting boxes, making small forest openings, and constructing brush piles.
- (3) Groups could also conduct various studies such as bird inventories, small mammal live trapping, and vegetation transects, listing or mapping.

A major topic of discussion should be vegetation succession and its value in wildlife management.

Concluding, the area offers good overall vegetation diversity, and in a heavily populated area like Bridgeport, it provides both necessary wildlife habitat and excellent potential for environmental educational opportunities.

**LAND USE
AND
PLANNING CONSIDERATIONS**



LAND USE AND PLANNING CONSIDERATIONS

Land Use History of Elton Roger's Woodland Park

From 1875 until the 1930s, Elton Roger's Woodland Park was owned by Bridgeport Hydraulic Company. During this period, Ox Stream Reservoir occupied about 15 acres in the northwestern portion of the site. Water from this reservoir, which had a holding capacity of 25 million gallons, was diverted into Island Brook Reservoir (now Lake Forest), then to a distribution reservoir just west on Bunnells Pond. The original Ox Brook Dam still stands, an impressive example of stonework of the period.

After Bridgeport Hydraulic sold the property, there was a substantial amount of earth-moving activity in preparation for a residential subdivision which was never built. Evidence suggests that the ridge to the east of the reservoir site was blasted to provide rock fill for the subdivision roads. These roadbeds provide access to the interior of the park off Frenchtown Road. Revegetation over the years has reduced their original 50-foot width to about 10 feet in most places.

In the early 1970s, the City of Bridgeport purchased the parcel, using funds from the Federal Land and Water Conservation Fund. Since that time, the park has never been developed for recreational use, though the Parks Department has provided occasional maintenance. At one time, the park was used by Boy Scouts for overnight camping, but concern about open campfires put an end to this use. About four years ago, the Bridgeport co-ed Softball League made a proposal to develop softball fields in the park and deed them to the city. The

league, which has 600 to 700 members and 26 teams, is an active organization with a strong and continuing need for playing fields. However, the lack of well-suited sites and the likelihood of neighborhood opposition are two obstacles which would be difficult to overcome.

In January 1986, the city issued an update of its Master Plan, which included a section on recreation. One of the specific recreation objectives in this plan is to develop an urban campsite. Specific recommendations for Elton Roger's Woodland Park are to develop a series of hiking trails and designate an area for permit camping in order to enhance the use of the area for educational and nature appreciation purposes.

Recreational and Open Space Needs

Nature Study

At the present time, there are no nature study areas located within the city. The one field study program for school children, the "Ocean Classroom," focuses on marine ecosystems. For field study of terrestrial ecosystems, students are usually bused to the Connecticut Audubon Center in Fairfield. The Barlett Arboretum in Stamford and Kellogg Environmental Center in Derby, both State-owned facilities, are within reasonable driving distance. Two adjacent municipalities have developed nature study programs which utilize various public lands. The Mill River Wetlands Committee in Fairfield focuses on Perry's Mill Pond and Ash Creek, while Stratford uses Roosevelt Forest and the Great Meadows salt marsh. Smaller open spaces close to schools are also used for shorter field trips.

The experience of other towns suggests that an in-town nature study area would be a great asset if a carefully planned program of study were developed specifically for the area. An in-town study area offers two advantages over the Audubon Center and State-owned areas: (1) greater convenience of access and (2) an opportunity to develop a scientific understanding of a familiar local environment.

Camping

Both Boy Scouts and Girl Scouts use a variety of camping facilities throughout the State. The Boy Scouts own two campgrounds, Hoyt Reservation in Redding, and Camp Pomperaug, near the Massachusetts border. Kettletown State Park in Southbury is also used for camping. Town-owned parks in adjacent areas, namely Beech Memorial and Old Mine in Trumbull, Roosevelt Forest in Stratford, and Lake Mohegan in Fairfield provide opportunity for organized group camping. Ninety Acres Park in Bridgeport was used recently for a camporee. The Girl Scouts own Camp Katoya, a day camp in Milford and an overnight camp, Camp Iwoketa in Norfolk. Local troops also use Webb Mountain Park in Monroe and Lake Mohegan in Fairfield.

A need expressed by both Boy Scout and Girl Scout Councils is for a campsite which scouts can hike to or take a bus to. Elton Roger's Woodland Park is in a good location in this regard, as it is located in the most densely populated city in the State and is accessible by two bus routes, one along Old Town Road and the other along Main Street, a short distance away. In addition to overnight camping, the Girl Scouts also have a need for cookout areas. Elton Roger's Woodland Park could serve this need well, being so conveniently

located, if appropriate facilities such as fire pits were provided.

Potential Park Development Impacts

Any type of active recreational or educational use of Elton Roger's Woodland Park is likely to meet resistance from residents of the surrounding neighborhood. However, the park is large enough to accommodate the proposed uses as long as a reasonable setback distance from adjacent residences is maintained. The positive aspect of increased usage of the park is that dumping and vandalism would decrease and a regular maintenance schedule would be implemented. Scout troops have in the past supplemented Parks Department efforts by cleaning up debris and carrying out conservation projects. It is likely that these activities would increase if the park were actually developed for youth group activities.

Noise

Use of the park by school groups on weekdays and by scouts on weekends will increase the noise level in the park to some extent. However, the number of persons using the park at any one time can be controlled by instituting a permit system or similar scheduling procedure. In addition, existing vegetation and topography of the park will attenuate sound. If campgrounds and trails are located so as to maximize this buffering effect, noise should not be noticeable outside the park.

Fire

The building of campfires is a traditional element of overnight camping and is, of course, essential for cookouts. To control the amount of smoke and to minimize the danger of setting fire to the woods, fires should be allowed only in designated areas. These areas should be located at a suitable distance from residential areas and well designed and maintained to insure fire safety.

Traffic and Parking

The park is bounded by Frenchtown Road, Old Town Road, Kaechele Place, and Sequoia Road. Of these, only Old Town Road, with an average of about 5,000 vehicles per day, carries a moderately high volume of through traffic. It is not expected that development of a campground and/or nature study area would add significantly to traffic volumes.

The proposed parking area near the corner of Frenchtown and Old Town Roads shown in Figure 3 is a good location in a number of respects:

- (1) It is the largest flat area easily accessible from a road.
- (2) The good sight lines along Old Town Road promote safe exit and entrance from the access driveways.
- (3) The access drive nearest to the corner of Old Town and Frenchtown Roads is approximately 225 feet from the intersection - a distance which is adequate to prevent conflicts between traffic on Old Town Road and vehicles entering and exiting the parking lot.

If the Parks Department conceptual site plan is used as a basis for further planning and eventual development, the geometrics of the parking lot should be improved in the following respects:

- (1) The width of the access drives should be at least 25 feet.
- (2) A parking bay for at least one school bus should be provided.
- (3) Corners where the driveways intersect Old Town Road should be tapered to curves with radii of at least 20 feet.
- (4) Parking stalls for automobiles should measure 9' x 19'.
- (5) Loading spaces for buses and parking spaces for automobiles should be located at least six feet from the street.

Recreational Development Considerations

Introduction

In evaluating an area for possible recreational use, two major factors must be considered: (1) the needs of the community and its ability to develop and maintain an area and (2) the physical character and developability or carrying capacity of the area.

In the case of Bridgeport, this city is blessed with a good system of developed parks and playgrounds and, therefore, seems to have relatively little use for another intensively developed area. Furthermore, as is the case with many cities with fiscal limitations, one may question the priority which could be given to developing and maintaining another park. On the other hand, Bridgeport's Park Department staff stated that Bridgeport needs a tract of basically natural open space to be used for nature walks, youth group camping, environmental education, and a possible nature center.

Regarding the physical character of Elton Roger's Woodland Park, it is clear that nearly all of its area has severe to very severe

recreational development and use limitations in terms of rock outcrop, shallow to bedrock soils, occasional steep slopes, or poorly-drained, even boggy soils (see Appendix C). Therefore, intensive park development may be extremely, if not prohibitively expensive, and thus unwise from a cost-benefit standpoint.

It is fortunate that Bridgeport's needs/capabilities mesh with the park's physical capabilities. The area should be maintained basically as undeveloped, low intensity use open space, and it is precisely this type of use which Bridgeport needs and wishes for Elton Roger's Woodland Park.

Existing Conditions

Surrounding Land Uses

The park basically is surrounded with single-family, owner occupied residential housing with the exception of commercial land use along Main Street to the west and an area of condominiums protruding into the park on the east. As such, the neighbors seem to be very concerned with neighborhood stability and with any use of the park which might affect this stability.

Present Uses And Misuses

Since acquiring the property in the late 1960s - early 1970s, Bridgeport has not developed the park. Thus, recreational use consists of occasional walkers and some unauthorized dirt bike use in the eastern part of the park. Another misuse includes trashing around the periphery of the park, most notably along

Kaechele Road near the power company substation.

Natural Site Characteristics

Natural factors of the park include:

- (1) An often varied topography with interesting rock outcrops.
- (2) A basically healthy deciduous forest cover with many trees of moderate to substantial size.
- (3) Several wetland areas which add visual and ecological variety to the park.
- (4) An existing earthen dam with rock face which appears to be in good physical condition.

Recreational Management Alternatives

Access

Develop a single access off Old Town Road as previously discussed. This should involve an off-road parking lot screened from the homes on the north side of Old Town Road. A low berm with some deciduous scrub/shrub vegetation already accomplishes part of this screening, but additional planting, particularly with conifers to provide year-round screening is suggested. This lot could be gravelled, with rustic wooden fencing to provide definition, and should be gated and locked at night to prevent misuse (and neighborhood reaction). It is encouraged that the proposed second parking lot on Frenchtown Road not be pursued at this time. It will be difficult enough to win neighborhood acceptance of even one parking lot and a park of this size could well be serviced by one lot at which management control could more readily be enforced.

Install effective physical barriers to illegal vehicular access to the park if and as needed. Admittedly this will be more difficult to control in the case of dirt bikes and will be achieved only with policing combined with neighborhood cooperation.

Nature Center

A small nature center associated with the parking lot/access discussed above could be considered, but it is advised that the parking lot first be built during the initial stages of park development. If the lot becomes accepted and as monies and public support become available, the nature center could then be developed, preferably in rustic, log cabin size and in the edge of the woods beyond the parking lot, well out of sight of homes on Old Town Road.

Improve Public Image of Park

Improve the public image of the park through removal of existing trash as well as policing and solicitation of neighborhood cooperation to discourage further trashing. In addition, consider the feasibility of discontinuing and gating a section of Kaechele Road behind the substation to forestall trashing in this isolated location where the trashing problem is the most acute.

Develop Nature Trails

Develop an internal system of nature trails, taking advantage of the various points of interest and with access to the trail system only from the proposed parking lot/nature center location to foster appropriate usage and management control. Similarly such trails

should be kept sufficiently within the park so as to minimize interaction with abutting residential properties.

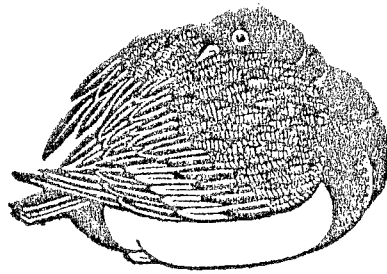
Develop Camp Areas

Consider development of a primitive youth camp area, located in a relatively level and well-drained area and situated as far away as possible from neighbors to minimize likely problems of trespassing into private backyards. Without careful site analysis, such a location cannot be pinpointed, and soil limitations clearly will limit the range of choices available.

Development of Ponds

Consider the possibilities presented by the existing dam in terms of diversifying the potential of the park. With a watershed of about 75 acres, approximately 110 to 115 acre-feet of storage should be possible according to a 1971 SCS1 standard for Connecticut (i.e., 1 acre watershed = 1.5 acre-foot storage). Possibilities include: (1) development of a shallow pond with some visual and fishing potential or (2) a wildlife marsh. A third proposal is to consider the basin above the dam in terms of its potential flood control storage value. The first two proposals, however, may well deserve consideration if monies and interest should become available.

APPENDICES



APPENDIX A
FOREST OVERSTORY VEGETATION

LIST OF SPECIES

| | |
|-------------------|--------------------------------|
| Red Oak | <u>Quercus rubra</u> |
| White Oak | <u>Quercus alba</u> |
| Red Maple | <u>Acer rubrum</u> |
| Sugar Maple | <u>Acer saccharum</u> |
| Yellow Birch | <u>Betula lutea</u> |
| Black Birch | <u>Betula lenta</u> |
| Gray Birch | <u>Betula populifolia</u> |
| Bitternut Hickory | <u>Carya cordiformis</u> |
| Shagbark Hickory | <u>Carya ovata</u> |
| American Beech | <u>Fagus grandifolia</u> |
| Cherry | <u>Prunus serotina</u> |
| Quaking Aspen | <u>Populus tremuloides</u> |
| Tulip | <u>Liriodendron tulipifera</u> |
| Ash | <u>Fraxinus americana</u> |
| Cedar | <u>Juniperus virginiana</u> |
| Willow | <u>Salix spp.</u> |
| Speckled Alder | <u>Alnus rugosa</u> |
| White Pine | <u>Pinus strobus</u> |

APPENDIX B

HERB AND SHRUB VEGETATION

LIST OF SPECIES

| | |
|--------------------------------|------------------------------------|
| Ragweed | <u>Artemesia spp.</u> |
| Goldenrod | <u>Solidago spp.</u> |
| Smartweed | <u>Polygonum spp.</u> |
| Poison Ivy | <u>Rhus radicans</u> |
| Virginia Day Flower | <u>Commelina virginica</u> |
| Spotted Touch-me-not Jewelweed | <u>Impatiens capensis</u> |
| False Solomans Seal | <u>Smilacina racemosa</u> |
| Hog Peanut | <u>Amphicarpa bracteata</u> |
| Jerusalem Artichoke | <u>Helianthus tuberosus</u> |
| Wild Grape | <u>Vitus spp.</u> |
| Virginia Creeper | <u>Parthenocissus quinquefolia</u> |
| Barberry | <u>Berberis vulgaris</u> |
| Sweet Pepperbush | <u>Clethra alnifolia</u> |
| Multiflora Rose | <u>Rosa multiflora</u> |
| Viburnum | <u>Viburnum acerifolium</u> |
| Flowering Dogwood | <u>Cornus florida</u> |
| Witch Hazel | <u>Hanamdius virginiana</u> |
| Honeysuckle | <u>Lonicera japonica</u> |
| Elderberry | <u>Sambucus canadensis</u> |
| Stinging Neettle | <u>Urtica dioica</u> |
| Trillium | <u>Trillium spp.</u> |
| Greenbriar | <u>Smilax rotundifolia</u> |
| Highbush Blueberry | <u>Vaccinium corymbosum</u> |
| Lowbush Blueberry | <u>Vaccinium vacillous</u> |
| Spotted Wintergreen | <u>Chimaphilla maculata</u> |
| Sweet Fern | <u>Comptania peregrina</u> |
| Sassafras | <u>Sassafras albidum</u> |
| Smooth Sumac | <u>Rhus glabra</u> |
| Periwinkle | <u>Vinca minor</u> |
| Meadow-Rue | <u>Thalictrum spp.</u> |
| Buttonbush | <u>Cephalanthus occidentalis</u> |
| Common Reed Grass | <u>Phragmites communis</u> |
| Purple Loosetrife | <u>Lythrum salicaria</u> |
| Beggar's Ticks | <u>Desmodium spp.</u> |
| Queen Anne's Lace | <u>Daucus carota</u> |
| Spicebush | <u>Lindera benzoin</u> |

APPENDIX C

SOILS LIMITATION CHART

SOILS LIMITATION CHART

ELTON ROGERS WOODLAND PARK - BRIDGEPORT

| SOIL SYMBOL | SOIL NAME | RECREATIONAL DEVELOPMENT | | | |
|---------------------------------------------------------------|------------------------------------|-------------------------------------------------------------------------|---------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| | | Camp Areas | Picnic Areas | Playgrounds | Paths & Trails |
| Aa - Nearly level | Adrian | Severe: wetness, floods, excess humus | Severe: wetness, excess humus | Severe: wetness, floods, excess humus | Severe: wetness, excess humus |
| CrC - Fine Sandy loams, very rocky 3-15% slopes | Charlton -- Hollis | Moderate: slope, large stones Moderate: slope, large stones | Moderate: slope Moderate: slope | Severe: slope Severe: slope, depth to rock | Moderate: large stones Moderate: large stones |
| HpC - Hollis Charlton, Rock outcrop complex 3-15% slopes | Hollis Charlton Rock outcrop | Moderate: slope, large stones Moderate: slope, large stones ----- | Moderate: slope Moderate: slope ----- | Severe: slope, depth to rock Severe: slope ----- | Moderate: large stones Moderate: large stones ----- |
| HrE - Hollis Rock outcrop Charlton complex 15-45% slopes | Hollis Rock outcrop Charlton | Severe: slopes ----- | Severe: slopes ----- | Severe: slopes, depth to rock ----- | Severe: slope ----- |
| Rn - Ridgebury Leicester-Whitman, extremely stony, fine sandy | Ridgebury Leicester-Whitman | Severe: wetness, large stones Severe: large stones, wetness | Severe: wetness Severe: wetness | Severe: large stones, wetness Severe: wetness, large stones | Severe: wetness, large stones Severe: large stones wetness Severe: wetness, large stones |

SOILS LIMITATION CHART

ELTON ROGERS WOODLAND PARK - BRIDGEPORT

| SOIL SYMBOL | SOIL NAME | RECREATIONAL DEVELOPMENT | | | |
|------------------|-------------|--------------------------|--------------|-------------|----------------|
| | | Camp Areas | Picnic Areas | Playgrounds | Paths & Trails |
| UD - Smoothed | Udortheints | ----- | ----- | ----- | ----- |

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 - a 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 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 landowner/developer allowing the Team to enter the property for purposes of review, and a statement identifying the specific areas of concern the Team should 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 two (2) reviews per month.

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